

SENT
HYDRAULIC

VALVOLE
ITALIA[®]



我們追求卓越
We make excellence





Valvole Italia成立于2014年，是意大利领先的螺纹插装平衡阀和负载保持阀制造商。

桑特液压 位于中国长沙，成立于2000年，是负载控制阀和比例控制阀及螺纹插装阀集成阀块的领先制造商。

桑特液压和**Valvole**紧密合作，不仅向客户提供产品，还向客户提供量身定制的解决方案。和客户合作开发的能力是我们成功的关键，我们经验丰富的工程师为客户量身定制解决方案，充分满足客户的期望和要求。即使是最复杂的需求也总会给出正确的答案。最新的CAD和CAM 技术使我们能够向客户提供最快速的市场服务响应，最先进的FMS生产系统使我们确保持续稳定的最高质量水平。无论大批量生产还是特别定制，从一个想法到批量产品交货，桑特液压和Valvole Italia将是您身边可靠的创新合作伙伴。

Valvole Italia founded in 2014, is one Italy leading manufacturer of screw-in cartridge counterbalance valves and parts-in-body load holding valves.

SANT HYDRAULIC located in Changsha in China, founded in 2000, is a leading manufacturer of load control valves, proportional control valves and hydraulic manifolds integrated with screw-in cartridge valves.

Together with Valvole Italia, SANT Hydraulic not only supplies products, but also provides customized solutions. The capability of co-design with customers has always proved to be our key success factor. Our experienced engineers tailor customized solutions that fulfill all possible customer wishes and requirements. They almost always know the correct answer even for the most complex requirements. The latest CAD and CAM technologies enable us to provide customers the most responsive service in the marketplace. Our most up-to-date FMS and production techniques ensure a constant and highest quality level. Whether it is for large production volumes or individual special order, SANT Hydraulic and Valvole Italia will be at your side as a reliable innovation partner from the idea to mass production delivery.

> Introduction **20**

Cartridge Valves

Valve name	pilot ratio	setting	capacity	cavity	configuration
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Load Holding Valves

Standard Configuration

Normale SAE08 4:1 fixed setting	4:1	fixed	30 lpm (8 gpm)	SAE08	standard	28
Normale SAE08 4:1 adjustable setting	4:1	adjustable	30 lpm (8 gpm)	SAE08	standard	29
Normale SAE08 4:1 SP fixed setting ultra fine control	4:1	fixed	4 lpm (1 gpm)	SAE08	standard	30
Normale SAE08 4:1 SP adjustable setting ultra fine control	4:1	adjustable	4 lpm (1 gpm)	SAE08	standard	31
Normale SAE08 4:1 SP fixed setting fine control	4:1	fixed	15 lpm (4 gpm)	SAE08	standard	32
Normale SAE08 4:1 SP adjustable setting fine control	4:1	adjustable	15 lpm (4 gpm)	SAE08	standard	33
Normale SAE08 4:1 SP fixed setting	4:1	fixed	30 lpm (8 gpm)	SAE08	standard	34
Normale SAE08 4:1 SP adjustable setting	4:1	adjustable	30 lpm (8 gpm)	SAE08	standard	35
Normale SAE08 8:1 fixed setting	8:1	fixed	30 lpm (8 gpm)	SAE08	standard	36
Normale SAE08 8:1 adjustable setting	8:1	adjustable	30 lpm (8 gpm)	SAE08	standard	37
Normale SAE10 3:1 fixed setting	3:1	fixed	60 lpm (15 gpm)	SAE10	standard	38
Normale SAE10 3:1 adjustable setting	3:1	adjustable	60 lpm (15 gpm)	SAE10	standard	39
Normale SAE10 8:1 fixed setting	8:1	fixed	60 lpm (15 gpm)	SAE10	standard	40

Valve name	pilot ratio	setting	capacity	cavity	configuration	page
Normale SAE10 8:1 adjustable setting	8:1	adjustable	60 lpm (15 gpm)	SAE10	standard	41
Normale SAE12 4:1 fixed setting	4:1	fixed	120 lpm (30 gpm)	SAE12	standard	42
Normale SAE12 4:1 adjustable setting	4:1	adjustable	120 lpm (30 gpm)	SAE12	standard	43
Normale SAE16 4:1 adjustable setting fine control	4:1	adjustable	150 lpm (38gpm)	SAE16	standard	44
Normale SAE16 4:1 adjustable setting	4:1	adjustable	200 lpm (50 gpm)	SAE16	standard	45
Normale SAE20 4:1 fixed setting	4:1	fixed	320 lpm (85 gpm)	SAE20	standard	46
Normale SAE20 4:1 adjustable setting	4:1	adjustable	320 lpm (85 gpm)	SAE20	standard	47
Normale SAE20 8:1 fixed setting	8:1	fixed	320 lpm (85 gpm)	SAE20	standard	48
Normale SAE20 8:1 adjustable setting	8:1	adjustable	320 lpm (85 gpm)	SAE20	standard	49
Normale SAE20 GT 8:1 fixed setting	8:1	fixed	350 lpm (90 gpm)	SAE20	standard	50
Normale SAE20 GT 8:1 adjustable setting	8:1	adjustable	350 lpm (90 gpm)	SAE20	standard	51
Normale Ristretta T11A 2:1 SP fixed setting	2:1	fixed	30 lpm (8 gpm)	T11A	standard	52
Normale Ristretta T11A 2:1 SP adjustable setting	2:1	adjustable	30 lpm (8 gpm)	T11A	standard	53
Normale Ristretta T11A 3:1 fixed setting ultra fine control	3:1	fixed	4 lpm (1 gpm)	T11A	standard	54
Normale Ristretta T11A 3:1 adjustable setting ultra fine control	3:1	adjustable	4 lpm (1 gpm)	T11A	standard	55
Normale Ristretta T11A 3:1 SP fixed setting ultra fine control	3:1	fixed	4 lpm (1 gpm)	T11A	standard	56
Normale Ristretta T11A 3:1 SP adjustable setting ultra fine control	3:1	adjustable	4 lpm (1 gpm)	T11A	standard	57
Normale Ristretta T11A 3:1 fixed setting fine control	3:1	fixed	15 lpm (4 gpm)	T11A	standard	58
Normale Ristretta T11A 3:1 adjustable setting fine control	3:1	adjustable	15 lpm (4 gpm)	T11A	standard	59
Normale Ristretta T11A 3:1 SP fixed setting fine control	3:1	fixed	15 lpm (4 gpm)	T11A	standard	60
Normale Ristretta T11A 3:1 SP adjustable setting fine control	3:1	adjustable	15 lpm (4 gpm)	T11A	standard	61
Normale Ristretta T11A 3:1 fixed setting	3:1	fixed	30 lpm (8 gpm)	T11A	standard	62
Normale Ristretta T11A 3:1 adjustable setting	3:1	adjustable	30 lpm (8 gpm)	T11A	standard	63
Normale Ristretta T11A 3:1 SP fixed setting	3:1	fixed	30 lpm (8 gpm)	T11A	standard	64

Valve name	pilot ratio	setting	capacity	cavity	configuration	page
Normale Ristretta T11A 3:1 SP adjustable setting	3:1	adjustable	30 lpm (8 gpm)	T11A	standard	65
Normale Ristretta T11A 4:1 fixed setting ultra fine control	4:1	fixed	4 lpm (1 gpm)	T11A	standard	66
Normale Ristretta T11A 4:1 adjustable setting ultra fine control	4:1	adjustable	4 lpm (1 gpm)	T11A	standard	67
Normale Ristretta T11A 4:1 SP fixed setting ultra fine control	4:1	fixed	4 lpm (1 gpm)	T11A	standard	68
Normale Ristretta T11A 4:1 SP adjustable setting ultra fine control	4:1	adjustable	4 lpm (1 gpm)	T11A	standard	69
Normale Ristretta T11A 4:1 fixed setting fine control	4:1	fixed	15 lpm (4 gpm)	T11A	standard	70
Normale Ristretta T11A 4:1 adjustable setting fine control	4:1	adjustable	15 lpm (4 gpm)	T11A	standard	71
Normale Ristretta T11A 4:1 SP fixed setting fine control	4:1	fixed	15 lpm (4 gpm)	T11A	standard	72
Normale Ristretta T11A 4:1 SP adjustable setting fine control	4:1	adjustable	15 lpm (4 gpm)	T11A	standard	73
Normale Ristretta T11A 4:1 fixed setting	4:1	fixed	30 lpm (8 gpm)	T11A	standard	74
Normale Ristretta T11A 4:1 adjustable setting	4:1	adjustable	30 lpm (8 gpm)	T11A	standard	75
Normale Ristretta T11A 4:1 SP fixed setting	4:1	fixed	30 lpm (8 gpm)	T11A	standard	76
Normale Ristretta T11A 4:1 SP adjustable setting	4:1	adjustable	30 lpm (8 gpm)	T11A	standard	77
Normale Ristretta T11A 7,5:1 SP fixed setting	7,5:1	fixed	30 lpm (8 gpm)	T11A	standard	78
Normale Ristretta T11A 7,5:1 SP adjustable setting	7,5:1	adjustable	30 lpm (8 gpm)	T11A	standard	79
Normale Ristretta T11A 9:1 fixed setting	9:1	fixed	30 lpm (8 gpm)	T11A	standard	80
Normale Ristretta T11A 9:1 adjustable setting	9:1	adjustable	30 lpm (8 gpm)	T11A	standard	81
Normale Ristretta T11A 9:1 SP fixed setting	9:1	fixed	30 lpm (8 gpm)	T11A	standard	82
Normale Ristretta T11A 9:1 SP adjustable setting	9:1	adjustable	30 lpm (8 gpm)	T11A	standard	83
Normale Ristretta T11A 3:1 SBB fixed setting	3:1	fixed	30 lpm (8 gpm)	T11A	standard	84
Normale Ristretta T11A 3:1 SBB adjustable setting	3:1	adjustable	30 lpm (8 gpm)	T11A	standard	85
Normale T11A TG 3:1 fixed setting	3:1	fixed	40 lpm (10 gpm)	T11A	standard	86
Normale T11A TG 3:1 adjustable setting	3:1	adjustable	40 lpm (10 gpm)	T11A	standard	87
Normale T11A 2:1 fixed setting	2:1	fixed	60 lpm (15 gpm)	T11A	standard	88
Normale T11A 2:1 adjustable setting	2:1	adjustable	60 lpm (15 gpm)	T11A	standard	89

Valve name	pilot ratio	setting	capacity	cavity	configuration	page
Normale T11A 3:1 fixed setting	3:1	fixed	60 lpm (15 gpm)	T11A	standard	90
Normale T11A 3:1 adjustable setting	3:1	adjustable	60 lpm (15 gpm)	T11A	standard	91
Normale T11A 3:1 SP fixed setting	3:1	fixed	60 lpm (15 gpm)	T11A	standard	92
Normale T11A 3:1 SP adjustable setting	3:1	adjustable	60 lpm (15 gpm)	T11A	standard	93
Normale T11A 5:1 fixed setting	5:1	fixed	60 lpm (15 gpm)	T11A	standard	94
Normale T11A 5:1 adjustable setting	5:1	adjustable	60 lpm (15 gpm)	T11A	standard	95
Normale T11A 8:1 fixed setting	8:1	fixed	60 lpm (15 gpm)	T11A	standard	96
Normale T11A 8:1 adjustable setting	8:1	adjustable	60 lpm (15 gpm)	T11A	standard	97
Normale T11A 10:1 fixed setting	10:1	fixed	60 lpm (15 gpm)	T11A	standard	98
Normale T11A 10:1 adjustable setting	10:1	adjustable	60 lpm (15 gpm)	T11A	standard	99
Normale T11A 10:1 SP fixed setting	10:1	fixed	60 lpm (15 gpm)	T11A	standard	100
Normale T11A 10:1 SP adjustable setting	10:1	adjustable	60 lpm (15 gpm)	T11A	standard	101
Normale T11A GT 3:1 fixed setting	3:1	fixed	75 lpm (20 gpm)	T11A	standard	102
Normale T11A GT 3:1 adjustable setting	3:1	adjustable	75 lpm (20 gpm)	T11A	standard	103
Normale T11A GT 8:1 fixed setting	8:1	fixed	75 lpm (20 gpm)	T11A	standard	104
Normale T11A GT 8:1 adjustable setting	8:1	adjustable	75 lpm (20 gpm)	T11A	standard	105
Normale T11A GT 10:1 fixed setting	10:1	fixed	75 lpm (20 gpm)	T11A	standard	106
Normale T11A GT 10:1 adjustable setting	10:1	adjustable	75 lpm (20 gpm)	T11A	standard	107
Normale T11A CVT 2:1 fixed setting	2:1	fixed	60 lpm (15 gpm)	T11A	standard	108
Normale T11A CVT 2:1 adjustable setting	2:1	adjustable	60 lpm (15 gpm)	T11A	standard	109
Normale T11A CVT 3:1 fixed setting	3:1	fixed	60 lpm (15 gpm)	T11A	standard	110
Normale T11A CVT 3:1 adjustable setting	3:1	adjustable	60 lpm (15 gpm)	T11A	standard	111
Normale T11A CVT 5:1 fixed setting	5:1	fixed	60 lpm (15 gpm)	T11A	standard	112
Normale T11A CVT 5:1 adjustable setting	5:1	adjustable	60 lpm (15 gpm)	T11A	standard	113
Normale T11A CVT 8:1 fixed setting	8:1	fixed	60 lpm (15 gpm)	T11A	standard	114

Valve name	pilot ratio	setting	capacity	cavity	configuration	page
Normale T11A CVT 8:1 adjustable setting	8:1	adjustable	60 lpm (15 gpm)	T11A	standard	115
Normale T11A CVT 10:1 fixed setting	10:1	fixed	60 lpm (15 gpm)	T11A	standard	116
Normale T11A CVT 10:1 adjustable setting	10:1	adjustable	60 lpm (15 gpm)	T11A	standard	117
Normale T2A 4:1 fixed setting	4:1	fixed	120 lpm (30 gpm)	T2A	standard	118
Normale T2A 4:1 adjustable setting	4:1	adjustable	120 lpm (30 gpm)	T2A	standard	119
Normale T2A 10:1 fixed setting	10:1	fixed	120 lpm (30 gpm)	T2A	standard	120
Normale T2A 10:1 adjustable setting	10:1	adjustable	120 lpm (30 gpm)	T2A	standard	121
Normale T2A GT 4:1 fixed setting	4:1	fixed	150 lpm (38gpm)	T2A	standard	122
Normale T2A GT 4:1 adjustable setting	4:1	adjustable	150 lpm (38gpm)	T2A	standard	123
Normale T17A 4:1 adjustable setting	4:1	adjustable	240 lpm (60 gpm)	T17A	standard	124
Normale T17A 8:1 adjustable setting	8:1	adjustable	240 lpm (60 gpm)	T17A	standard	125
Normale T19A 5:1 adjustable setting	5:1	adjustable	480 lpm (120 gpm)	T19A	standard	126
Normale T19A 8:1 adjustable setting	8:1	adjustable	480 lpm (120 gpm)	T19A	standard	127
Normale i08 2:1 SP fixed setting ultra fine control	2:1	fixed	4 lpm (1 gpm)	i08	standard	128
Normale i08 2:1 SP adjustable setting ultra fine control	2:1	adjustable	4 lpm (1 gpm)	i08	standard	129
Normale i08 2:1 SP fixed setting very fine control	2:1	fixed	10 lpm (2,6 gpm)	i08	standard	130
Normale i08 2:1 SP adjustable setting very fine control	2:1	adjustable	10 lpm (2,6 gpm)	i08	standard	131
Normale i08 2:1 SP fixed setting fine control	2:1	fixed	15 lpm (4 gpm)	i08	standard	132
Normale i08 2:1 SP adjustable setting fine control	2:1	adjustable	15 lpm (4 gpm)	i08	standard	133
Normale i08 2:1 SP fixed setting	2:1	fixed	30 lpm (8 gpm)	i08	standard	134
Normale i08 2:1 SP adjustable setting	2:1	adjustable	30 lpm (8 gpm)	i08	standard	135
Normale i08 3:1 fixed setting ultra fine control	3:1	fixed	4 lpm (1 gpm)	i08	standard	136
Normale i08 3:1 adjustable setting ultra fine control	3:1	adjustable	4 lpm (1 gpm)	i08	standard	137
Normale i08 3:1 fixed setting very fine control	3:1	fixed	10 lpm (2,6 gpm)	i08	standard	138

Valve name	pilot ratio	setting	capacity	cavity	configuration	page
Normale i08 3:1 adjustable setting very fine control	3:1	adjustable	10 lpm (2,6 gpm)	i08	standard	139
Normale i08 3:1 fixed setting fine control	3:1	fixed	15 lpm (4 gpm)	i08	standard	140
Normale i08 3:1 adjustable setting fine control	3:1	adjustable	15 lpm (4 gpm)	i08	standard	141
Normale i08 3:1 fixed setting	3:1	fixed	30 lpm (8 gpm)	i08	standard	142
Normale i08 3:1 adjustable setting	3:1	adjustable	30 lpm (8 gpm)	i08	standard	143
Normale i08 3:1 SP fixed setting ultra fine control	3:1	fixed	4 lpm (1 gpm)	i08	standard	144
Normale i08 3:1 SP adjustable setting ultra fine control	3:1	adjustable	4 lpm (1 gpm)	i08	standard	145
Normale i08 3:1 SP fixed setting very fine control	3:1	fixed	10 lpm (2,6 gpm)	i08	standard	146
Normale i08 3:1 SP adjustable setting very fine control	3:1	adjustable	10 lpm (2,6 gpm)	i08	standard	147
Normale i08 3:1 SP fixed setting fine control	3:1	fixed	15 lpm (4 gpm)	i08	standard	148
Normale i08 3:1 SP adjustable setting fine control	3:1	adjustable	15 lpm (4 gpm)	i08	standard	149
Normale i08 3:1 SP fixed setting	3:1	fixed	30 lpm (8 gpm)	i08	standard	150
Normale i08 3:1 SP adjustable setting	3:1	adjustable	30 lpm (8 gpm)	i08	standard	151
Normale i08 4:1 fixed setting ultra fine control	4:1	fixed	4 lpm (1 gpm)	i08	standard	152
Normale i08 4:1 adjustable setting ultra fine control	4:1	adjustable	4 lpm (1 gpm)	i08	standard	153
Normale i08 4:1 fixed setting fine control	4:1	fixed	15 lpm (4 gpm)	i08	standard	154
Normale i08 4:1 adjustable setting fine control	4:1	adjustable	15 lpm (4 gpm)	i08	standard	155
Normale i08 4:1 fixed setting	4:1	fixed	30 lpm (8 gpm)	i08	standard	156
Normale i08 4:1 adjustable setting	4:1	adjustable	30 lpm (8 gpm)	i08	standard	157
Normale i08 4:1 SP fixed setting ultra fine control	4:1	fixed	4 lpm (1 gpm)	i08	standard	158
Normale i08 4:1 SP adjustable setting ultra fine control	4:1	adjustable	4 lpm (1 gpm)	i08	standard	159
Normale i08 4:1 SP fixed setting fine control	4:1	fixed	15 lpm (4 gpm)	i08	standard	160
Normale i08 4:1 SP adjustable setting fine control	4:1	adjustable	15 lpm (4 gpm)	i08	standard	161
Normale i08 4:1 SP fixed setting	4:1	fixed	30 lpm (8 gpm)	i08	standard	162

Valve name	pilot ratio	setting	capacity	cavity	configuration	page
Normale i08 4:1 SP adjustable setting	4:1	adjustable	30 lpm (8 gpm)	i08	standard	163
Normale i08 5:1 SP fixed setting	5:1	fixed	30 lpm (8 gpm)	i08	standard	164
Normale i08 5:1 SP adjustable setting	5:1	adjustable	30 lpm (8 gpm)	i08	standard	165
Normale i08 8:1 SP fixed setting	8:1	fixed	30 lpm (8 gpm)	i08	standard	166
Normale i08 8:1 SP adjustable setting	8:1	adjustable	30 lpm (8 gpm)	i08	standard	167
Normale i08 10:1 SP fixed setting	10:1	fixed	30 lpm (8 gpm)	i08	standard	168
Normale i08 10:1 SP adjustable setting	10:1	adjustable	30 lpm (8 gpm)	i08	standard	169
Normale i12 4:1 fixed setting	4:1	fixed	120 lpm (30 gpm)	i12	standard	170
Normale i12 4:1 adjustable setting	4:1	adjustable	120 lpm (30 gpm)	i12	standard	171
Normale i16 4:1 adjustable setting	4:1	adjustable	200 lpm (50 gpm)	i16	standard	172
Normale 31PB 4:1 adjustable setting	4:1	adjustable	60 lpm (15 gpm)	31PB	standard	173
Normale 34PB 4:1 adjustable setting fine control	4:1	adjustable	120 lpm (30 gpm)	34PB	standard	174
Normale 34PB 4:1 adjustable setting	4:1	adjustable	150 lpm (38gpm)	34PB	standard	175

Balanced Configuration

Compensata SAE12 4:1 SP fixed setting	4:1	fixed	120 lpm (30 gpm)	SAE12	balanced	176
Compensata SAE12 4:1 SP adjustable setting	4:1	adjustable	120 lpm (30 gpm)	SAE12	balanced	177
Compensata T2A 4:1 fixed setting	4:1	fixed	120 lpm (30 gpm)	T2A	balanced	178
Compensata T2A 4:1 adjustable setting	4:1	adjustable	120 lpm (30 gpm)	T2A	balanced	179
Compensata T2A 4:1 SP fixed setting	4:1	fixed	120 lpm (30 gpm)	T2A	balanced	180
Compensata T2A 4:1 SP adjustable setting	4:1	adjustable	120 lpm (30 gpm)	T2A	balanced	181
Compensata i12 4:1 SP fixed setting	4:1	fixed	120 lpm (30 gpm)	i12	balanced	182
Compensata i12 4:1 SP adjustable setting	4:1	adjustable	120 lpm (30 gpm)	i12	balanced	183

Valve name	pilot ratio	setting	capacity	cavity	configuration	page
Vented Configuration						
Ventilata SAE08 4:1 fixed setting	4:1	fixed	30 lpm (8 gpm)	SAE08	vented	184
Ventilata SAE08 4:1 adjustable setting	4:1	adjustable	30 lpm (8 gpm)	SAE08	vented	185
Ventilata SAE10 3:1 adjustable setting	3:1	adjustable	60 lpm (15 gpm)	SAE10	vented	186
Ventilata SAE12 4:1 adjustable setting	4:1	adjustable	120 lpm (30 gpm)	SAE12	vented	187
Ventilata SAE16 4:1 adjustable setting	4:1	adjustable	200 lpm (50 gpm)	SAE16	vented	188
Ventilata Ristretta T11A 3:1 fixed setting ultra fine control	3:1	fixed	30 lpm (8 gpm)	T11A	vented	189
Ventilata Ristretta T11A 3:1 adjustable setting ultra fine control	3:1	adjustable	30 lpm (8 gpm)	T11A	vented	190
Ventilata Ristretta T11A 3:1 fixed setting fine control	3:1	fixed	30 lpm (8 gpm)	T11A	vented	191
Ventilata Ristretta T11A 3:1 adjustable setting fine control	3:1	adjustable	30 lpm (8 gpm)	T11A	vented	192
Ventilata Ristretta T11A 3:1 fixed setting	3:1	fixed	30 lpm (8 gpm)	T11A	vented	193
Ventilata Ristretta T11A 3:1 adjustable setting	3:1	adjustable	30 lpm (8 gpm)	T11A	vented	194
Ventilata Ristretta T11A 4:1 fixed setting ultra fine control	4:1	fixed	30 lpm (8 gpm)	T11A	vented	195
Ventilata Ristretta T11A 4:1 adjustable setting ultra fine control	4:1	adjustable	30 lpm (8 gpm)	T11A	vented	196
Ventilata Ristretta T11A 4:1 fixed setting fine control	4:1	fixed	30 lpm (8 gpm)	T11A	vented	197
Ventilata Ristretta T11A 4:1 adjustable setting fine control	4:1	adjustable	30 lpm (8 gpm)	T11A	vented	198
Ventilata Ristretta T11A 4:1 fixed setting	4:1	fixed	30 lpm (8 gpm)	T11A	vented	199
Ventilata Ristretta T11A 4:1 adjustable setting	4:1	adjustable	30 lpm (8 gpm)	T11A	vented	200
Ventilata T11A 1:1 adjustable setting	1:1	adjustable	60 lpm (15 gpm)	T11A	vented	201
Ventilata T11A 2:1 adjustable setting	2:1	adjustable	60 lpm (15 gpm)	T11A	vented	202
Ventilata T11A 3:1 adjustable setting	3:1	adjustable	60 lpm (15 gpm)	T11A	vented	203
Ventilata T11A 5:1 adjustable setting	5:1	adjustable	60 lpm (15 gpm)	T11A	vented	204
Ventilata T11A 8:1 adjustable setting	8:1	adjustable	60 lpm (15 gpm)	T11A	vented	205
Ventilata T11A 10:1 adjustable setting	10:1	adjustable	60 lpm (15 gpm)	T11A	vented	206
Ventilata T2A 2:1 adjustable setting	2:1	adjustable	120 lpm (30 gpm)	T2A	vented	207

Valve name	pilot ratio	setting	capacity	cavity	configuration	page
Ventilata T2A 4:1 adjustable setting	4:1	adjustable	120 lpm (30 gpm)	T2A	vented	208
Ventilata T2A 8:1 adjustable setting	8:1	adjustable	120 lpm (30 gpm)	T2A	vented	209
Ventilata T17A 4:1 adjustable setting	4:1	adjustable	240 lpm (60 gpm)	T17A	vented	210
Ventilata T19A 5:1 adjustable setting	5:1	adjustable	480 lpm (120 gpm)	T19A	vented	211
Ventilata T19A 8:2 adjustable setting	8:2	adjustable	480 lpm (120 gpm)	T19A	vented	212
Ventilata i08 4:1 fixed setting	4:1	fixed	30 lpm (8 gpm)	i08	vented	213
Ventilata i08 4:1 adjustable setting	4:1	adjustable	30 lpm (8 gpm)	i08	vented	214
Ventilata i12 4:1 adjustable setting	4:1	adjustable	120 lpm (30 gpm)	i12	vented	215
Ventilata i16 4:1 adjustable setting	4:1	adjustable	200 lpm (50 gpm)	i16	vented	216
Ventilata 07P 15:1 adjustable setting	15:1	adjustable	20 lpm (8 gpm)	07P	vented	217

Drained Configuration

Drenata T21A 1:1 adjustable setting	1:1	adjustable	60 lpm (15 gpm)	T21A	drained	218
Drenata T21A 2:1 adjustable setting	2:1	adjustable	60 lpm (15 gpm)	T21A	drained	219
Drenata T21A 3:1 adjustable setting	3:1	adjustable	60 lpm (15 gpm)	T21A	drained	220
Drenata T21A 5:1 adjustable setting	5:1	adjustable	60 lpm (15 gpm)	T21A	drained	221
Drenata T21A 8:1 adjustable setting	8:1	adjustable	60 lpm (15 gpm)	T21A	drained	222
Drenata T21A 10:1 adjustable setting	10:1	adjustable	60 lpm (15 gpm)	T21A	drained	223

Check Valves

P.O. check T11A fixed setting	3:1	fixed	60 lpm (15 gpm)	T11A	drained	224
P.O. check T11A SP fixed setting	3:1	fixed	60 lpm (15 gpm)	T11A	standard	225
P.O. check i08 fixed setting	3:1	fixed	30 lpm (8 gpm)	i08	standard	226
P.O. check i08 SP fixed setting	3:1	fixed	30 lpm (8 gpm)	i08	standard	227
Check Valve i10 fixed setting		fixed	90 lpm (25 gpm)	i10	standard	228

Valve name	pilot ratio	setting	capacity	cavity	configuration	page
Relief Valves						
VM6 direct acting adjustable setting		adjustable	1,5 lpm (0,4 gpm)	VM6	standard	229
VM31 direct acting - guided poppet type adjustable setting		adjustable	30 lpm (8gpm)	VM31	standard	230
VM31 direct acting - guided poppet type Hard Seat F adjustable setting		adjustable	30 lpm (8gpm)	VM31	standard	231
VMP2 10A pilot operated		adjustable	60 lpm (15gpm)	SAE10 std	standard	232

Sequence Valves

Sequenza SAE10 AP		adjustable	60 lpm (15 gpm)	SAE10 std	drained	233
Sequenza SAE10 AD		adjustable	60 lpm (15 gpm)	SAE10 std	drained	234
Sequenza T11A AP		adjustable	60 lpm (15 gpm)	T11A	drained	235

Pressure Reducing Valves

CRPR SAE10 DMP		adjustable	20 lpm (5 gpm)	SAE10	standard	236
CRPR SAE10		adjustable	30 lpm (8 gpm)	SAE10	standard	237

Parts in body valves

Valve name	pilot ratio	capacity	type	ports	connection	configuration	setting	page
Standard Configuration								
Normale 79 S L 1/4	4:1	40 lpm (10 gpm)	single	G 1/4	in line	standard	adjustable	238
Normale 79 S L PIL 1/4	4:1	40 lpm (10 gpm)	single	G 1/4	in line - pil port	standard	adjustable	239
Normale 79 S FC2 1/4	4:1	40 lpm (10 gpm)	single	G 1/4	flanged	standard	adjustable	240
Normale 79 D L 1/4	4:1	40 lpm (10 gpm)	double	G 1/4	in line	standard	adjustable	241
Normale 79 D FC2 1/4	4:1	40 lpm (10 gpm)	double	G 1/4	flanged	standard	adjustable	242
Normale 79 D L 1/4 steel	4:1	40 lpm (10 gpm)	double	G 1/4	in line	standard	adjustable	243
Normale 79 D FC2 1/4 steel	4:1	40 lpm (10 gpm)	double	G 1/4	flanged	standard	adjustable	244
Normale 31 NPS S L 3/8 F	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	in line	standard	fixed	245
Normale 31 NPS S L 3/8	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	in line	standard	adjustable	246
Normale 31 NPS S L PIL 3/8 F	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	in line - pil port	standard	fixed	247
Normale 31 NPS S L PIL 3/8	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	in line - pil port	standard	adjustable	248
Normale 31 NPS S FC1 PIL 3/8 F	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	flanged - pil port	standard	fixed	249
Normale 31 NPS S FC1 PIL 3/8	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	flanged - pil port	standard	adjustable	250
Normale 31 NPS S FC2 3/8 F	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	flanged	standard	fixed	251
Normale 31 NPS S FC2 3/8	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	flanged	standard	adjustable	252
Normale 31 NPS S FC1 PL 3/8 F	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	flanged c2	standard	fixed	253
Normale 31 NPS S FC1 PL 3/8	4:1 - 8:1	90 lpm (24 gpm)	single	G 3/8	flanged c2	standard	adjustable	254
Normale 31 NPS S L 1/2 F	4:1 - 8:1	90 lpm (24 gpm)	single	G 1/2	in line	standard	fixed	255
Normale 31 NPS S L 1/2	4:1 - 8:1	90 lpm (24 gpm)	single	G 1/2	in line	standard	adjustable	256
Normale 31 NPS S L PIL 1/2 F	4:1 - 8:1	90 lpm (24 gpm)	single	G 1/2	flanged - pil port	standard	fixed	257
Normale 31 NPS S L PIL 1/2	4:1 - 8:1	90 lpm (24 gpm)	single	G 1/2	flanged - pil port	standard	adjustable	258
Normale 31 NPS S FC2 1/2 F	4:1 - 8:1	90 lpm (24 gpm)	single	G 1/2	flanged	standard	fixed	259
Normale 31 NPS S FC2 1/2	4:1 - 8:1	90 lpm (24 gpm)	single	G 1/2	flanged	standard	adjustable	260

Valve name	pilot ratio	capacity	type	ports	connection	configuration	setting	page
Normale 31 NPS S FC1 PL 1/2 F	4:1 - 8:1	90 lpm (24 gpm)	single	G 1/2	flanged c2	standard	fixed	261
Normale 31 NPS S FC1 PL 1/2	4:1 - 8:1	90 lpm (24 gpm)	single	G 1/2	flanged c2	standard	adjustable	262
Normale 31 NPS D L 3/8 F	4:1 - 8:1	90 lpm (24 gpm)	double	G 3/8	in line	standard	fixed	263
Normale 31 NPS D L 3/8	4:1 - 8:1	90 lpm (24 gpm)	double	G 3/8	in line	standard	adjustable	264
Normale 31 NPS D FC1 3/8 F	4:1 - 8:1	90 lpm (24 gpm)	double	G 3/8	flanged c2	standard	fixed	265
Normale 31 NPS D FC1 3/8	4:1 - 8:1	90 lpm (24 gpm)	double	G 3/8	flanged c2	standard	adjustable	266
Normale 31 NPS D FC2 3/8 F	4:1 - 8:1	90 lpm (24 gpm)	double	G 3/8	flanged	standard	fixed	267
Normale 31 NPS D FC2 3/8	4:1 - 8:1	90 lpm (24 gpm)	double	G 3/8	flanged	standard	adjustable	268
Normale 31 NPS D L 1/2 F	4:1 - 8:1	90 lpm (24 gpm)	double	G 1/2	in line	standard	fixed	269
Normale 31 NPS D L 1/2	4:1 - 8:1	90 lpm (24 gpm)	double	G 1/2	in line	standard	adjustable	270
Normale 31 NPS D FC1 1/2 F	4:1 - 8:1	90 lpm (24 gpm)	double	G 1/2	flanged c2	standard	fixed	271
Normale 31 NPS D FC1 1/2	4:1 - 8:1	90 lpm (24 gpm)	double	G 1/2	flanged c2	standard	adjustable	272
Normale 31 NPS D FC2 1/2 F	4:1 - 8:1	90 lpm (24 gpm)	double	G 1/2	flanged	standard	fixed	273
Normale 31 NPS D FC2 1/2	4:1 - 8:1	90 lpm (24 gpm)	double	G 1/2	flanged	standard	adjustable	274
Normale 34 S L 1/2	4:1 - 8:1	150 lpm (40 gpm)	single	G 1/2	in line	standard	adjustable	275
Normale 34 S FC1 PL 1/2	4:1 - 8:1	150 lpm (40 gpm)	single	G 1/2	flanged c2	standard	adjustable	276
Normale 34 S FC2 1/2	4:1 - 8:1	150 lpm (40 gpm)	single	G 1/2	flanged	standard	adjustable	277
Normale 34 S L 3/4	4:1 - 8:1	150 lpm (40 gpm)	single	G 3/4	in line	standard	adjustable	278
Normale 34 S FC1 PL 3/4	4:1 - 8:1	150 lpm (40 gpm)	single	G 3/4	flanged c2	standard	adjustable	279
Normale 34 S FC2 3/4	4:1 - 8:1	150 lpm (40 gpm)	single	G 3/4	flanged	standard	adjustable	280
Normale 34 D L 1/2	4:1 - 8:1	150 lpm (40 gpm)	single	G 1/2	in line	standard	adjustable	281
Normale 34 D FC2 1/2	4:1 - 8:1	150 lpm (40 gpm)	single	G 1/2	flanged	standard	adjustable	282
Normale 34 D L 3/4	4:1 - 8:1	150 lpm (40 gpm)	single	G 3/4	in line	standard	adjustable	283
Normale 34 D FC2 3/4	4:1 - 8:1	150 lpm (40 gpm)	single	G 3/4	flanged	standard	adjustable	284
Normale 43 S L Pil 1	4:1	350 lpm (93 gpm)	single	G 1	in line - pil port	standard	adjustable	285

Valve name	pilot ratio	capacity	type	ports	connection	configuration	setting	page
Balanced configuration								
Compensata 31 NPS S L 3/8	4:1	90 lpm (24 gpm)	single	G 3/8	in line	balanced	adjustable	286
Compensata 31 NPS S L Pil 3/8	4:1	90 lpm (24 gpm)	single	G 3/8	in line - pil port	balanced	adjustable	287
Compensata 31 NPS S FC1 Pil 3/8	4:1	90 lpm (24 gpm)	single	G 3/8	flanged - pil port	balanced	adjustable	288
Compensata 31 NPS S FC1 PL 3/8	4:1	90 lpm (24 gpm)	single	G 3/8	flanged c2	balanced	adjustable	289
Compensata 31 NPS S FC2 3/8	4:1	90 lpm (24 gpm)	single	G 3/8	flanged	balanced	adjustable	290
Compensata 31 NPS S L 1/2	4:1	90 lpm (24 gpm)	single	G 1/2	in line	balanced	adjustable	291
Compensata 31 NPS S L Pil 1/2	4:1	90 lpm (24 gpm)	single	G 1/2	in line - pil port	balanced	adjustable	292
Compensata 31 NPS S FC1 PL 1/2	4:1	90 lpm (24 gpm)	single	G 1/2	flanged c2	balanced	adjustable	293
Compensata 31 NPS S FC2 1/2	4:1	90 lpm (24 gpm)	single	G 1/2	flanged	balanced	adjustable	294
Compensata 31 NPS D L 3/8	4:1	90 lpm (24 gpm)	double	G 3/8	in line	balanced	adjustable	295
Compensata 31 NPS D FC2 3/8	4:1	90 lpm (24 gpm)	double	G 3/8	flanged	balanced	adjustable	296
Compensata 31 NPS D L 1/2	4:1	90 lpm (24 gpm)	double	G 1/2	in line	balanced	adjustable	297
Compensata 31 NPS D FC2 1/2	4:1	90 lpm (24 gpm)	double	G 1/2	flanged	balanced	adjustable	298
Vented Configuration								
Ventilata 79 D FC2P 1/4	4:1	40 lpm (10 gpm)	double	G 1/4	flanged	vented	adjustable	299
Ventilata 79 D FC2 3/8	4:1	40 lpm (10 gpm)	double	G 3/8	flanged	vented	adjustable	300
Ventilata 34 S L 1/2	4:1 -8:1	150 lpm (40 gpm)	single	G 1/2	in line	vented	adjustable	301
Ventilata 34 S FC1 PL 1/2	4:1 -8:1	150 lpm (40 gpm)	single	G 1/2	flanged c2	vented	adjustable	302
Ventilata 34 S FC2 1/2	4:1 -8:1	150 lpm (40 gpm)	single	G 1/2	flanged	vented	adjustable	303
Ventilata 34 S L 3/4	4:1 -8:1	150 lpm (40 gpm)	single	G 3/4	in line	vented	adjustable	304
Ventilata 34 S FC1 PL 3/4	4:1 -8:1	150 lpm (40 gpm)	single	G 3/4	flanged c2	vented	adjustable	305
Ventilata 34 S FC2 PL 3/4	4:1 -8:1	150 lpm (40 gpm)	single	G 3/4	flanged	vented	adjustable	306

Valve name	pilot ratio	capacity	type	ports	connection	configuration	setting	page
Ventilata 34 D L 1/2	4:1 -8:1	150 lpm (40 gpm)	double	G 1/2	in line	vented	adjustable	307
Ventilata 34 D FC2 1/2	4:1 -8:1	150 lpm (40 gpm)	double	G 1/2	flanged	vented	adjustable	308
Ventilata 34 D L 3/4	4:1 -8:1	150 lpm (40 gpm)	double	G 1/2	in line	vented	adjustable	309
Ventilata 34 D FC2 3/4	4:1 -8:1	150 lpm (40 gpm)	double	G 1/2	flanged	vented	adjustable	310

Regenerative Function

Rigenerativo 79	4:1	9 lpm (24 gpm)	regenerative	G 3/8	flanged		adjustable	311
Rigenerativo 43	4:1	400 lpm (106 gpm)	regenerative	1" SAE6000	flanged		adjustable	312

Valves for motors

Normale 43 S FW 1	13:1	350 lpm (93 gpm)	single	1" SAE6000 - 1 1/4" SAE6000	flanged		adjustable	313
Normale ZG SAE20	8:1	320 lpm (85 gpm)	double	1" SAE6000	flanged		adjustable	314

Introduction

The term *Counterbalance Valve* has become generally accepted globally for valves that perform the following functions in mobile equipment:

- > **Load Holding:** securing the last commanded position of an actuator by preventing fluid from escaping work chambers, usually in a leak free mode.
- > **Motion Control:** maintaining positive effort of an actuator in all conditions, even in cases where the load can work with forces of gravity.
- > **Overcenter Control:** preventing the load from running ahead of the power supply to the actuator in cases where the work of the actuator transitions from a positive force in the requested direction of movement to a negative force in the same direction
- > **Free upstream flow** into the actuator through a check valve; for example for load lifting.
- > **Pressure relieving** (with open center spool in the directional valve) for pressure surges in the actuator work chamber caused, for example, by oil expansion due to heating, etc.

SANT & Valvole Italia offers a wide range of counterbalance valves to best suit the performance needs of a large number of applications. This first catalog only shows the standard range of components, but of course our team of hydraulic, service and design engineers is available to support our Customers to:

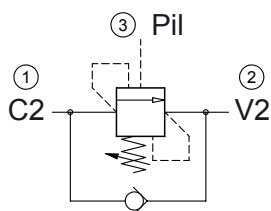
- > Customize blocks and solutions to better fit each application
- > Customize, when needed, the valves function and components design in order to reach the proper performance level required by the application

Important features of our counterbalance valves

- > Low leakage when closed: maximum 5 drops/min when valve closes with reseal pressure applied to load holding port
- > Standard maximum operating pressure 350 Bar (5000 PSI), and optional maximum working pressure of 420 Bar (6100 PSI).
- > Reliable and stable hydraulic performance over full temperature range, -30°C – 100°C (-22F – 212F).
- > Wide range of pilot ratios from 2:1 to 24:1
- > High level of contamination resistance: the critical components of the load holding valve are hardened and are not subjected to performance degrading damage with normal levels of fluid contamination. However, good system design considerations should be made to maintain ISO 4406 19/17/14 for all high pressure components.
- > Unsealed or Sealed Pilot Piston: the pilot piston can be provided with a glide ring for reduced hysteresis which allows a very low level of leakage which is beneficial for bleeding air from the pilot chamber on commissioning. The pilot piston can also be provided with positive seals for critical low flow or master/slave circuits where no leakage through the pilot chamber can be tolerated.
- > Setting Adjustment in CLOCKWISE direction. Most hydraulic components are made with setting adjustment mechanisms following the convention that adjustment made in a CLOCKWISE direction INCREASES the set value. Some counterbalance valve companies have created components where COUNTERCLOCKWISE adjustments INCREASE the set value. However the latter feature is achieved mechanically, the increasing adjustment in a COUNTERCLOCKWISE direction is not intuitive and therefore may be unsafe.
- > Fixed or Adjustable Setting: counterbalance valves can be produced with fixed or adjustable settings. Adjustable setting valves can be provided with tamper indicating caps.
- > Reseat: in the product datasheets which follow, the reseal value indicated is obtained with valve set at maximum setting value allowed; this reseal value (in percentage of the setting) decreases with decreasing setting values.

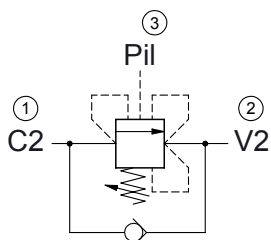
There are several versions of counterbalance valves designed to optimize machine performance, efficiency and stability based on the fact that some level of backpressure will always exist while the valve is in operation.

NORMALE standard counterbalance valve



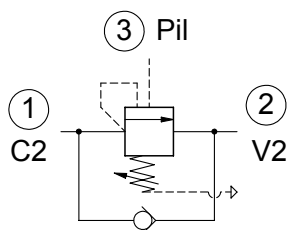
Port (1) is the load port; Port (2) is the exhaust port and Port (3) is the pilot port. The spring chamber on the NORMALE counterbalance valve is drained/connected to port (2). In this case, backpressure has effects on both the relief and pilot opening pressures since it pushes the relief piston in the closed direction and it opposes the pilot piston too.

COMPENSATA compensated counterbalance valve



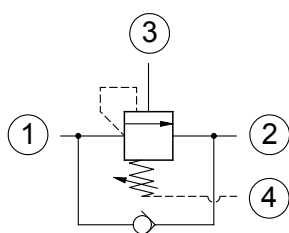
The spring chamber is connected to the exhaust port (2), however, this valve type has a special configuration on the relief piston that allows the relief opening independently from any back pressure. The pilot opening pressure, instead, remains influenced by backpressure at port 2. These valves may be employed in those applications that require to relieve pressure at the established pressure setting value, independently from any backpressure in the return line. They are frequently fitted in systems with directional valves with closed center spools equipped with port relief valves

VENTILATA vented counterbalance valve



The Vented counterbalance valve has a vented spring chamber. Both the relief and the pilot opening of the valve are independent from backpressure at port 2. These valves must be used only in conjunction with directional valves with closed center spools and equipped with port relief valves. This version of counterbalance valve will be more efficient in systems with high backpressure or line losses between the counterbalance valve and the directional control.

DRENATA drained counterbalance valve



The drained counterbalance valve includes a fourth port which allows the spring chamber to be connected either to tank line (sump) or other pressure sources in the system. In case the drain line is connected to tank pressure, the performance can be similar as the vented counterbalance valve as far as the pressure in the drain line is close to zero. These valves type can be used when the application boundary conditions makes it preferable to avoid a vented spring chamber, or in various special applications as regenerative circuits.

Determining the Proper Pressure Setting of a Counterbalance Valve

The pressure setting (P_s) of a counterbalance valve must be at least thirty percent higher than the maximum load induced pressure (P_L).



$$P_s \geq 1.3 \cdot P_L$$

Determining the

Opening Pressure of a Counterbalance Valve

The pilot pressure to open the counterbalance valve (or pressure to lower the load) depends on the valve setting, pilot ratio, load induced pressure, and pressures at the valve outlet and/or in the spring chamber. Following discussion and calculations use these variable definitions:

- P_S Counterbalance Valve setting**
- R_{Pil} Counterbalance Valve Pilot Ratio**
- P_L Load Induced Pressure**
- P_B Pressure at the Counterbalance Valve Outlet (Backpressure)**
- P_{pil} Pilot pressure required to open the counterbalance valve (Load Lowering Pressure)**
- P_R Pressure at port 1 required to open the relief function of the counterbalance valve**
- α Cylinder bore area / cylinder annular area**

The effects of backpressure on the pilot opening pressure and on the relief opening pressure of the valve are different, depending on the valve type.

These effects should be considered when selecting null conditions for directional control valve, design of plumbing and the ability for the counterbalance valve to function as a relief valve. For example the influence of back pressure can often be used to help stabilize functions as it creates a type of feedback helping the counterbalance valve to regulate the load during lowering. However, in cases where backpressure exists, system efficiency is in general compromised.

For a normal valve, it must be considered, that the backpressure has also effect of the relief opening pressure, with a factor $= R_{pil} + 1$. So, in case of backpressure, not only the pilot opening, but also the relief setting of a NORMALE counterbalance valve becomes higher.

The relief opening pressure (at port 1) of a standard type (NORMALE) counterbalance valve can be calculated as follows:

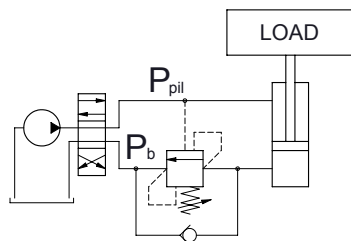
$$P_R = P_S + P_B \cdot (R_{Pil} + 1)$$

Example:
 NORMALE counterbalance valve with 4:1 pilot ratio, with nominal relief setting of 350 bar and backpressure of 10 bar has an effective relief opening at: $350 + 10 \cdot (4+1) = 400$ Bar.

If we consider the case of:

- > a standard counterbalance valve (sensitive to backpressure) and a vented valve
- > fitted to a double acting cylinder with a certain area ratio,
 α = cylinder bore area / cylinder annular area
- > ideal situation of absence or negligible effect of seal friction

The P_{pil} required to start opening the valve can be calculated as follows:



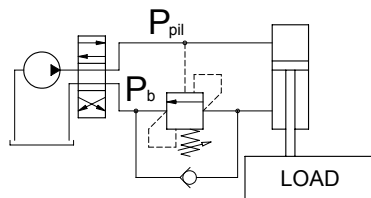
In case of load pushing the cylinder rod and valve fitted to the full bore side

NORMAL valve (as represented in the picture on the left)

$$P_{pil} = \frac{P_S - P_L + P_B \cdot (R_{pil} + 1)}{R_{pil} + \frac{1}{\alpha}} \quad \text{often simplified as} \quad P_{pil} = \frac{P_S - P_L + P_B \cdot (R_{pil} + 1)}{R_{pil}}$$

VENTED valve

$$P_{pil} = \frac{P_S - P_L}{R_{pil} + \frac{1}{\alpha}} \quad \text{often simplified as} \quad P_{pil} = \frac{P_S - P_L}{R_{pil}}$$



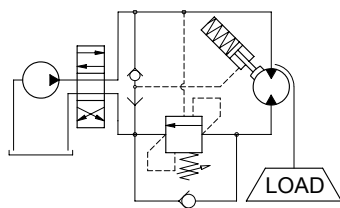
In case of load pulling the cylinder rod and valve fitted to the annular chamber

NORMAL valve (as represented in the picture on the left)

$$P_{pil} = \frac{P_S - P_L + P_B \cdot (R_{pil} + 1)}{R_{pil} + \alpha}$$

VENTED valve

$$P_{pil} = \frac{P_S - P_L}{R_{pil} + \alpha}$$



In case of valve fitted to an equal area actuator or to a hydraulic motor where $\alpha=1$

NORMAL valve (as represented in the picture on the left)

$$P_{pil} = \frac{P_S - P_L + P_B \cdot (R_{pil} + 1)}{R_{pil} + 1}$$

➤ SANT & Valvole Italia counterbalance technology

In general, the use of lower pilot ratios can help to achieve more stable functions/systems, but on the other hand this also creates a loss of efficiency of the function/system.

The specific requirements of each application and the boundary conditions of the system have to be taken into account in order to select the proper valve for each function, also considering the relevant characteristics of the other components which have an influence on the valve behavior (main directional valve, pump, control system, actuator, etc.).

Basing on these inputs **SANT & Valvole Italia** supports the Customers and Partners to select the most suitable load holding valve, and can also offer support in order to achieve a fine tuning of the valve on the application in order to keep the optimum pilot ratio (to support the system efficiency) and at the same time reach the desired stability, controllability and reactivity of the movement.

In order to find the proper tuning to keep

- High pilot ratio => higher efficiency
- Good stability and controllability of the movement
- Good reactivity, also in cold conditions

depending on the valve type, different strategies are possible and **SANT & Valvole Italia** can propose different devices to control the signals that determine the quality of the load handling / motion control. Simply put, the counterbalance valve performance must match the system dynamic in which it is installed: this includes hydraulic system reaction as well as machine rigidity or stiffness.

To advance counterbalance valve performance, optimizations have been made around the core of the counterbalance valve – The Load Holding Piston and Seat. Creating better flow paths, and extending the stroke of the load holding piston allows for larger flows (or less pressure drop) in the same or smaller valve packages. Furthermore, the modified flow passages and longer stroke allows for customization of the load holding piston to create area gains that best match the machine system dynamic over the opening time of the counterbalance valve. This also allows for designs of load holding pistons (poppets) which have either a very linear open area gain, or one that is progressive. Both of these techniques support better more stable transitions as the counterbalance valve regulates to safely control load lowering movements, and allows for increased speed of actuators in a predefined cavity or space.

➤ Valve Packaging, Flexibility, Labeling, Branding and Life

SANT & Valvole Italia has adopted all best practices into the design and manufacturing of counterbalance valves. Having a sharp focus on the single function of load holding allows those best practices to be installed in a flexible way such that no single process must inhibit innovation of product or Customer support. Being flexible means the company can flow with industry demands on technical and commercial issues, while always expanding the technology on which the company survives.

Every consideration is made with the Customer in mind.

> Pressure setting

Products are supplied pre-set at the standard pressure setting indicated in the relevant catalog sheet. If the application requires a readjustment, please ensure that the limits of the indicated pressure range and maximum working pressure are never exceeded.

> Storage of new valves

The valves shall not be exposed to direct sun light nor to sources of heat or ozone (like electric motors running), and should be stored in their original, protective packing at ambient temperature within the range -20°C and +50°C (-4°F and 122°F).

> Seals

O-Rings: Buna N (acrylonitrile butadiene), also named NBR (according to ASTM), compatible with fluids having mineral oil base, water-in-oil emulsions, and water-glycol fluids. These seals are standard for temperatures within the range -30°C and +100°C (-22°F and +212°F).

Back-up rings and Slide rings: strengthened PTFE (Politetrafluoroetilene like Teflon®, Lubriflon®, Ecoflon®, or similar).

FPM (Viton®) seals are available on request.

Note: the seals materials are compatible with the fluids normally used in hydraulic systems; in case of special fluids, if you suspect incompatibility between the fluid used and the standard seals, contact **SANT & Valvole Italia**.

> Seal kits

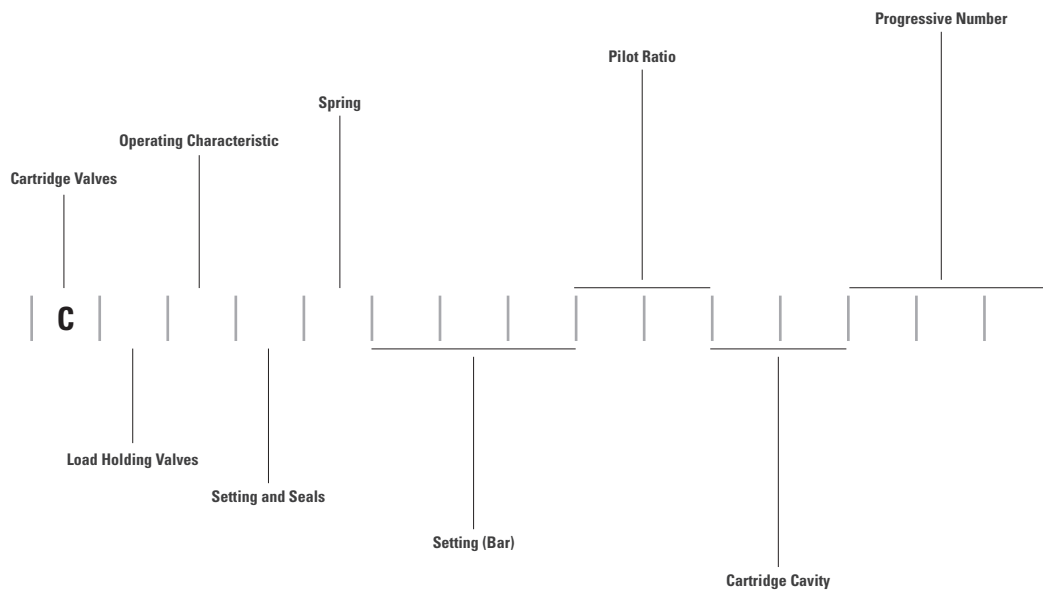
Cartridge valves: the kits include all the external seals

Parts-in-body valves: the kits normally include all external seals for flange fitting (please refer to each single datasheet)

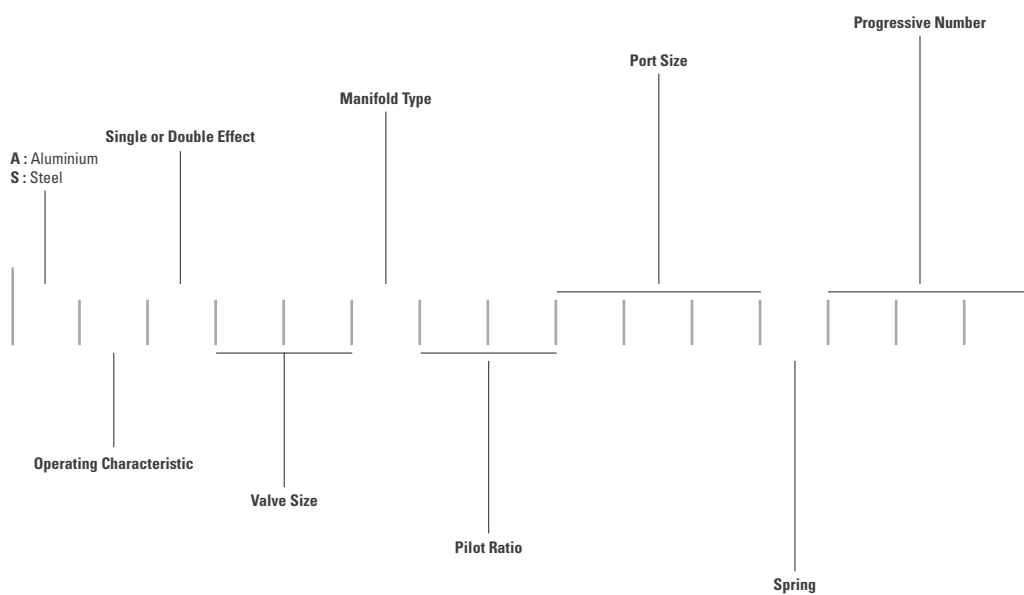
> Installation

- > Ensure that all matching surfaces are clean, without contamination.
- > Ensure that all seals and back-up rings for the matching surfaces are flawless and correctly placed.
- > Do not put any sealing material other than the standard seals.
- > Place the valve in position, then, by hand, insert the fittings and the locating screws.
- > In case of cartridge valve, check that the cavity is clean, without sharp edges or chips. Dip the cartridge in clean oil, then insert it into the cavity and screw it in by hand, until you begin to compress the top O-Ring.
- > Finally tighten with a calibrated torque wrench and torque up to the specifications shown in the catalog.

➤ Cartridge Valves

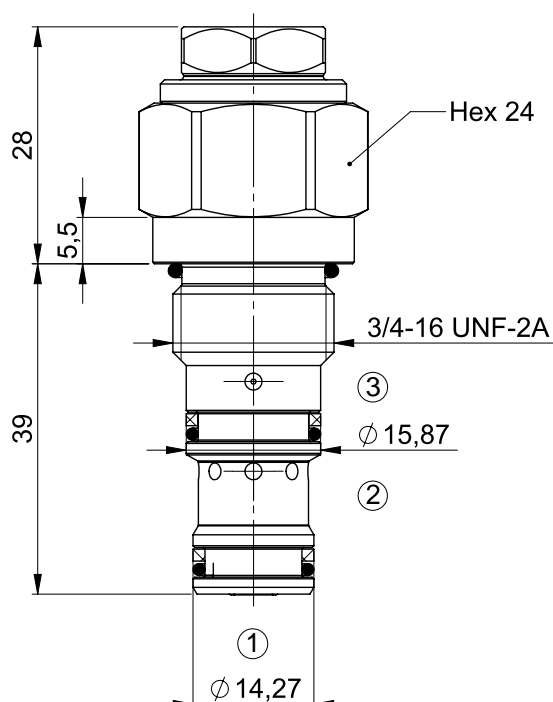
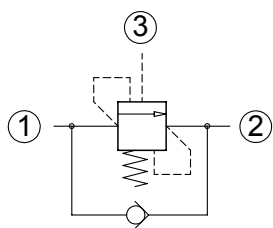


➤ Parts in body



Load holding valves

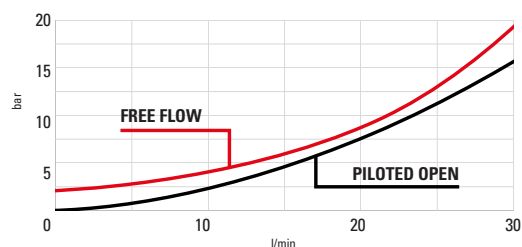
Normale SAE08 4:1 fixed setting



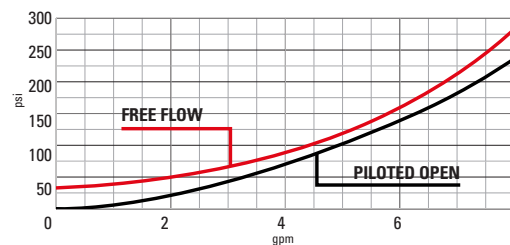
Technical Details

cavity	SAE08
capacity	30 lpm (8 gpm)
max operating pressure	350 bar
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



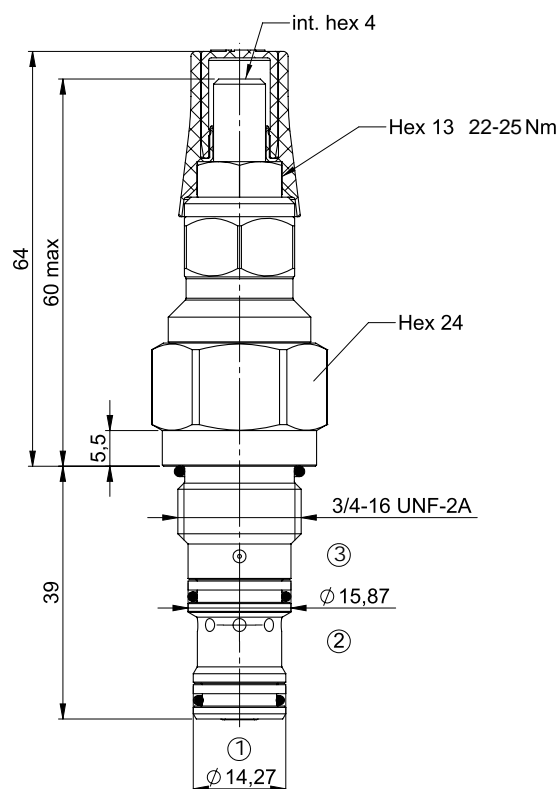
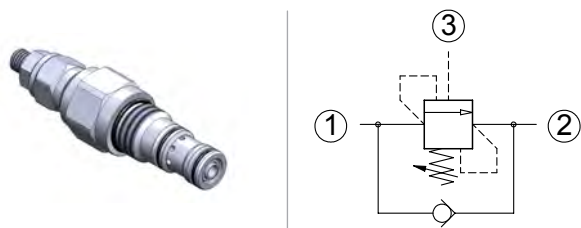
Seals
1 = BUNA SEALS
3 = VITON SEALS

C | 0 | 0 | | | | | 0 | 4 | 0 | 8 | 0 | 0 | A

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

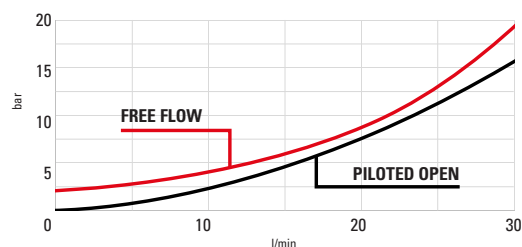
Normale SAE08 4:1 adjustable setting



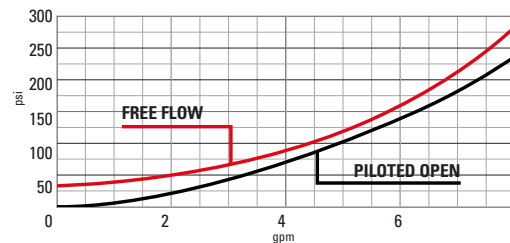
Technical Details

cavity	SAE08
capacity	30 lpm (8 gpm)
max operating pressure	350 bar
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

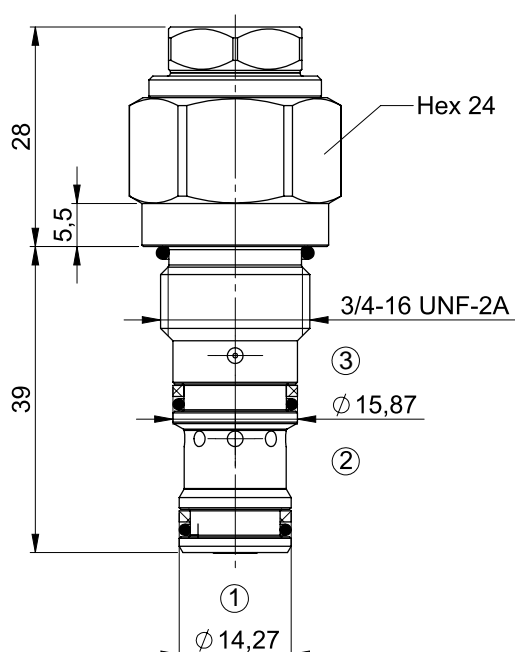
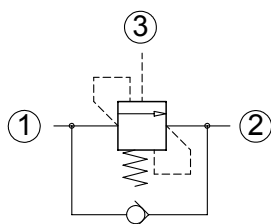
C | 0 | 0 | | | | | 0 | 4 | 0 | 8 | 0 | 0 | A

Spring Setting (bar)

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

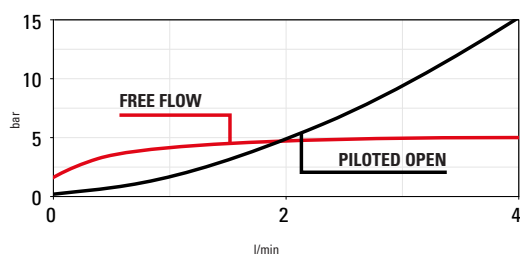
Normale SAE08 4:1 SP fixed setting **ULTRA FINE CONTROL**



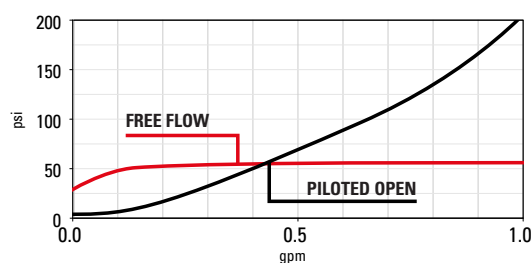
Technical Details

cavity	SAE08
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



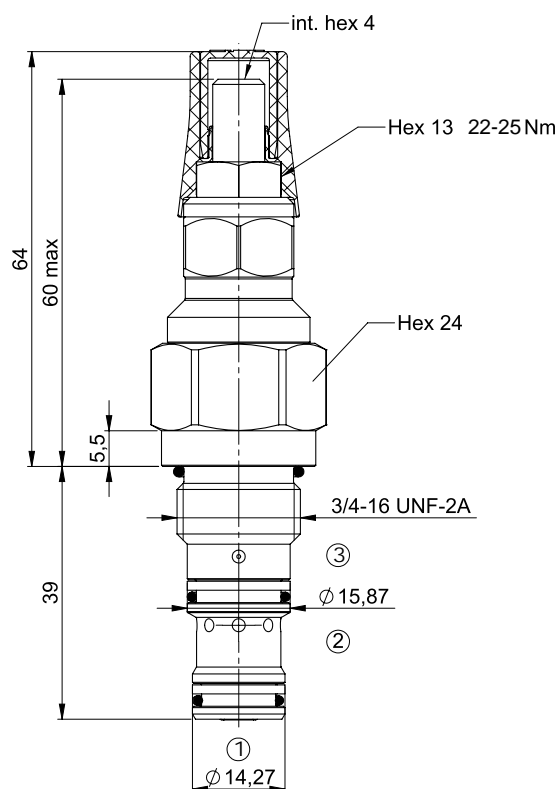
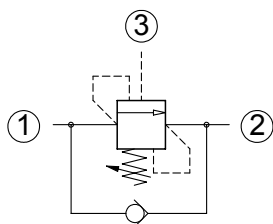
Seals
B = BUNA + sealed piston
D = VITON + sealed piston

C | D | 0 | | | | | 0 | 4 | 0 | 8 | 0 | 0 | A

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

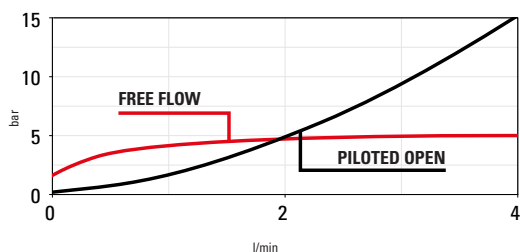
Normale SAE08 4:1 SP adj. setting **ULTRA FINE CONTROL**



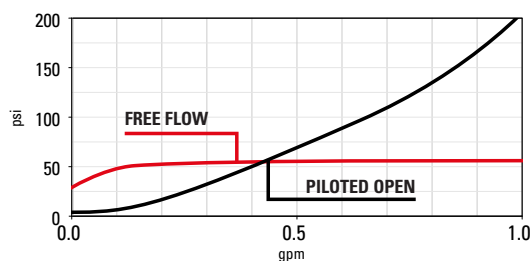
Technical Details

cavity	SAE08
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1 in ³ /min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + anti tampering + sealed piston
H = VITON + anti tampering + sealed piston

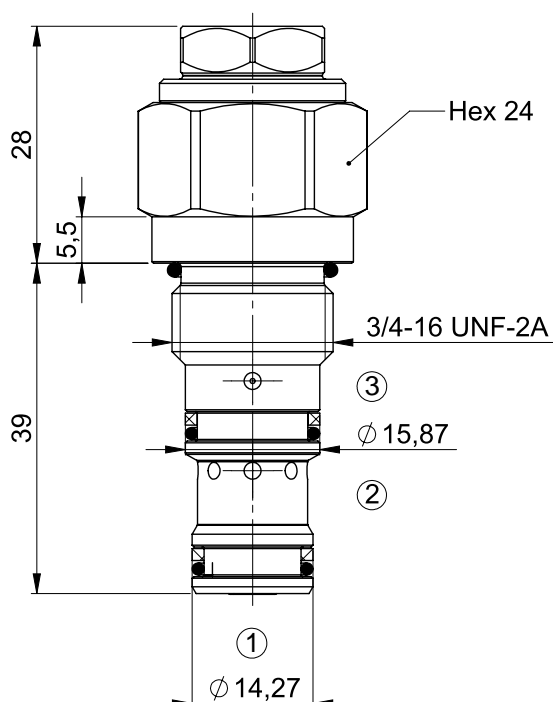
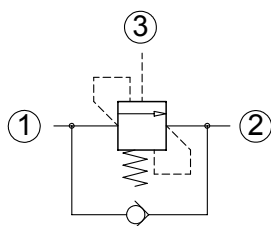
C | D | 0 | | | | | 0 | 4 | 0 | 8 | 0 | 0 | A

Spring Setting (bar)

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

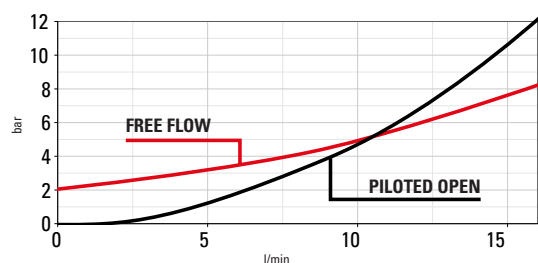
Normale SAE08 4:1 SP fixed setting **FINE CONTROL**



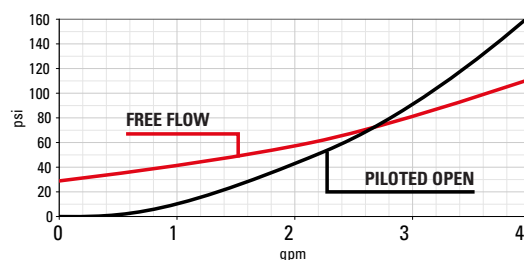
Technical Details

cavity	SAE08
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in ³ /min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



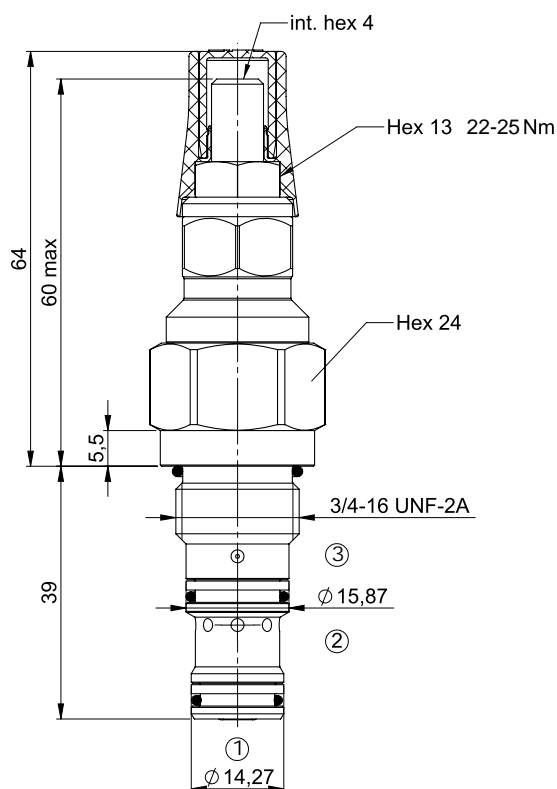
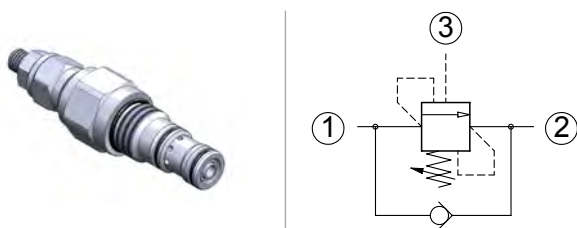
Seals
B = BUNA + sealed piston
D = VITON + sealed piston

C | W | 0 | | | | | 0 | 4 | 0 | 8 | 0 | 0 | A

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

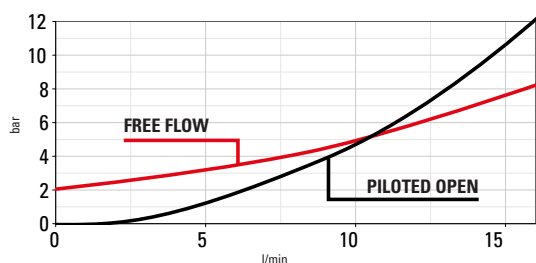
Normale SAE08 4:1 SP adjustable setting **FINE CONTROL**



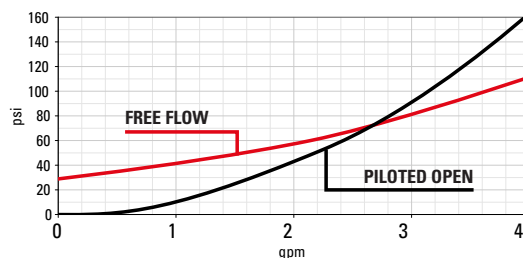
Technical Details

cavity	SAE08
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

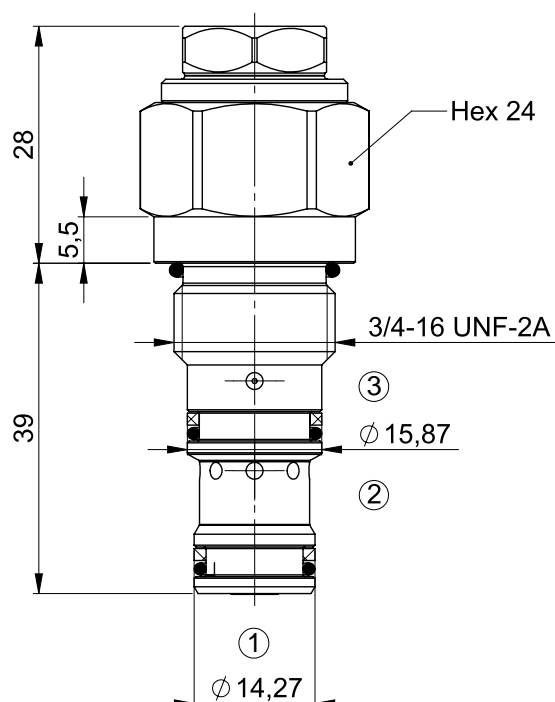
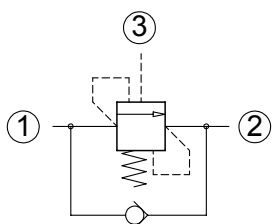
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + anti tampering + sealed piston
H = VITON + anti tampering + sealed piston

C | W | 0 | | | | | 0 | 4 | 0 | 8 | 0 | 0 | A

Spring Setting (bar)

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

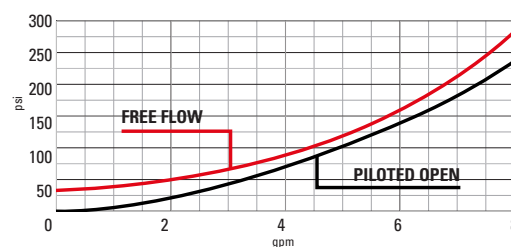
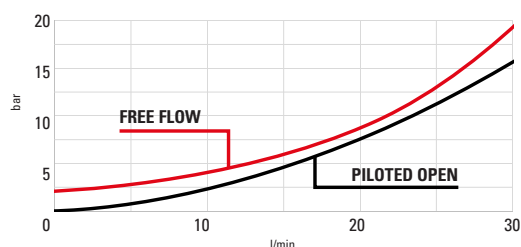
Normale SAE08 4:1 SP fixed setting



Technical Details

cavity	SAE08
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	100 bar (1450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Declared reset value is obtained with valve set @ maximum setting



Performance curves

Seals

B = BUNA + sealed piston
D = VITON + sealed piston

D = VITON + sealed piston

C	0	0							0	4	0	8	0	0	A
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Spring

L = 30-105 bar

T = 70-150 bar

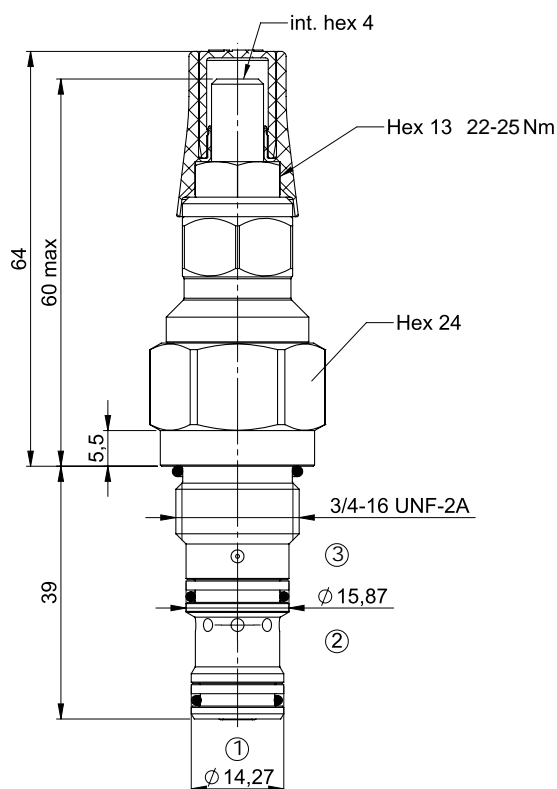
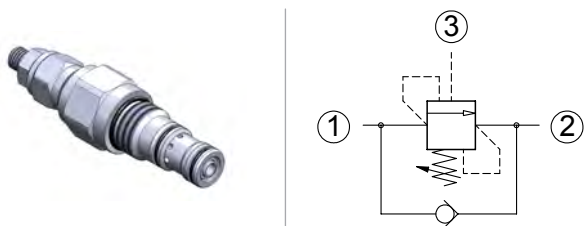
M = 100-210 bar

D = 200-350 bar

Setting (bar)

Load holding valves

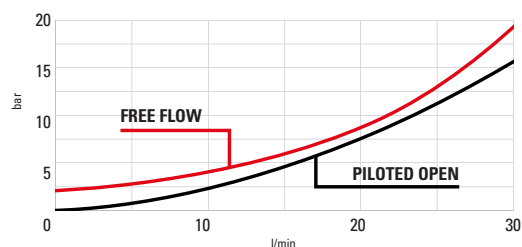
Normale SAE08 4:1 SP adjustable setting



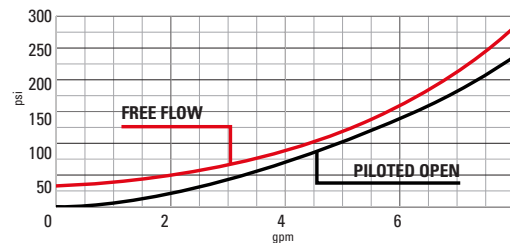
Technical Details

cavity	SAE08
capacity	30 lpm (8 gpm)
max operating pressure	350 bar
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + anti tampering + sealed piston
H = VITON + anti tampering + sealed piston

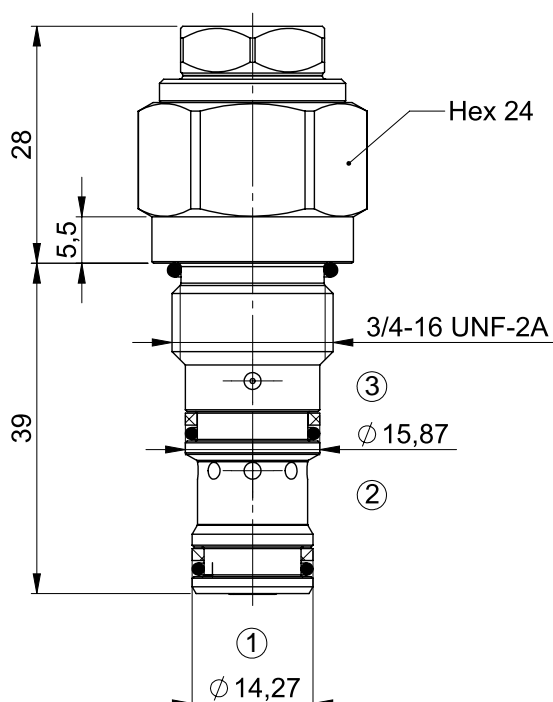
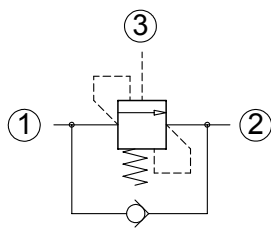
C | 0 | 0 | | | | | 0 | 4 | 0 | 8 | 0 | 0 | A

Spring Setting (bar)

- Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

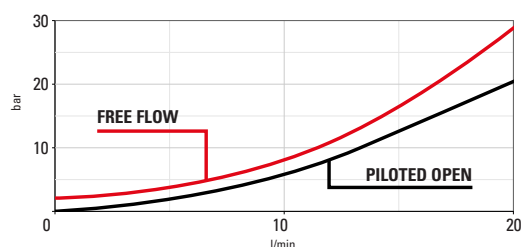
Normale SAE08 8:1 fixed setting



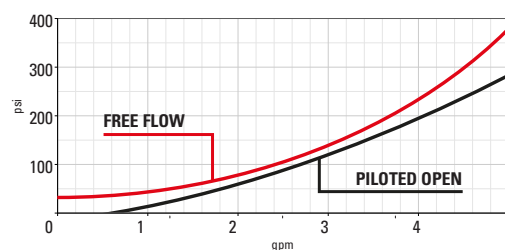
Technical Details

cavity	SAE08
capacity	20 lpm (5 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	140 bar (2000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	310 bar (4500 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

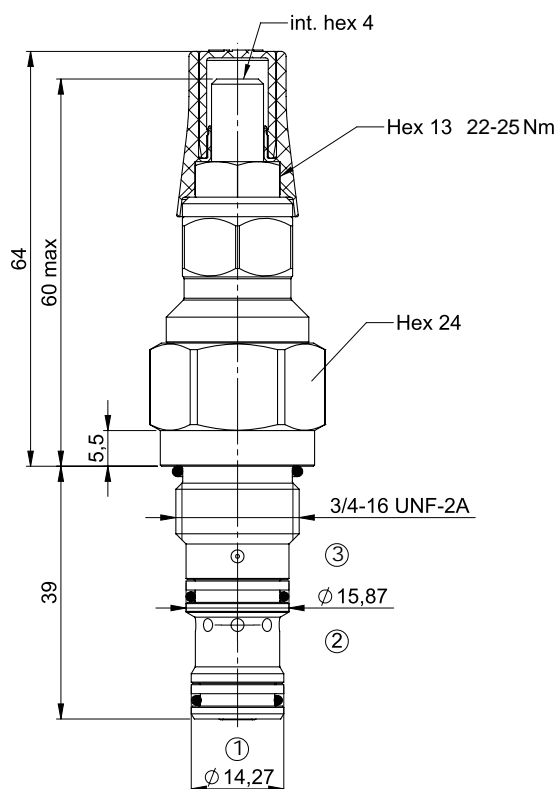
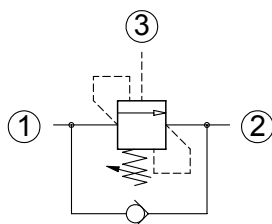
C | 0 | 0 | | | | | 0 | 8 | 0 | 8 | 0 | 0 | A

Setting (bar)

Spring
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

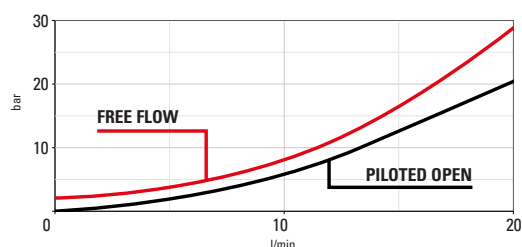
Normale SAE08 8:1 adjustable setting



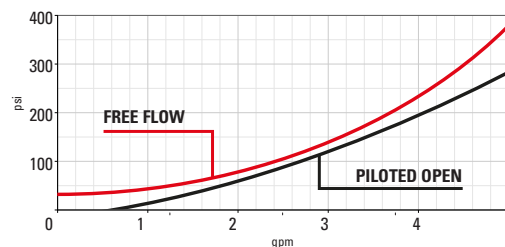
Technical Details

cavity	SAE08
capacity	20 lpm (5 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	140 bar (2000 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	310 bar (4500 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | 0 | | | | | 0 | 8 | 0 | 8 | 0 | 0 | A

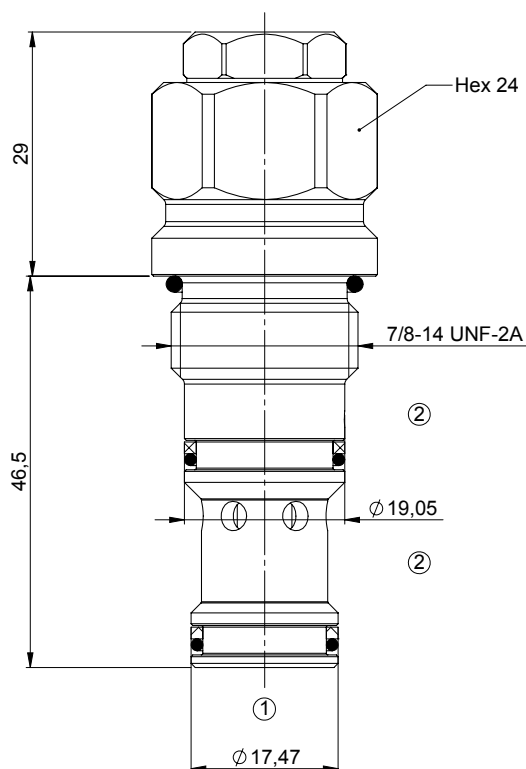
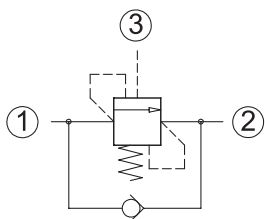
Setting (bar)

Spring

- T = 70-150 bar
- M = 100-210 bar
- D = 200-350 bar

Load holding valves

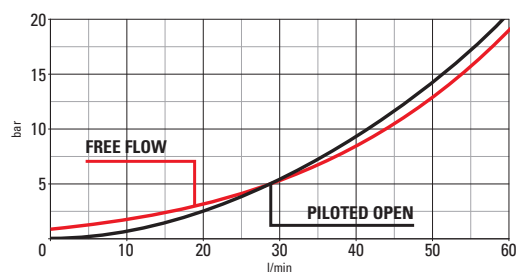
Normale SAE10 3:1 fixed setting



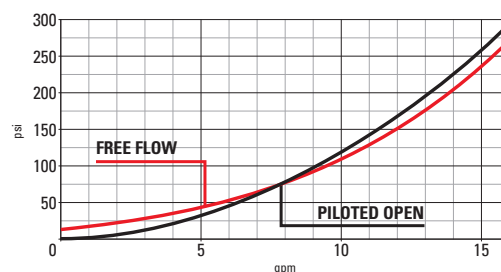
Technical Details

cavity	SAE10
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	35 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
valve weight	0.190 Kg (0.42 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE10SN700000
seal kit (viton)	S0SAE10SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

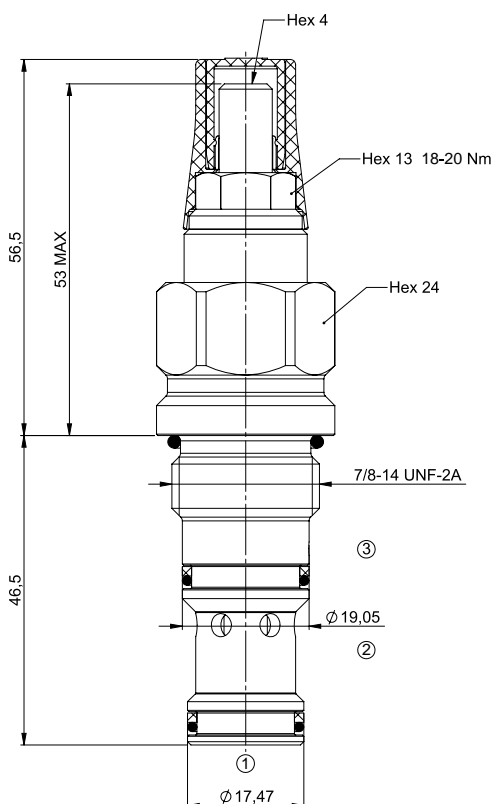
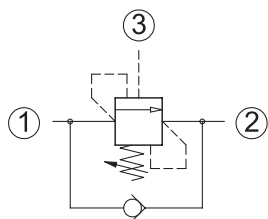
C | 0 | 0 | | | | | 0 | 3 | 1 | 0 | 0 | 0 | A

Setting (bar)

Spring
T = 35-130 bar
M = 130-210 bar
D = 200-350 bar

Load holding valves

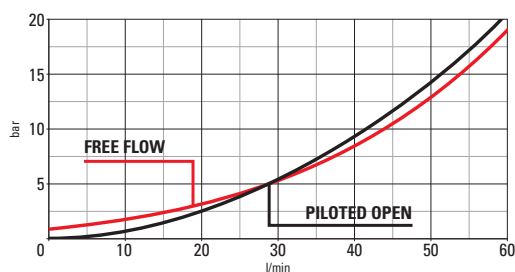
Normale SAE10 3:1 adjustable setting



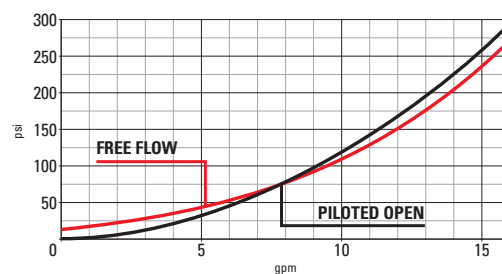
Technical Details

cavity	SAE10
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	35 bar (500 psi)
pressure increase per turn	206 bar (spring D) - 132 bar (spring M) - 33 bar (spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0.190 Kg (0.42 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE10SN700000
seal kit (viton)	S0SAE10SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



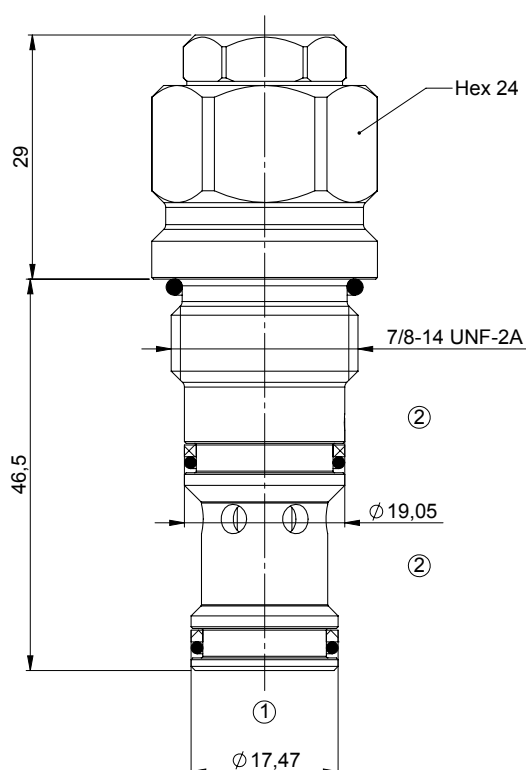
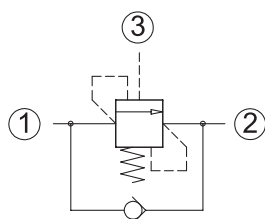
Performance curves



C	0	0	0	0	3	1	0	0	0	A
			Setting (bar)							
			Spring							
			T = 35-130 bar							
			M = 130-210 bar							
			D = 200-350 bar							

Load holding valves

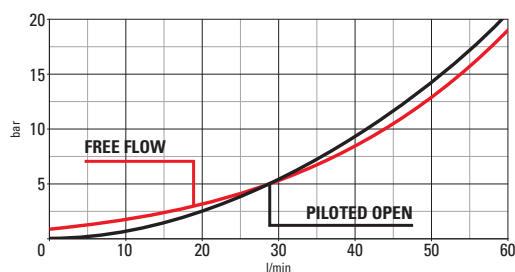
Normale SAE10 8:1 fixed setting



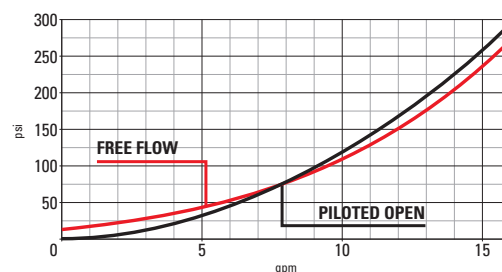
Technical Details

cavity	SAE10
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	100 bar (1450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
valve weight	0.190 Kg (0.42 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE10SN700000
seal kit (viton)	S0SAE10SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

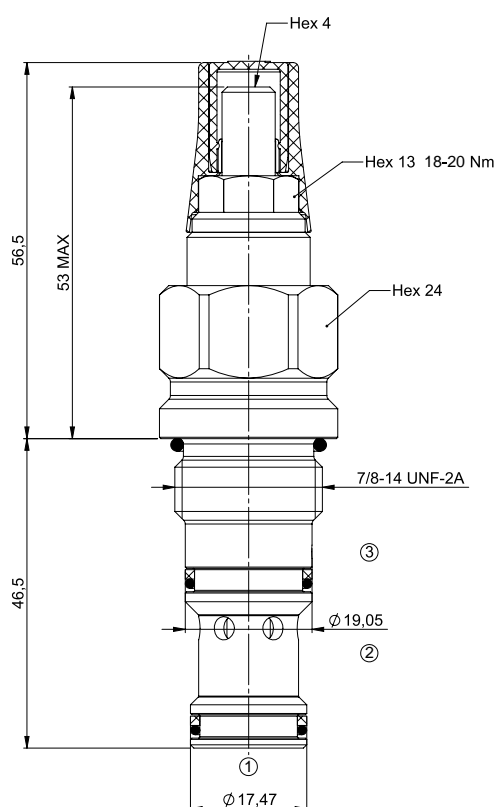
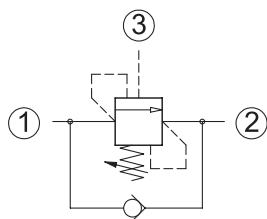
C | 0 | 0 | | | | | 0 | 8 | 1 | 0 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

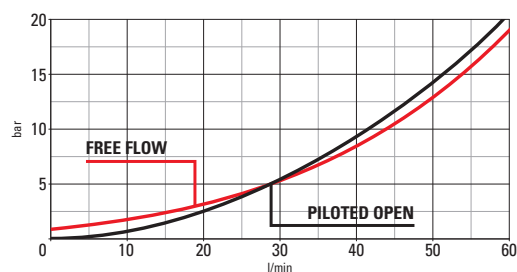
Normale SAE10 8:1 adjustable setting



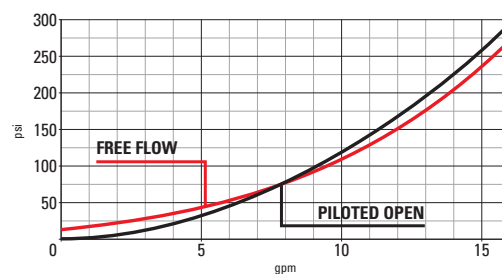
Technical Details

cavity	SAE10
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	100 bar (spring D) 48 bar (spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0.190 Kg (0.42 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE10SN700000
seal kit (viton)	S0SAE10SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

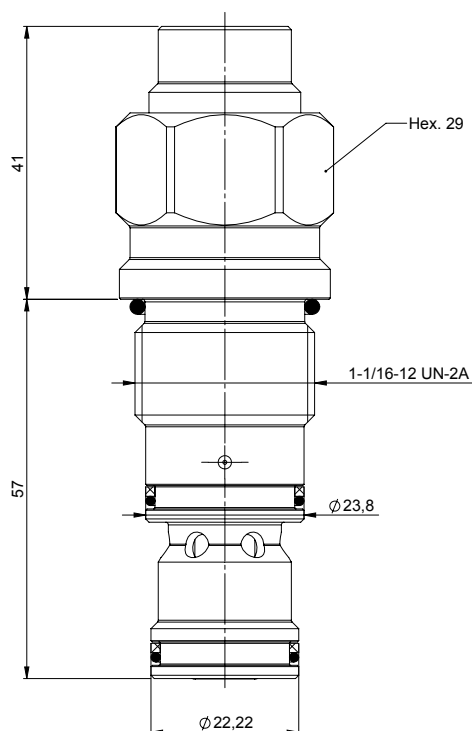
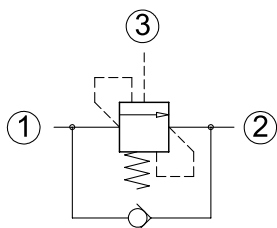
C | 0 | 0 | | | | | 0 | 8 | 1 | 0 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

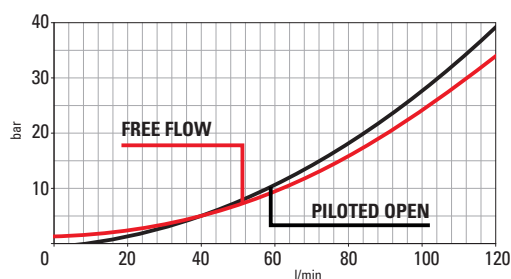
Normale SAE12 4:1 fixed setting



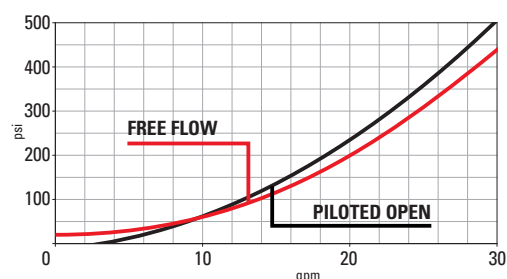
Technical Details

cavity	SAE12
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	81-95 Nm (45 lbf ft)
valve weight	0,320 kg (0,70 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE12SN700000
seal kit (viton)	S0SAE12SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

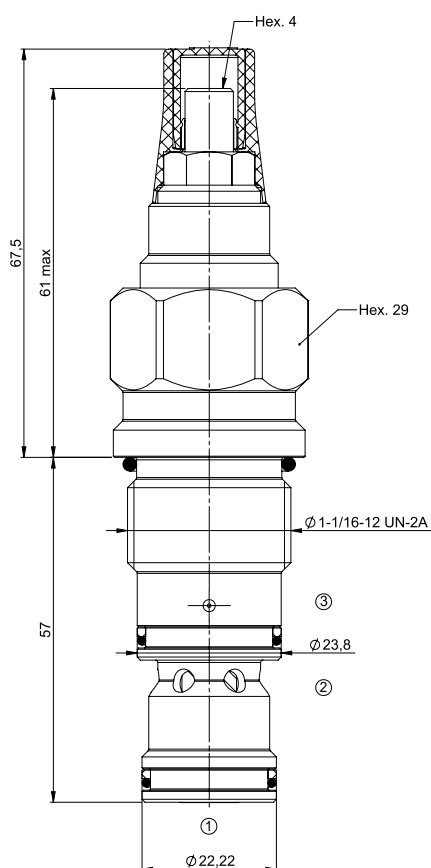
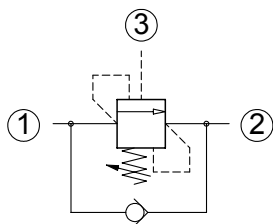
C | 0 | 0 | | | | | 0 | 4 | 1 | 2 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

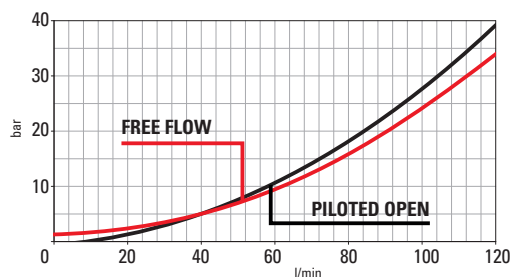
Normale SAE12 4:1 adjustable setting



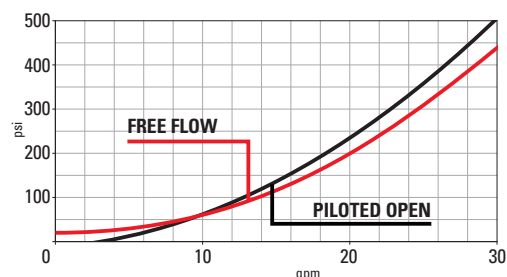
Technical Details

cavity	SAE12
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	156 bar (spring D) - 49 bar (spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	81-95 Nm (60-70 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SO SAE12SN700000
seal kit (viton)	SO SAE12SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Turn adjustment clockwise to increase setting
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

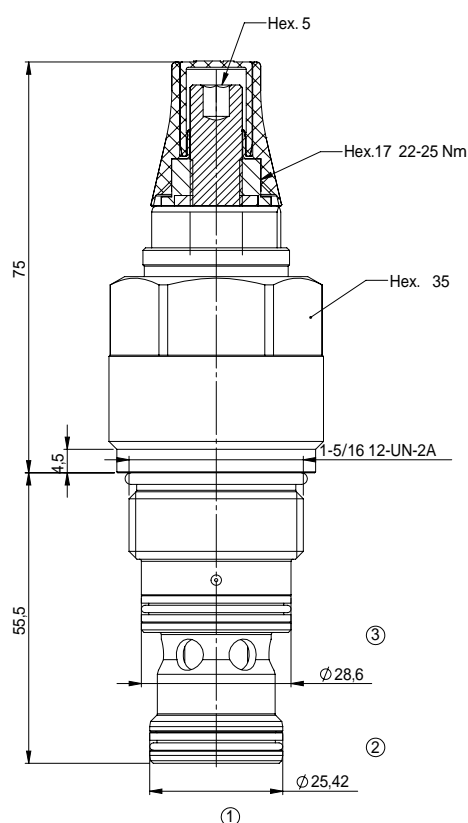
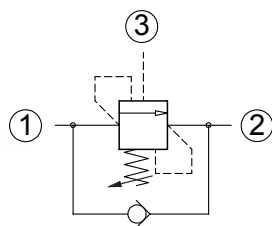
C | **0** | **0** | | | | | **0** | **4** | **1** | **2** | **0** | **0** | **A**

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

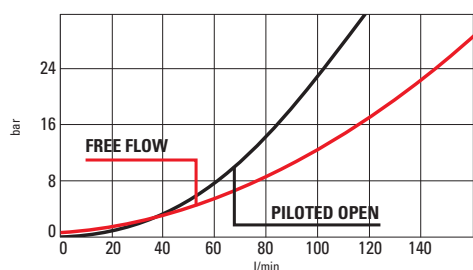
Normale SAE16 4:1 adj. setting FINE CONTROL



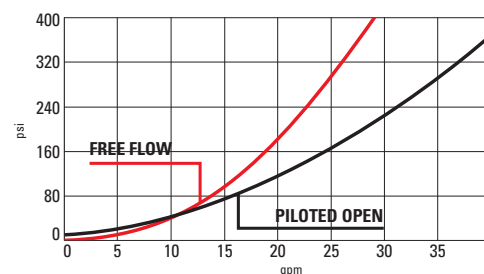
Technical Details

cavity	SAE16
capacity	150 lpm (38 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	41 bar (spring M) - 123 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	35
valve installation torque	108-122 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.6 kg
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE16SN700000
seal kit (viton)	S0SAE16SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | W | 0 | | | | | 1 | 0 | 4 | 6 | 0 | 0 | A

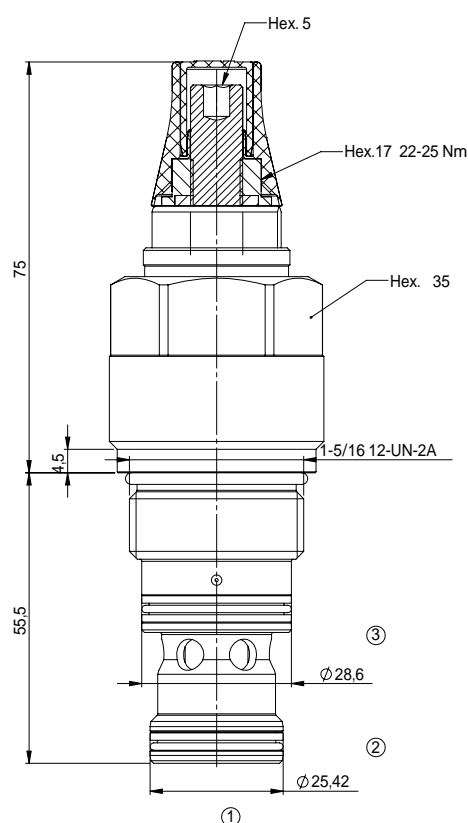
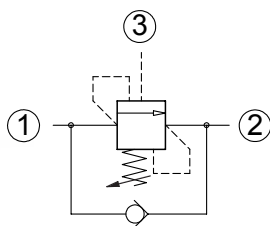
Setting (bar)

Spring

M = 70-210 bar
D = 140-350 bar

Load holding valves

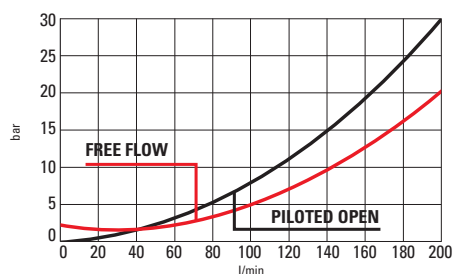
Normale SAE16 4:1 adjustable setting



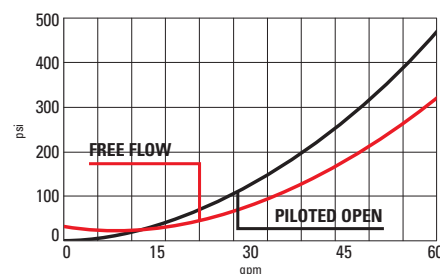
Technical Details

cavity	SAE16
capacity	200 lpm (50 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	41 bar (spring M) - 123 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	35
valve installation torque	108-122 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.6 kg
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE16SN700000
seal kit (viton)	S0SAE16SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | 0 | 0 | | | | | 0 | 4 | 1 | 6 | 0 | 0 | A

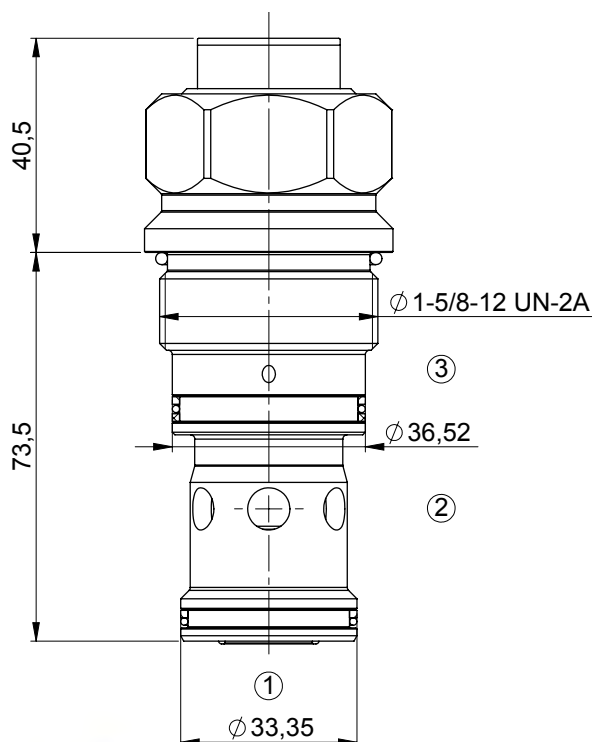
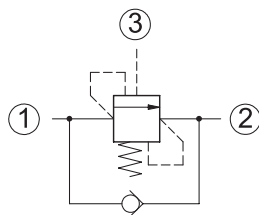
Setting (bar)

Spring

M = 70-210 bar
D = 140-350 bar

Load holding valves

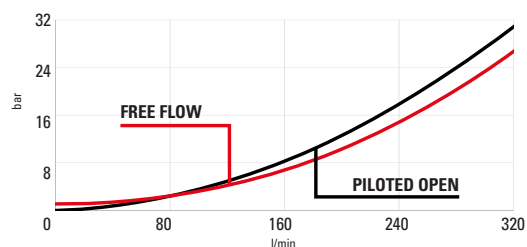
Normale SAE20 4:1 fixed setting



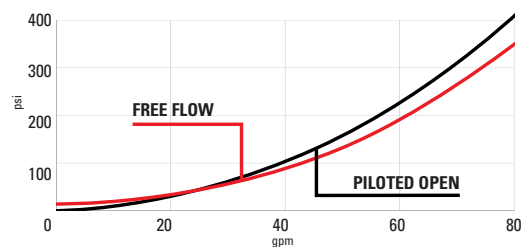
Technical Details

cavity	SAE20
capacity	320 lpm (85 gpm)
max operating pressure	420 bar (6000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve hex size (mm)	41
valve installation torque	128-149 Nm (95-110 lbf ft)
valve weight	1 kg (2,2 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE20SN700000
seal kit (viton)	S0SAE20SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

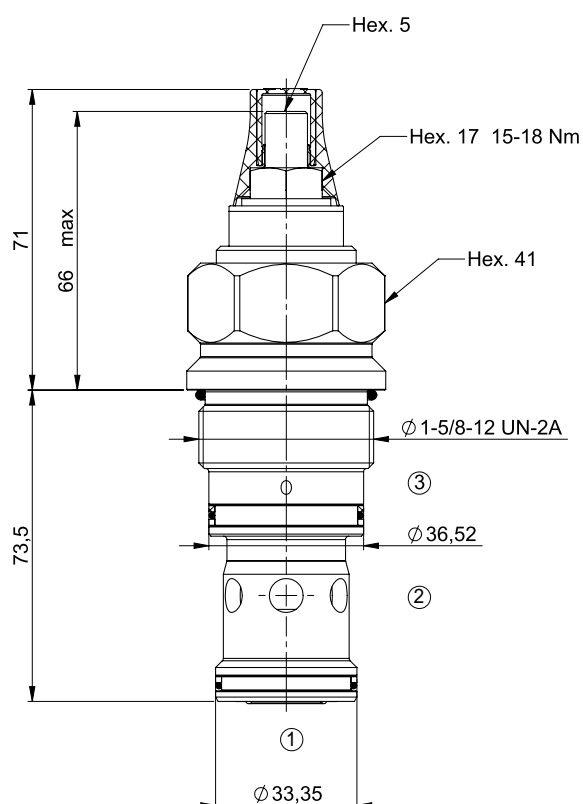
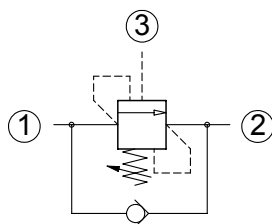
C | 0 | 0 | | | | | 0 | 4 | 2 | 0 | 0 | 0 | A

Setting (bar)

Spring
D = 140-350 bar

Load holding valves

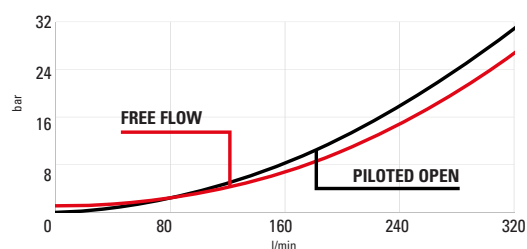
Normale SAE20 4:1 adjustable setting



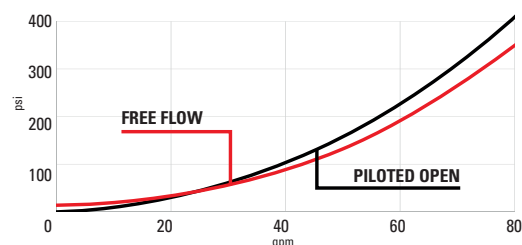
Technical Details

cavity	SAE20
capacity	320 lpm (85 gpm)
max operating pressure	420 bar (6000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	115 bar (spring D) - 85 bar (spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	41
valve installation torque	128-149 Nm (95-110 lbf ft)
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	15-18 Nm (11-13 lbf ft)
valve weight	1 kg (2,2 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE20SN700000
seal kit (viton)	S0SAE20SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

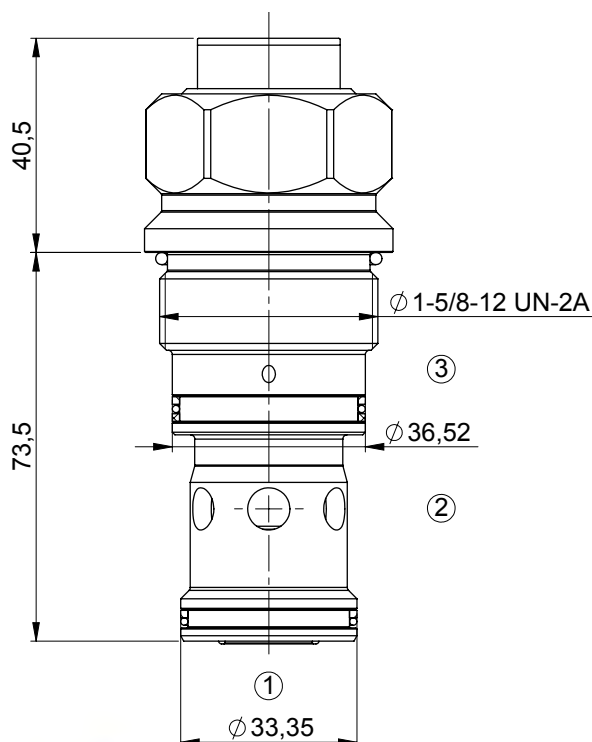
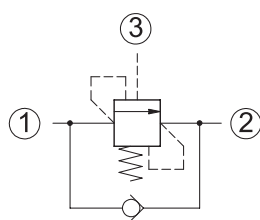
C | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | A

Setting (bar)

Spring
D = 140-350 bar

Load holding valves

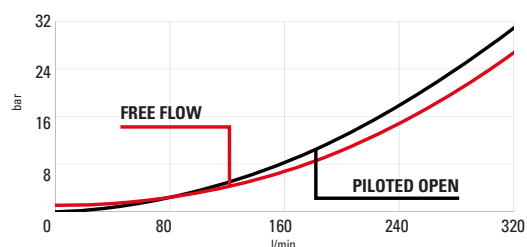
Normale SAE20 8:1 fixed setting



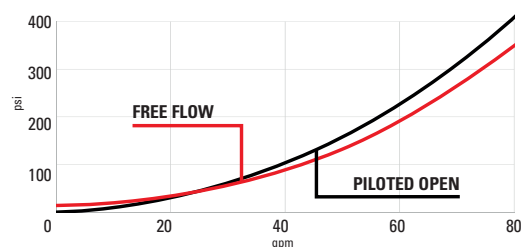
Technical Details

cavity	SAE20
capacity	320 lpm (85 gpm)
max operating pressure	420 bar (6000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve hex size (mm)	41
valve installation torque	128-149 Nm (95-110 lbf ft)
valve weight	1 kg (2,2 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE20SN700000
seal kit (viton)	S0SAE20SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

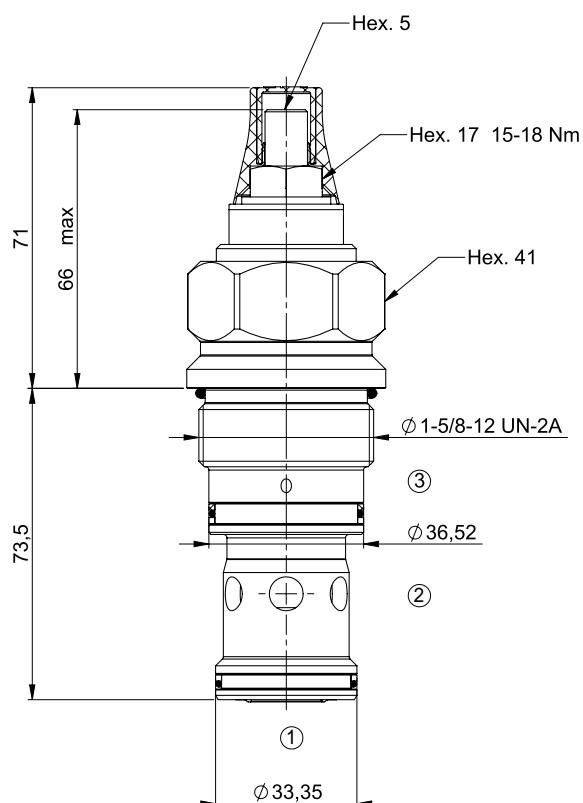
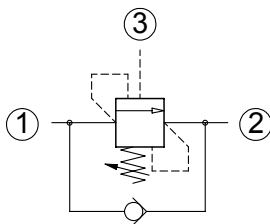
C | 0 | 0 | | | | | 0 | 8 | 2 | 0 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

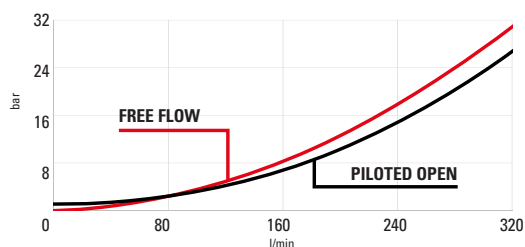
Normale SAE20 8:1 adjustable setting



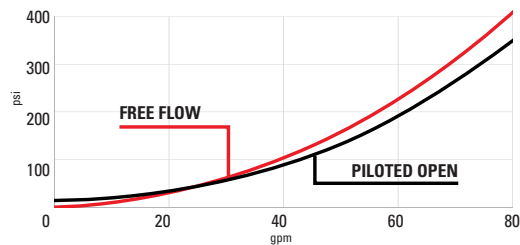
Technical Details

cavity	SAE20
capacity	320 lpm (85 gpm)
max operating pressure	420 bar (6000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	133 bar (spring D) - 85 bar (spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	350 bar (5000 psi)
valve hex size (mm)	41
valve installation torque	128-149 Nm (95-110 lbf ft)
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	15-18 Nm (11-13 lbf ft)
valve weight	1 kg (2.2 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE20SN700000
seal kit (viton)	S0SAE20SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

C | 0 | 0 | | | | | 0 | 8 | 2 | 0 | 0 | 0 | A

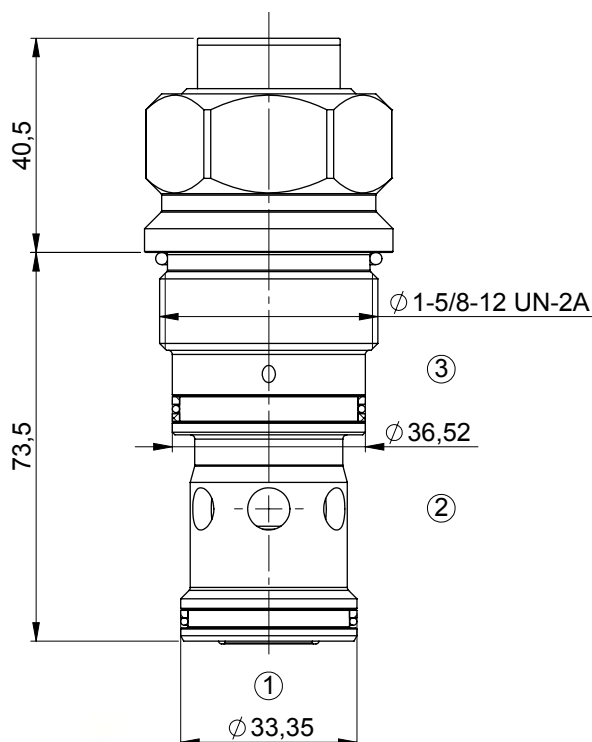
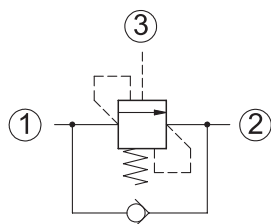
Setting (bar)

Spring

- M = 70-210 bar
- D = 140-420 bar

Load holding valves

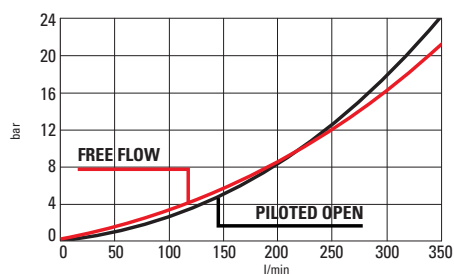
Normale SAE20 GT 8:1 fixed setting



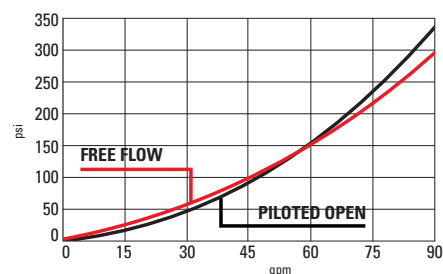
Technical Details

cavity	SAE20
capacity	350 lpm (90 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	camp
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	41
valve installation torque	128 - 149 Nm (95-119 lbf ft)
valve weight	2 Kg (2,2 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE20SN700000
seal kit (viton)	S0SAE20SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

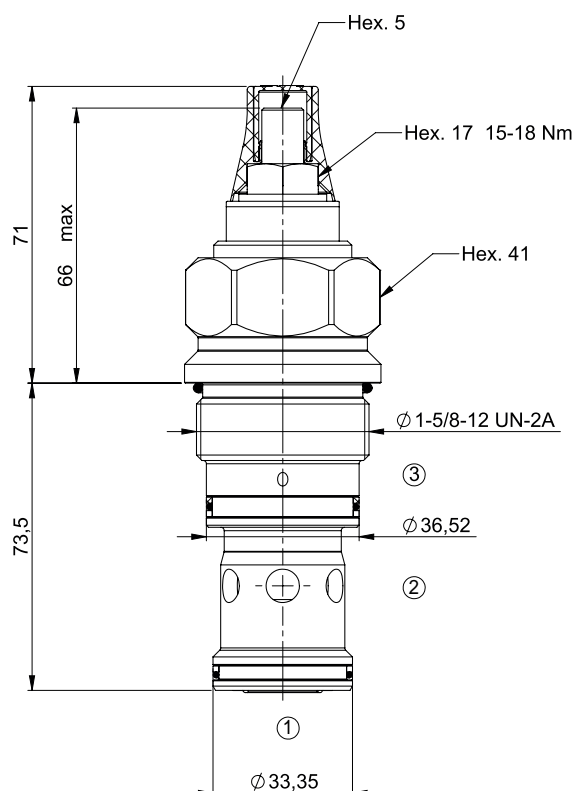
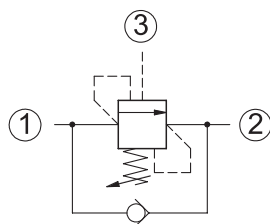
Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

C | 2 | 0 | | | | | 0 | 8 | 2 | 0 | 0 | 0 | A

Load holding valves

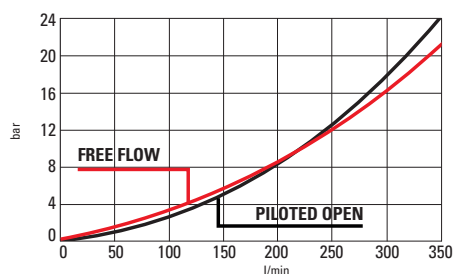
Normale SAE20 GT 8:1 adjustable setting



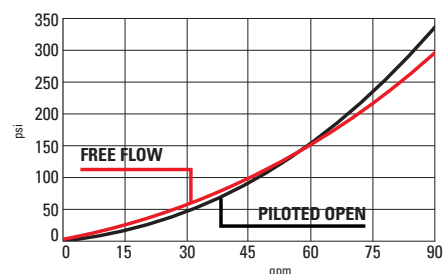
Technical Details

cavity	SAE20
capacity	350 lpm (90 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	133 bar (spring D) - 85 bar (spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	41
valve installation torque	128 - 149 Nm (95-119 lbf ft)
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	25
valve weight	1 Kg (2,2 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE20SN700000
seal kit (viton)	S0SAE20SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

C | 2 | 0 | | | | | 0 | 8 | 2 | 0 | 0 | 0 | A

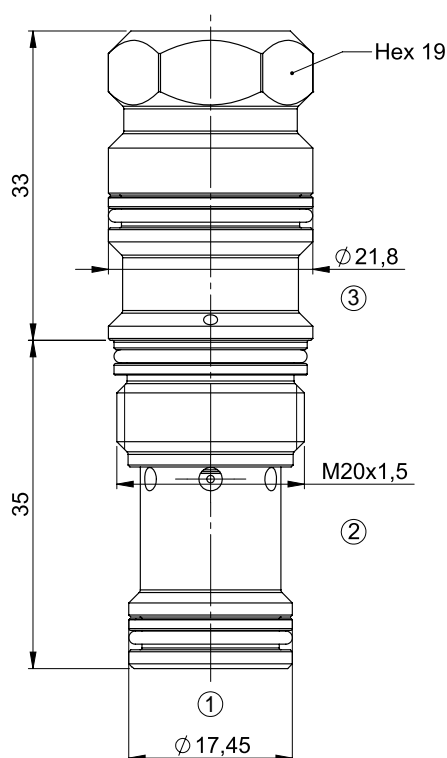
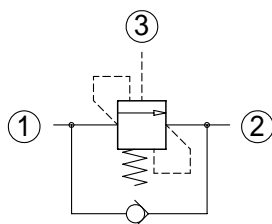
Setting (bar)

Spring

- M = 70-210 bar
- D = 140-350 bar

Load holding valves

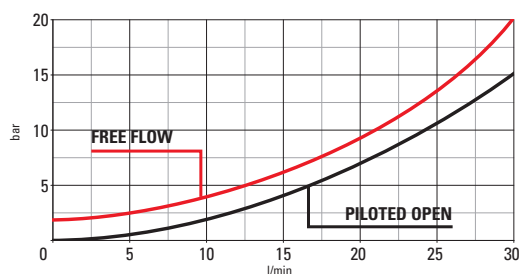
Normale Ristretta T11A 2:1 SP fixed setting



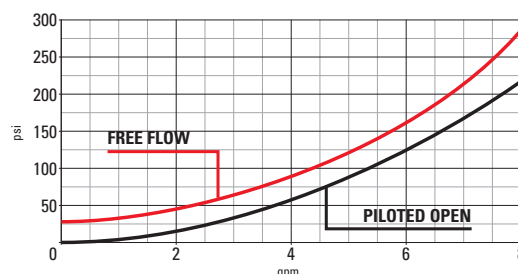
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Indicated Reseat value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options
B = BUNA SEALS
D = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

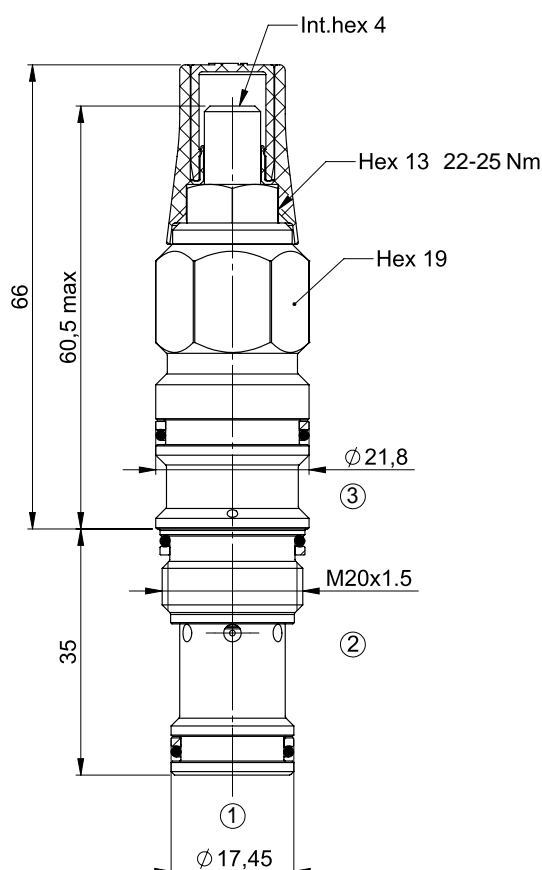
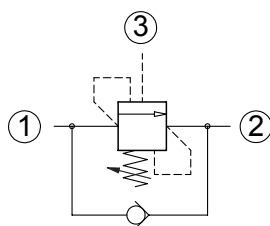
C | 0 | 4 | | | | | 0 | 2 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

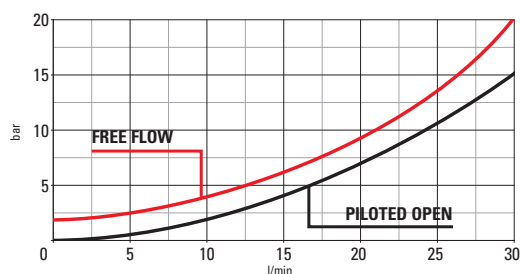
Normale Ristretta T11A 2:1 SP adjustable setting



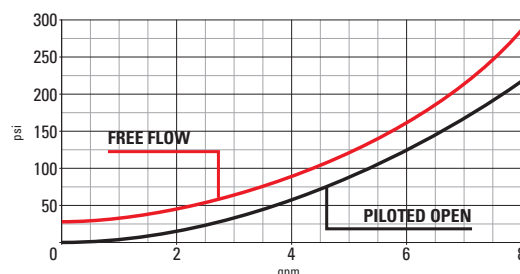
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1 in ³ /min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

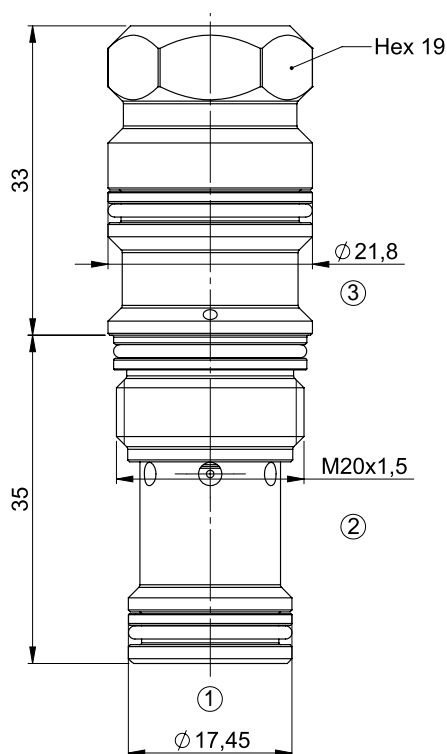
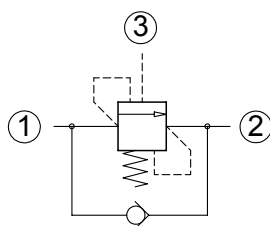
C | **0** | **4** | | | | | **0** | **2** | **1** | **1** | **0** | **0** | **A**

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

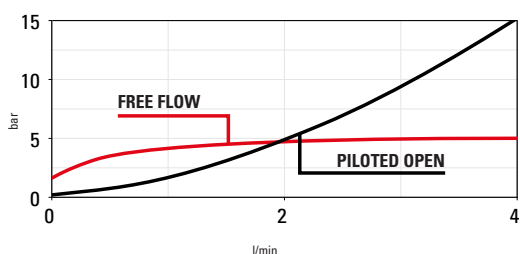
Normale Ristretta T11A 3:1 fixed setting **ULTRA FINE CONTROL**



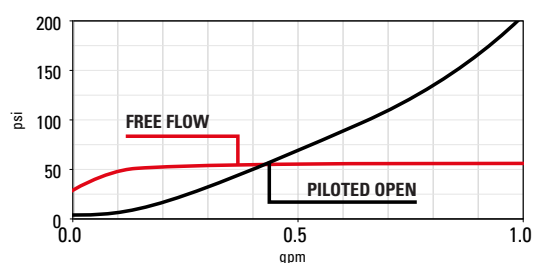
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

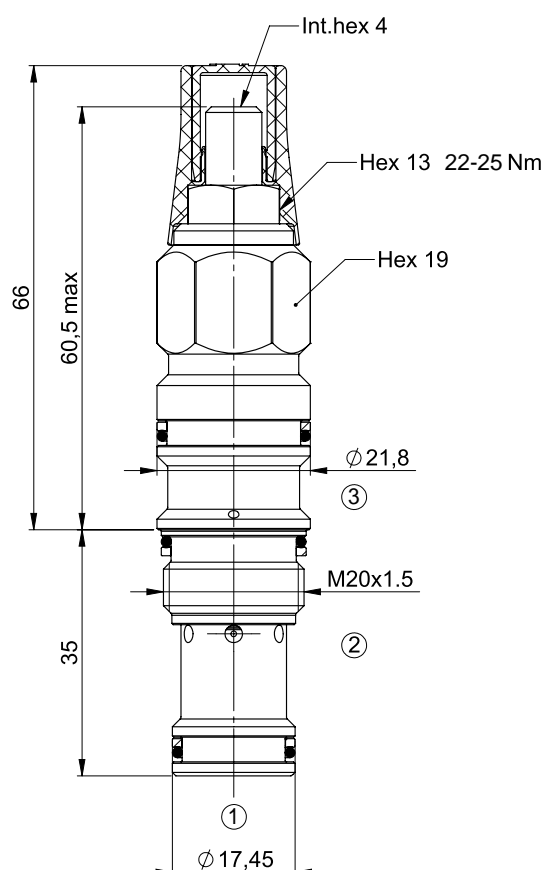
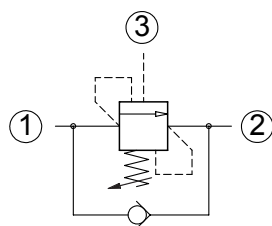
C | D | 4 | | | | | 0 | 3 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

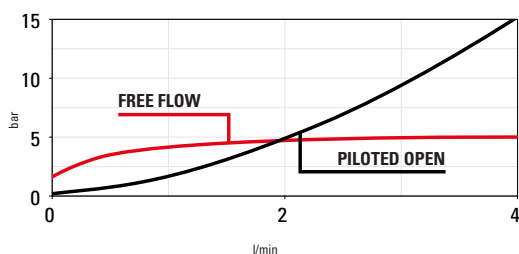
Normale Ristretta T11A 3:1 adj. setting **ULTRA FINE CONTROL**



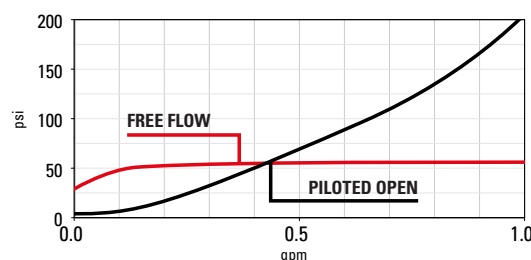
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | **D** | **4** | | | | | **0** | **3** | **1** | **1** | **0** | **0** | **A**

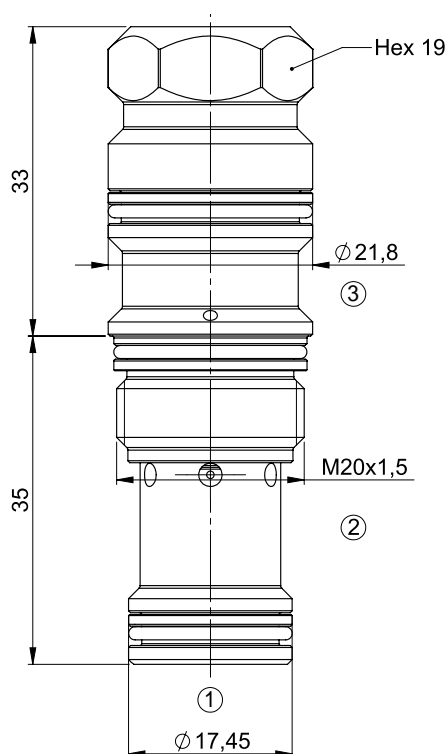
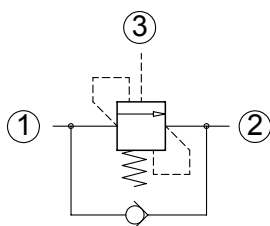
Setting (bar)

Spring

T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

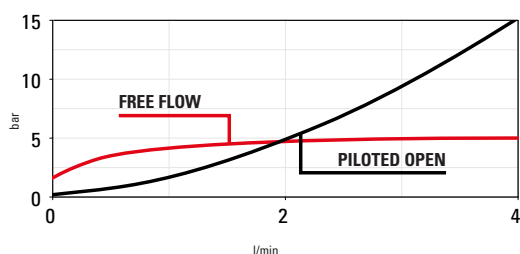
Normale Ristretta T11A 3:1 SP fixed setting **ULTRA FINE CONTROL**



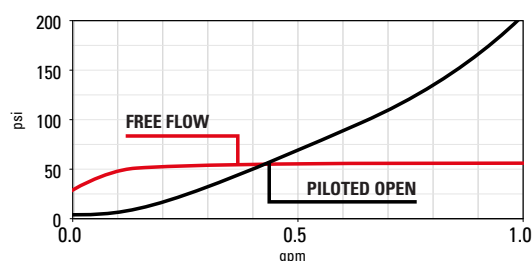
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

C | **D** | **4** |

0 | **3** | **1** | **1** |

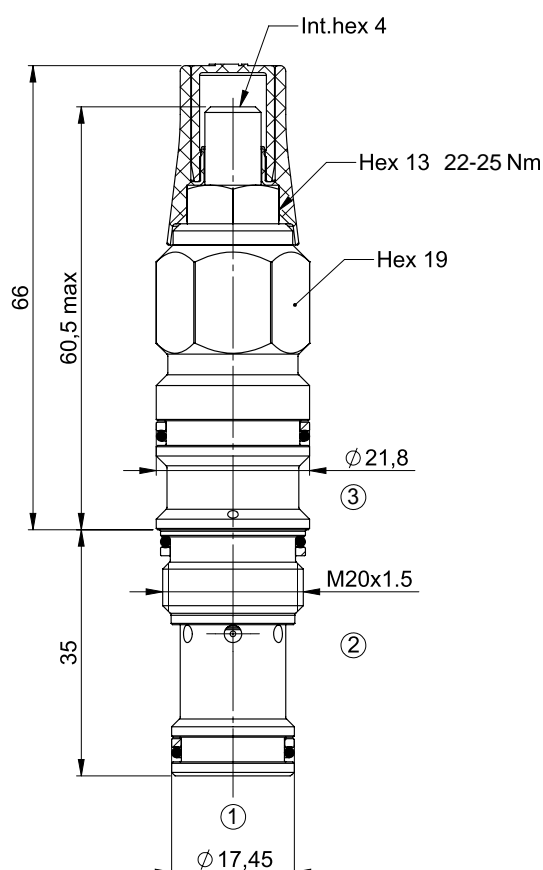
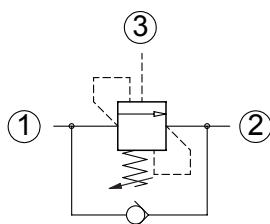
0 | **A**

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

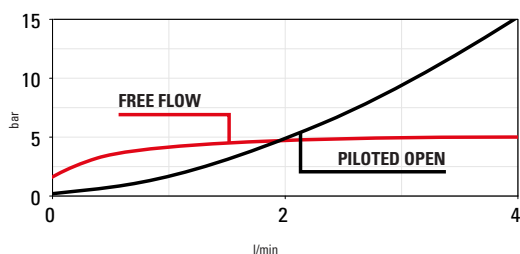
Normale Ristretta T11A 3:1 SP adj. setting **ULTRA FINE CONTROL**



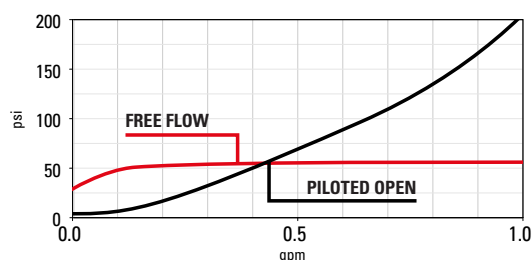
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



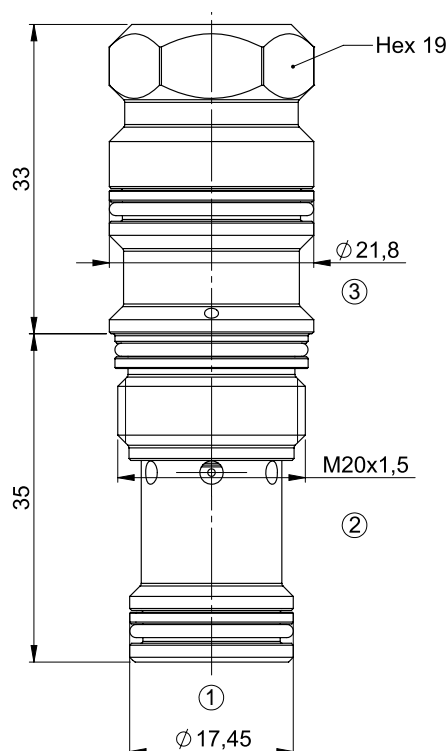
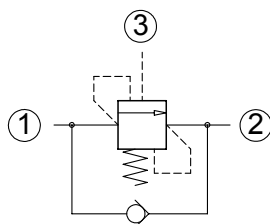
Performance curves



Seals																				
A = BUNA SEALS																				
G = BUNA tamper resistant																				
C = VITON SEALS																				
H = VITON tamper resistant																				
C	D	4																		
Setting (bar)																				
Spring																				
T = 30-105 bar																				
M = 100-280 bar																				
D = 200-390 bar																				
0	3	1	1	0	0	A														

Load holding valves

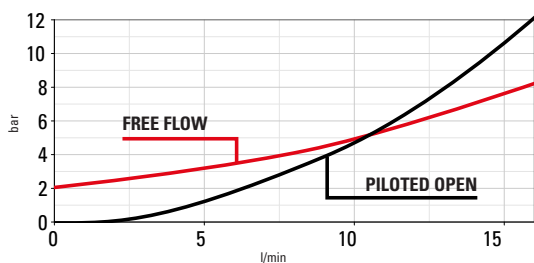
Normale Ristretta T11A 3:1 fixed setting FINE CONTROL



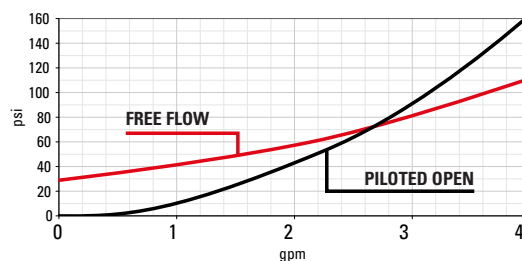
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

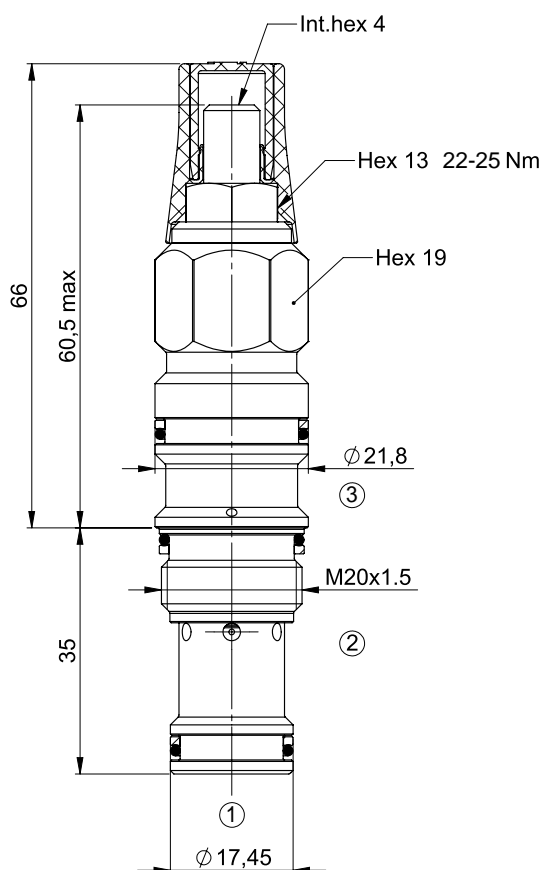
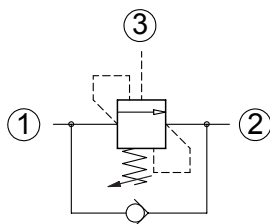
C | W | 4 | | | | | 0 | 3 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

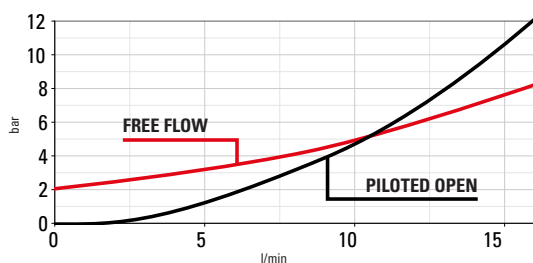
Normale Ristretta T11A 3:1 adj. setting **FINE CONTROL**



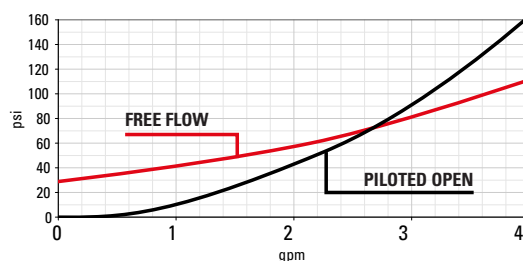
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | **W** | **4** | | | | | **0** | **3** | **1** | **1** | **0** | **0** | **A**

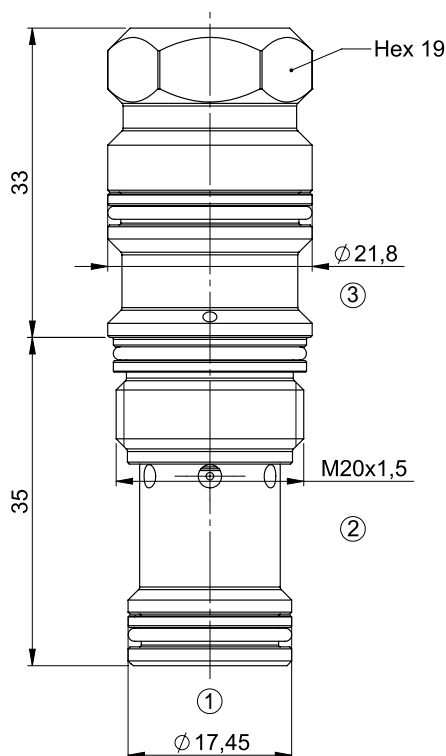
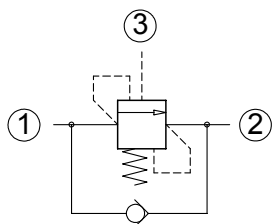
Setting (bar)

Spring

T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

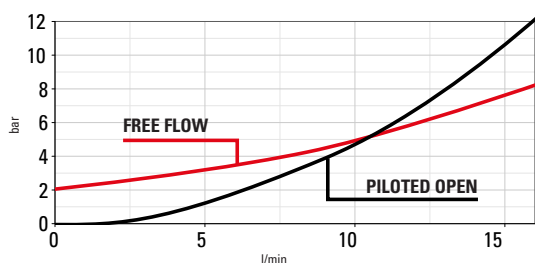
Normale Ristretta T11A 3:1 SP fixed setting FINE CONTROL



Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



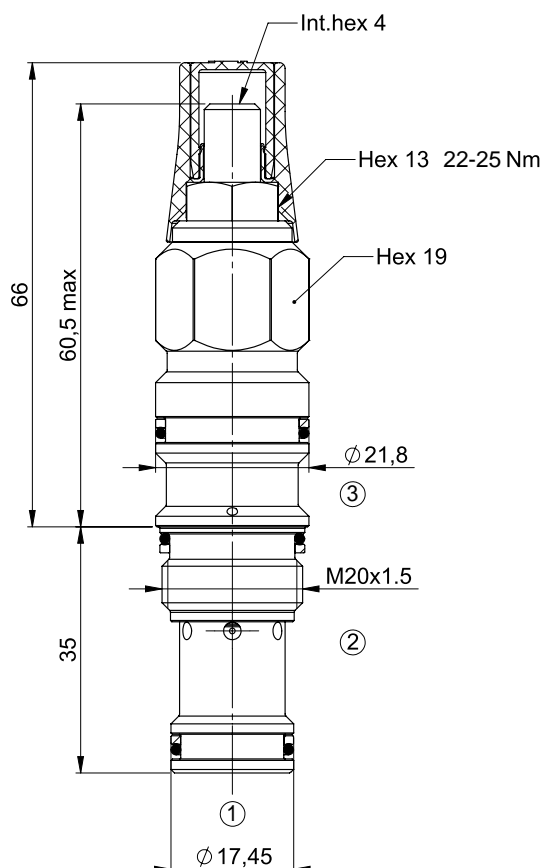
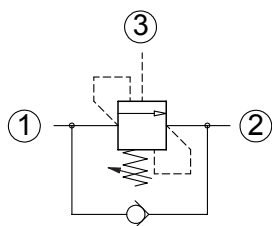
Performance curves



				Seals B = BUNA SEALS D = VITON SEALS								0 = Standard Zinc plating Z = Zinc Nickel plating			
C	W	4						0	3	1	1		0	A	
				Setting (bar)											
				Spring T = 30-105 bar M = 100-280 bar D = 200-390 bar											

Load holding valves

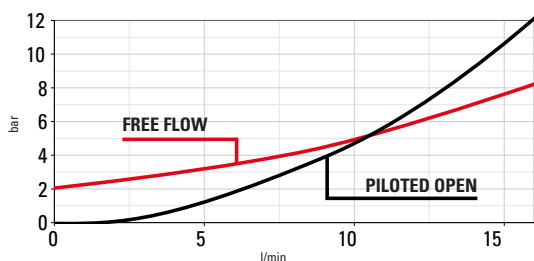
Normale Ristretta T11A 3:1 SP adj. setting FINE CONTROL



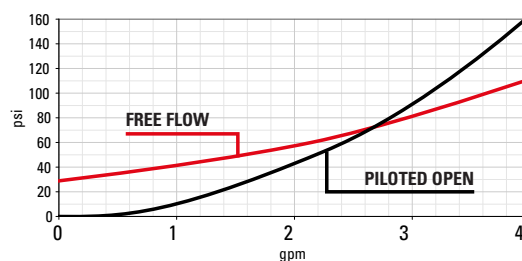
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



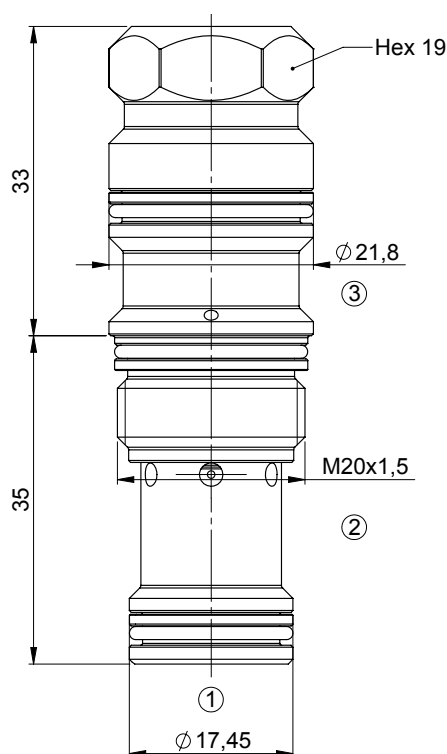
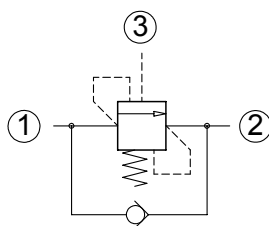
Performance curves



Seals									
A = BUNA SEALS									
G = BUNA tamper resistant									
C = VITON SEALS									
H = VITON tamper resistant									
C W 4 0 3 1 1 0 0 A									
Setting (bar)									
Spring									
T = 30-105 bar									
M = 100-280 bar									
D = 200-390 bar									

Load holding valves

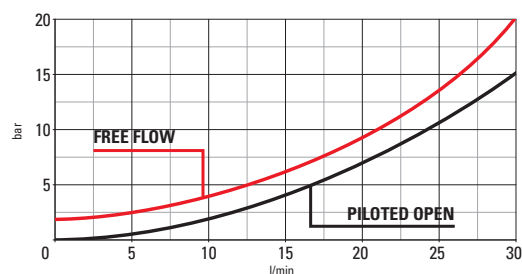
Normale Ristretta T11A 3:1 fixed setting



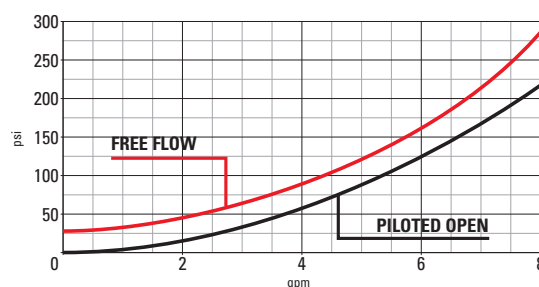
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

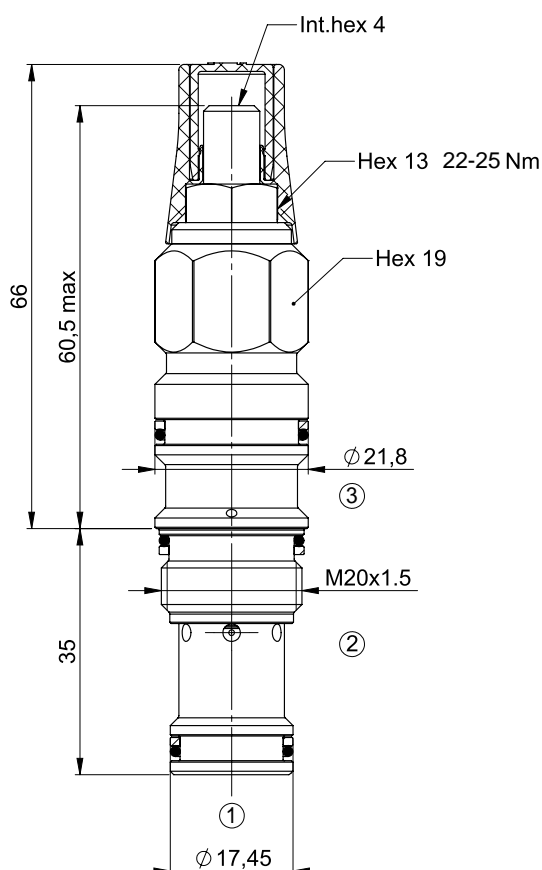
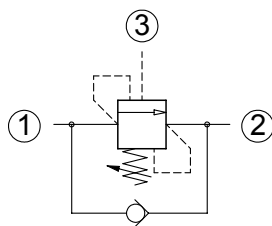
C | 0 | 4 | | | | | 0 | 3 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

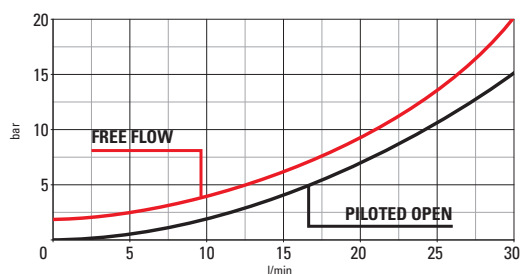
Normale Ristretta T11A 3:1 adjustable setting



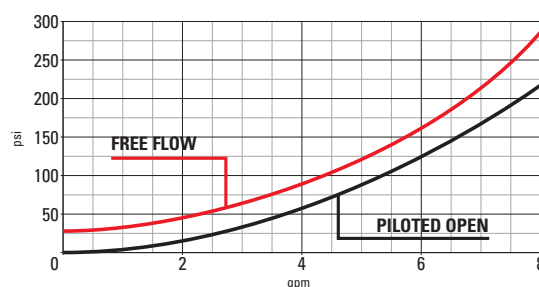
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Indicated Reseat value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | 0 | 4 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

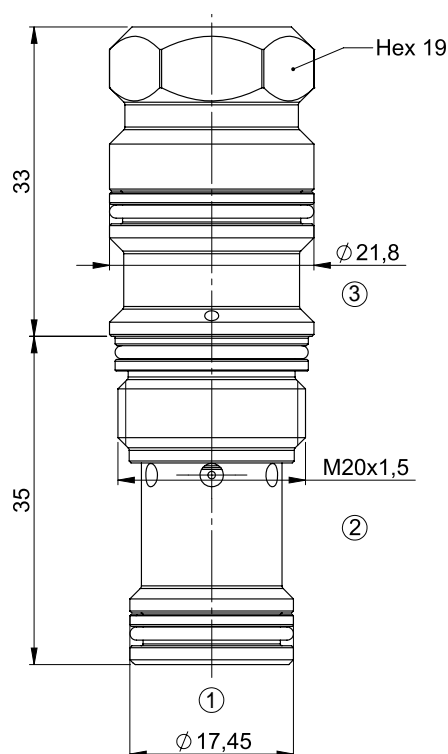
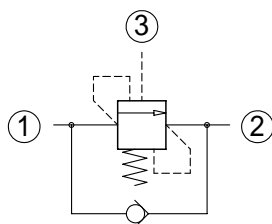
Setting (bar)

Spring

T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

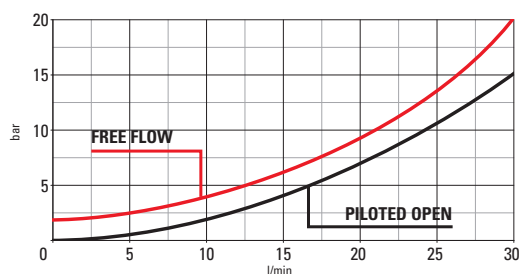
Normale Ristretta T11A 3:1 SP fixed setting



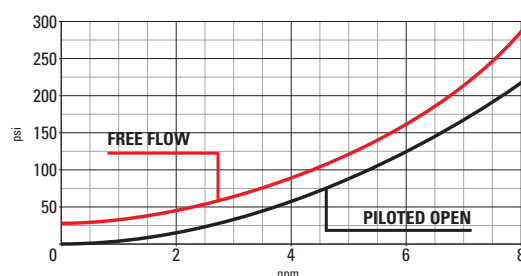
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Indicated Reseat value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options
B = BUNA SEALS
D = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

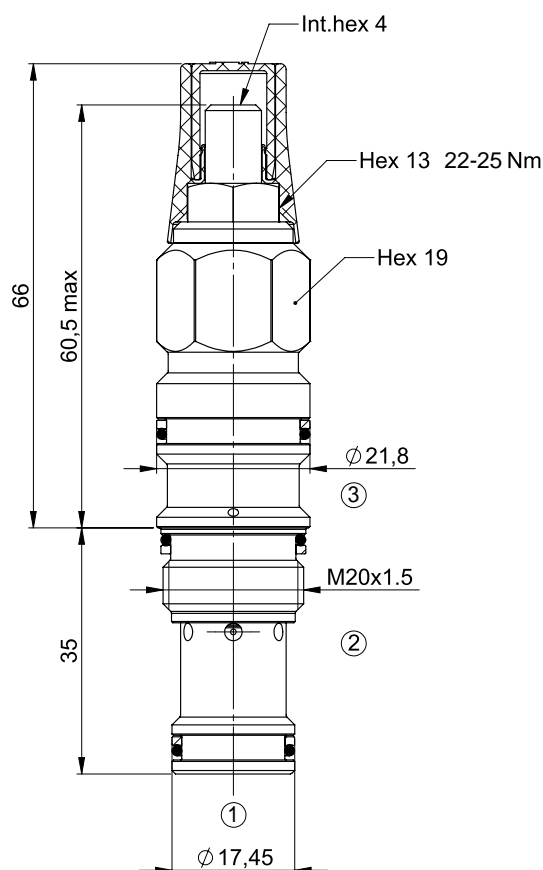
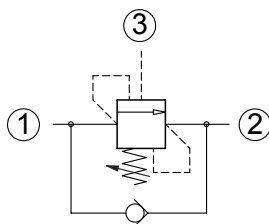
C | 0 | 4 | | | | | 0 | 3 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

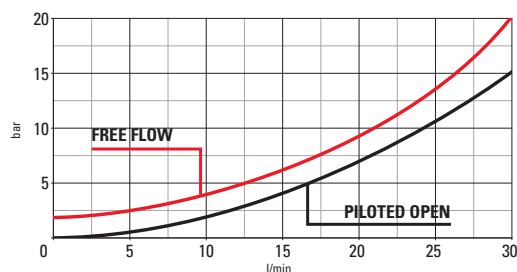
Normale Ristretta T11A 3:1 SP adjustable setting



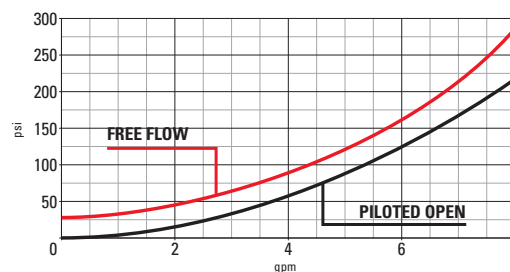
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting

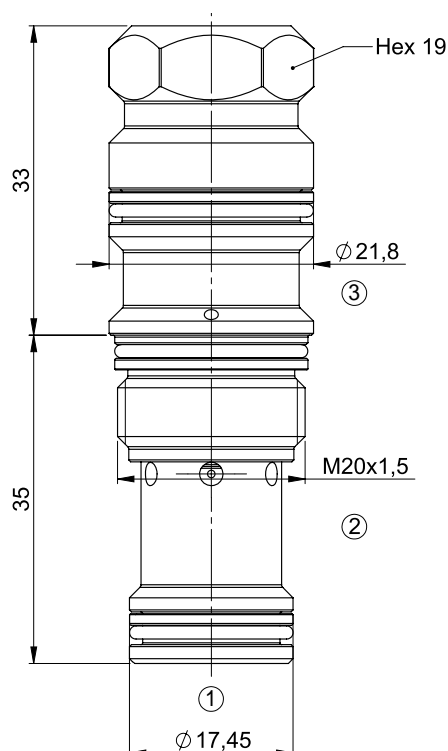
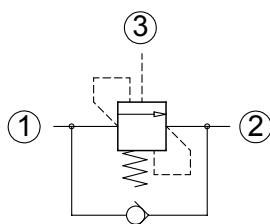


Performance curves



Seals									
A = BUNA SEALS									
G = BUNA tamper resistant									
C = VITON SEALS									
H = VITON tamper resistant									
C 0 4 0 3 1 1 0 0 A									
Setting (bar)									
Spring									
T = 30-105 bar									
M = 100-280 bar									
D = 200-390 bar									

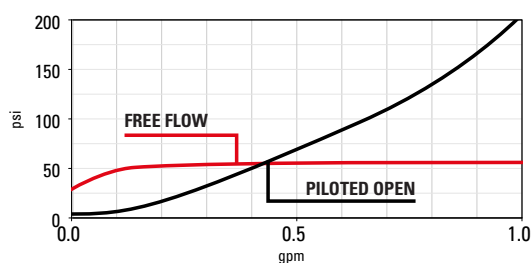
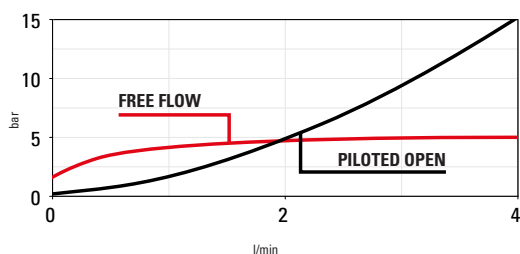
Normale Ristretta T11A 4:1 fixed setting **ULTRA FINE CONTROL**



Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN9000000
seal kit (viton)	S00T11ASV9000000
temperature range	-.30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves

Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

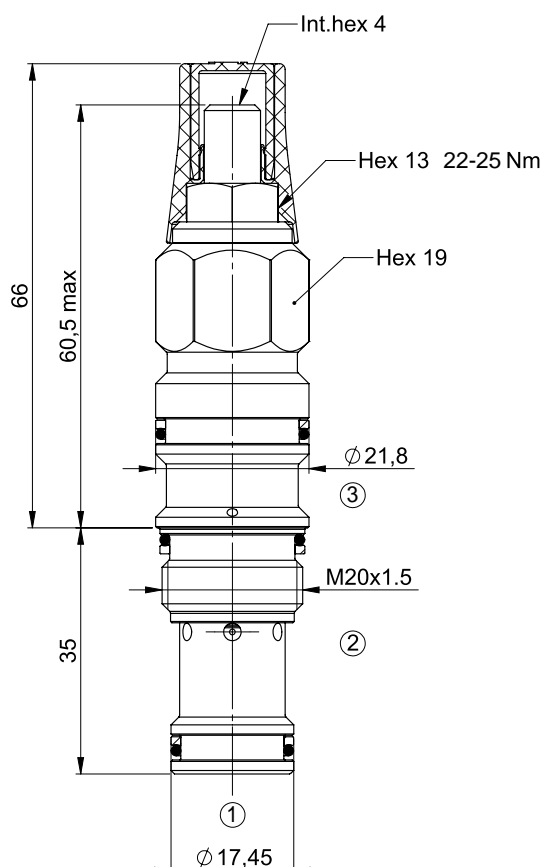
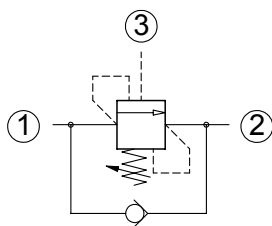
C	D	4						0	4	1	1			0	A
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Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

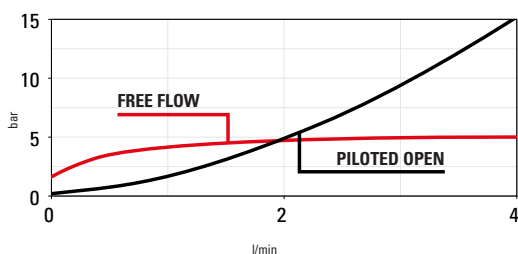
Normale Ristretta T11A 4:1 adj. setting **ULTRA FINE CONTROL**



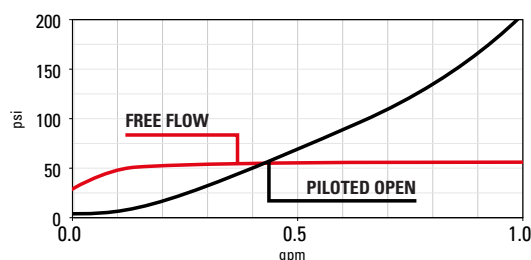
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | **D** | **4** | | | | | **0** | **4** | **1** | **1** | **0** | **0** | **A**

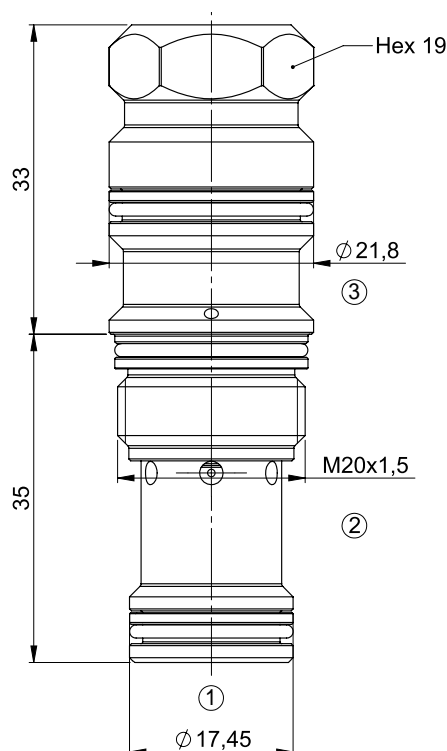
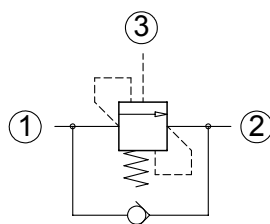
Setting (bar)

Spring

T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

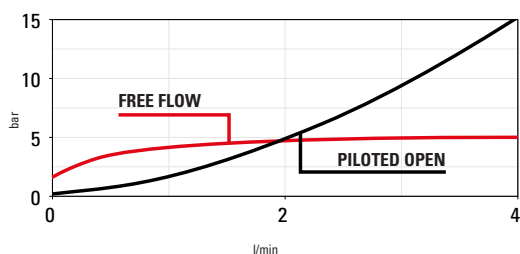
Normale Ristretta T11A 4:1 SP fixed setting **ULTRA FINE CONTROL**



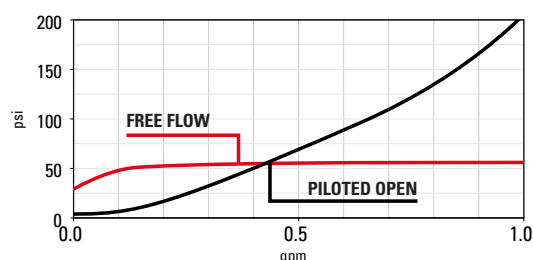
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

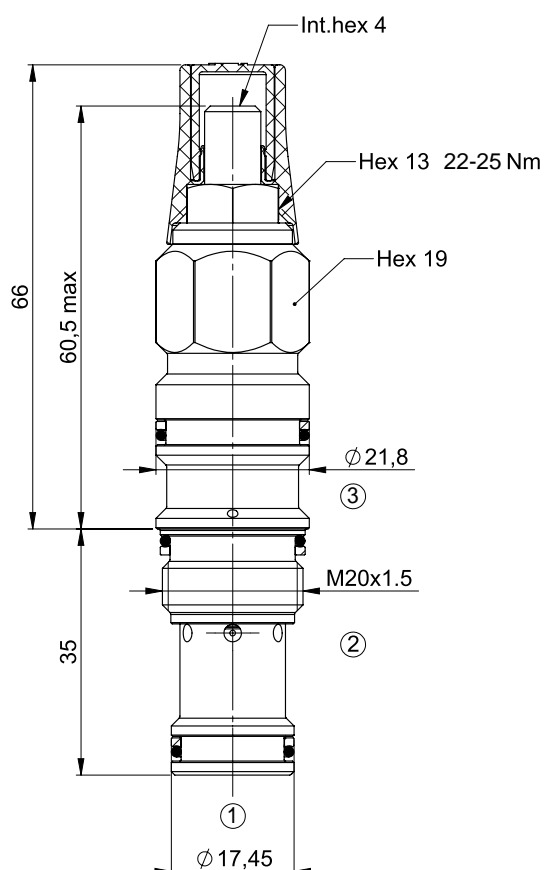
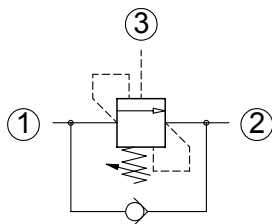
C | D | 4 | | | | | 0 | 4 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

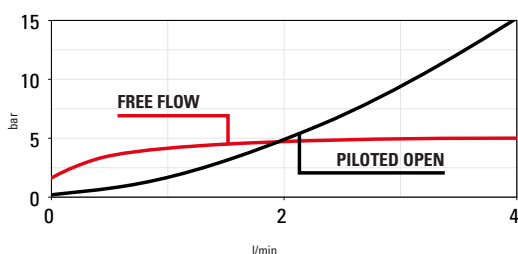
Normale Ristretta T11A 4:1 SP adj. setting **ULTRA FINE CONTROL**



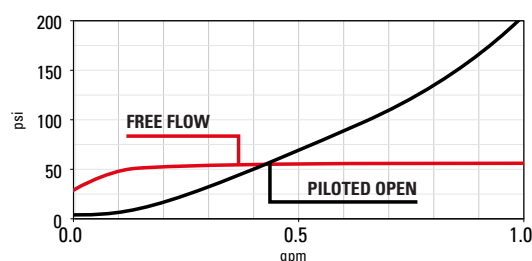
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | **D** | **4** | | | | | **0** | **4** | **1** | **1** | **0** | **0** | **A**

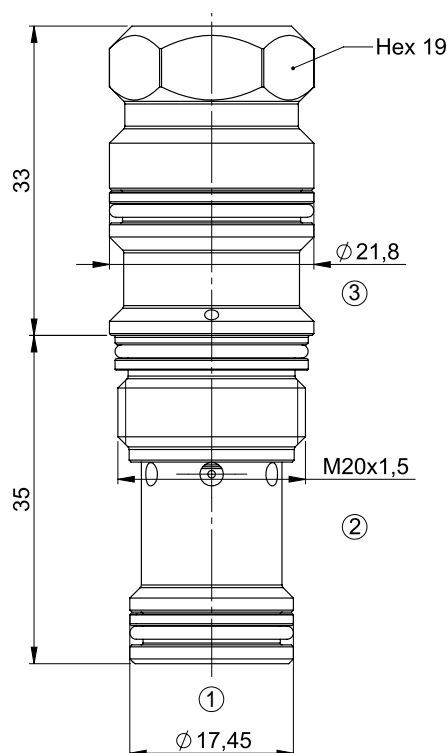
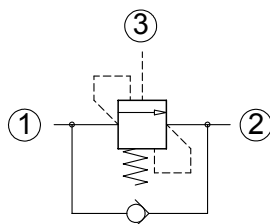
Setting (bar)

Spring

T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

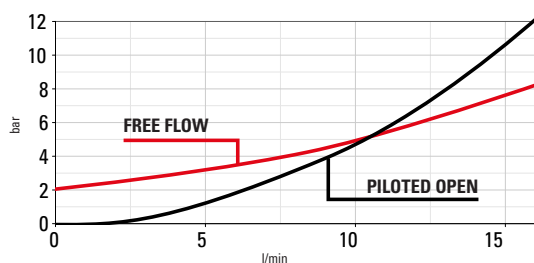
Normale Ristretta T11A 4:1 fixed setting FINE CONTROL



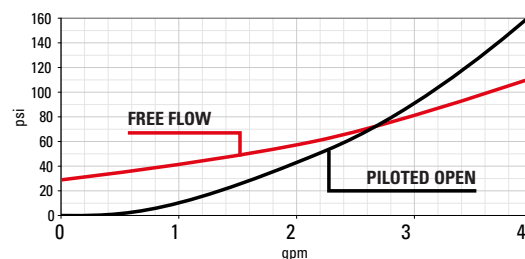
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



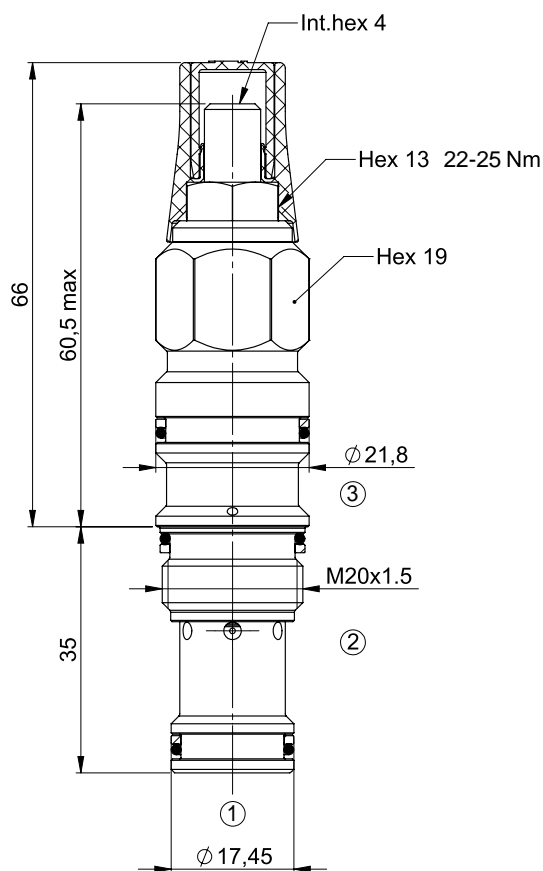
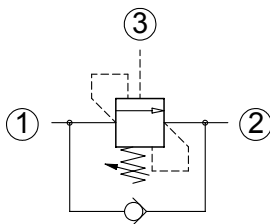
Performance curves



Seals										0 = Standard Zinc plating																			
1 = BUNA SEALS										Z = Zinc Nickel plating																			
3 = VITON SEALS																													
C	W	4											0	4	1	1											0	A	
										Setting (bar)																			
										Spring																			
										T = 30-105 bar																			
										M = 100-280 bar																			
										D = 200-390 bar																			

Load holding valves

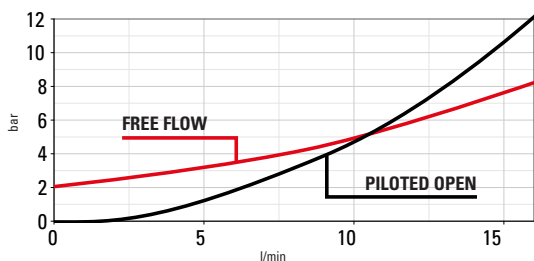
Normale Ristretta T11A 4:1 adj. setting FINE CONTROL



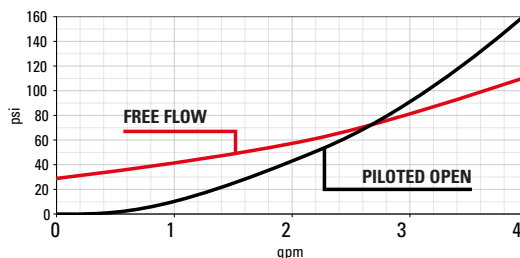
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

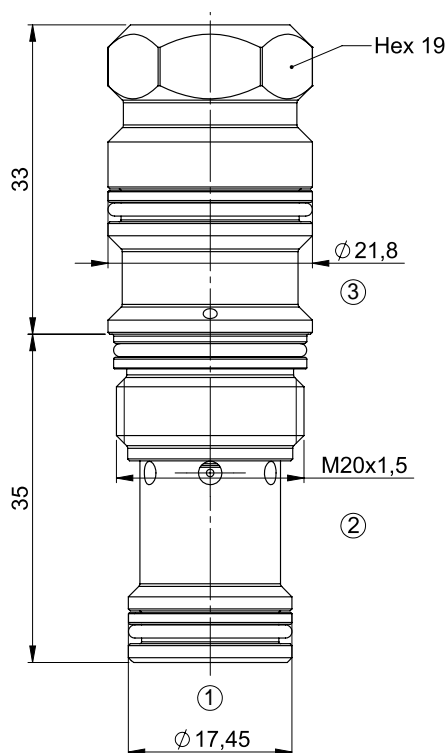
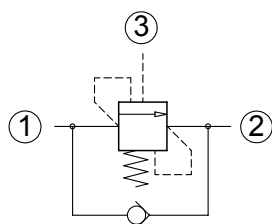
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | W | 4 | | | | | 0 | 4 | 1 | 1 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 70-280 bar
D = 200-390 bar

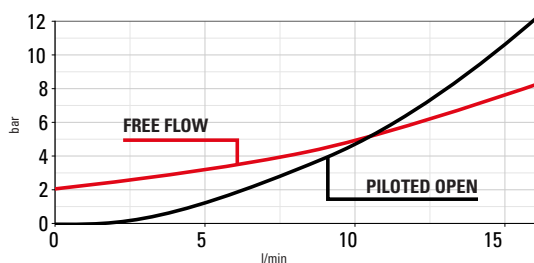
Normale Ristretta T11A 4:1 SP fixed setting **FINE CONTROL**



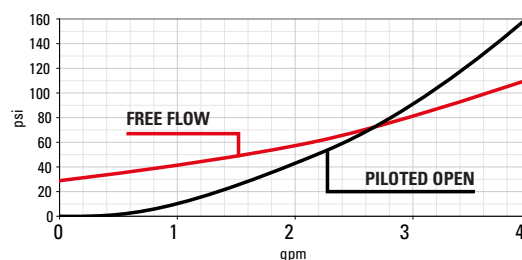
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reset value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

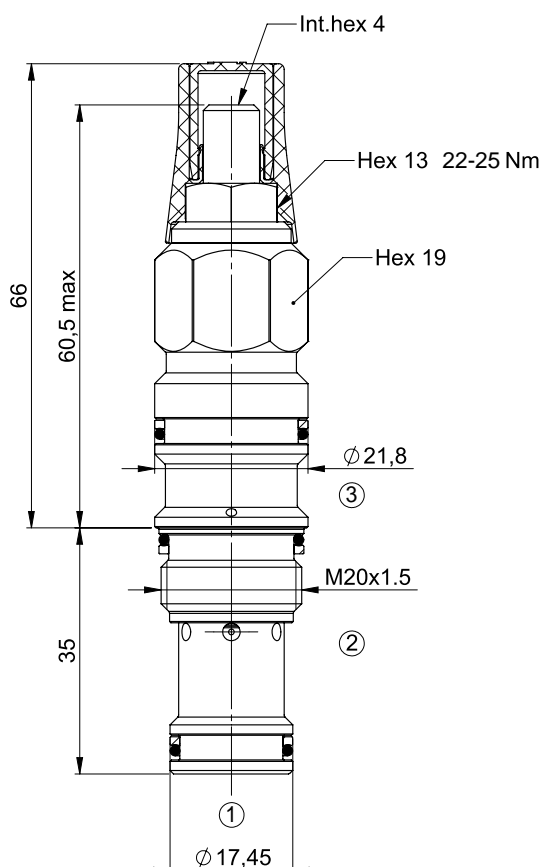
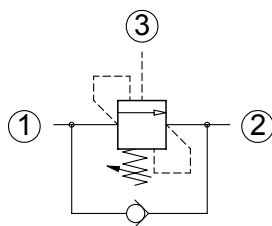
C	W	4						0	4	1	1			0	A
---	---	---	--	--	--	--	--	---	---	---	---	--	--	---	---

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

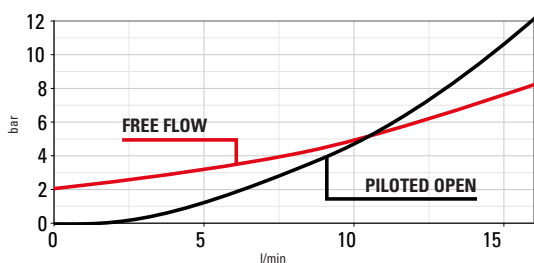
Normale Ristretta T11A 4:1 SP adj. setting FINE CONTROL



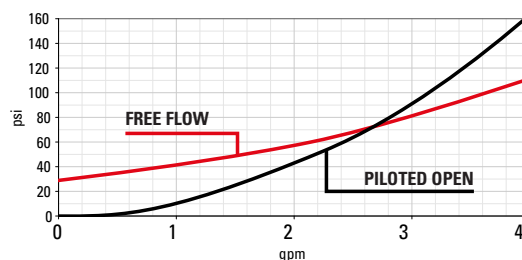
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | W | 4 | | | | | 0 | 4 | 1 | 1 | 0 | 0 | A

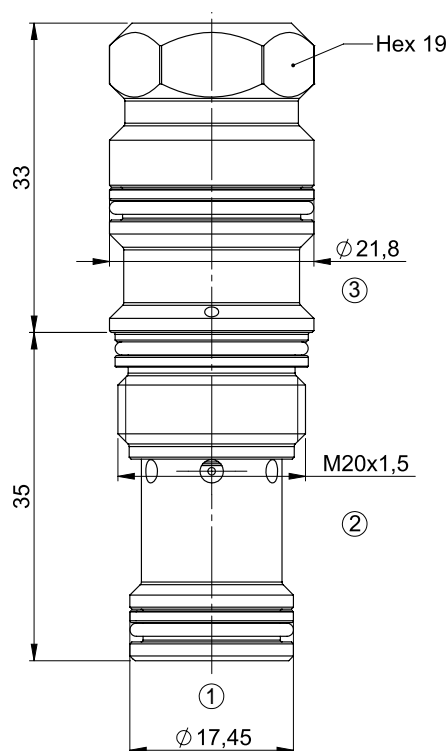
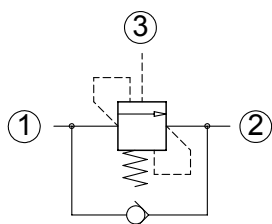
Setting (bar)

Spring

T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

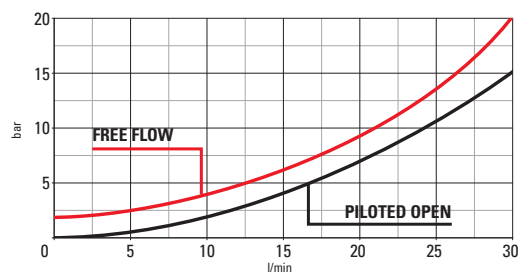
Normale Ristretta T11A 4:1 fixed setting



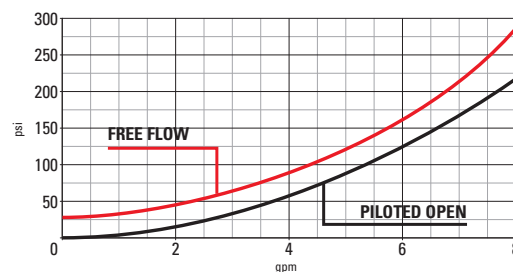
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

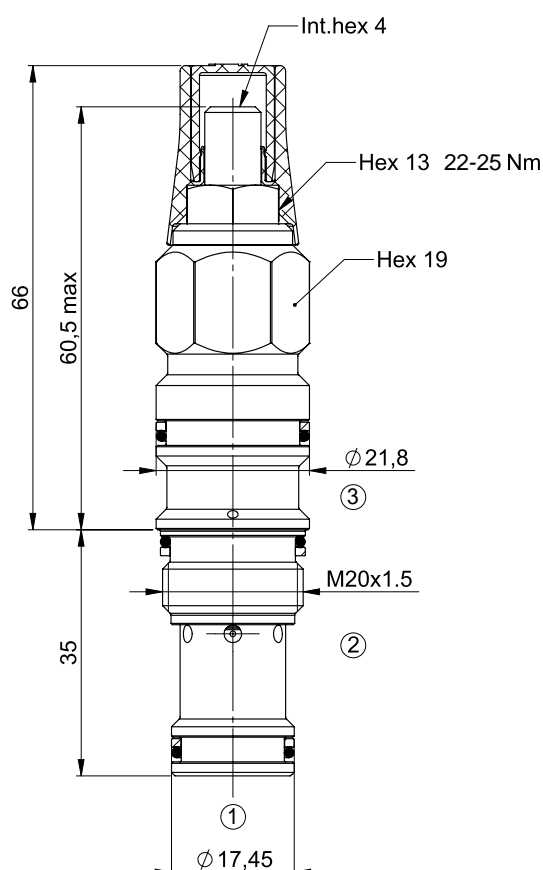
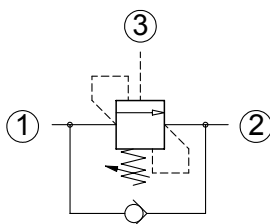
C | 0 | 4 | | | | | 0 | 4 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

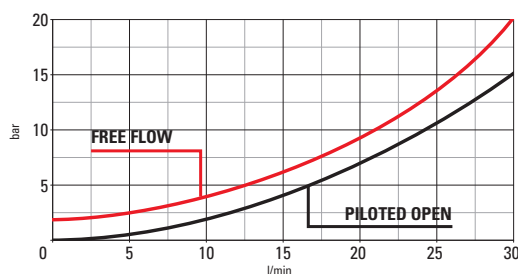
Normale Ristretta T11A 4:1 adjustable setting



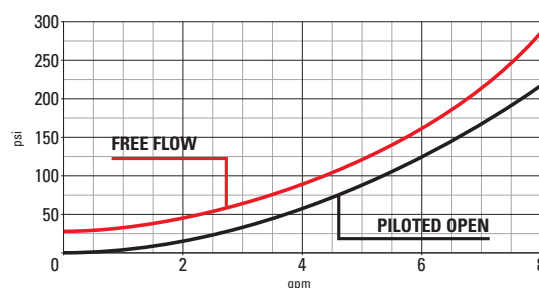
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | 4 | | | | | 0 | 4 | 1 | 1 | 0 | 0 | A

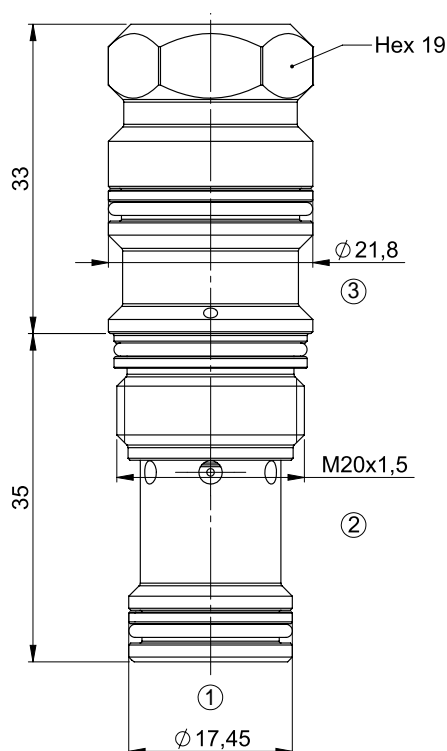
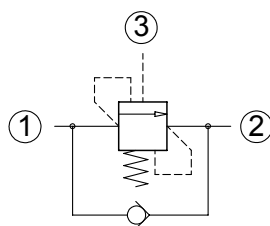
Setting (bar)

Spring

- T = 30-105 bar
- M = 100-280 bar
- D = 200-390 bar

Load holding valves

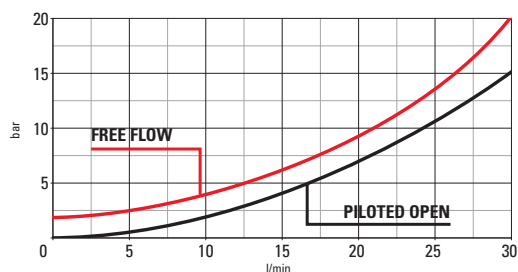
Normale Ristretta T11A 4:1 SP fixed setting



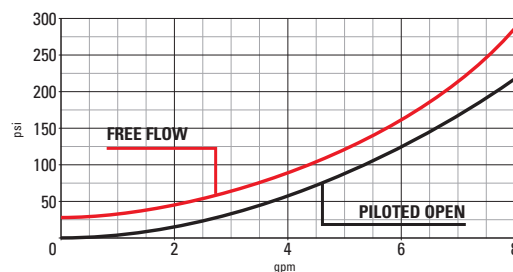
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs) 0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

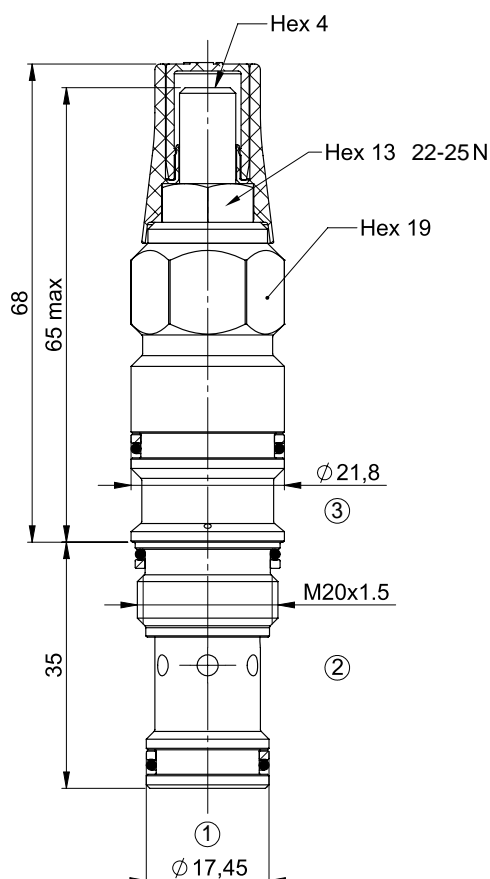
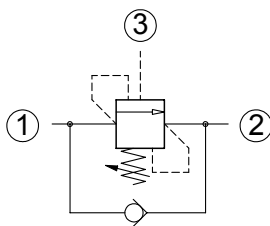
C | 0 | 4 | | | | | 0 | 4 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

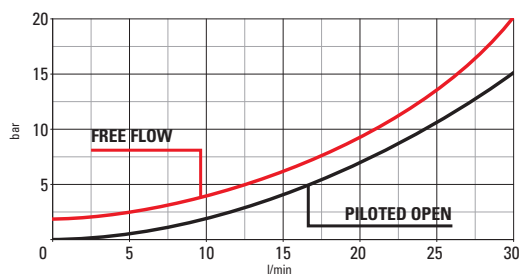
Normale Ristretta T11A 7,5:1 SP adjustable setting



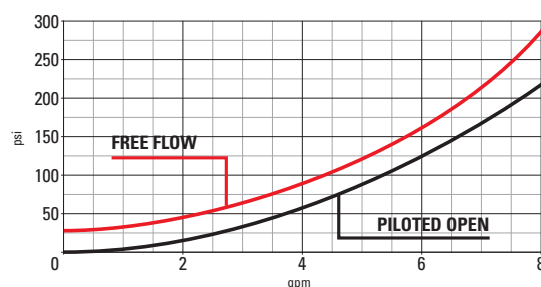
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	7,5:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | 0 | 4 | | | | | 0 | 7 | 1 | 1 | 0 | 0 | A

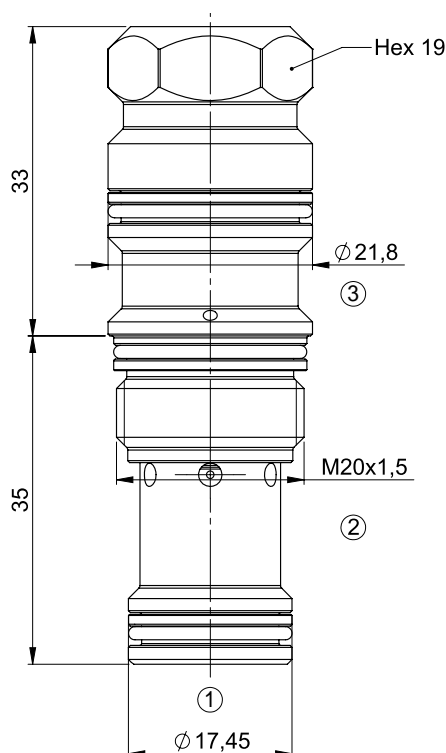
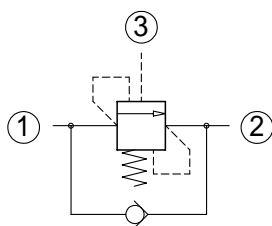
Setting (bar)

Spring

T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

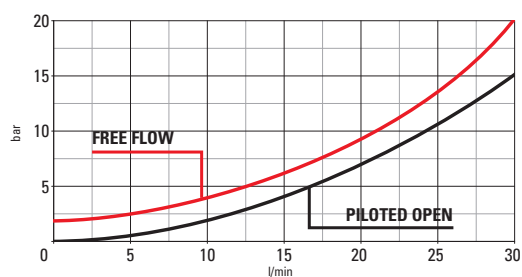
Normale Ristretta T11A 9:1 fixed setting



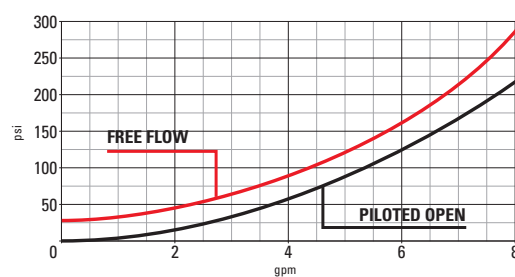
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	9:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

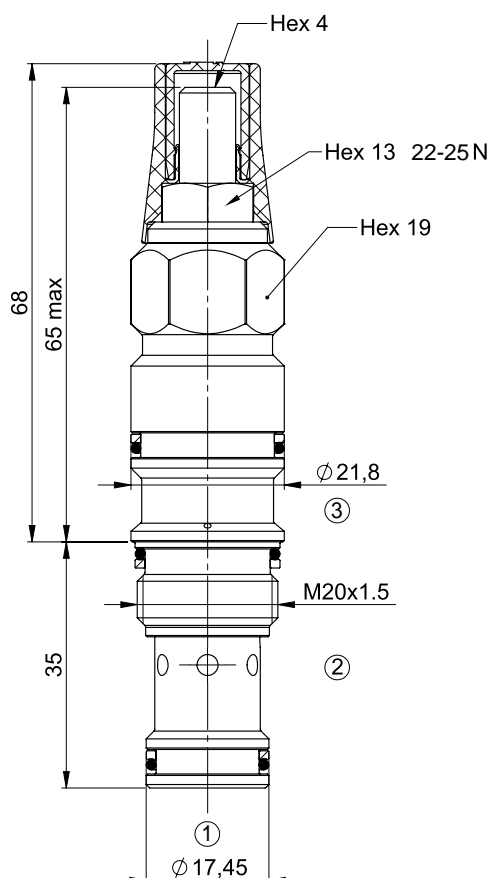
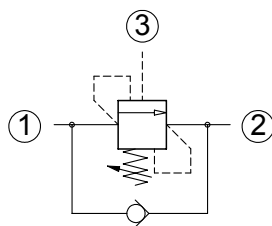
C | 0 | 4 | | | | | 0 | 9 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

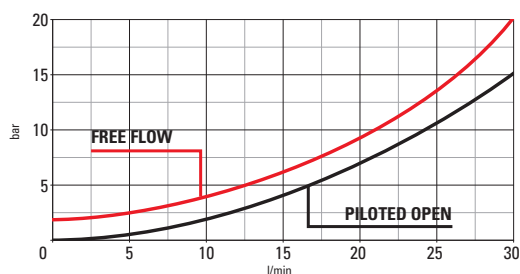
Normale Ristretta T11A 9:1 adjustable setting



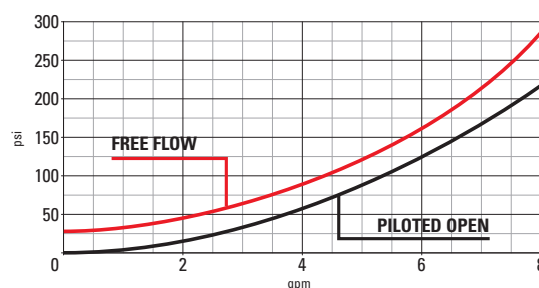
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	9:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | 0 | 4 | | | | | 0 | 9 | 1 | 1 | 0 | 0 | A

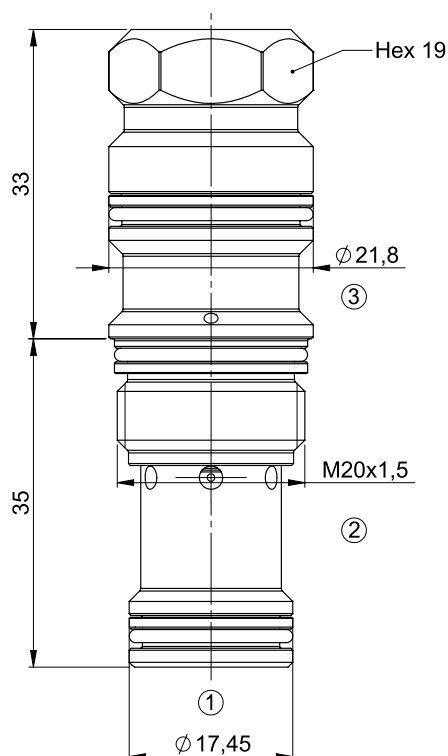
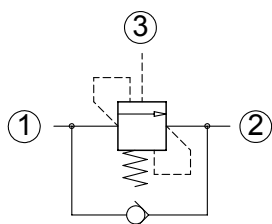
Setting (bar)

Spring

T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

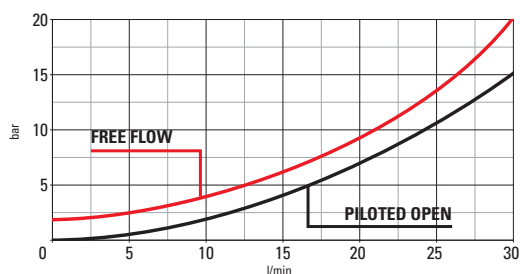
Normale Ristretta T11A 9:1 SP fixed setting



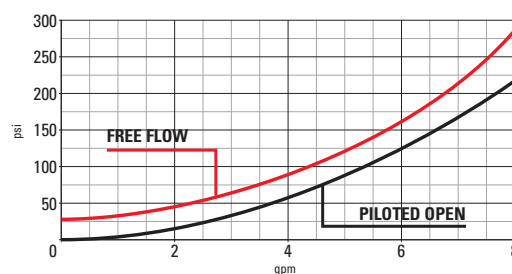
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	9:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,130 kg (0,29 lbs) 0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



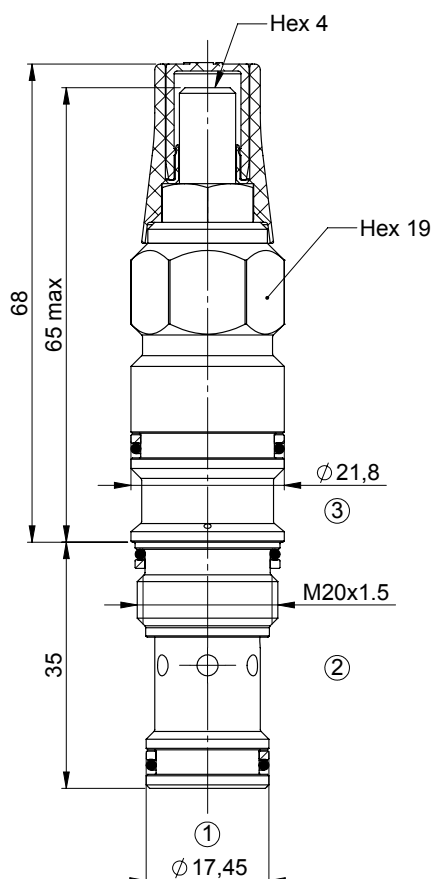
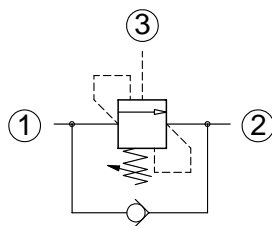
Performance curves



C 0 4								0 9 1 1				0 A			

Load holding valves

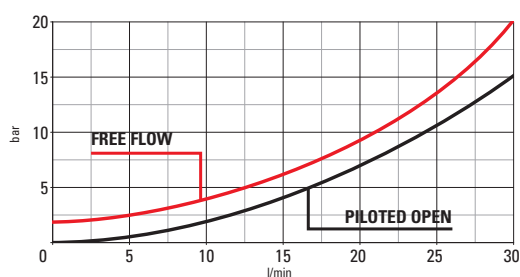
Normale Ristretta T11A 9:1 SP adjustable setting



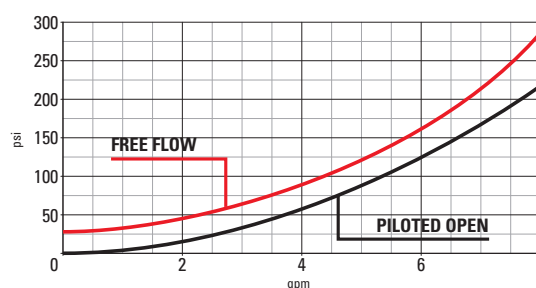
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	9:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | 0 | 4 | | | | | 0 | 9 | 1 | 1 | 0 | 0 | A

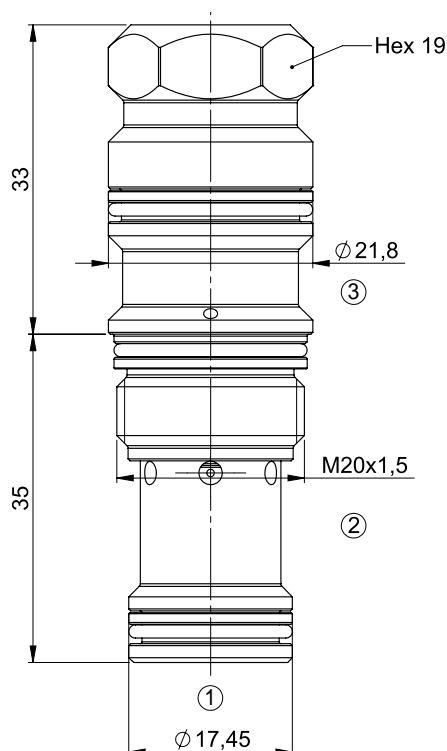
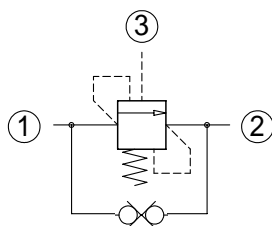
Setting (bar)

Spring

T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

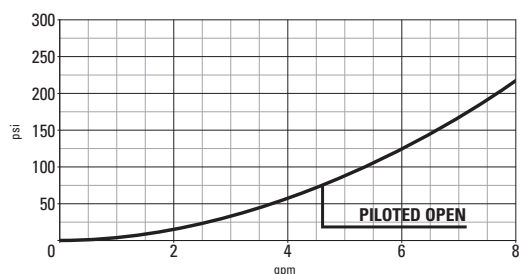
Normale Ristretta T11A 3:1 SBB fixed setting



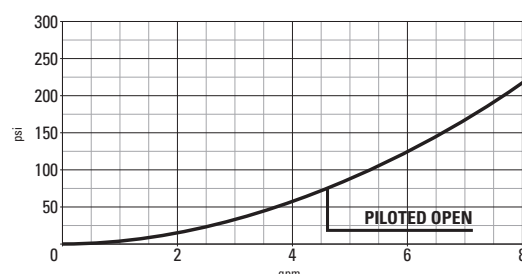
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Indicated Reseat value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options
B = BUNA SEALS
D = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

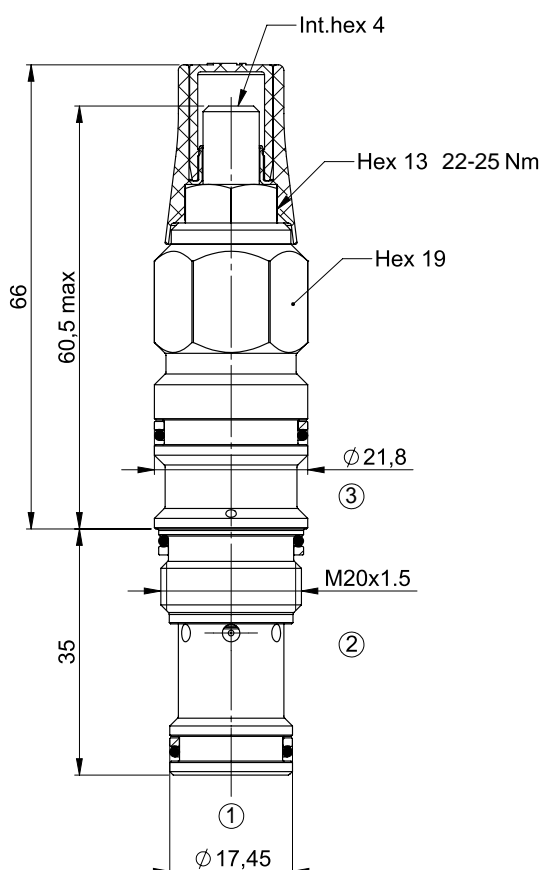
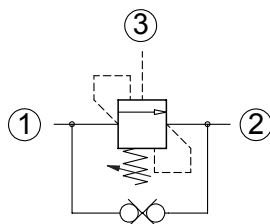
C | 0 | M | | | | | 0 | 3 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-280 bar
D = 200-390 bar

Load holding valves

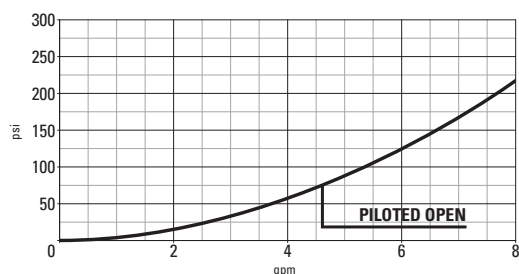
Normale Ristretta T11A 3:1 SBB adjustable setting



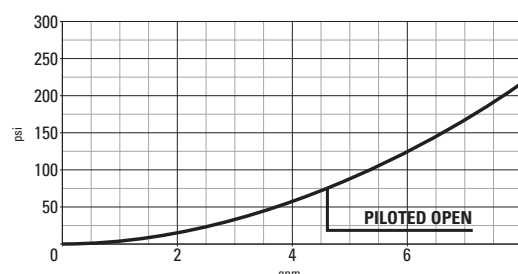
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	173 bar (Spring D) - 155 bar (Spring M) - 27 bar (Spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



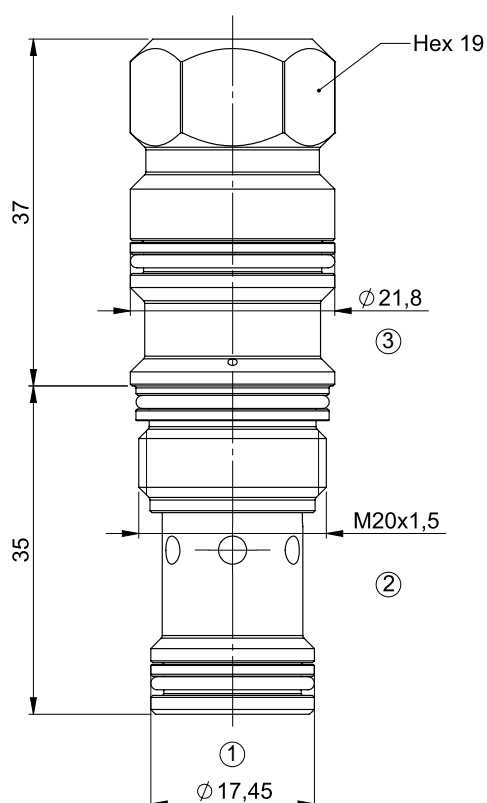
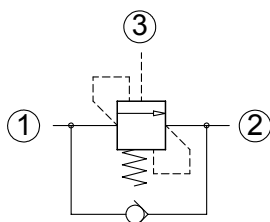
Performance curves



Seals									
A = BUNA SEALS									
G = BUNA tamper resistant									
C = VITON SEALS									
H = VITON tamper resistant									
C 0 M 0 3 1 1 0 0 A									
Setting (bar)									
Spring									
T = 30-105 bar									
M = 100-280 bar									
D = 200-390 bar									

Load holding valves

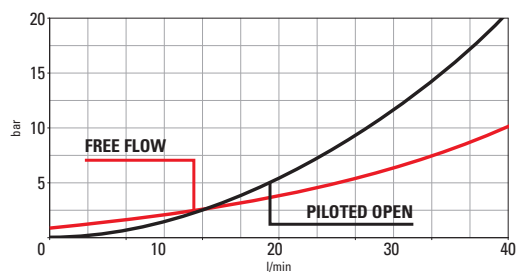
Normale T11A TG 3:1 fixed setting



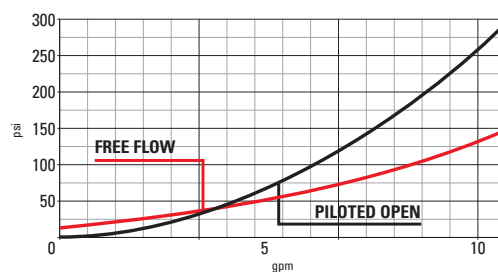
Technical Details

cavity	T11A
capacity	40 lpm (10 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	450 bar (6500 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	350 bar (5000 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

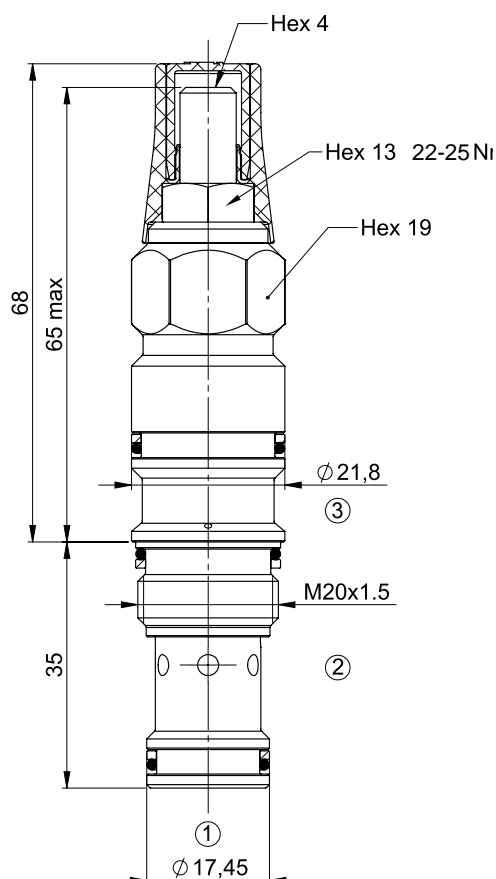
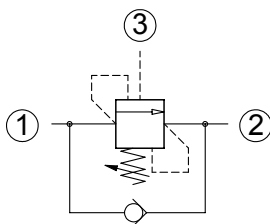
C | 1 | 0 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-320 bar
D = 200-450 bar

Load holding valves

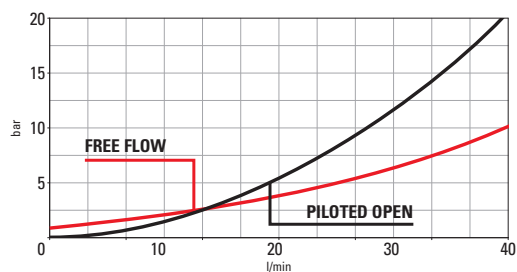
Normale T11A TG 3:1 adjustable setting



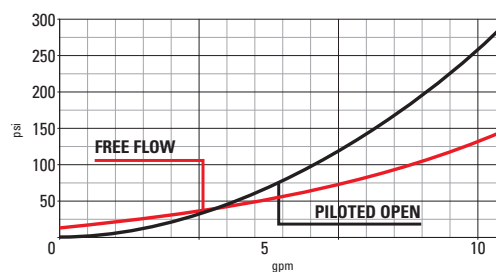
Technical Details

cavity	T11A
capacity	40 lpm (10 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	450 bar (6500 psi)
minimum setting	30 bar (450 psi)
pressure increase per turn	201 bar (Spring D) - 135 bar (Spring M) - 33 bar (Spring T)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	350 bar (5000 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/20

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum settin



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | 1 | 0 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

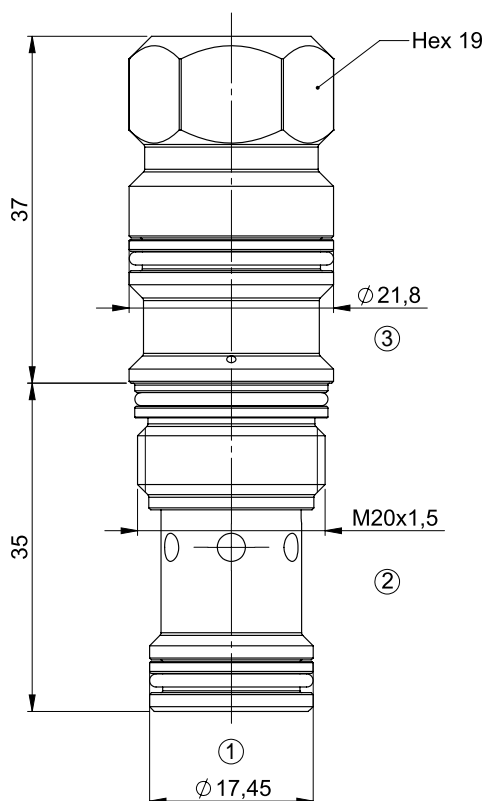
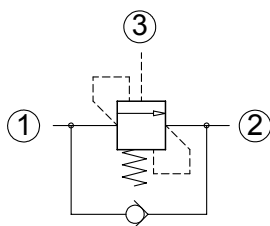
Setting (bar)

Spring

T = 30-105 bar
M = 105-320 bar
D = 200-450 bar

Load holding valves

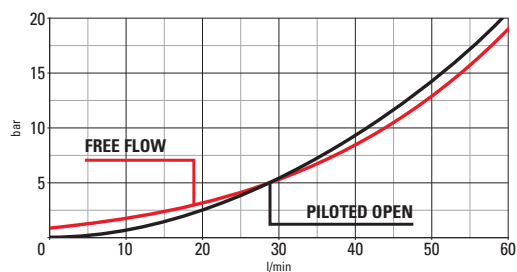
Normale T11A 2:1 fixed setting



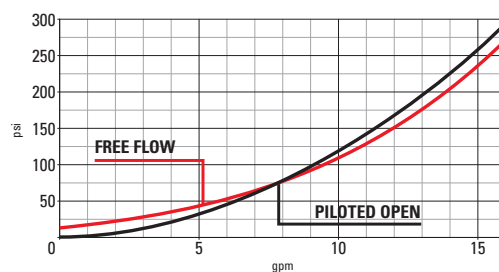
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	420 bar (6000 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

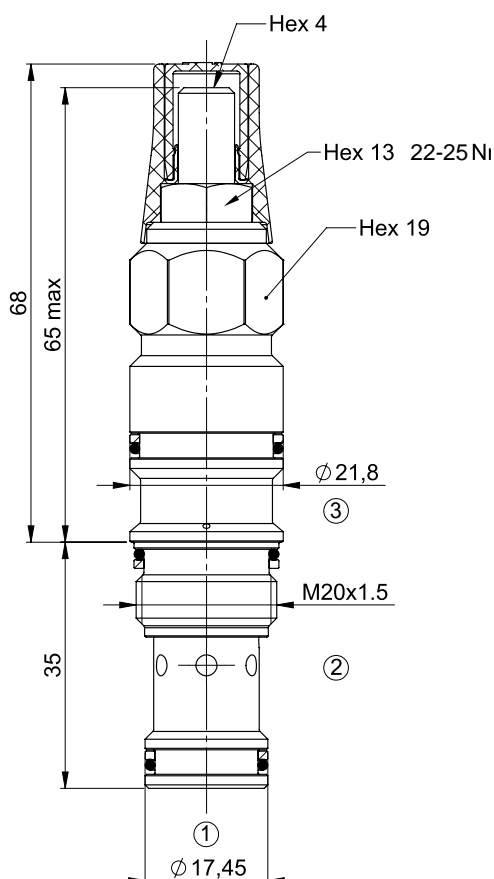
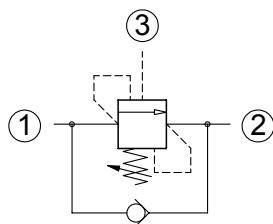
0 = Standard Zinc plating
Z = Zinc Nickel plating

C | 0 | 0 | | | | | 0 | 2 | 1 | 1 | | 0 | A

Spring
T = 35-105 bar
M = 105-210 bar
D = 200-350 bar
S = 340-420 bar

Load holding valves

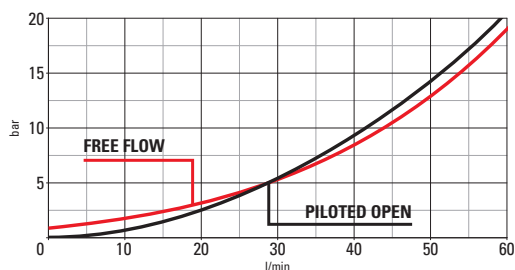
Normale T11A 2:1 adjustable setting



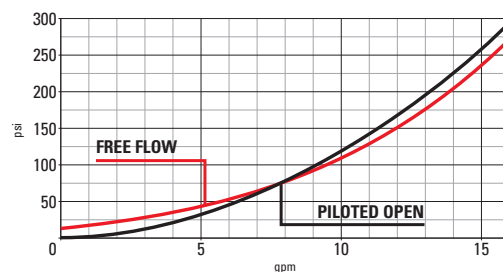
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	420 bar (6000 psi)
minimum setting	30 bar (450 psi)
pressure increase per turn	235 bar (Spring S) - 201 bar (Spring D) - 135 bar (Spring M) - 33 bar (Spring T)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/20

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

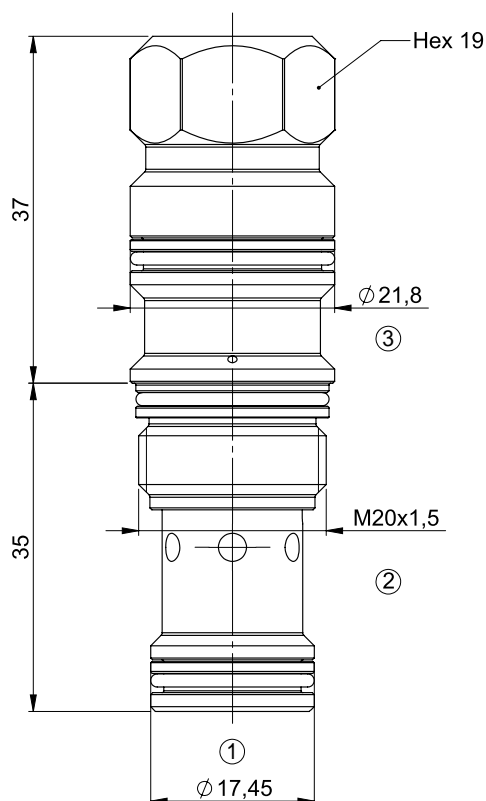
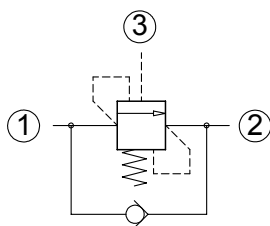
C | 0 | 0 | | | | | 0 | 2 | 1 | 1 | 0 | 0 | A

Spring Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 200-350 bar
S = 340-420 bar

Load holding valves

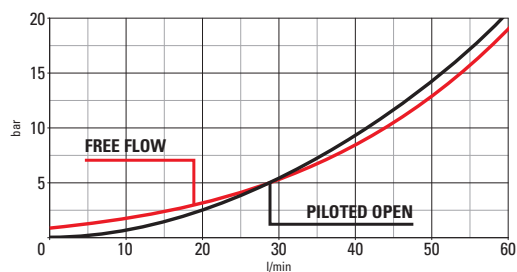
Normale T11A 3:1 fixed setting



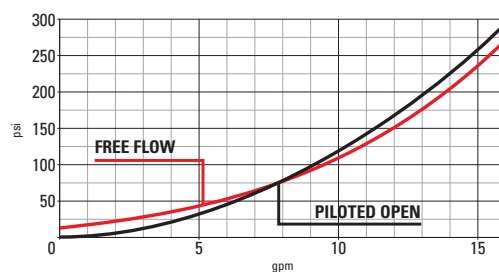
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	420 bar (6000 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



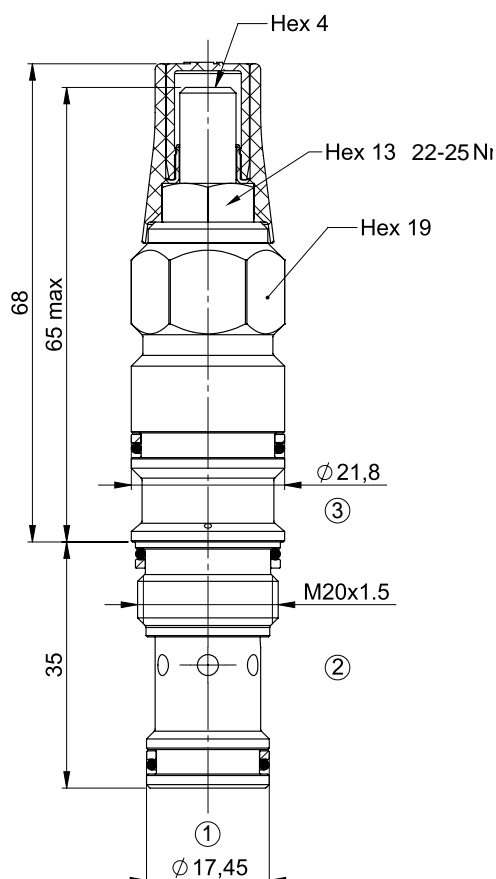
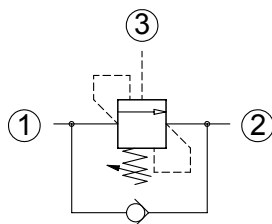
Performance curves



													Seals																0 = Standard Zinc plating								
													1 = BUNA SEALS																Z = Zinc Nickel plating								
													3 = VITON SEALS																								
C			0			0													0			3			1			1			0			0			A

Load holding valves

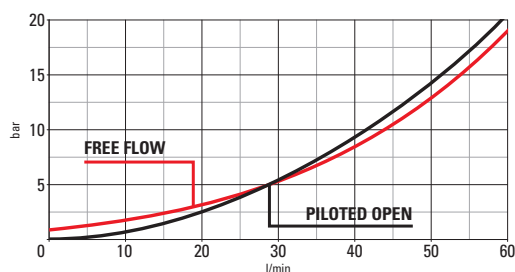
Normale T11A 3:1 adjustable setting



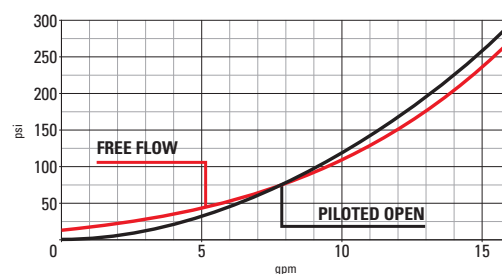
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	420 bar (6000 psi)
minimum setting	30 bar (450 psi)
pressure increase per turn	201 bar (Spring D) - 135 bar (Spring M) - 33 bar (Spring T) - 235 bar (Spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/20

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum settin



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | 0 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

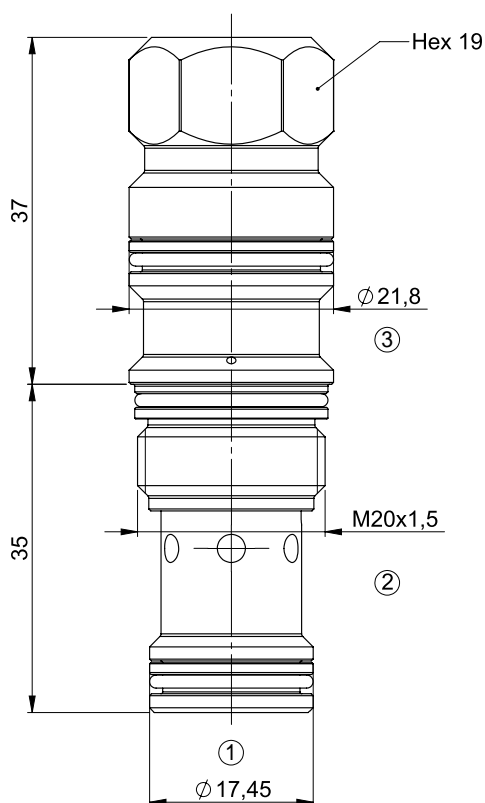
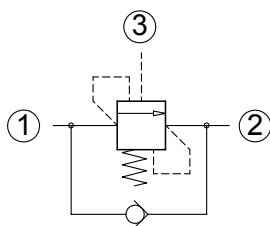
Spring

- T = 30-105 bar
- M = 105-210 bar
- D = 200-350 bar
- S = 340-420 bar

Setting (bar)

Load holding valves

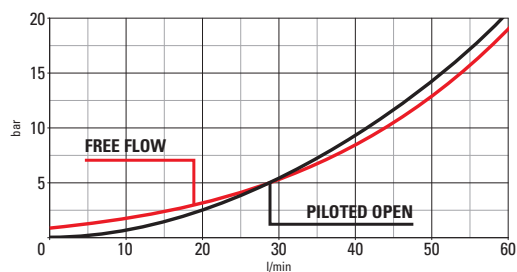
Normale T11A 3:1 SP fixed setting



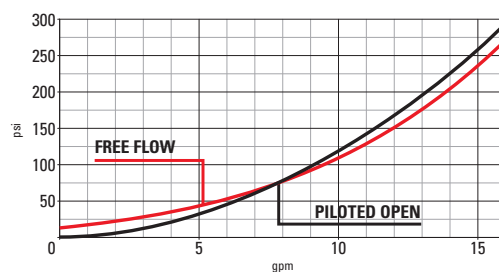
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	420 bar (6000 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

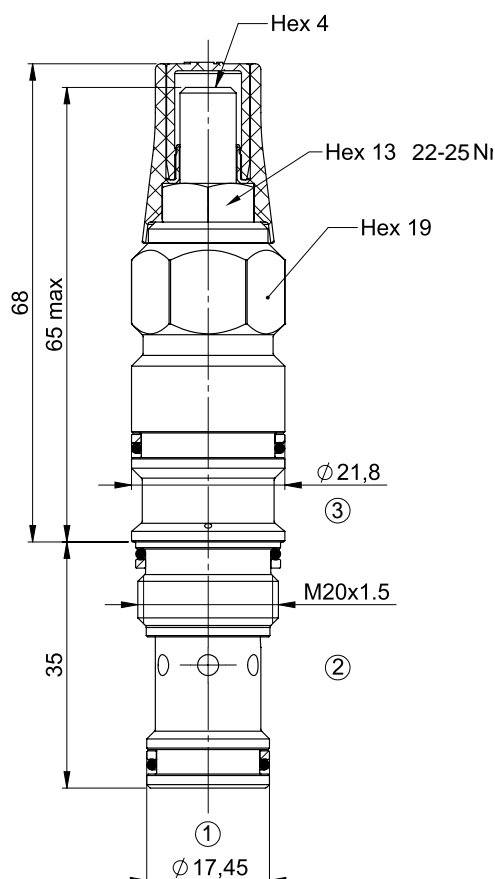
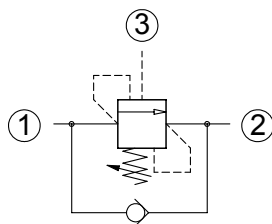
0 = Standard Zinc plating
Z = Zinc Nickel plating

C | 0 | 0 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

Spring
T = 30-105 bar
M = 105-210 bar
D = 200-350 bar
S = 340-420 bar

Load holding valves

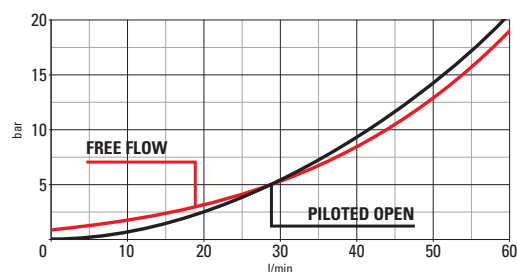
Normale T11A 3:1 SP adjustable setting



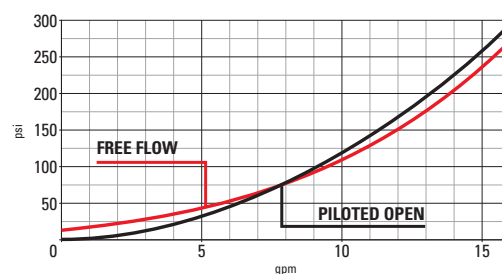
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	420 bar (6000 psi)
minimum setting	30 bar (450 psi)
pressure increase per turn	201 bar (Spring D) - 135 bar (Spring M) - 33 bar (Spring T) - 235 bar (Spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/20

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum settin



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

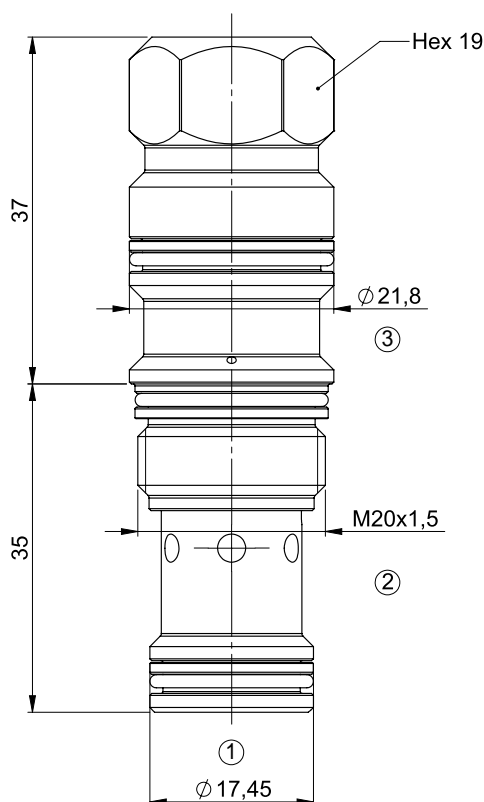
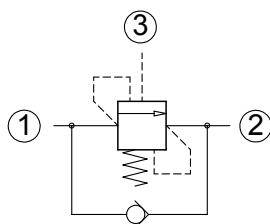
C | 0 | 0 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

Spring Setting (bar)

T = 30-105 bar
M = 105-210 bar
D = 200-350 bar
S = 340-420 bar

Load holding valves

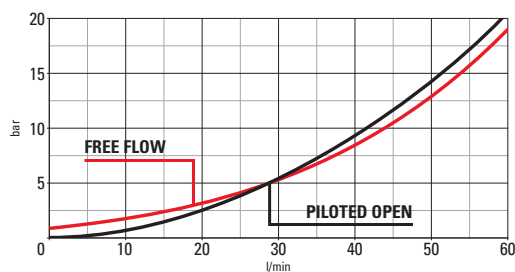
Normale T11A 5:1 fixed setting



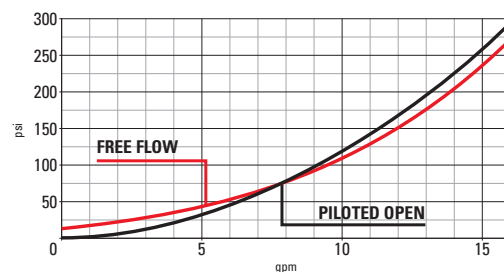
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	420 bar (6000 psi)
minimum setting	30 bar (450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/23

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

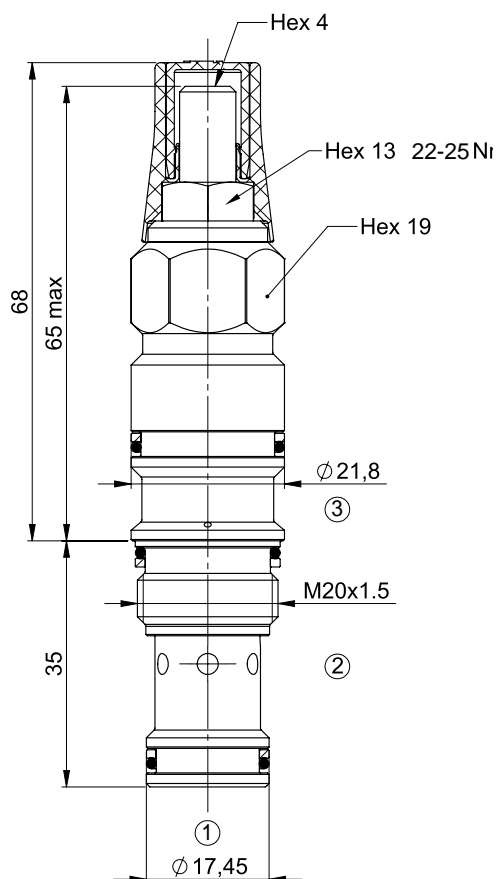
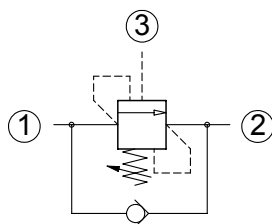
0 = Standard Zinc plating
Z = Zinc Nickel plating

C | 0 | 0 | | | | | 0 | 5 | 1 | 1 | | 0 | A

Spring
L = 30-105 bar
T = 50-210 bar
D = 210-360 bar
S = 360-420 bar

Load holding valves

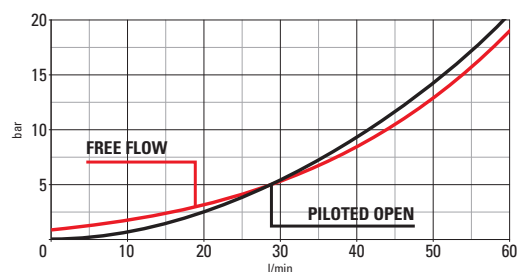
Normale T11A 5:1 adjustable setting



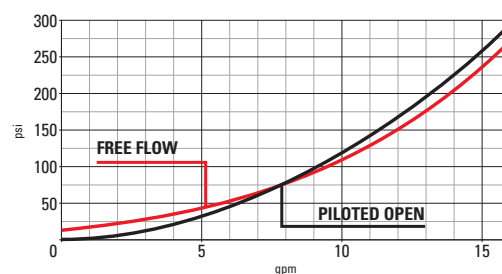
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	420 bar (6000 psi)
minimum setting	30 bar (450 psi)
pressure increase per turn	238 bar (Spring S) - 165 bar (Spring D) - 58 bar (Spring T) - 32 bar (Spring L)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/22

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

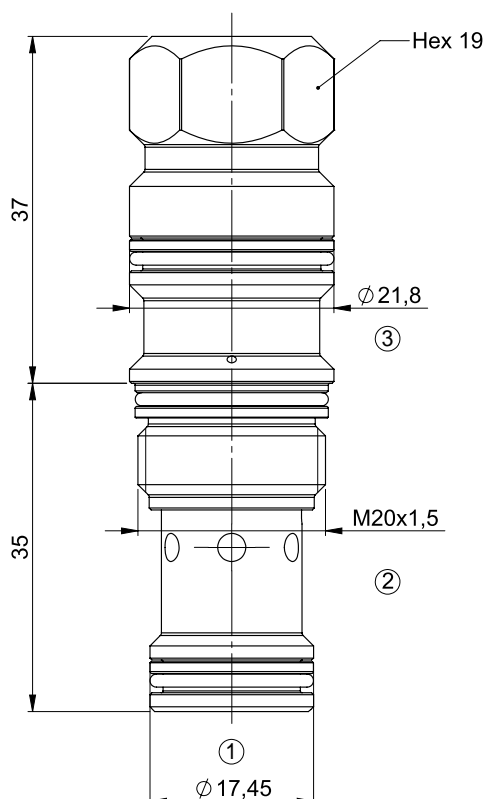
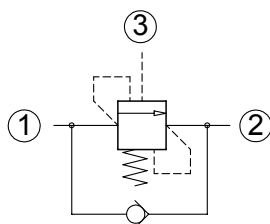
C | 0 | 0 | | | | | 0 | 5 | 1 | 1 | 0 | 0 | A

Spring Setting (bar)

- L = 30-105 bar
- T = 50-210 bar
- D = 210-360 bar
- S = 360-420 bar

Load holding valves

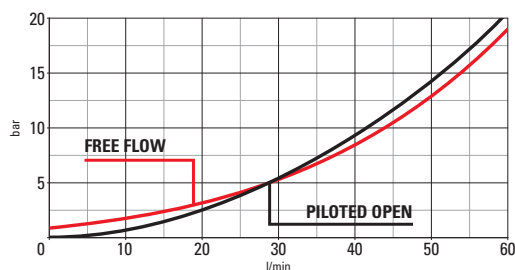
Normale T11A 8:1 fixed setting



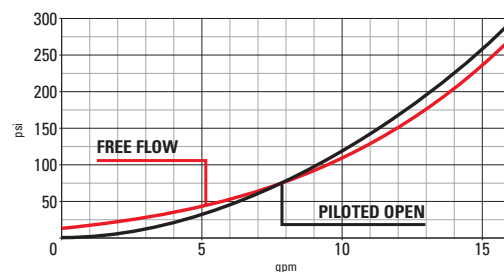
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/25

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

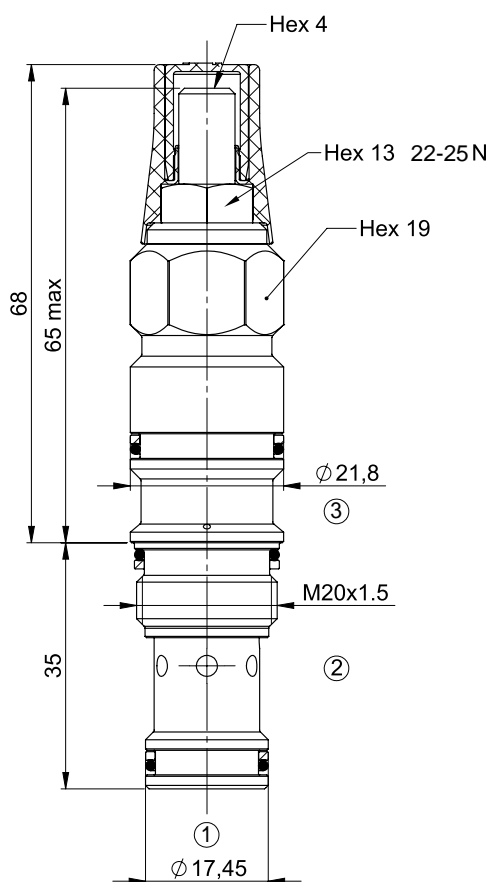
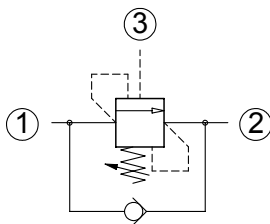
C | 0 | 0 | | | | | 0 | 8 | 1 | 1 | | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

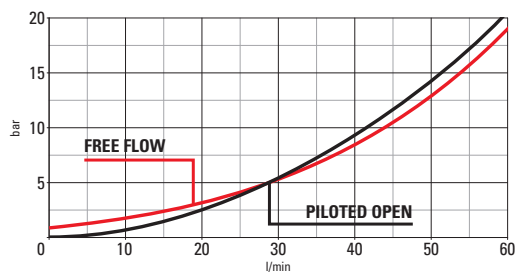
Normale T11A 8:1 adjustable setting



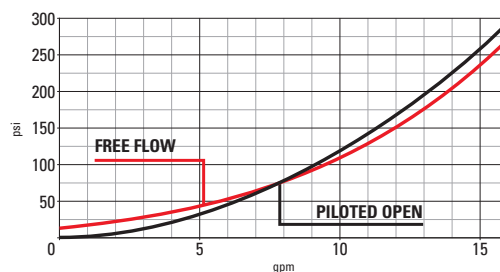
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	93 bar (Spring D) - 50 bar (Spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/24

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | 0 | | | | | 0 | 8 | 1 | 1 | 0 | 0 | A

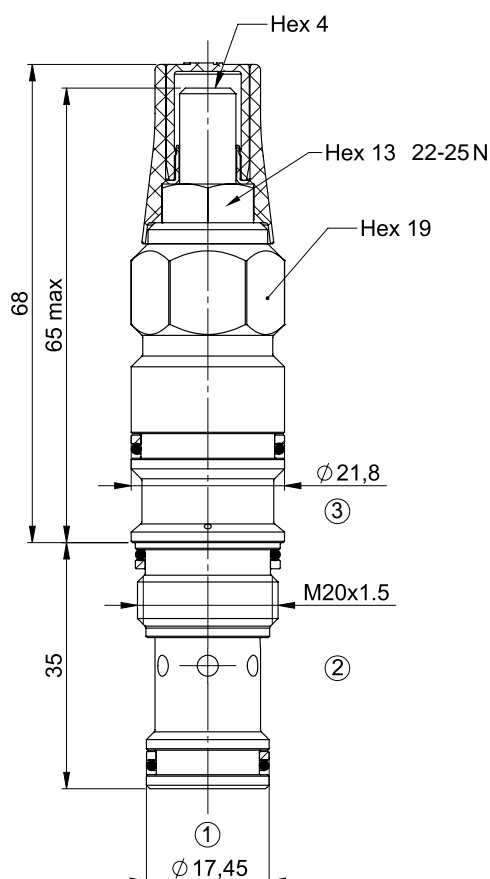
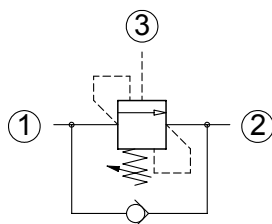
Setting (bar)

Spring

- M = 70-210 bar
- D = 140-350 bar

Load holding valves

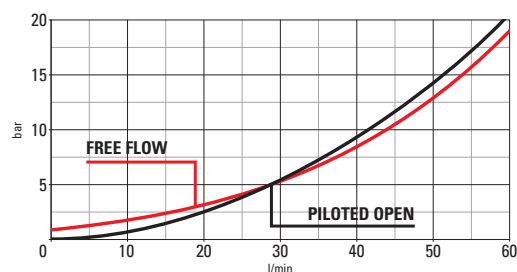
Normale T11A 10:1 adjustable setting



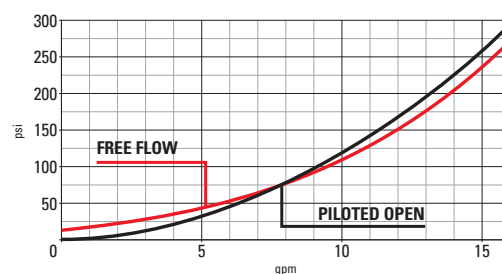
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	115 bar (spring D) - 63 bar (spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | 0 | | | | | 1 | 0 | 1 | 1 | 0 | 0 | A

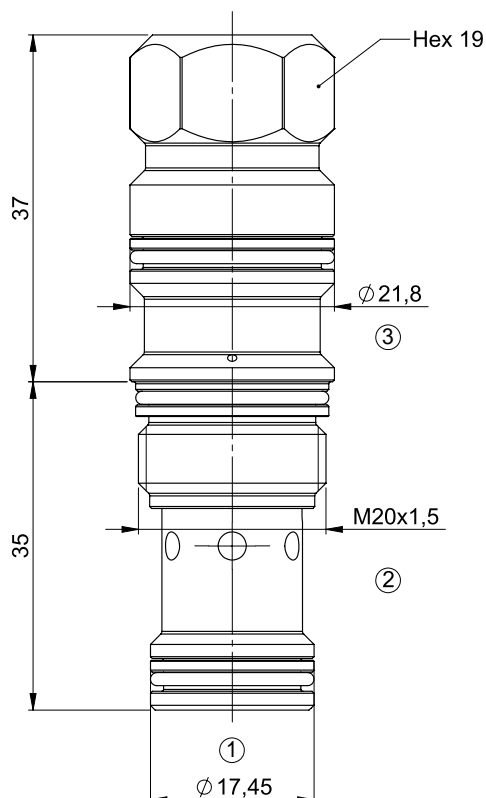
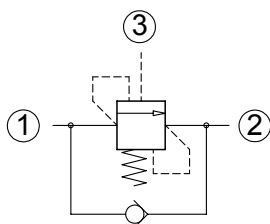
Setting (bar)

Spring

- M = 70-210 bar
- D = 140-420 bar

Load holding valves

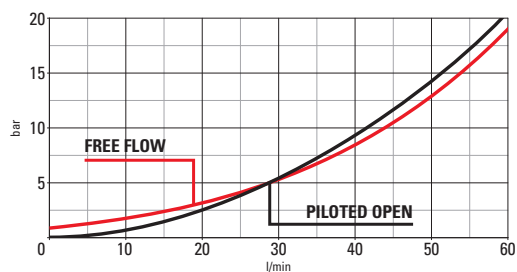
Normale T11A 10:1 SP fixed setting



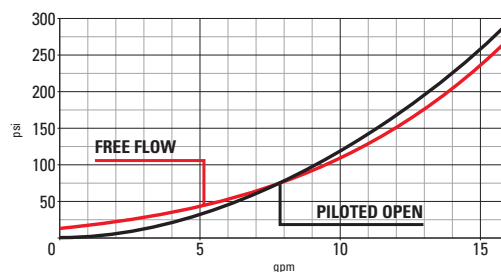
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/27

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

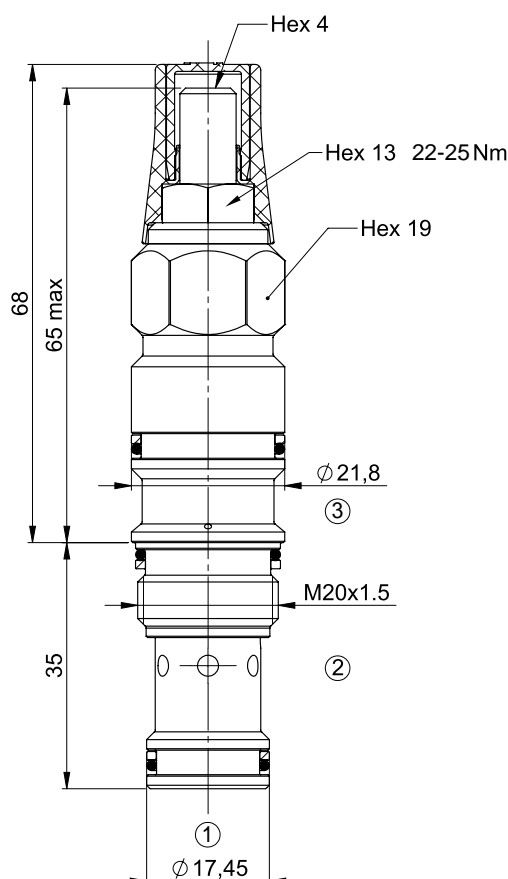
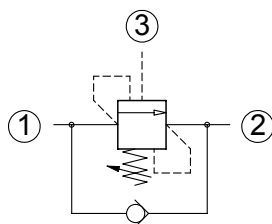
C | 0 | 0 | | | | | 1 | 0 | 1 | 1 | | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-420 bar

Load holding valves

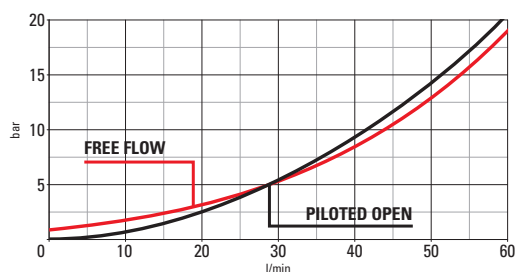
Normale T11A 10:1 SP adjustable setting



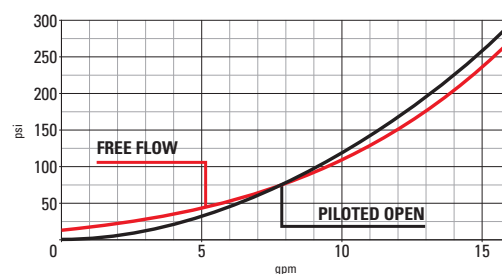
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	115 bar (spring D) - 63 bar (spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | 0 | | | | | 1 | 0 | 1 | 1 | 0 | 0 | A

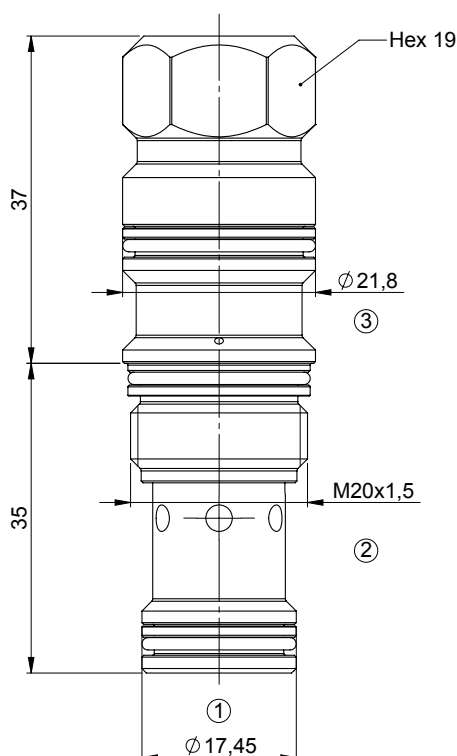
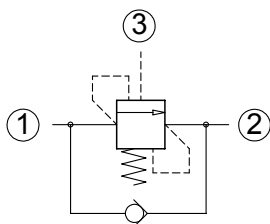
Setting (bar)

Spring

- M = 70-210 bar
- D = 140-420 bar

Load holding valves

Normale T11A GT 3:1 fixed setting



Technical Details

cavity	T11A
capacity	75 lpm (20 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	265 bar (3800 psi)
minimum setting	35 bar (500 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	210 bar (3000 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/29

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

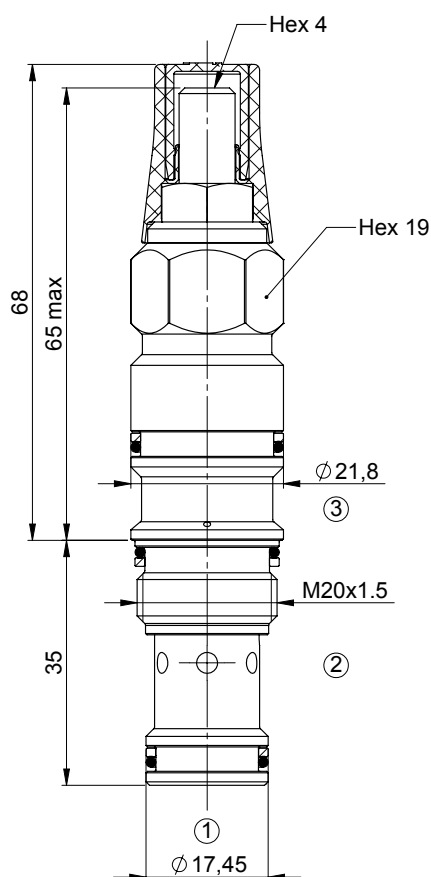
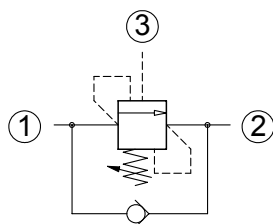
C | 2 | 0 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

Setting (bar)

Spring
T = 35-105 bar
M = 105-155 bar
D = 140-265 bar

Load holding valves

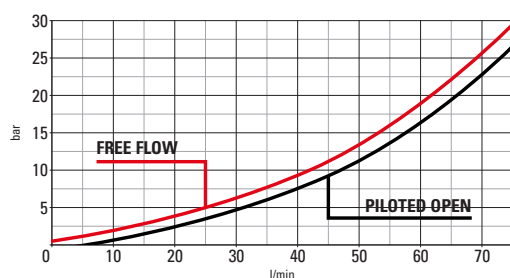
Normale T11A GT 3:1 adjustable setting



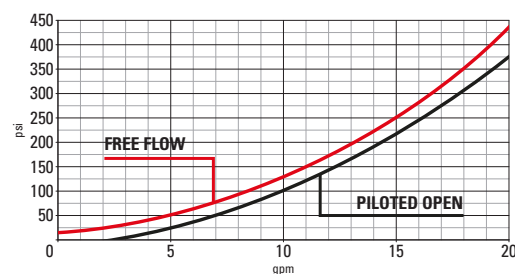
Technical Details

cavity	T11A
capacity	75 lpm (20 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	265 bar (3800 psi)
minimum setting	35 bar (500 psi)
pressure increase per turn	206 bar (spring D) - 132 bar (spring M) - 33 bar (spring T)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	210 bar (3000 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/28

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | 2 | 0 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

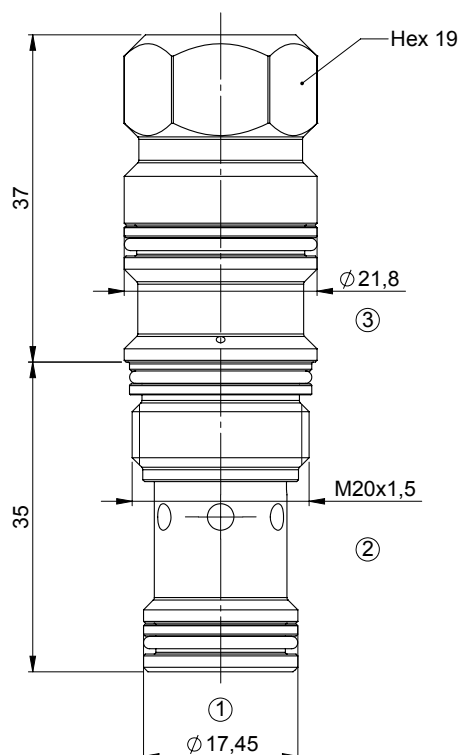
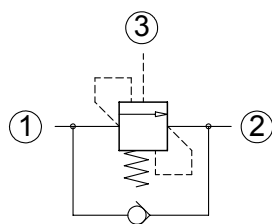
Setting (bar)

Spring

T = 35-105 bar
M = 105-155 bar
D = 140-265 bar

Load holding valves

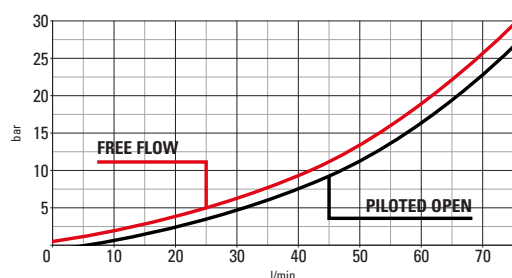
Normale T11A GT 8:1 fixed setting



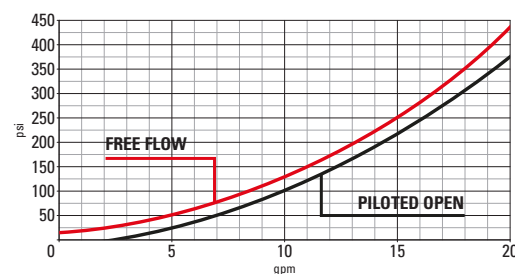
Technical Details

cavity	T11A
capacity	75 lpm (20 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	270 bar (4000 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs) 0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

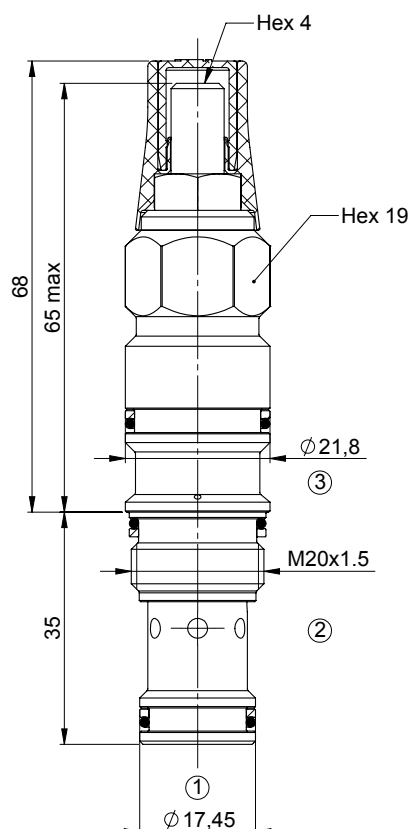
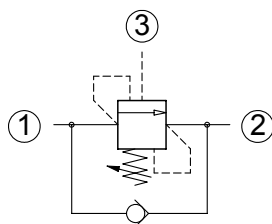
C | 2 | 0 | | | | | 0 | 8 | 1 | 1 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

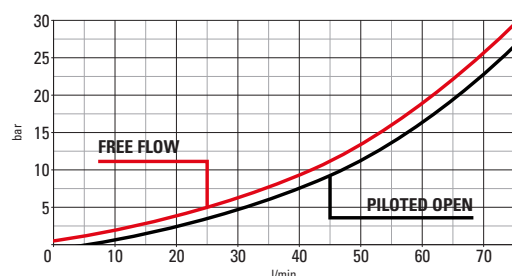
Normale T11A GT 8:1 adjustable setting



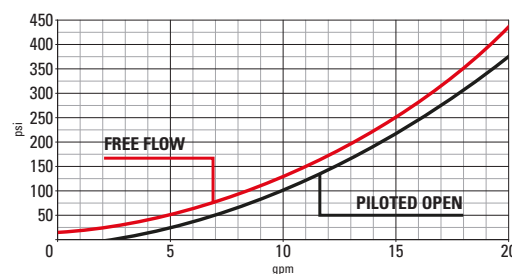
Technical Details

cavity	T11A
capacity	75 lpm (20 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	93 bar (spring D) - 50 bar (spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	270 bar (4000 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 2 | 0 | | | | | 0 | 8 | 1 | 1 | 0 | 0 | A

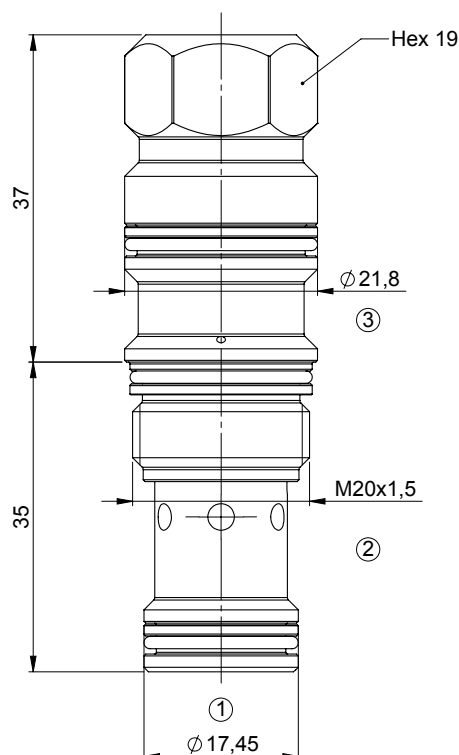
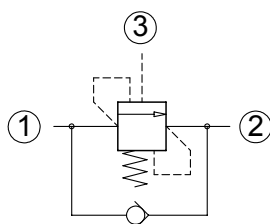
Setting (bar)

Spring

- M = 70-190 bar
- D = 140-310 bar

Load holding valves

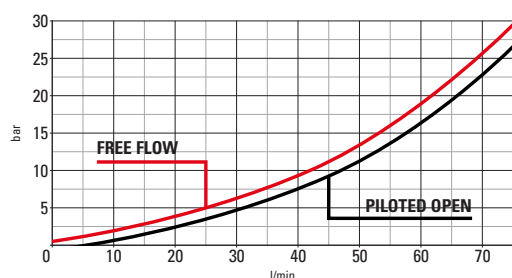
Normale T11A GT 10:1 fixed setting



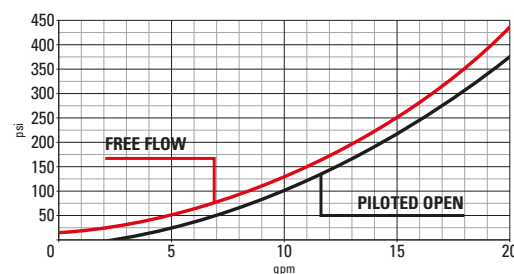
Technical Details

cavity	T11A
capacity	75 lpm (20 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	390 bar (5650 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	310 bar (4500 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

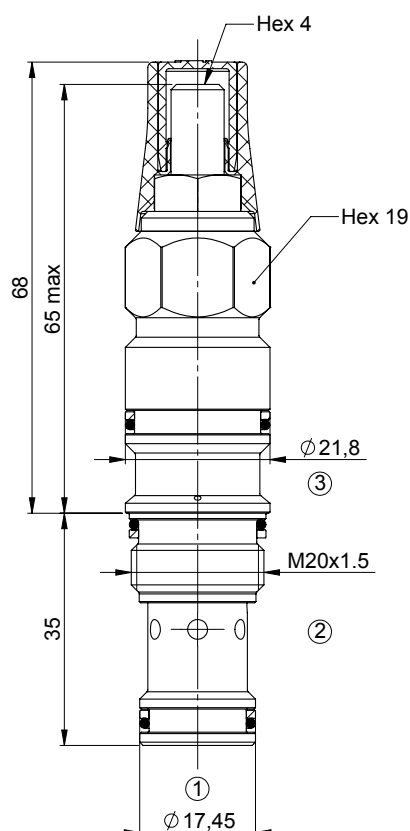
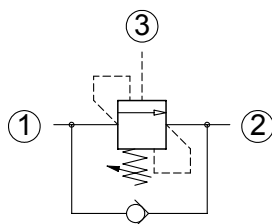
C | 2 | 0 | | | | | 1 | 0 | 1 | 1 | 0 | 0 | A

Setting (bar)

Spring
M = 70-190 bar
D = 140-390 bar

Load holding valves

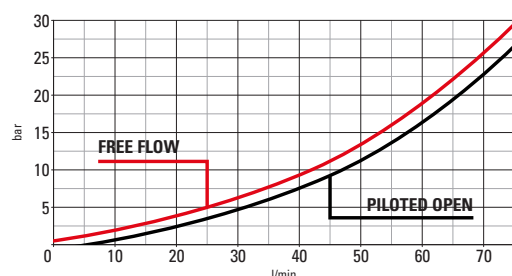
Normale T11A GT 10:1 adjustable setting



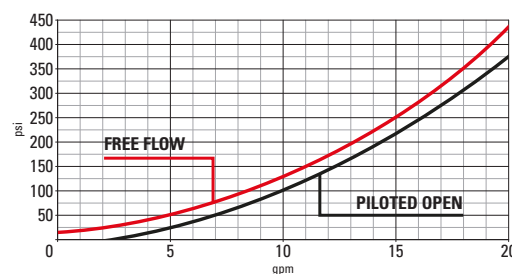
Technical Details

cavity	T11A
capacity	75 lpm (20 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	390 bar (5650 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	115 bar (spring D) - 63 bar (spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	310 bar (4500 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 2 | 0 | | | | | 1 | 0 | 1 | 1 | 0 | 0 | A

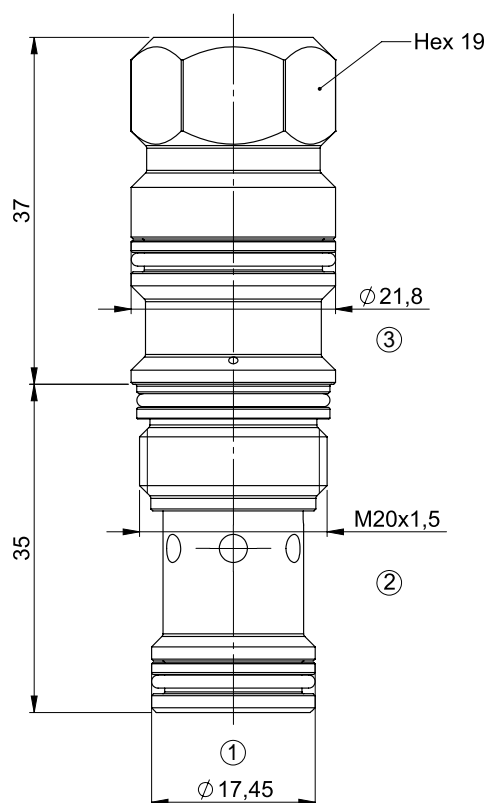
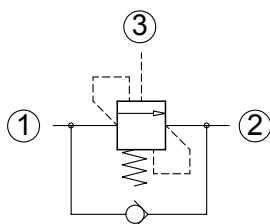
Setting (bar)

Spring

- M = 70-190 bar
- D = 140-390 bar

Load holding valves

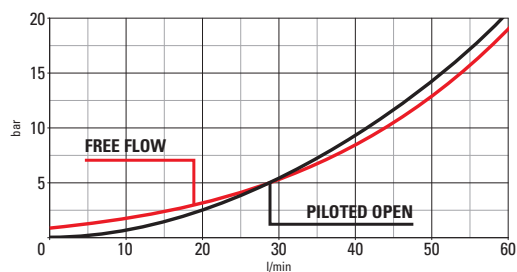
Normale T11A 2:1 CVT fixed setting



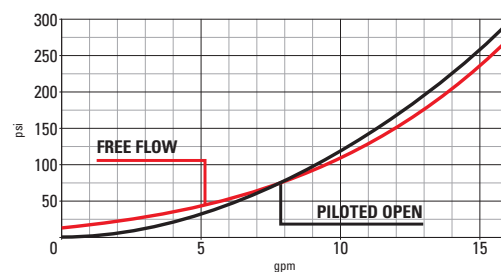
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	35 bar (500 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Check valve setting: 0,3 bar
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

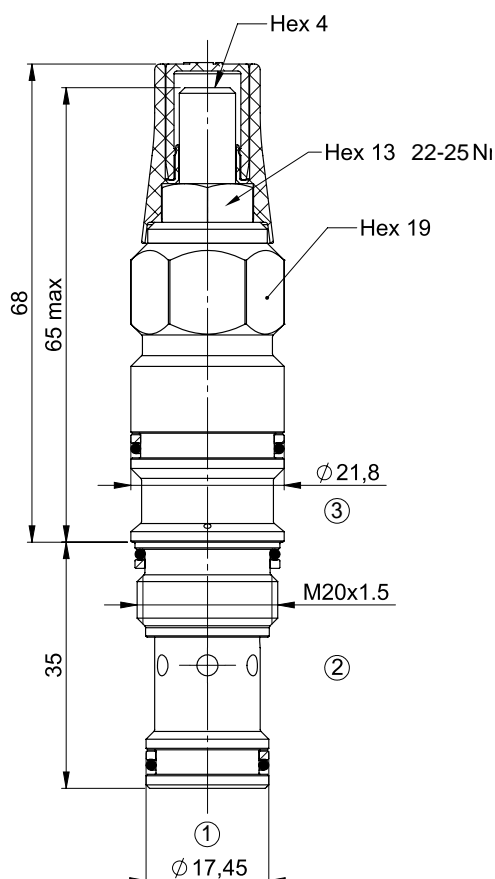
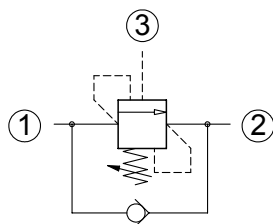
C | 0 | A | | | | | 0 | 2 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 35-105 bar
M = 105-210 bar
D = 200-350 bar

Load holding valves

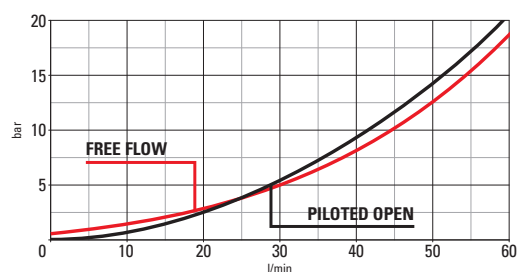
Normale T11A 2:1 CVT adjustable setting



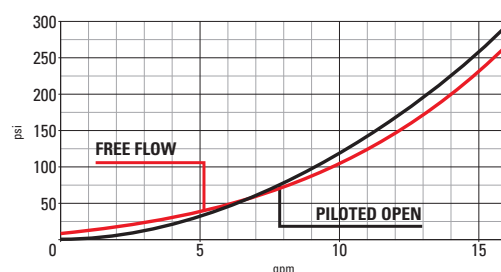
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	35 bar (500 psi)
pressure increase per turn	201 bar (Spring D) - 135 bar (Spring M) - 33 bar (Spring T)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/20

- Check valve setting: 0,3 bar
- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | A

0 | 2 | 1 | 1 | 0 | 0 | A

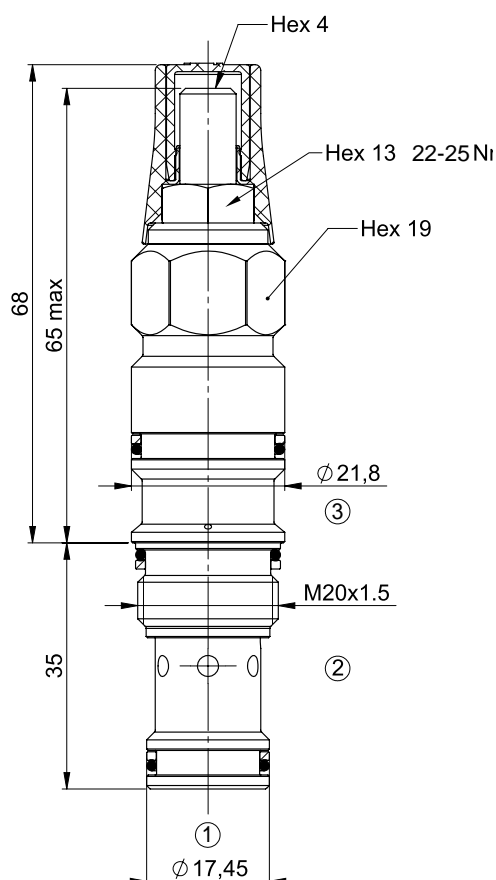
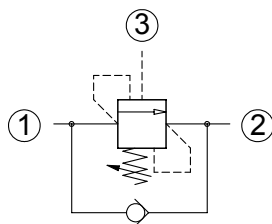
Setting (bar)

Spring

- T = 35-105 bar
- M = 105-210 bar
- D = 200-350 bar

Load holding valves

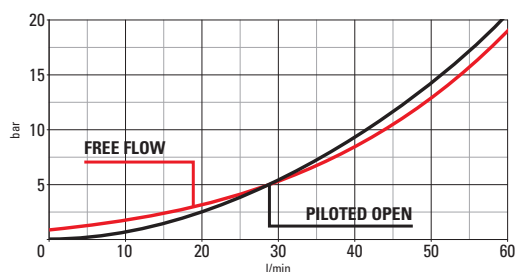
Normale T11A 3:1 CVT adjustable setting



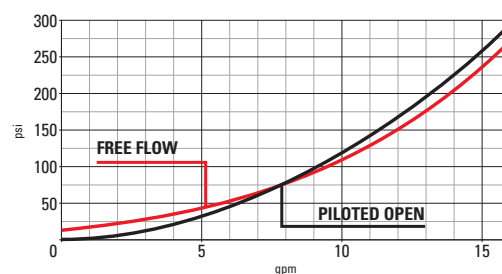
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	420 bar (6000 psi)
minimum setting	35 bar (500 psi)
pressure increase per turn	201 bar (Spring D) - 135 bar (Spring M) - 33 bar (Spring T) - 235 bar (Spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/20

- Check valve setting: 0,3 bar
- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum settin



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

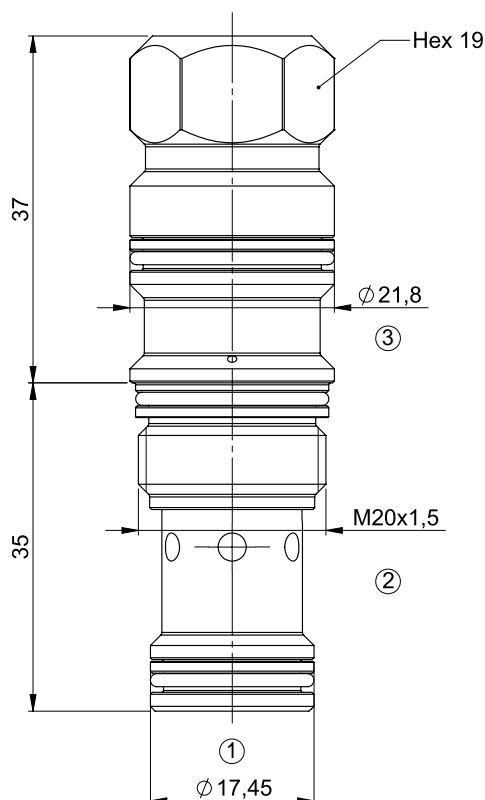
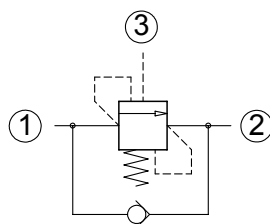
C | 0 | A | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

Spring Setting (bar)

- T = 35-105 bar
- M = 105-210 bar
- D = 200-350 bar
- S = 340-420 bar

Load holding valves

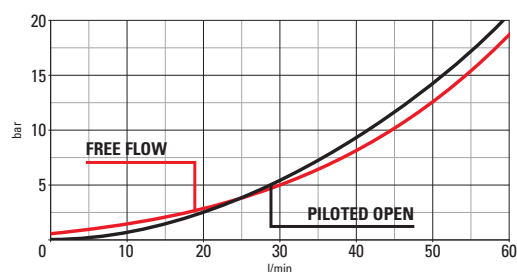
Normale T11A 5:1 CVT fixed setting



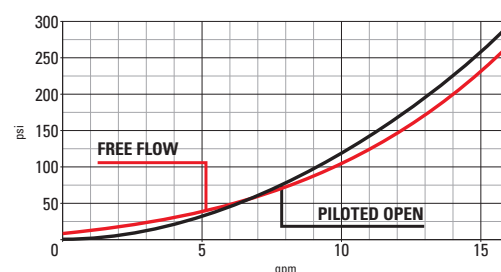
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	360 bar (5220 psi)
minimum setting	50 bar (725 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/23

- Check valve setting: 0,3 bar
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

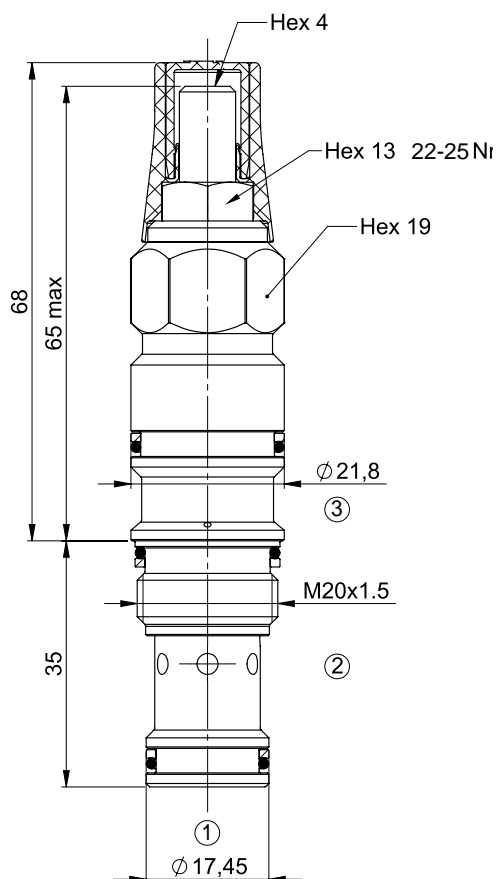
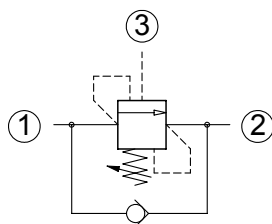
C | 0 | A | | | | | 0 | 5 | 1 | 1 | | 0 | A

Setting (bar)

Spring
T = 50-210 bar
D = 210-360 bar
S = 360-420 bar

Load holding valves

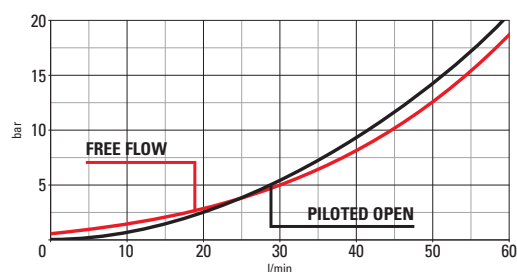
Normale T11A 5:1 CVT adjustable setting



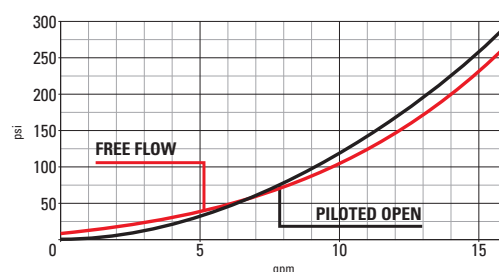
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	360 bar (5220 psi)
minimum setting	50 bar (725 psi)
pressure increase per turn	238 bar (Spring S) - 165 bar (Spring D) - 58 bar (Spring T)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/22

- Check valve setting: 0,3 bar
- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | A

0 | 5 | 1 | 1 | 0 | 0 | A

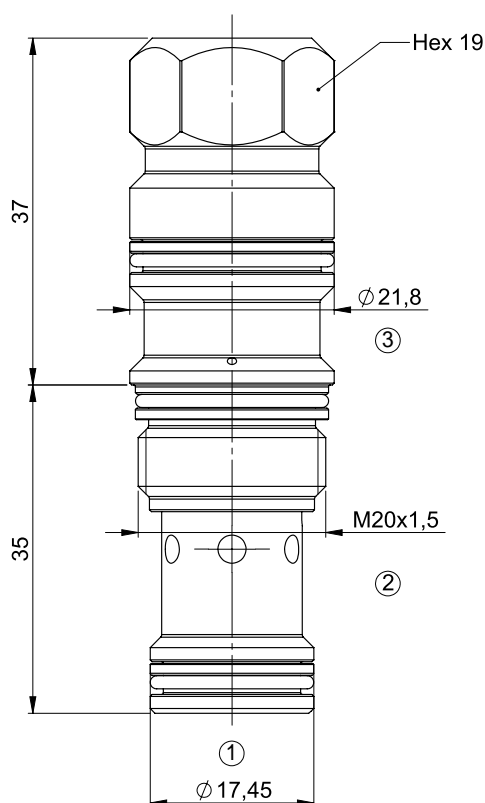
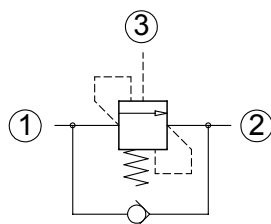
Setting (bar)

Spring

- T = 50-210 bar
- D = 210-360 bar
- S = 360-420 bar

Load holding valves

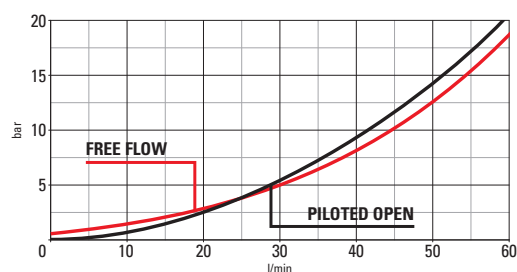
Normale T11A 8:1 CVT fixed setting



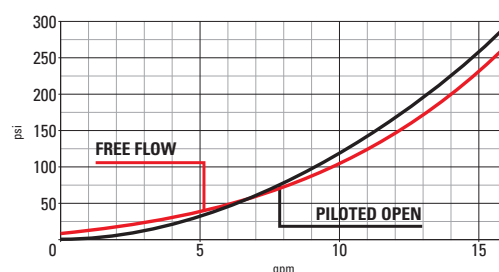
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/25

- Check valve setting: 0,3 bar
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

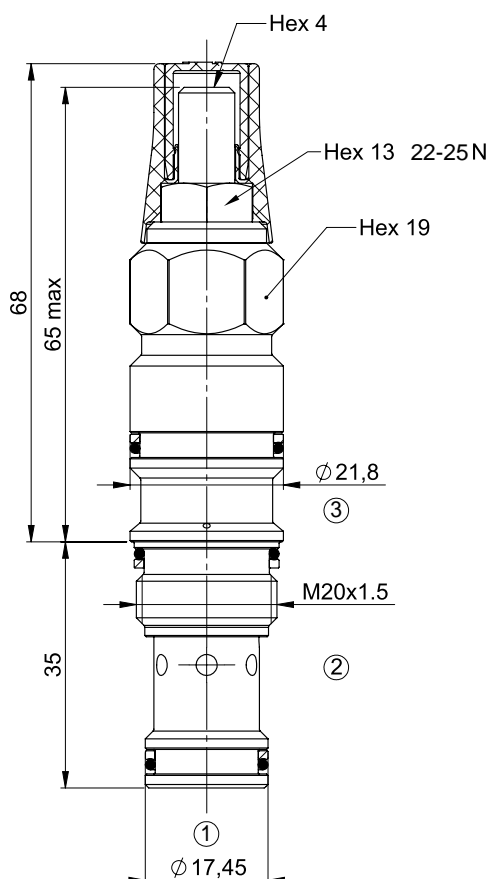
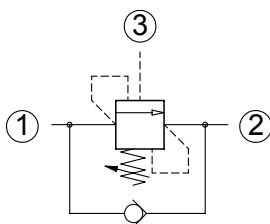
C | 0 | A | | | | | 0 | 8 | 1 | 1 | | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

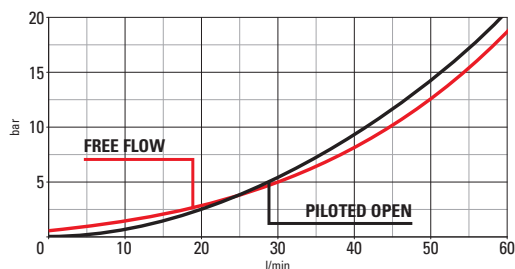
Normale T11A 8:1 CVT adjustable setting



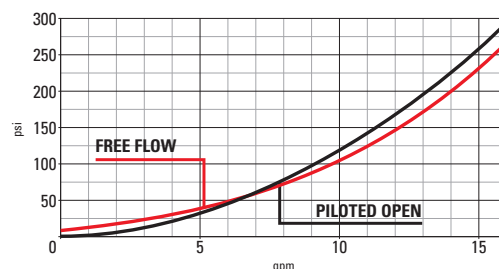
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	93 bar (Spring D) - 50 bar (Spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/24

- Check valve setting: 0,3 bar
- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

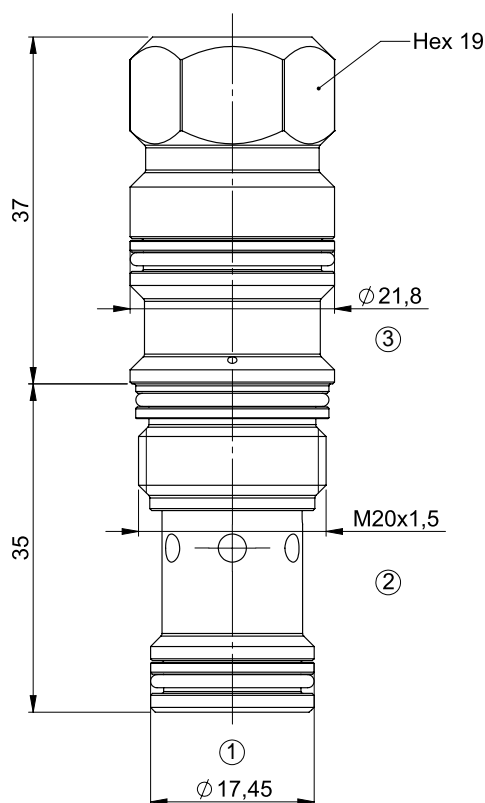
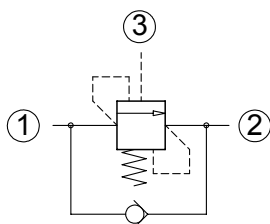
C | 0 | A | | | | | 0 | 8 | 1 | 1 | 0 | 0 | A

Setting (bar)

Spring

- M = 70-210 bar
- D = 140-350 bar

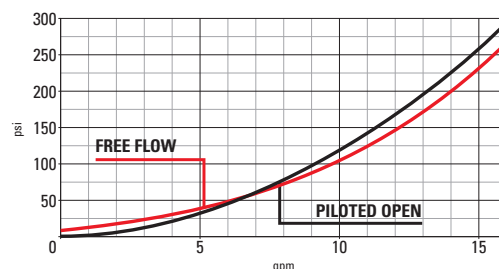
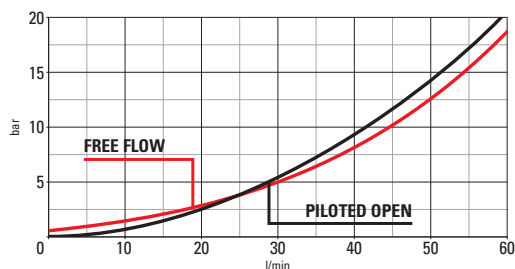
Normale T11A 10:1 CVT fixed setting



Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0,136 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/27

- Check valve setting: 0,3 bar
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves

Seals
1 = BUNA SEALS
3 = VITON SEALS

0 = Standard Zinc plating
Z = Zinc Nickel plating

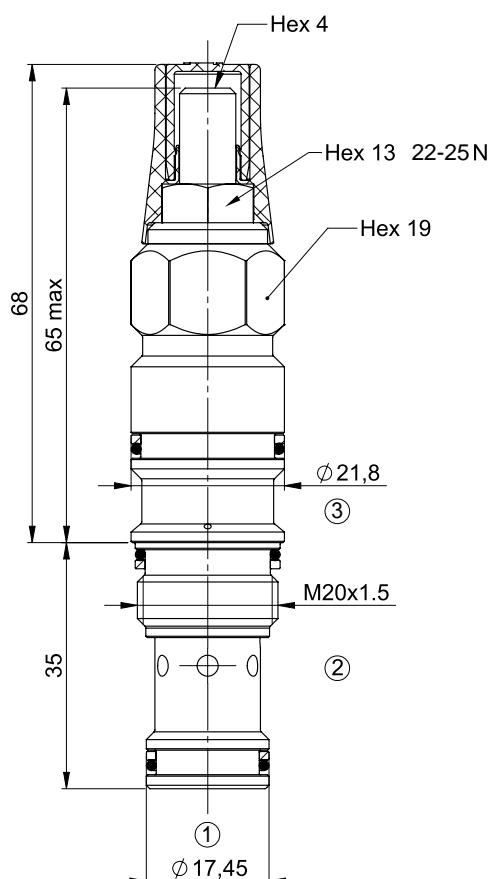
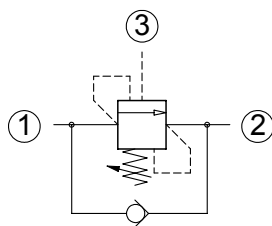
C	0	A						1	0	1	1			0	A
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Setting (bar)

Spring
M = 70-210 bar
D = 140-420 bar

Load holding valves

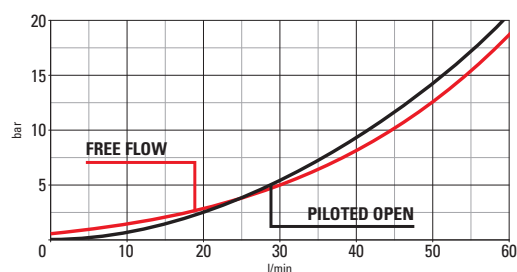
Normale T11A 10:1 CVT adjustable setting



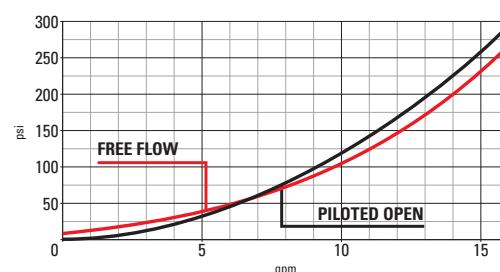
Technical Details

cavity	T11A
capacity	60 lpm (16gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	115 bar (spring D) - 63 bar (spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Check valve setting: 0,3 bar
- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | A | | | | | 1 | 0 | 1 | 1 | 0 | 0 | A

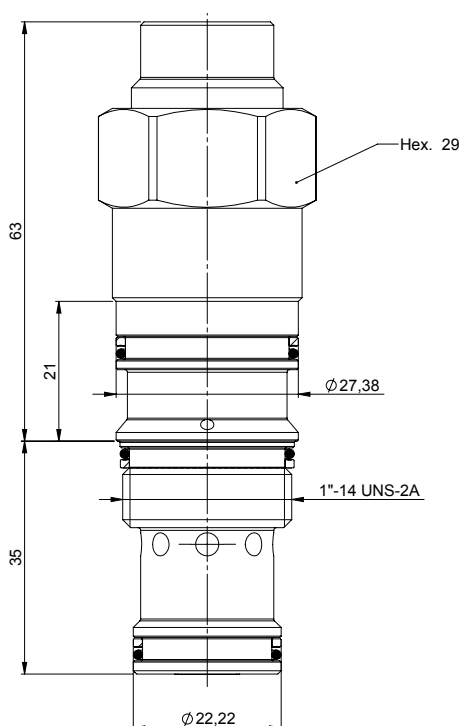
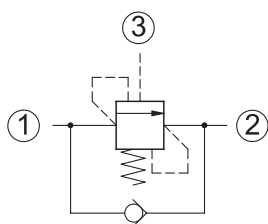
Setting (bar)

Spring

- M = 70-210 bar
- D = 140-420 bar

Load holding valves

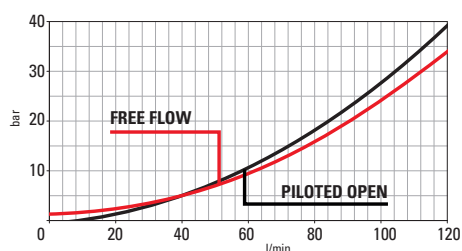
Normale T2A 4:1 fixed setting



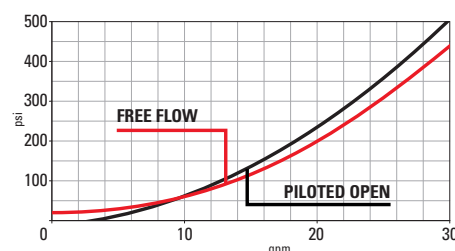
Technical Details

cavity	T2A
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

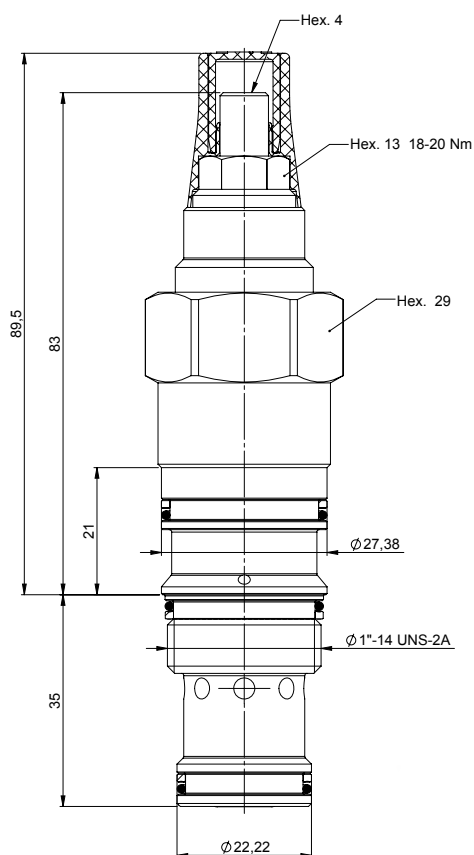
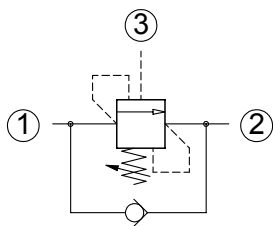
C | 0 | 0 | | | | | 0 | 4 | 0 | 2 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar
S = 300-420 bar

Load holding valves

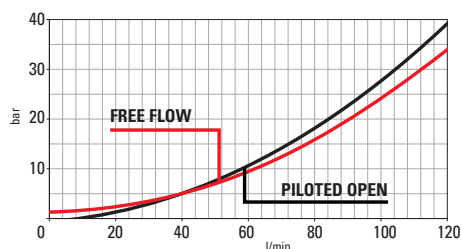
Normale T2A 4:1 adjustable setting



Technical Details

cavity	T2A
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	156 bar (Spring D) - 49 bar (Spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

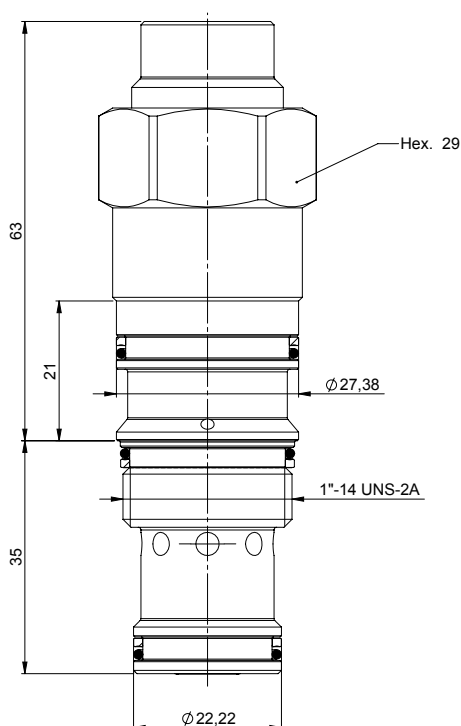
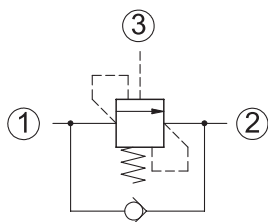
C | **0** | **0** | | | | | **0** | **4** | **0** | **2** | **0** | **0** | **A**

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar
S = 300-420 bar

Load holding valves

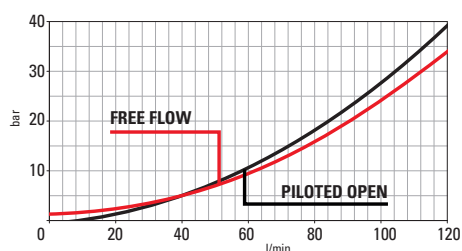
Normale T2A 10:1 fixed setting



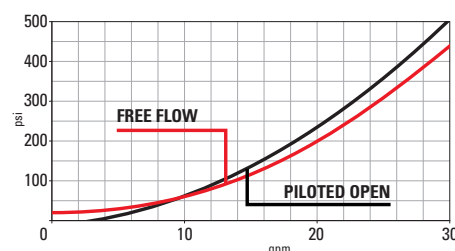
Technical Details

cavity	T2A
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4700 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

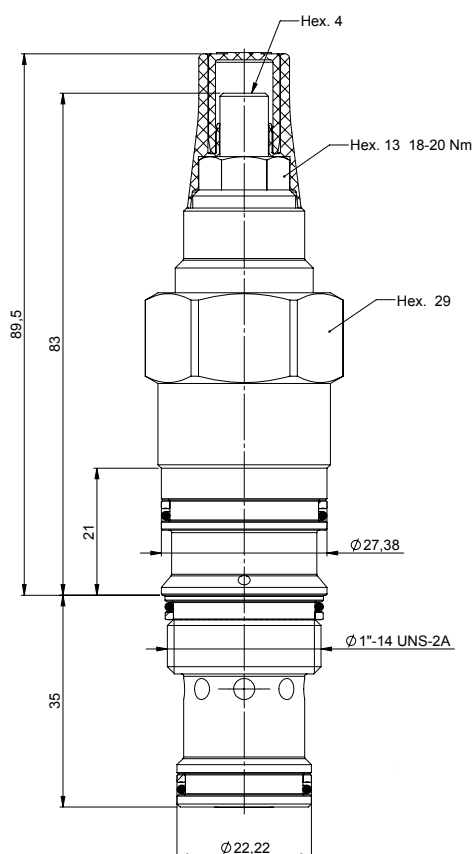
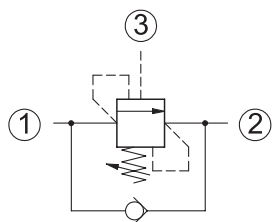
C | 0 | 0 | | | | | 1 | 0 | 0 | 2 | 0 | 0 | A

Setting (bar)

Spring
M = 70-280 bar
D = 140-420 bar

Load holding valves

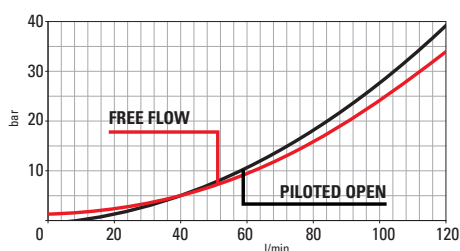
Normale T2A 10:1 adjustable setting



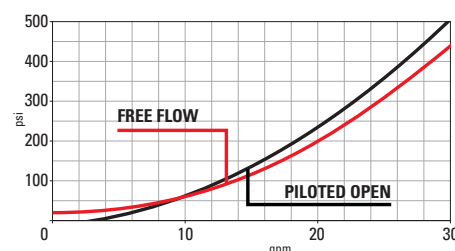
Technical Details

cavity	T2A
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	89 bar (spring M) – 122 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4700 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

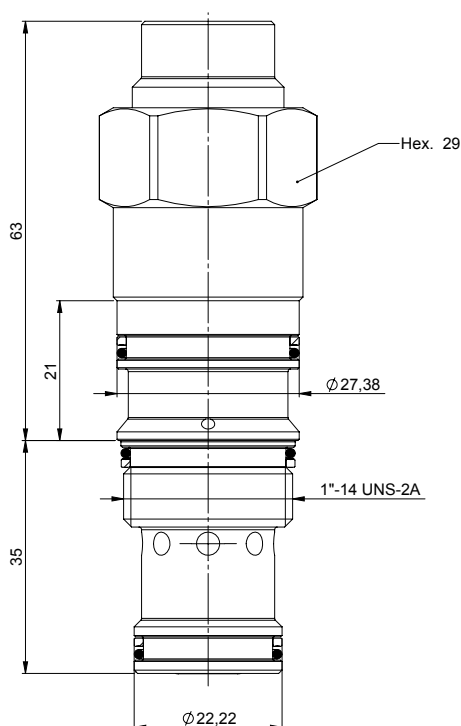
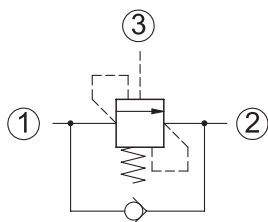
C | **0** | **0** | | | | | **1** | **0** | **0** | **2** | **0** | **0** | **A**

Setting (bar)

Spring
M = 70-280 bar
D = 140-420 bar

Load holding valves

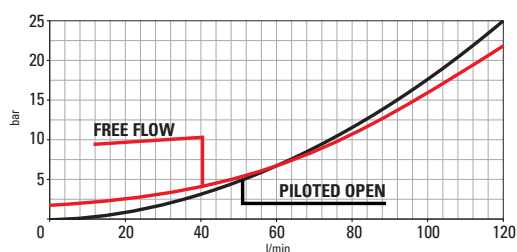
Normale T2A GT 4:1 fixed setting



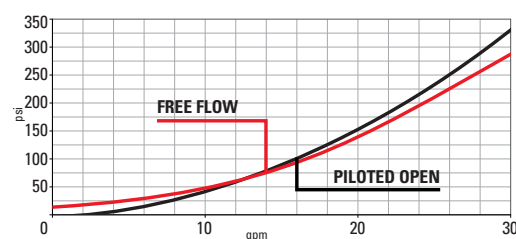
Technical Details

cavity	T2A
capacity	150 lpm (38 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

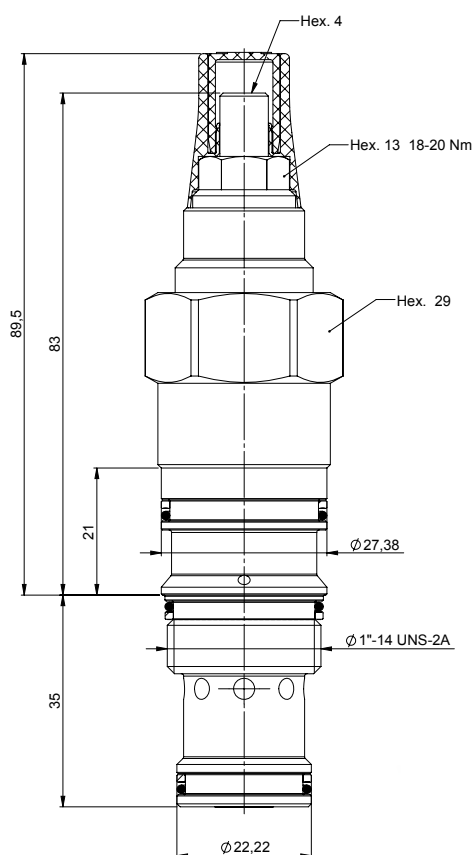
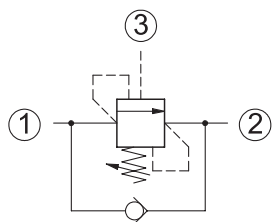
C | 2 | 0 | | | | | 0 | 4 | 0 | 2 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-240 bar
S = 300-350 bar

Load holding valves

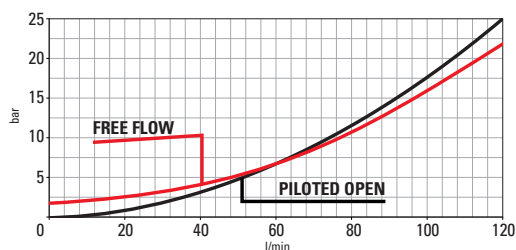
Normale T2A GT 4:1 adjustable setting



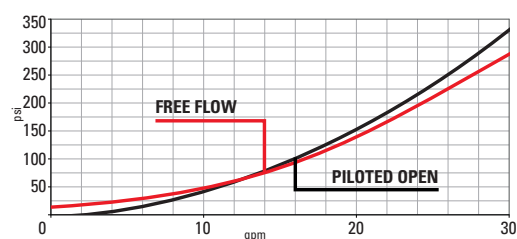
Technical Details

cavity	T2A
capacity	150 lpm (38 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	156 bar (spring D) - 49 bar (spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | 2 | 0

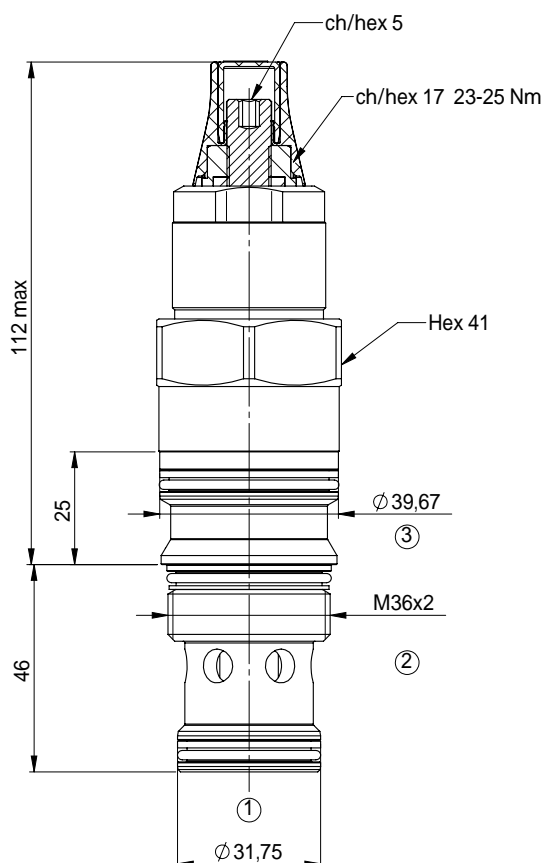
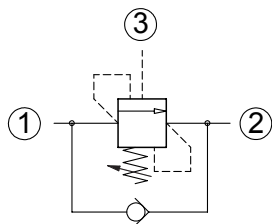
Setting (bar)

Spring
M = 70-210 bar
D = 140-290 bar
S = 300-350 bar

0 | 4 | 0 | 2 | 0 | 0 | A

Load holding valves

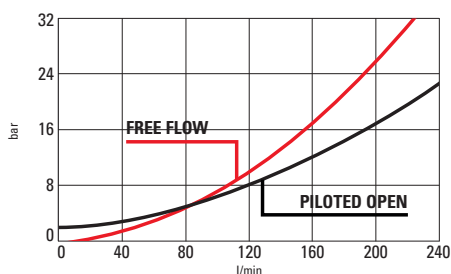
Normale T17A 4:1 adjustable setting



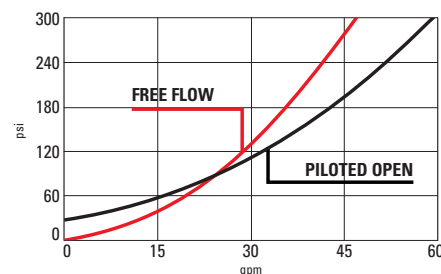
Technical Details

cavity	T17A
capacity	240 lpm (60 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	77 bar (spring M) / 119 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	41
valve installation torque	205-220 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.9 kg
external component surface treatment	zinc plating
seal kit (nbr)	S00T17ASN900000
seal kit (viton)	S00T17ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

C | 0 | 0 | | | | | 0 | 4 | 1 | 7 | 0 | 0 | A

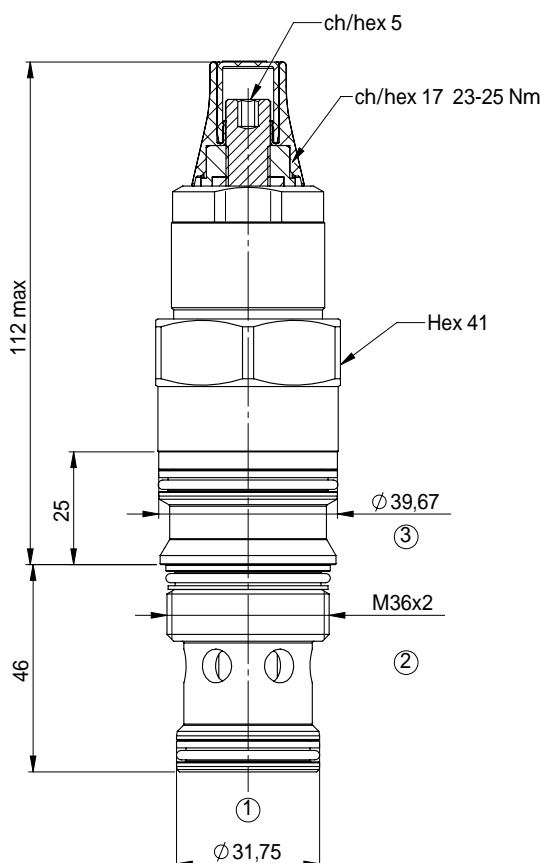
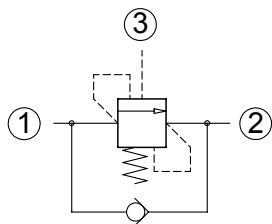
Setting (bar)

Spring

- M = 70-280 bar
- D = 140-350 bar

Load holding valves

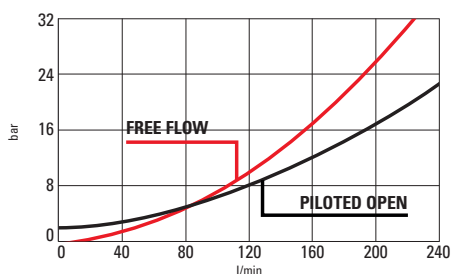
Normale T17A 8:1 adjustable setting



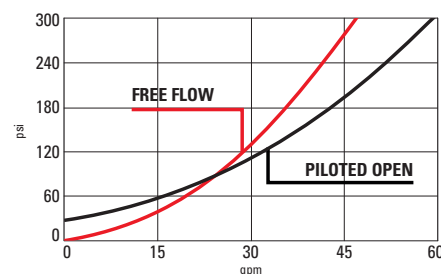
Technical Details

cavity	T17A
capacity	240 lpm (60 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	420 bar (6000 psi)
minimum setting	140
pressure increase per turn	158 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	350 bar (5000 psi)
valve hex size (mm)	41
valve installation torque	205-220 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.9 kg
external component surface treatment	zinc plating
seal kit (nbr)	S00T17ASN900000
seal kit (viton)	S00T17ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

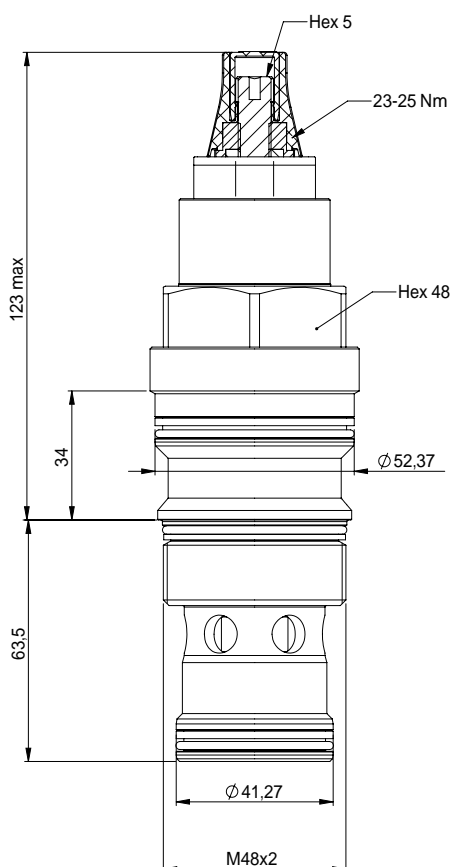
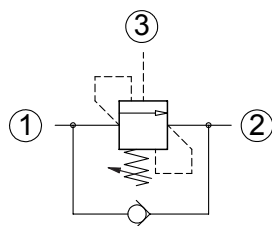
- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

C | 0 | 0 | | | | | 0 | 8 | 1 | 7 | 0 | 0 | A

Setting (bar)

Spring
D = 140-420 bar

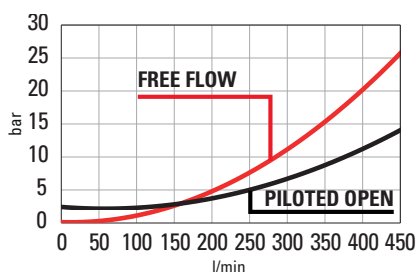
Load holding valves Normale T19A 5:1 adjustable setting



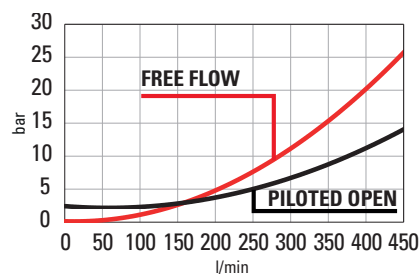
Technical Details

cavity	T19A
capacity	480 lpm (120 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	420 bar (6000 psi)
minimum setting	140
pressure increase per turn	68 bar (spring M) / 113 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	350 bar (5000 psi)
valve hex size (mm)	48
valve installation torque	475-510 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	1.6 kg
external component surface treatment	zinc plating
seal kit (nbr)	S00T19ASN900000
seal kit (viton)	S00T19ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + tamper resistant + sealed piston
H = VITON + tamper resistant + sealed piston

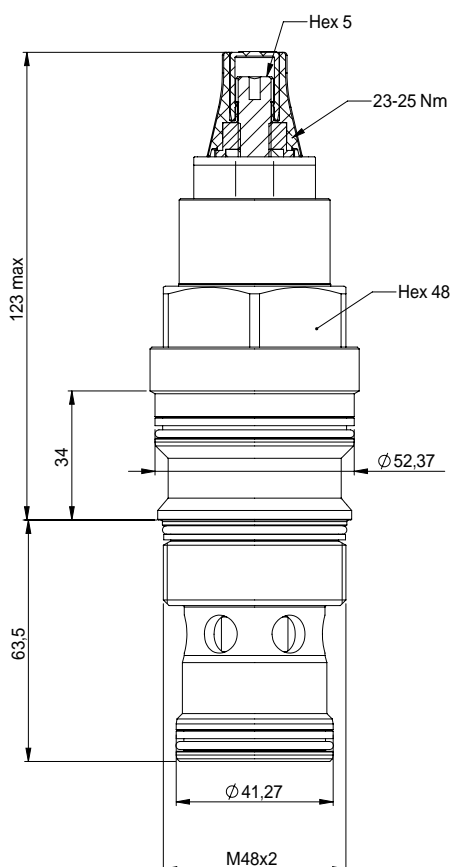
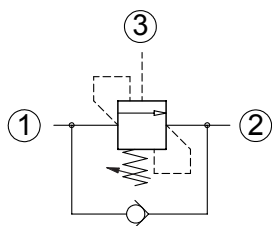
C | 0 | 0 | | | | | 0 | 5 | 1 | 9 | 0 | 0 | A

Setting (bar)

Spring

- M = 70-280 bar
D = 140-420 bar

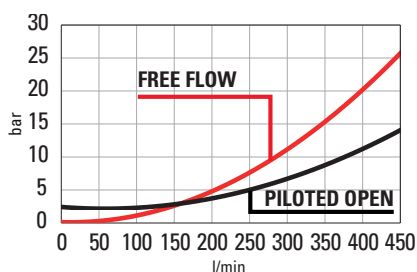
Load holding valves Normale T19A 8:1 adjustable setting



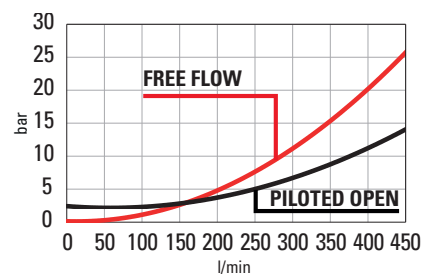
Technical Details

cavity	T19A
capacity	480 lpm (120 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	450 bar (6500 psi)
minimum setting	140
pressure increase per turn	112 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	350 bar (5000 psi)
valve hex size (mm)	48
valve installation torque	475-510 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	1.6 kg
external component surface treatment	zinc plating
seal kit (nbr)	S00T19ASN900000
seal kit (viton)	S00T19ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting
- For settings lower than 140 bar please consult factory



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

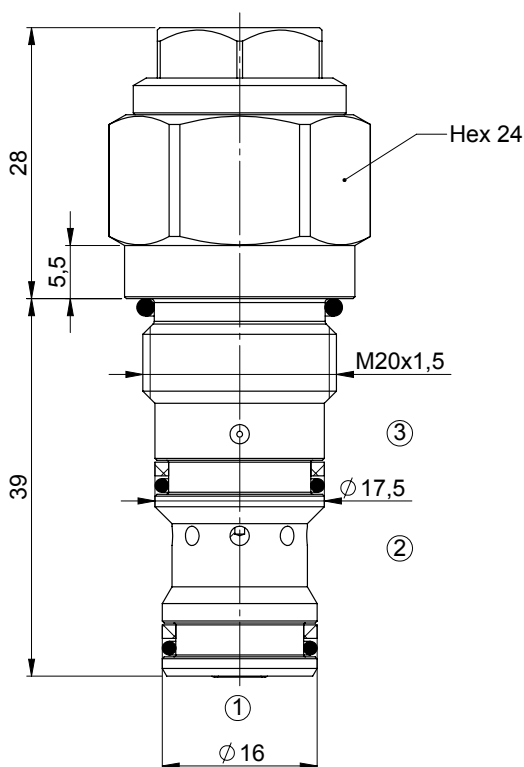
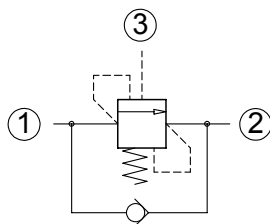
C | 0 | 0 | | | | | 0 | 8 | 1 | 9 | 0 | 0 | A

Setting (bar)

Spring
D = 140-450 bar

Load holding valves

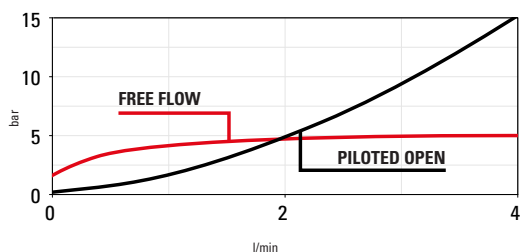
Normale i08 2:1 SP fixed setting **ULTRA FINE CONTROL**



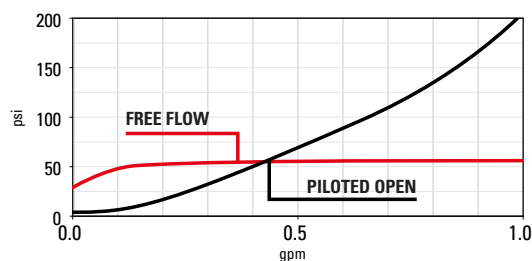
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

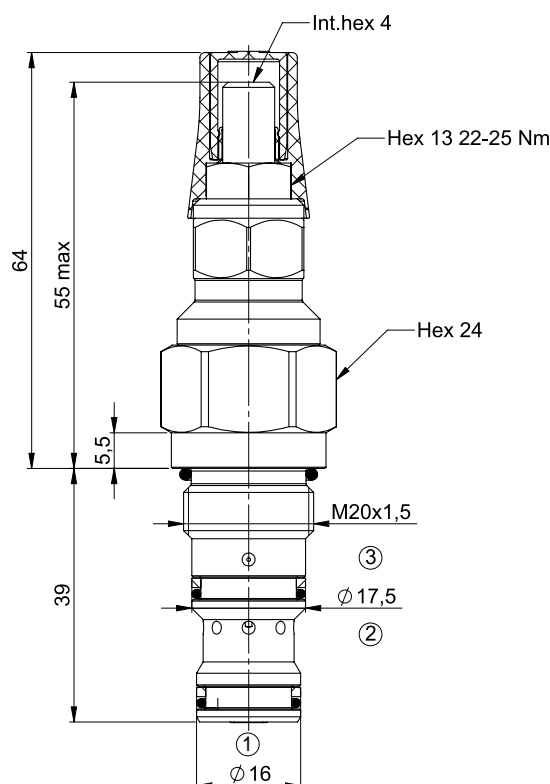
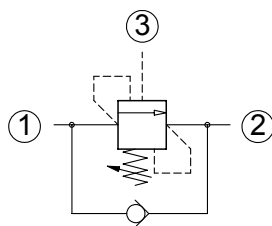
C | D | 0 | | | | | 0 | 2 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

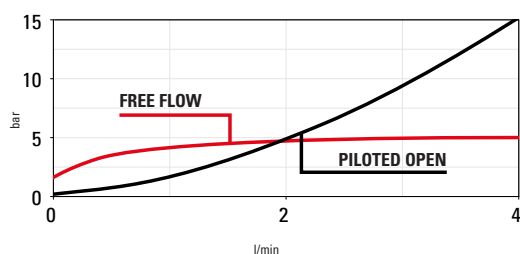
Normale i08 2:1 SP adj. setting **ULTRA FINE CONTROL**



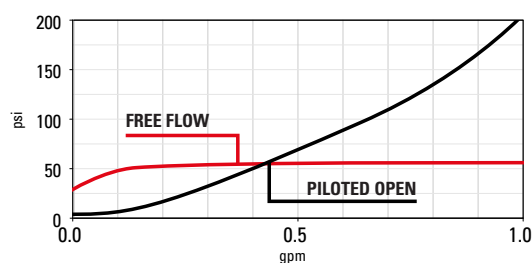
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



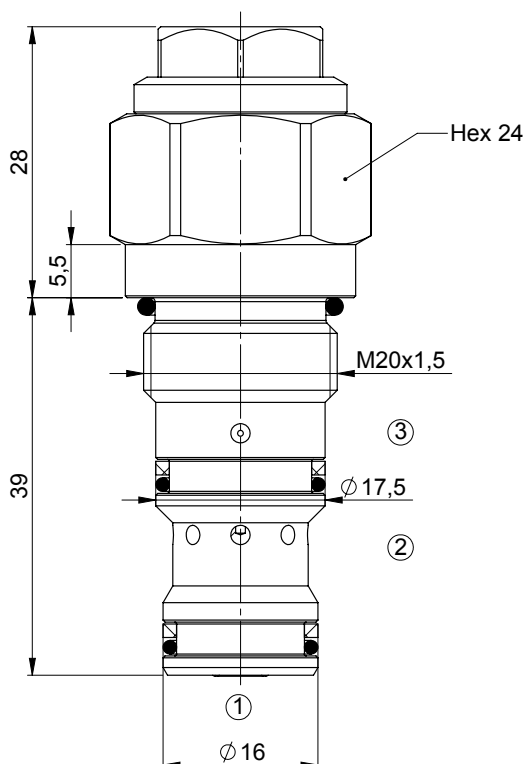
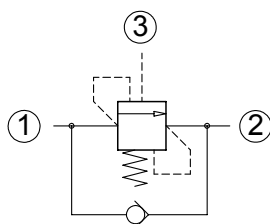
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **D** | **0** | | | | | **0** | **2** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

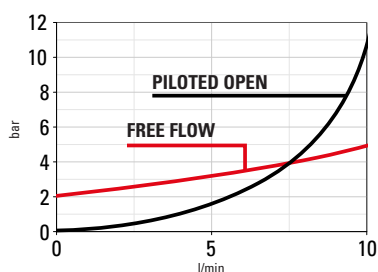
Normale i08 2:1 SP fixed setting **VERY FINE CONTROL**



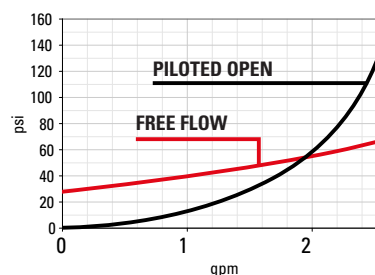
Technical Details

cavity	IH A6610
capacity	10 lpm (2,6 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

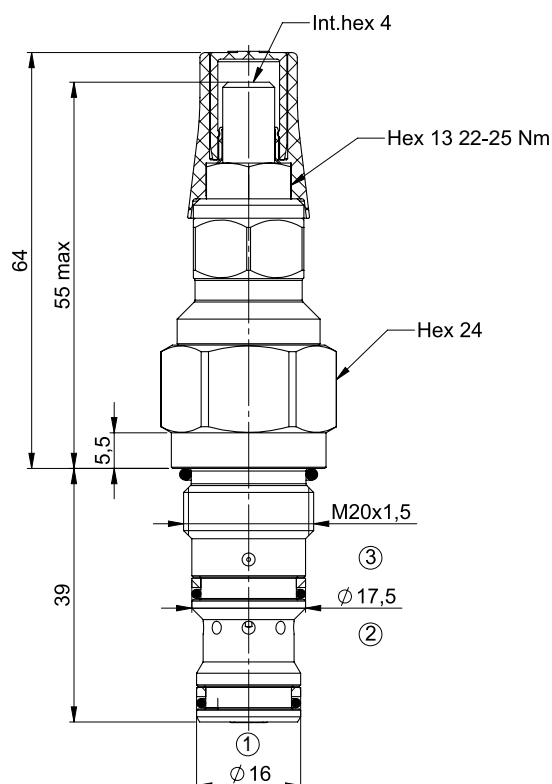
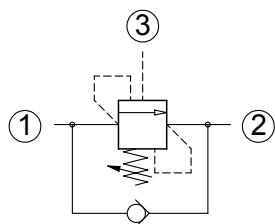
C | J | 0 | | | | | 0 | 2 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-210 bar
D = 210-350 bar

Load holding valves

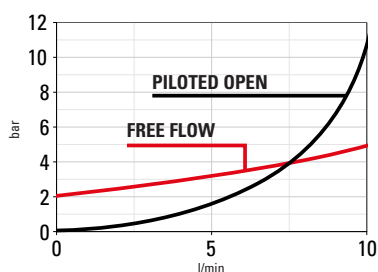
Normale i08 2:1 SP adjustable setting **VERY FINE CONTROL**



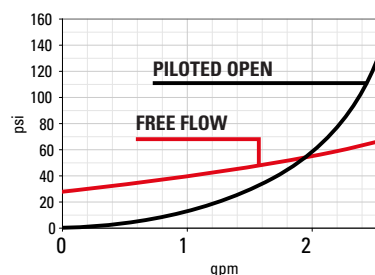
Technical Details

cavity	IH A6610
capacity	10 lpm (2,6 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



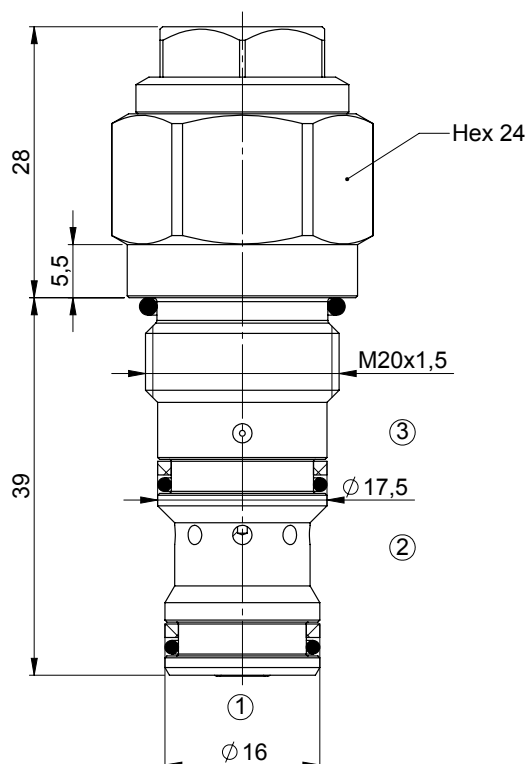
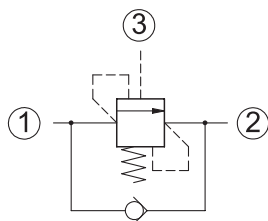
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **J** | **0** | | | | | **0** | **2** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

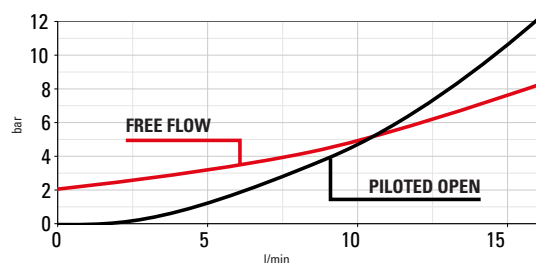
Normale i08 2:1 SP fixed setting FINE CONTROL



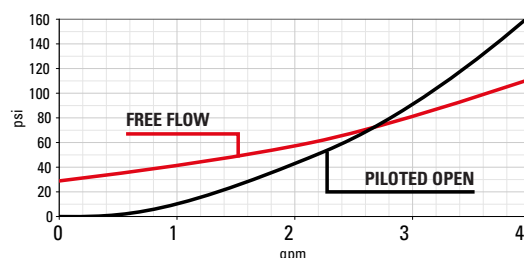
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA
D = VITON

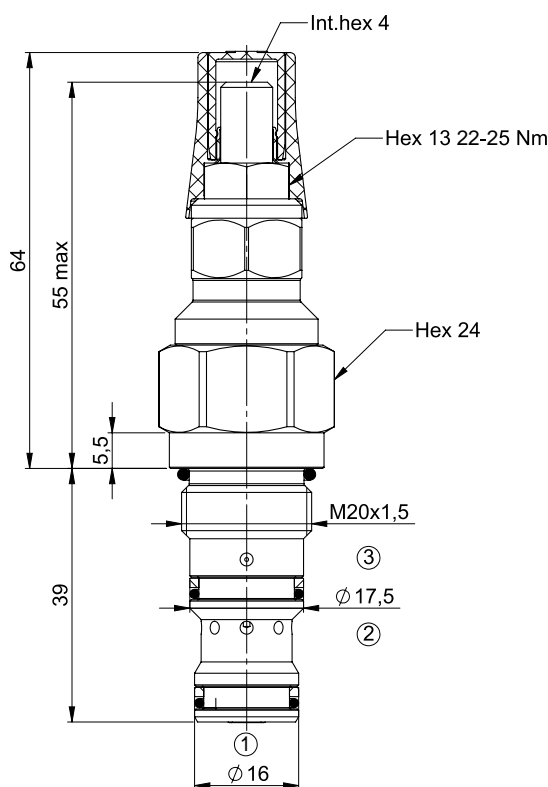
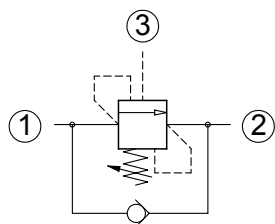
C | W | 0 | | | | | 0 | 2 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

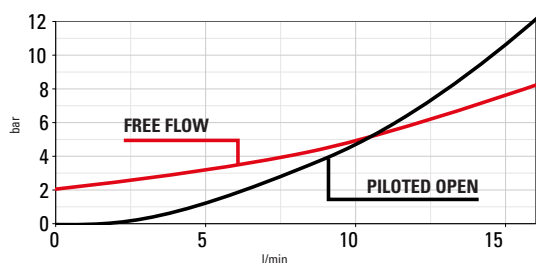
Normale i08 2:1 SP adjustable setting **FINE CONTROL**



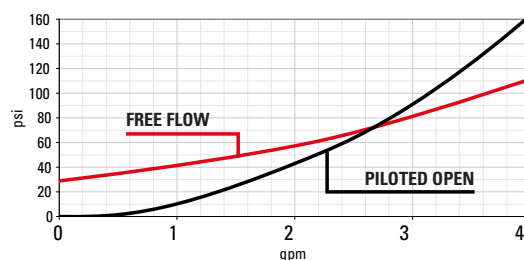
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



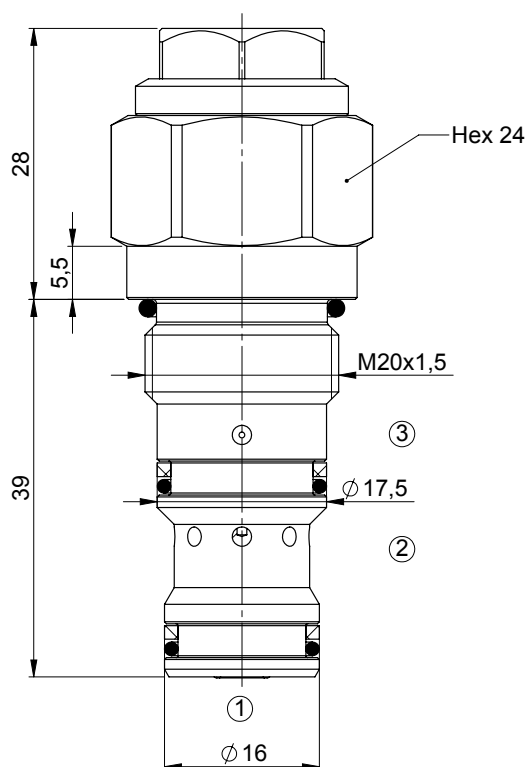
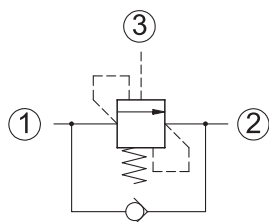
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **W** | **0** | | | | | **0** | **2** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

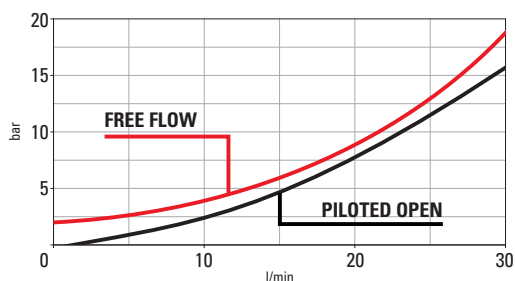
Normale i08 2:1 SP fixed setting



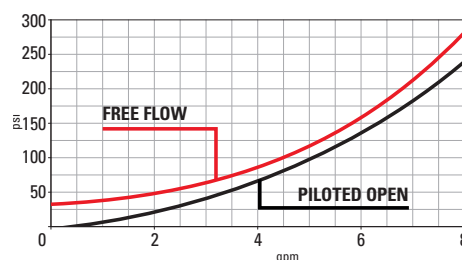
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

C | 0 | 0

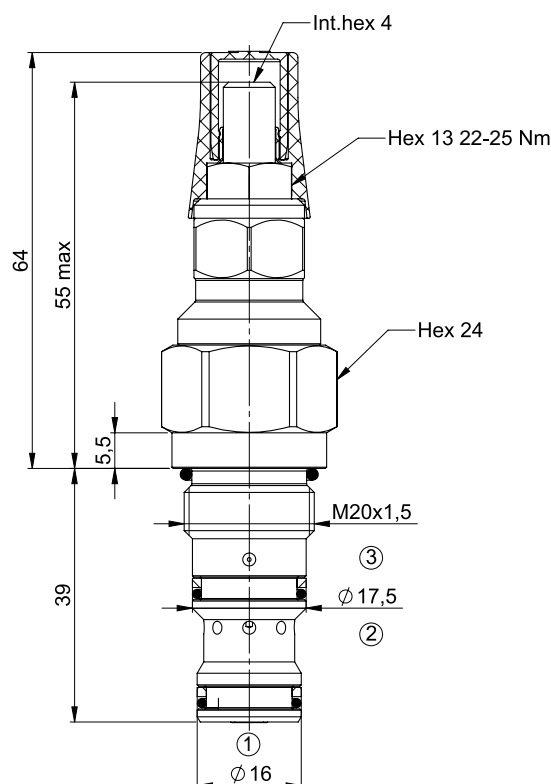
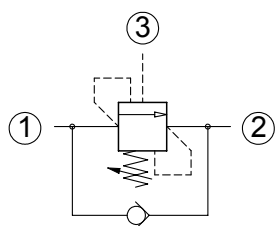
0 | 2 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 100-210 bar
D = 210-350 bar

Load holding valves

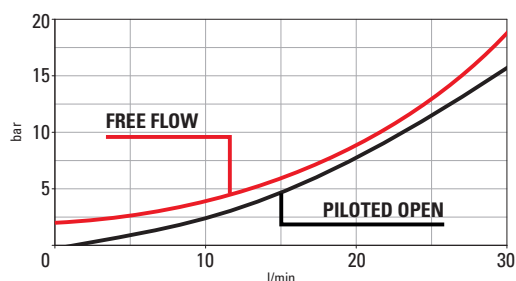
Normale i08 2:1 SP adjustable setting



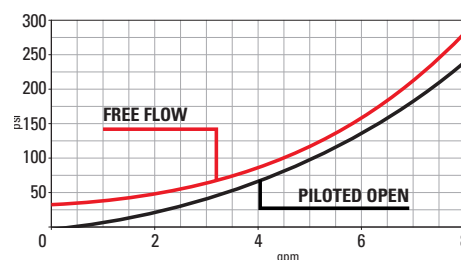
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

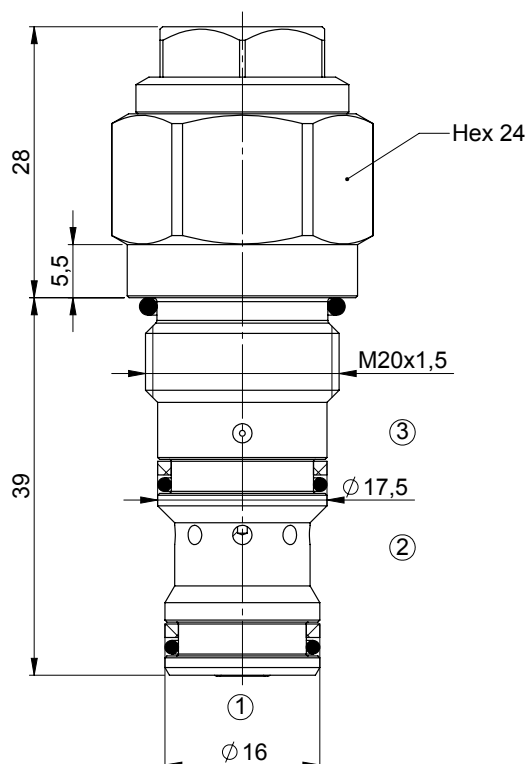
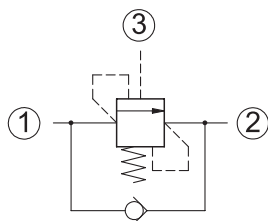
C | **0** | **0**

| **0** | **2** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

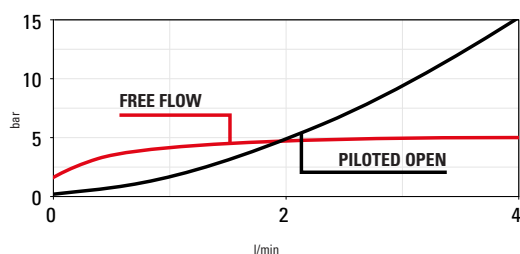
Normale i08 3:1 fixed setting **ULTRA FINE CONTROL**



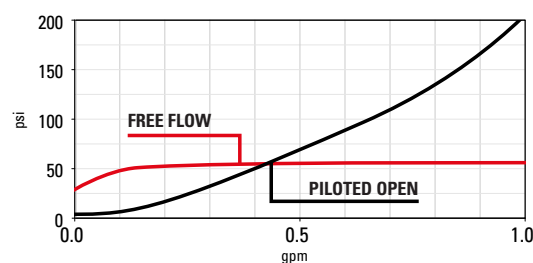
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA
3 = VITON

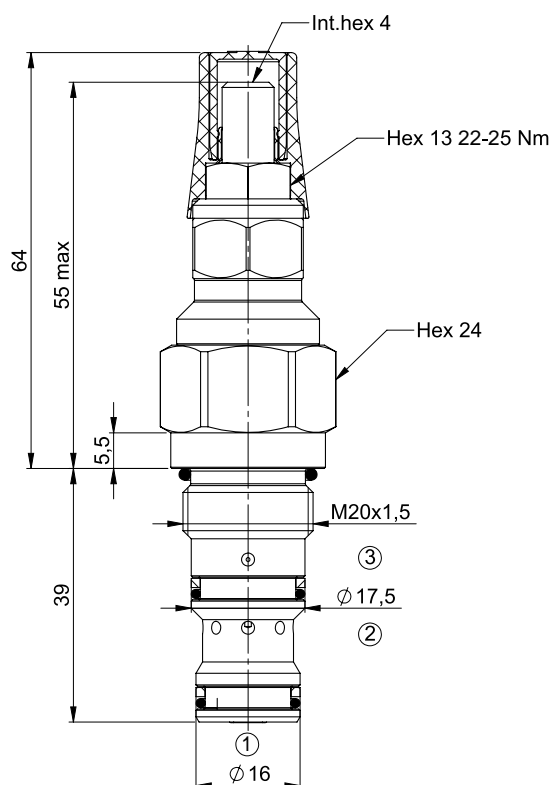
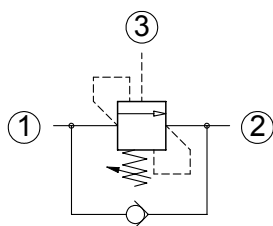
C | D | 0 | | | | | 0 | 3 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

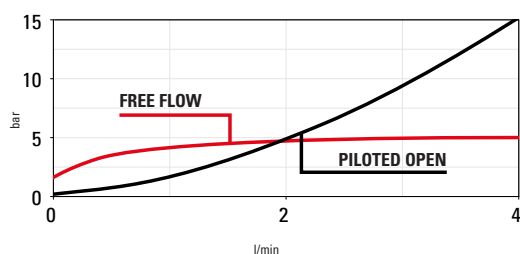
Normale i08 3:1 adj. setting **ULTRA FINE CONTROL**



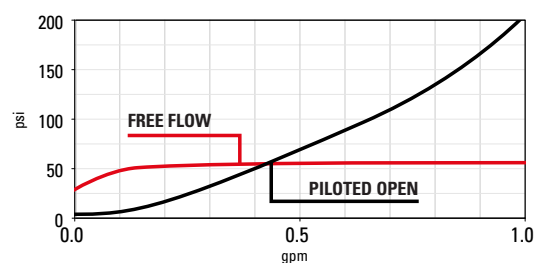
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



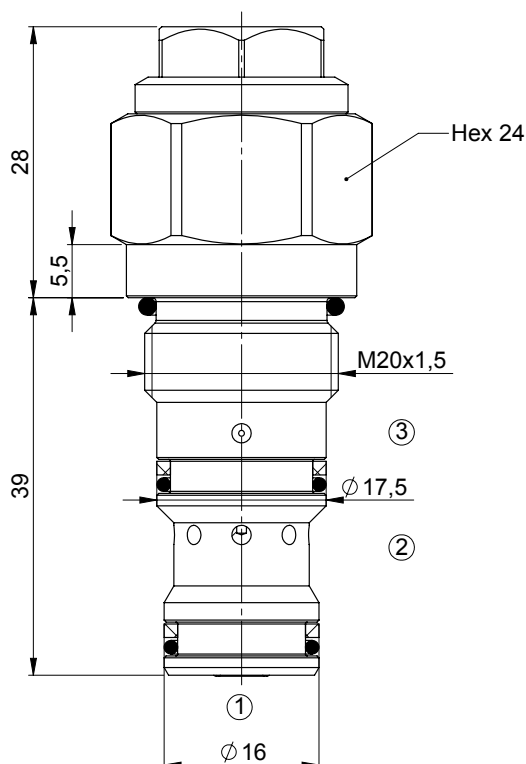
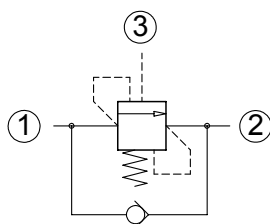
Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | **D** | **0** | | | | | **0** | **3** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

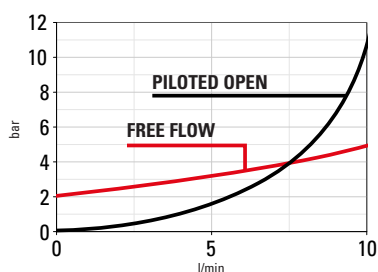
Normale i08 3:1 fixed setting **VERY FINE CONTROL**



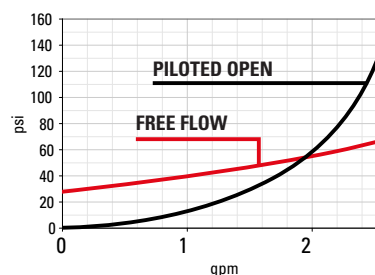
Technical Details

cavity	IH A6610
capacity	10 lpm (2,6 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA + sealed piston
3 = VITON + sealed piston

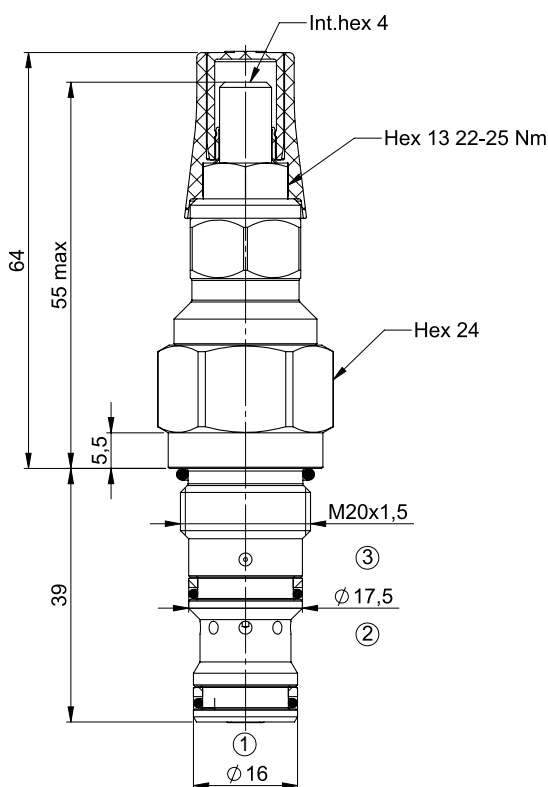
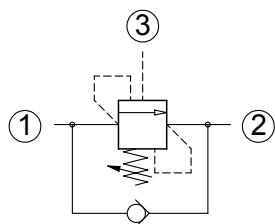
C | J | 0 | | | | | 0 | 3 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

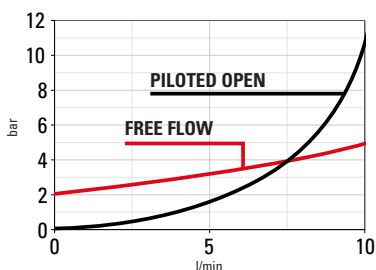
Normale i08 3:1 adjustable setting **VERY FINE CONTROL**



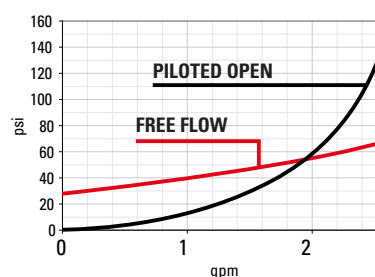
Technical Details

cavity	IH A6610
capacity	10 lpm (2,6 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



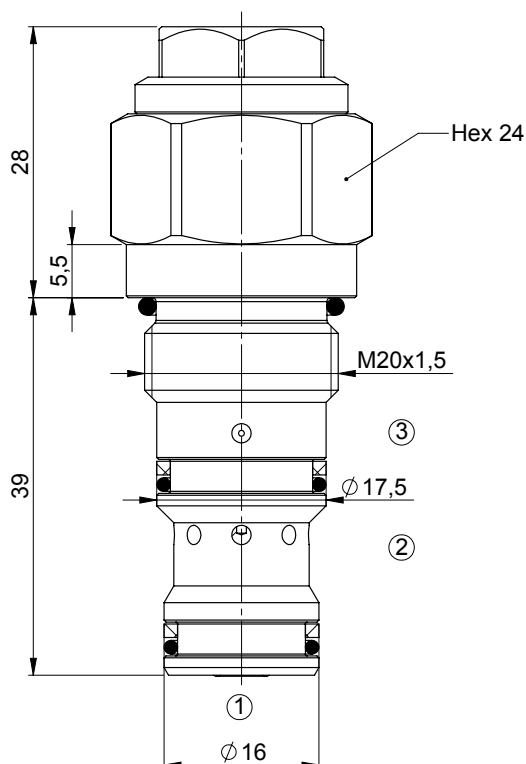
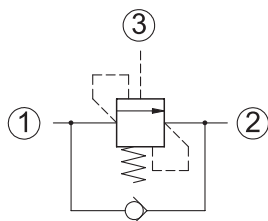
Seals
0 = BUNA + sealed piston
6 = VITON + sealed piston
2 = BUNA + piombatura + sealed piston
7 = VITON + piombatura + sealed piston

C | **J** | **0** | | | | | **0** | **3** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

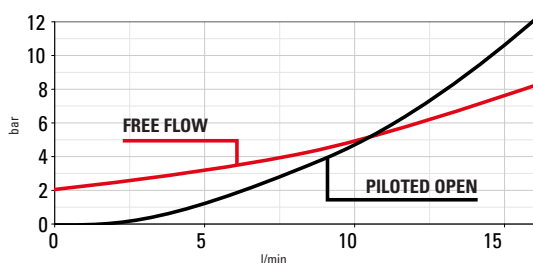
Normale i08 3:1 fixed setting **FINE CONTROL**



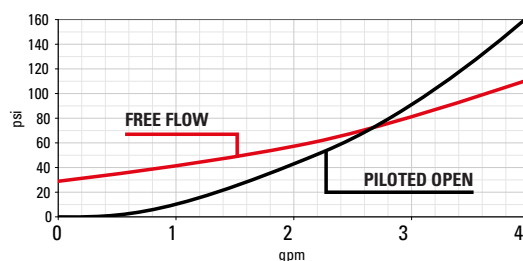
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA
3 = VITON

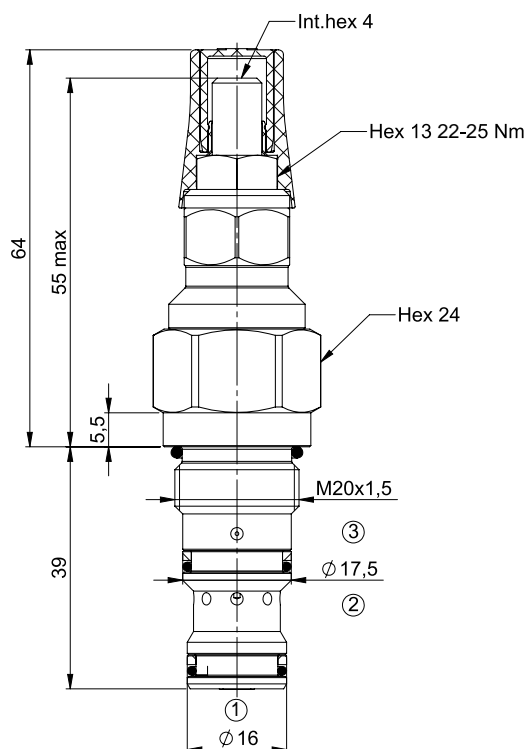
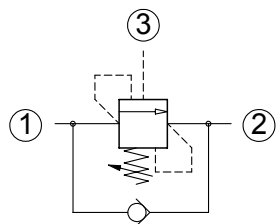
C | W | 0 | | | | | 0 | 3 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

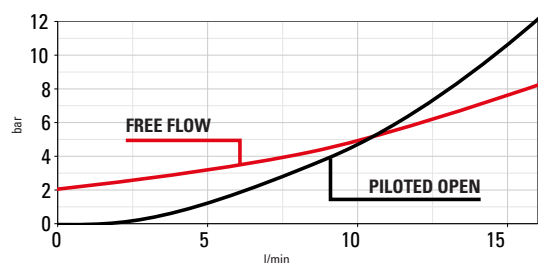
Normale i08 3:1 adj. setting **FINE CONTROL**



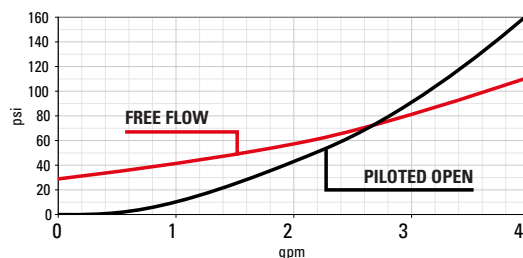
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



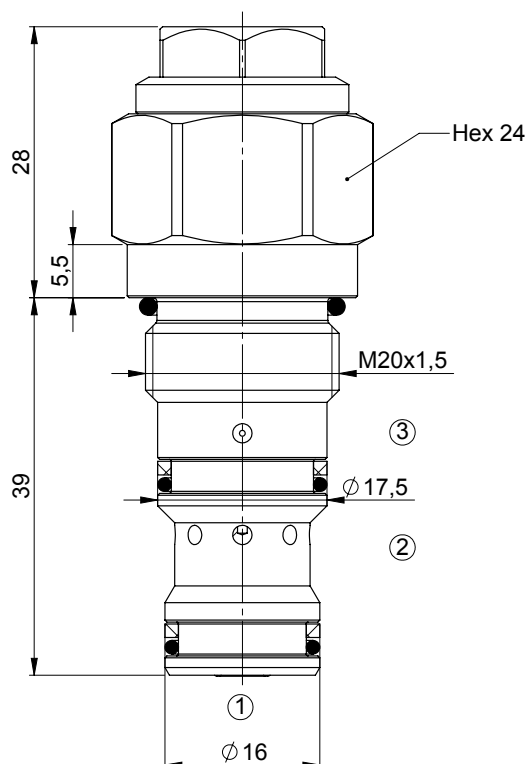
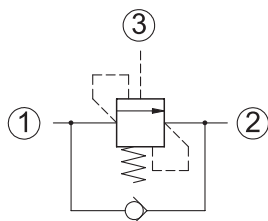
Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | W | 0 | | | | | 0 | 3 | 6 | 6 | 0 | 0 | A

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

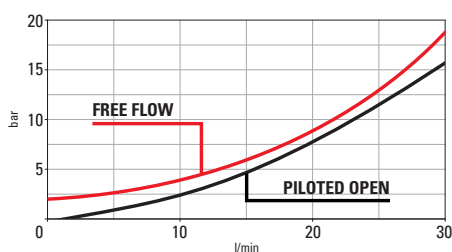
Normale i08 3:1 fixed setting



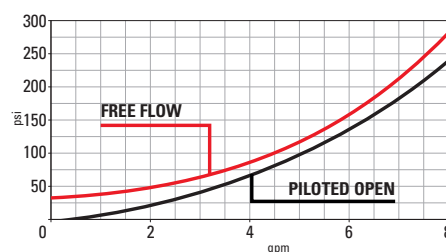
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA
3 = VITON

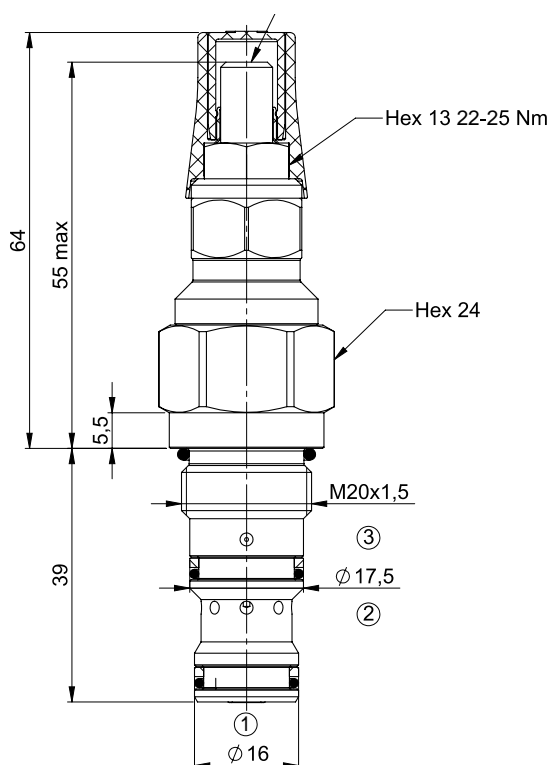
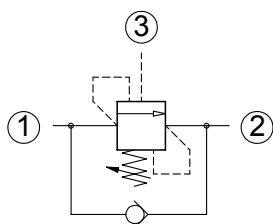
C | 0 | 0 | | | | | 0 | 3 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

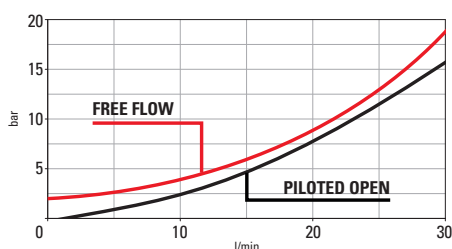
Normale i08 3:1 adjustable setting



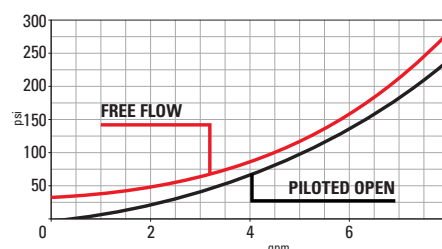
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



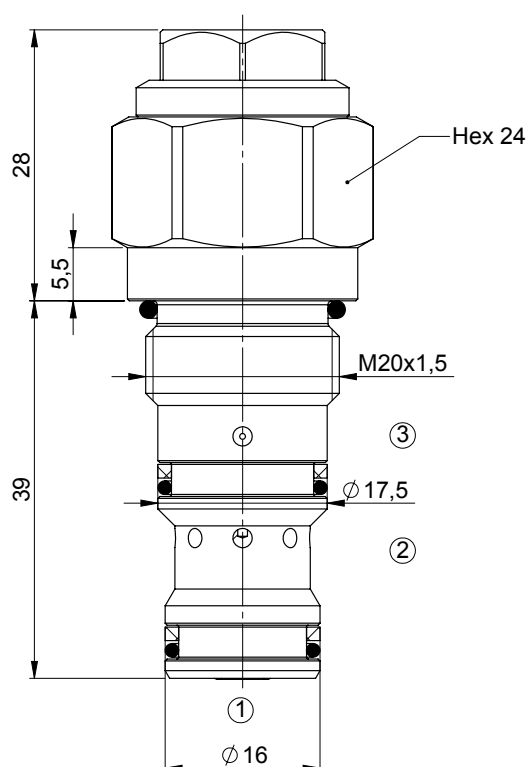
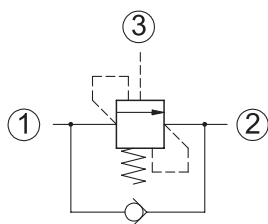
Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | **0** | **0** | | | | | **0** | **3** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

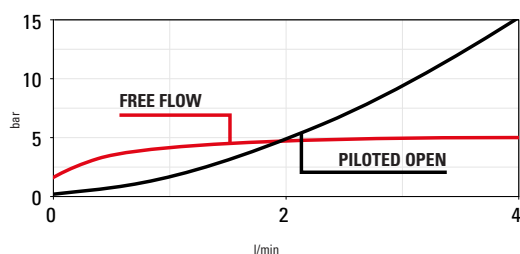
Normale i08 3:1 SP fixed setting **ULTRA FINE CONTROL**



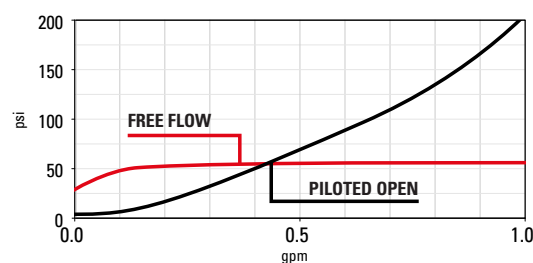
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

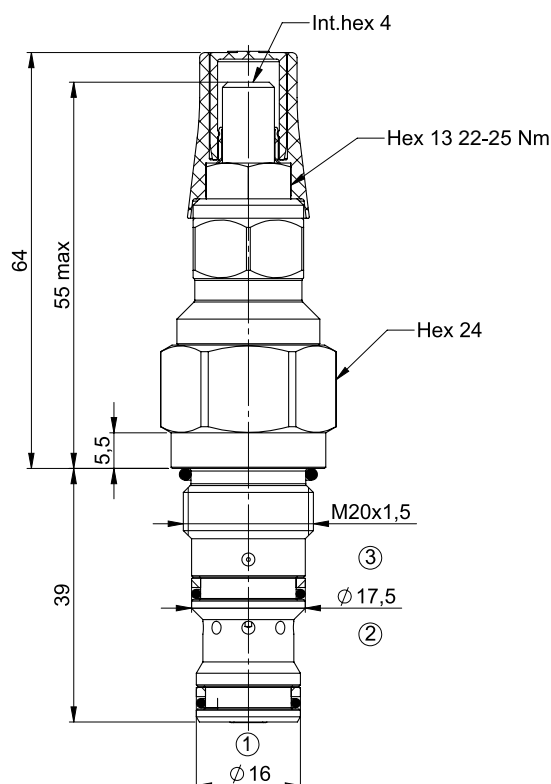
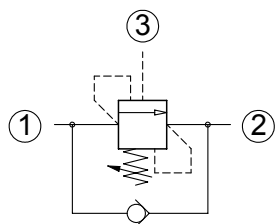
C | D | 0 | | | | | 0 | 3 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

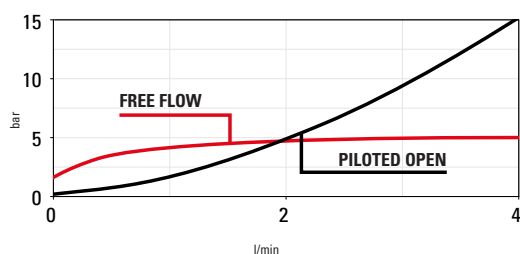
Normale i08 3:1 SP adj. setting **ULTRA FINE CONTROL**



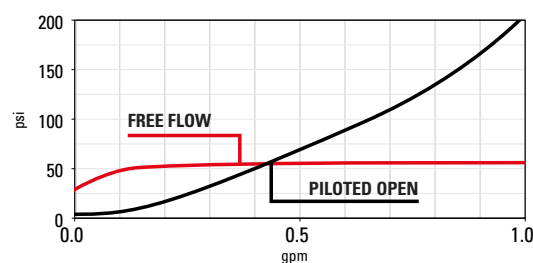
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



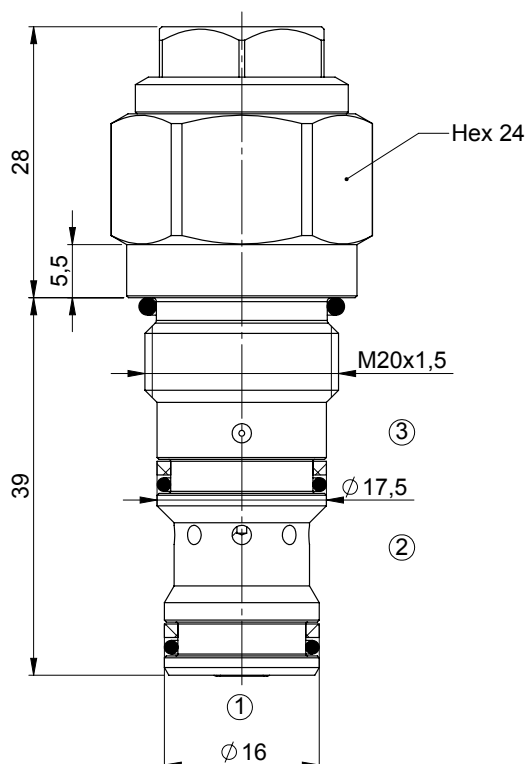
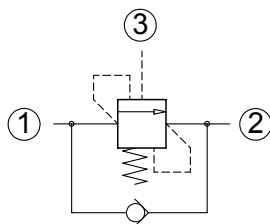
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **D** | **0** | | | | | **0** | **3** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

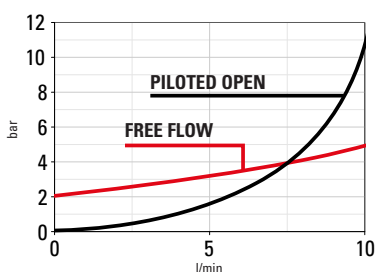
Normale i08 3:1 SP fixed setting **VERY FINE CONTROL**



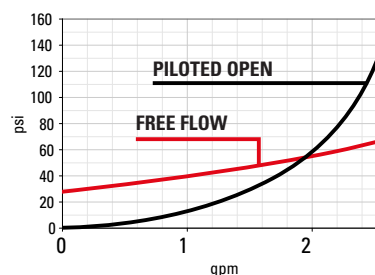
Technical Details

cavity	IH A6610
capacity	10 lpm (2,6 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

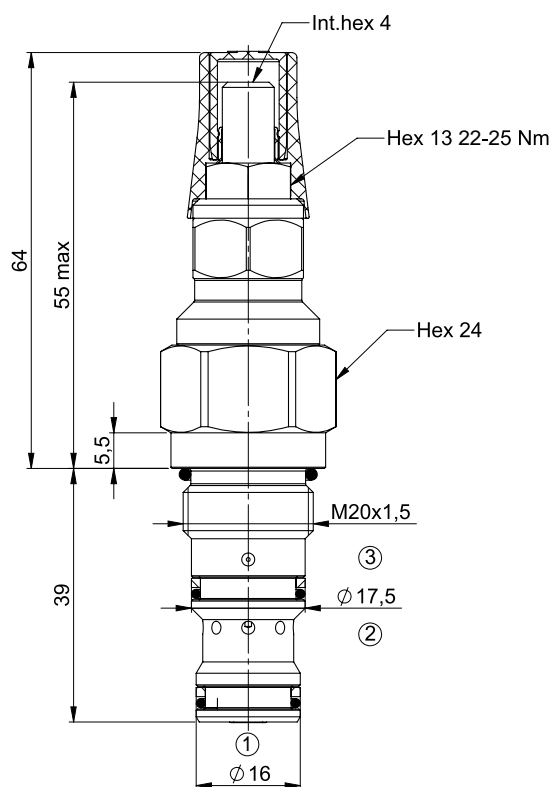
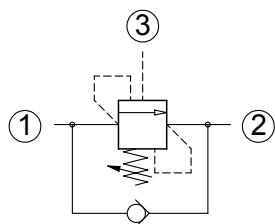
C | J | 0 | | | | | 0 | 3 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

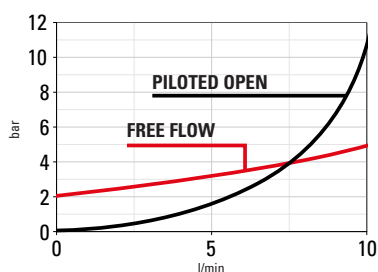
Normale i08 3:1 SP adjustable setting **VERY FINE CONTROL**



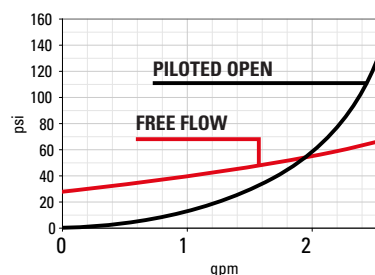
Technical Details

cavity	IH A6610
capacity	10 lpm (2,6 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



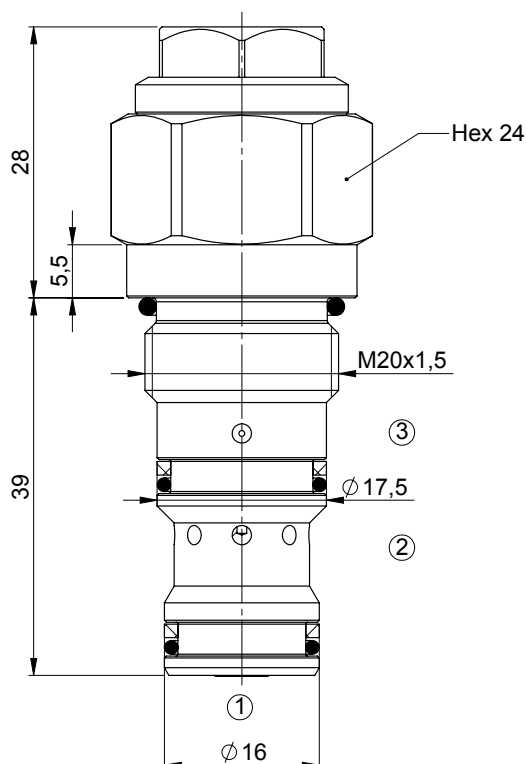
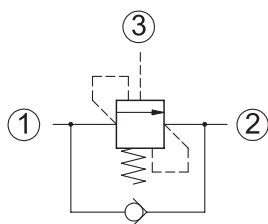
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **J** | **0** | | | | | **0** | **3** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

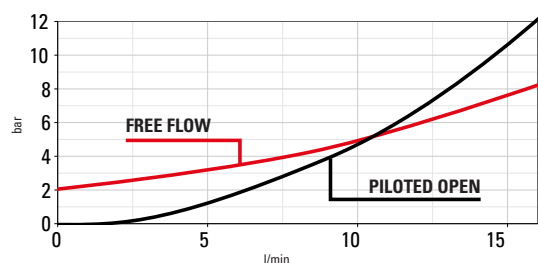
Normale i08 3:1 SP fixed setting FINE CONTROL



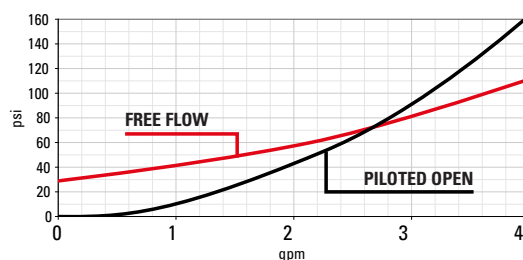
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

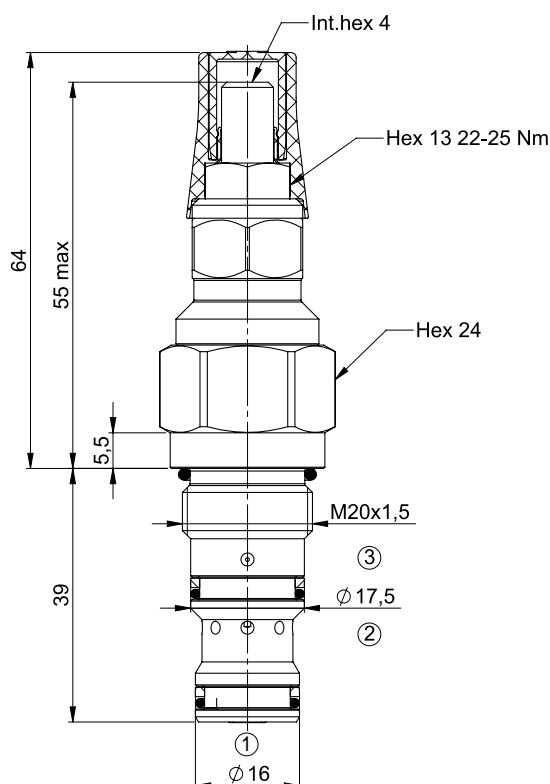
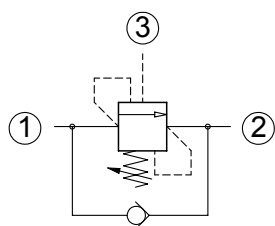
C | W | 0 | | | | | 0 | 3 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

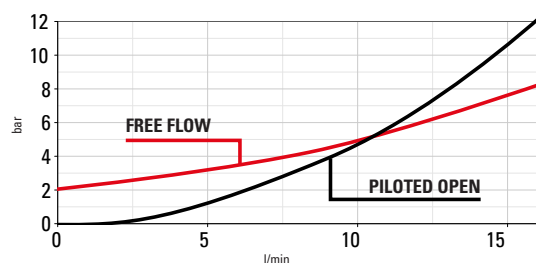
Normale i08 3:1 SP adjustable setting **FINE CONTROL**



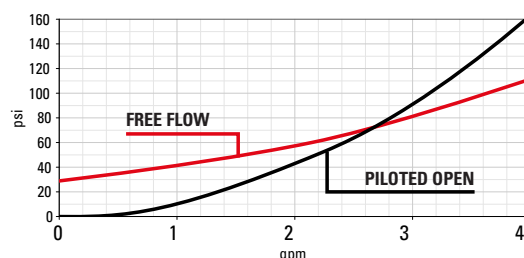
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



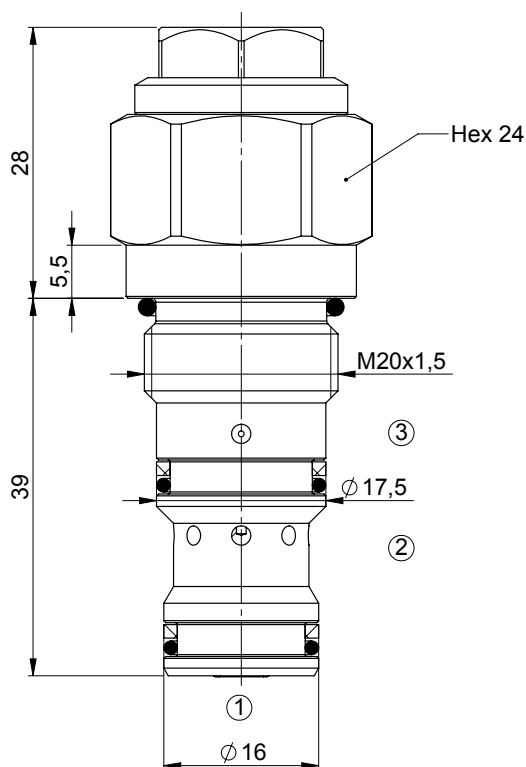
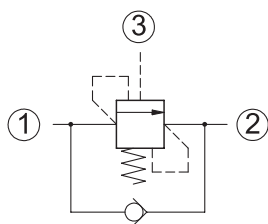
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **W** | **0** | | | | | **0** | **3** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

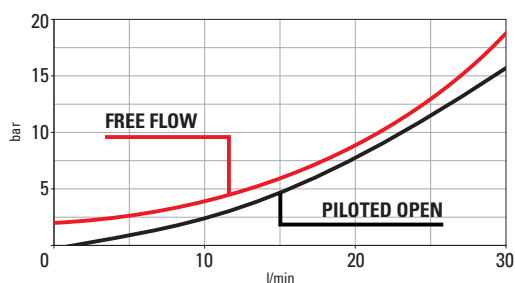
Normale i08 3:1 SP fixed setting



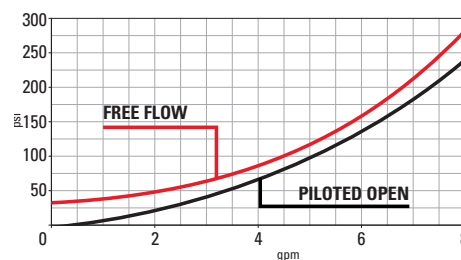
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

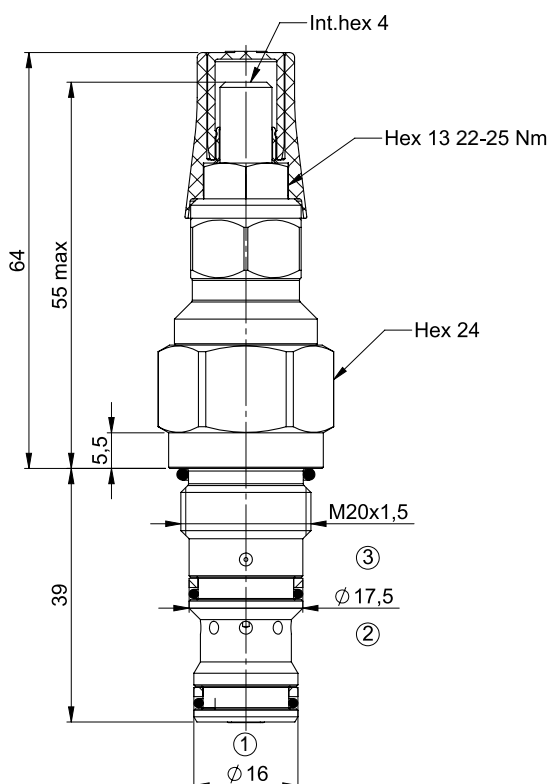
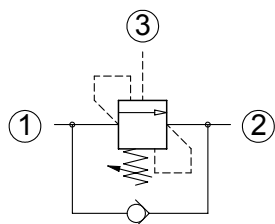
C | 0 | 0 | | | | | 0 | 3 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

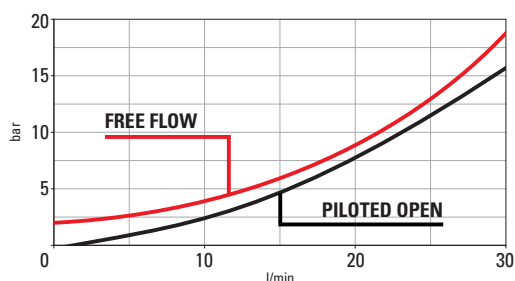
Normale i08 3:1 SP adjustable setting



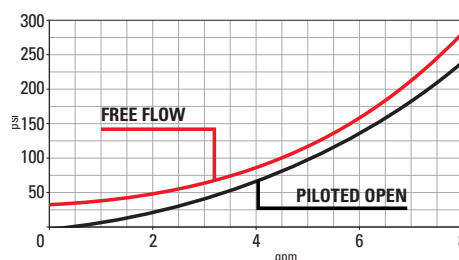
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



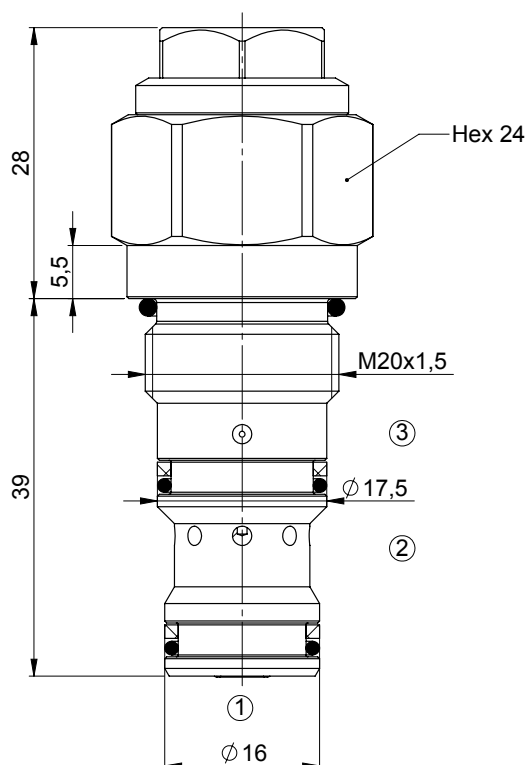
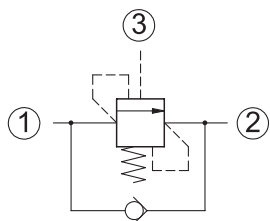
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **0** | **0** | | | | | **0** | **3** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

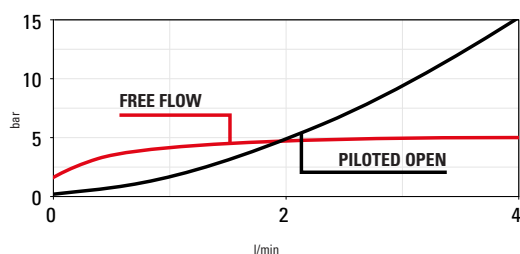
Normale i08 4:1 fixed setting **ULTRA FINE CONTROL**



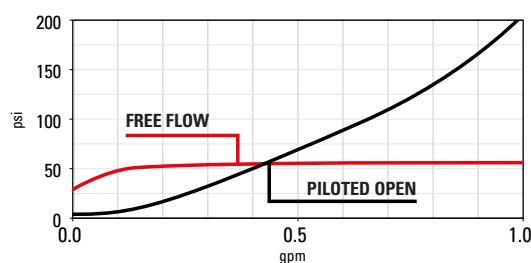
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA
3 = VITON

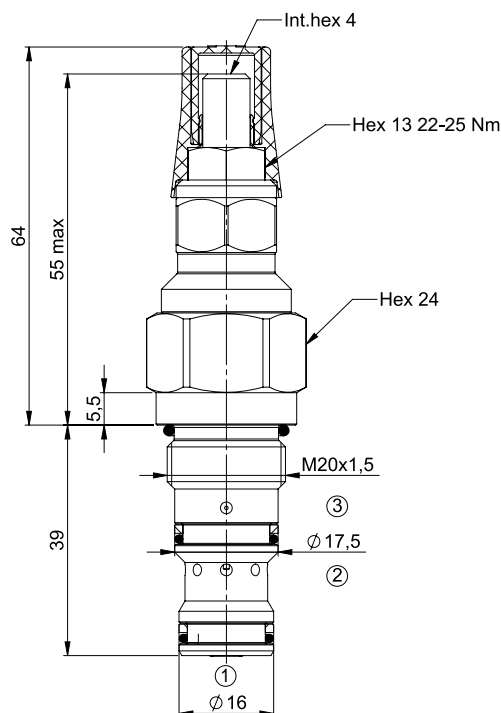
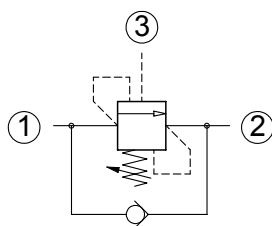
C | D | 0 | | | | | 0 | 4 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

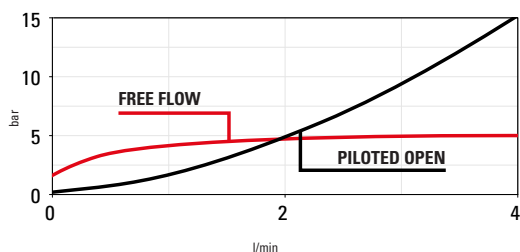
Normale i08 4:1 adj. setting **ULTRA FINE CONTROL**



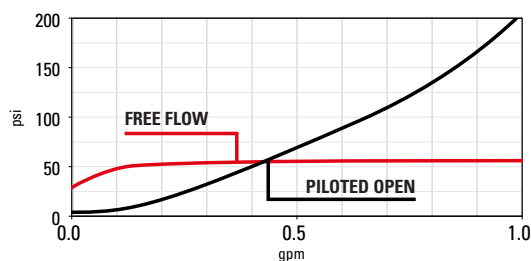
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



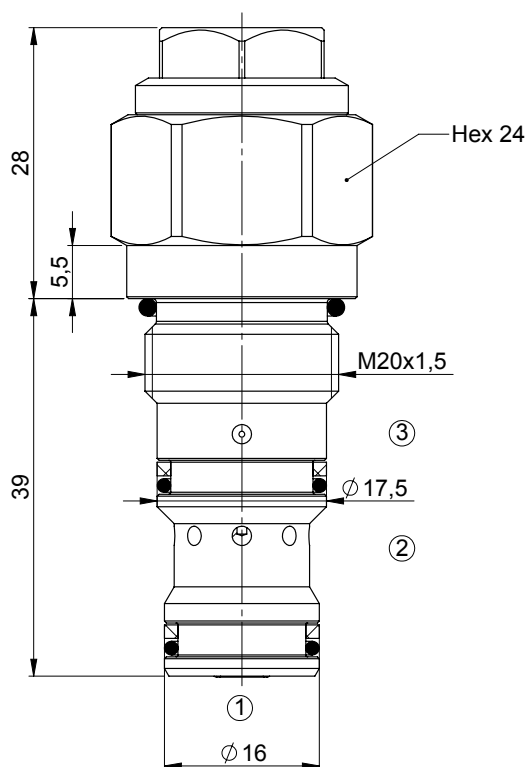
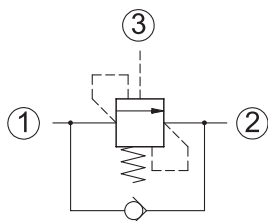
Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | **D** | **0** | | | | | **0** | **4** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

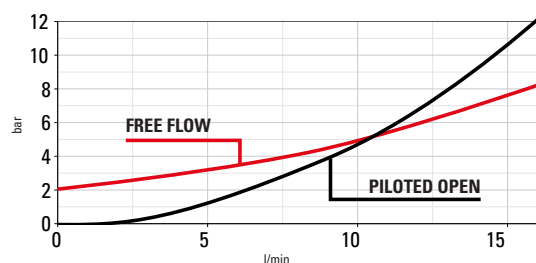
Normale i08 4:1 fixed setting FINE CONTROL



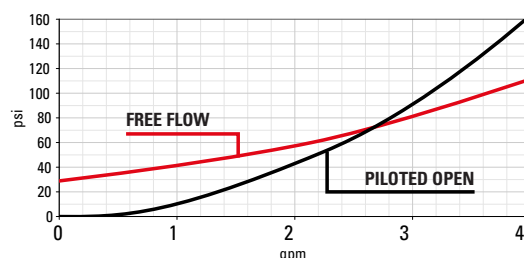
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA
3 = VITON

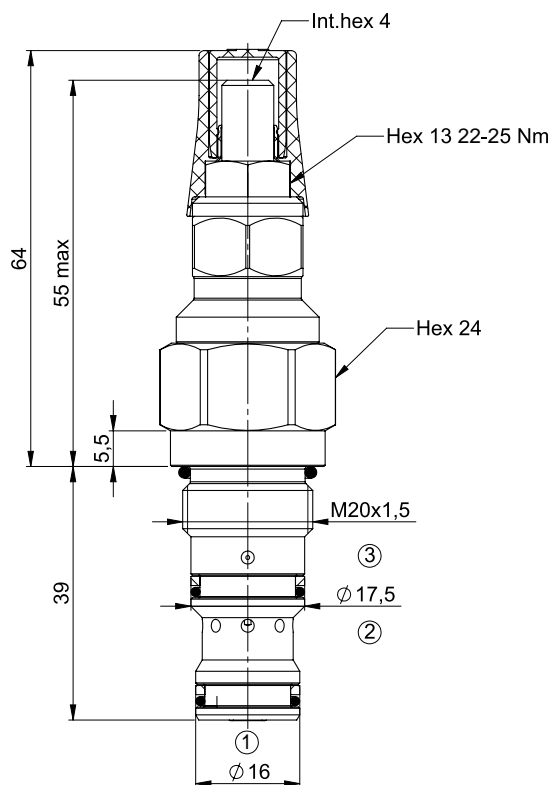
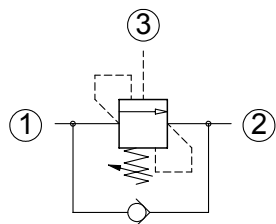
C | W | 0 | | | | | 0 | 4 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

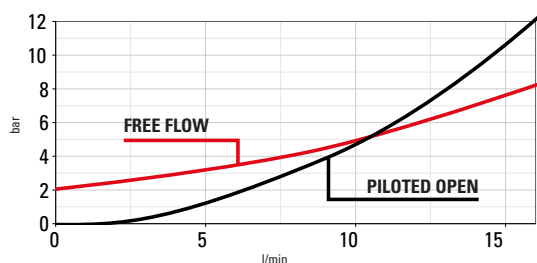
Normale i08 4:1 adj. setting FINE CONTROL



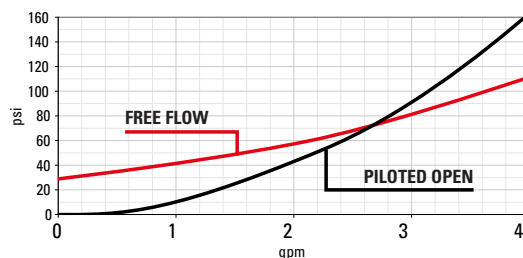
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



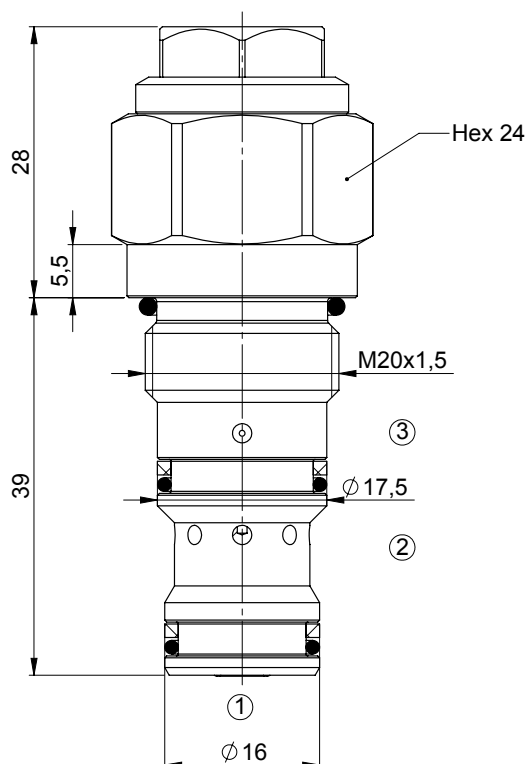
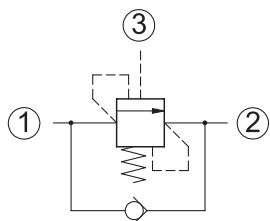
Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | W | 0 | | | | | 0 | 4 | 6 | 6 | 0 | 0 | A

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

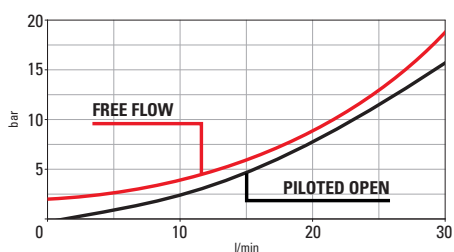
Normale i08 4:1 fixed setting



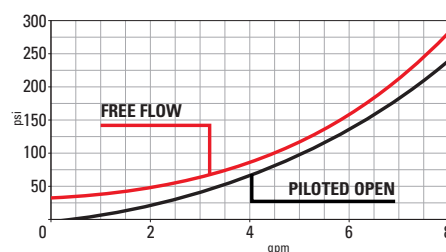
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA
3 = VITON

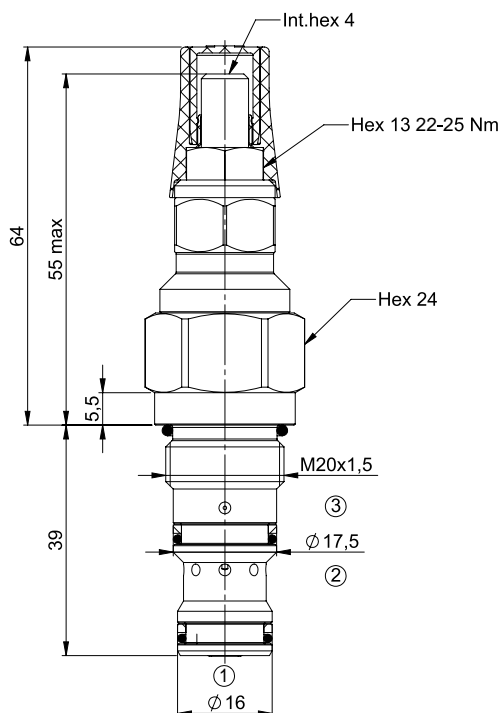
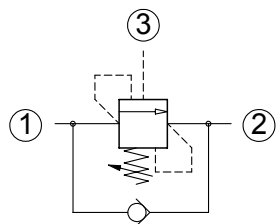
C | 0 | 0 | | | | | 0 | 4 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

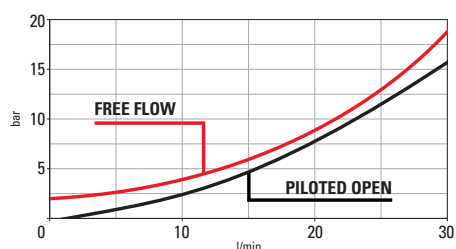
Normale i08 4:1 adjustable setting



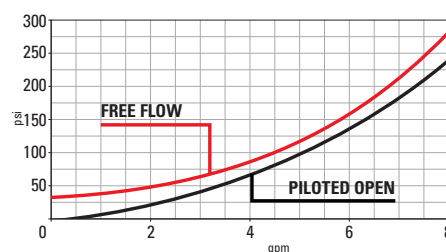
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



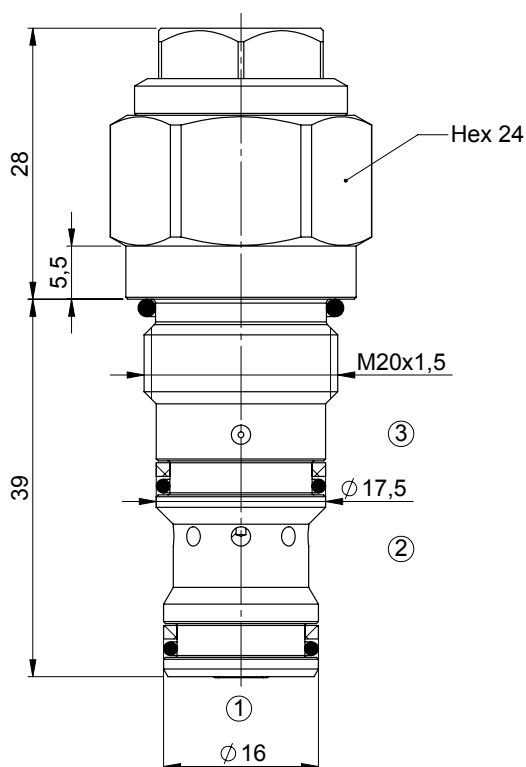
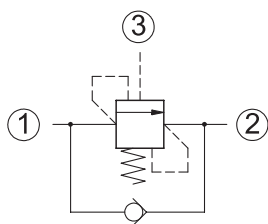
Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

C | **0** | **0** | | | | | **0** | **4** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

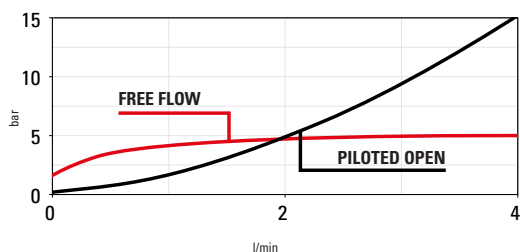
Normale i08 4:1 SP fixed setting **ULTRA FINE CONTROL**



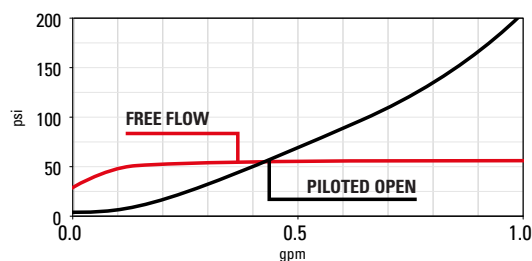
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

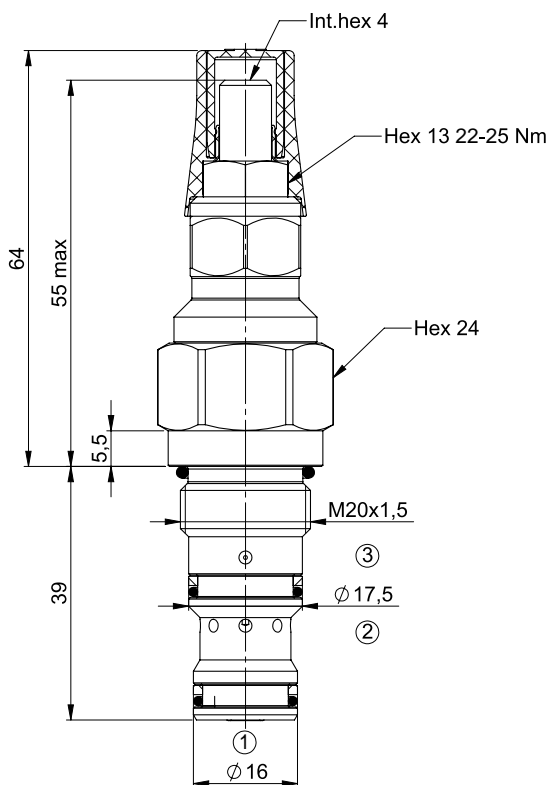
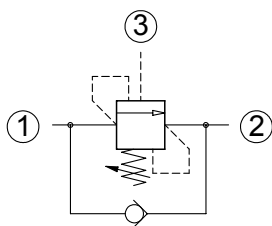
C | D | 0 | | | | | 0 | 4 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

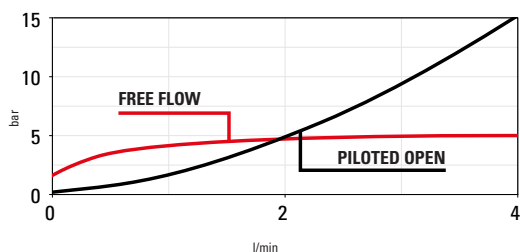
Normale i08 4:1 SP adj. setting **ULTRA FINE CONTROL**



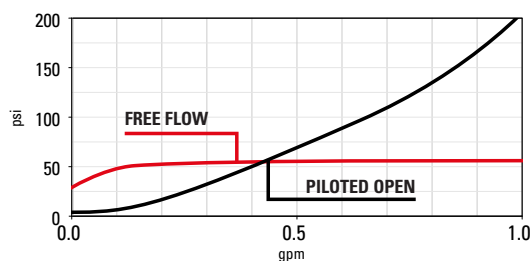
Technical Details

cavity	IH A6610
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



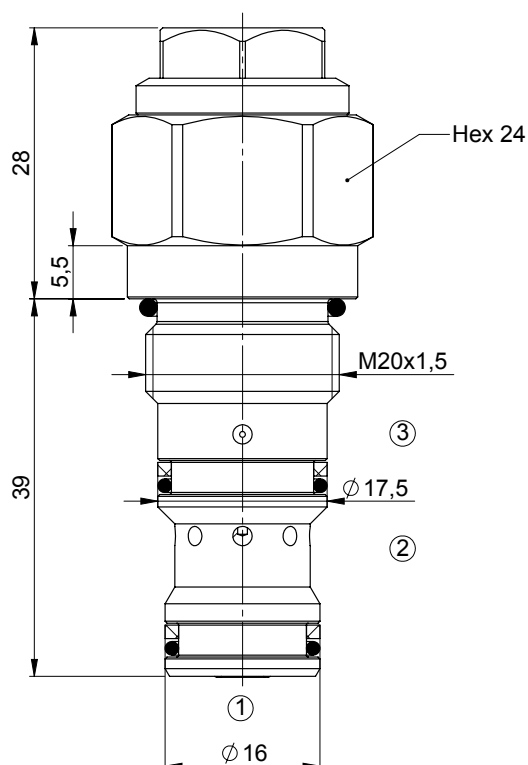
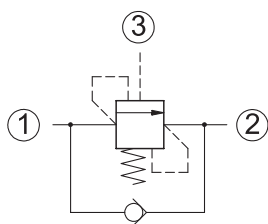
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **D** | **0** | | | | | **0** | **4** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

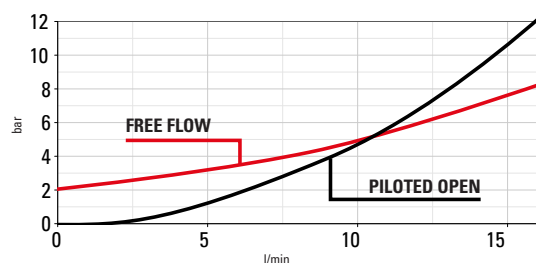
Normale i08 4:1 SP fixed setting FINE CONTROL



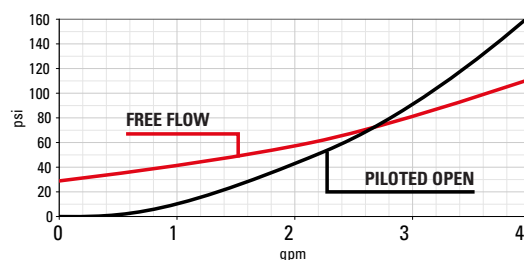
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

C | W | 0

Setting (bar)

Spring

T = 30-105 bar

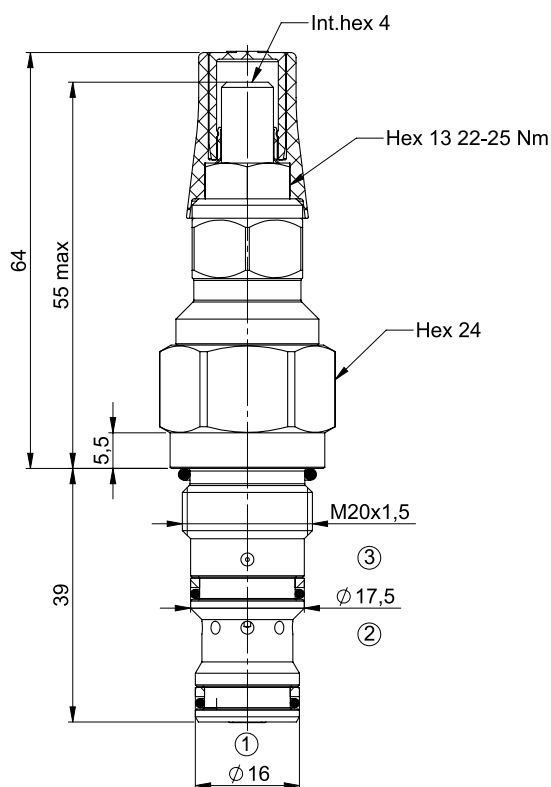
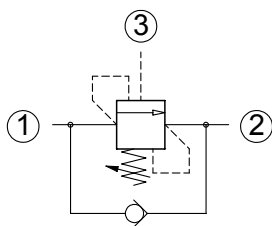
M = 105-210 bar

D = 210-350 bar

0 | 4 | 6 | 6 | 0 | 0 | A

Load holding valves

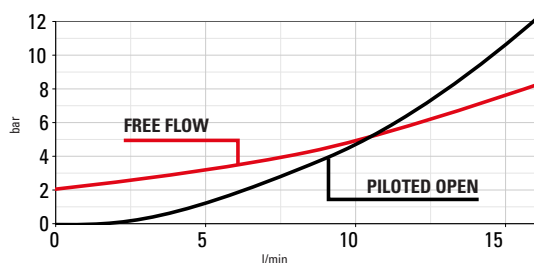
Normale i08 4:1 SP adjustable setting **FINE CONTROL**



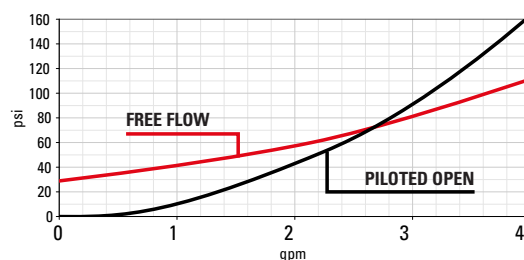
Technical Details

cavity	IH A6610
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



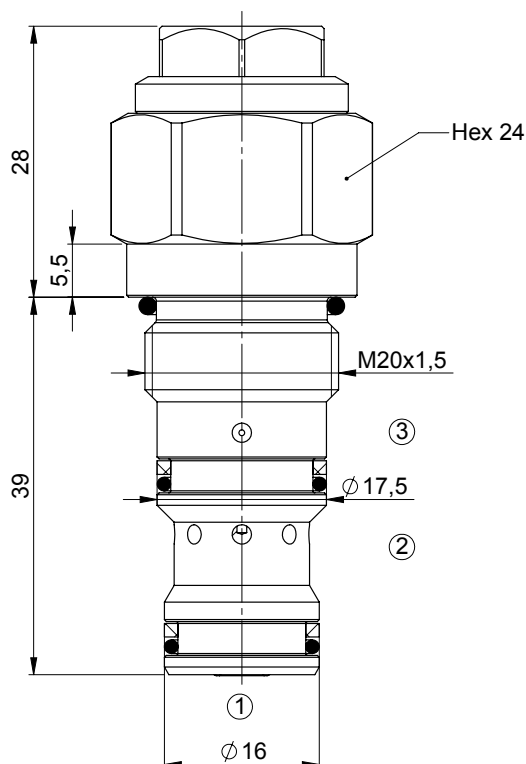
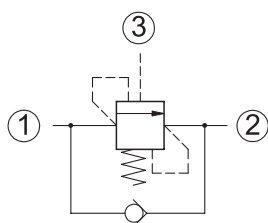
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **W** | **0** | | | | | **0** | **4** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

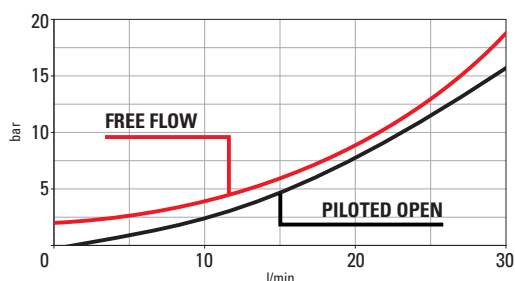
Normale i08 4:1 SP fixed setting



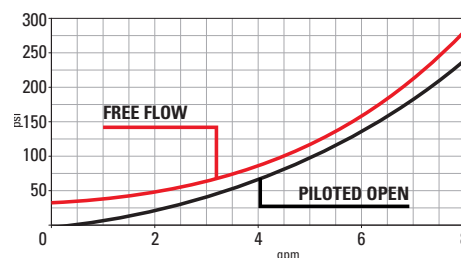
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

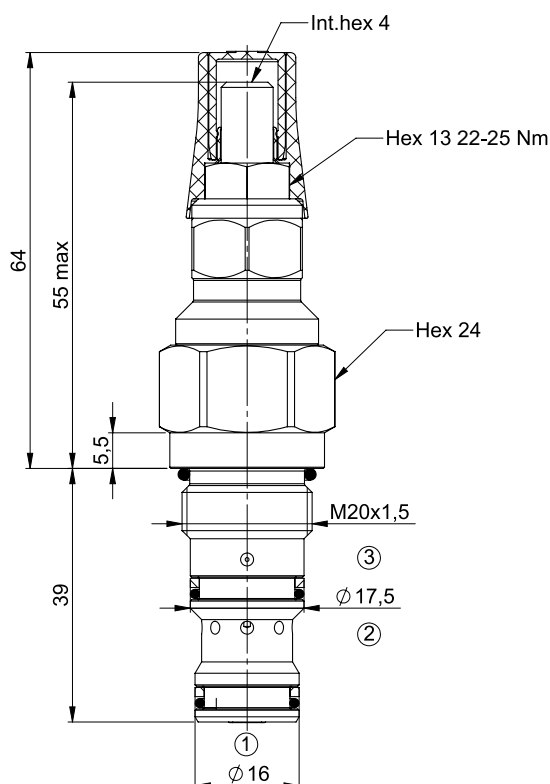
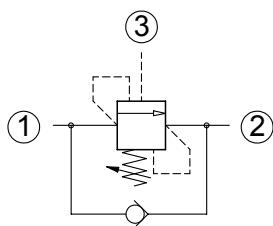
C | 0 | 0 | | | | | 0 | 4 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

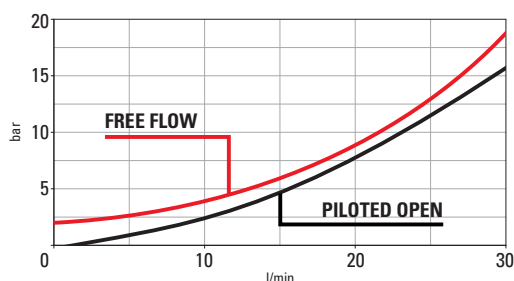
Normale i08 4:1 SP adjustable setting



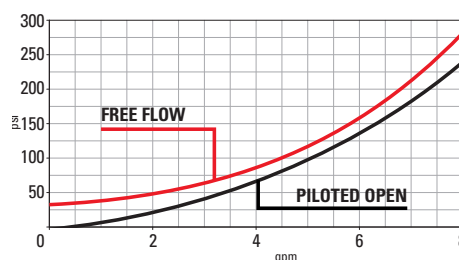
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



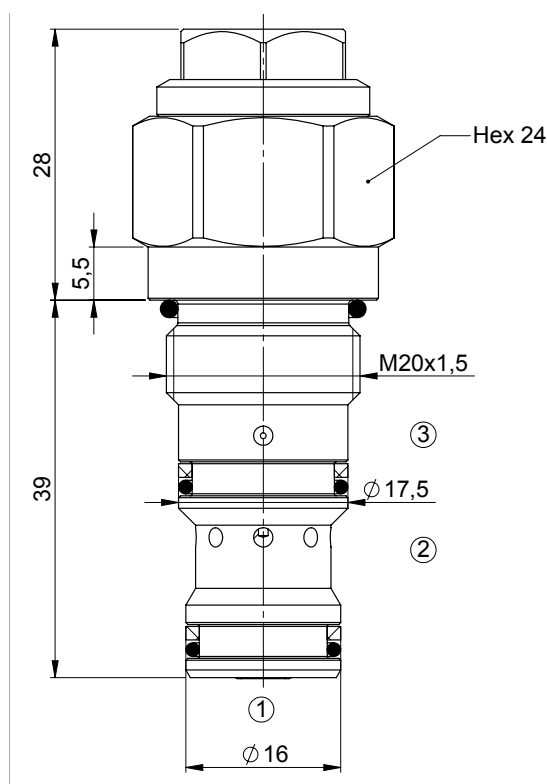
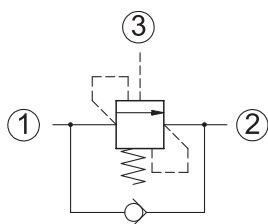
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **0** | **0** | | | | | **0** | **4** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

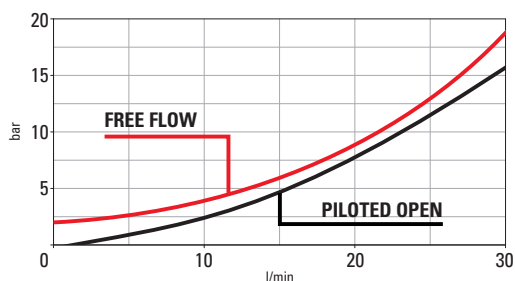
Normale i08 5:1 SP fixed setting



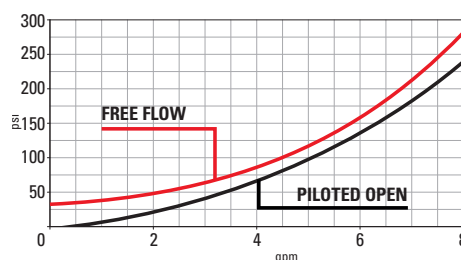
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting
- For settings lower than 100 bar please consult factory



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

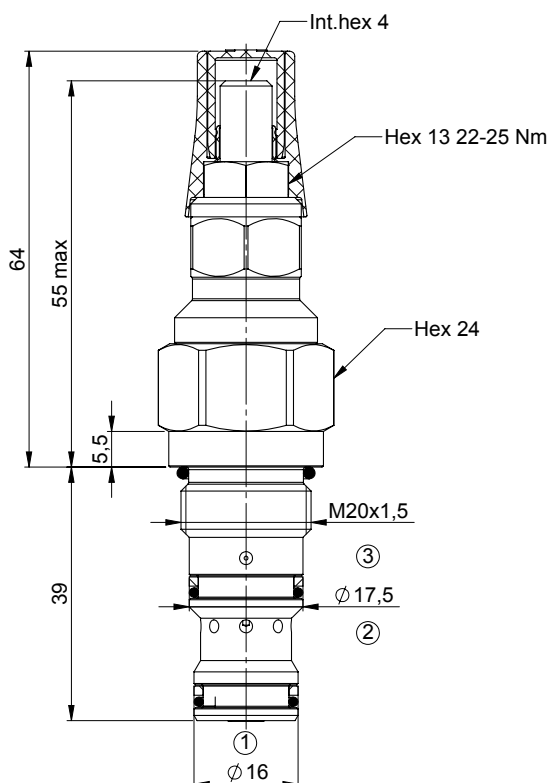
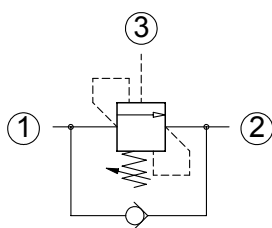
C | 0 | 0 | | | | | 0 | 5 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

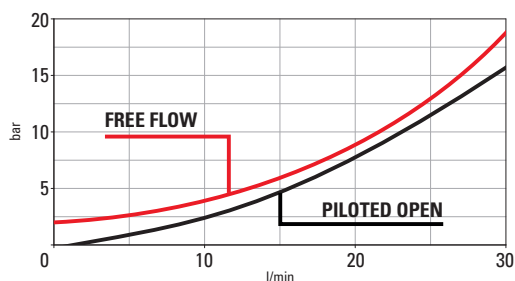
Normale i08 5:1 SP adjustable setting



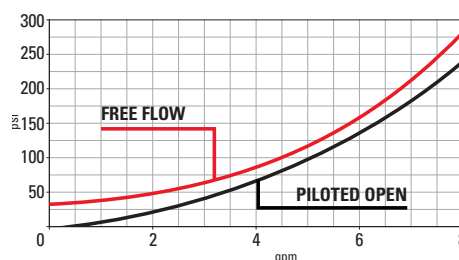
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



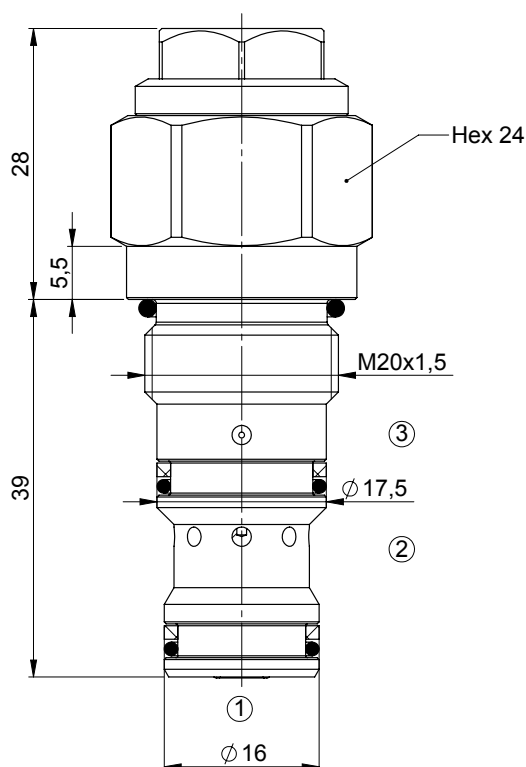
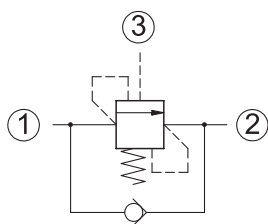
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **0** | **0** | | | | | **0** | **5** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

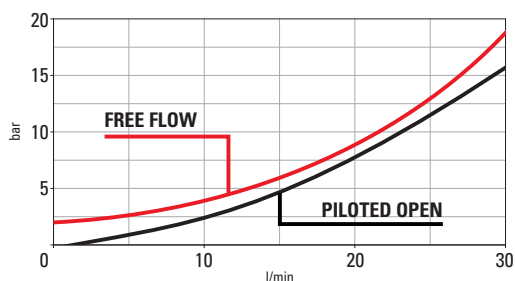
Normale i08 8:1 SP fixed setting



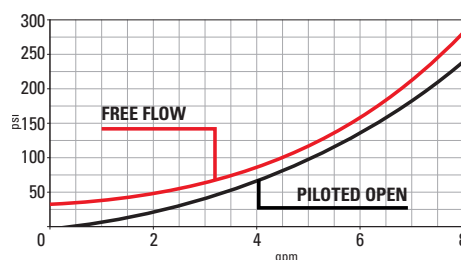
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting
- For settings lower than 100 bar please consult factory



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

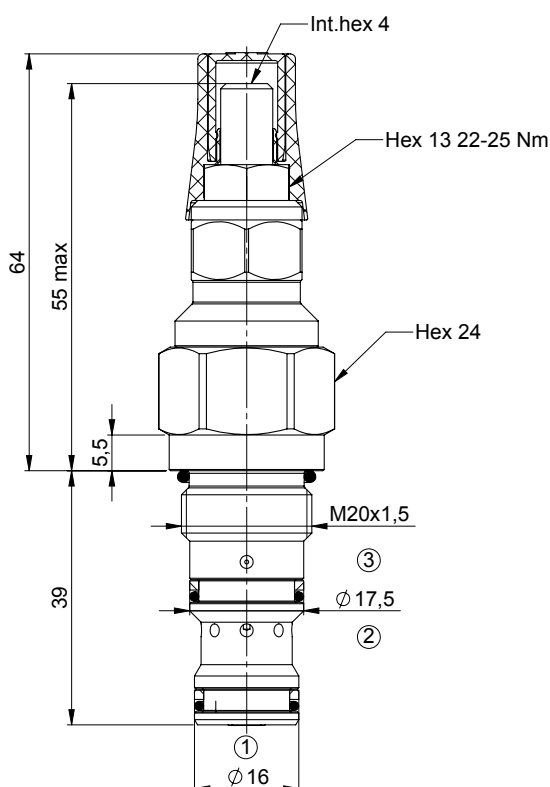
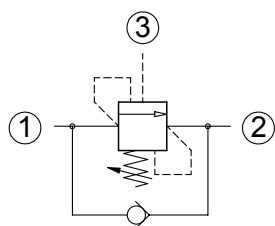
C | 0 | 0 | | | | | 0 | 8 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

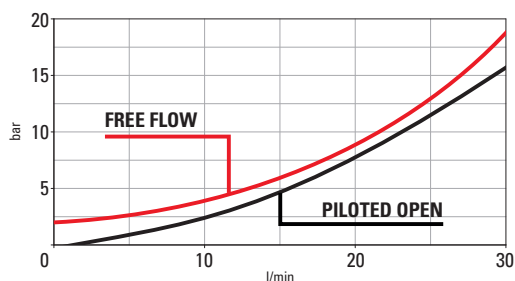
Normale i08 8:1 SP adjustable setting



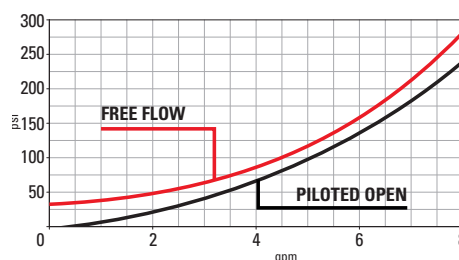
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



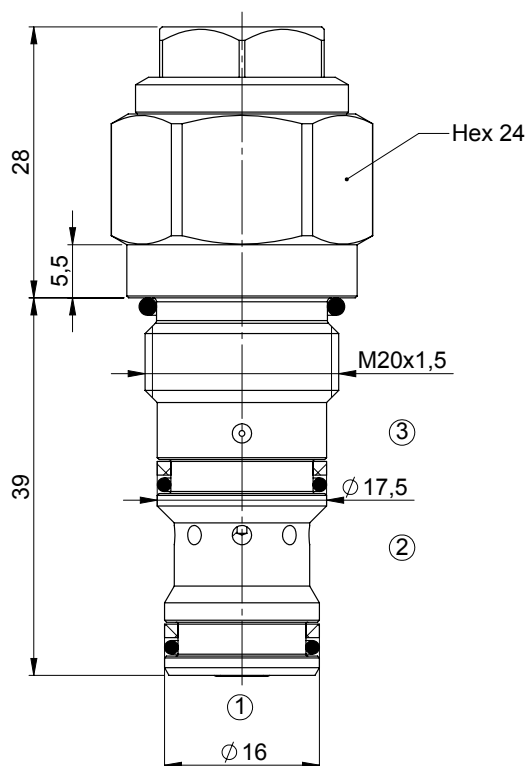
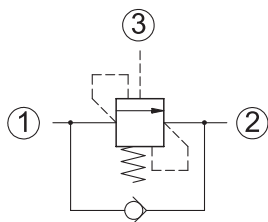
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **0** | **0** | | | | | **0** | **8** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

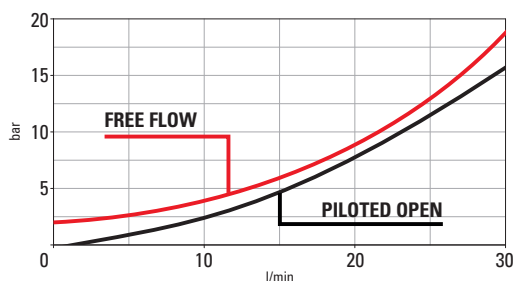
Normale i08 10:1 SP fixed setting



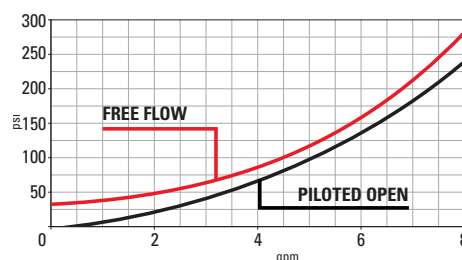
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

C | 0 | 0

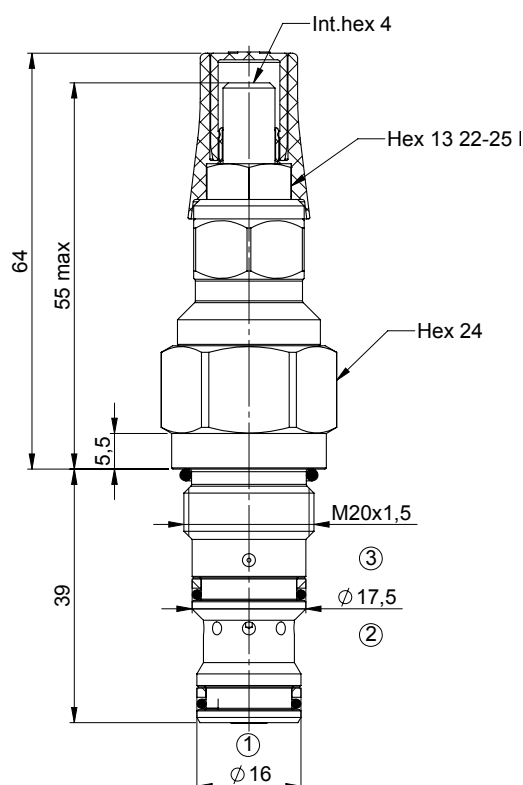
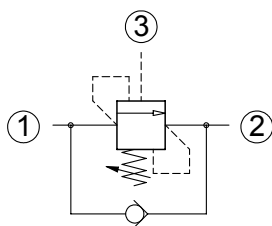
| 1 | 0 | 6 | 6 | 0 | 0 | A

Setting (bar)

Spring
T = 30-105 bar
M = 105-210 bar
D = 210-350 bar

Load holding valves

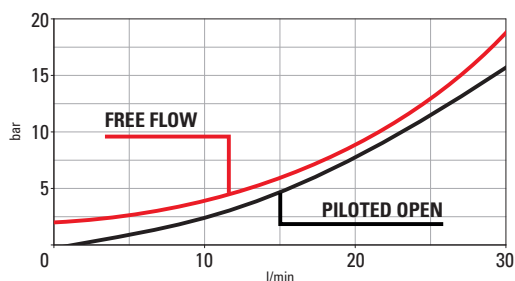
Normale i08 10:1 SP adjustable setting



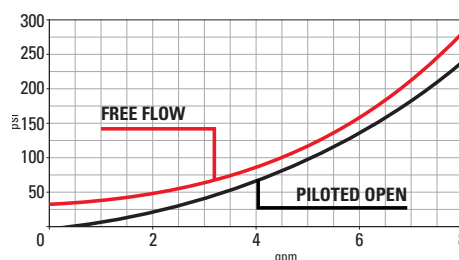
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	350 bar (5000 psi)
minimum setting	30 bar (500 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T) - 27 bar (spring L)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



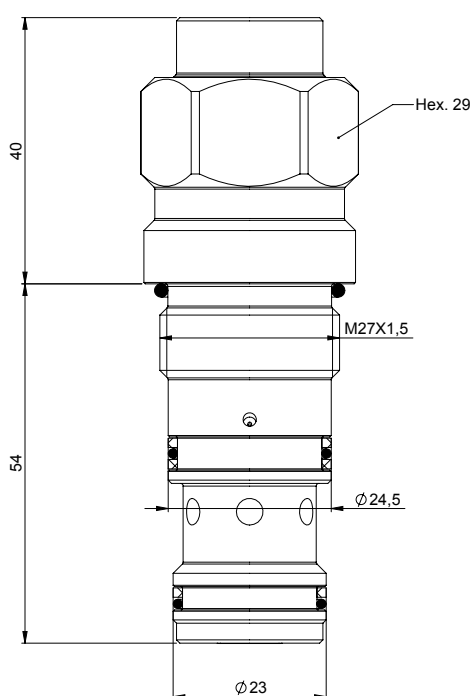
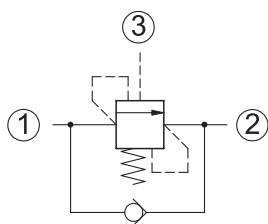
Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

C | **0** | **0** | | | | | **1** | **0** | **6** | **6** | **0** | **0** | **A**

Spring
L = 30-105 bar
T = 70-150 bar
M = 100-210 bar
D = 200-350 bar

Load holding valves

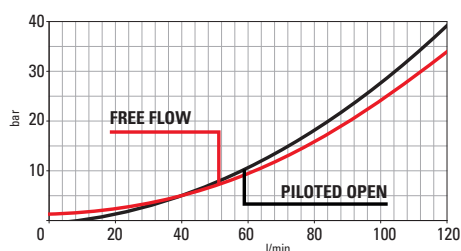
Normale i12 4:1 fixed setting



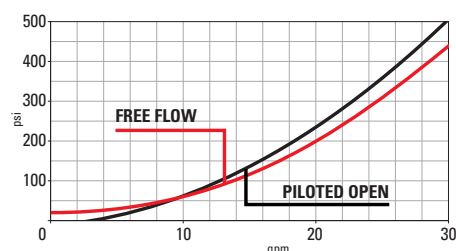
Technical Details

cavity	IH A12336
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60 Nm (44 lbf ft)
valve weight	0,40 kg (0,88 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE12SN700000
seal kit (viton)	S0SAE12SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

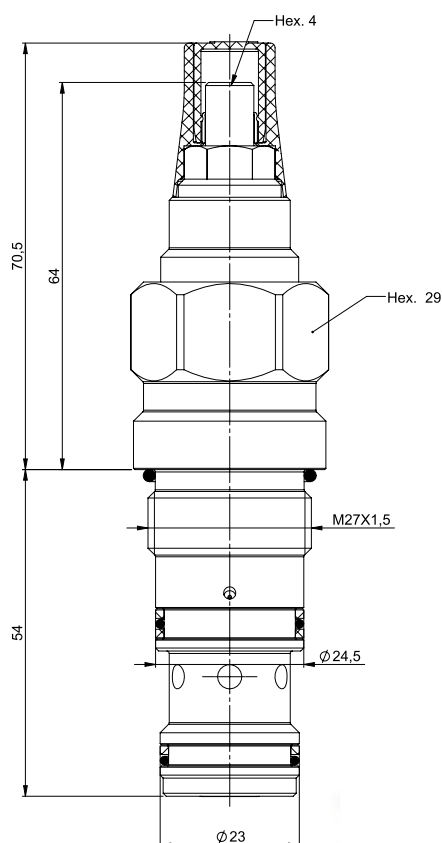
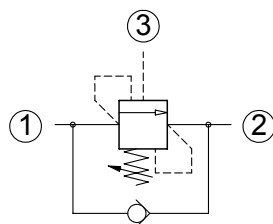
C | 0 | 0 | | | | | 0 | 4 | 3 | 6 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

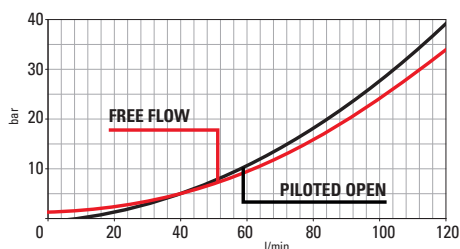
Normale i12 4:1 adjustable setting



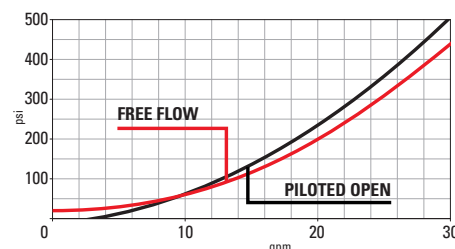
Technical Details

cavity	IH A12336
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	156 bar (spring D) - 49 bar (spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60 Nm (44 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0,40 kg (0,88 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SA12336SN700000
seal kit (viton)	SA12336SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

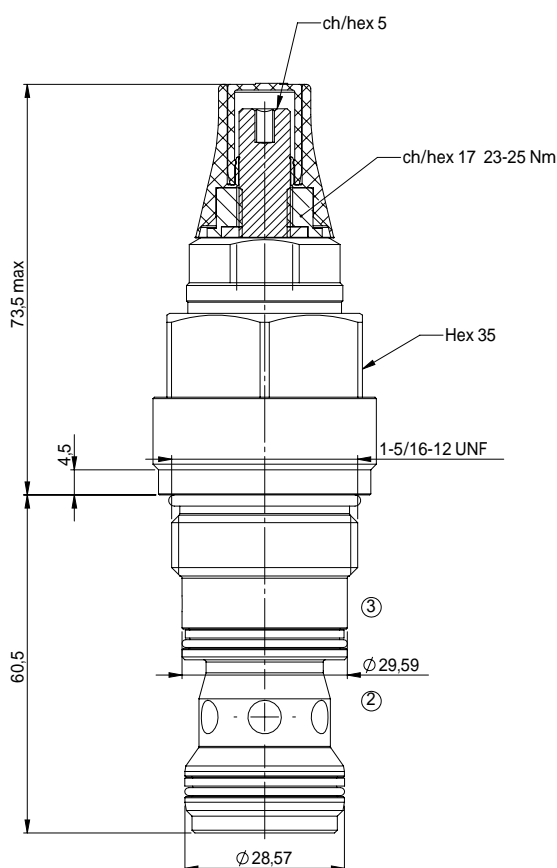
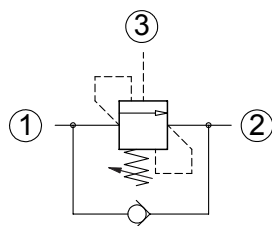
C | **0** | **0** | | | | | **0** | **4** | **3** | **6** | **0** | **0** | **A**

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

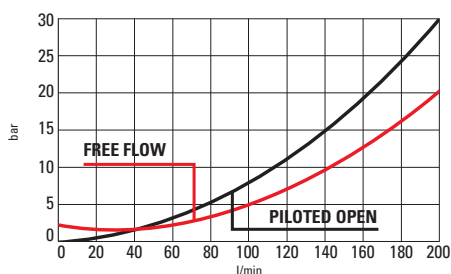
Normale i16 4:1 adjustable setting



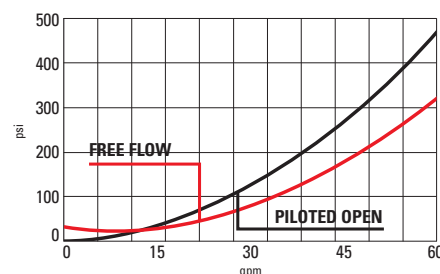
Technical Details

cavity	IH A877
capacity	200 lpm (50 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	140
pressure increase per turn	66 bar (spring M) / 123 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	35
valve installation torque	100-110 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	25
valve weight	0.6 kg
external component surface treatment	zinc plating
seal kit (nbr)	S00877ASN900000
seal kit (viton)	S00877ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

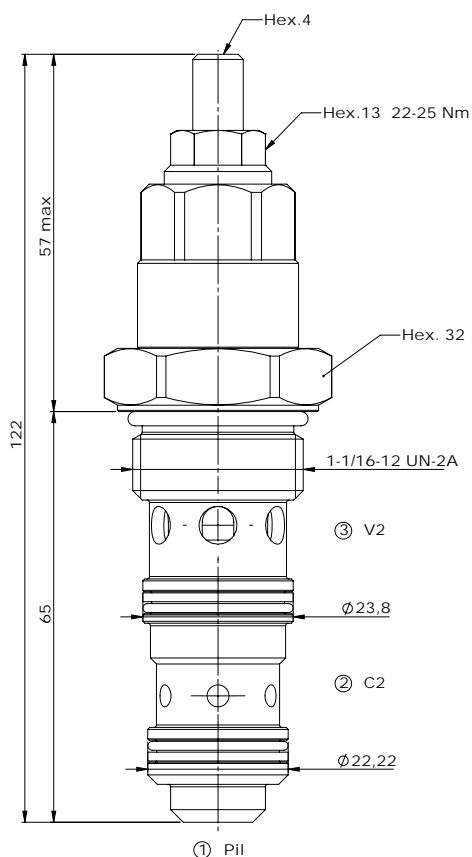
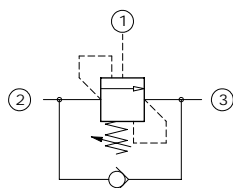
C | 0 | 0 | | | | | 0 | 4 | 8 | 7 | 0 | 0 | A

Setting (bar)

Spring

- M = 70-210 bar
- D = 140-350 bar

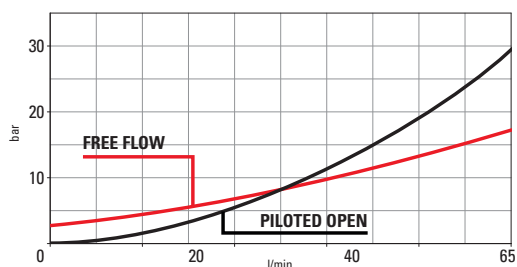
Load holding valves Normale 31PB



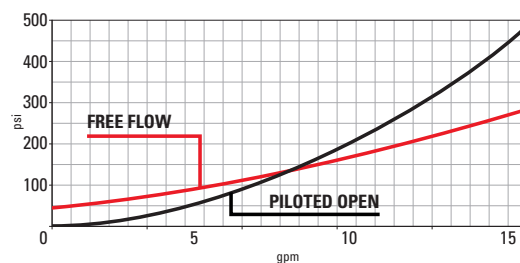
Technical Details

cavity	31pb
capacity	60 lpm (15 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350
minimum setting	70 (1000 psi)
pressure increase per turn	61,5 bar (spring M) - 138 bar (spring D)
pressure setting established @	cracking pressure
maximum valve leakage at reseal	5 drops/min
operating characteristic	standard
reseal	80%
maximum recommended load pressure at maximum setting	270 bar (4000 psi)
valve hex size (mm)	32
valve installation torque	116-128 Nm (85-95 lbf ft)
adjustment screw internal hex size (mm)	4
lock nut hex size	13
lock nut torque	22-25 Nm (16-18 lbf ft)
valve weight	0,32 kg (0,66 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S031PB0SN700000
seal kit (viton)	S031PB0SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting
- For anti tampering cap please consult factory



Performance curves



C | 0 | 0 | A | | | | 0 | 4 | 3 | 1 | 0 | 0 | A

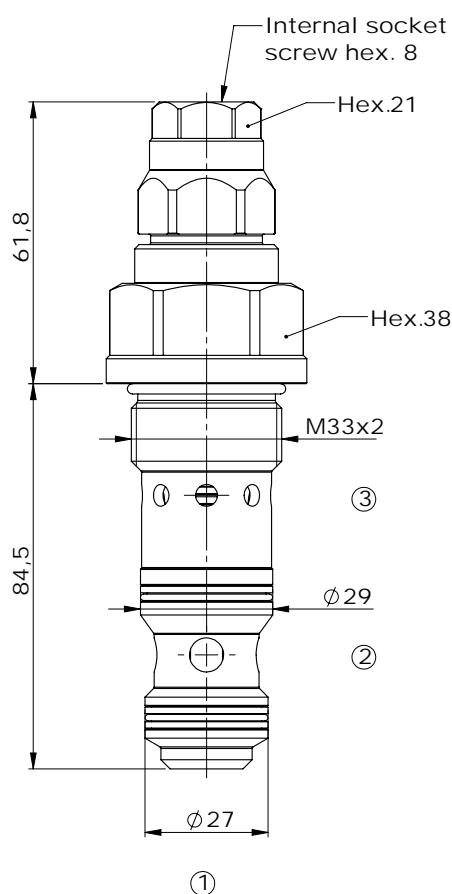
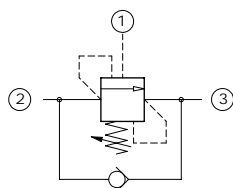
Setting (bar)

Spring

M = 70-210 bar
D = 140-350 bar

Load holding valves

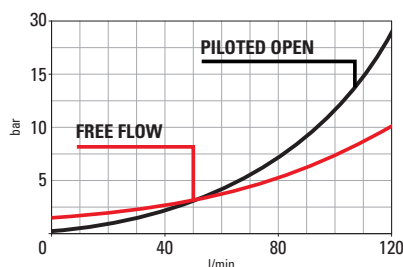
Normale 34PB FINE CONTROL



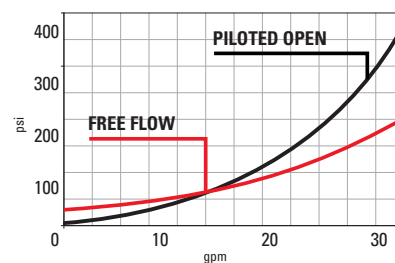
Technical Details

cavity	34pb
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	30 bar (spring M) - 73 bar (spring D)
pressure setting established @	cracking pressure
maximum valve leakage at reseal	5 drops/min
operating characteristic	standard
reseal	80%
maximum recommended load pressure at maximum setting	270 bar (4000 psi)
valve hex size (mm)	32
valve installation torque	116-128 Nm (85-95 lbf ft)
adjustment screw internal hex size (mm)	8
lock nut hex size	21
valve weight	0,32 kg (0,66 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S034PB0SN700000
seal kit (viton)	S034PB0SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting
- For anti tampering cap please consult factory



Performance curves

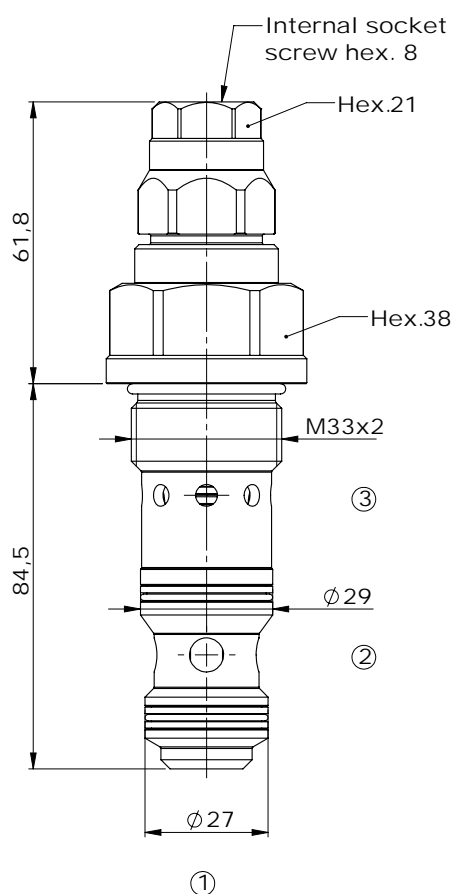
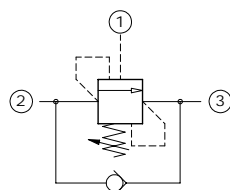


C | L | O | A | | | | | 0 | 4 | 3 | 4 | 0 | 0 | A

Setting (bar)

Spring
D = 200-350 bar
M = 90-200 bar

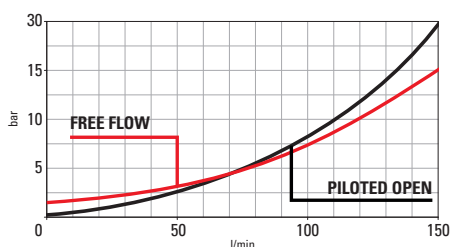
Load holding valves Normale 34PB



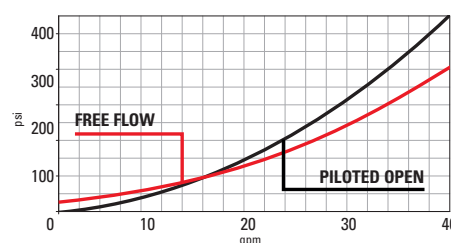
Technical Details

cavity	34pb
capacity	150 lpm (40 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	30 bar (spring M) - 73 bar (spring D)
pressure setting established @	cracking pressure
maximum valve leakage at reseal	5 drops/min
operating characteristic	standard
reseal	80%
maximum recommended load pressure at maximum setting	270 bar (4000 psi)
valve hex size (mm)	32
valve installation torque	116-128 Nm (85-95 lbf ft)
adjustment screw internal hex size (mm)	8
lock nut hex size	21
valve weight	0,32 kg (0,66 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S034PB0SN700000
seal kit (viton)	S034PB0SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting
- For anti tampering cap please consult factory



Performance curves



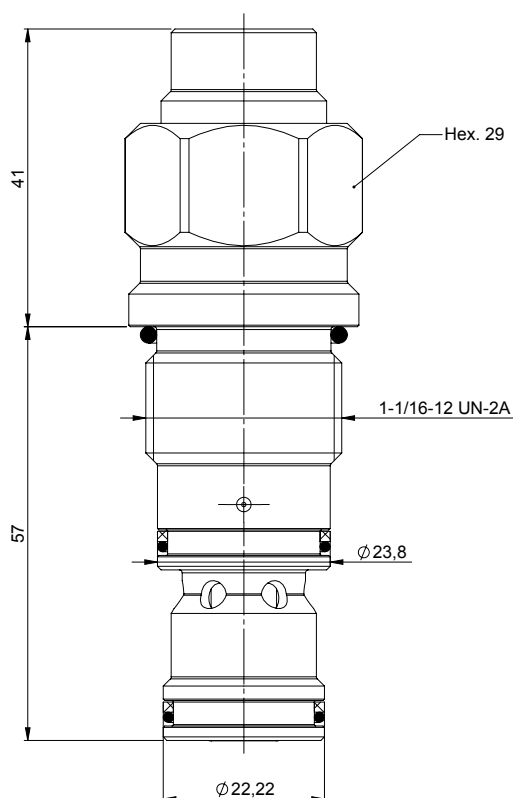
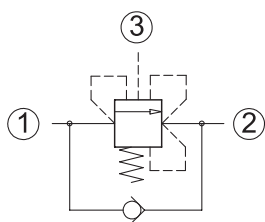
C | 0 | 0 | A | | | | 0 | 4 | 3 | 4 | 0 | 0 | A

Setting (bar)

Spring
M = 60-210 bar
D = 100-350 bar

Load holding valves

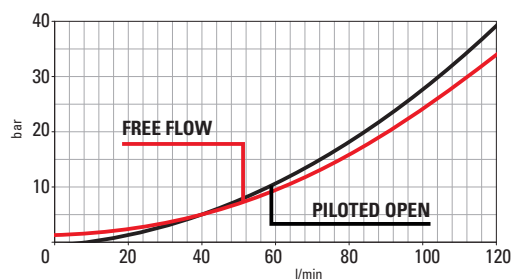
Compensata SAE12 4:1 SP fixed setting



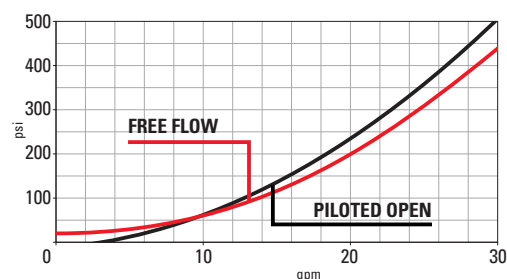
Technical Details

cavity	SAE12
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	Balanced
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	81-95 Nm (45 lbf ft)
valve weight	0,320 kg (0,70 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE12SN700000
seal kit (viton)	S0SAE12SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 440619/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

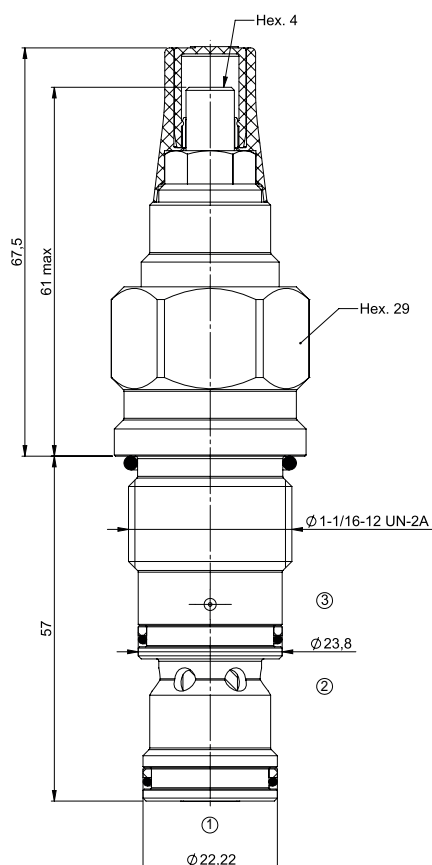
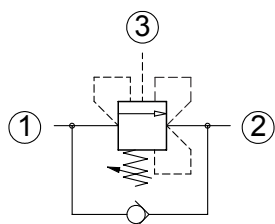
C | 0 | 1 | | | | | 0 | 4 | 1 | 2 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

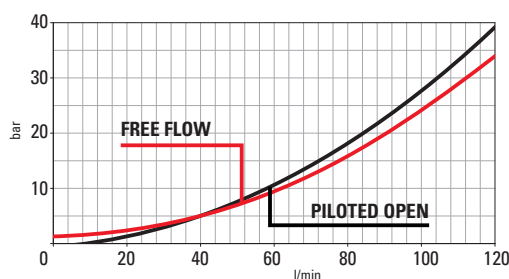
Compensata SAE12 4:1 SP adjustable setting



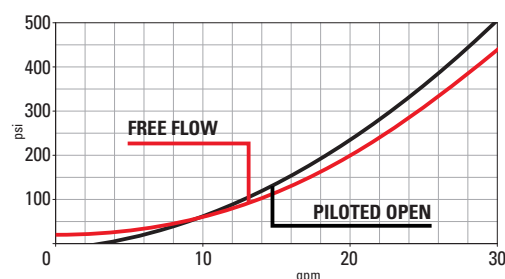
Technical Details

cavity	SAE12
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	156 bar (spring D) - 49 bar (spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	Balanced
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	81-95 Nm (60-70 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE12SN700000
seal kit (viton)	S0SAE12SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 440619/17/14

- Turn adjustment clockwise to increase setting
- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

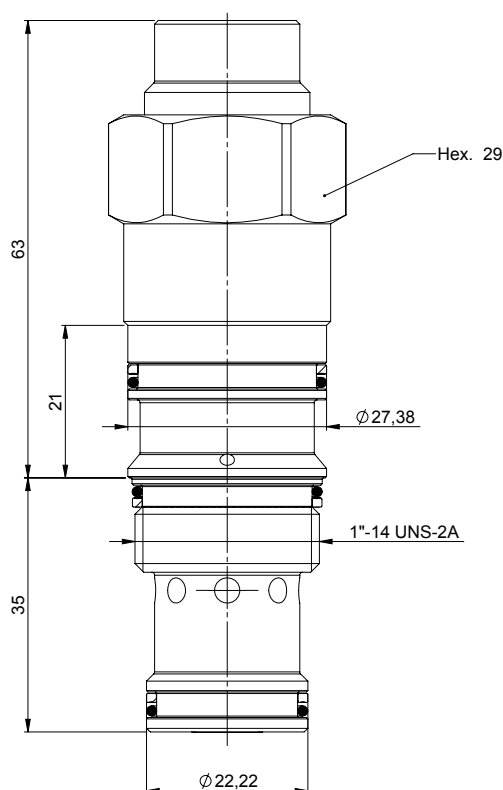
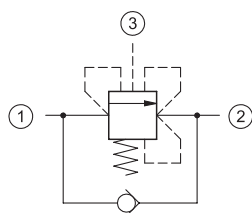
C | **0** | **1** | | | | | **0** | **4** | **1** | **2** | **0** | **0** | **A**

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

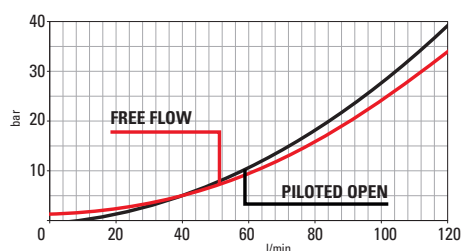
Compensata T2A 4:1 fixed setting



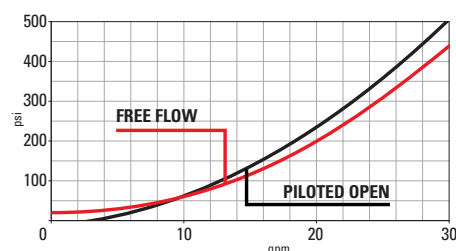
Technical Details

cavity	T2A
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	balanced
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 440619/17/14

- Turn adjustment clockwise to increase setting
- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
1 = BUNA SEALS
3 = VITON SEALS

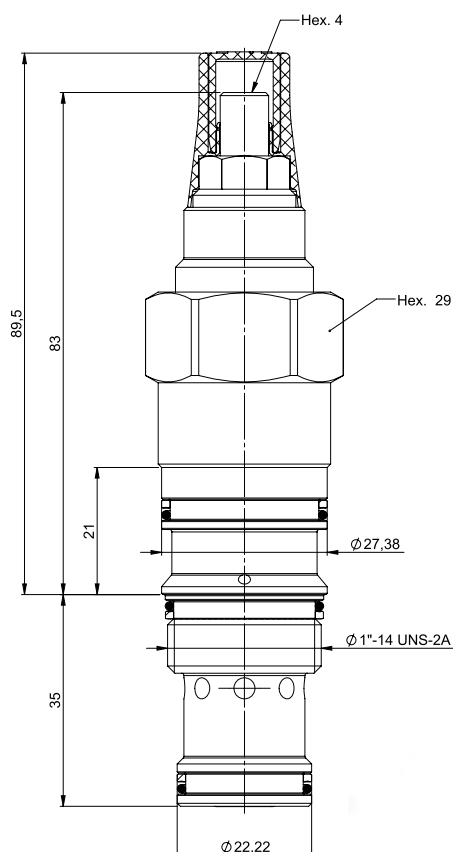
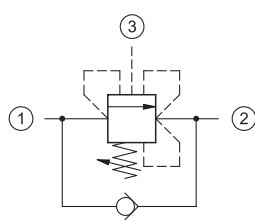
C | 0 | 1 | | | | | 0 | 4 | 0 | 2 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

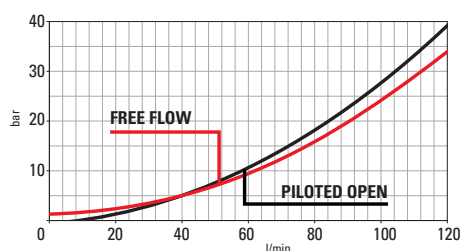
Compensata T2A 4:1 adjustable setting



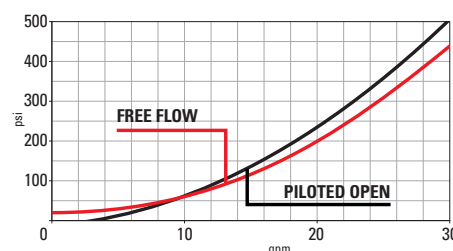
Technical Details

cavity	T2A
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	156 bar (spring D) - 49 bar (spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	balanced
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 440619/17/14

- Turn adjustment clockwise to increase setting
- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is not provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
0 = BUNA SEALS
6 = BUNA tamper resistant
2 = VITON SEALS
7 = VITON tamper resistant

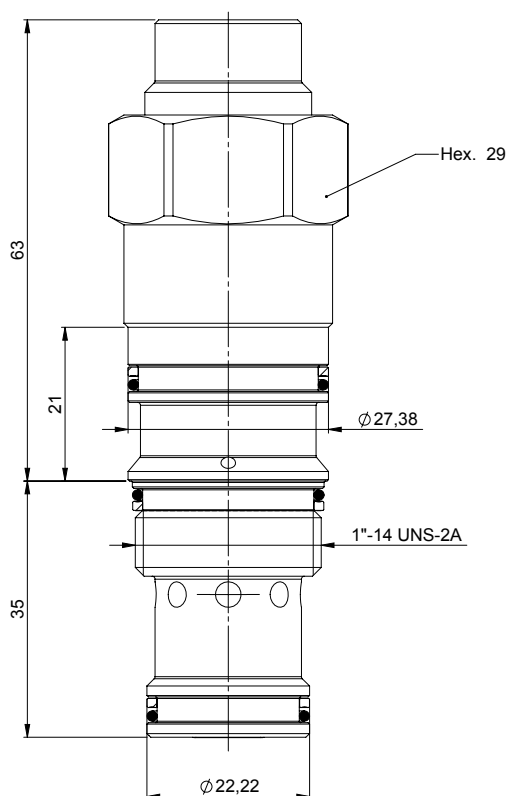
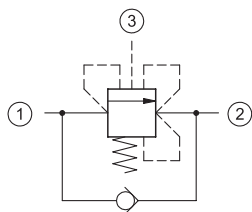
C | **0** | **1** | | | | | **0** | **4** | **0** | **2** | **0** | **0** | **A**

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

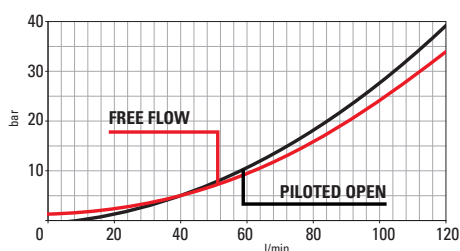
Compensata T2A 4:1 SP fixed setting



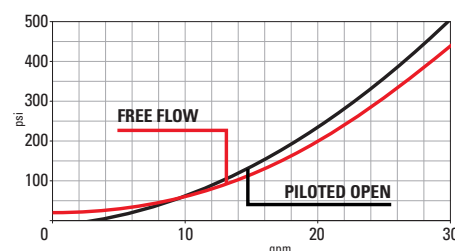
Technical Details

cavity	T2A
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	balanced
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 440619/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = VITON SEALS

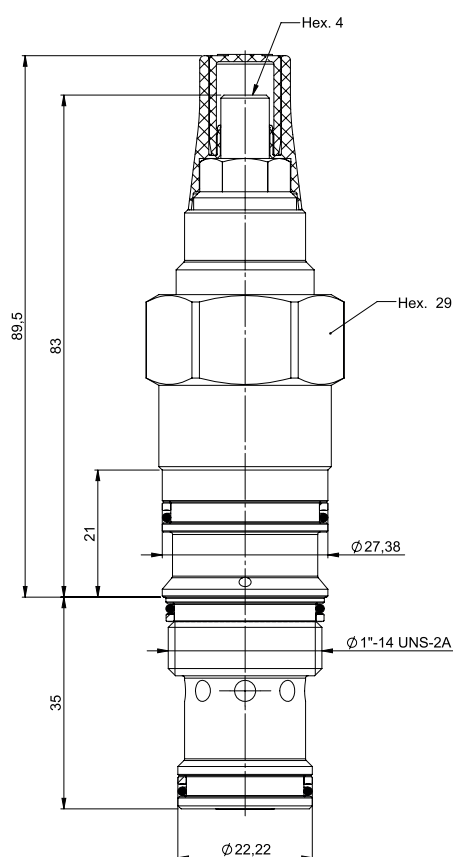
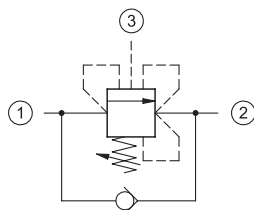
C | 0 | 1 | | | | | 0 | 4 | 0 | 2 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-290 bar

Load holding valves

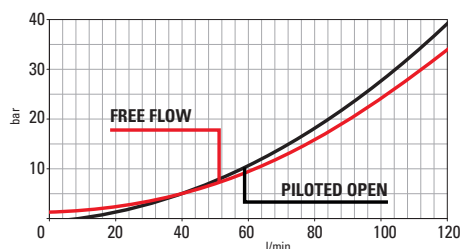
Compensata T2A 4:1 SP adjustable setting



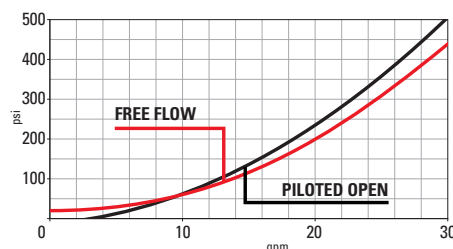
Technical Details

cavity	T2A
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	156 bar (spring D) - 49 bar (spring M)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	balanced
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0,350 kg (0,77 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 440619/17/14

- Turn adjustment clockwise to increase setting
- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

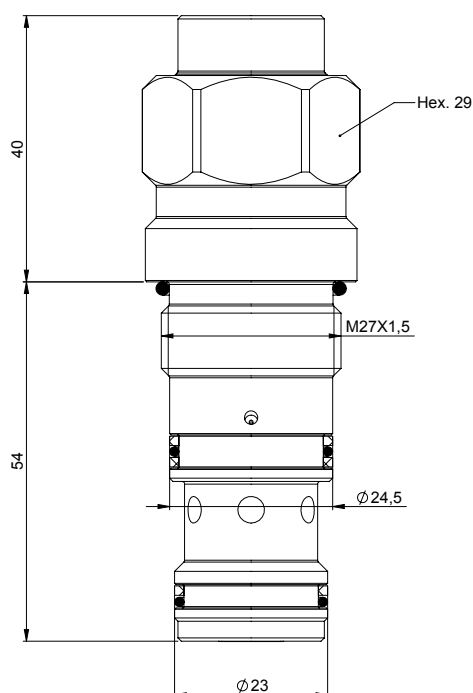
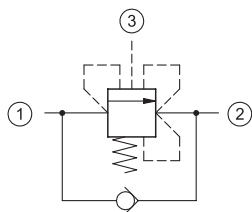
C | **0** | **1** | | | | | **0** | **4** | **0** | **2** | **0** | **0** | **A**

Setting (bar)

Spring
M = 70-210 bar
D = 140-290 bar

Load holding valves

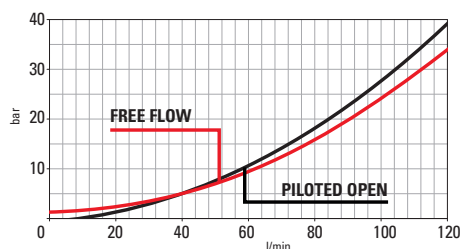
Compensata i12 4:1 SP fixed setting



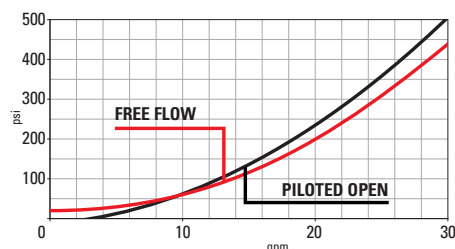
Technical Details

cavity	IH A12336
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	Balanced
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60 Nm (44 lbf ft)
valve weight	0,40 kg (0,88 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE12SN700000
seal kit (viton)	S0SAE12SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 440619/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

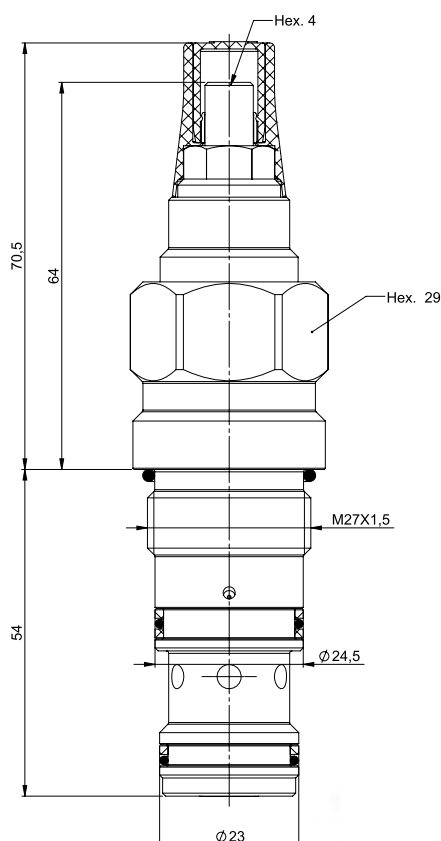
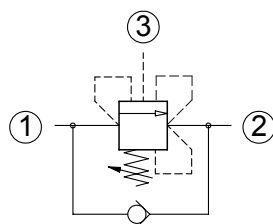
C | 0 | 1 | | | | | 0 | 4 | 3 | 6 | 0 | 0 | A

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

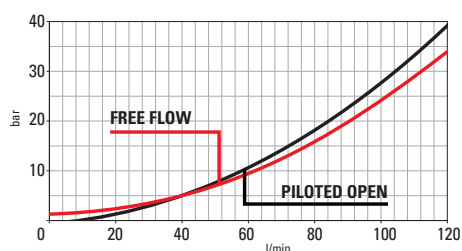
Compensata i12 4:1 SP adjustable setting



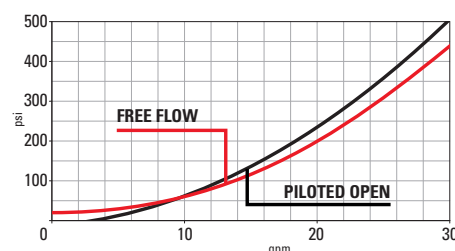
Technical Details

cavity	IH A12336
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	156 bar (spring D) - 49 bar (spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	Balanced
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60 Nm (44 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0,40 kg (0,88 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SA12336SN700000
seal kit (viton)	SA12336SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 440619/17/14

- Turn adjustment clockwise to increase setting
- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
A = BUNA + sealed piston
G = VITON + sealed piston
C = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

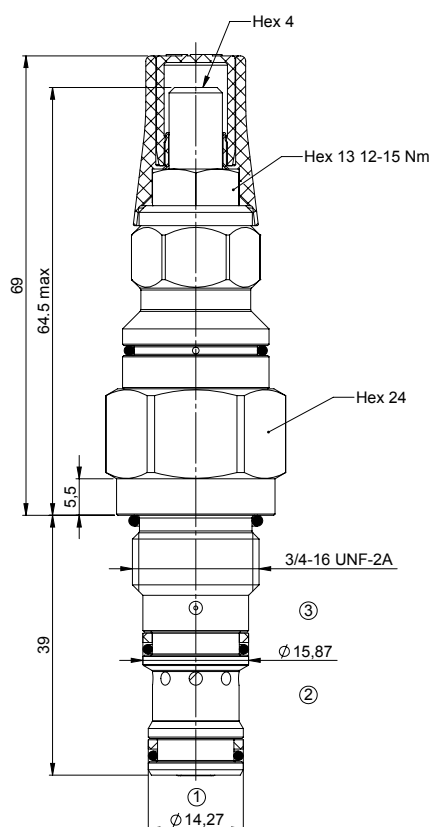
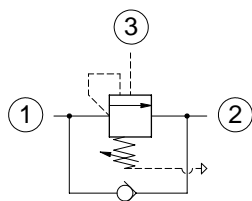
C | **0** | **1** | | | | | **0** | **4** | **3** | **6** | **0** | **0** | **A**

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

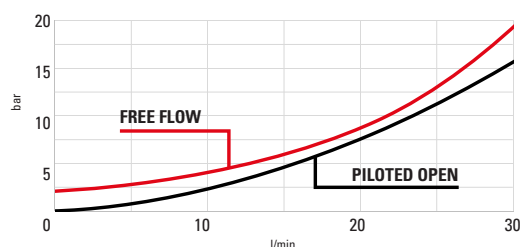
Ventilata SAE08 4:1 adjustable setting



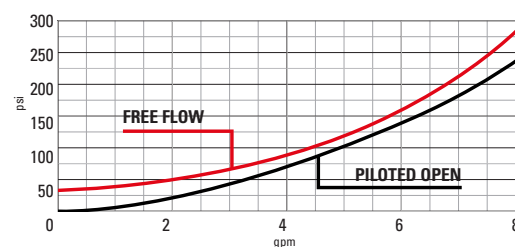
Technical Details

cavity	SAE08
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + anti tampering + sealed piston
- H = VITON + anti tampering + sealed piston

C | 0 | 2 | | | | | 0 | 4 | 0 | 8 | 0 | 0 | A

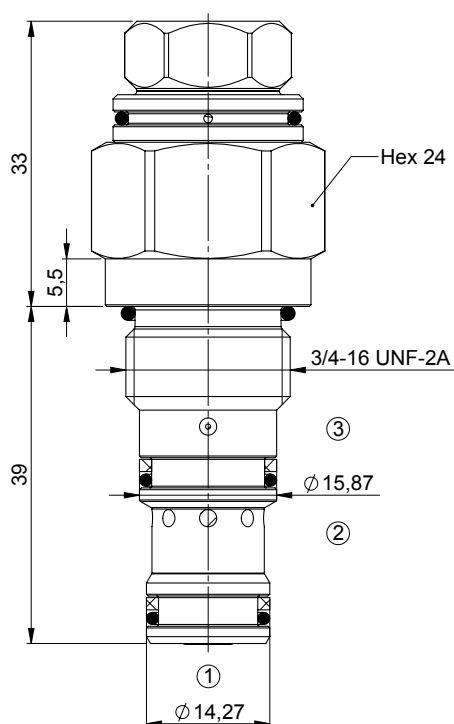
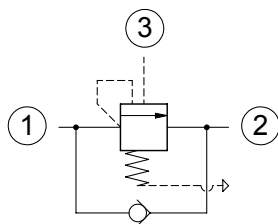
Setting (bar)

Spring

- T = 70-150 bar
- M = 100-210 bar
- D = 200-350 bar

Load holding valves

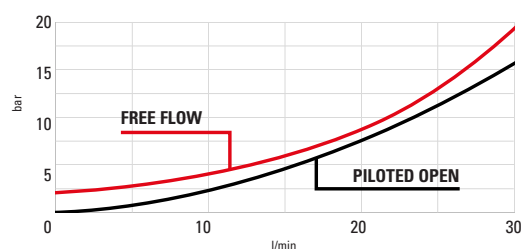
Ventilata SAE08 4:1 fixed setting



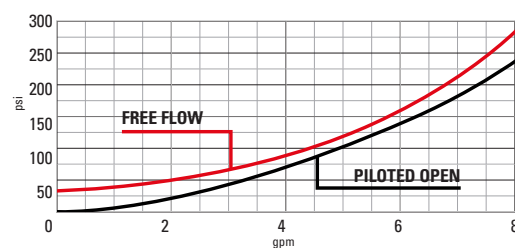
Technical Details

cavity	SAE08
capacity	30lpm (8gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	100 bar (1450 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size	24
valve installation torque	34-41 Nm (25-30 lbf ft)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	S0SAE08SN700000
seal kit (viton)	S0SAE08SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/37

- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA + sealed piston
D = VITON + sealed piston

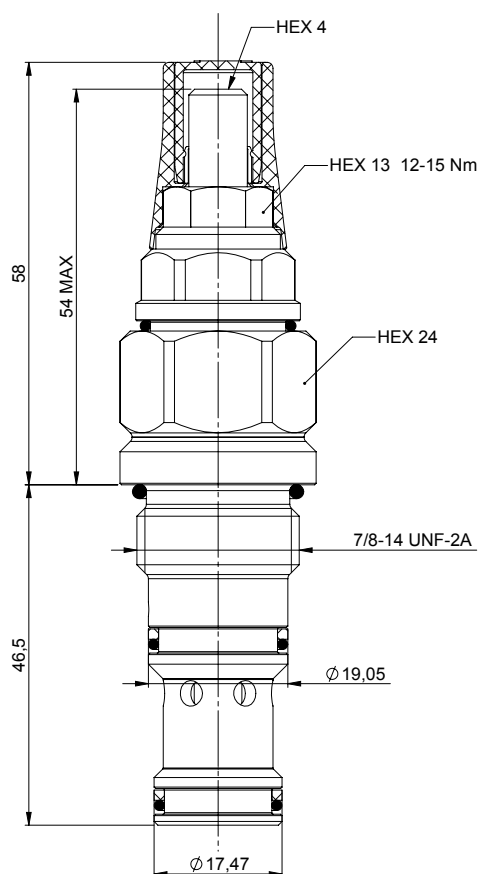
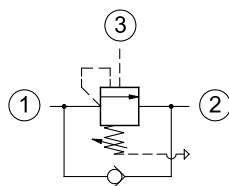
C | **0** | **2** | | | | | **0** | **4** | **0** | **8** | **0** | **0** | **A**

Setting (bar)

Spring
M = 100-210 (109 bar/turn)
D = 200-350 (136 bar/turn)

Load holding valves

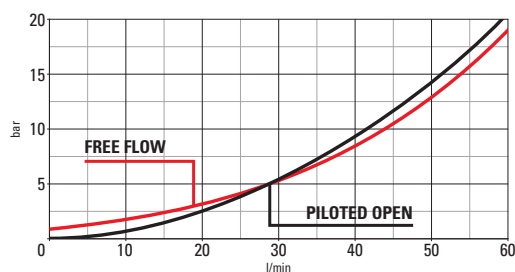
Ventilata SAE10 3:1 adjustable setting



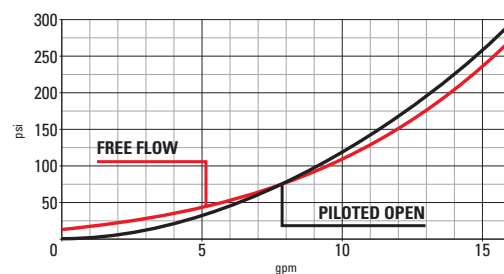
Technical Details

cavity	SAE10
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	206 bar (spring D) - 132 bar (spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0.190 Kg (0.42 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE10SN700000
seal kit (viton)	S0SAE10SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
A = BUNA SEALS
C = BUNA tamper resistant
G = VITON SEALS
H = VITON tamper resistant

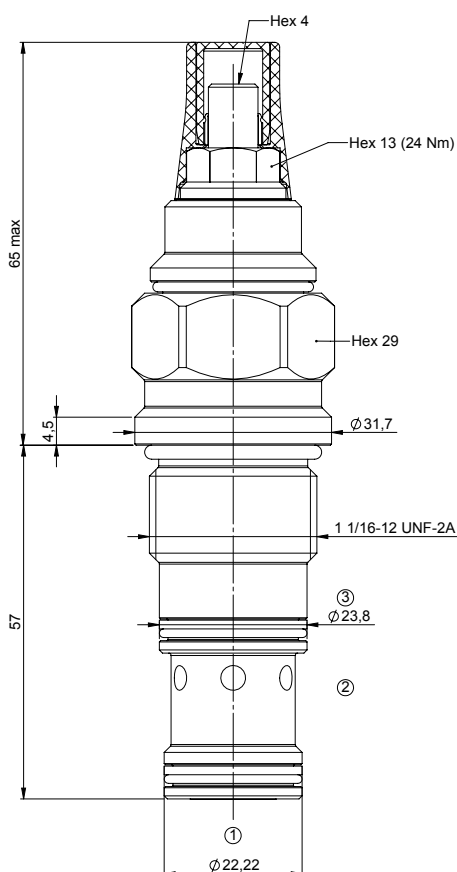
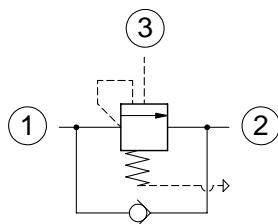
C | **0** | **2** | | | | | **0** | **3** | **1** | **0** | **0** | **0** | **A**

Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

Load holding valves

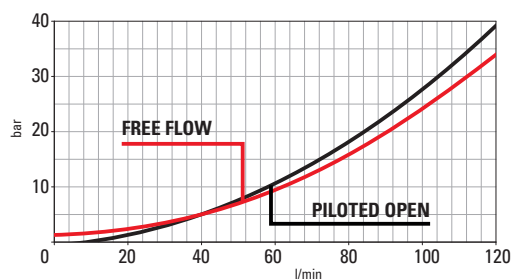
Ventilata SAE12 4:1 adjustable setting



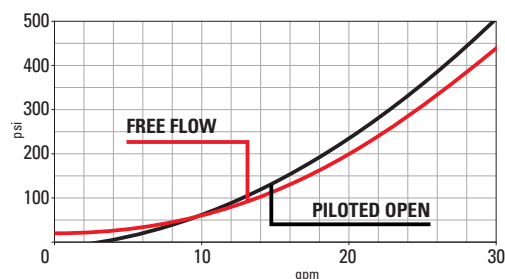
Technical Details

cavity	SAE12
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	47 bar (M spring) / 149 bar (D spring)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size	29
valve installation torque	81-95 Nm
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	22
valve weight	0.35 kg
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/37

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

C | 0 | 2 | | | | | 0 | 4 | 1 | 2 | 0 | 0 | A

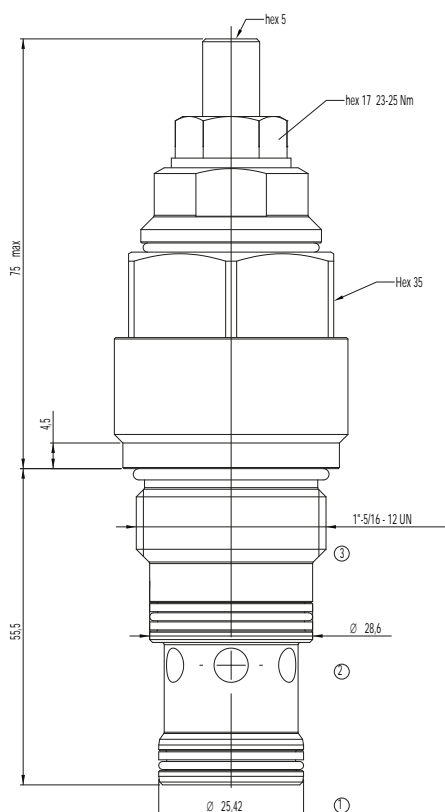
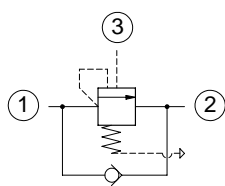
Setting (bar)

Spring

- M = 70-210 bar
- D = 140-350 bar

Load holding valves

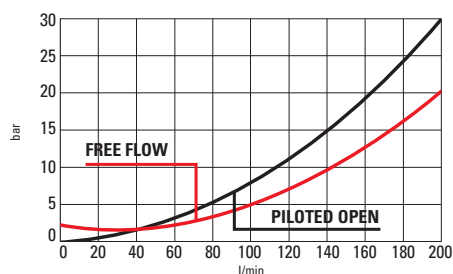
Ventilata SAE16 4:1 adjustable setting



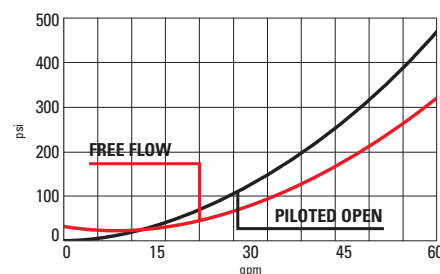
Technical Details

cavity	SAE16
capacity	200 lpm (50 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	41 bar (spring M) - 123 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	35
valve installation torque	108-122 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	25
valve weight	0.6 kg
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE16SN700000
seal kit (viton)	S0SAE16SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
C = BUNA tamper resistant
G = VITON SEALS
H = VITON tamper resistant

C | 0 | 2 | | | | | 0 | 4 | 1 | 6 | 0 | 0 | A

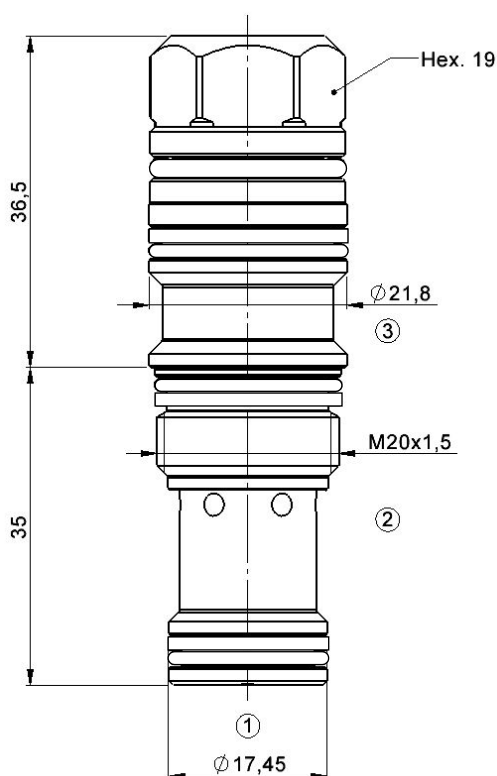
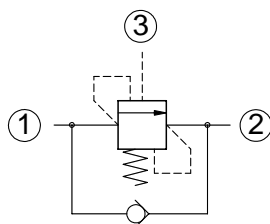
Setting (bar)

Spring

M = 70-210 bar
D = 140-350 bar

Load holding valves

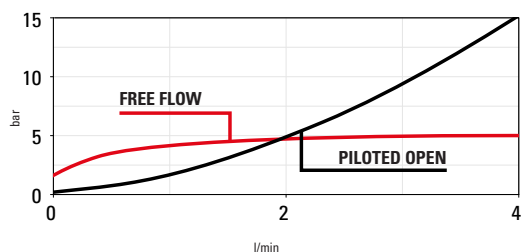
Ventilata Ristretta T11A 3:1 fixed setting **ULTRA FINE CONTROL**



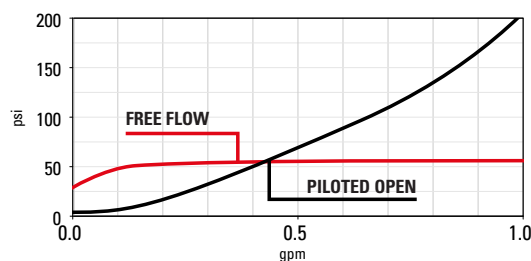
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

B = BUNA SEALS
D = VITON SEALS

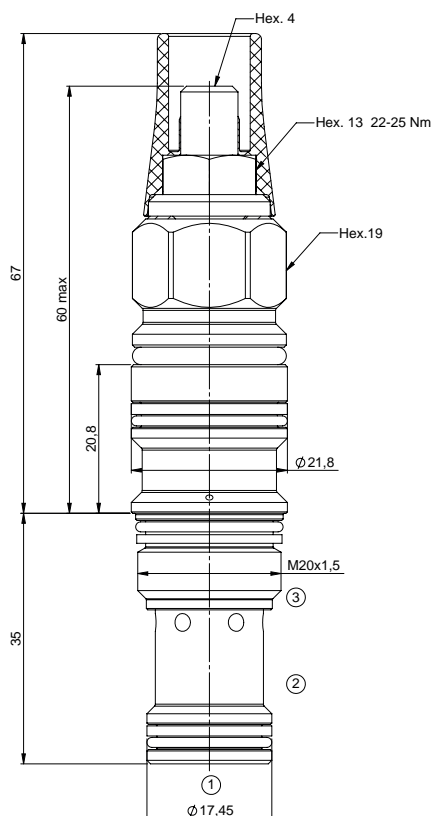
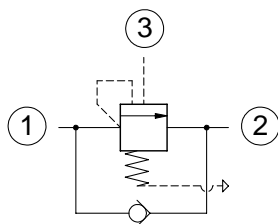
C | **D** | **6** | | | | | **0** | **3** | **1** | **1** | **0** | **0** | **A**

Spring Setting (bar)

T = 40-105 bar
M = 105-210 bar
D = 170-330 bar
S = 330-390 bar

Load holding valves

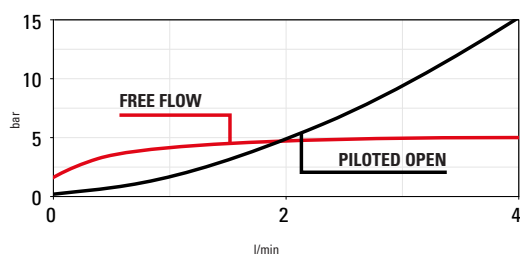
Ventilata Ristretta T11A 3:1 adj. setting **ULTRA FINE CONTROL**



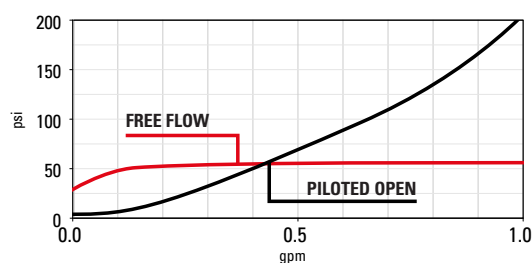
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure increase per turn	155 bar (spring M) - 27 bar (spring T) 151 bar (spring D) - 177 bar (spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

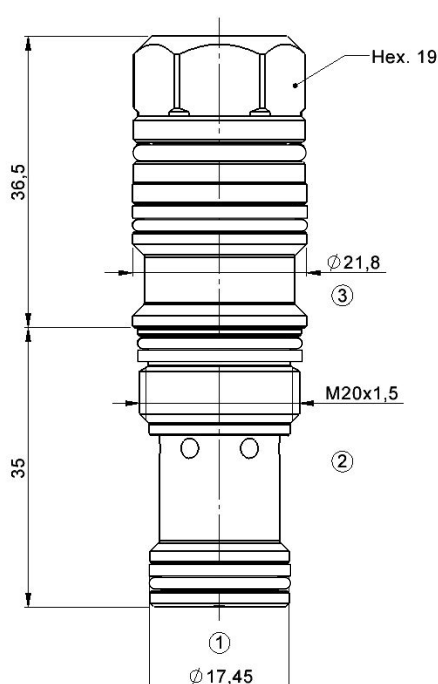
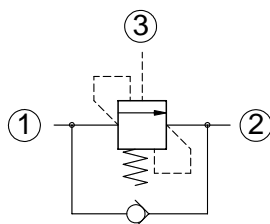
C | **D** | **6** | | | | | **0** | **3** | **1** | **1** | **0** | **0** | **A**

Spring Setting (bar)

- T** = 40-105 bar
- M** = 105-210 bar
- D** = 170-330 bar
- S** = 330-390 bar

Load holding valves

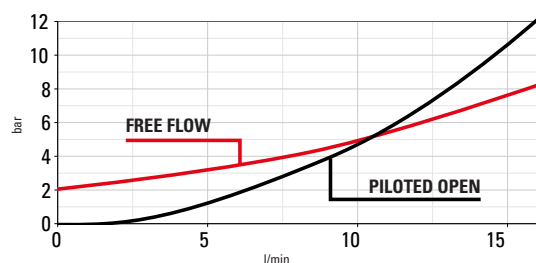
Ventilata Ristretta T11A 3:1 fixed setting **FINE CONTROL**



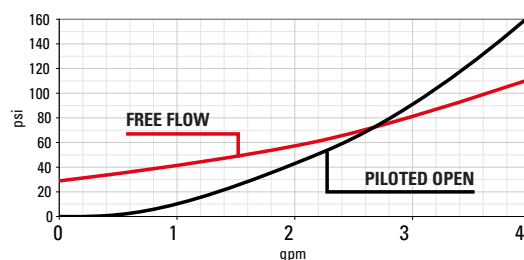
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Operations of all functions are independent of back-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

B = BUNA SEALS
D = VITON SEALS

C | **W** | **6** | | | | | **0** | **3** | **1** | **1** | **0** | **0** | **A**

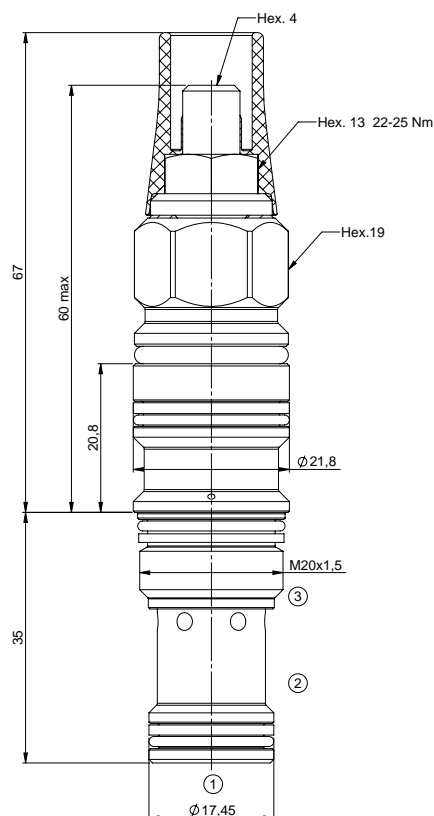
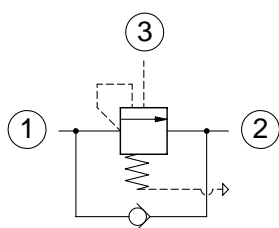
Spring

T = 40-105 bar
M = 105-210 bar
D = 170-330 bar
S = 330-390 bar

Setting (bar)

Load holding valves

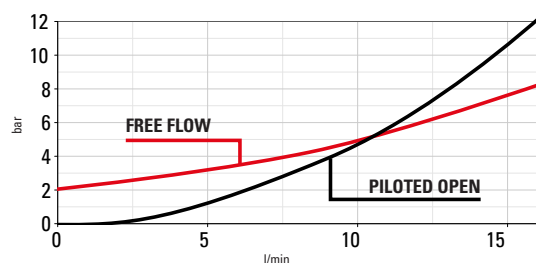
Ventilata Ristretta T11A 3:1 adjustable setting **FINE CONTROL**



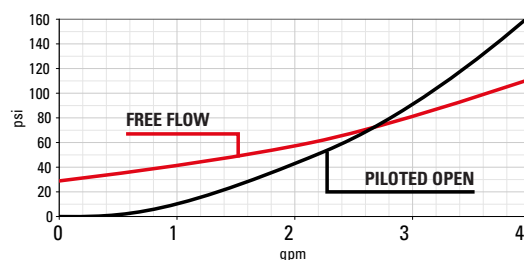
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure increase per turn	155 bar (spring M) - 27 bar (spring T) 151 bar (spring D) - 177 bar (spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

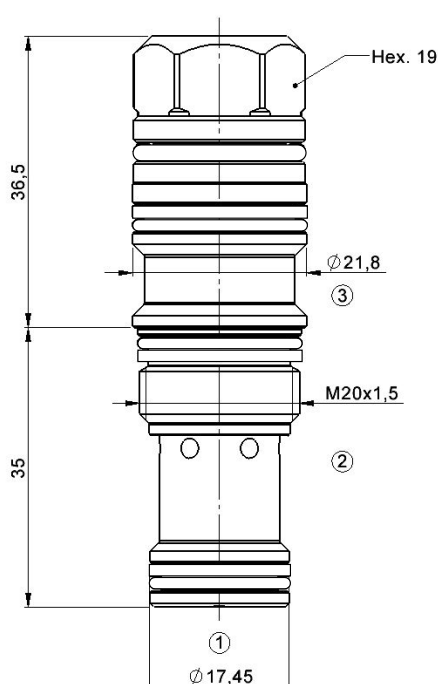
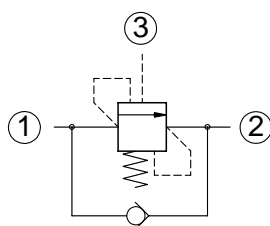
C | **W** | **6** | | | | | **0** | **3** | **1** | **1** | **0** | **0** | **A**

Spring Setting (bar)

- T** = 40-105 bar
- M** = 105-210 bar
- D** = 170-330 bar
- S** = 330-390 bar

Load holding valves

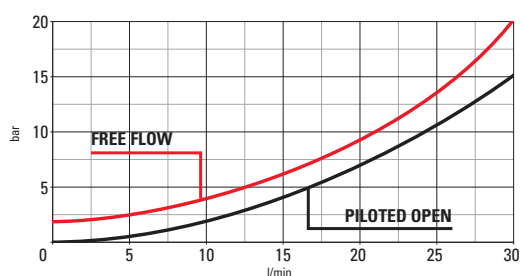
Ventilata Ristretta T11A 3:1 fixed setting



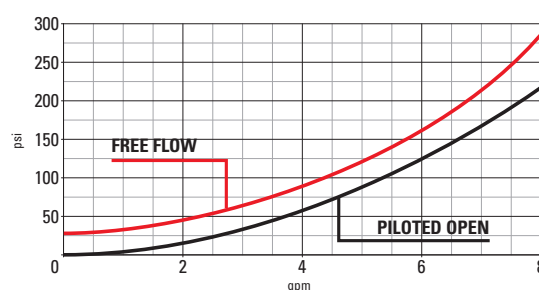
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Operations of all functions are independent of back-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

B = BUNA SEALS
D = VITON SEALS

C | 0 | 6 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

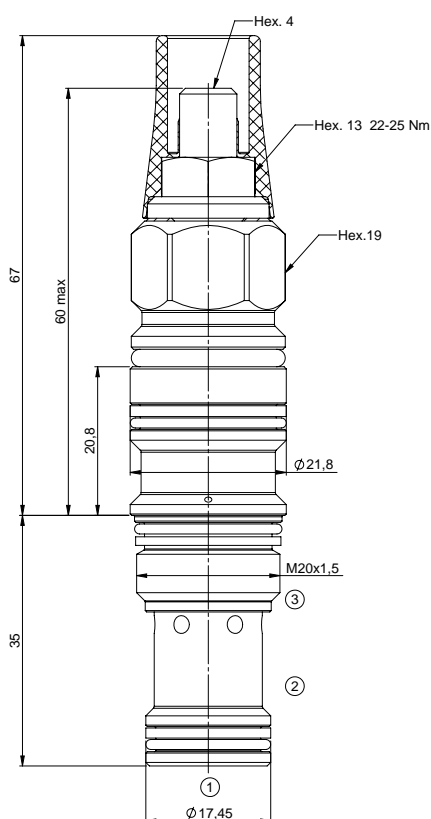
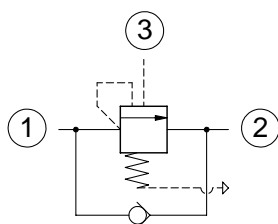
Spring

T = 40-105 bar
M = 105-210 bar
D = 170-330 bar
S = 330-390 bar

Setting (bar)

Load holding valves

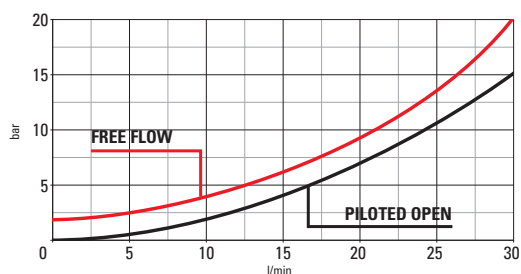
Ventilata Ristretta T11A 3:1 adjustable setting



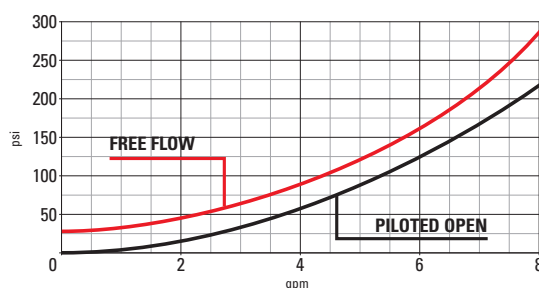
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	280 bar (4000 psi)
minimum setting	40 bar (580 psi)
pressure increase per turn	155 bar (spring M) - 27 bar (spring T) 151 bar (spring D) - 177 bar (spring S)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	230 bar (3350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | 6 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

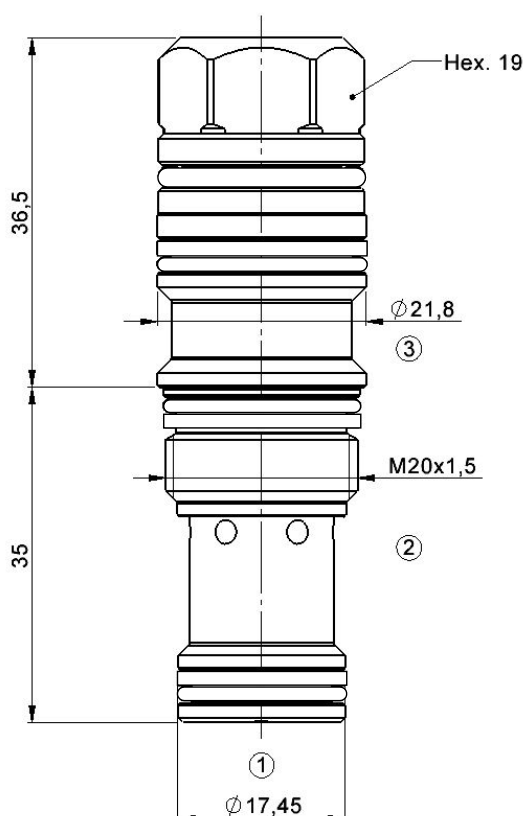
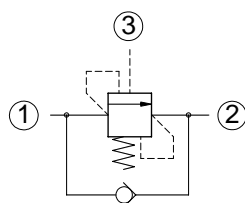
Spring

- T = 40-105 bar
- M = 105-210 bar
- D = 170-330 bar
- S = 330-390 bar

Setting (bar)

Load holding valves

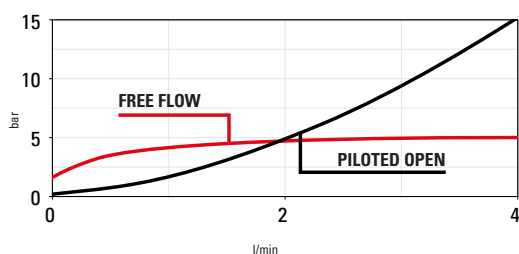
Ventilata Ristretta T11A 4:1 fixed setting **ULTRA FINE CONTROL**



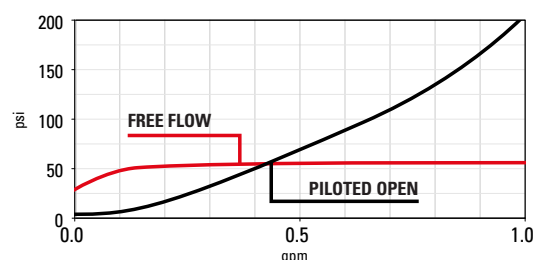
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Operations of all functions are independent of back-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

B = BUNA SEALS
D = VITON SEALS

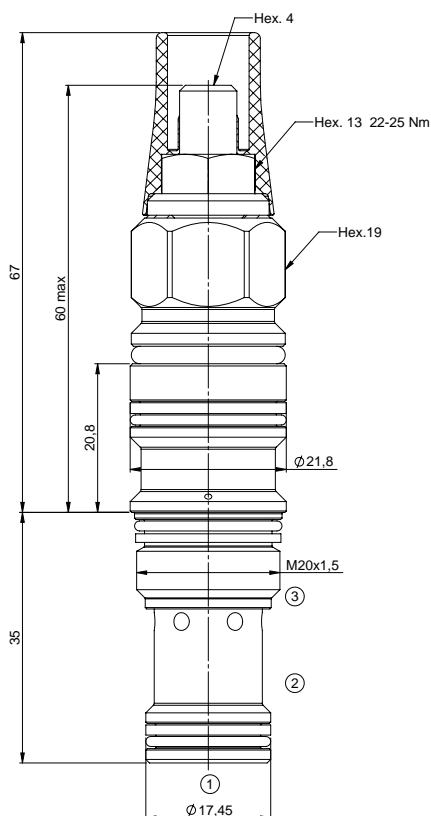
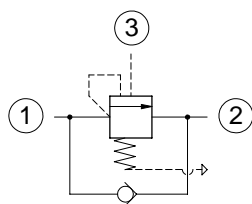
C | D | 6 | | | | | 0 | 4 | 1 | 1 | 0 | 0 | A

Spring Setting (bar)

T = 40-105 bar
M = 105-210 bar
D = 170-330 bar
S = 330-390 bar

Load holding valves

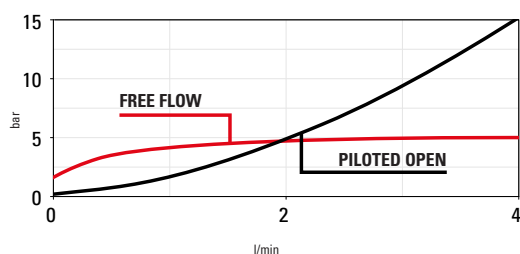
Ventilata Ristretta T11A 4:1 adj. setting **ULTRA FINE CONTROL**



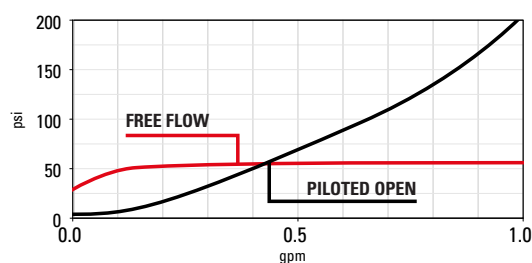
Technical Details

cavity	T11A
capacity	4 lpm (1 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure increase per turn	155 bar (spring M) - 27 bar (spring T) 151 bar (spring D) - 177 bar (spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

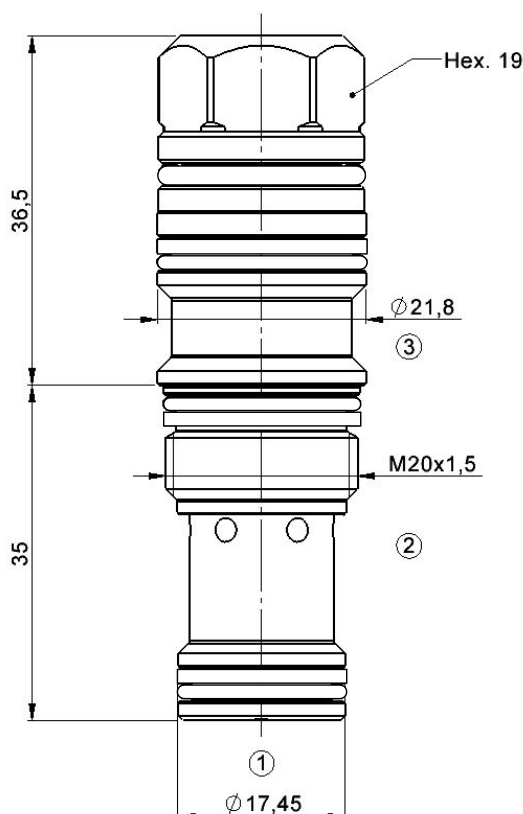
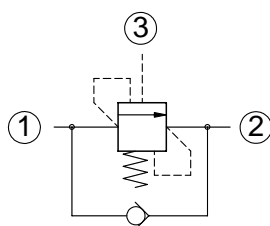
C | **D** | **6** | | | | | **0** | **4** | **1** | **1** | **0** | **0** | **A**

Spring

- T = 40-105 bar
- M = 105-210 bar
- D = 170-330 bar
- S = 330-390 bar

Load holding valves

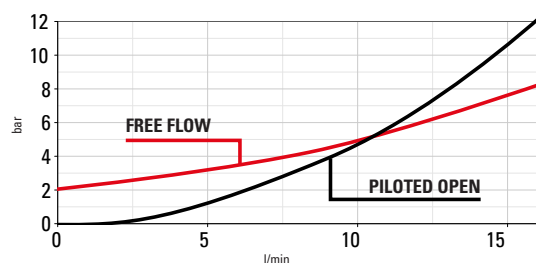
Ventilata Ristretta T11A 4:1 fixed setting **FINE CONTROL**



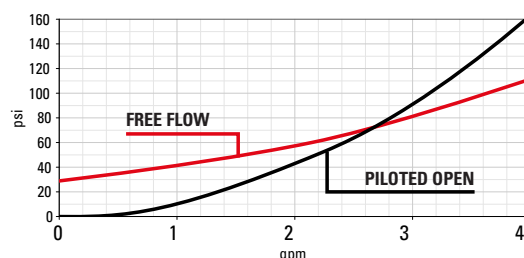
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

B = BUNA SEALS
D = VITON SEALS

C | W | 6 | | | | | 0 | 4 | 1 | 1 | 0 | 0 | A

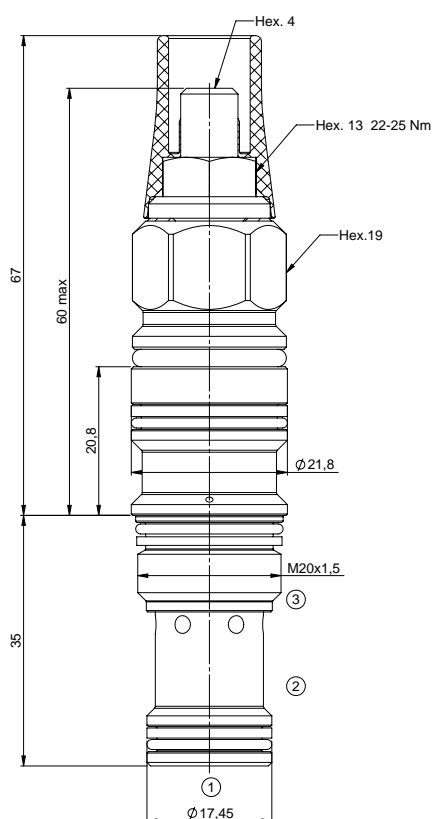
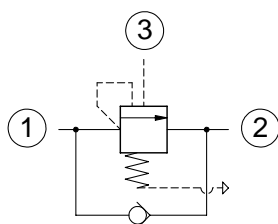
Spring

T = 40-105 bar
M = 105-210 bar
D = 170-330 bar
S = 330-390 bar

Setting (bar)

Load holding valves

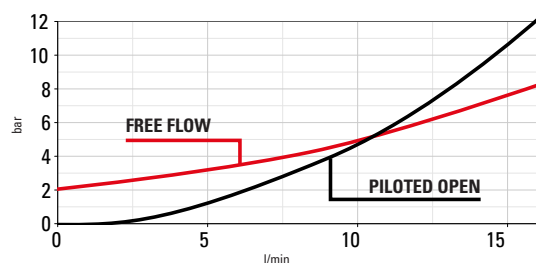
Ventilata Ristretta T11A 4:1 adjustable setting **FINE CONTROL**



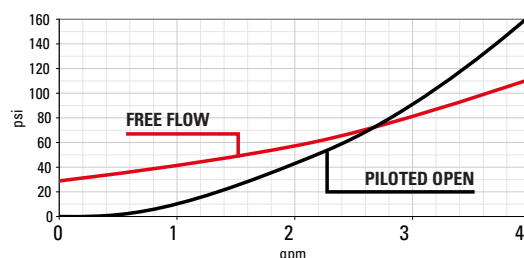
Technical Details

cavity	T11A
capacity	15 lpm (4 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure increase per turn	155 bar (spring M) - 27 bar (spring T) 151 bar (spring D) - 177 bar (spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

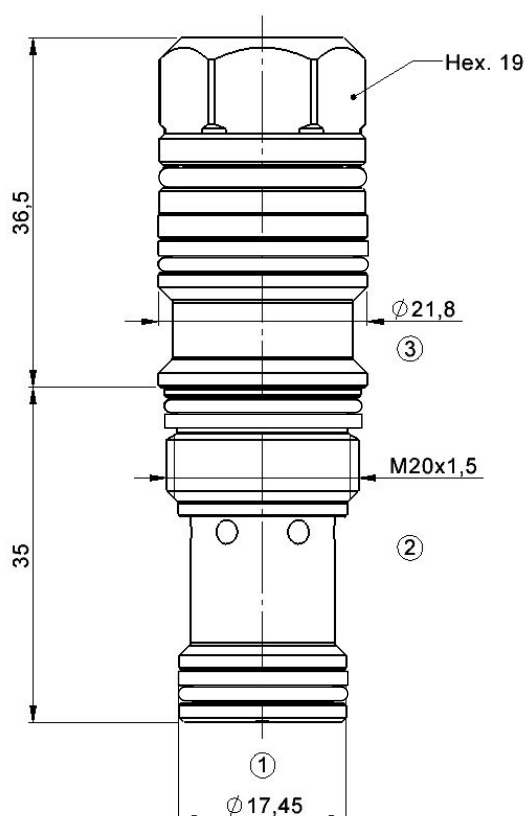
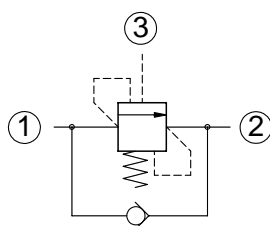
C | **W** | **6** | | | | | **0** | **4** | **1** | **1** | **0** | **0** | **A**

Spring Setting (bar)

- T** = 40-105 bar
- M** = 105-210 bar
- D** = 170-330 bar
- S** = 330-390 bar

Load holding valves

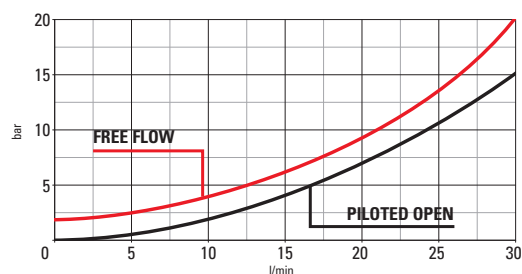
Ventilata Ristretta T11A 4:1 fixed setting



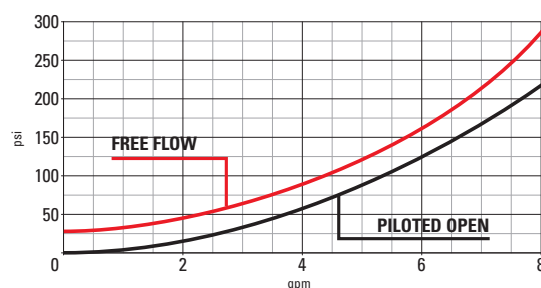
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	390 bar (5650 psi)
minimum setting	40 bar (580 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	300 bar (4350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

B = BUNA SEALS
D = VITON SEALS

C | 0 | 6 | | | | | 0 | 4 | 1 | 1 | 0 | 0 | A

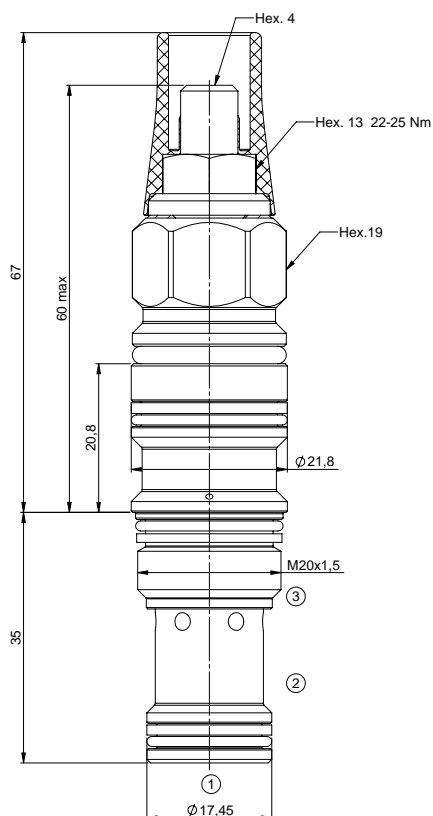
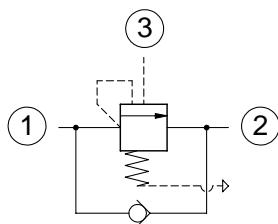
Spring

T = 40-105 bar
M = 105-210 bar
D = 170-330 bar
S = 330-390 bar

Setting (bar)

Load holding valves

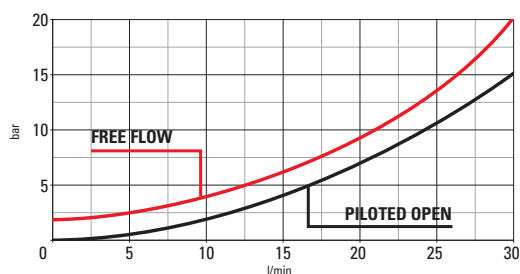
Ventilata Ristretta T11A 4:1 adjustable setting



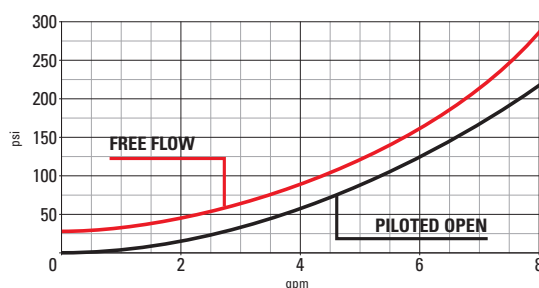
Technical Details

cavity	T11A
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	280 bar (4000 psi)
minimum setting	40 bar (580 psi)
pressure increase per turn	155 bar (2250 psi) spring M 27 bar (390 psi) spring T
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	230 bar (3350 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- 0 = BUNA SEALS
- 6 = BUNA tamper resistant
- 2 = VITON SEALS
- 7 = VITON tamper resistant

C | 0 | 6 | | | | | 0 | 4 | 1 | 1 | 0 | 0 | A

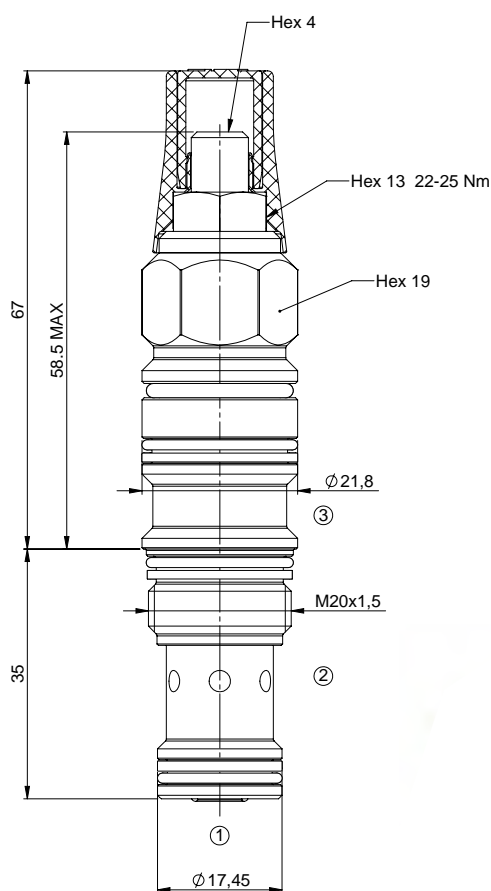
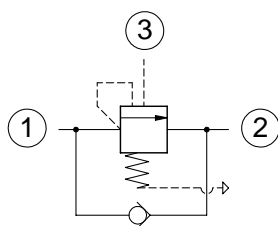
Spring

- T = 40-105 bar
- M = 105-210 bar
- D = 170-330 bar
- S = 330-390 bar

Setting (bar)

Load holding valves

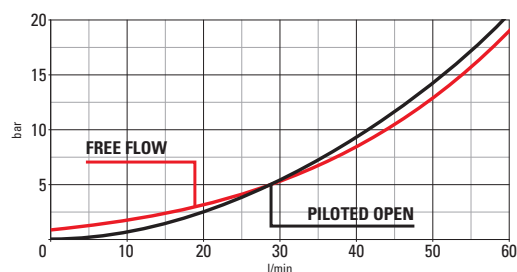
Ventilata T11A 1:1 adjustable setting



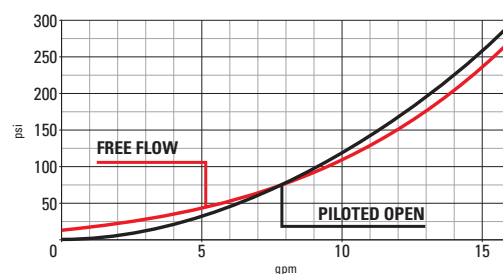
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	1:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	31 bar (spring T) - 118 bar (spring M) - 175 bar (spring D) - 204 bar (spring S)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

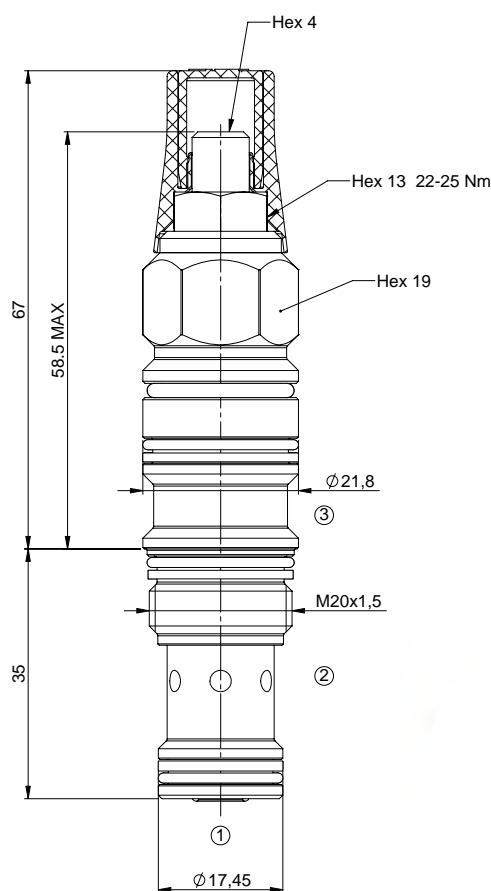
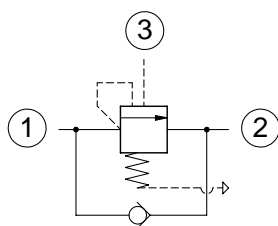
C | 0 | 2 | | | | | 0 | 1 | 1 | 1 | 0 | 0 | A

Spring Setting (bar)

T = 40-105 bar
M = 90-210 bar
D = 140-350 bar
S = 300-420 bar

Load holding valves

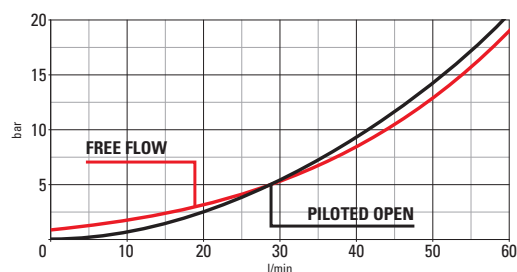
Ventilata T11A 2:1 adjustable setting



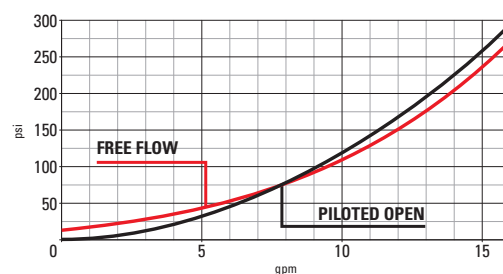
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	30 bar (spring T) - 115 bar (spring M) - 171 bar (spring D) - 200 bar (spring S)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

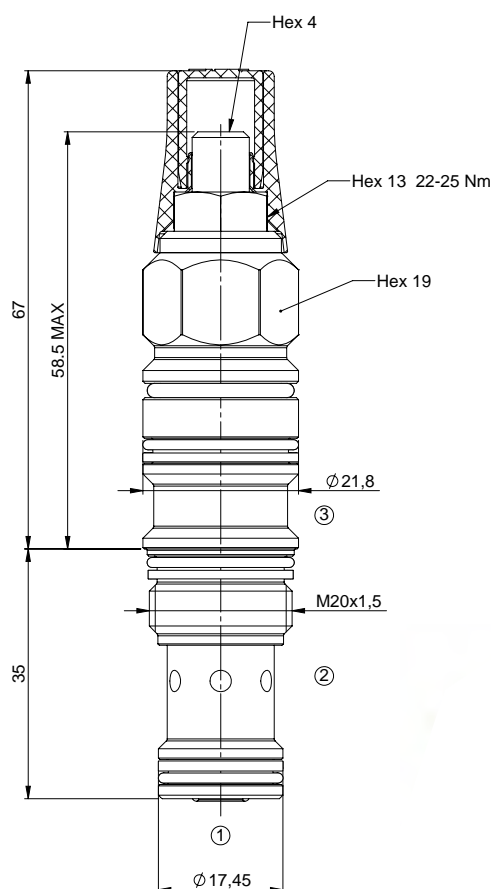
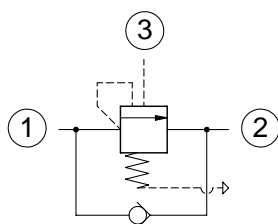
C | 0 | 2 | | | | | 0 | 2 | 1 | 1 | 0 | 0 | A

Spring Setting (bar)

Spring
T = 40-105 bar
M = 90-210 bar
D = 140-350 bar
S = 300-420 bar

Load holding valves

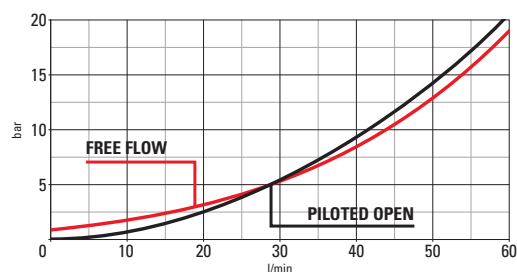
Ventilata T11A 3:1 adjustable setting



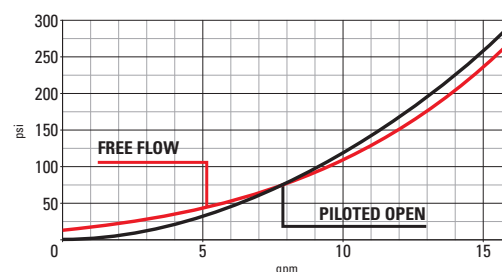
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	29 bar (spring M) - 166 bar (spring D) - 109 bar (spring T) - 193 bar (spring S)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

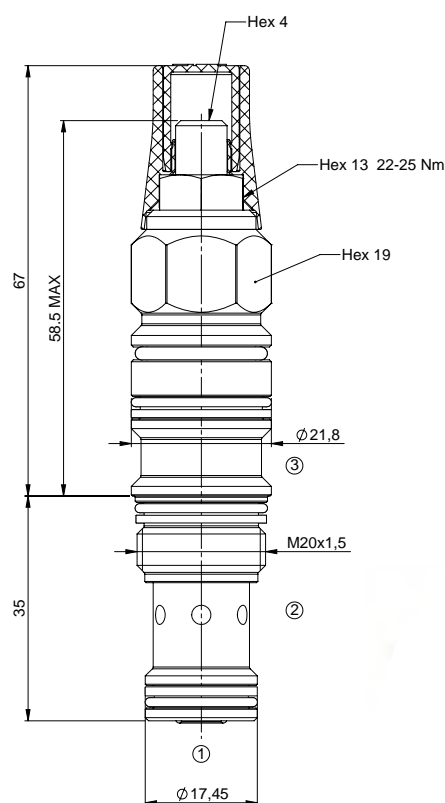
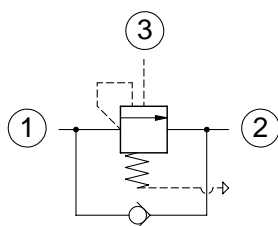
C | 0 | 2 | | | | | 0 | 3 | 1 | 1 | 0 | 0 | A

Spring Setting (bar)

Spring
T = 40-105 bar
M = 90-210 bar
D = 140-350 bar
S = 300-420 bar

Load holding valves

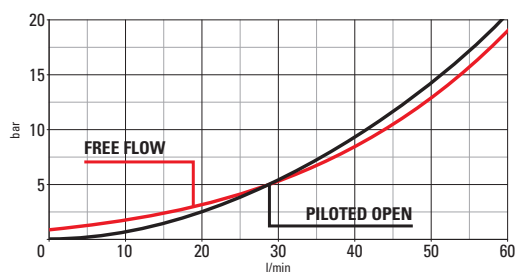
Ventilata T11A 5:1 adjustable setting



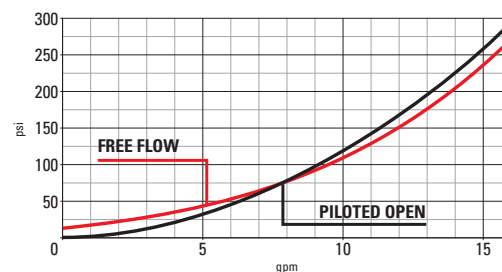
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	29 bar (spring T) - 166 bar (spring M) - 109 bar (spring D) - 193 bar (spring S)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

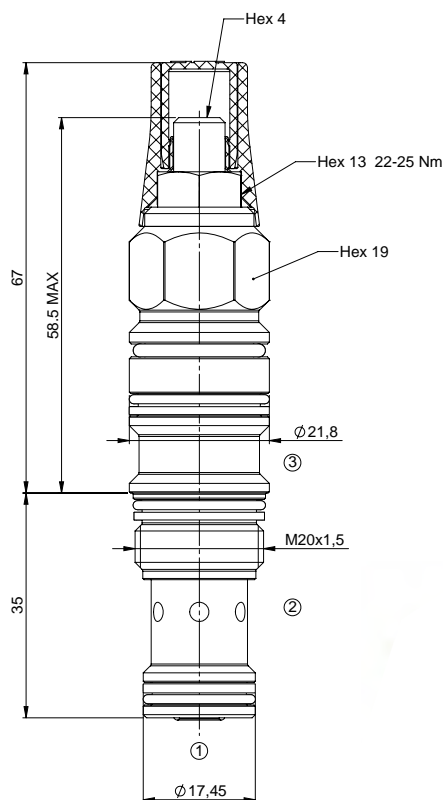
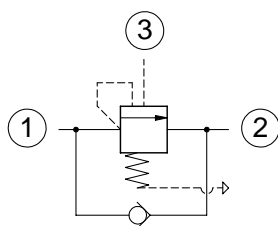
C | 0 | 2 | | | | | 0 | 5 | 1 | 1 | 0 | 0 | A

Spring Setting (bar)

T = 40-105 bar
M = 90-210 bar
D = 140-350 bar
S = 300-420 bar

Load holding valves

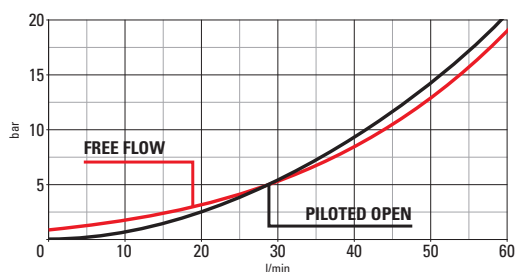
Ventilata T11A 8:1 adjustable setting



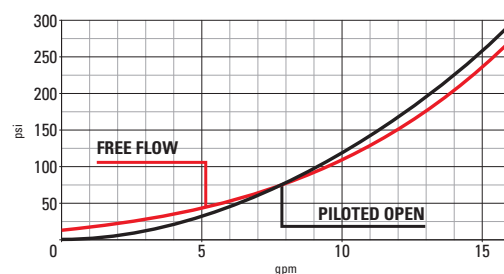
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	35 bar (spring T) - 131 bar (spring M) - 200 bar (spring D)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | 0 | 2 | | | | | 0 | 8 | 1 | 1 | 0 | 0 | A

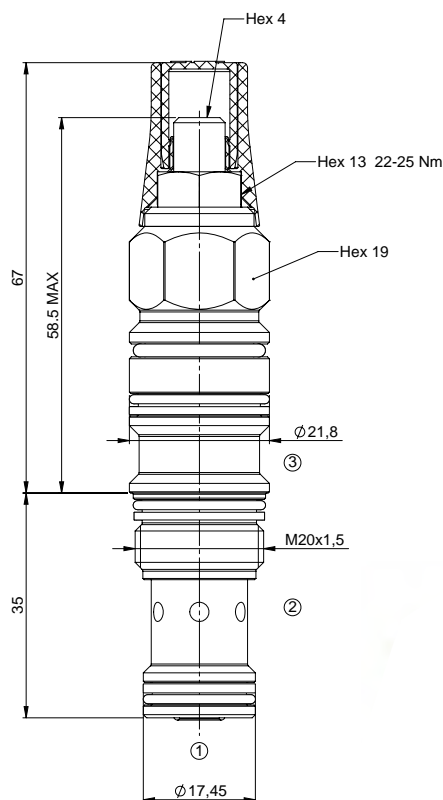
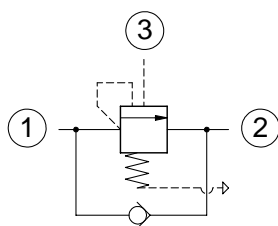
Setting (bar)

Spring

T = 40-120 bar
M = 110-250 bar
D = 200-420 bar

Load holding valves

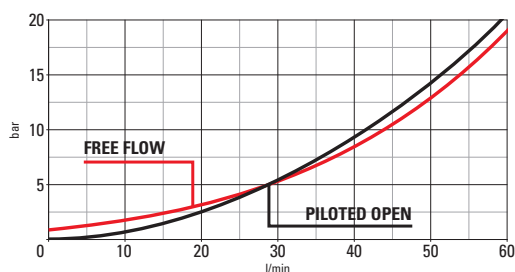
Ventilata T11A 10:1 adjustable setting



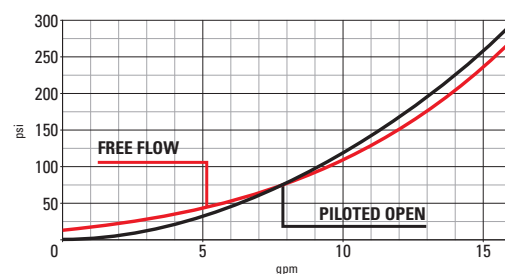
Technical Details

cavity	T11A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	42 bar (spring T) - 170 bar (spring M) - 252 bar (spring D)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

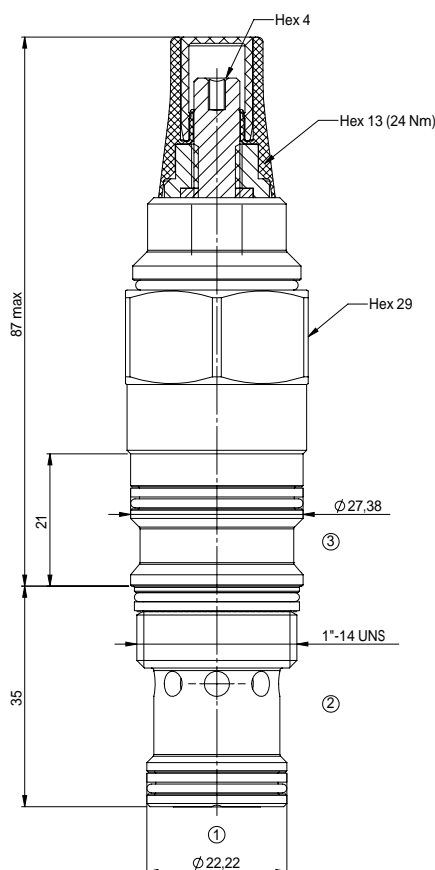
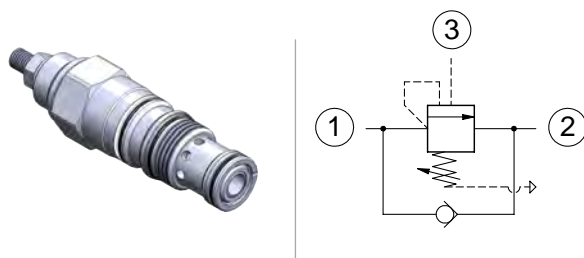
C | 0 | 2 | | | | | 0 | 10 | 1 | 1 | 0 | 0 | A

Setting (bar)

Spring

T = 40-120 bar
M = 110-250 bar
D = 200-420 bar

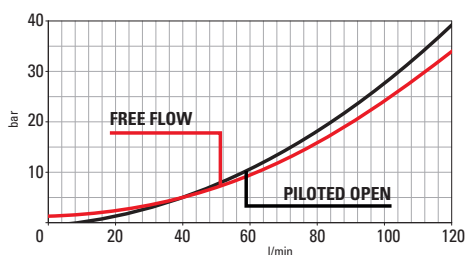
Ventilata T2A 2:1 adjustable setting



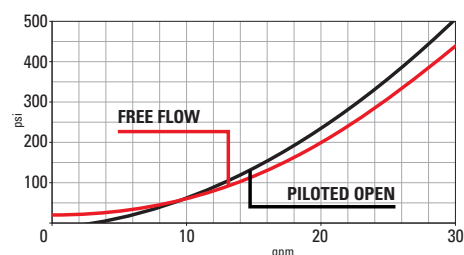
Technical Details

cavity	T2A
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	47 bar (M spring) / 149 bar (D spring)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0.35 kg
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + tamper resistant + sealed piston
H = VITON + tamper resistant + sealed piston

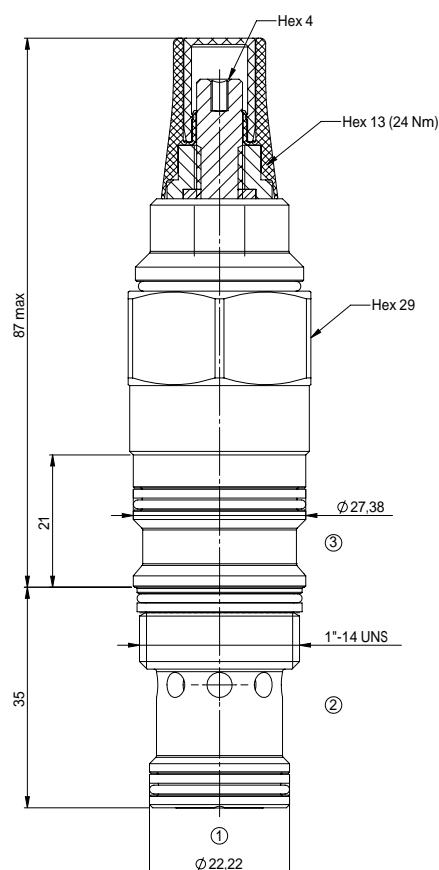
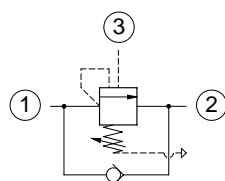
C | 0 | 2 | | | | | 0 | 2 | 0 | 2 | 0 | 0 | A

Setting (bar)
Setting (bar)

Spring

- M = 70-210 bar
D = 140-350 bar

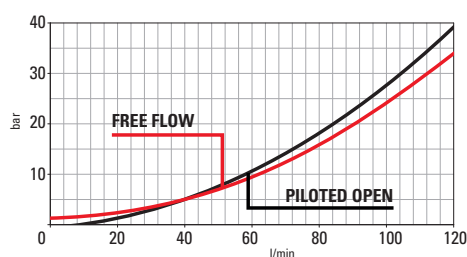
Ventilata T2A 8:1 adjustable setting



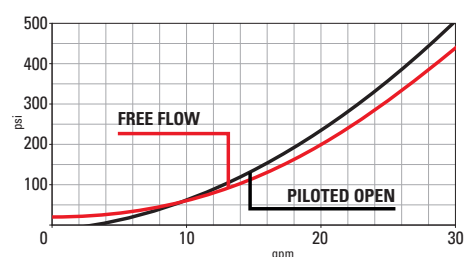
Technical Details

cavity	T2A
capacity	120 lpm
max operating pressure	350 bar (5000 psi)
pilot ratio	8 :1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	47 bar (M spring) / 96 bar (D spring)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	320 bar (4650 psi)
valve hex size (mm)	29
valve installation torque	60-70 Nm (44-52 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0.35 kg
external component surface treatment	zinc plating
seal kit (nbr)	S000T2ASN900000
seal kit (viton)	S000T2ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

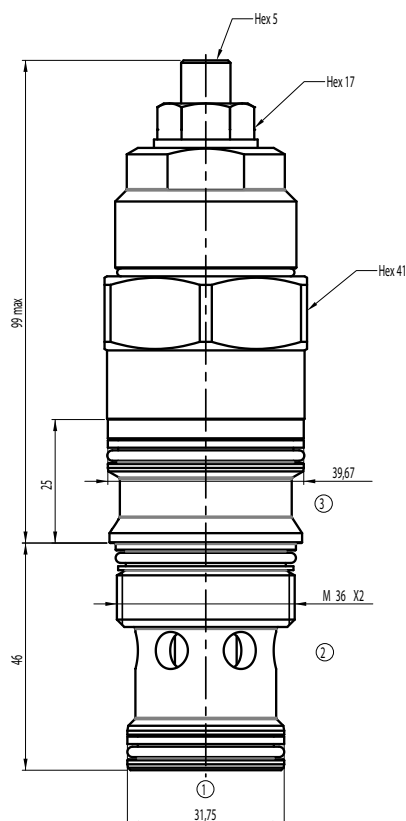
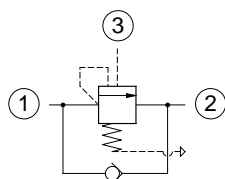
C | 0 | 2 | | | | | 1 | 0 | 0 | 8 | 0 | 0 | A

Setting (bar)
Setting (bar)

Spring

- M = 70-210 bar
- D = 140-420 bar

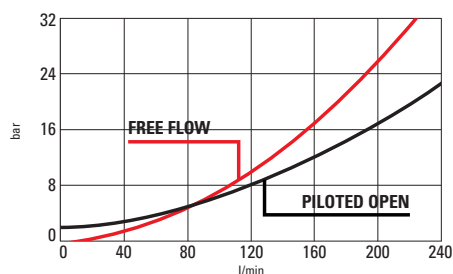
Ventilata T17A 4:1 adjustable setting



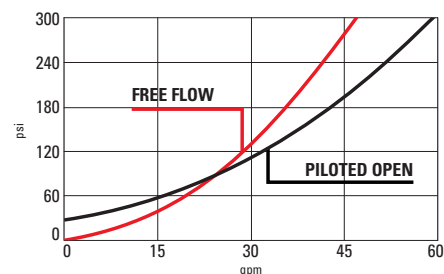
Technical Details

cavity	T17A
capacity	240 lpm (60 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	77 bar (spring M) / 119 bar (spring D)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	Vented
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	41
valve installation torque	205-220 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	25
valve weight	0.9 kg
external component surface treatment	zinc plating
seal kit (nbr)	S00T17ASN900000
seal kit (viton)	S00T17ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + tamper resistant + sealed piston
H = VITON + tamper resistant + sealed piston

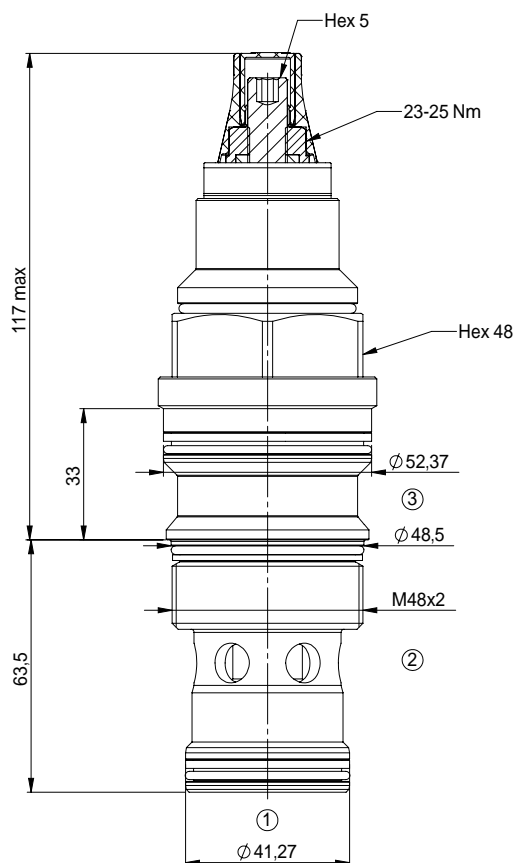
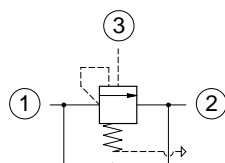
C | 0 | 2 | | | | | 0 | 4 | 1 | 7 | 0 | 0 | A

Setting (bar)
Setting (bar)

Spring

- M = 70-280 bar
D = 140-420 bar

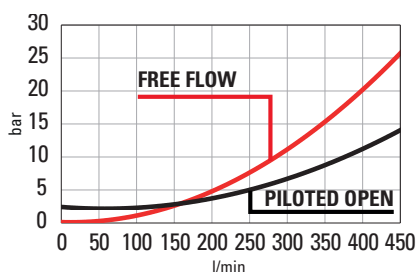
Ventilata T19A 5:1 adjustable setting



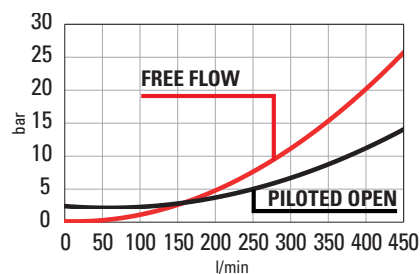
Technical Details

cavity	T19A
capacity	480 lpm (120 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	65 bar (M spring) / 107 bar (D spring)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	320 bar (4650 psi)
valve hex size (mm)	48
valve installation torque	475-510 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	25
valve weight	1.6 kg
external component surface treatment	zinc plating
seal kit (nbr)	S00T19ASN900000
seal kit (viton)	S00T19ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

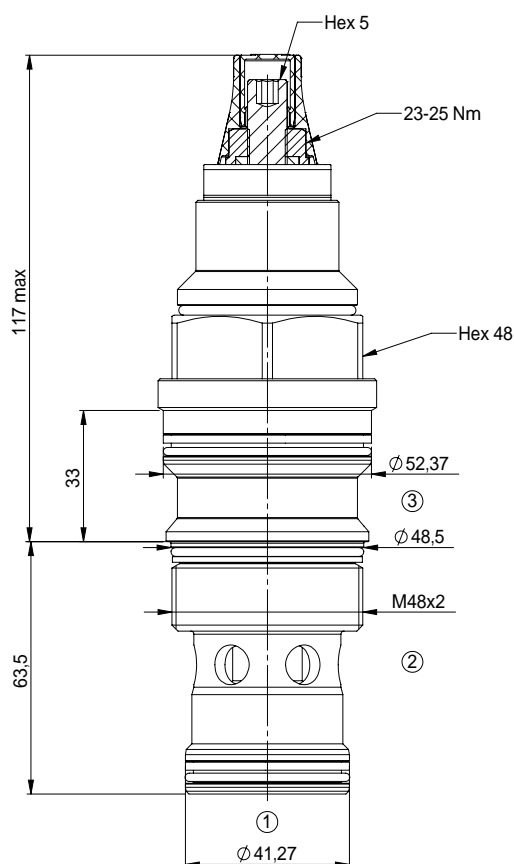
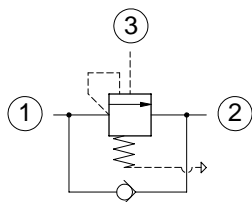
C | 0 | 2 | | | | | 0 | 5 | 1 | 9 | 0 | 0 | A

Setting (bar)
Setting (bar)

Spring

- M = 70-280 bar
- D = 140-350 bar

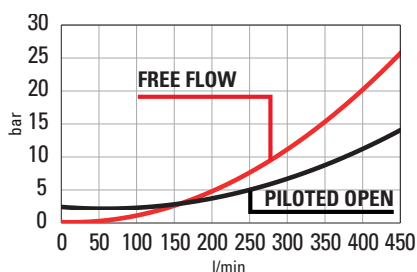
Ventilata T19A 8:1 adjustable setting



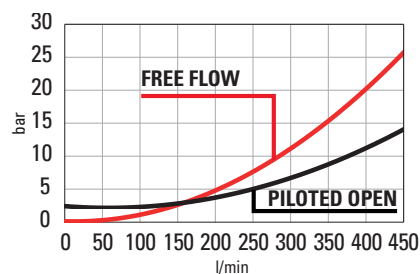
Technical Details

cavity	T19A
capacity	480 lpm (120 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	65 bar (M spring) / 107 bar (D spring)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	320 bar (4650 psi)
valve hex size (mm)	48
valve installation torque	475-510 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	25
valve weight	1.6 kg
external component surface treatment	zinc plating
seal kit (nbr)	S00T19ASN900000
seal kit (viton)	S00T19ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



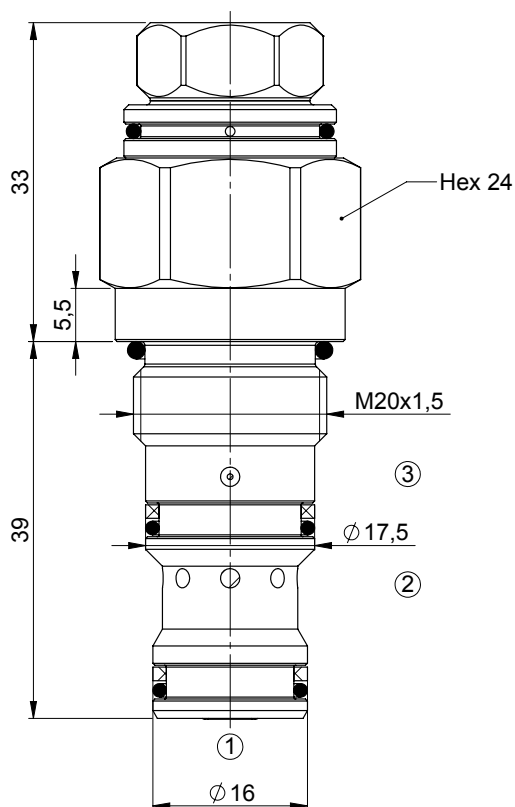
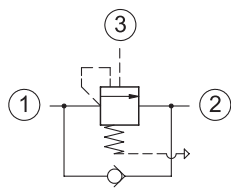
Seals and anti-tamper options
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + tamper resistant + sealed piston
H = VITON + tamper resistant + sealed piston

C | **0** | **2** | | | | | **0** | **8** | **1** | **9** | **0** | **0** | **A**

Setting (bar)
Setting (bar)

Spring
M = 70-280 bar
D = 140-350 bar

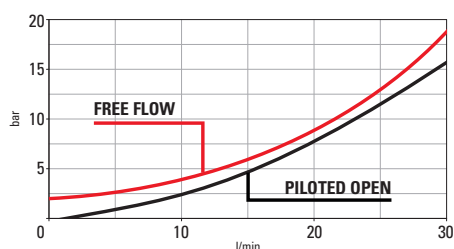
Ventilata i08 4:1 fixed setting



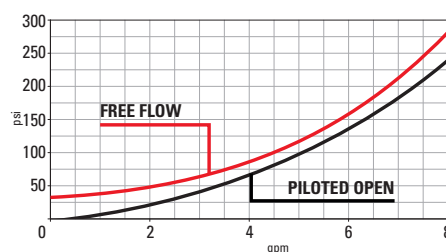
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	50 bar (1000 psi)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOA6610SN700000
seal kit (viton)	SOA6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
B = BUNA SEALS
D = BUNA tamper resistant

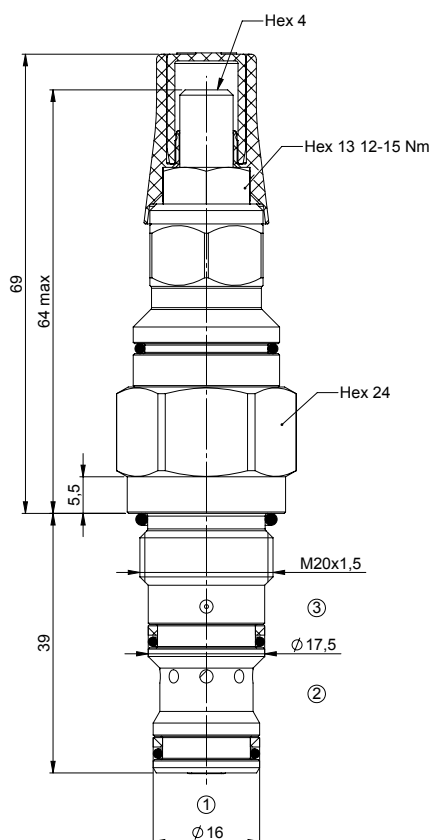
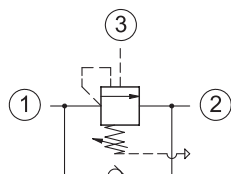
C | 0 | 2

Setting (bar)
Setting (bar)

Spring
T = 50-150 bar
M = 100-210 bar
D = 200-350 bar

0 | 4 | 6 | 6 | 0 | 0 | A

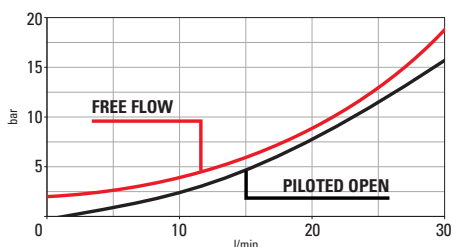
Ventilata i08 4:1 adjustable setting



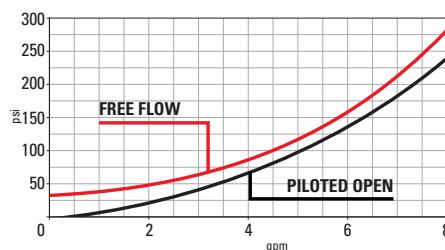
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	50 bar (1000 psi)
pressure increase per turn	136 bar (spring D) - 109 bar (spring M) - 73 bar (spring T)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	24
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0A6610SN700000
seal kit (viton)	S0A6610SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



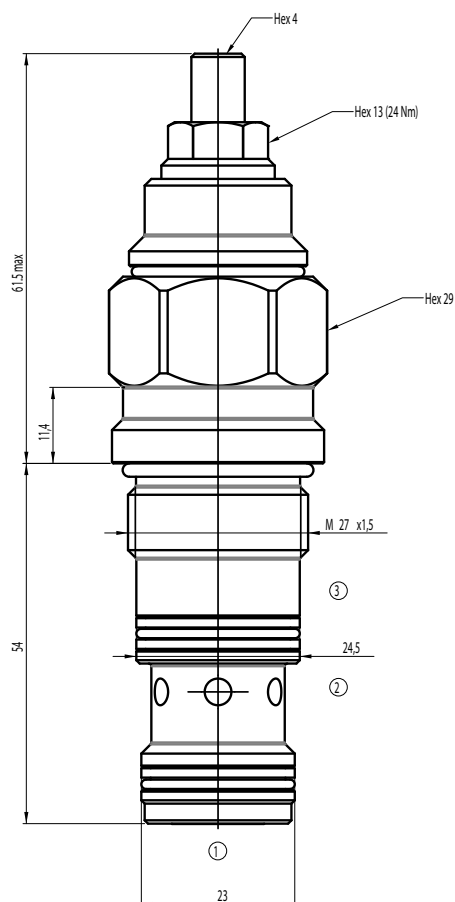
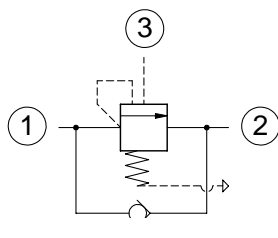
Seals
A = BUNA SEALS
C = BUNA tamper resistant
G = VITON SEALS
H = VITON tamper resistant

C | 0 | 2 | | | | | 0 | 4 | 6 | 6 | 0 | 0 | A

Setting (bar)
Setting (bar)

Spring
T = 50-150 bar
M = 100-210 bar
D = 200-350 bar

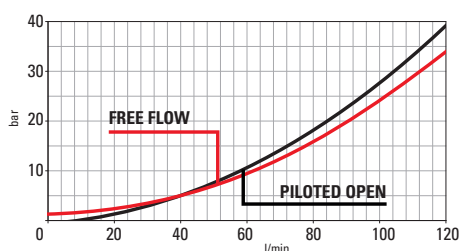
Ventilata i12 4:1 adjustable setting



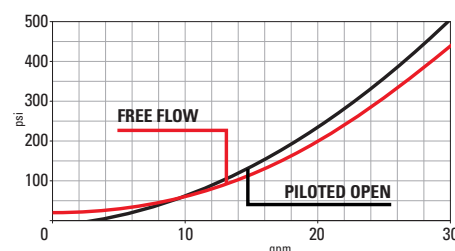
Technical Details

cavity	IH A12336
capacity	120 lpm (30 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	156 bar (spring D) - 49 bar (spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	29
valve installation torque	60 Nm (44 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	18-20 Nm (13-15 lbf ft)
valve weight	0.40 kg (0.88 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SA12336SN700000
seal kit (viton)	SA12336SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals
A = BUNA + sealed piston
C = VITON + sealed piston
G = BUNA + piombatura + sealed piston
H = VITON + piombatura + sealed piston

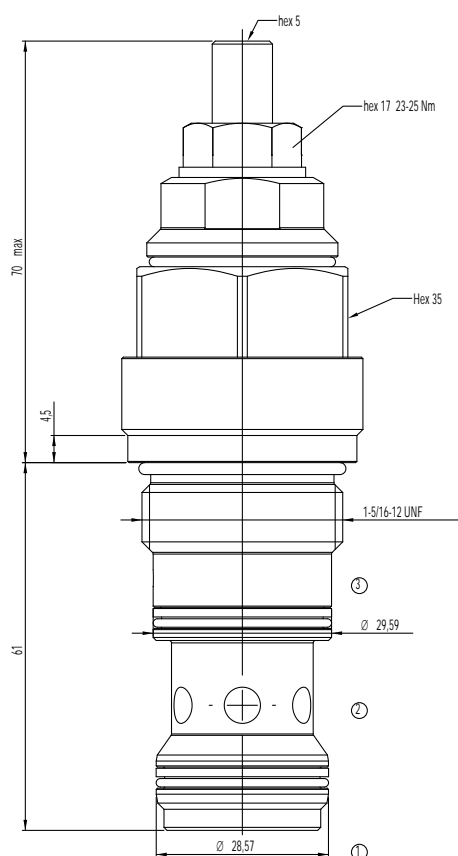
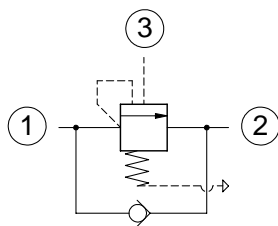
C | **0** | **2**

Setting (bar)
Setting (bar)

Spring
M = 70-210 bar
D = 140-350 bar

| **0** | **4** | **3** | **6** | **0** | **0** | **A**

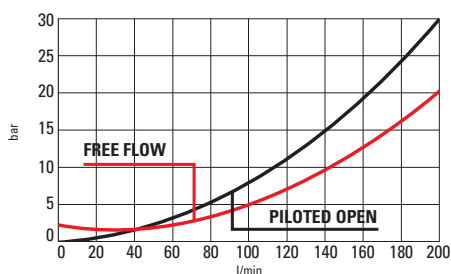
Ventilata i16 4:1 adjustable setting



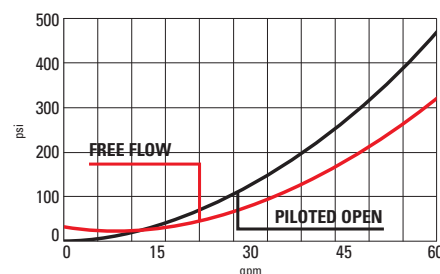
Technical Details

cavity	IH A877
capacity	200 lpm (50 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	140
pressure increase per turn	66 bar (spring M) / 123 bar (spring D)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>85%
Maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve hex size (mm)	35
valve installation torque	100-110 Nm
adjustment screw internal hex size (mm)	5
seal-lock hex size (mm)	17
seal-lock torque	25
valve weight	0.6 kg (1.3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00877ASN900000
seal kit (viton)	S00877ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

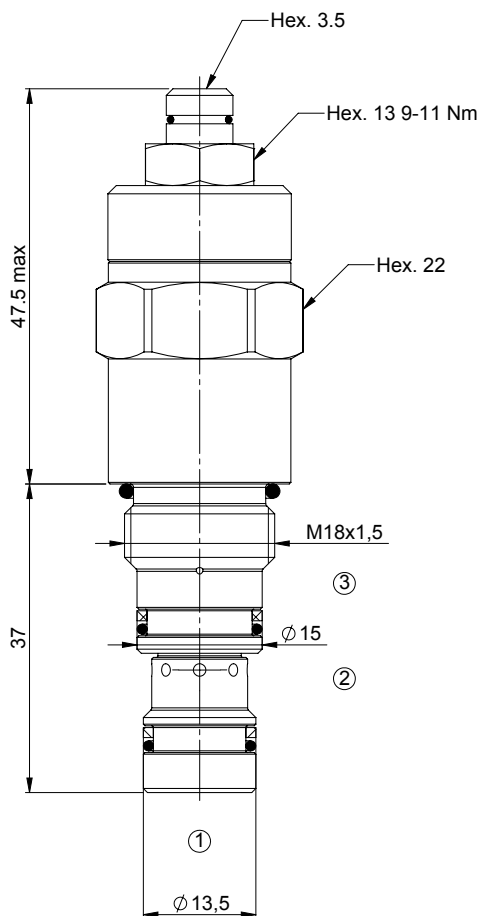
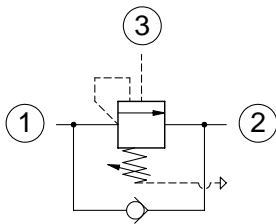
C | 0 | 2 | | | | | 0 | 4 | 8 | 7 | 0 | 0 | A

Setting (bar)
Setting (bar)

Spring

- M = 70-210 bar
- D = 140-350 bar

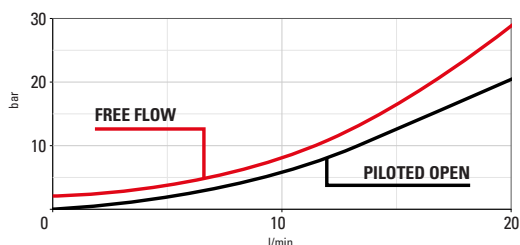
Ventilata 07P 15:1 SP adjustable setting



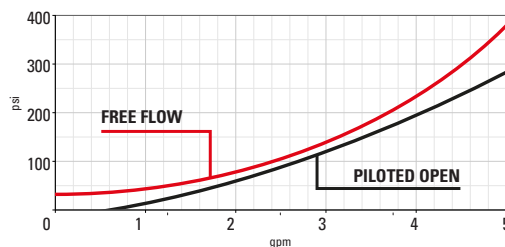
Technical Details

cavity	07P
capacity	15 lpm (5gpm)
max operating pressure	350 (5000 psi)
pilot ratio	15:1
maximum setting	380 bar (5500 psi)
minimum setting	210 bar (3000 psi)
pressure increase per turn	140 bar (2030 psi)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>90%
Maximum recommended load pressure at maximum setting	320 bar (4680 psi)
valve hex size (mm)	22
valve installation torque	30 Nm
adjustment screw internal hex size (mm)	3,5
seal-lock hex size (mm)	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0,130 kg (0,29 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000053SN700000
seal kit (viton)	S000053SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back-pressure at port 2, thanks to the fact that the spring chamber is vented to atmosphere.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals between all ports
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



Seals and anti-tamper options

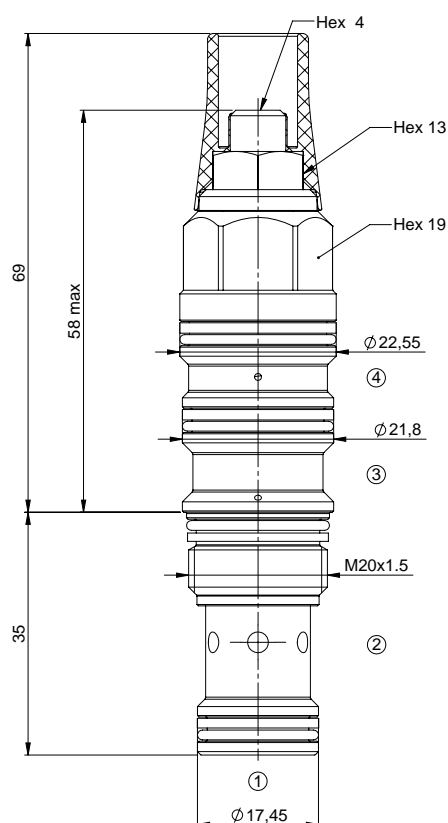
- A = BUNA + sealed piston
- C = VITON + sealed piston
- G = BUNA + tamper resistant + sealed piston
- H = VITON + tamper resistant + sealed piston

C | 0 | 2 | | | | | 1 | 5 | 5 | 3 | 0 | 0 | A

Setting (bar)
Setting (bar)

Spring
D = 210-380 bar

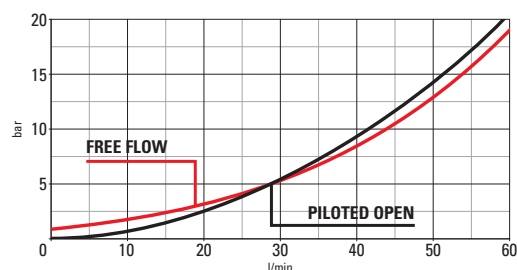
Drenata T21A 1:1 adjustable setting



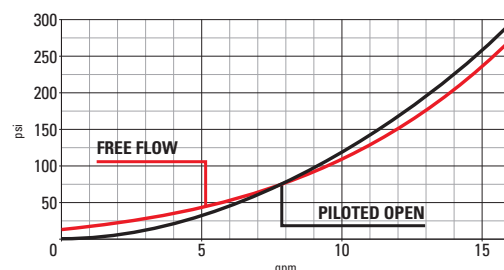
Technical Details

cavity	T21A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	1:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	31 bar (spring T) - 118 bar (spring M) - 175 bar (spring D) - 204 bar (spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	drained
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000D
seal kit (viton)	S00T11ASV90000D
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is drained to port 4.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting
- Port 4 is intended to be connected to a tank line only



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | 0 | 3

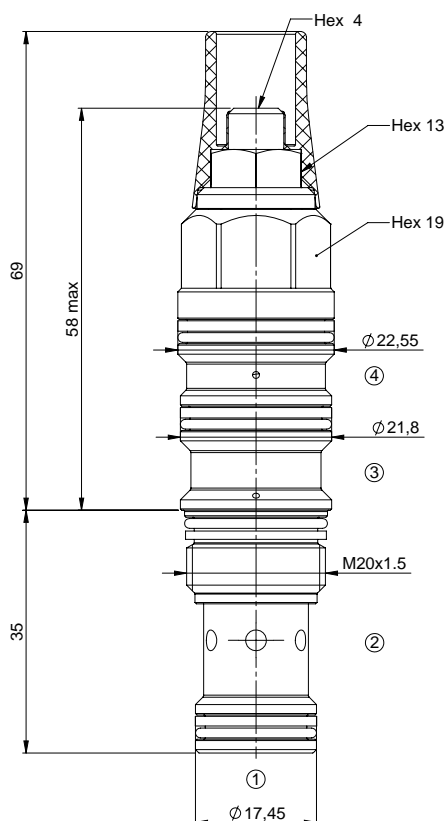
0 | 1 | 2 | 1 | 0 | 0 | A

Setting (bar)
Setting (bar)

Spring

T = 40-105 bar
M = 90-210 bar
D = 140-350 bar
S = 300-420 bar

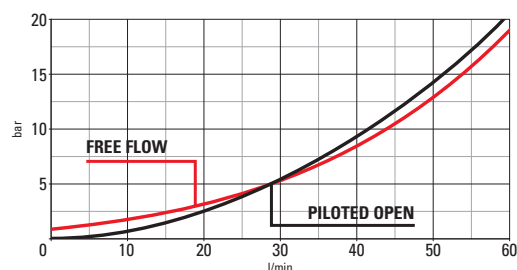
Drenata T21A 2:1 adjustable setting



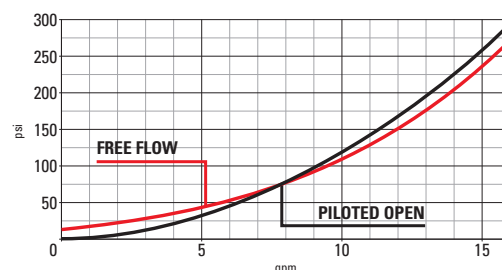
Technical Details

cavity	T21A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	2:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	30 bar (spring T) - 115 bar (spring M) - 171 bar (spring D) - 200 bar (spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	drained
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000D
seal kit (viton)	S00T11ASV90000D
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is drained to port 4.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting
- Port 4 is intended to be connected to a tank line only



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | 0 | 3

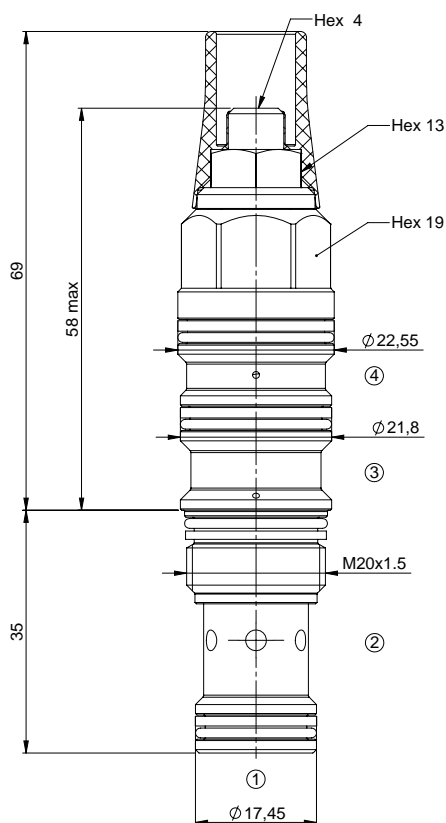
0 | 2 | 2 | 1 | 0 | 0 | A

Setting (bar)
Setting (bar)

Spring

T = 40-105 bar
M = 90-210 bar
D = 140-350 bar
S = 300-420 bar

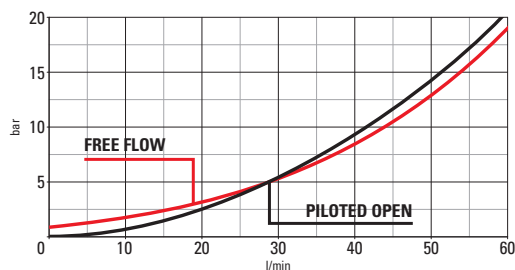
Drenata T21A 3:1 adjustable setting



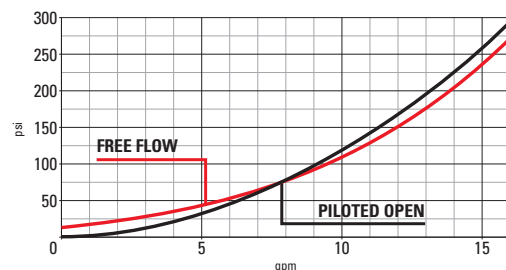
Technical Details

cavity	T21A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	109 bar (spring M) 166 bar (spring D)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	drained
reseal	>85%
maximum recommended load pressure at maximum setting	270 bar (3900 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000D
seal kit (viton)	S00T11ASV90000D
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is drained to port 4.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting
- Port 4 is intended to be connected to a tank line only



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | 0 | 3

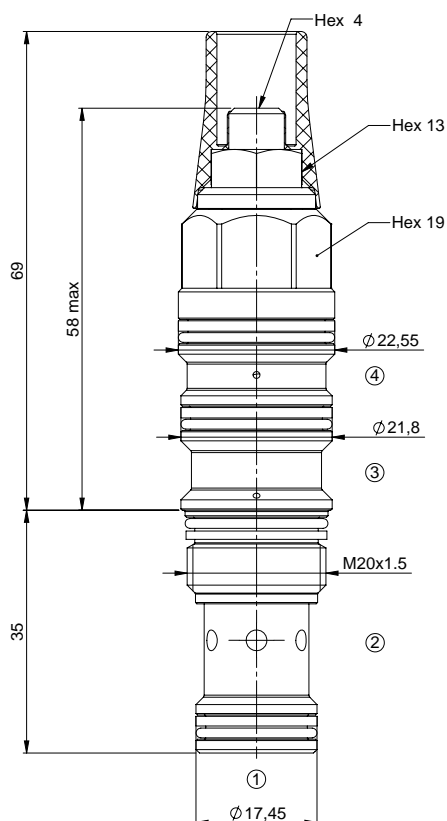
Setting (bar)
Setting (bar)

0 | 3 | 2 | 1 | 0 | 0 | A

Spring

M = 70-210 bar
D = 140-350 bar

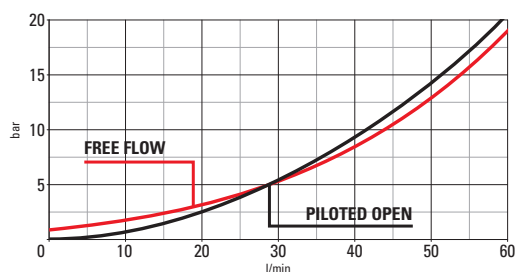
Drenata T21A 5:1 adjustable setting



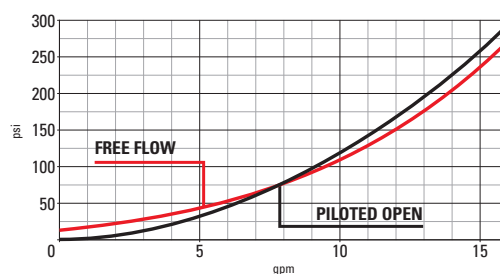
Technical Details

cavity	T21A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	5:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	109 bar (spring M) - 166 bar (spring D)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	drained
reseal	>85%
maximum recommended load pressure at maximum setting	320 bar (4600 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is drained to port 4.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting
- Port 4 is intended to be connected to a tank line only



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | 0 | 3

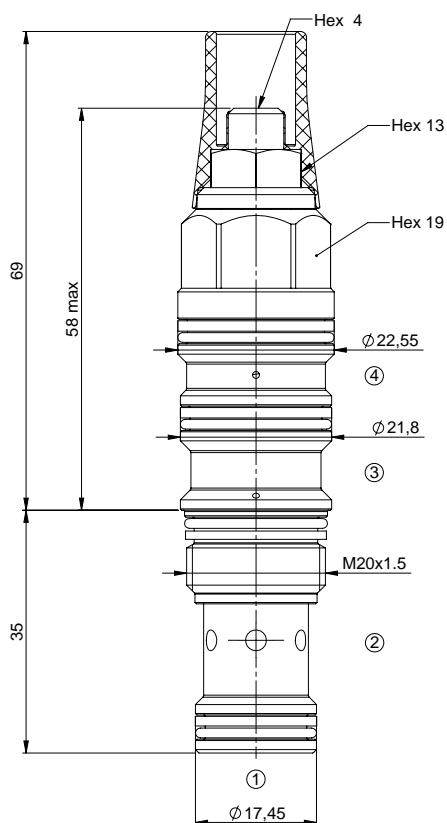
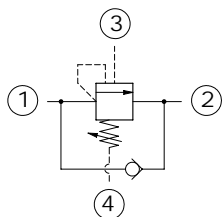
Setting (bar)
Setting (bar)

Spring

M = 70-210 bar
D = 140-350 bar

0 | 5 | 2 | 1 | 0 | 0 | A

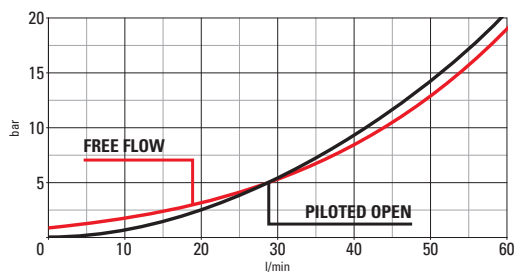
Drenata T21A 8:1 adjustable setting



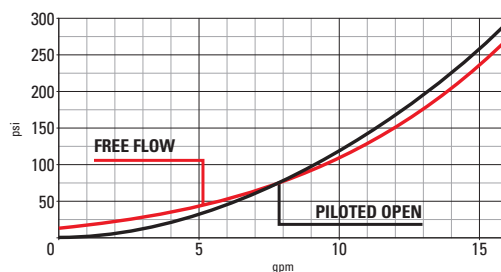
Technical Details

cavity	T21A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	131 bar (spring M) - 200 bar (spring D)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	drained
reseal	>85%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000V
seal kit (viton)	S00T11ASV90000V
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is drained to port 4.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting
- Port 4 is intended to be connected to a tank line only



Performance curves



Seals and anti-tamper options

- A = BUNA SEALS
- G = BUNA tamper resistant
- C = VITON SEALS
- H = VITON tamper resistant

C | 0 | 3

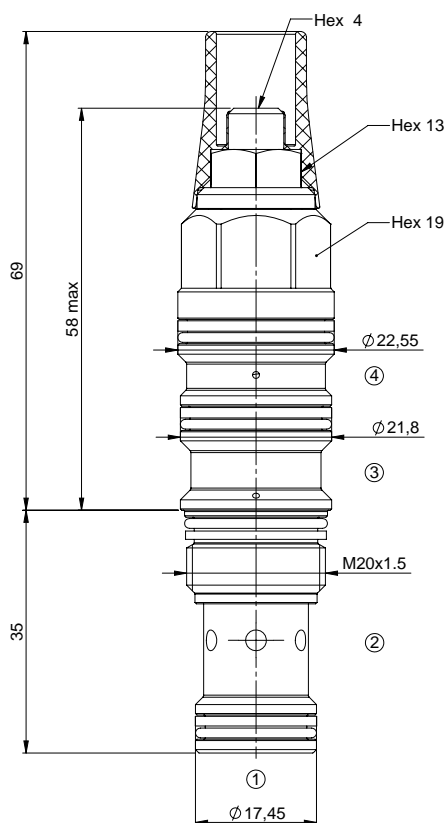
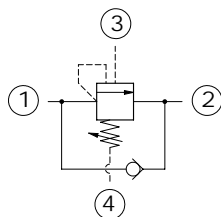
Setting (bar)
Setting (bar)

0 | 8 | 2 | 1 | 0 | 0 | A

Spring

- M = 70-210 bar
- D = 140-420 bar

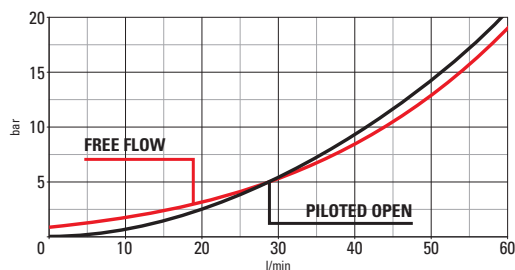
Drenata T21A 10:1 adjustable setting



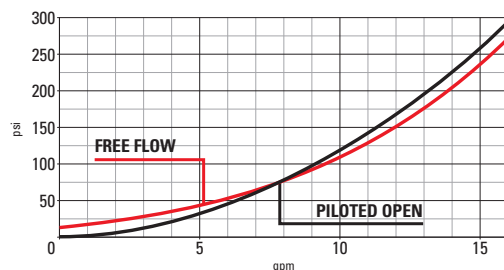
Technical Details

cavity	T21A
capacity	60 lpm (16 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	10:1
maximum setting	420 bar (6000 psi)
minimum setting	40 bar (600 psi)
pressure increase per turn	42 bar (spring T) - 170 bar (spring M) - 252 bar (spring D)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	drained
reseal	>85%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	4
seal-lock hex size (mm)	13
seal-lock torque	22-25 Nm (16-18 lbf ft)
valve weight	0.150 Kg (0.33 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000D
seal kit (viton)	S00T11ASV90000D
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Operations of all functions are independent of back.-pressure at port 2, thanks to the fact that the spring chamber is drained to port 4.
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure.
- This valve is provided with positive seals on the pilot section
- Declared reseal value is obtained with valve set @ maximum setting
- Port 4 is intended to be connected to a tank line only



Performance curves



Seals and anti-tamper options

A = BUNA SEALS
G = BUNA tamper resistant
C = VITON SEALS
H = VITON tamper resistant

C | 0 | 3

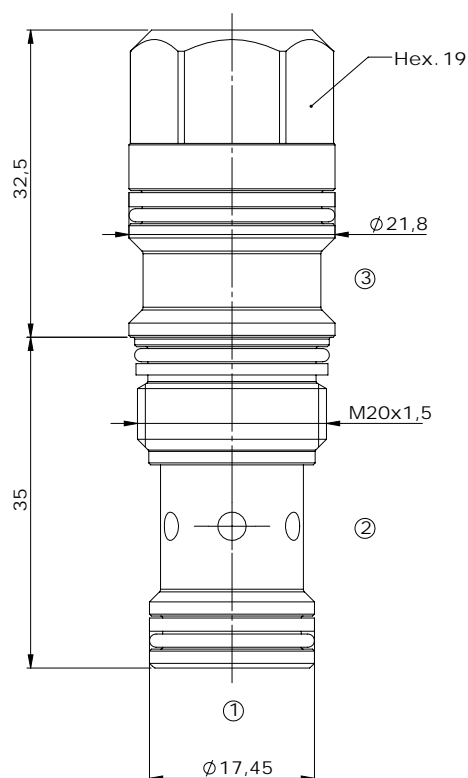
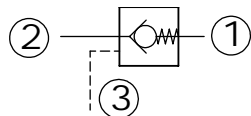
Setting (bar)
Setting (bar)

Spring

T = 40-120 bar
M = 110-250 bar
D = 200-420 bar

1 | 0 | 2 | 1 | 0 | 0 | A

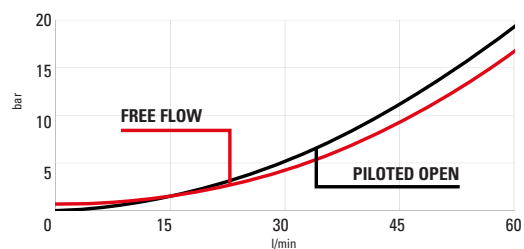
Check Valves P.O.Check T11A



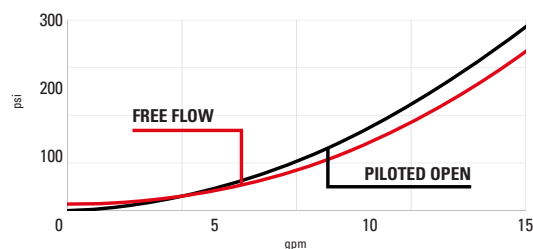
Technical Details

cavity	T11A
capacity	60 lpm (15 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum valve leakage at reseal	5 drops/min
operating characteristic	standard
valve hex size (mm)	19
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0,13 kg (0,27 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000
seal kit (viton)	S00T11ASV90000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 5 to 800 mm ² /s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting
- This valve is not provided with positive seals on pilot section



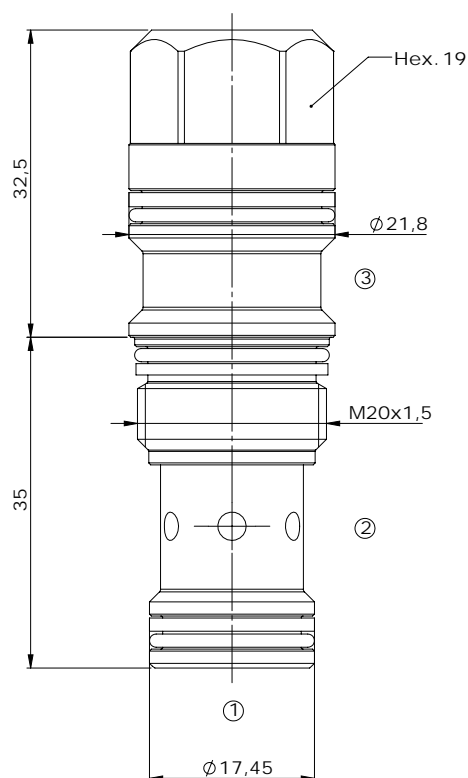
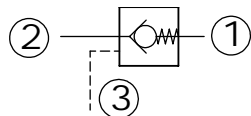
Performance curves



C | 6 | 2 | 2 | 0 | 2 | 3 | 6 | 0 | T | 1 | 1 | 0 | 0 | A

Check Valves

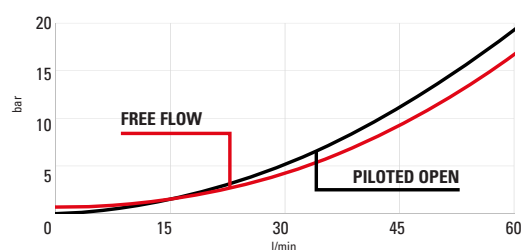
P.O.Check T11A SP



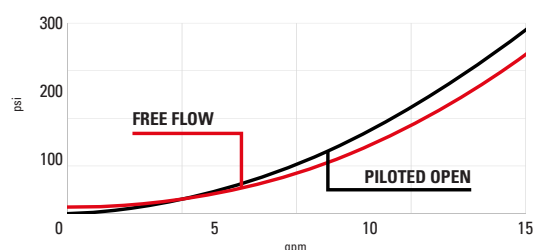
Technical Details

cavity	T11A
capacity	60 lpm (15 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum valve leakage at reseal	5 drops/min
operating characteristic	standard
valve hex size (mm)	19
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0,13 kg (0,27 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN90000
seal kit (viton)	S00T11ASV90000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 5 to 800 mm ² /s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting
- This valve is provided with positive seals on pilot section

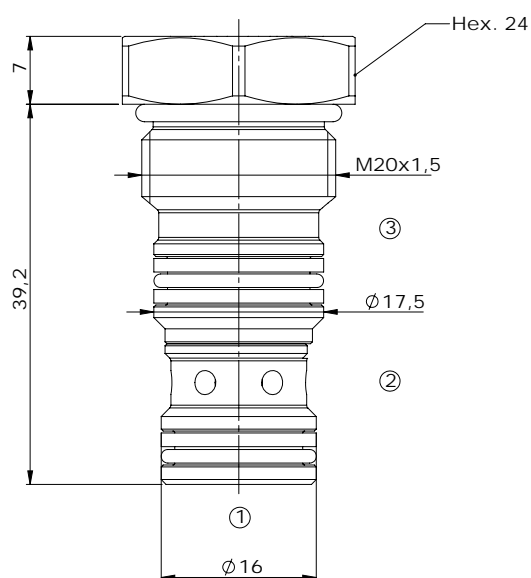
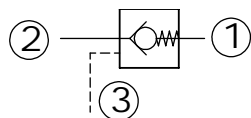


Performance curves



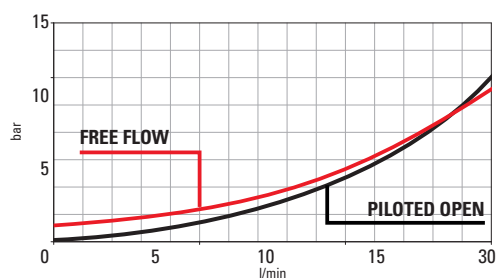
C | 6 | S | 2 | 0 | 2 | 3 | 6 | 0 | T | 1 | 1 | 0 | 0 | A

Setting (bar)

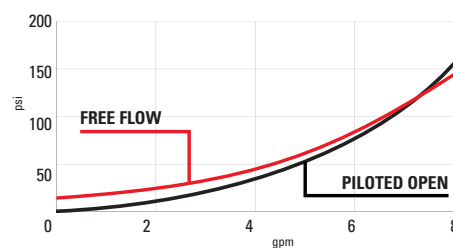


cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum valve leakage at reseal	5 drops/min
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0,08 kg (XX lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00CVI8SN700000
seal kit (viton)	S00CVI8SV700000
temperature range	-.30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 5 to 800 mm ² /s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- This valve is not provided with positive seals on pilot section

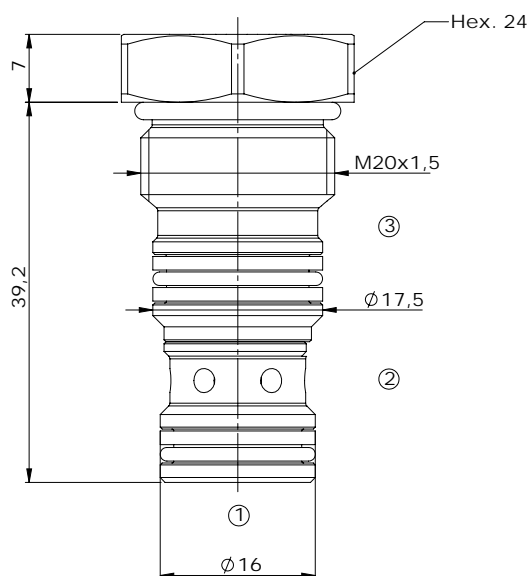
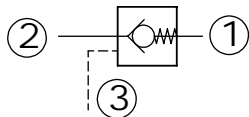


Performance curves



C	6	2	0	0	2	3	3	0	0	6	6	0	0	A
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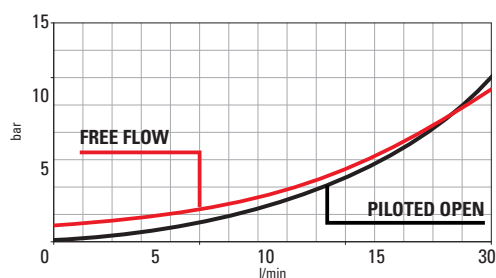
Check Valves P.O.Check i08 SP



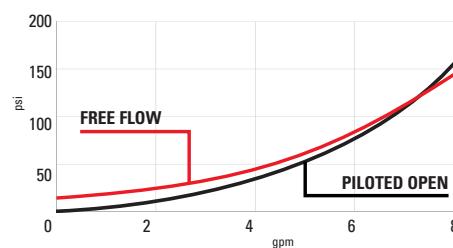
Technical Details

cavity	IH A6610
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
pilot ratio	3:1
maximum valve leakage at reseal	5 drops/min
valve hex size (mm)	24
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0,08 kg (XX lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00CVI8SN700000
seal kit (viton)	S00CVI8SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 5 to 800 mm ² /s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- This valve is provided with positive seals on pilot section



Performance curves

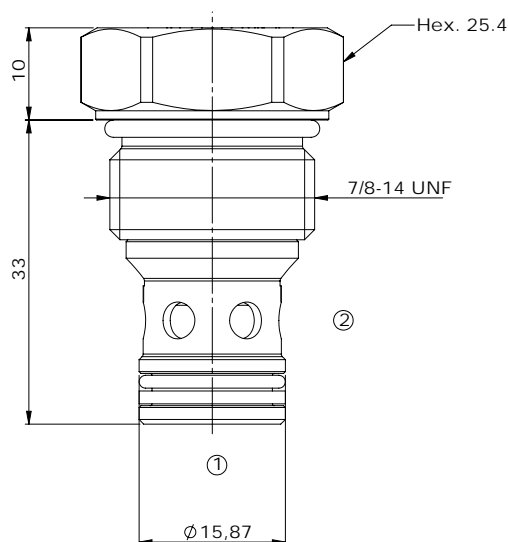
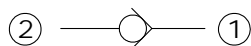


C | 6 | S | 0 | 0 | 2 | 3 | 3 | 0 | 0 | 6 | 6 | 0 | 0 | A

Setting (bar)

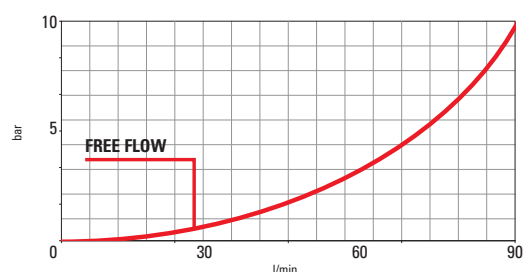
Check Valves

Check Valve i10

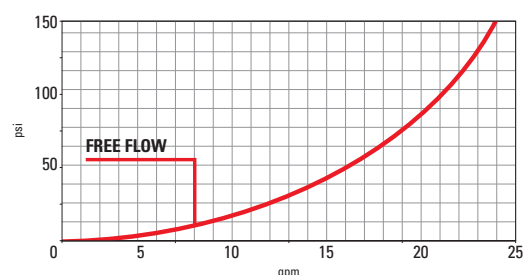


Technical Details

cavity	IH A12370
capacity	90 lpm (25 gpm)
max operating pressure	350 bar (5000 psi)
maximum valve leakage at reseal	5 drops/min
valve hex size (mm)	25,4 (1")
valve installation torque	45-50 Nm (33-37 lbf ft)
valve weight	0,09 kg (XX lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S000110SN700000
seal kit (viton)	S000110SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 5 to 800 mm ² /s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

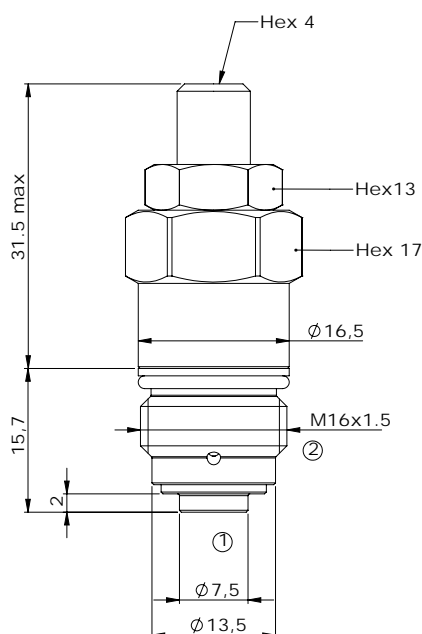
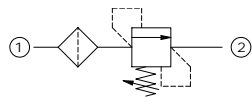


Performance curves



C | 6 | 2 | 0 | Z | 2 | 0 | 5 | 0 | 0 | 7 | 0 | 0 | 0 | A

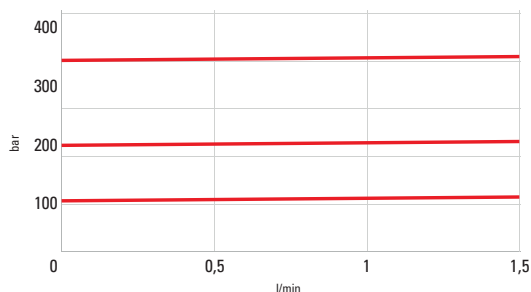
Relief Valves VM6 direct acting



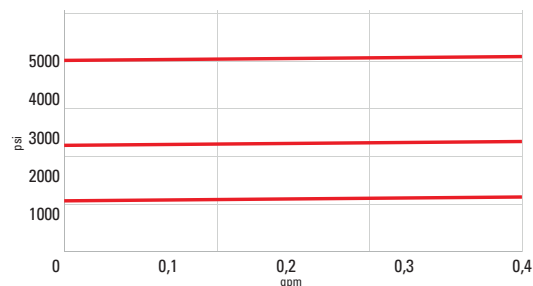
Technical Details

cavity	vm6
capacity	1,5 lpm (0,4 gpm)
max operating pressure	460 bar (6600 psi)
maximum setting	460 bar (6600 psi)
minimum setting	8 bar (115 psi)
pressure increase per turn	17 bar (spring L) - 50 bar (spring T) - 91 bar (spring M) - 205 bar (spring D) - 294 bar (spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
reseal	>85%
valve hex size (mm)	17
valve installation torque	27-33 Nm (20-24 lbf ft)
adjustment screw internal hex size (mm)	4
lock nut hex size	13
lock nut torque	9-11 Nm
valve weight	0,05 kg (0,11 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0VM600SN700000
seal kit (viton)	S0VM600SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting
- For anti tampering cap please consult factory



Performance curves

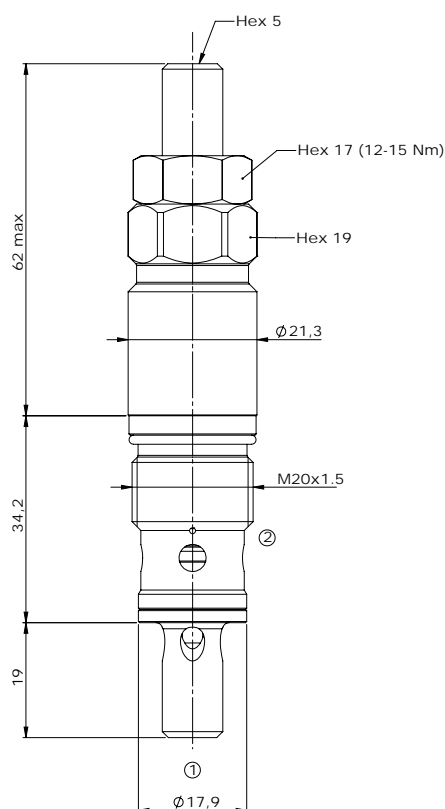
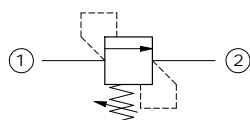


Setting (bar)											
C	3	0	1					1	6	0	2
										0	0
											A

Spring
L = 8-35 bar
T = 25-100 bar
M = 100-200 bar
D = 200-300 bar
S = 300-460 bar

Relief Valves

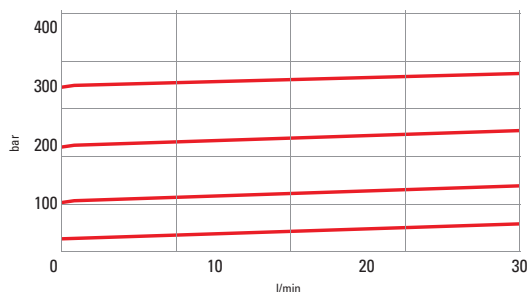
VM31 direct acting - guided poppet type



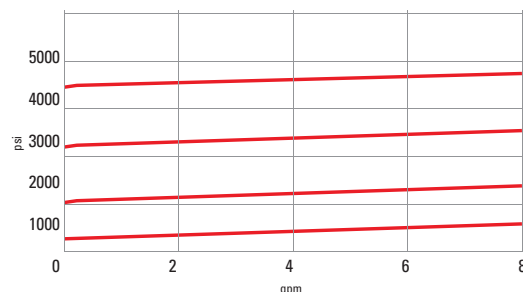
Technical Details

cavity	vm31
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
maximum setting	420 bar (6000 psi)
minimum setting	5 bar (70 psi)
pressure increase per turn	17 bar (spring L) - 50 bar (spring T) - 91 bar (spring M) - 205 bar (spring D) - 294 bar (spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
reseal	>85%
valve hex size (mm)	19
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	5
lock nut hex size	17
lock nut torque	12-15 Nm
valve weight	0,2 kg (0,44 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0VM310SN700000
seal kit (viton)	S0VM310SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



9 = standard adjustment
P = plastic handknob

Setting (bar)

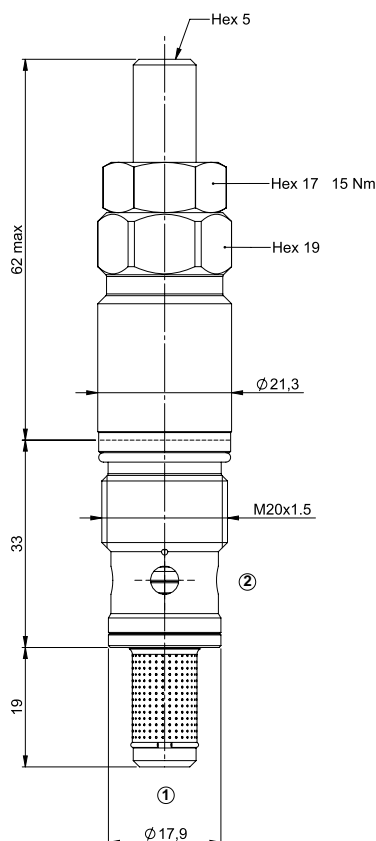
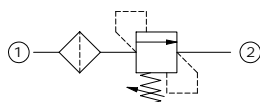
C | 3 | 0 | | | | 2 | 0 | 3 | 0 | 0 | 0 | A

Spring

L = 5-50 bar
T = 30-100 bar
M = 50-210 bar
D = 100-300 bar
S = 200-420 bar

Relief Valves

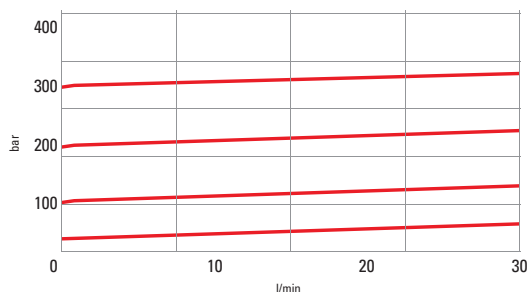
VM31 direct acting - guided poppet type **HARD SEAT F**



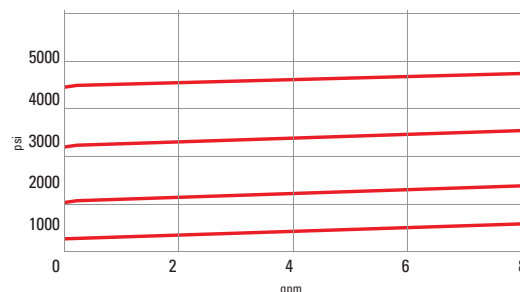
Technical Details

cavity	vm31
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
maximum setting	420 bar (6000 psi)
minimum setting	5 bar (70 psi)
pressure increase per turn	17 bar (spring L) - 50 bar (spring T) - 91 bar (spring M) - 205 bar (spring D) - 294 bar (spring S)
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
reseal	>85%
valve hex size (mm)	19
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	5
lock nut hex size	17
lock nut torque	12-15 Nm
valve weight	0,2 kg (0,44 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0VM310SN700000
seal kit (viton)	S0VM310SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 10 to 500 mm2/s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting



Performance curves



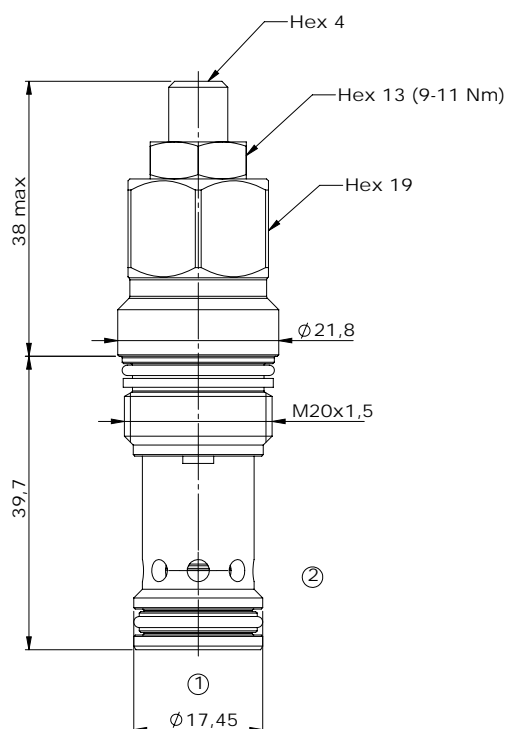
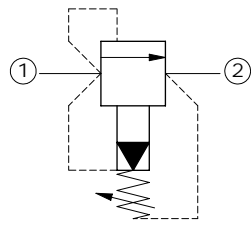
1 = standard adjustment
L = plastic handknob

Setting (bar)

C | 3 | 0 | | | | 2 | 0 | 3 | 0 | 0 | 0 | A

Spring
L = 5-50 bar
T = 30-100 bar
M = 50-210 bar
D = 100-300 bar
S = 200-420 bar

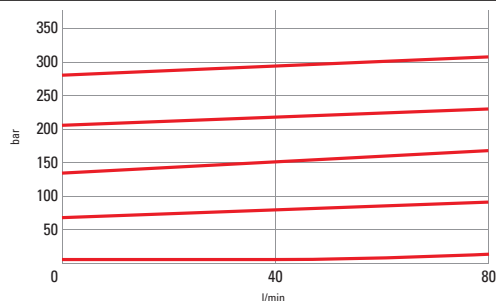
Relief Valves VMP2 10A pilot operated



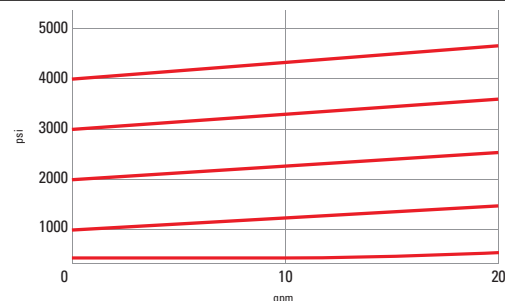
Technical Details

cavity	T10A
capacity	100 lpm (26 gpm)
minimum flow rate	3 l/min
max operating pressure	350 bar (5000 psi)
maximum setting	450 bar (6500 psi)
minimum setting	10 bar (150 psi)
pressure increase per turn	11 bar (spring L) - 50 bar (spring T) - 90 bar (spring M) - 206 bar (spring D) - 295 bar (spring S)
pressure setting established @	4 l/min
maximum valve leakage at reseal	200 cc/min @ 200 bar
valve hex size (mm)	19
valve installation torque	40-45 Nm (30-33 lbf ft)
adjustment screw internal hex size (mm)	4
lock nut hex size	13
lock nut torque	9-11 Nm
valve weight	0,15 kg (0,3 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SOVMP20SN700000
seal kit (viton)	SOVMP20SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting of the valve
- For anti tampering cap please consult factory
- For setting higher than 300 bar please consult factory



Performance curves

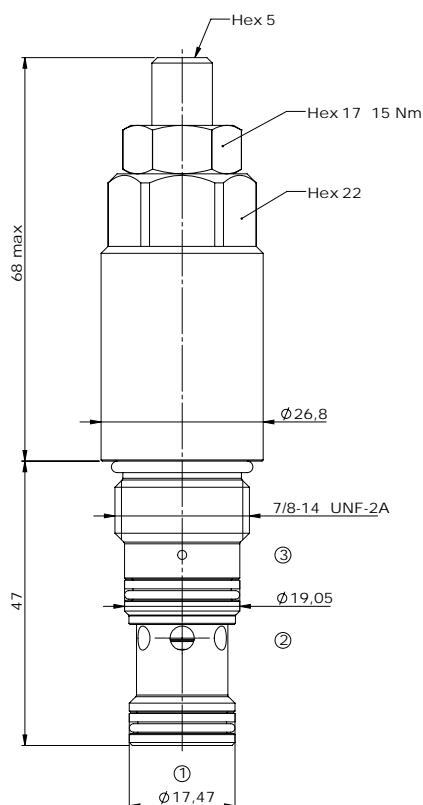
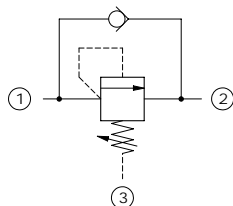


C | 3 | 3 | 0 | | | | T | D | C | 0 | 0 | 0 | A

Spring
L = 10-35 bar
T = 35-100 bar
M = 80-200 bar
D = 170-350 bar
S = 300-450 bar

Sequence Valves

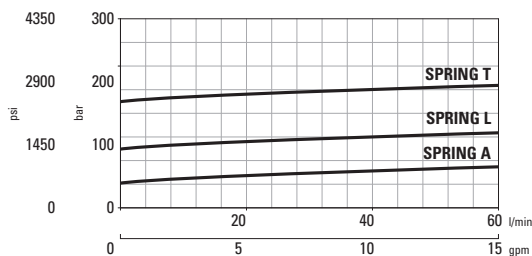
Sequenza SAE10 AP



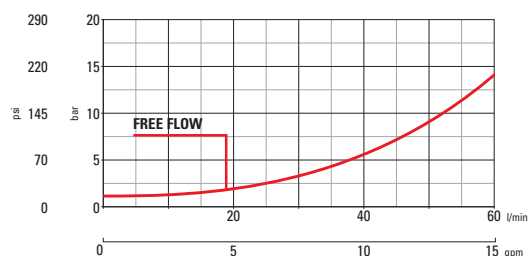
Technical Details

cavity	SAE10 STD
capacity	60 lpm (15 gpm)
max operating pressure	350 bar (5000 psi)
maximum setting	170 bar (2500 psi)
minimum setting	5 bar (70 psi)
pressure increase per turn	16 bar (spring L) - 57 bar (spring T) - 5,5 bar (spring A)
pressure setting established @	cracking pressure
maximum valve leakage at reseal	10 drops/min
reseal	80%
valve hex size (mm)	22
valve installation torque	41-47 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	5
lock nut hex size	17
lock nut torque	12-15 Nm
valve weight	0,3 kg (0,66 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0610SN900000
seal kit (viton)	S0610SV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Declared reseal value is obtained with valve set @ maximum setting
- This valve is provided with external spring chamber drain



Performance curves



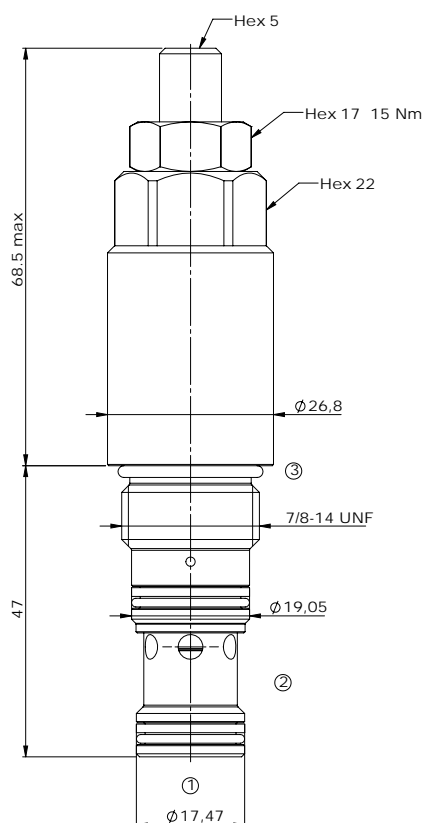
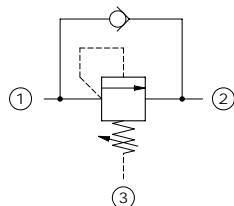
C | 3 | 0 | 1 | | | | 2 | 0 | 3 | 0 | 0 | 0 | A

Setting (bar)

Spring
L = 10-85 bar
T = 60-170 bar
A = 5-40 bar

Sequence Valves

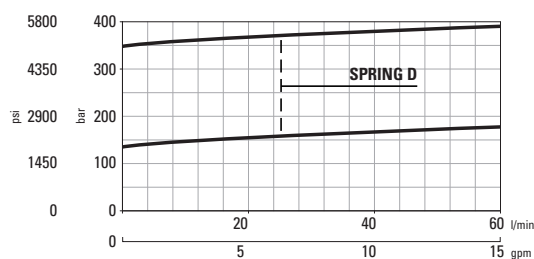
Sequenza SAE10 AD



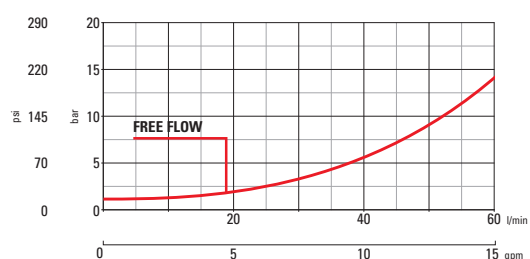
Technical Details

cavity	SAE10 STD
capacity	60 lpm (15 gpm)
max operating pressure	350 bar (5000 psi)
maximum setting	350 bar (5000 psi)
minimum setting	140 bar (2000 psi)
pressure increase per turn	122 bar (spring D)
pressure setting established @	cracking pressure
maximum valve leakage at reseal	10 drops/min
reseal	80%
valve hex size (mm)	22
valve installation torque	41-47 Nm (30-35 lbf ft)
adjustment screw internal hex size (mm)	5
lock nut hex size	17
lock nut torque	12-15 Nm
valve weight	0,3 kg (0,66 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0610SN900000
seal kit (viton)	S0610SV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting
- For anti tampering cap please consult factory



Performance curves

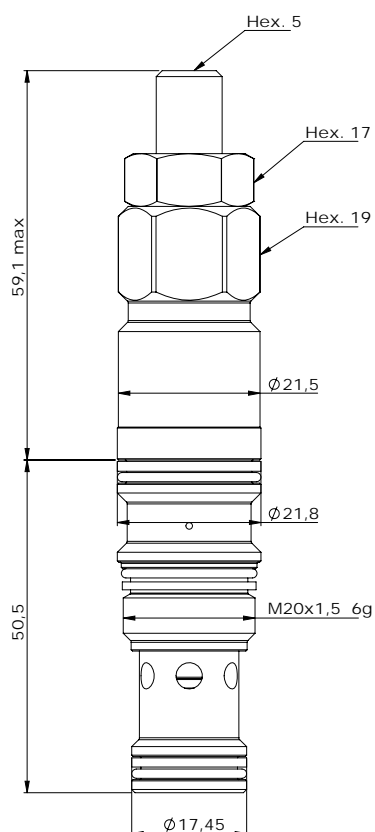
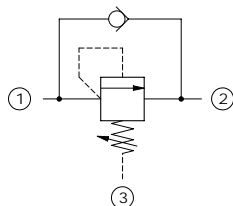


C | 5 | 2 | 0 | D | | | | 1 | 0 | 6 | 0 | 0 | 0 | A

Setting (bar)

Sequence Valves

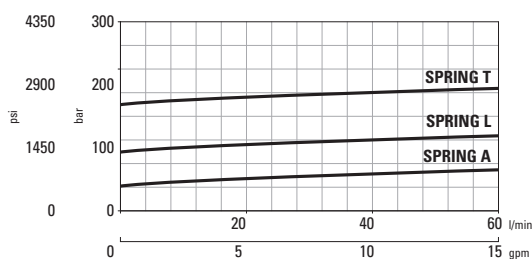
Sequenza T11A AP



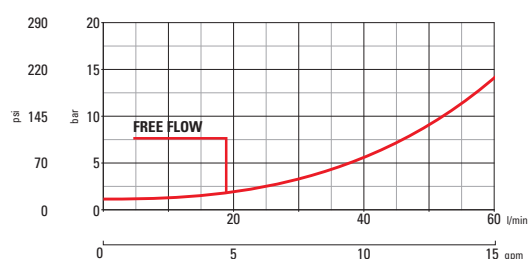
Technical Details

cavity	T11A
capacity	60 lpm (15 gpm)
max operating pressure	350 bar (5000 psi)
maximum setting	170 bar (2500 psi)
minimum setting	5 bar (70 psi)
pressure increase per turn	16 bar (spring L) - 57 bar (spring T) - 5,5 bar (spring A)
pressure setting established @	cracking pressure
maximum valve leakage at reseal	10 drops/min
reseal	80%
valve hex size (mm)	19
valve installation torque	45-50 Nm (33-37 lbf ft)
adjustment screw internal hex size (mm)	5
lock nut hex size	17
lock nut torque	12-15
valve weight	0,3 kg (0,66 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S00T11ASN900000
seal kit (viton)	S00T11ASV900000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral based or synthetics oil with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10 µm (NAS 8) ISO 4406 19/17/14

- Turn adjustment clockwise to increase setting
- Backpressure at port 2 adds to the effective relief setting of the valve
- Declared reseal value is obtained with valve set @ maximum setting
- For anti tampering cap please consult factory



Performance curves

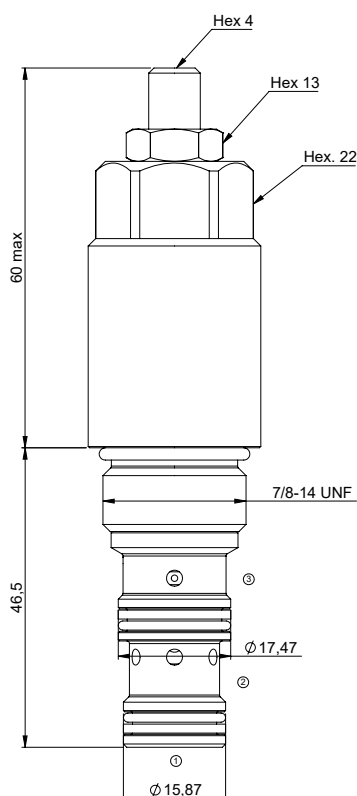
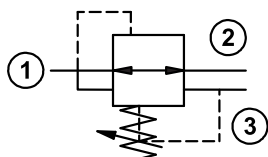


C | 5 | 2 | 0 | | | | 1 | 0 | 6 | 0 | 0 | 0 | A

Setting (bar)

Spring
L = 10-85 bar
T = 60-170 bar
A = 5-40 bar

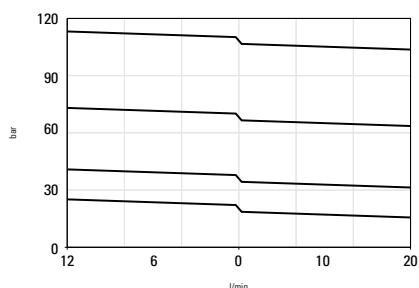
Pressure Reducing Valves CRPR SAE10 DMP



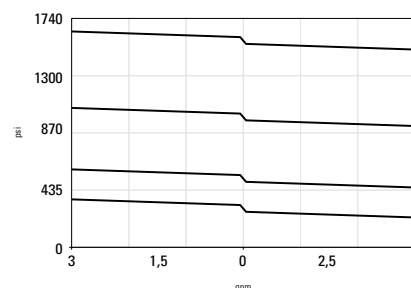
Technical Details

cavity	SAE10 STD
capacity	20 lpm (5 gpm)
max operating pressure	350 bar (5000 psi)
maximum setting	100 bar (1450 psi)
minimum setting	3 bar (43 psi)
pressure increase per turn	2 bar (Spring L) 5 bar (Spring T) 10 bar (Spring M) 21 bar (Spring D)
pressure setting established @	cracking pressure (1in3/min)
maximum internal leakage	150 cc / minute
valve hex size	22
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	9-11 Nm (6,5-8 lbf ft)
valve weight	0.2 Kg (0.44 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE10SN700000
seal kit (viton)	S0SAE10SV700000
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- This valve is provided with hardened spool and cage



Performance curves



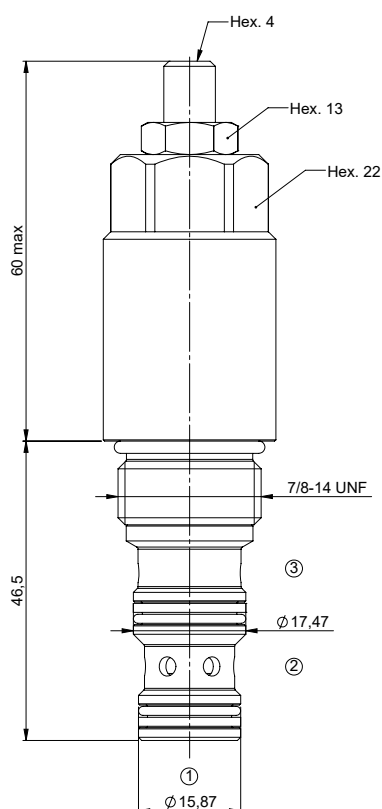
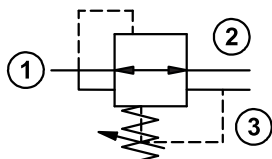
C | 4 | 0 | 9 | | | | 0 | 0 | 1 | 0 | 0 | 0 | A

Setting (bar)

Spring
L = 3-20 bar
T = 5-35 bar
M = 10-65 bar
D = 50-100 bar

Pressure Reducing Valves

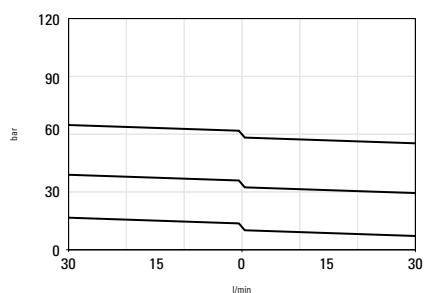
CRPR SAE10



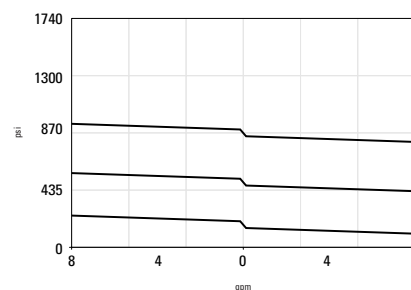
Technical Details

cavity	SAE10 STD
capacity	30 lpm (8 gpm)
max operating pressure	350 bar (5000 psi)
maximum setting	65 bar (950 psi)
minimum setting	3 bar (43 psi)
pressure increase per turn	3,4 bar (Spring L) 6,5 bar (Spring T) 13,5 bar (Spring M)
pressure setting established @	cracking pressure (1in3/min)
maximum internal leakage	200 cc / minute
valve hex size	22
valve installation torque	34-41 Nm (25-30 lbf ft)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	9-11 Nm (6,5-8 lbf ft)
valve weight	0.2 Kg (0.44 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	S0SAE10SN700000
seal kit (viton)	S0SAE10SV700000
temperature range	-.30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- This valve is provided with hardened spool and cage



Performance curves



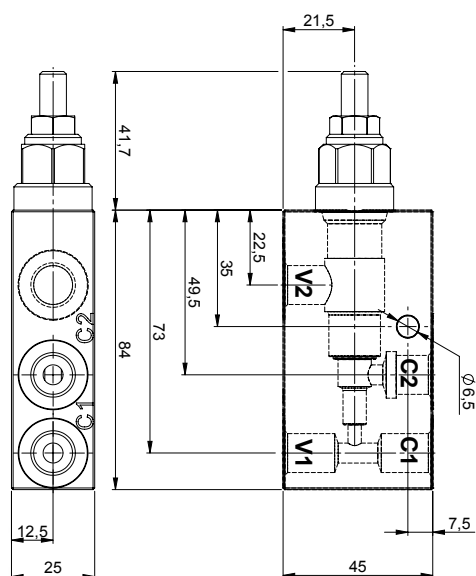
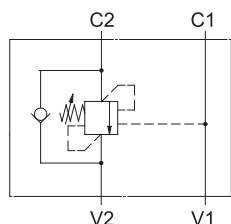
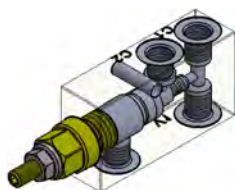
C | 4 | 0 | 0

Setting (bar)

Spring
L = 3-20 bar
T = 8-40 bar
M = 30-65 bar

0 0 1 0 0 0 A

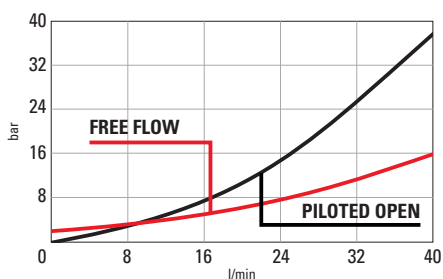
Normale 79 S L 1/4



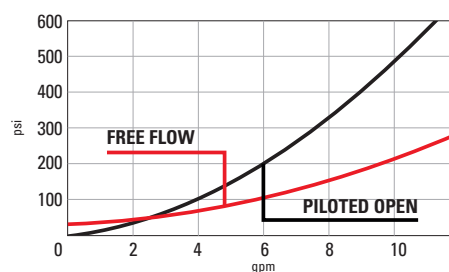
Technical Details

body material	zinc plated steel
capacity	40 lpm (10 gpm)
ports size	V1, V2, C1, C2: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 103 bar/turn Spring D: 171.5 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0,75 Kg (1,65 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 8:1 pilot ratio please consult factory



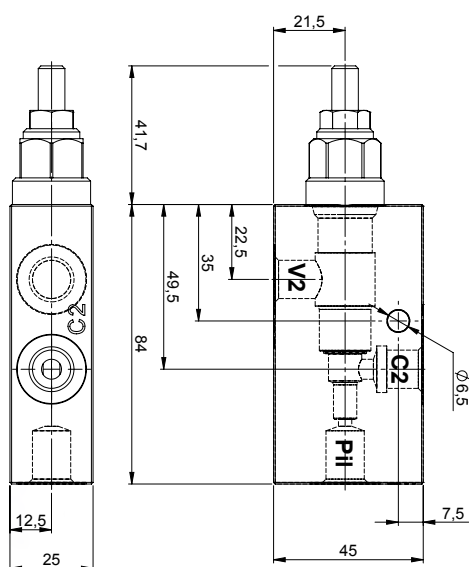
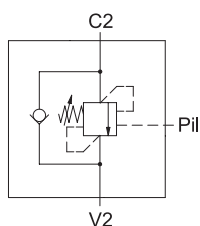
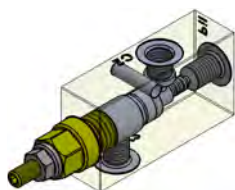
Performance curves



4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

S | N | S | 7 | 9 | L | 0 | 4 | G | 1 | 4 | | 0 | 0 | 0
Setting (bar)

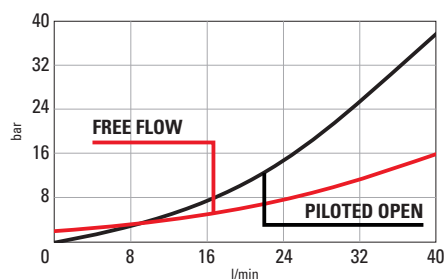
Normale 79 S L PIL 1/4



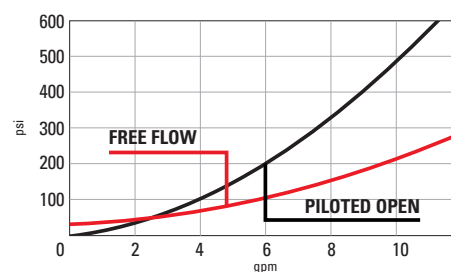
Technical Details

body material	zinc plated steel
capacity	40 lpm (10 gpm)
ports size	V2, C2, PIL: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 103 bar/turn Spring D: 171.5 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0,7 Kg (1,5 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 8:1 pilot ratio please consult factory



Performance curves

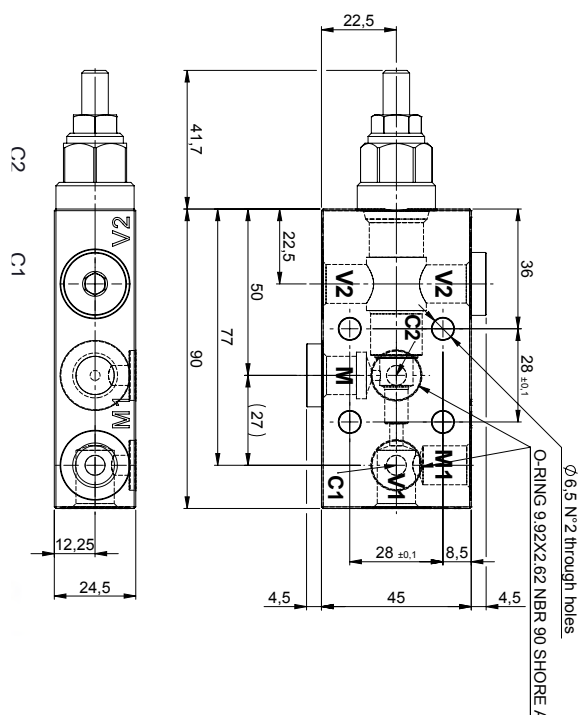
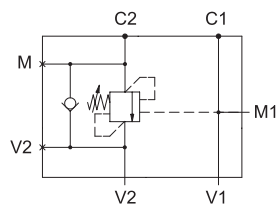
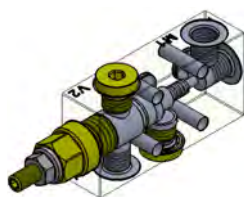


4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

S | N | S | 7 | 9 | P | 0 | 4 | G | 1 | 4 | | 0 | 0 | 0

Setting (bar)

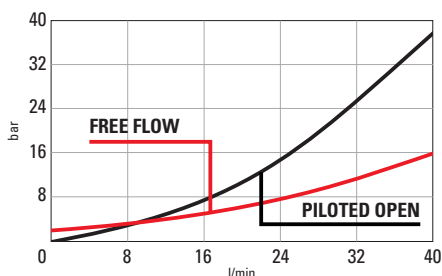
Normale 79 S FC2 1/4



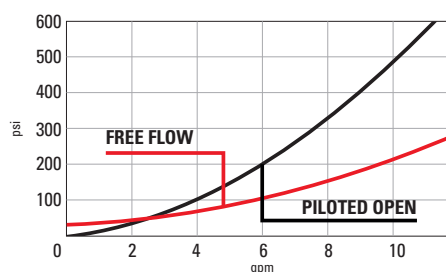
Technical Details

body material	zinc plated steel
capacity	40 lpm (10 gpm)
ports size	V1, V2, M, M1: G 1/4 C1, C2: $\phi 6$
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 103 bar/turn Spring D: 171.5 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0,7 Kg (1,5 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK290SH0992X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 8:1 pilot ratio please consult factory



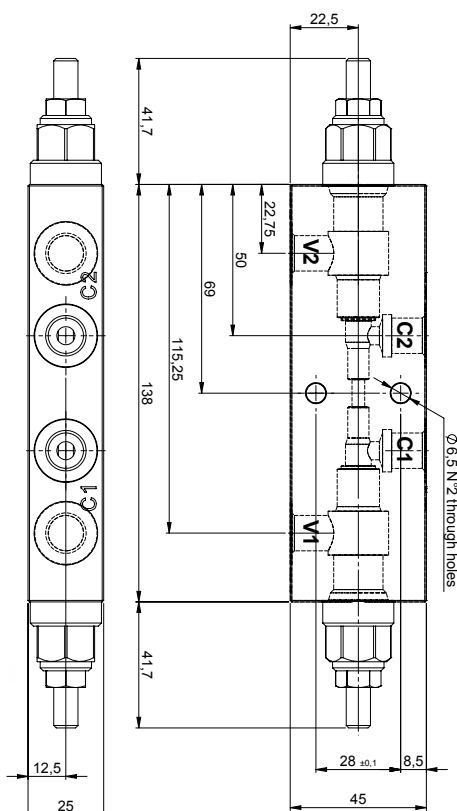
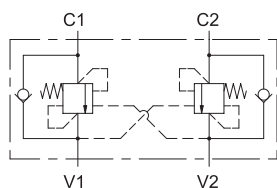
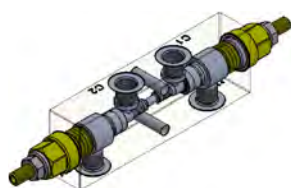
Performance curves



4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

S | N | S | 7 | 9 | 2 | 0 | 4 | G | 1 | 4 | | 0 | 0 | 0
Setting (bar)

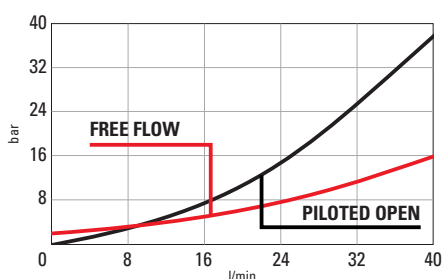
Normale 79 D L 1/4



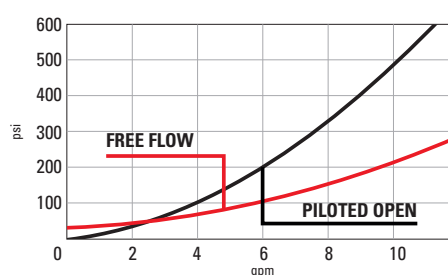
Technical Details

body material	aluminum
capacity	40 lpm (10 gpm)
ports size	V1, V2, C1, C2: G 1/4
max operating pressure	210 bar (3000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 103 bar/turn Spring D: 171.5 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0,6 Kg (1,35 lbs)
external component surface treatment	black or white anodization
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 8:1 pilot ratio please consult factory



Performance curves

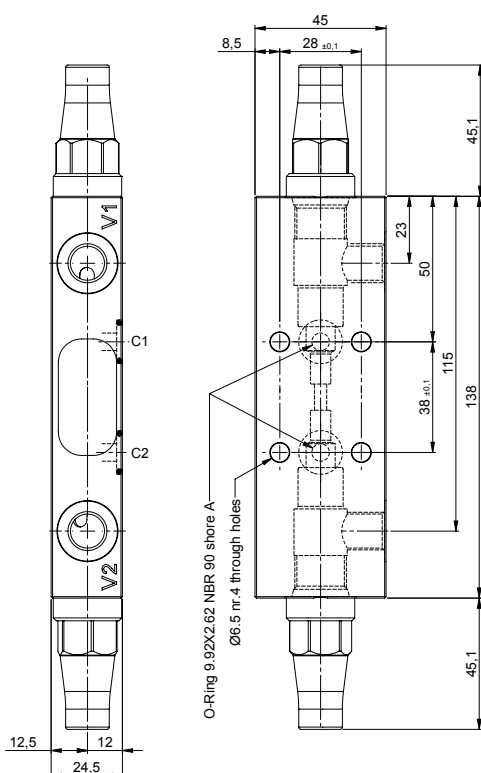
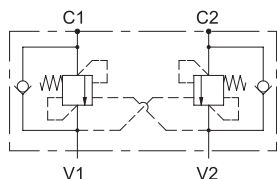
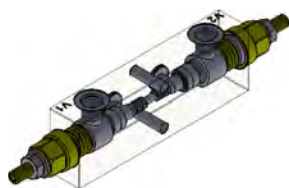


4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

A | N | D | 7 | 9 | L | 0 | 4 | G | 1 | 4 | | 0 | 0 | 0

Setting (bar)

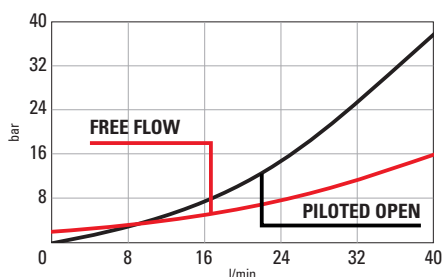
Normale 79 D FC2 1/4



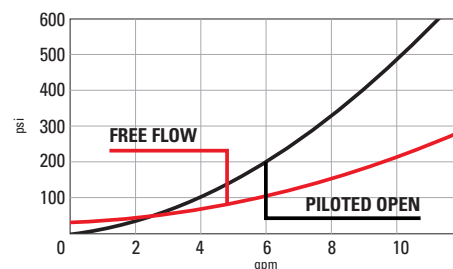
Technical Details

body material	aluminum
capacity	40 lpm (10 gpm)
ports size	V1, V2: G 1/4 C1, C2: 1/8
max operating pressure	210 bar (3000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 103 bar/turn Spring D: 171.5 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	0,6 Kg (1,35 lbs)
external component surface treatment	black or white anodization
seal kit (nbr)	SK290SH0992X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 8:1 pilot ratio please consult factory



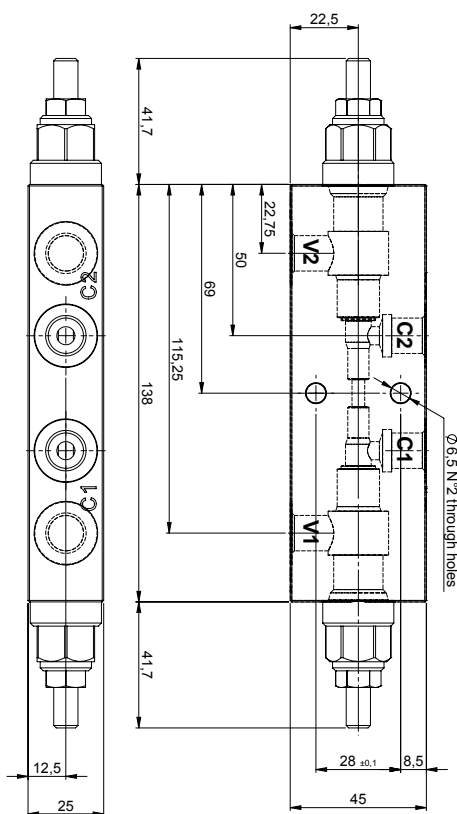
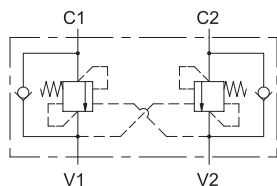
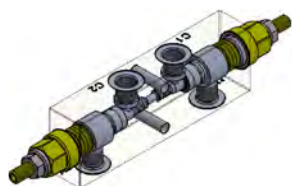
Performance curves



4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

A | N | D | 7 | 9 | 2 | 0 | 4 | G | 1 | 4 | | 0 | 0 | 0
Setting (bar)

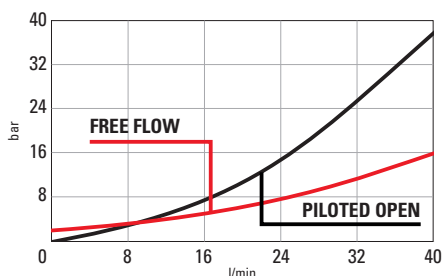
Normale 79 D L 1/4



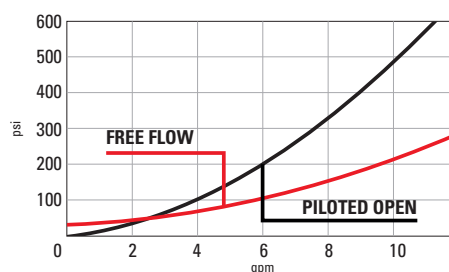
Technical Details

body material	zinc plated steel
capacity	40 lpm (10 gpm)
ports size	V1, V2, C1, C2: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 103 bar/turn Spring D: 171.5 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,5 Kg (3,2 lbs)
external component surface treatment	zinc plating
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 8:1 pilot ratio please consult factory



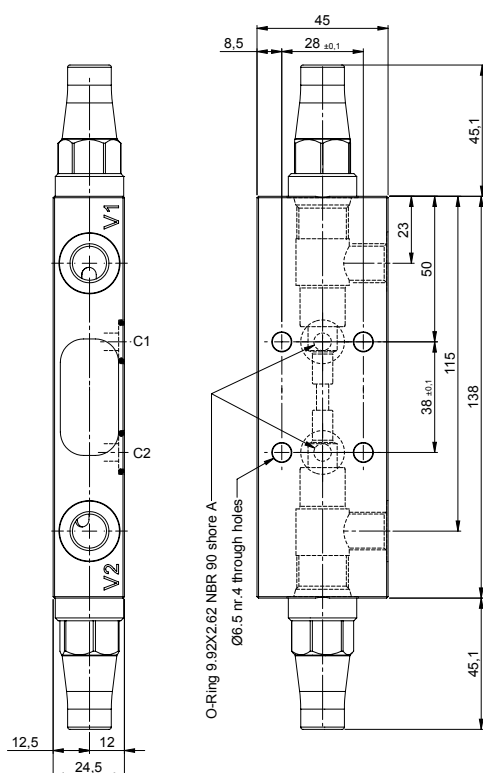
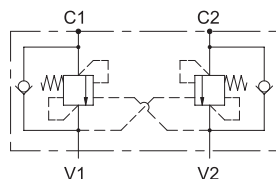
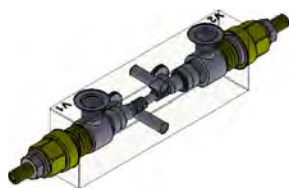
Performance curves



4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

S | N | D | 7 | 9 | L | 0 | 4 | G | 1 | 4 | | 0 | 0 | 0
Setting (bar)

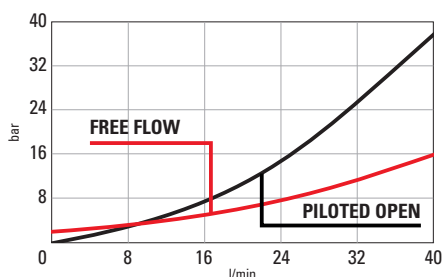
Normale 79 D FC2 1/4



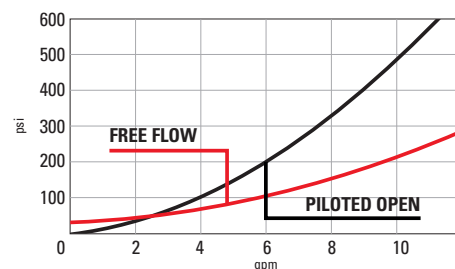
Technical Details

body material	zinc plated steel
capacity	40 lpm (10 gpm)
ports size	V1, V2: G 1/4 C1, C2: 1/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 103 bar/turn Spring D: 171.5 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,5 Kg (3,2 lbs)
external component surface treatment	zinc plating
seal kit (nbr)	SK290SH0992X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 8:1 pilot ratio please consult factory



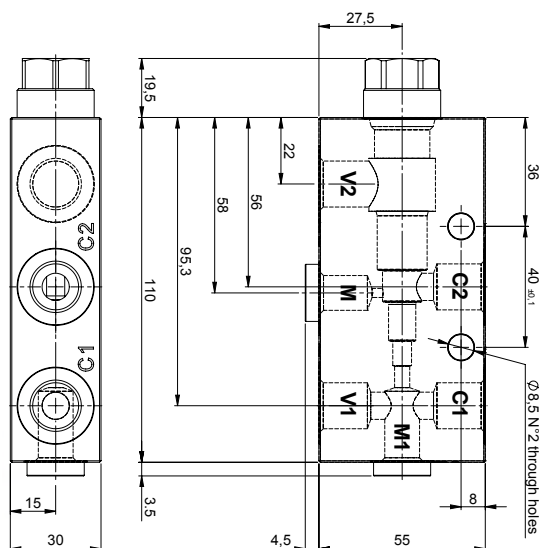
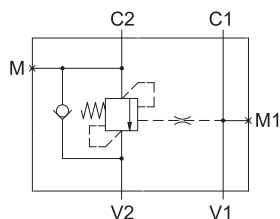
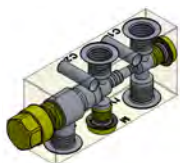
Performance curves



4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

A | N | D | 7 | 9 | 2 | 0 | 4 | G | 1 | 4 | | 0 | 0 | 0
Setting (bar)

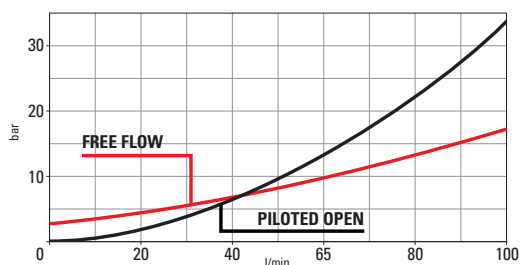
Load holding valves Normale 31NPS S L 3/8 F



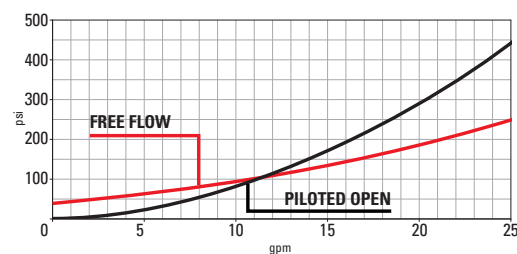
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1, C2: G 3/8 M: G 1/4, M1: G 1/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,34 Kg (2,95 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



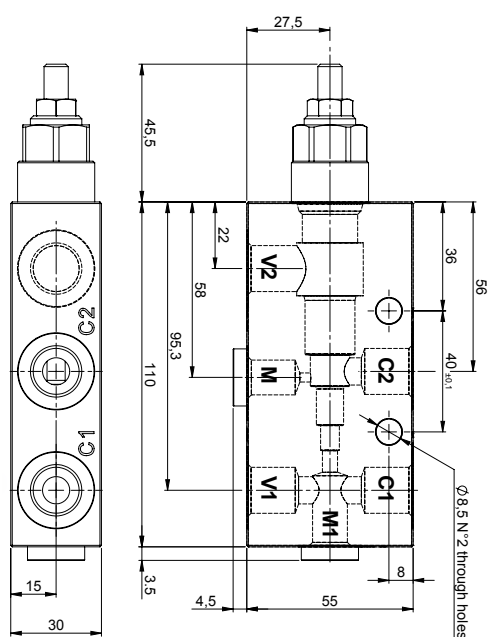
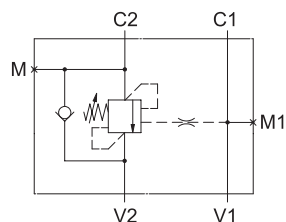
S | N | S | 3 | 1 | L | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

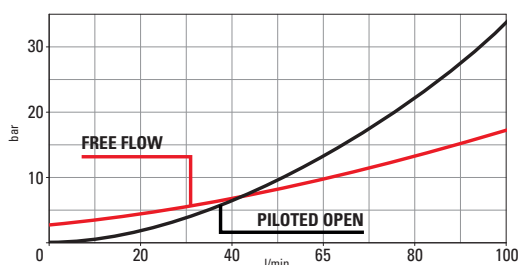
Load holding valves Normale 31NPS S L 3/8



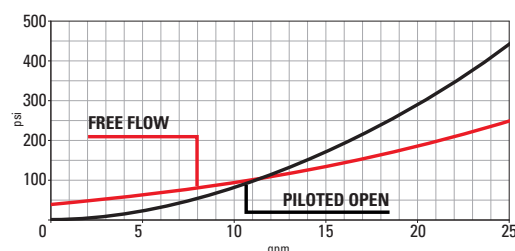
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V1, V2, C1, C2: G 3/8 M: G 1/4, M1: G 1/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114,5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,37 Kg (3 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

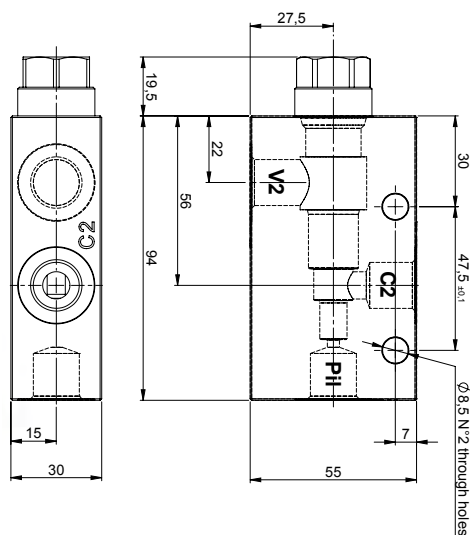
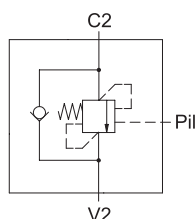
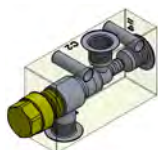
S | N | S | 3 | 1 | L | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

Load holding valves

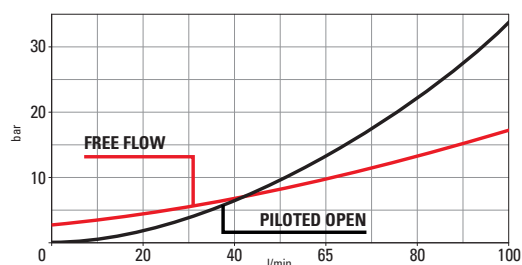
Normale 31NPS S L PIL 3/8 F



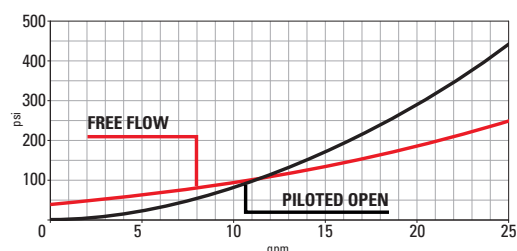
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V2, C2, Pil: G 3/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,11 Kg (2,44 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



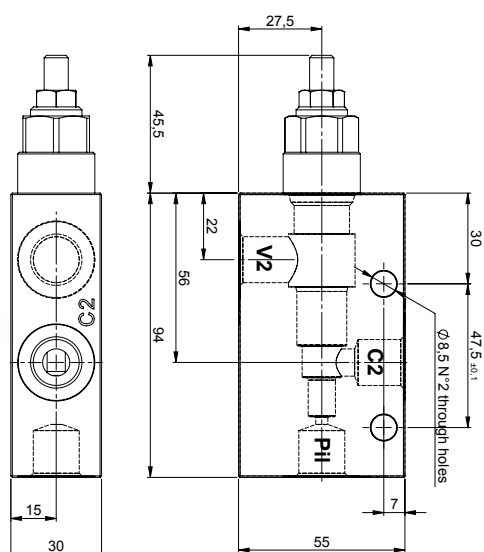
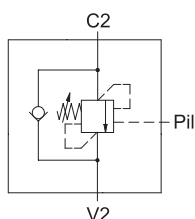
S | N | S | 3 | 1 | P | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

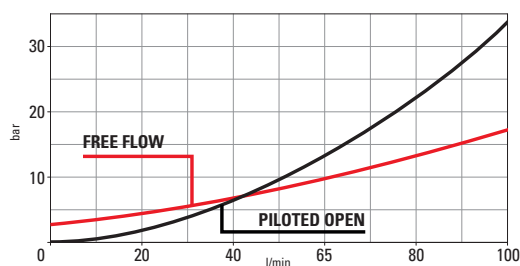
Load holding valves Normale 31NPS S L PIL 3/8



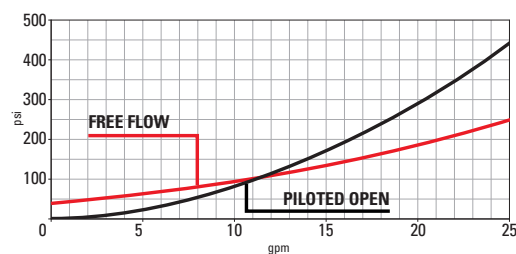
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V2, C2, Pil: G 3/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114.5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,15 Kg (2,5 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



S | N | S | 3 | 1 | P | | | G | 3 | 8 | | 0 | 0 | 0

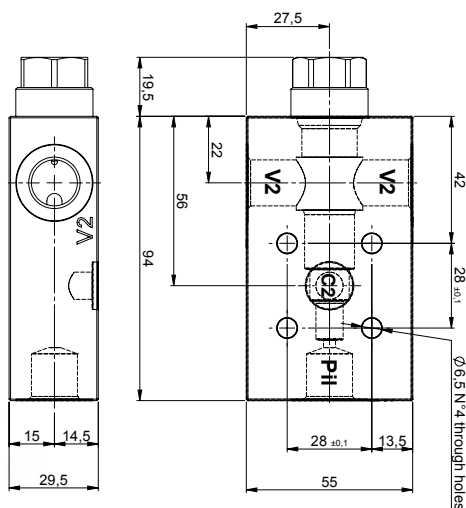
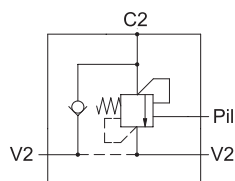
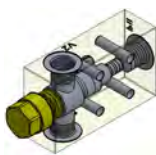
04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

Load holding valves

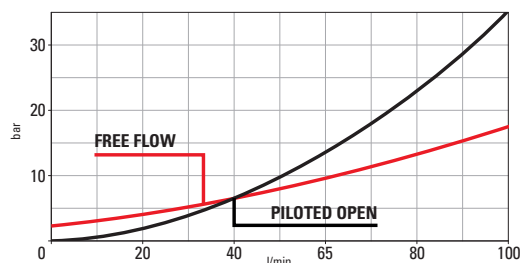
Normale 31NPS S FC1 PIL 3/8 F



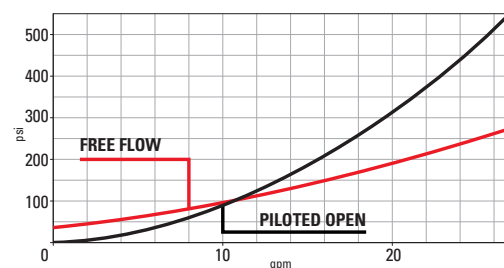
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V2, Pil: G 3/8 C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,09 Kg (2,4 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



S | N | S | 3 | 1 | 1 | | | G | 3 | 8 | | 0 | 0 | 0

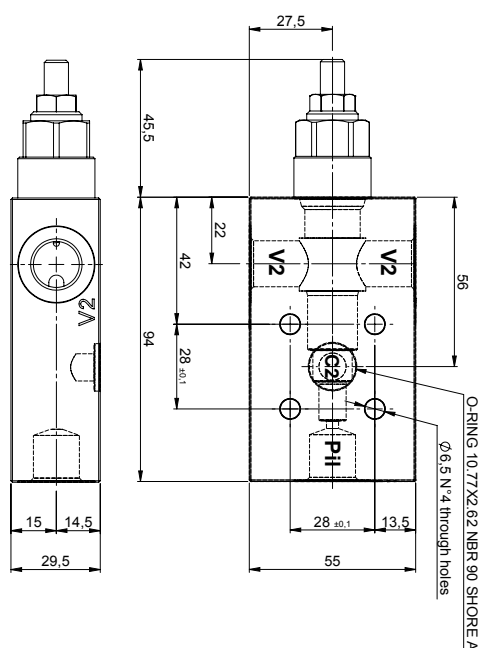
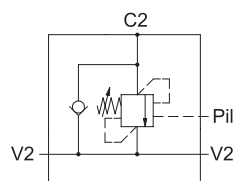
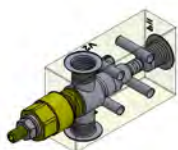
04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

Load holding valves

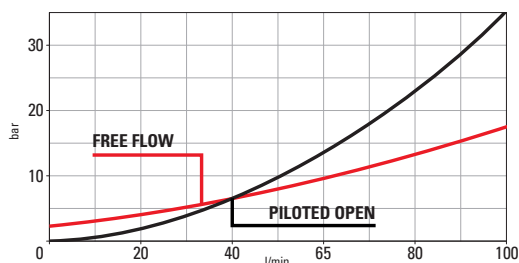
Normale 31NPS S FC1 PIL 3/8



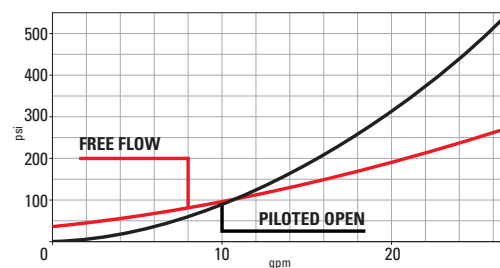
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V2, Pil: G 3/8 - C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114,5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,12 Kg (2,46 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



S | N | S | 3 | 1 | 1 | | | G | 3 | 8 | | 0 | 0 | 0

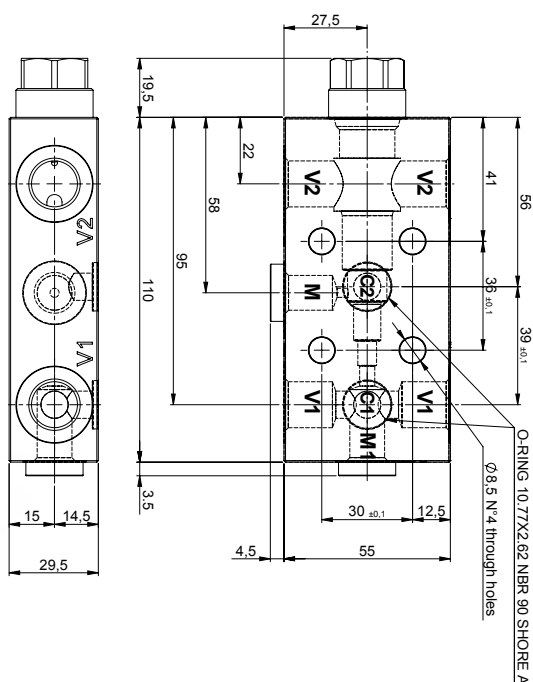
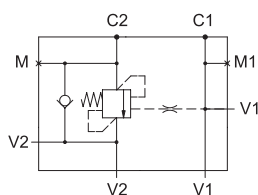
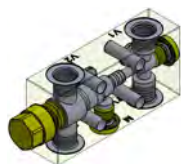
04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

Load holding valves

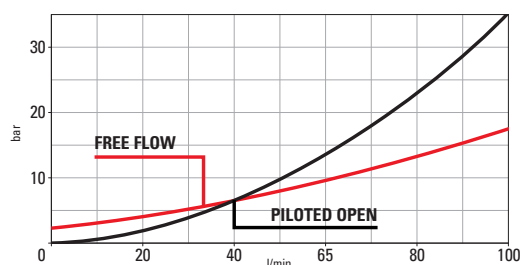
Normale 31NPS S FC2 3/8 F



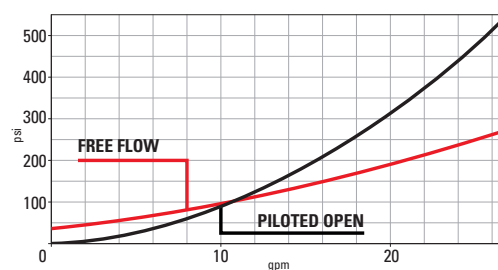
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 3/8 M: G 1/4, M1: G 1/8 C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,28 Kg (2,82 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



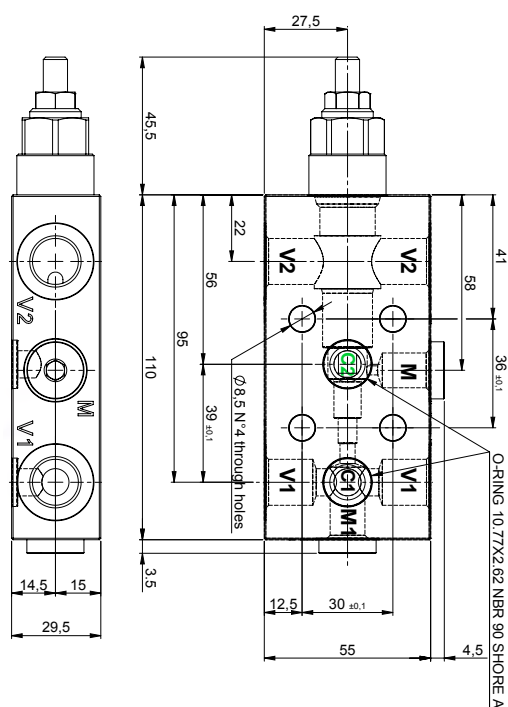
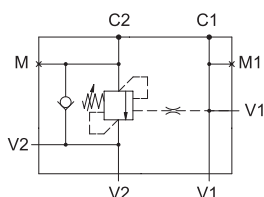
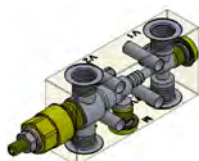
S | N | S | 3 | 1 | 2 | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

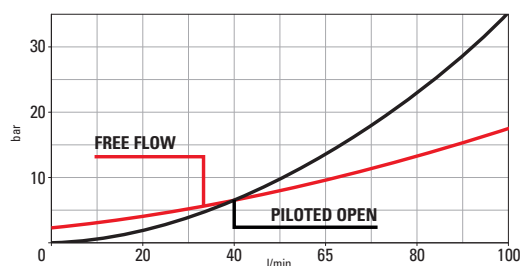
Load holding valves Normale 31NPS S FC2 3/8



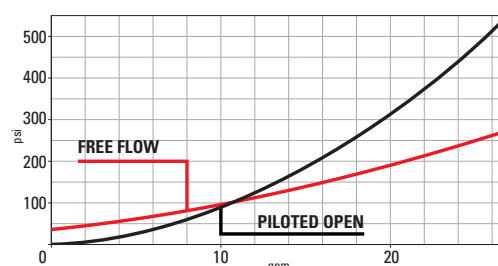
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V1, V2: G 3/8 M: G 1/4, M1: G 1/8 C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114,5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,32 Kg (2,9 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

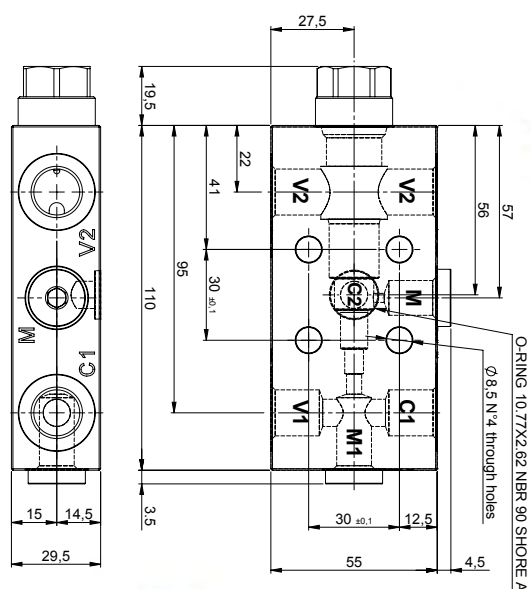
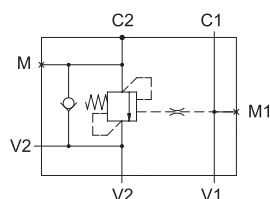
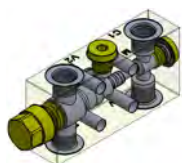
8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

S | N | S | 3 | 1 | 2 | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

Load holding valves

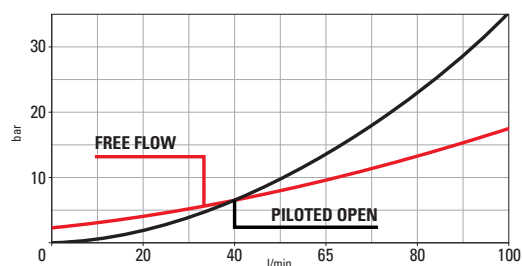
Normale 31NPS S FC1 PL 3/8 F



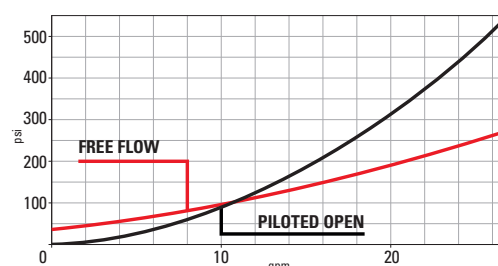
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1: G 3/8 M: G 1/4, M1: G 1/8 C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,29 Kg (2,84 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



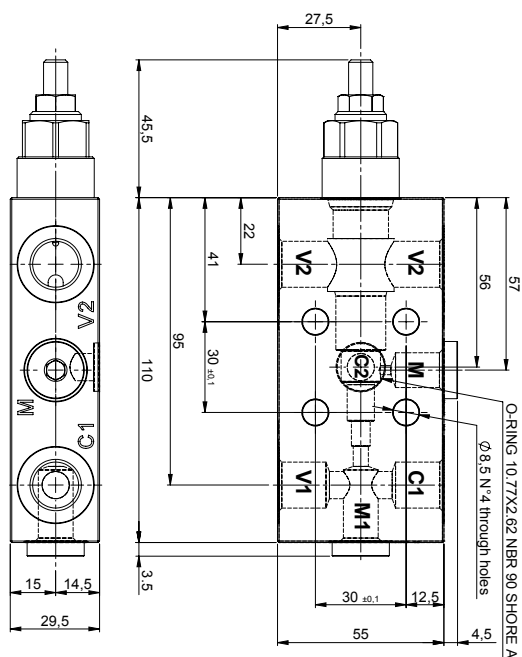
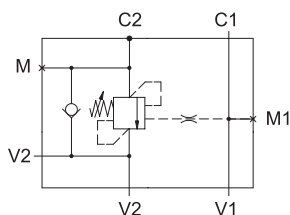
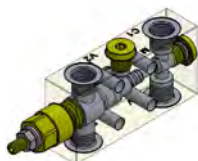
S | N | S | 3 | 1 | 3 | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

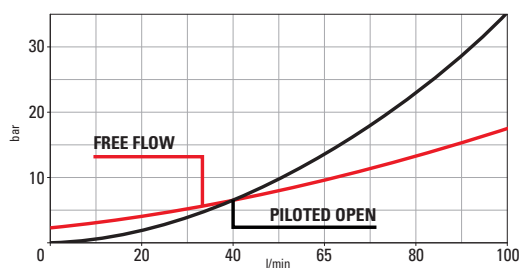
Load holding valves Normale 31NPS S FC1 PL 3/8



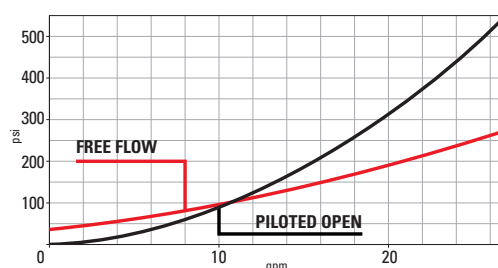
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V1, V2, C1: G 3/8 M: G 1/4, M1: G 1/8 C2: $\phi 9$
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114,5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,32 Kg (2,9 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



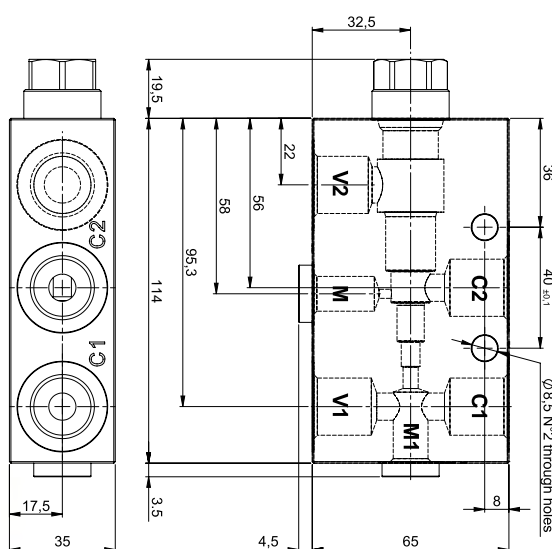
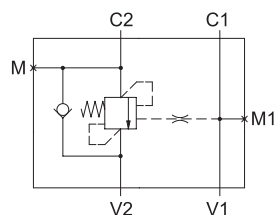
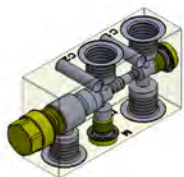
S | N | S | 3 | 1 | 3 | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

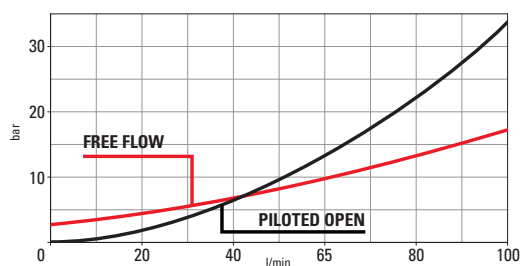
Load holding valves Normale 31NPS S L 1/2 F



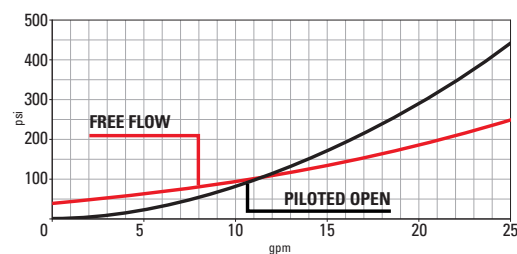
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1, C2: G 1/2 M, M1: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,8 Kg (3,95 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



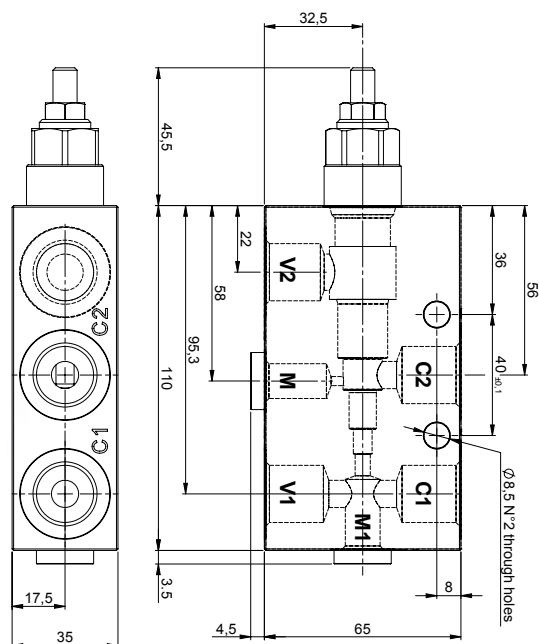
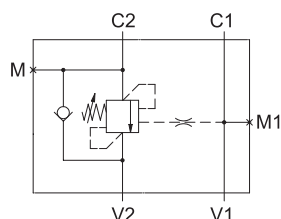
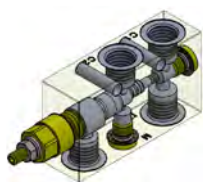
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04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

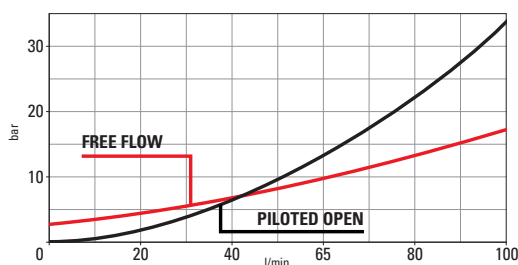
Load holding valves Normale 31NPS S L 1/2



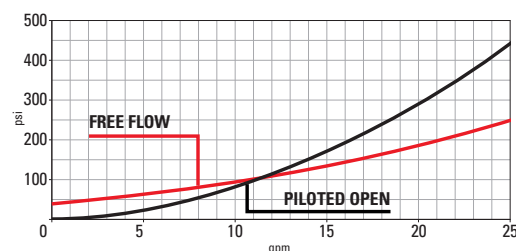
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1, C2: G 1/2 - M, M1: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114,5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,85 Kg (4 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



S | N | S | 3 | 1 | L | | | G | 1 | 2 | | 0 | 0 | 0

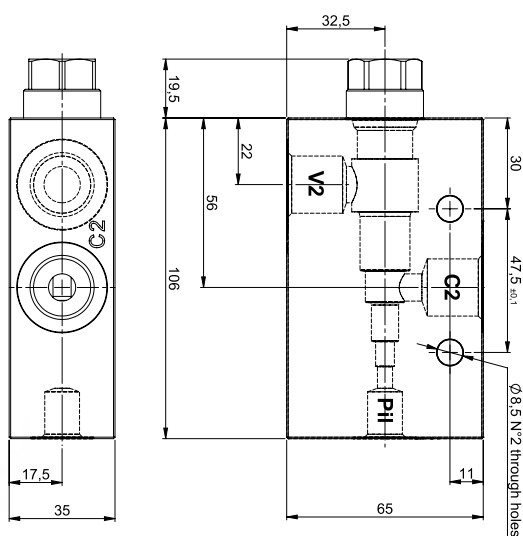
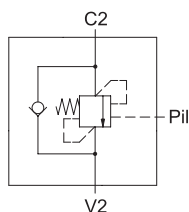
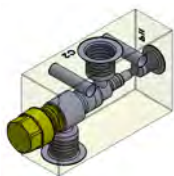
04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

8:1

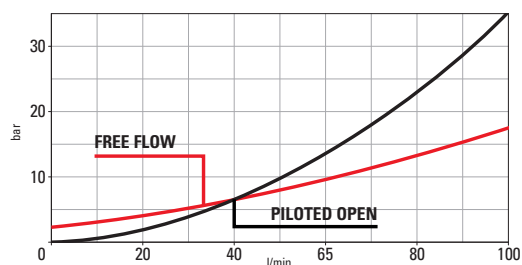
Load holding valves Normale 31NPS S L PIL 1/2 F



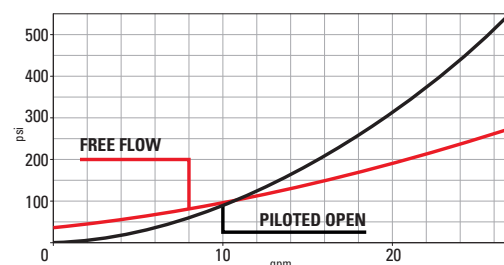
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V2, C2: G 1/2 Pil: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,75 Kg (3,85 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



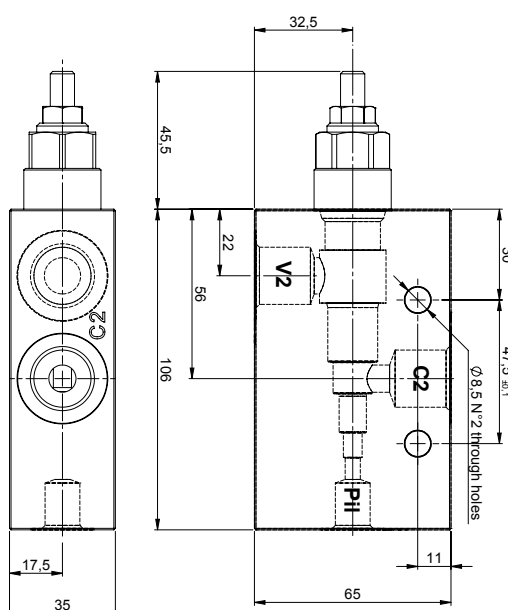
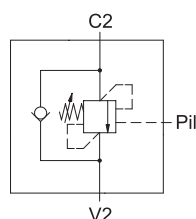
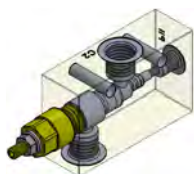
S | N | S | 3 | 1 | P | | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

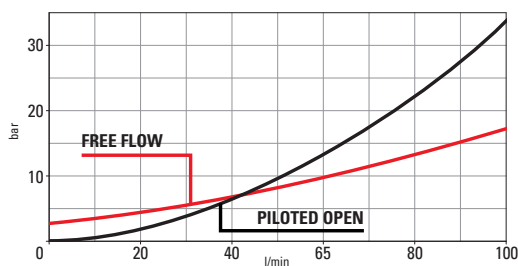
Load holding valves Normale 31NPS S L PIL 1/2



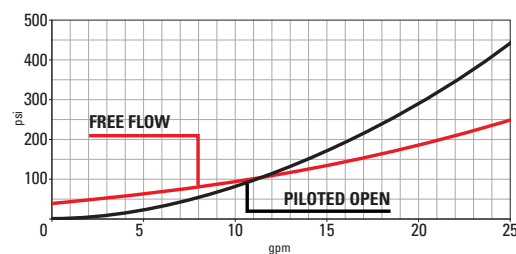
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V2, C2: G 1/2 Pil: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114.5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,8 Kg (3,95 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



S | N | S | 3 | 1 | P | | | G | 1 | 2 | | 0 | 0 | 0

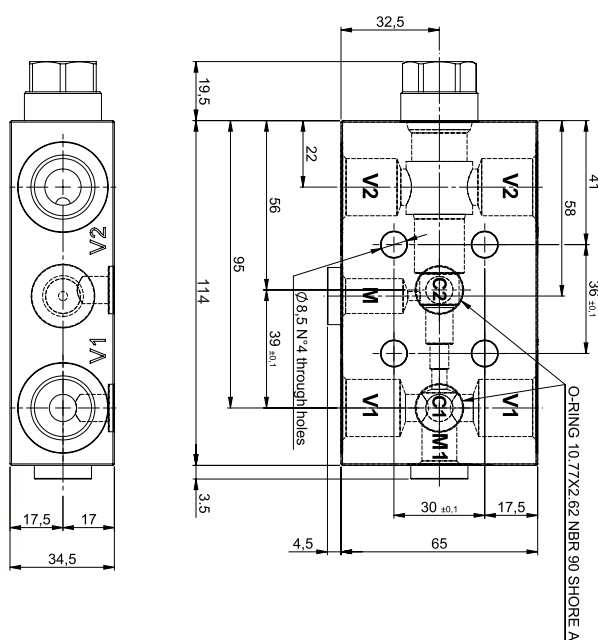
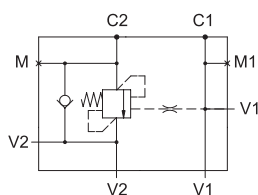
04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

Load holding valves

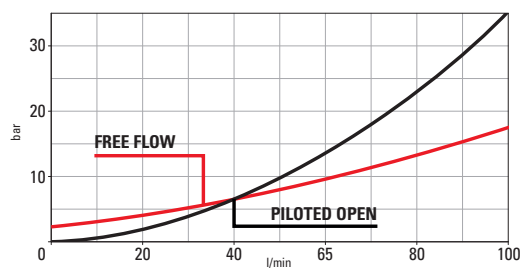
Normale 31NPS S FC2 1/2 F



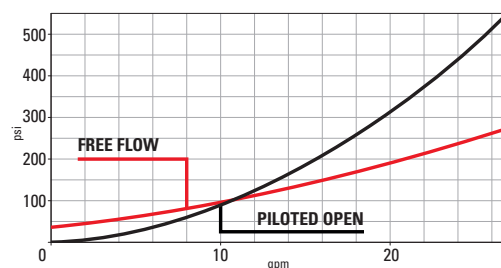
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 1/2 M, M1: G 1/4 C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,74 Kg (3,83 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



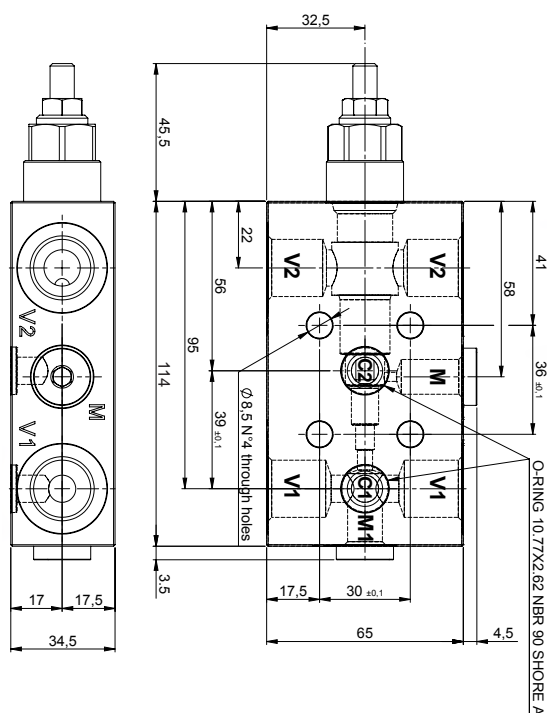
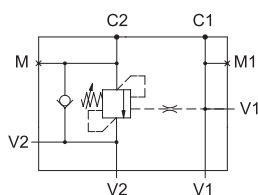
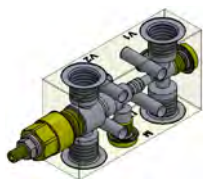
S | N | S | 3 | 1 | 2 | | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

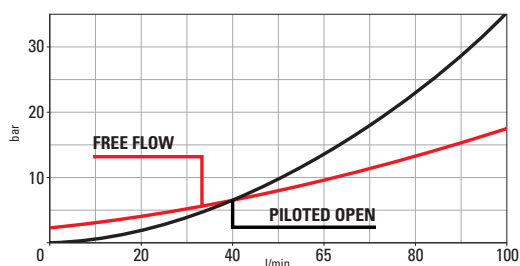
Load holding valves Normale 31NPS S FC2 1/2



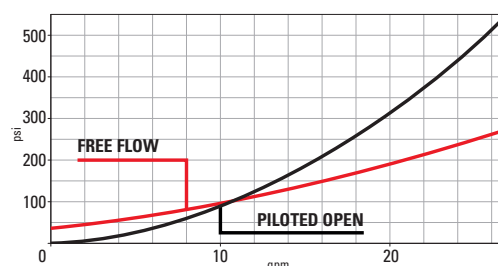
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 1/2 - M, M1: G 1/4 - C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114.5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,77 Kg (3,9 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



S | N | S | 3 | 1 | 2 | | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

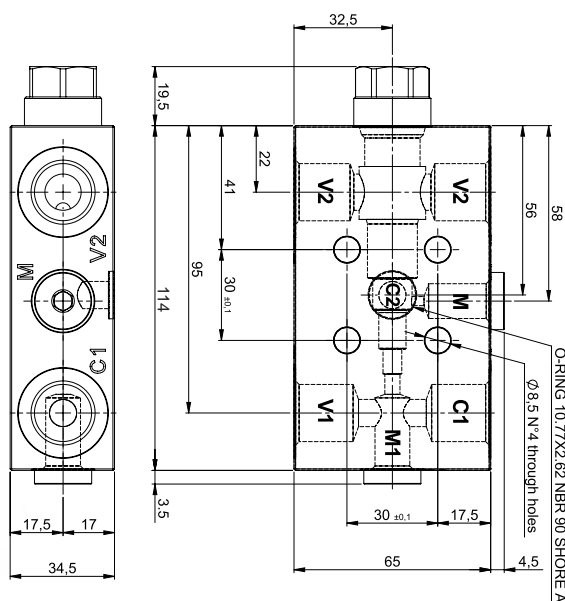
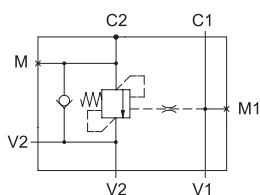
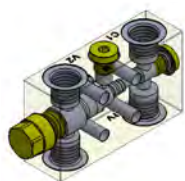
4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

8:1

Load holding valves

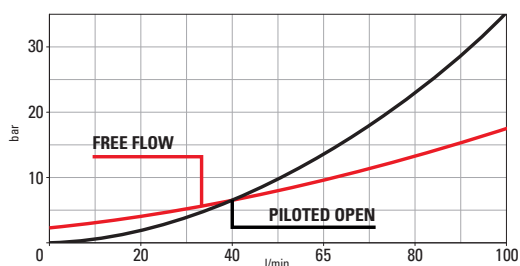
Normale 31NPS S FC1 PL 1/2 F



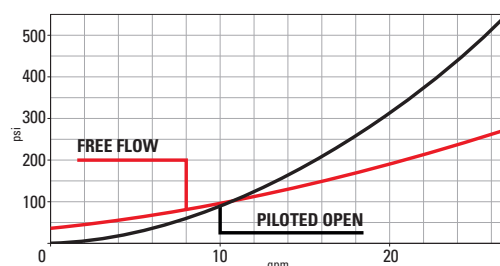
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1: G 1/2 M, M1: G 1/4 C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,75 Kg (3,85 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



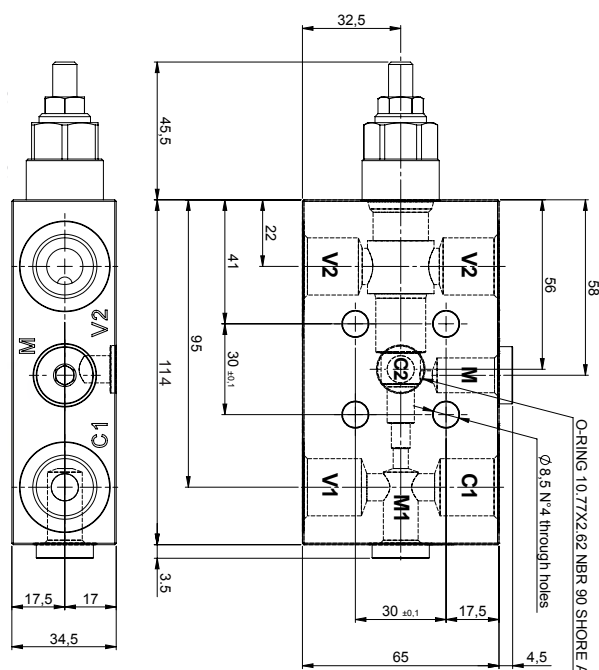
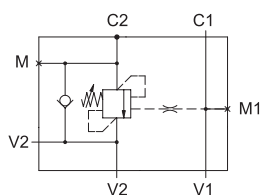
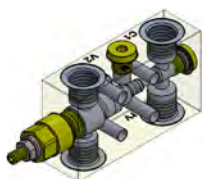
S | N | S | 3 | 1 | 3 | | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

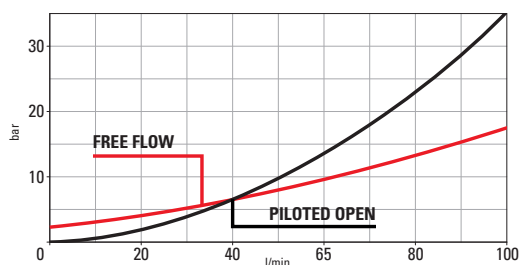
Load holding valves Normale 31NPS S FC1 PL 1/2



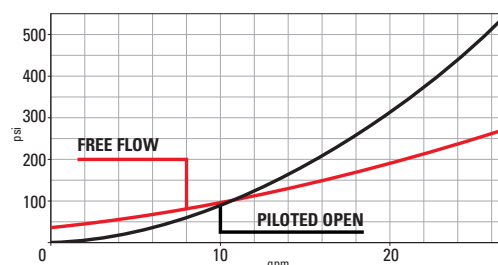
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1: G 1/2 - M, M1: G 1/4 - C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114.5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,78 Kg (3,92 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



S | N | S | 3 | 1 | 3 | | | G | 1 | 2 | | 0 | 0 | 0

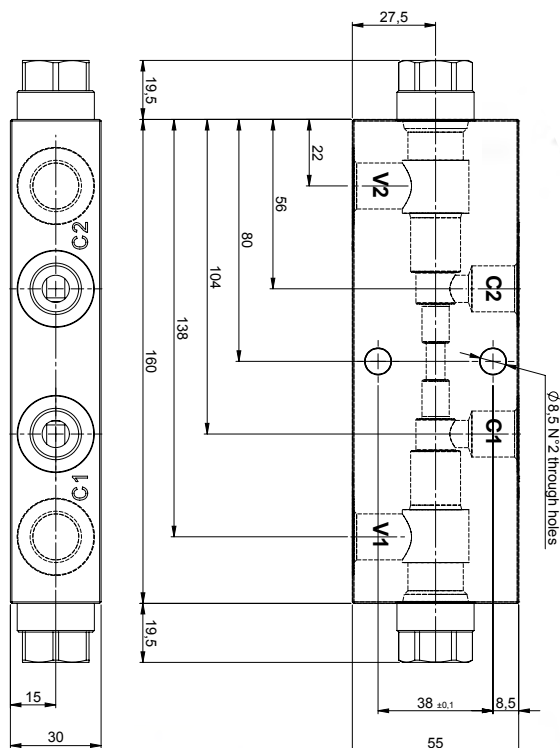
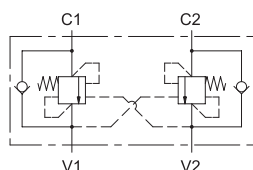
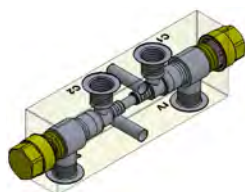
04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

8:1

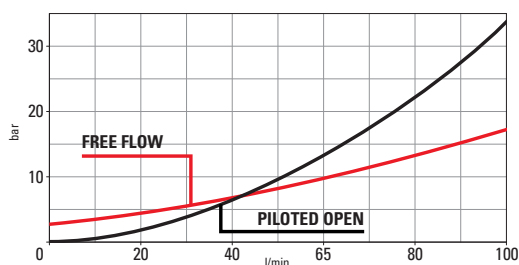
Load holding valves Normale 31NPS D L 3/8 F



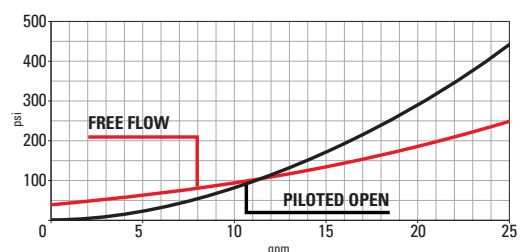
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1, C2: G 3/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,94 Kg (4,27 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



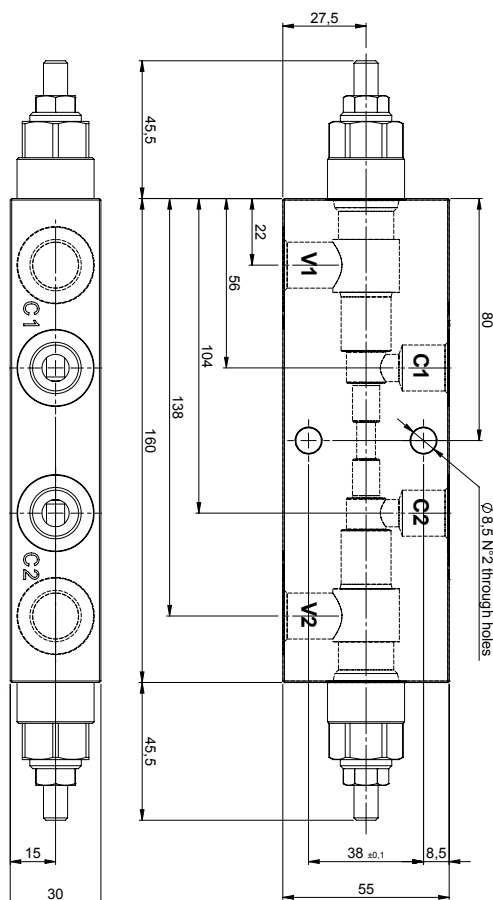
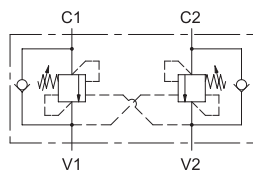
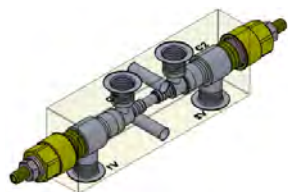
S | N | D | 3 | 1 | L | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

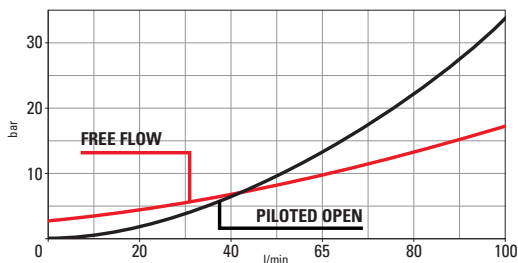
Load holding valves Normale 31NPS D L 3/8



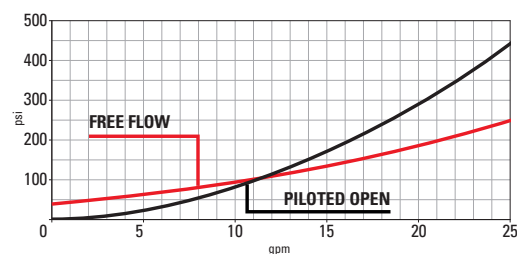
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V1, V2, C1, C2: G 3/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114,5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	2 Kg (4,4 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



S | N | D | 3 | 1 | L | | | G | 3 | 8 | | 0 | 0 | 0

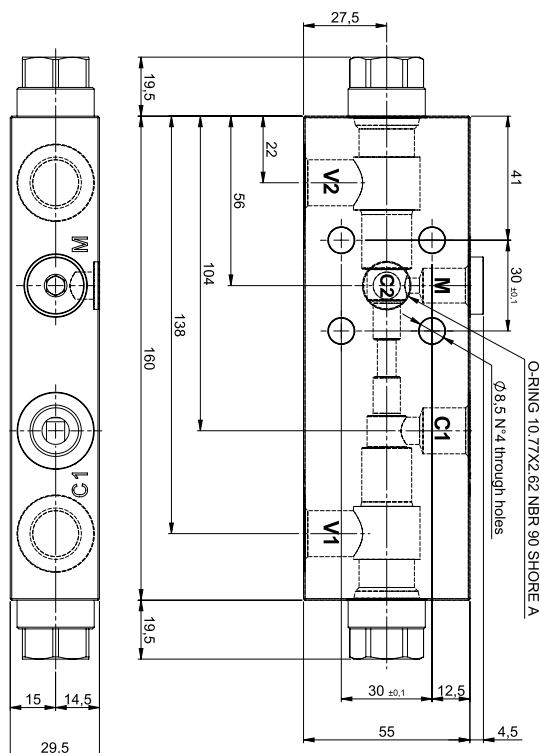
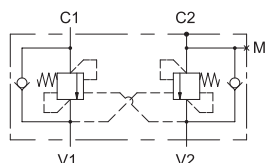
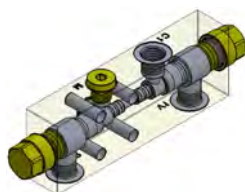
04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

Load holding valves

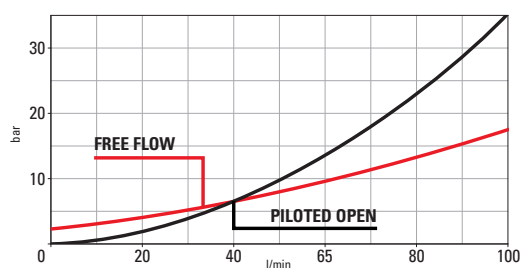
Normale 31NPS D FC1 3/8 F



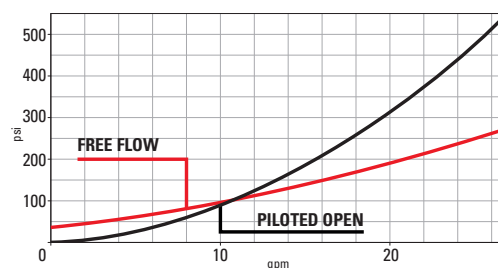
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1: G 3/8 M: G 1/4 C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,92 Kg (4,23 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



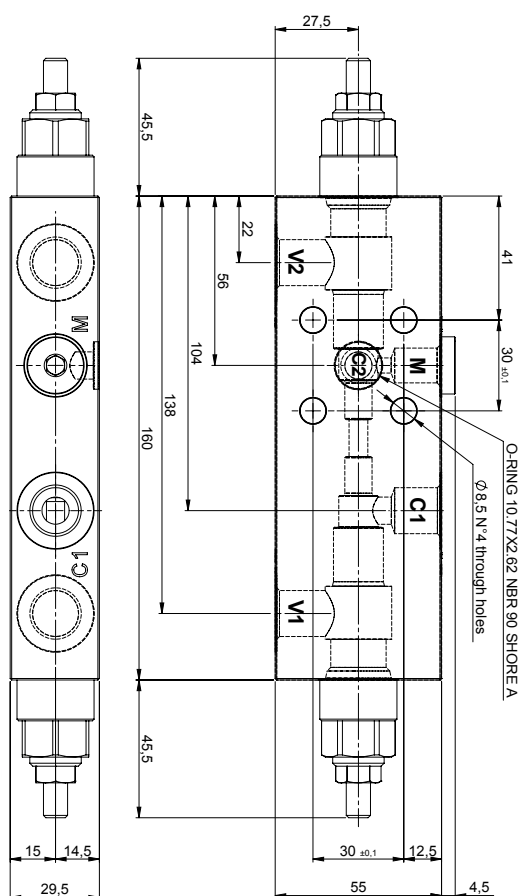
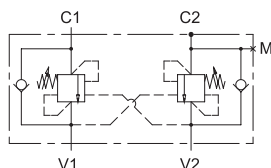
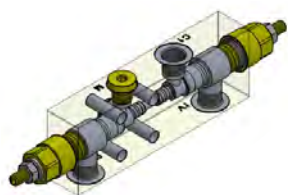
S | N | D | 3 | 1 | 1 | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

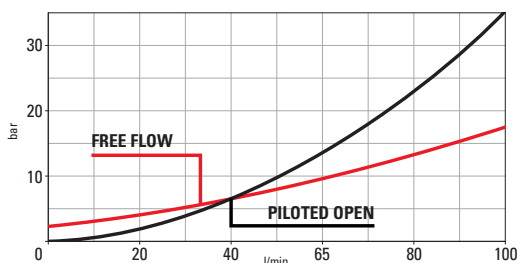
Load holding valves Normale 31NPS D FC1 3/8



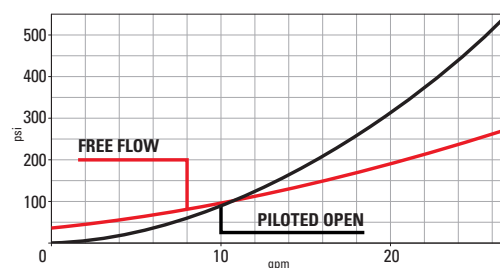
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1: G 3/8 - M: G1/4 - C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114,5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	2 Kg (4,4 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



S | N | D | 3 | 1 | 1 | | | G | 3 | 8 | | 0 | 0 | 0

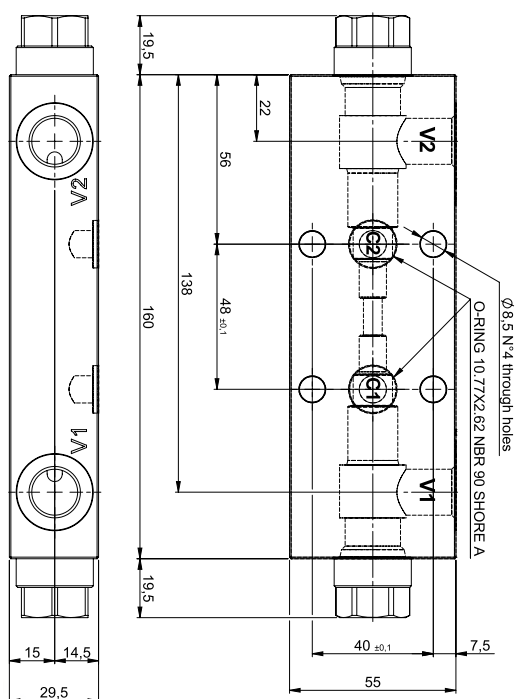
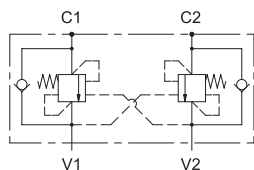
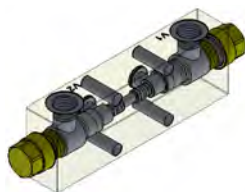
04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

Load holding valves

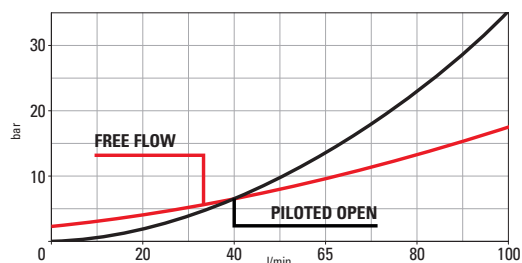
Normale 31NPS D FC2 3/8 F



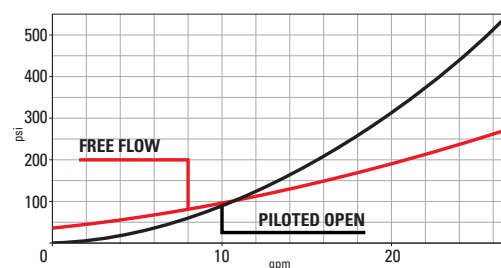
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 3/8 C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	1,9 Kg (4,18 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



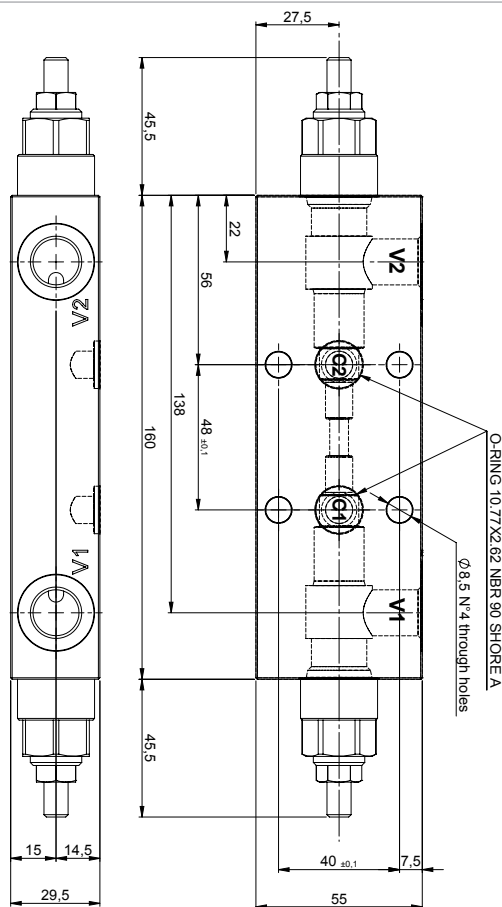
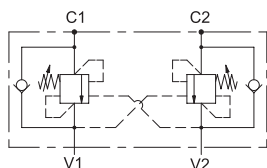
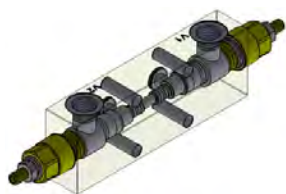
S | N | D | 3 | 1 | 2 | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

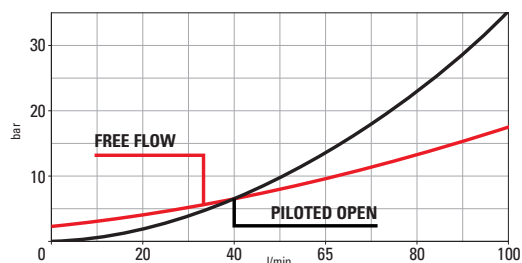
Load holding valves Normale 31NPS D FC2 3/8



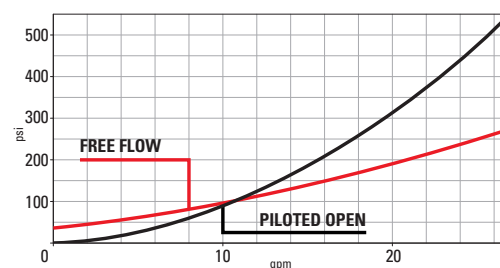
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 3/8 - C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114,5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	2 Kg (4,4 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



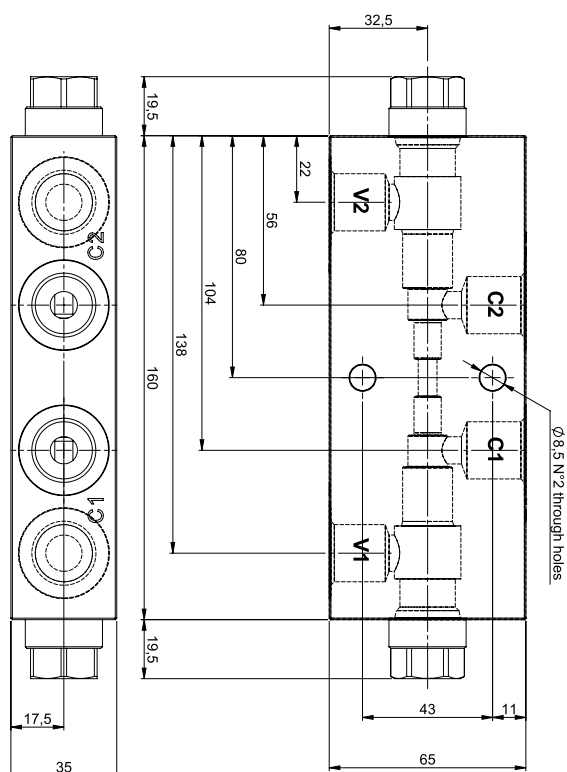
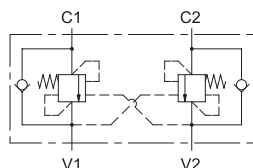
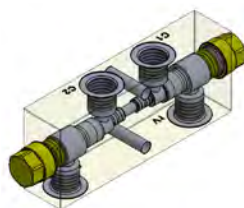
S | N | D | 3 | 1 | 2 | | | G | 3 | 8 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

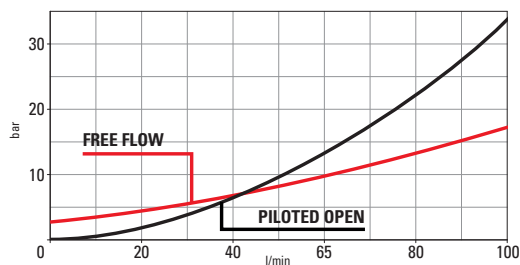
Load holding valves Normale 31NPS D L 1/2 F



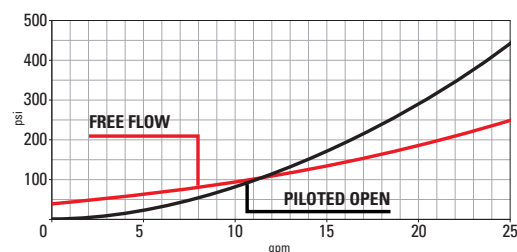
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1, C2: G 1/2
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	2,63 Kg (5,8 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



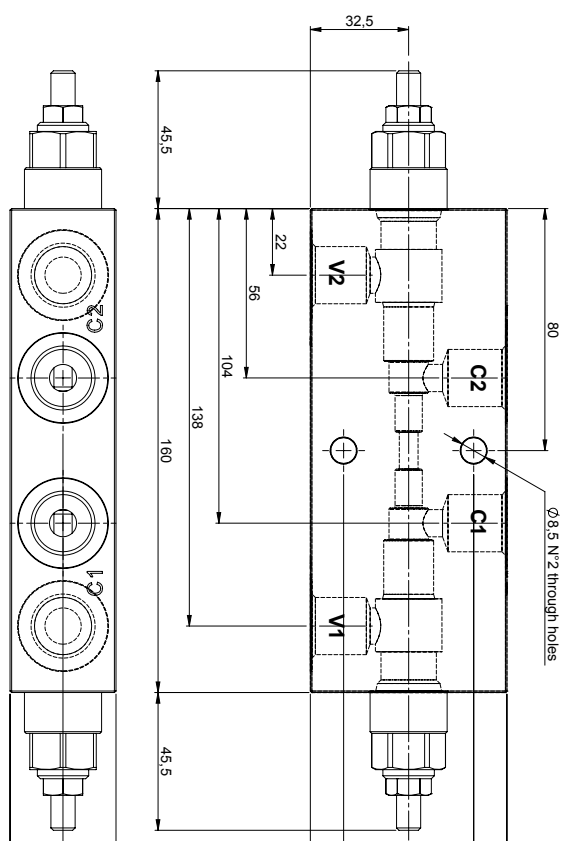
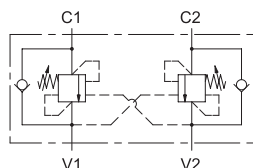
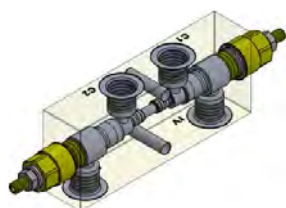
S | N | D | 3 | 1 | L | | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

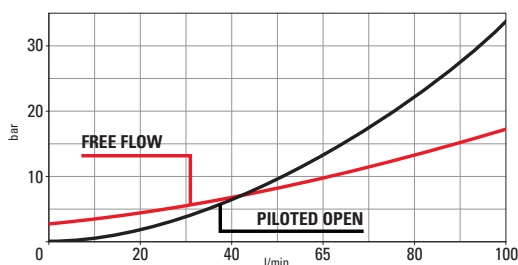
Load holding valves Normale 31NPS D L 1/2



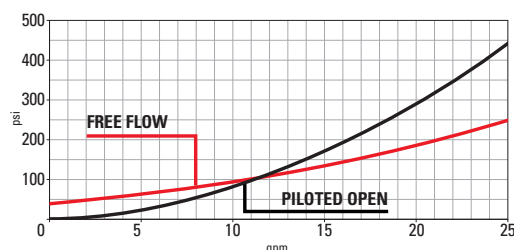
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1, C2 : G 1/2
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114.5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	2,7 Kg (5,95 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



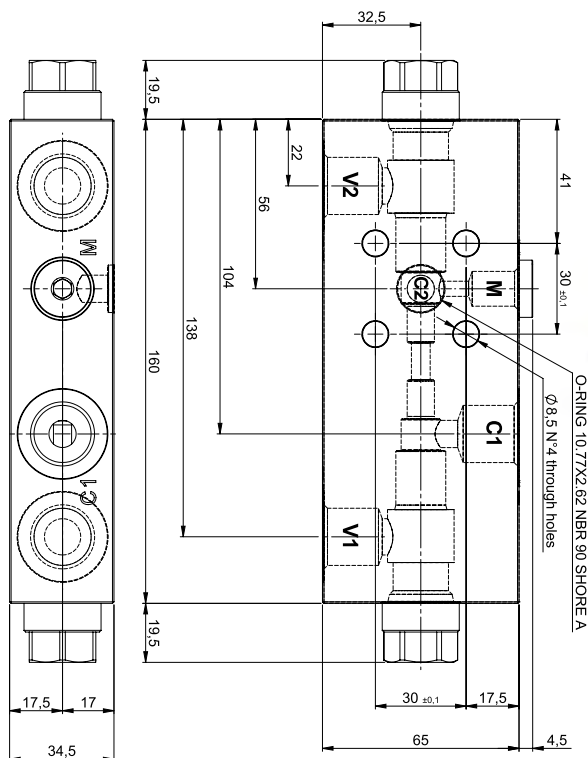
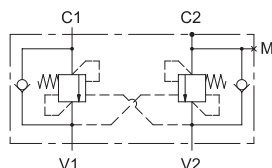
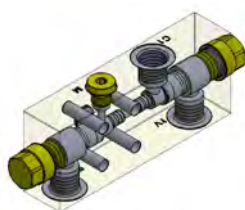
S | N | D | 3 | 1 | L | | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

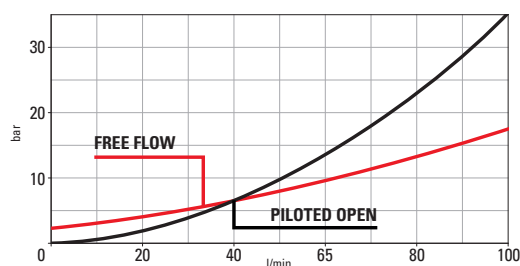
Load holding valves Normale 31NPS D FC1 1/2 F



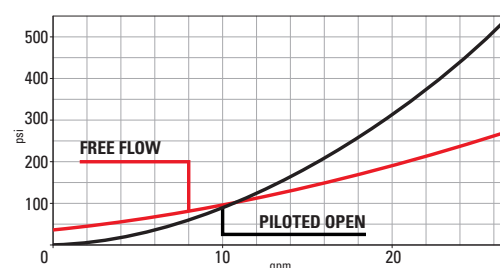
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1: G 1/2 M: G 1/4 C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	2,6 Kg (5,73 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



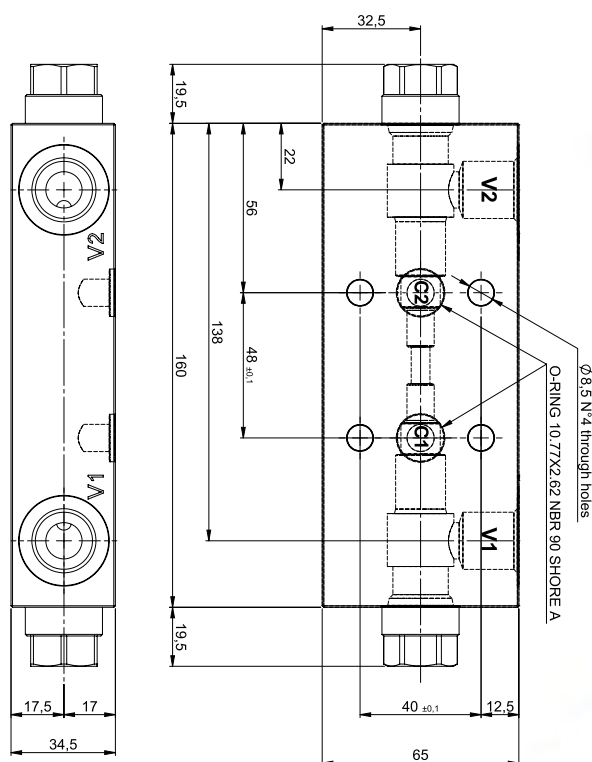
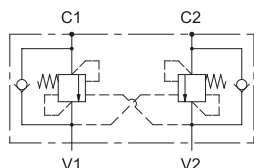
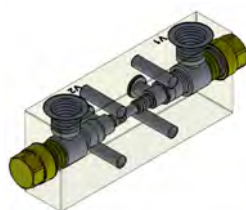
S | N | D | 3 | 1 | 1 | | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

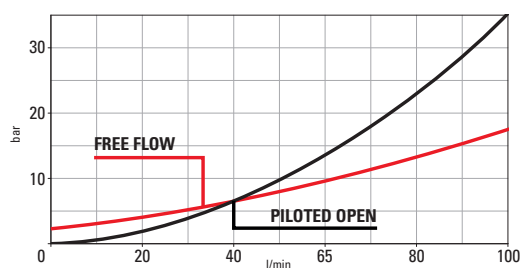
Load holding valves Normale 31NPS D FC2 1/2 F



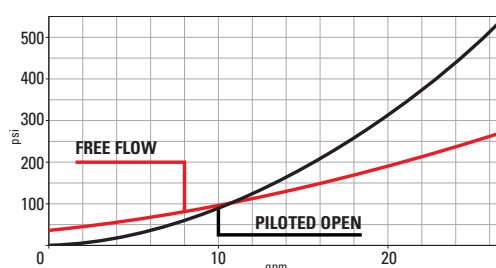
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V1, V2: G 1/2 C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
valve weight	2,65 Kg (5,84 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



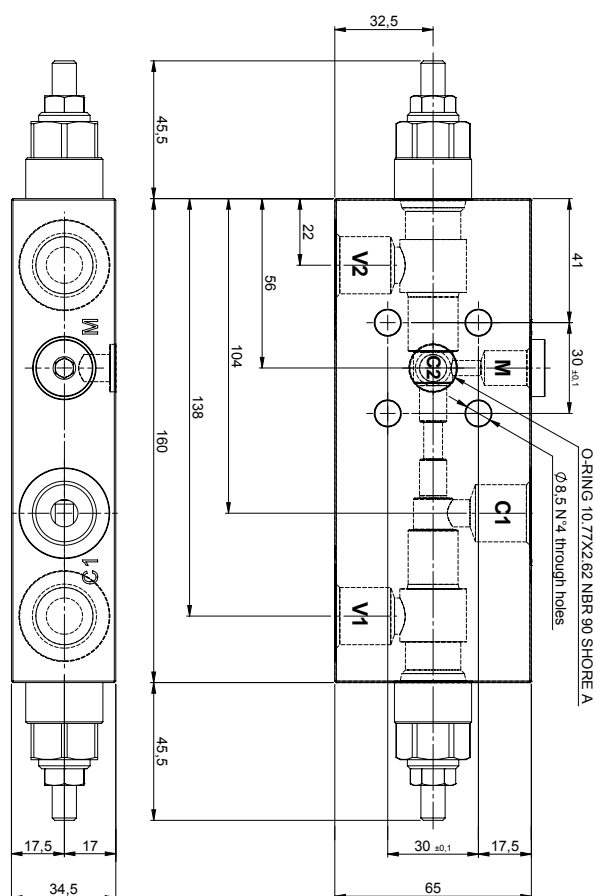
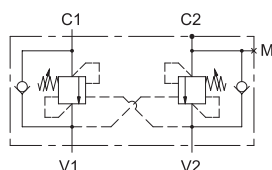
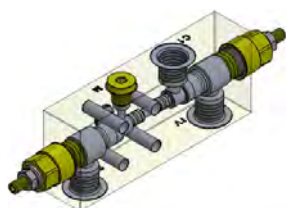
S | N | D | 3 | 1 | 2 | | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring I = 60-210 bar
(Standard Setting 200 bar)
Spring H = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring I = 100-380 bar
(Standard Setting 200 bar)
Spring H = 200-420 bar
(Standard Setting 350 bar)

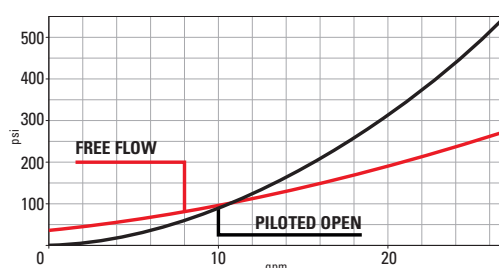
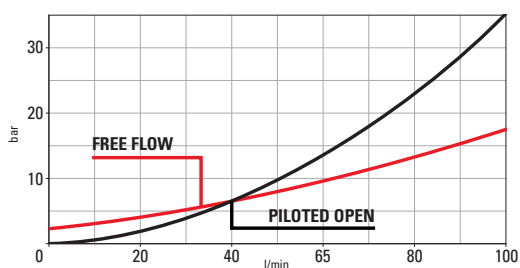
Load holding valves
Normale 31NPS D FC1 1/2



Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1: G 1/2 - M: G 1/4 - C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114,5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	2,68 Kg (5,9 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves

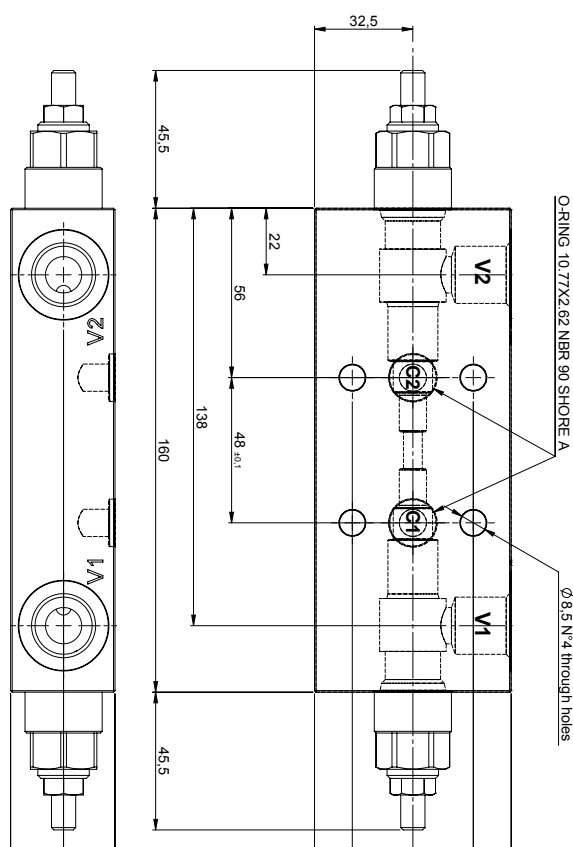
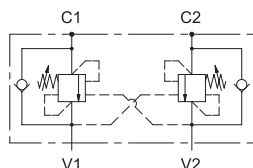
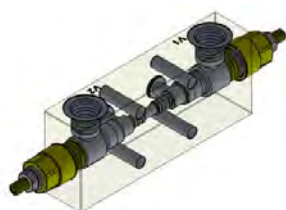
S	N	D	3	1	1			G	1	2		0	0	0
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04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
8:1 (Standard Setting 350 bar)

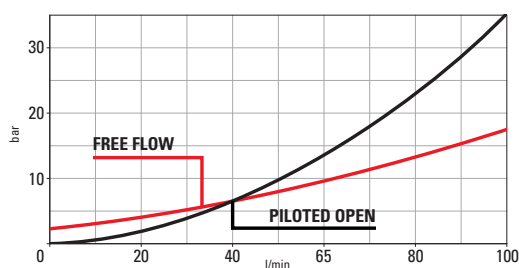
Load holding valves Normale 31NPS D FC2 1/2



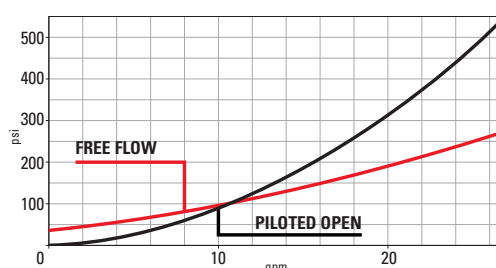
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 1/2 - C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi): 4:1 100 bar (1450 psi): 8:1
pressure increase per turn	4:1 Spring M: 61.5 bar/turn Spring D: 137 bar/turn 8:1 Spring M: 114.5 bar/turn Spring D: 256 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	2,72 Kg (5,99 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory
- For 2:1 pilot ratio please consult factory



Performance curves



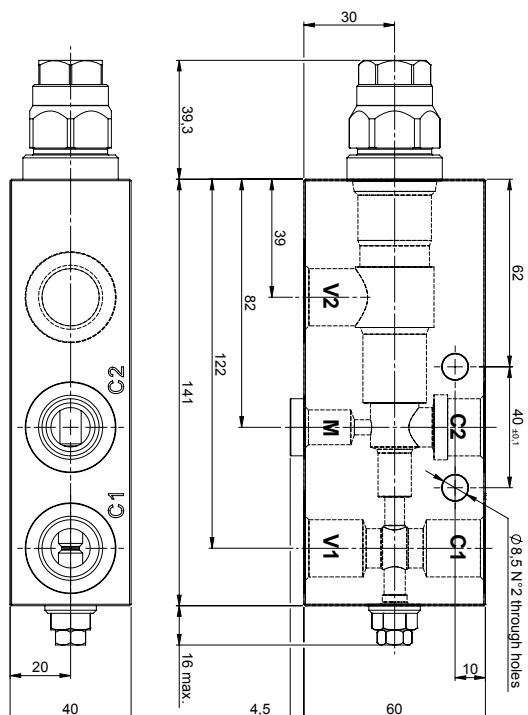
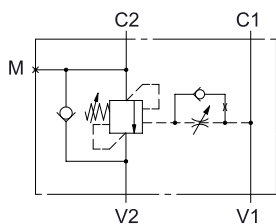
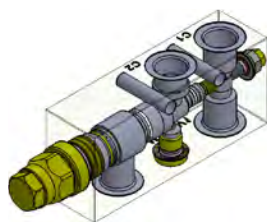
S | N | D | 3 | 1 | 2 | | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

4:1 Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

8:1 Spring M = 100-380 bar
(Standard Setting 200 bar)
Spring D = 200-420 bar
(Standard Setting 350 bar)

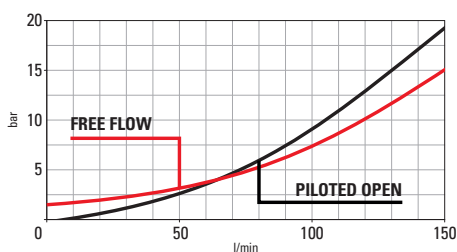
Load holding valves Normale 34 S L 1/2



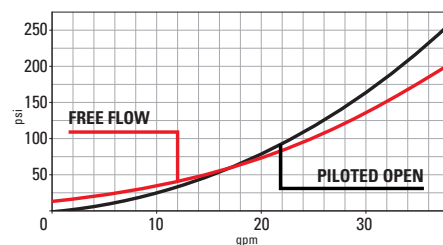
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, C2, V1, V2: G 1/2 M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,47 Kg (5,4 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



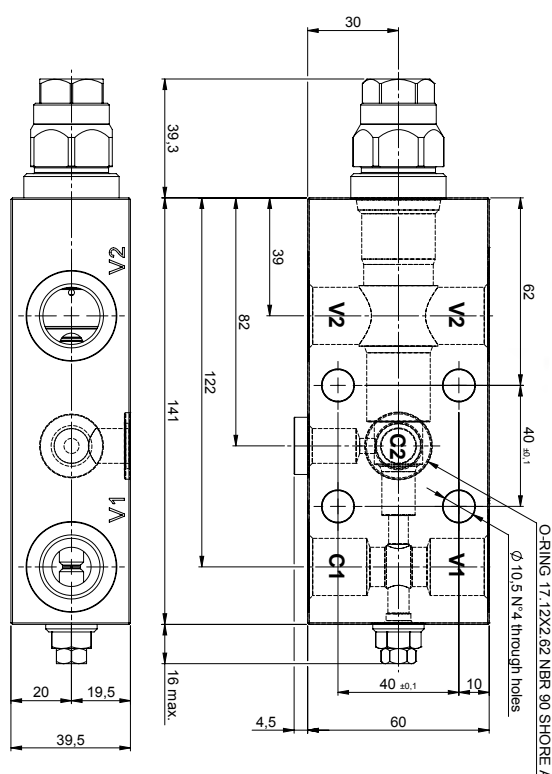
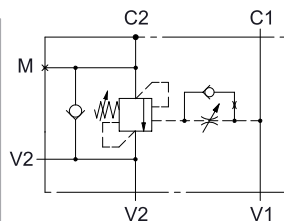
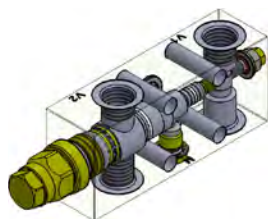
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

N S 3 4 L | G 1 2 | 0 0 0

04 = 4:1
08 = 8:1

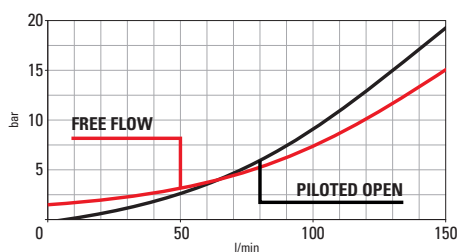
Load holding valves Normale 34 S FC1 PL 1/2



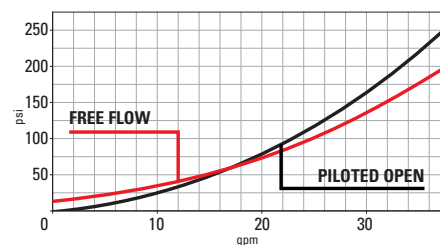
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, V1, V2: G 1/2 C2: ϕ 15, M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,36 Kg (5,2 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK190SH1712X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



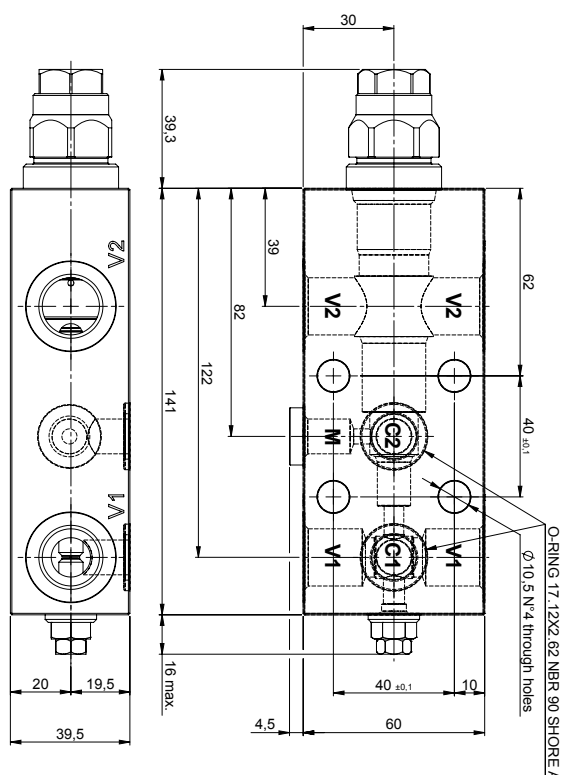
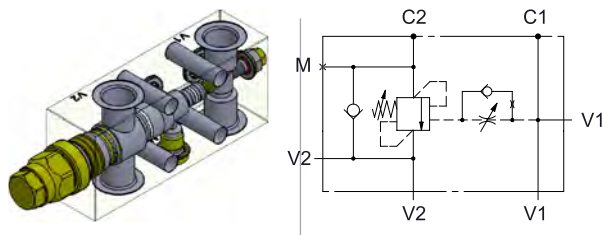
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

N | S | 3 | 4 | 1 | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

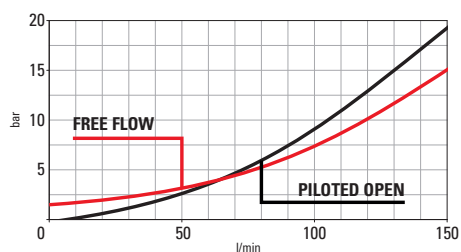
Load holding valves Normale 34 S FC2 1/2



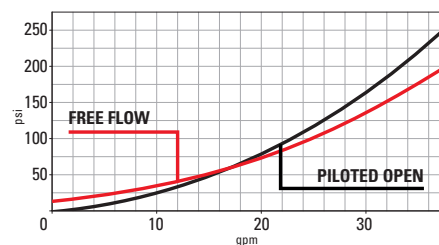
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	V1, V2: G 1/2 C1, C2: ϕ 15, M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,35 Kg (5,18 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1712X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



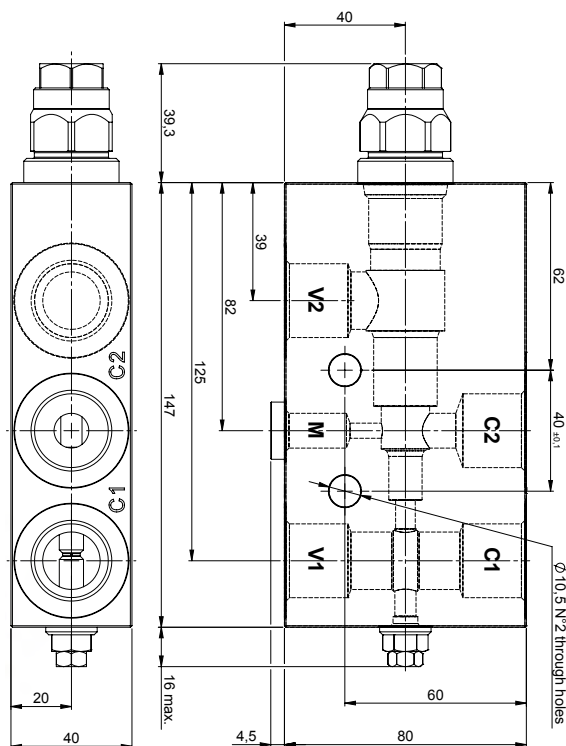
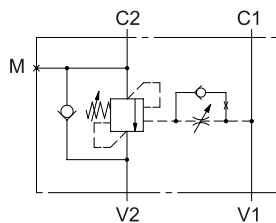
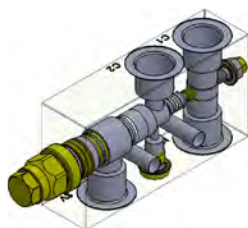
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-350 bar
(Standard Setting 350 bar)

N | S | 3 | 4 | 2 | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

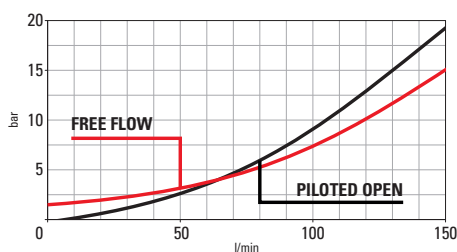
Load holding valves Normale 34 S L 3/4



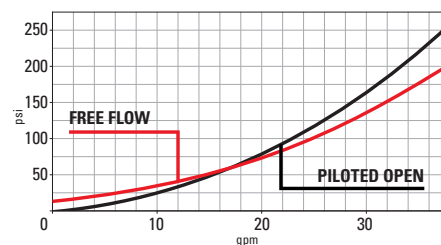
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, C2, V1, V2: G 3/4 M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	3,26 Kg (7,2 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



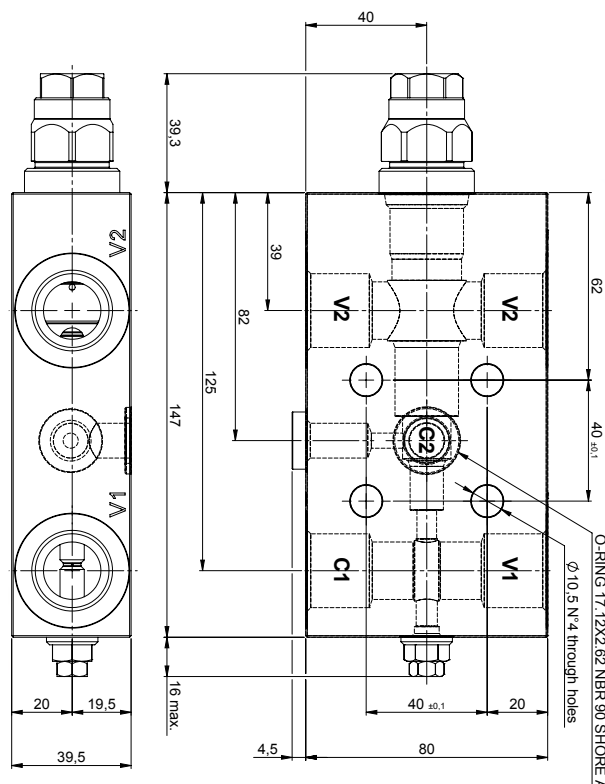
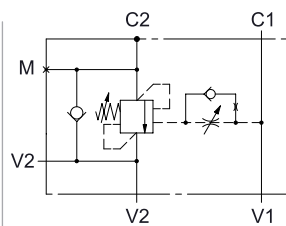
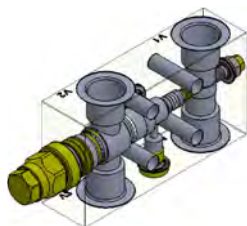
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

N S 3 4 L G 3 4 0 0 0

04 = 4:1
08 = 8:1

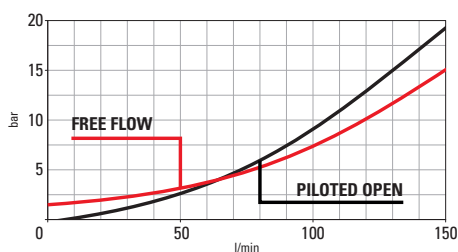
Load holding valves Normale 34 S FC1 PL 3/4



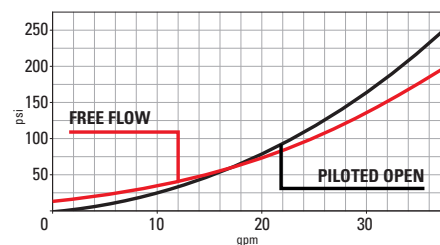
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, V1, V2: G 3/4 C2: Ø15, M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	3,13 Kg (6,9 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK190SH1712X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



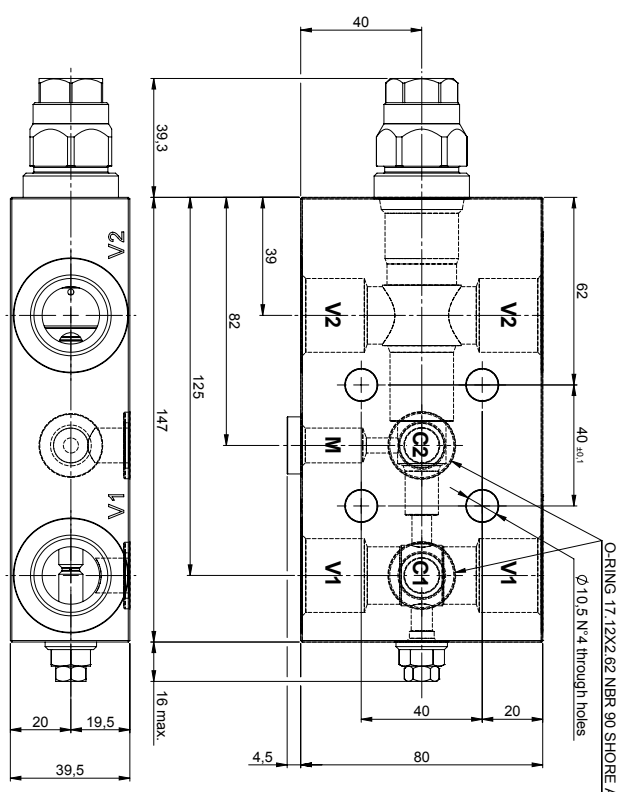
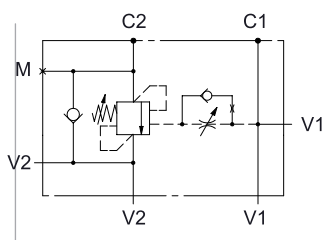
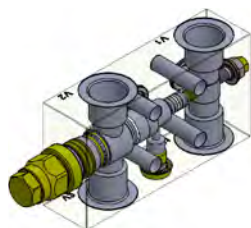
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

N | S | 3 | 4 | 1 | | G | 3 | 4 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

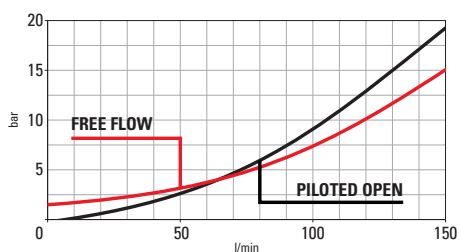
Load holding valves Normale 34 S FC2 3/4



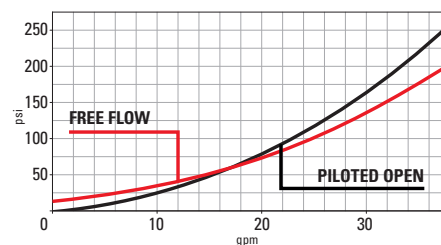
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	V1, V2: G 3/4 C1, C2: $\phi 15$, M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	3,13 Kg (6,9 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1712X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



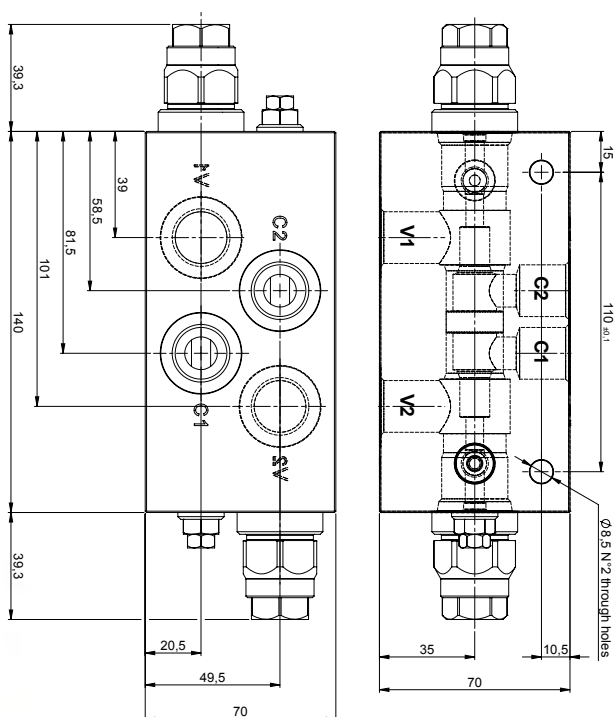
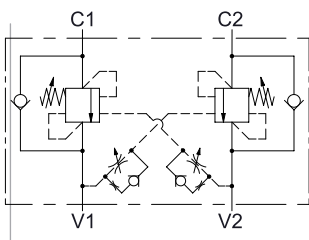
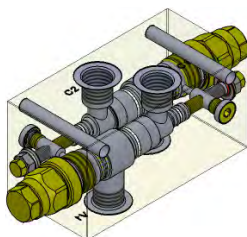
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

N S 3 4 2 | G 3 4 | 0 0 0

04 = 4:1
08 = 8:1

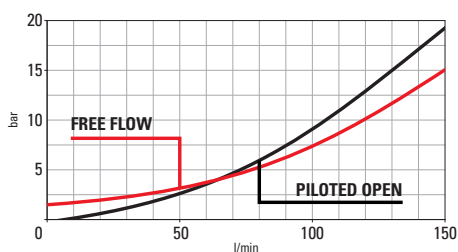
Load holding valves Normale 34 D L 1/2



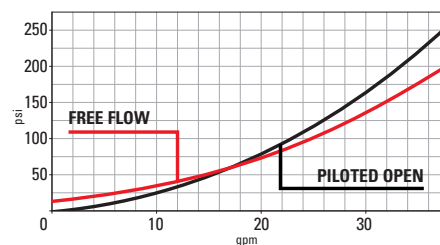
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, C2, V1, V2: G 1/2
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,3 Kg (5 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



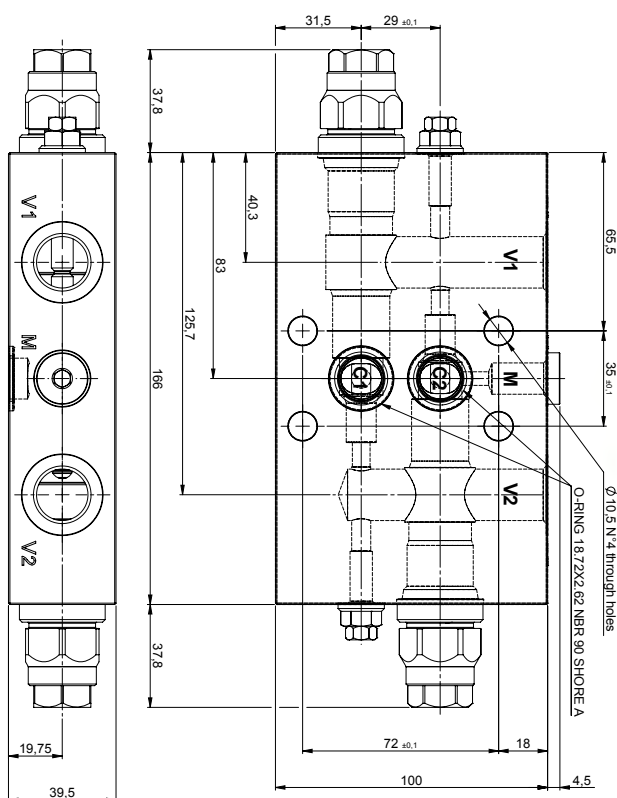
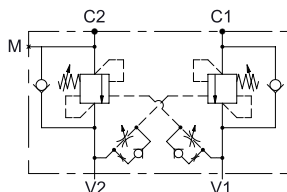
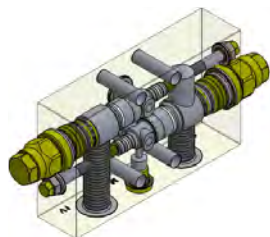
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

N | D | 3 | 4 | L | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

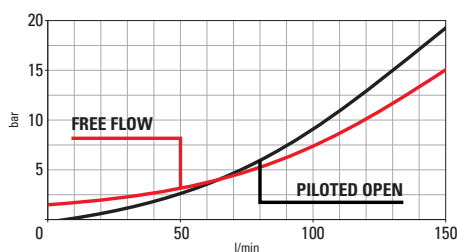
Load holding valves Normale 34 D FC2 1/2



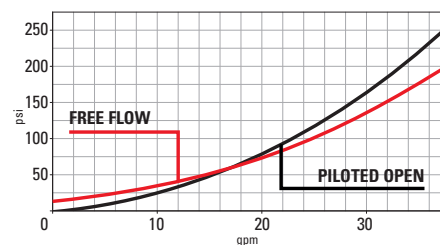
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	V1, V2: G 1/2 C1, C2: ϕ 15
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,2 Kg (4,85 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1812X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



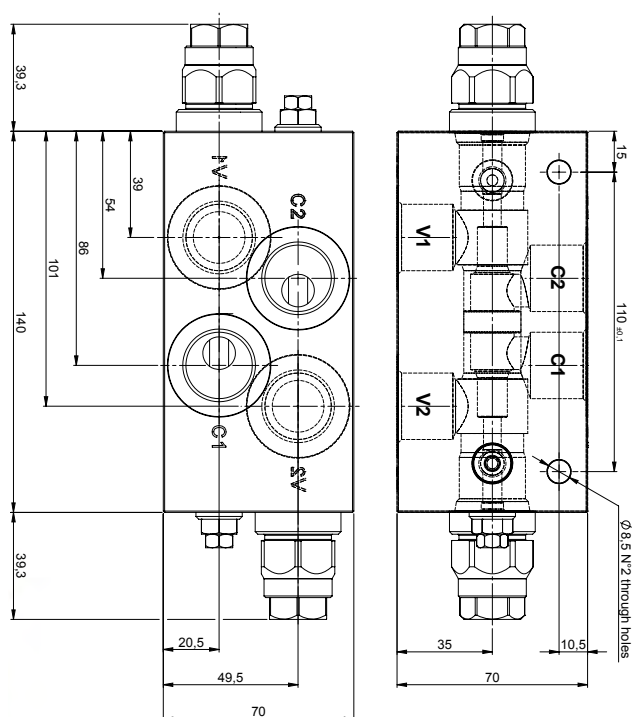
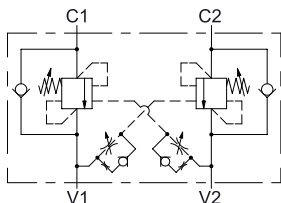
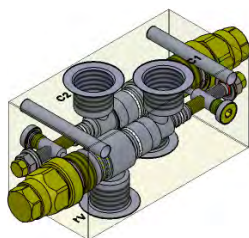
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

N D 3 4 2 | G 1 2 | 0 0 0

04 = 4:1
08 = 8:1

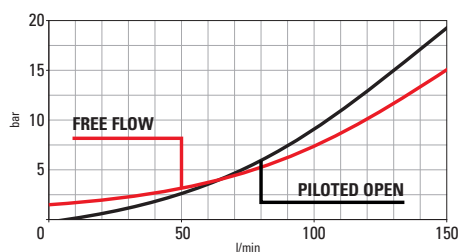
Load holding valves Normale 34 D L 3/4



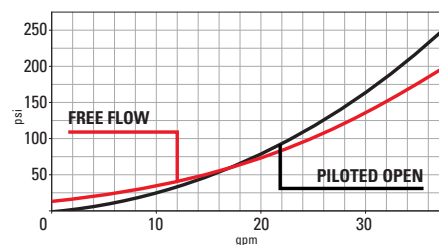
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, C2, V1, V2: G 3/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,3 Kg (5 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



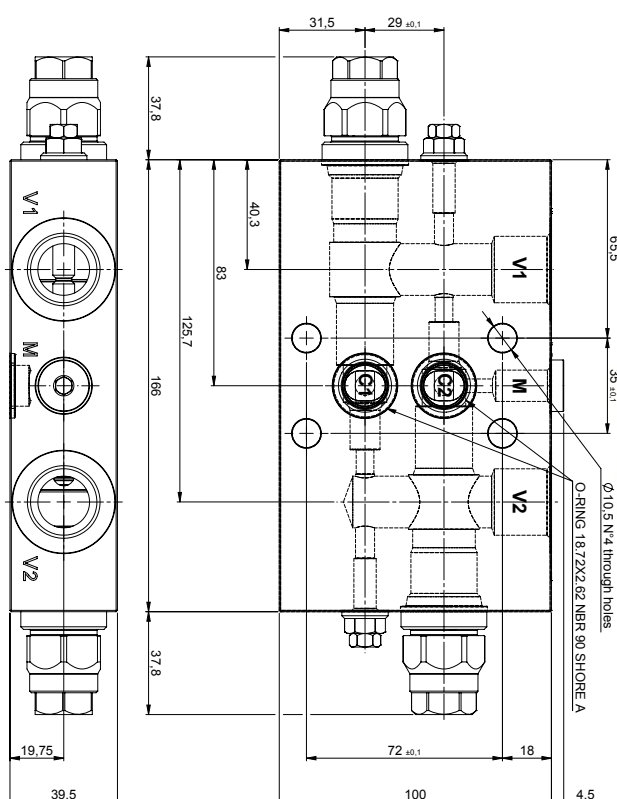
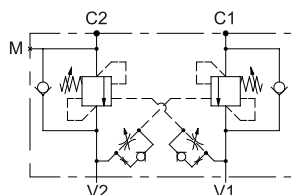
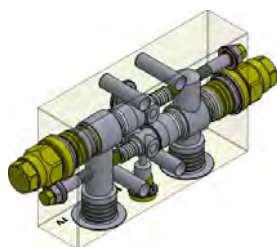
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

N D 3 4 L | G 3 4 | 0 0 0

04 = 4:1
08 = 8:1

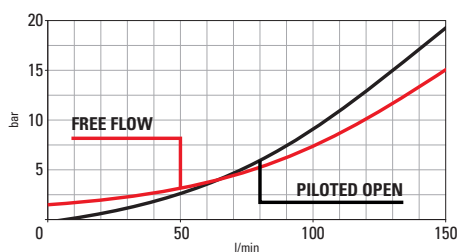
Load holding valves Normale 34 D FC2 3/4



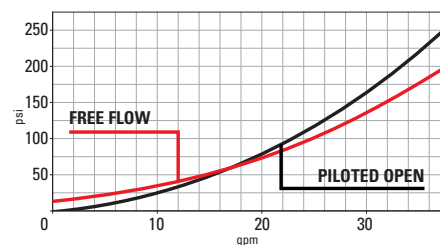
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	V1, V2: G 3/4 C1, C2: $\phi 15$
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,2 Kg (4,85 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1812X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



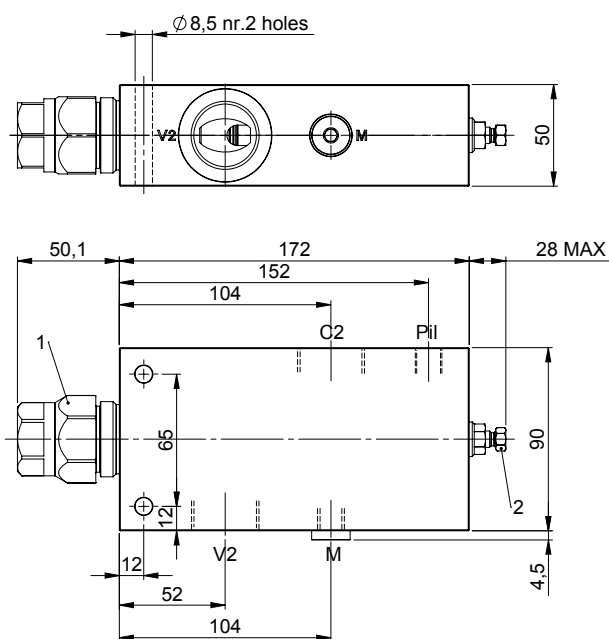
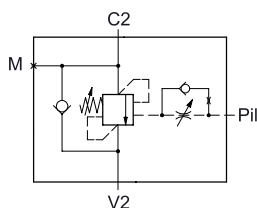
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-350 bar
(Standard Setting 350 bar)

N D 3 4 2 | G 3 4 | 0 0 0

04 = 4:1
08 = 8:1

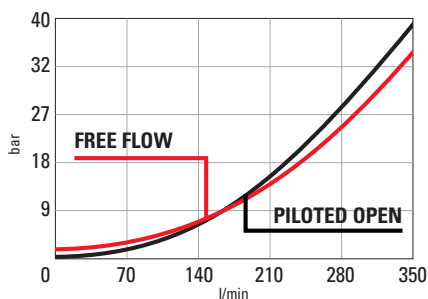
Load holding valves Normale 43 S L Pil 1



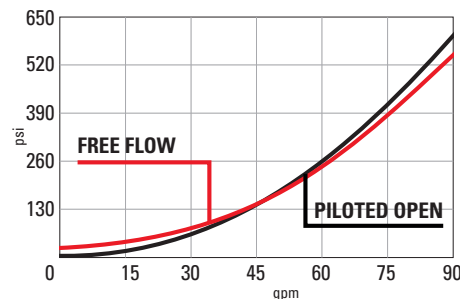
Technical Details

body material	zinc plated steel
capacity	350 lpm (93 gpm)
ports size	V2, C2: G 1 M, Pil: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	350 bar (5000 psi)
minimum setting	50 bar (750 psi)
pressure increase per turn	29 bar/turn (spring M) 48 bar/turn (spring D)
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve weight	5,75 kg (12,65 lbs)
external component surface treatment	zinc plating + sealing
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum body can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For special ports please consult factory



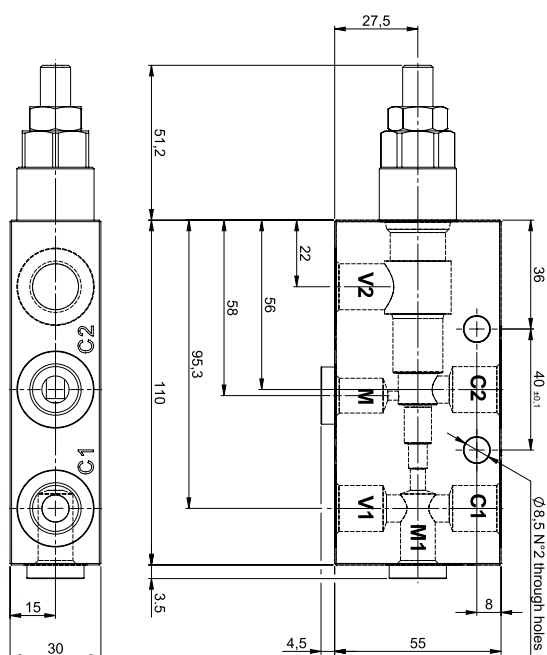
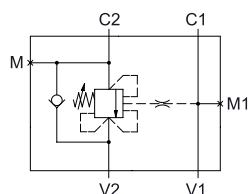
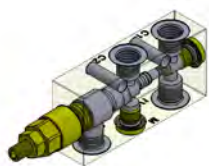
Performance curves



M = 50-210 bar
(Standard Setting 200 bar)
D = 150-350 bar
(Standard Setting 350 bar)

S | N | S | 4 | 3 | P | 0 | 4 | G | 0 | 1 | | 0 | 0 | 0

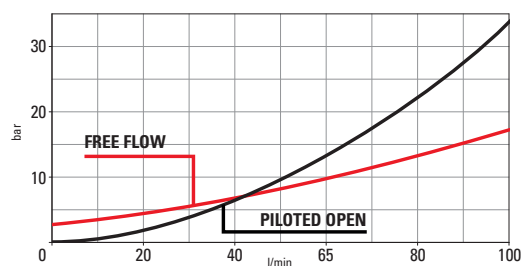
Load holding valves Compensata 31NPS S L 3/8



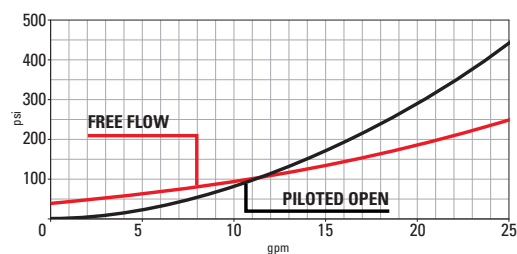
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1, C2: G 3/8, M: G 1/4, M1: G 1/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,37 Kg (3 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves

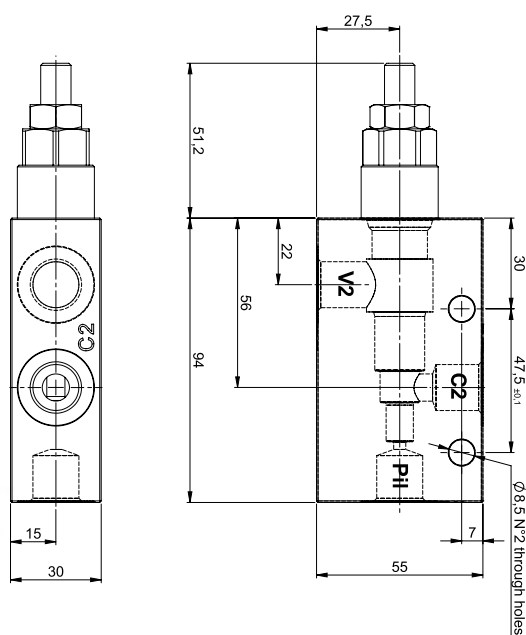
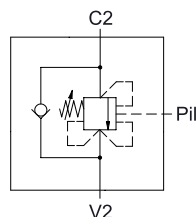
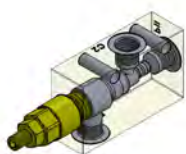


Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | S | 3 | 1 | L | 0 | 4 | G | 3 | 8 | | 0 | 0 | 0

Load holding valves

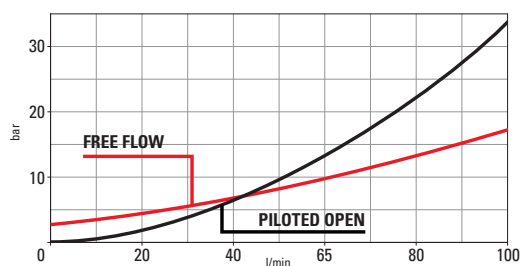
Compensata 31NPS S L PIL 3/8



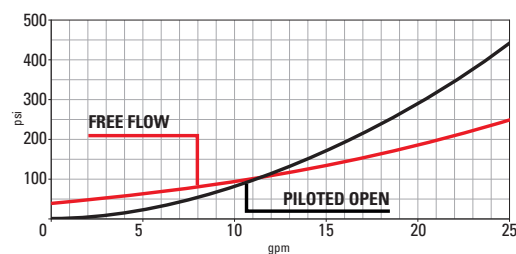
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V2, C2, Pil: G 3/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1 in 3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,15 Kg (2,5 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves

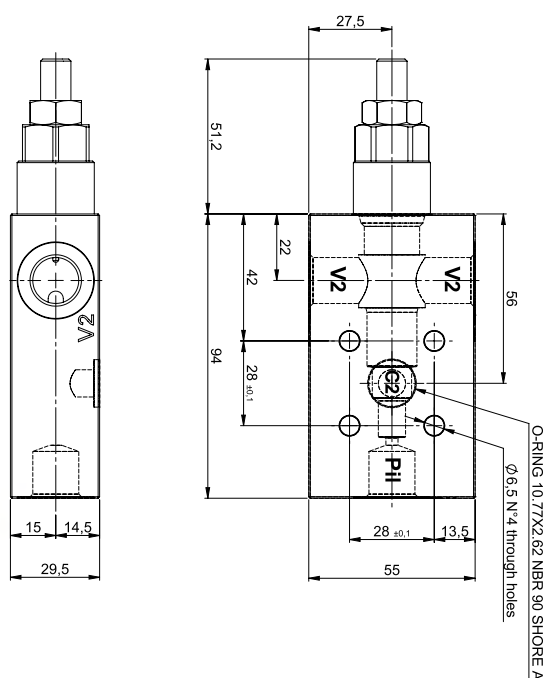
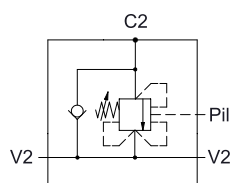
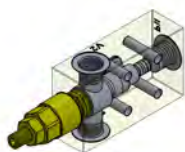


Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | S | 3 | 1 | P | 0 | 4 | G | 3 | 8 | | 0 | 0 | 0

Load holding valves

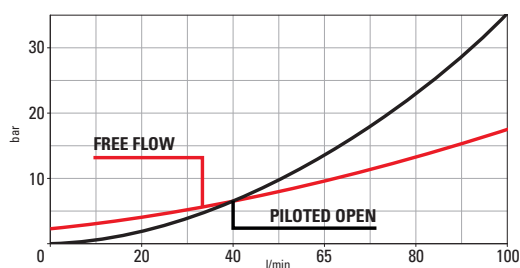
Compensata 31NPS S FC1 PIL 3/8



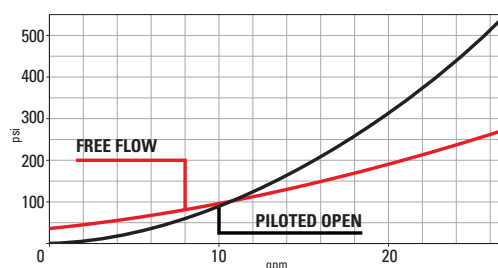
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V2, Pil: G 3/8 C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,12 Kg (2,46 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves

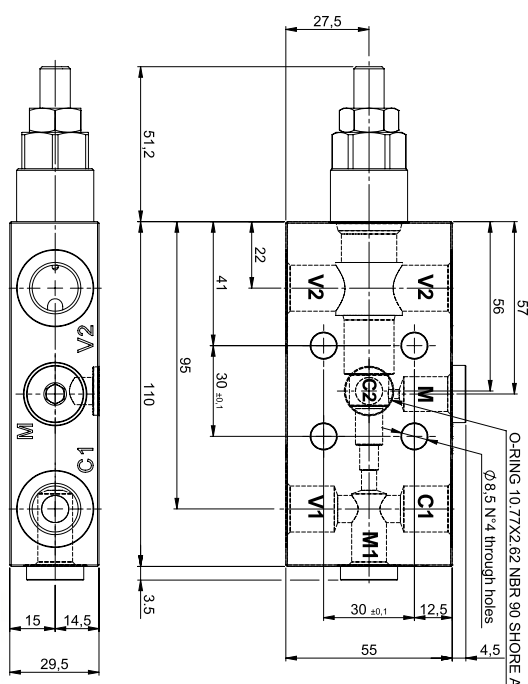
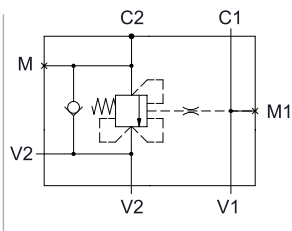
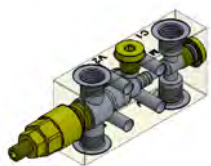


Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | S | 3 | 1 | 1 | 0 | 4 | G | 3 | 8 | | 0 | 0 | 0

Load holding valves

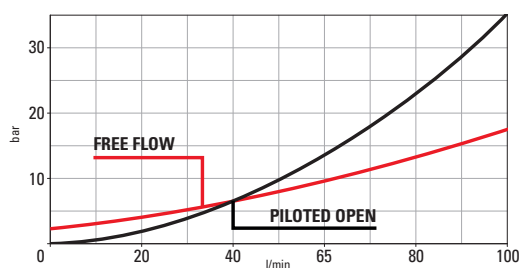
Compensata 31NPS S FC1 PL 3/8



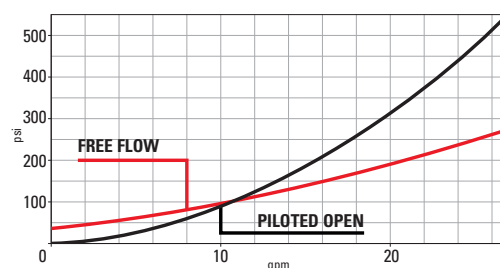
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V1, V2, C1: G 3/8 M: G 1/4, M1: G 1/8 C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,12 Kg (2,46 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



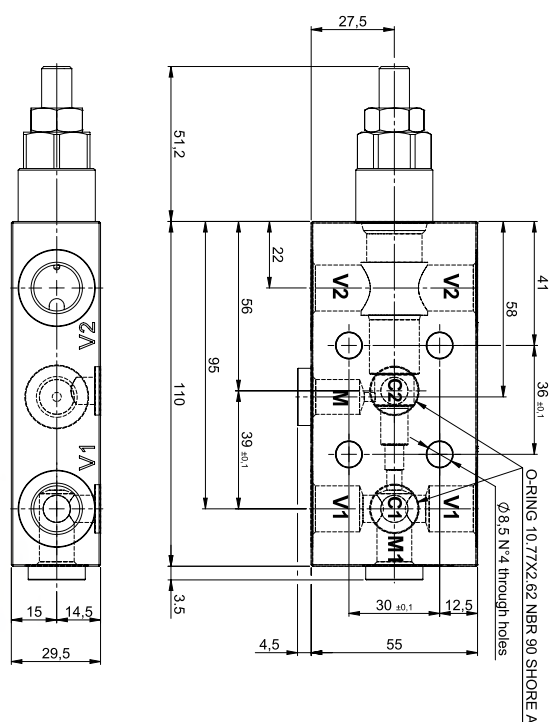
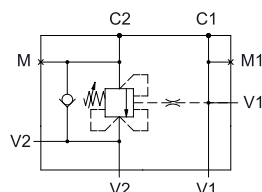
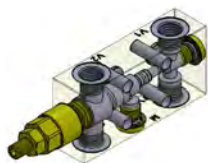
Performance curves



Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | S | 3 | 1 | 3 | 0 | 4 | G | 3 | 8 | | 0 | 0 | 0

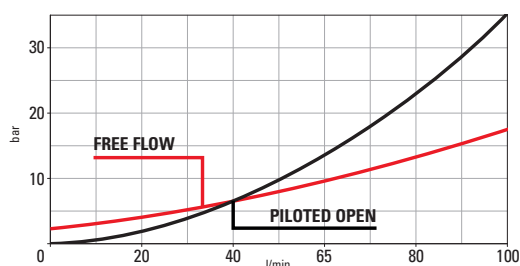
Load holding valves Compensata 31NPS S FC2 3/8



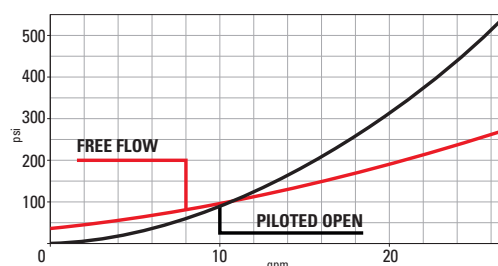
Technical Details

body material	aluminum or zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V1, V2: G 3/8 M: G 1/4, M1: G 1/8 C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,32 Kg (2,9 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



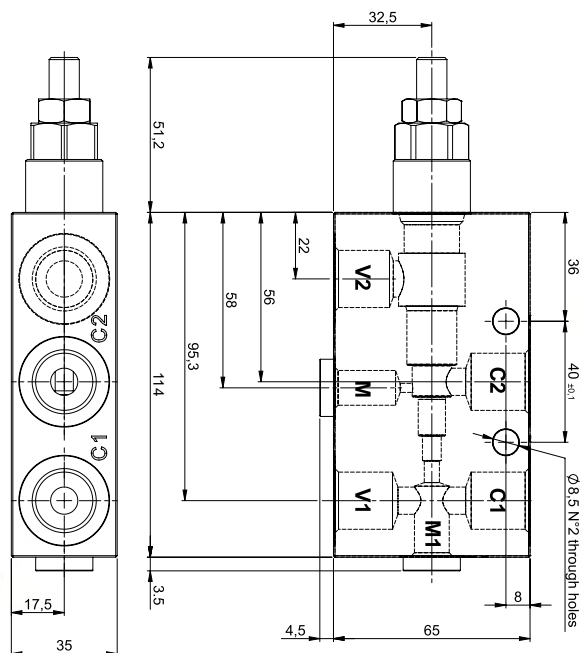
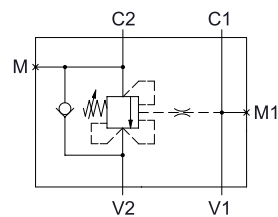
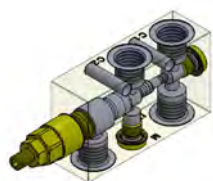
Performance curves



Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | S | 3 | 1 | 2 | 0 | 4 | G | 3 | 8 | | 0 | 0 | 0

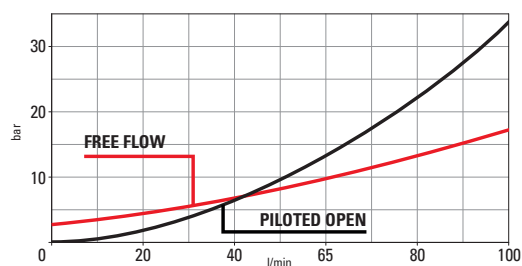
Load holding valves Compensata 31NPS S L 1/2



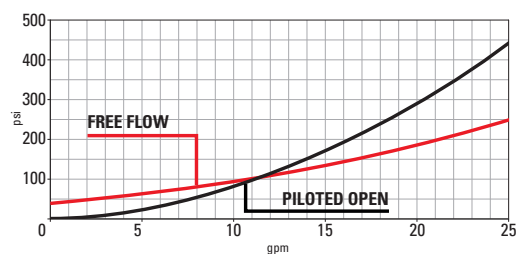
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1, C2: G 3/8, M: G 1/4, M1: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,37 Kg (3 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves

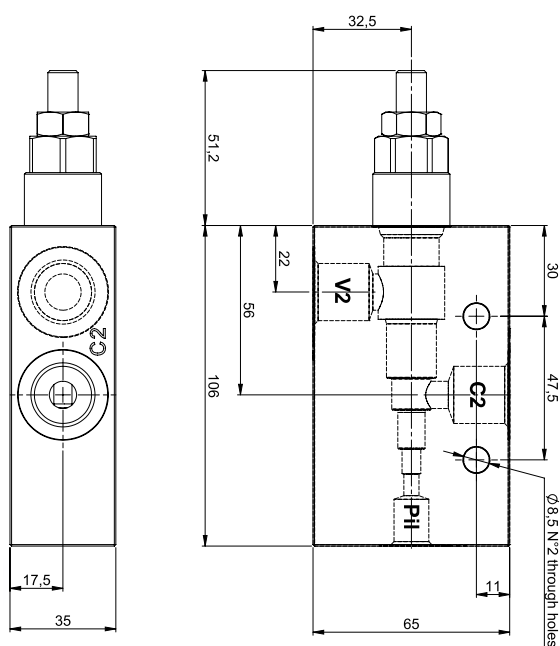
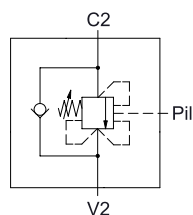
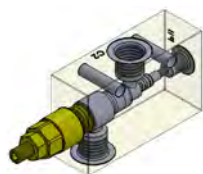


Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | S | 3 | 1 | L | 0 | 4 | G | 1 | 2 | | 0 | 0 | 0

Load holding valves

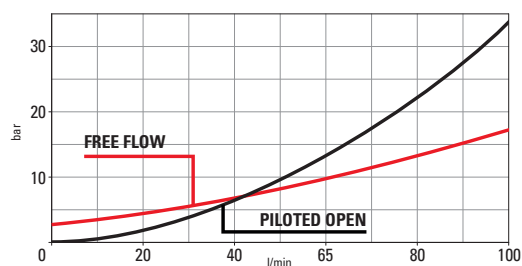
Compensata 31NPS S L PIL 1/2



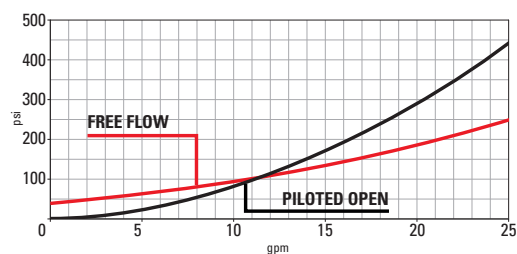
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V2, C2: G 1/2 Pil: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,37 Kg (3 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves

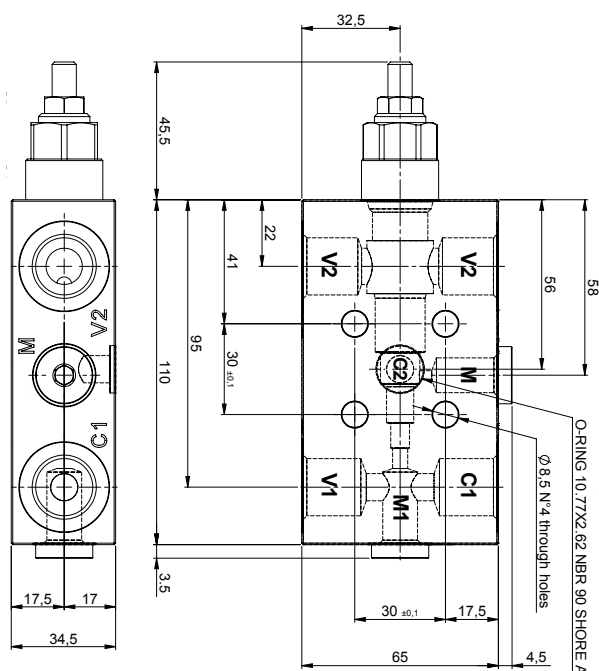
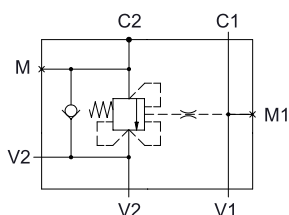
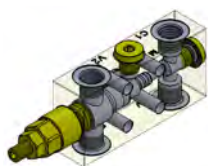


Spring M = 60-210 bar
(Standard Setting 200 bar)
 Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | S | 3 | 1 | P | 0 | 4 | G | 1 | 2 | | 0 | 0 | 0

Load holding valves

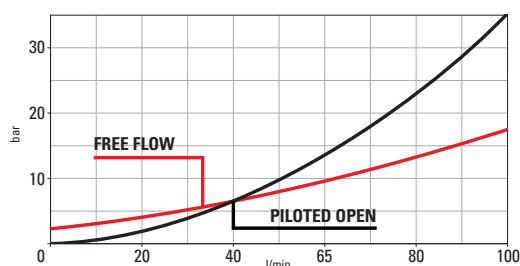
Compensata 31NPS S FC1 PL 1/2



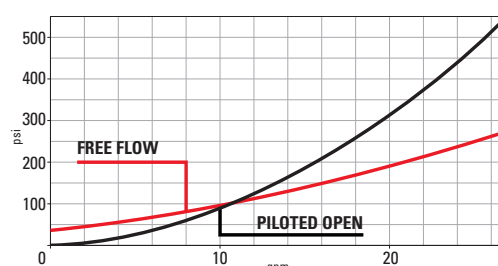
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1: G 1/2 M: G 1/4, M1: G 1/8 C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,32 Kg (2,9 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK190SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



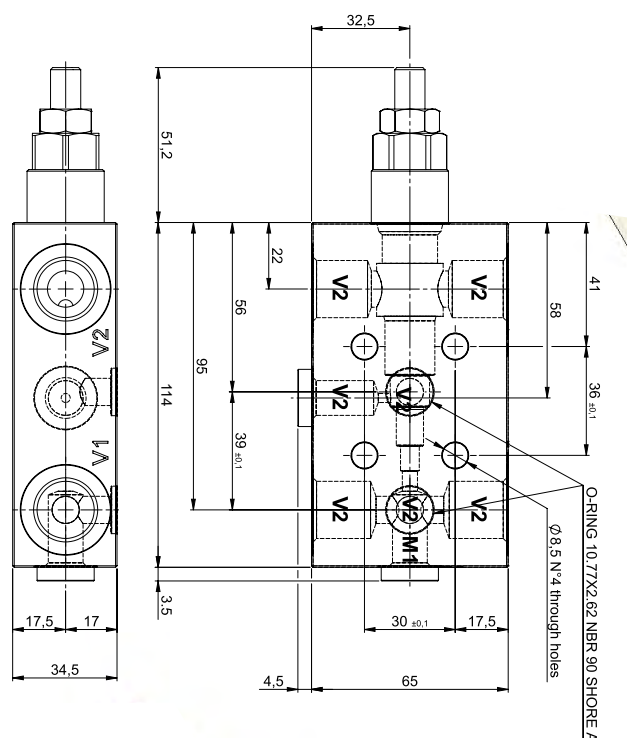
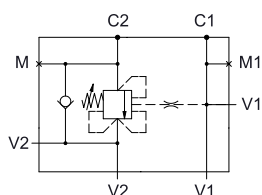
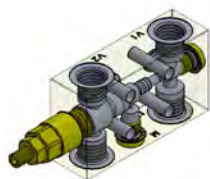
Performance curves



Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | S | 3 | 1 | 3 | 0 | 4 | G | 1 | 2 | | 0 | 0 | 0

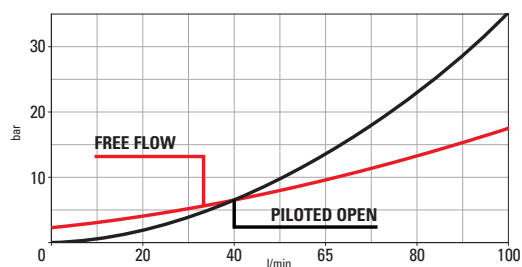
Load holding valves Compensata 31NPS S FC2 1/2



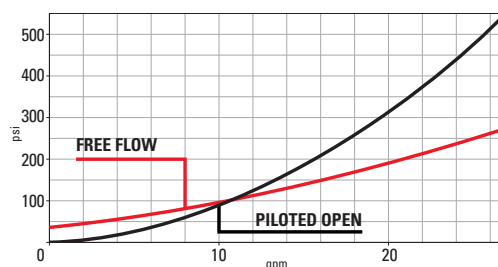
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 1/2 M: G 1/4, M1: G 1/4 C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,32 Kg (2,9 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



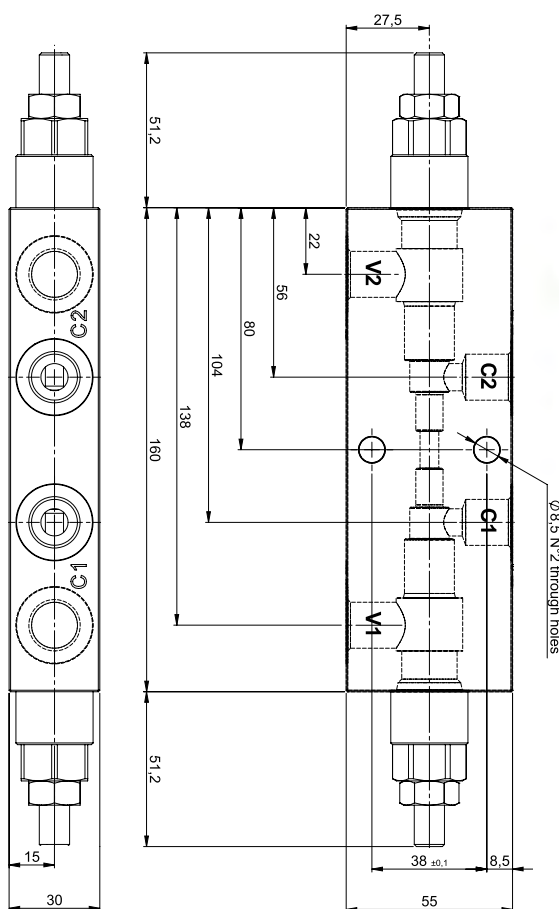
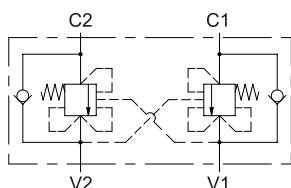
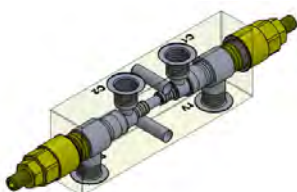
Performance curves



Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | S | 3 | 1 | 2 | 0 | 4 | G | 1 | 2 | | 0 | 0 | 0

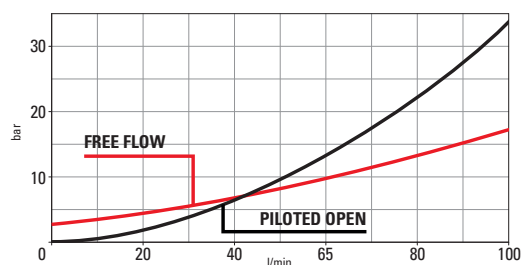
Load holding valves Compensata 31NPS D L 3/8



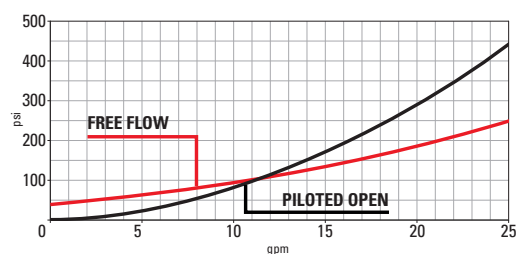
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
Ports size	V1, V2, C1, C2: G 3/8
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	2 Kg (4,4 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



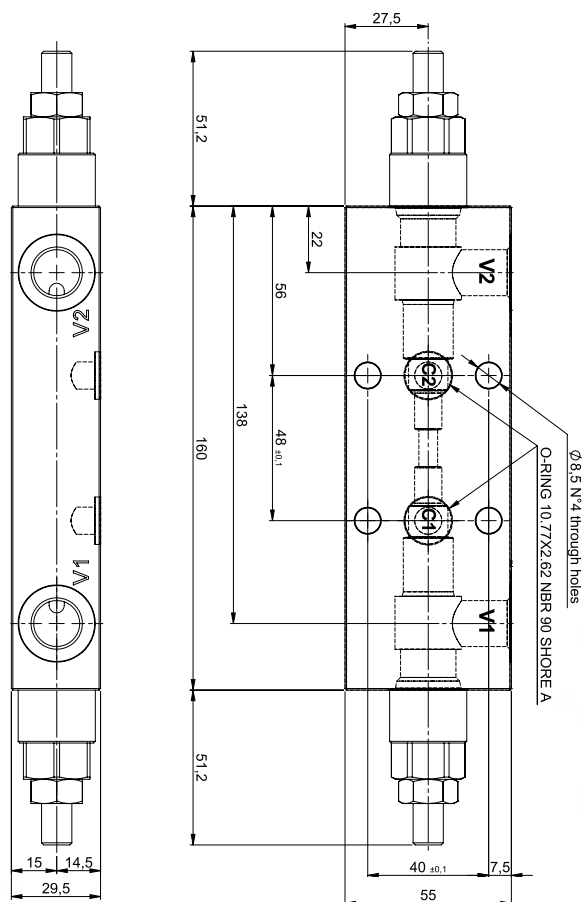
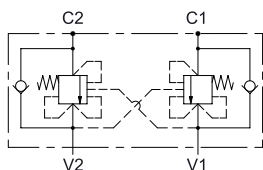
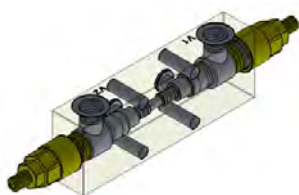
Performance curves



Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | D | 3 | 1 | L | 0 | 4 | G | 3 | 8 | | 0 | 0 | 0

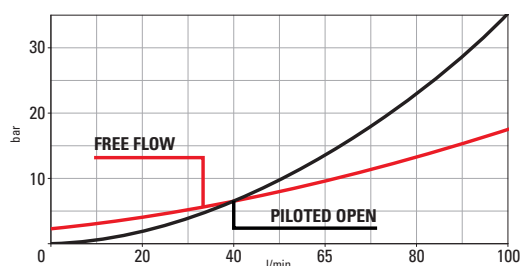
Load holding valves Compensata 31NPS D FC2 3/8



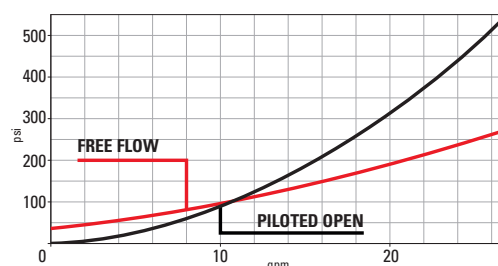
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 3/8 C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	2 Kg (4,4 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



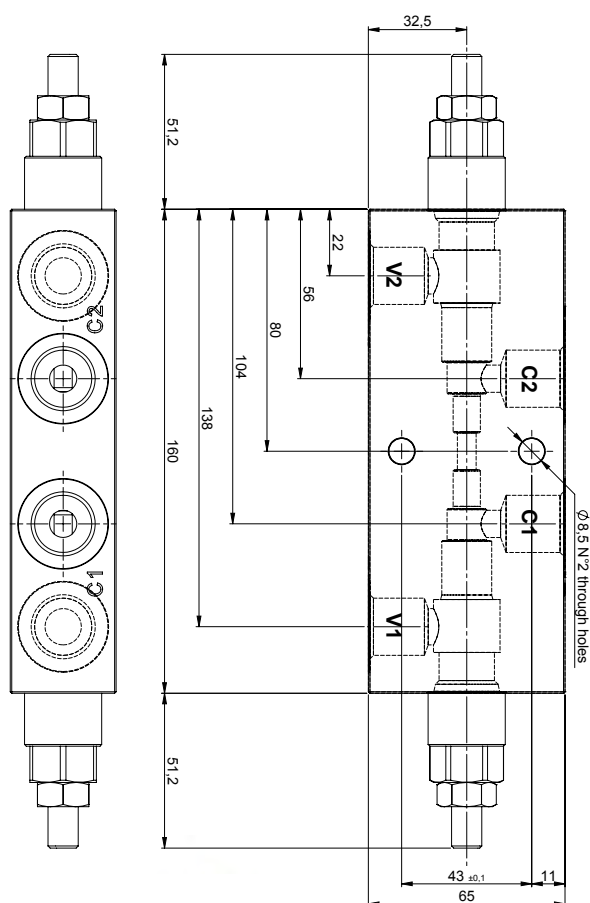
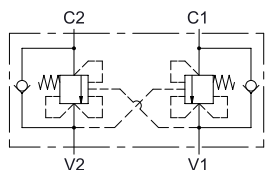
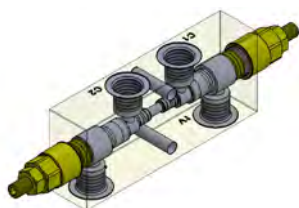
Performance curves



Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | D | 3 | 1 | 2 | 0 | 4 | G | 3 | 8 | | 0 | 0 | 0

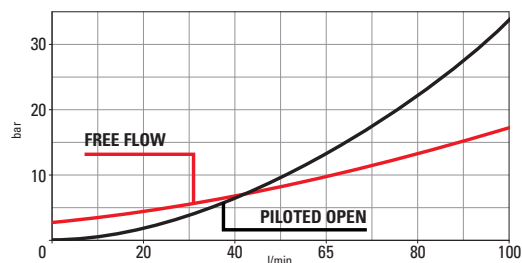
Load holding valves Compensata 31NPS D L 1/2



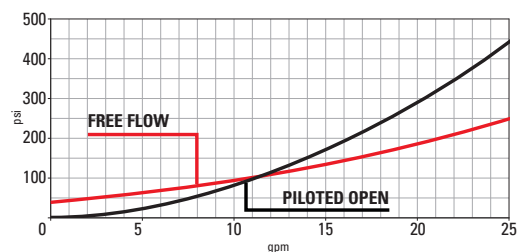
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2, C1, C2 : G 1/2
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,37 Kg (3 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves

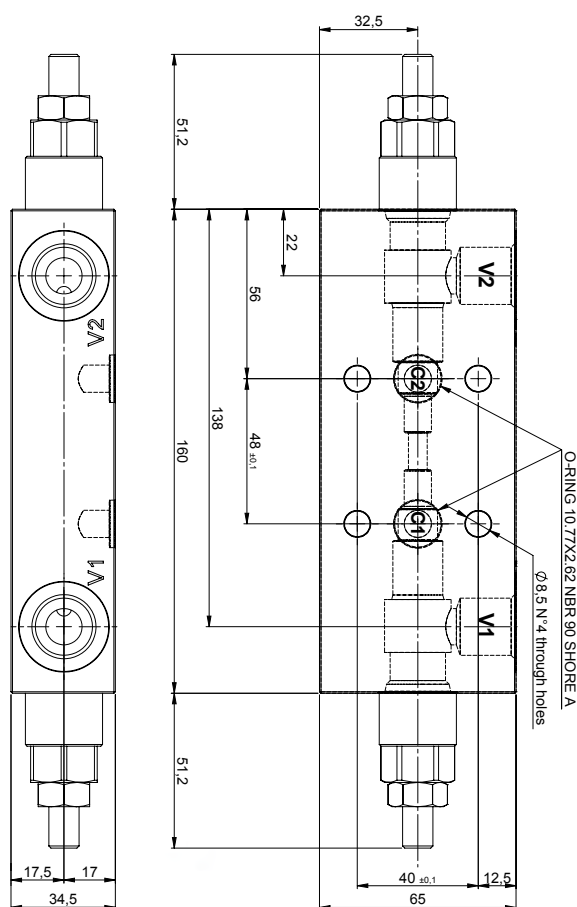
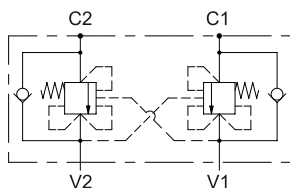
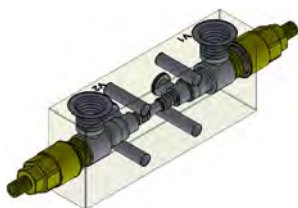


Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | D | 3 | 1 | L | 0 | 4 | G | 1 | 2 | | 0 | 0 | 0

Load holding valves

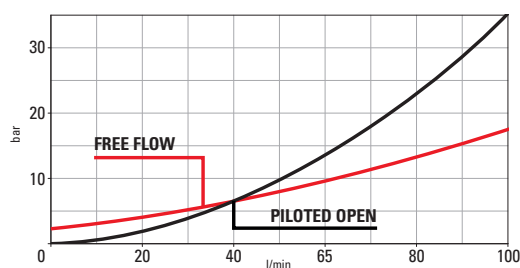
Compensata 31NPS D FC2 1/2



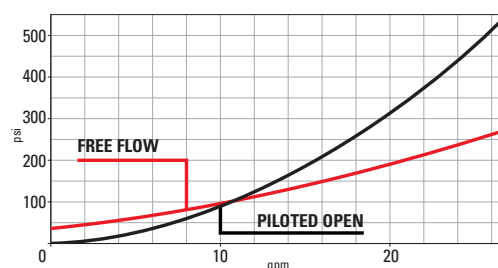
Technical Details

body material	zinc plated steel
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 1/2 C1, C2: ϕ 9
max operating pressure	350 bar (5000 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 49 bar/turn Spring D: 110 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
nut hex size	17
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,32 Kg (2,9 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1077x262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Balanced piston design allows relief operations to be independent of backpressure at port 2; piloted opening is still subject to additive pressure at port 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



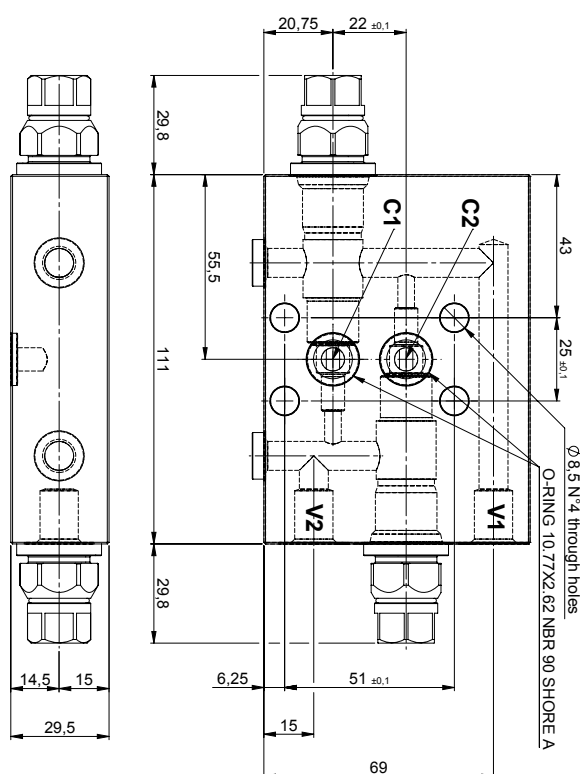
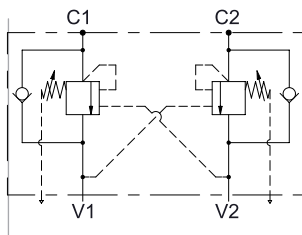
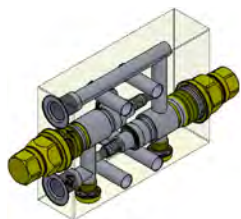
Performance curves



Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-360 bar
(Standard Setting 350 bar)

S | C | D | 3 | 1 | 2 | 0 | 4 | G | 1 | 2 | | 0 | 0 | 0

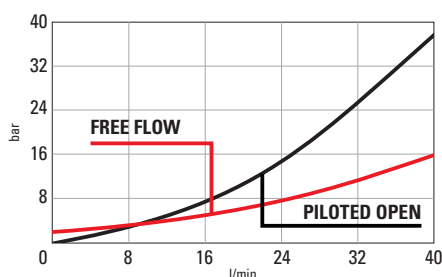
Load holding valves Ventilata 79 D FC2P 1/4



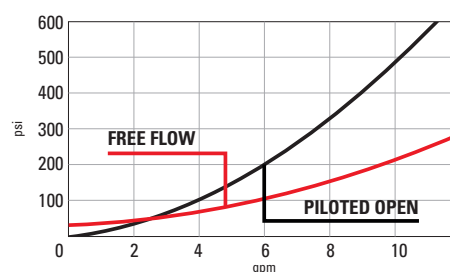
Technical Details

body material	aluminum
capacity	40 lpm (10 gpm)
ports size	V1, V2: G 1/4 C1, C2: $\varnothing 7$
max operating pressure	210 bar
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 82 bar/turn Spring D: 137 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
valve weight	0,9 Kg (2 lbs)
external component surface treatment	black or white anodization
seal kit (nbr)	SK290SH0992X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



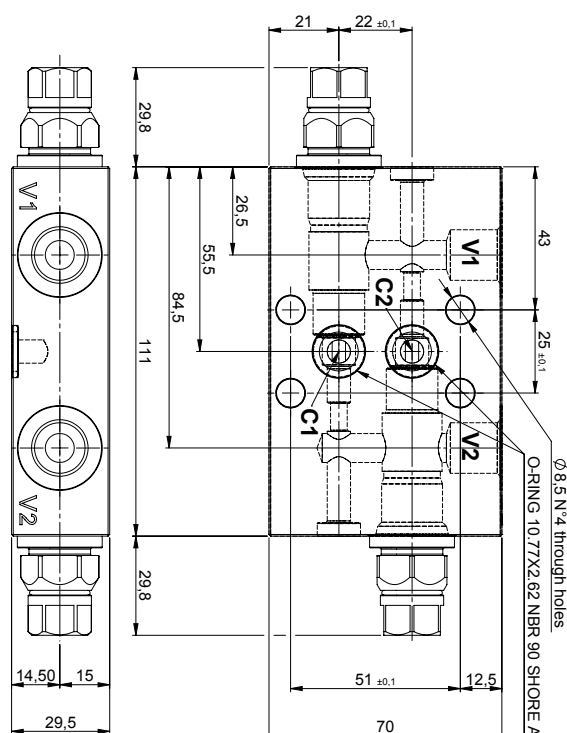
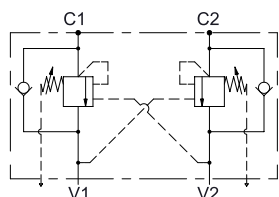
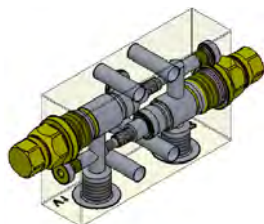
Performance curves



Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

A | V | D | 7 | 9 | 3 | 0 | 4 | G | 1 | 4 | | 0 | 0 | 0

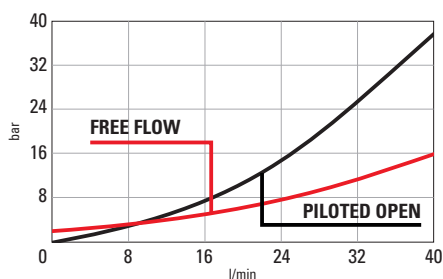
Load holding valves Ventilata 79 D FC2 3/8



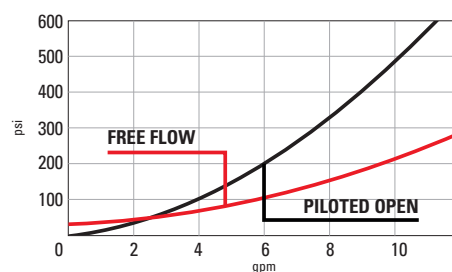
Technical Details

body material	aluminum
capacity	40 lpm (10 gpm)
ports size	V1, V2: G 3/8 C1, C2: 7
max operating pressure	210 bar
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	Spring M: 82 bar/turn Spring D: 137 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
valve weight	0,8 Kg (1,8 lbs)
external component surface treatment	black or white anodization
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



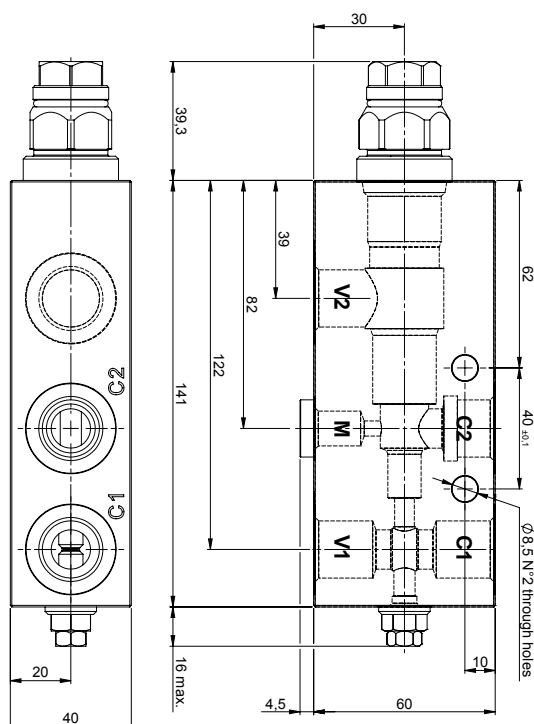
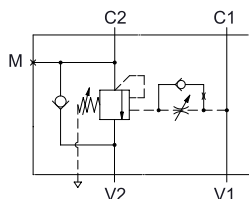
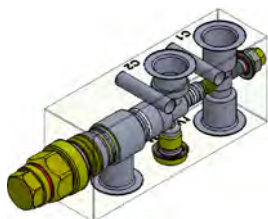
Performance curves



Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

A | V | D | 7 | 9 | 2 | 0 | 4 | G | 3 | 8 | | 0 | 0 | 0

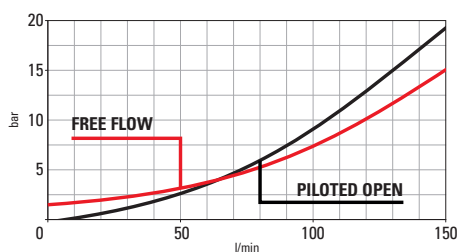
Load holding valves Ventilata 34 S L 1/2



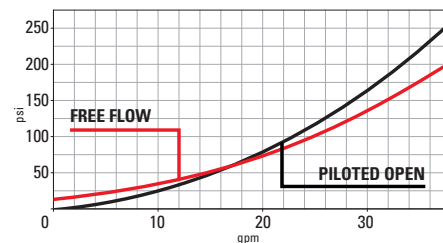
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, C2, V1, V2: G 1/2 M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,47 Kg (5,4 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



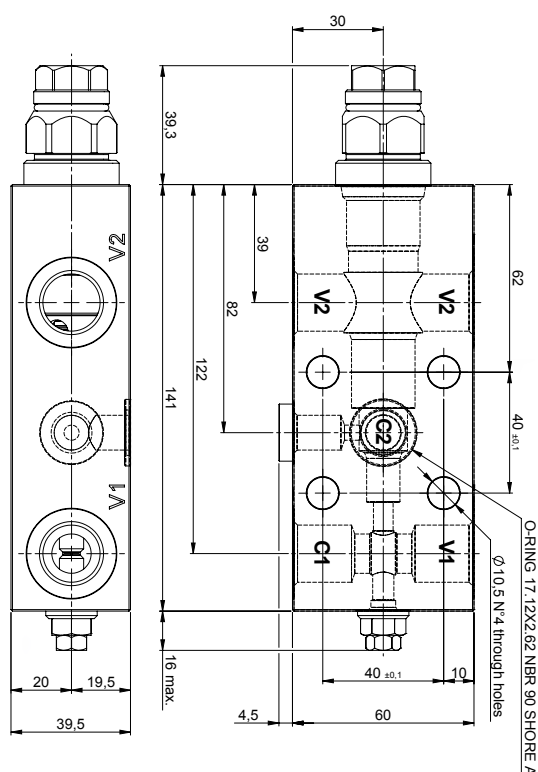
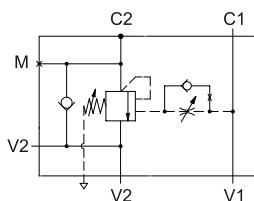
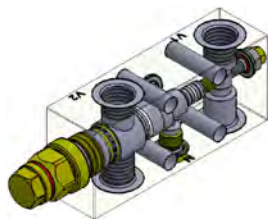
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

V | S | 3 | 4 | L | | G | 1 | 2 | | 0 | 0 | 0

O4 = 4:1
O8 = 8:1

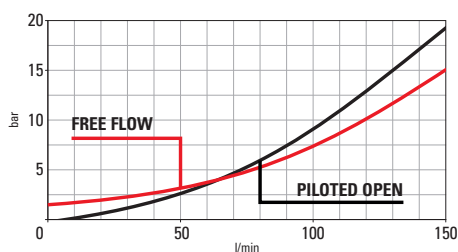
Load holding valves Ventilata 34 S FC1 PL 1/2



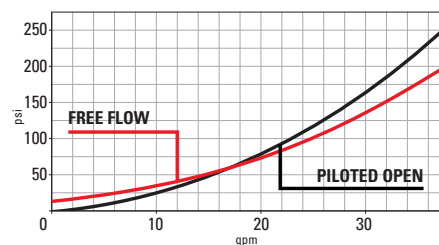
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, V1, V2: G 1/2 C2: $\phi 15$, M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,35 Kg (5,18 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK190SH1712X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



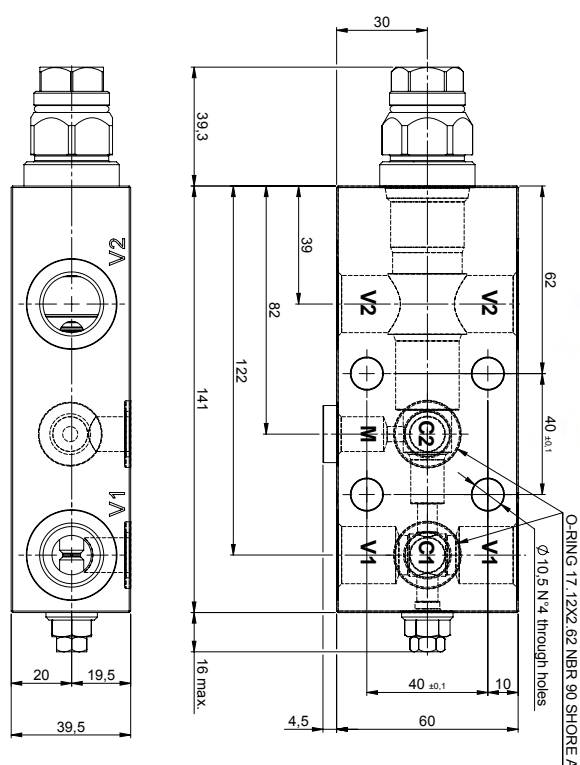
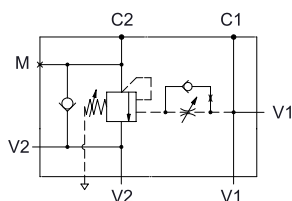
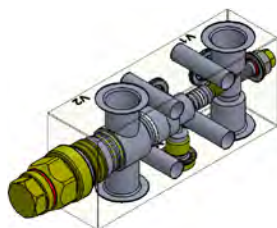
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

V | S | 3 | 4 | 1 | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

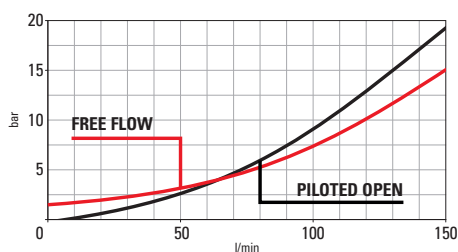
Load holding valves Ventilata 34 S FC2 1/2



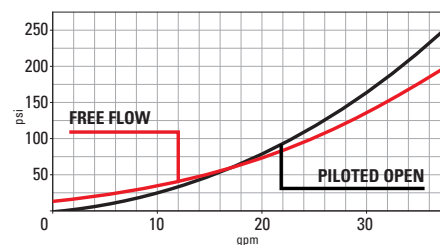
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	V1, V2: G 1/2 C1, C2: ϕ 15, M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,35 Kg (5,18 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1712X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



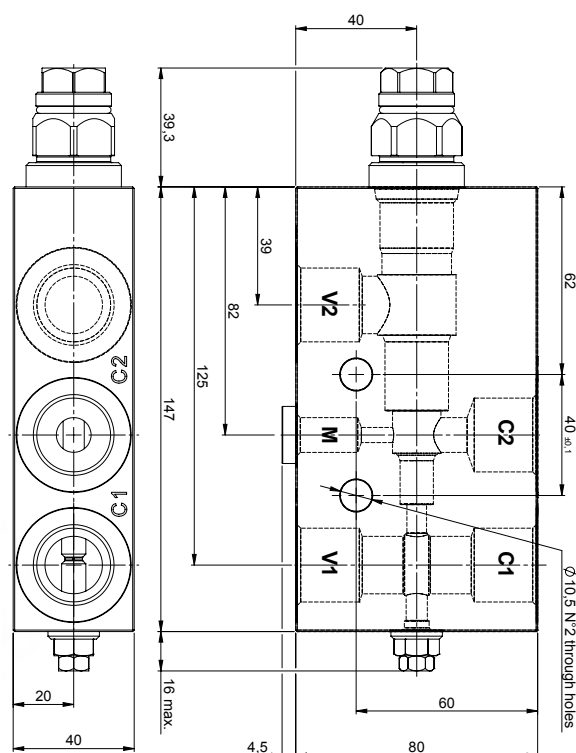
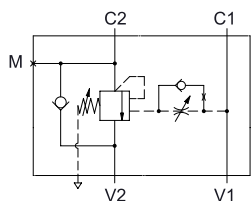
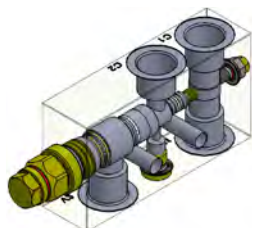
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

V | S | 3 | 4 | 2 | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

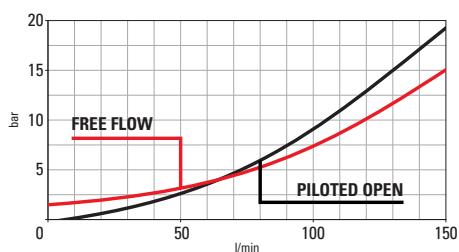
Load holding valves Ventilata 34 S L 3/4



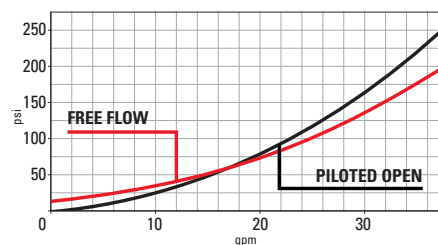
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, C2, V1, V2: G 3/4 M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	3,26 Kg (7.2 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



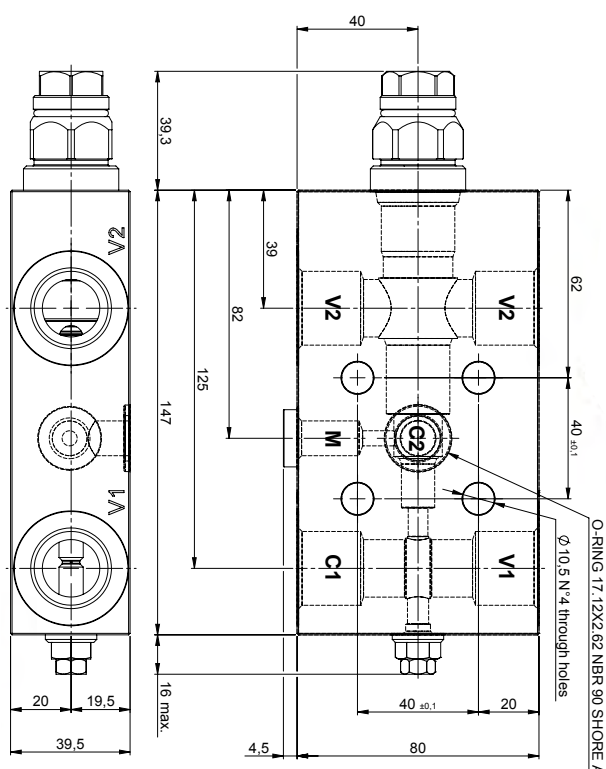
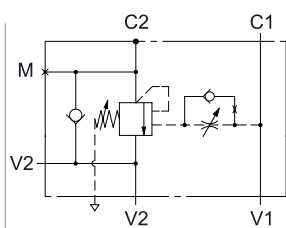
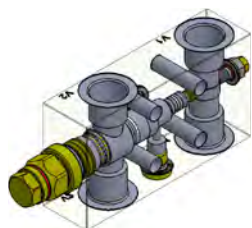
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 210-350 bar
(Standard Setting 350 bar)

V | S | 3 | 4 | L | | G | 3 | 4 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

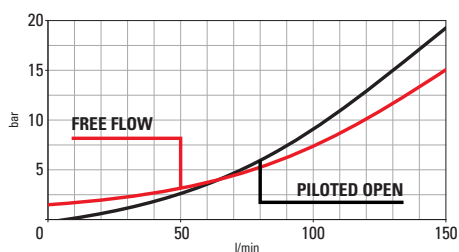
Load holding valves Ventilata 34 S FC1 PL 3/4



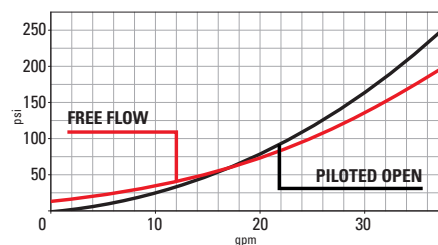
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, V1, V2: G 3/4 C2: ϕ 15, M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	3,13 Kg (6,9 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK190SH1712X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



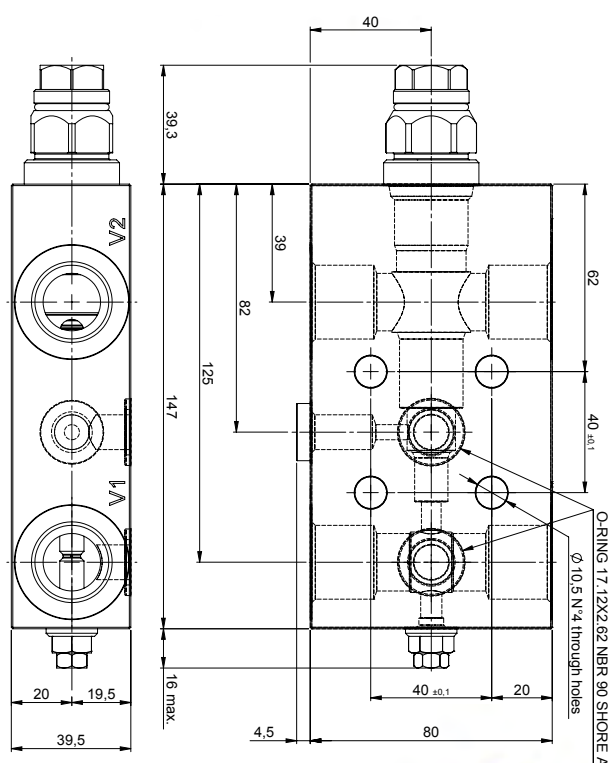
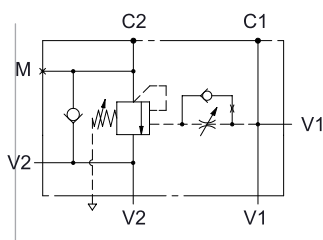
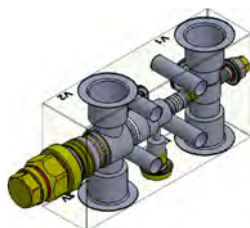
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

V | S | 3 | 4 | 1 | | G | 3 | 4 | | 0 | 0 | 0

O4 = 4:1
O8 = 8:1

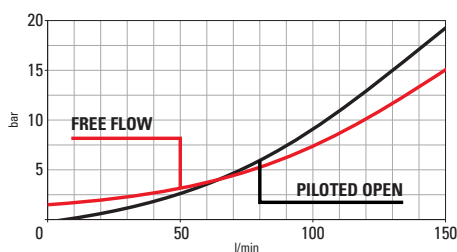
Load holding valves Ventilata 34 S FC2 3/4



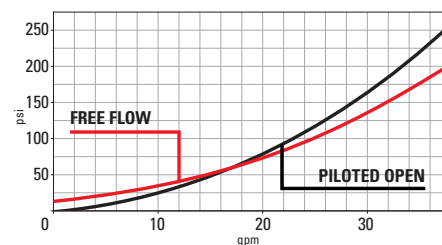
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	V1, V2: G 3/4 C1, C2: ϕ 15, M: G 1/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	3,13 Kg (6,9 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1712X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



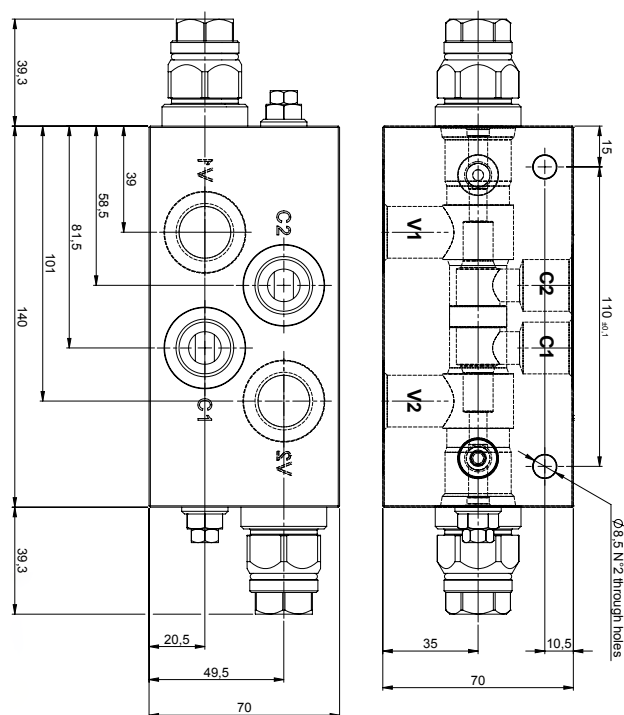
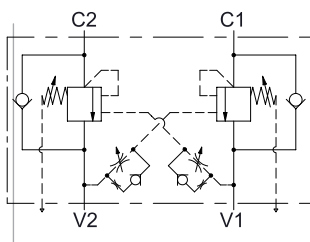
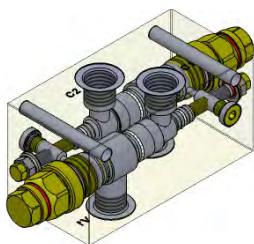
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

V | S | 3 | 4 | 2 | | G | 3 | 4 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

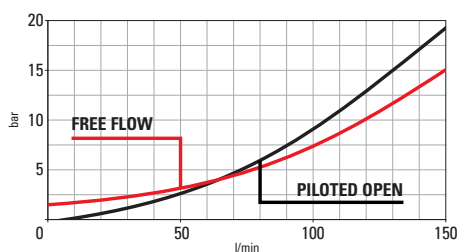
Load holding valves Ventilata 34 D L 1/2



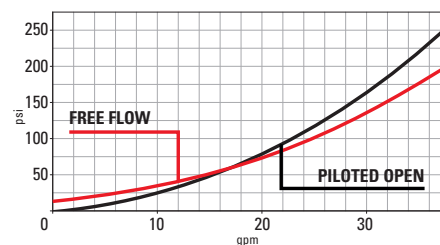
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, C2, V1, V2: G 1/2
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,3 Kg (5 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



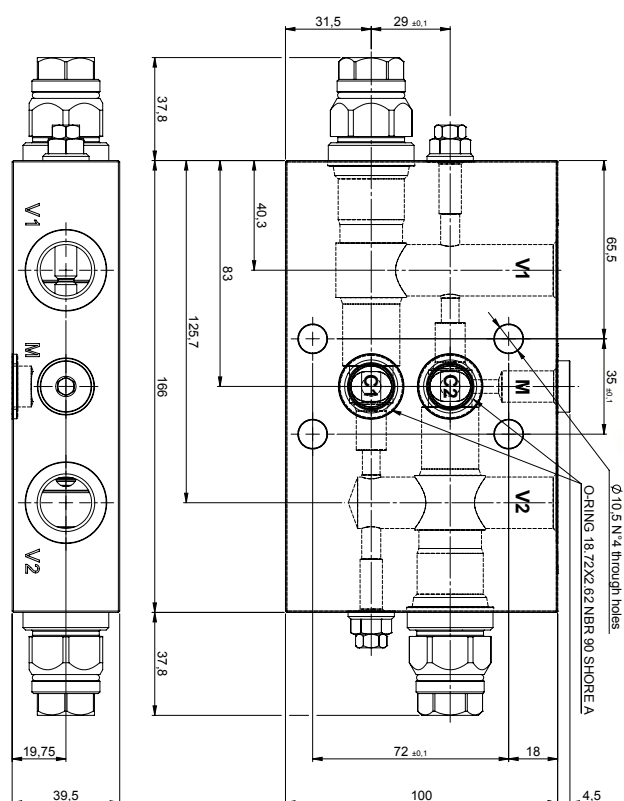
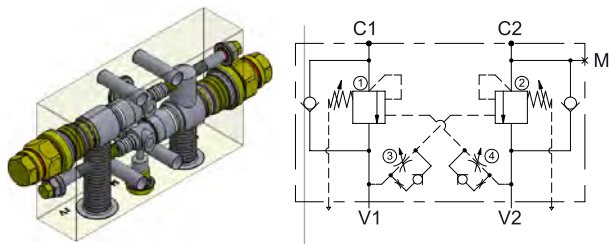
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

V | S | 3 | 4 | L | | G | 1 | 2 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

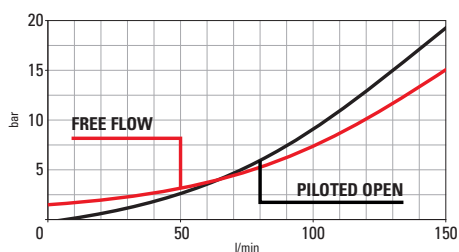
Load holding valves Ventilata 34 D FC2 1/2



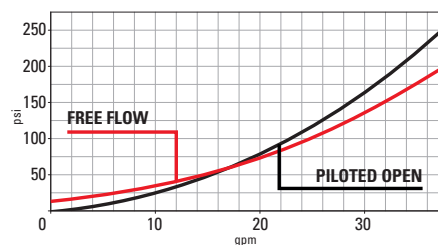
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	V1, V2: G 1/2 C1, C2: ϕ 15
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,2 Kg (4,85 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1812X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



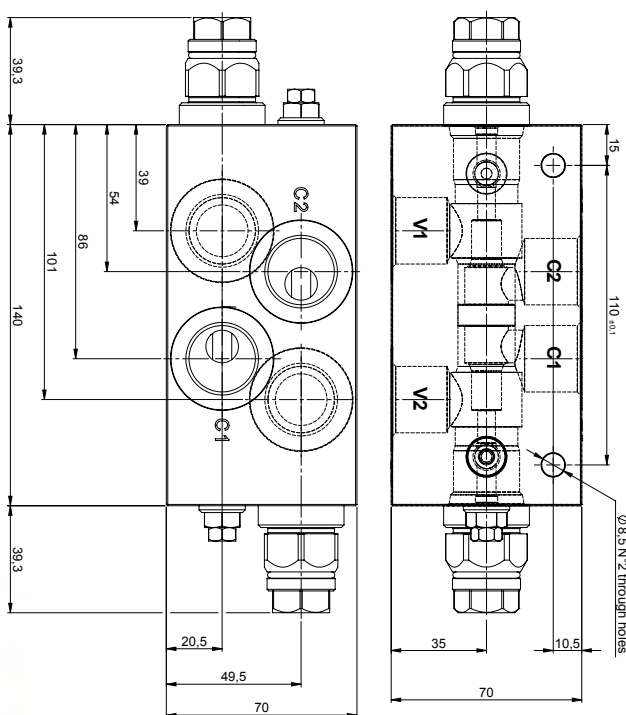
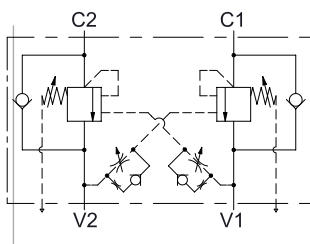
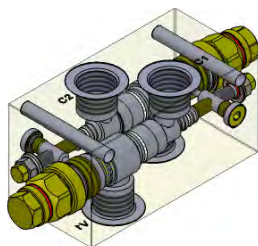
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

V | D | 3 | 4 | 2 | | G | 1 | 2 | | 0 | 0 | 0

O4 = 4:1
O8 = 8:1

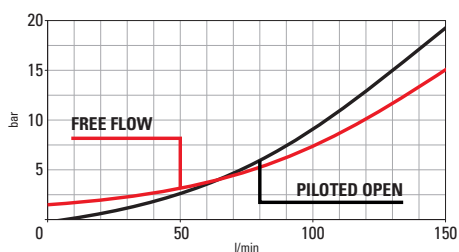
Load holding valves Ventilata 34 D L 3/4



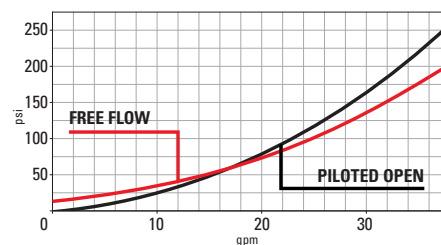
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	C1, C2, V1, V2: G 3/4
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,2 Kg (4,85 lbs)
external component surface treatment	zinc plating + sealing for steel body
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



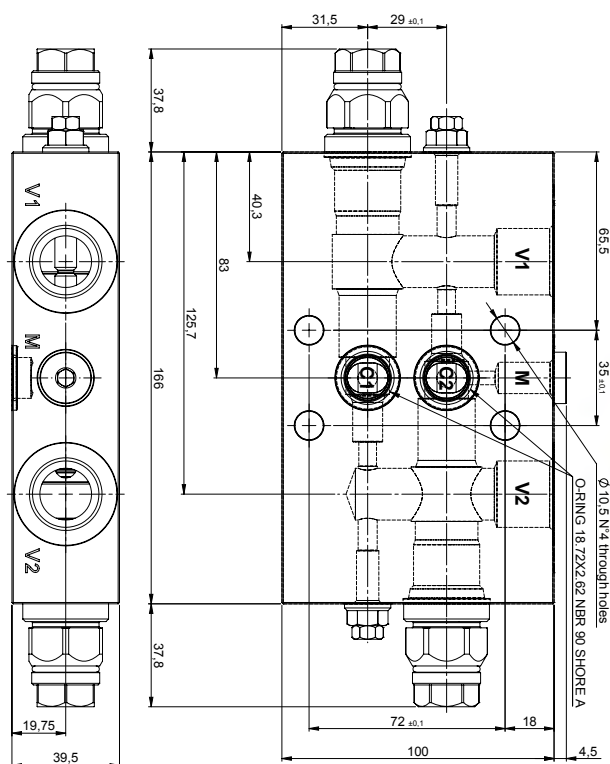
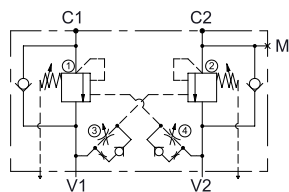
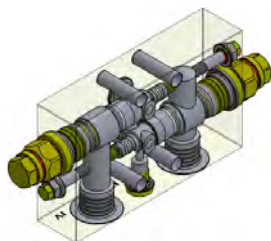
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

V | S | 3 | 4 | L | | G | 3 | 4 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

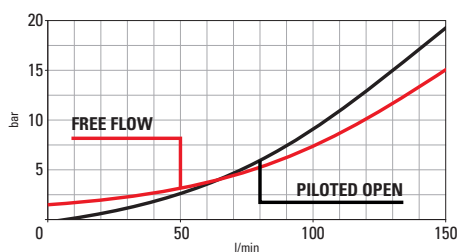
Load holding valves Ventilata 34 D FC2 3/4



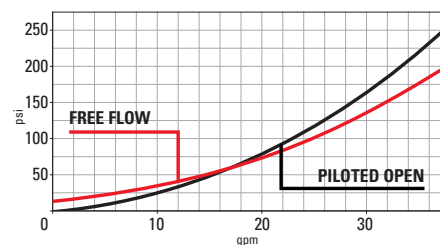
Technical Details

body material	aluminum or zinc plated steel
capacity	150 lpm (40 gpm)
ports size	V1, V2: G 3/4 C1, C2: $\phi 15$
max operating pressure	350 bar (steel block) - 210 bar (aluminum block)
pilot ratio	4:1 - 8:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (4:1) - 100 bar (8:1)
pressure increase per turn	4:1 Spring M: 30 bar/turn Spring D: 73 bar/turn 8:1 Spring M: 54.5 bar/turn Spring D: 132 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	vented
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	8
valve weight	2,3 Kg (5 lbs)
external component surface treatment	zinc plating + sealing for steel body
seal kit (nbr)	SK290SH1812X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum bodies can be anodized upon request
- The spring chamber is vented to atmosphere allowing operation of all functions independent of back-pressure at 2
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



Performance curves



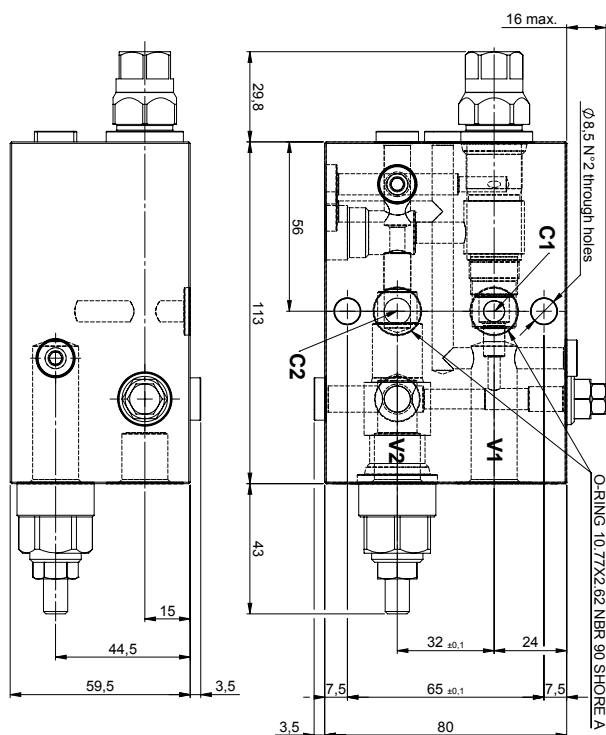
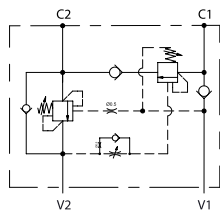
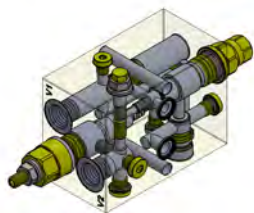
A = aluminum
S = steel

Spring M = 60-210 bar
(Standard Setting 200 bar)
Spring D = 110-350 bar
(Standard Setting 350 bar)

V | D | 3 | 4 | 2 | | G | 3 | 4 | | 0 | 0 | 0

04 = 4:1
08 = 8:1

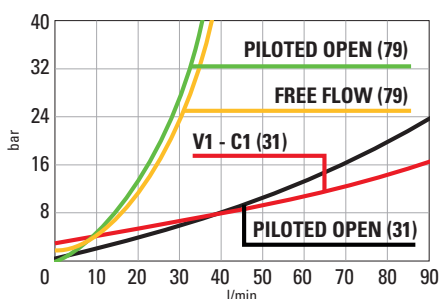
Load holding valves Rigenerativo 79-31 FC2 3/8



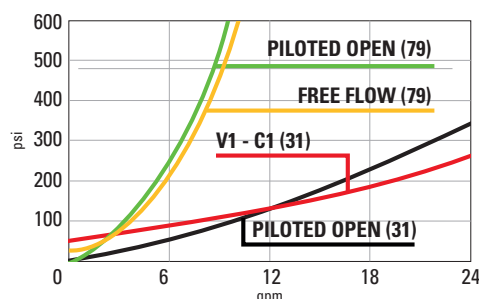
Technical Details

body material	aluminum
capacity	90 lpm (24 gpm)
ports size	V1, V2: G 3/8 C1: ϕ 7, C2: ϕ 8,75
max operating pressure	210 bar (3050 psi)
pilot ratio	4:1
maximum setting	420 bar (6100 psi)
minimum setting	60 bar (870 psi)
pressure increase per turn	31 NPS Spring M: 61.5 bar/turn Spring D: 137 bar/turn 79 Spring M: 82 bar/turn Spring D: 134,5 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	4(31) / 5(79)
seal-lock hex size	13
seal-lock torque	12-15 Nm (9-11 lbf ft)
valve weight	1,7 Kg (3,74 lbs)
external component surface treatment	aluminum
seal kit (nbr)	SK290SH1077X262
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum body can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory



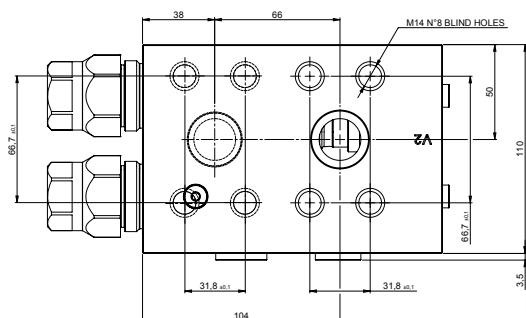
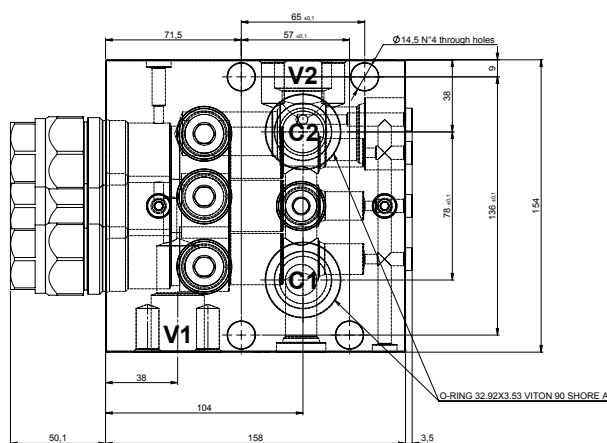
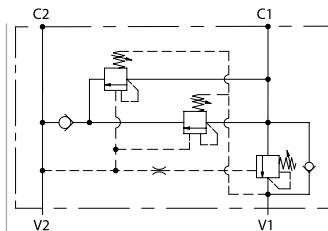
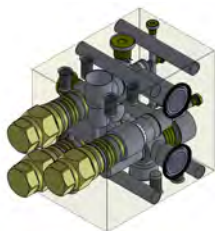
Performance curves



M = 50-210 bar
(Standard Setting 200 bar for 31 and 79)
D = 150-350 bar
(Standard Setting 350 bar for 79 and 31)

A | R | I | 7 | 9 | 2 | 0 | 4 | G | 3 | 8 | | 0 | 0 | 0

Load holding valves Rigenerativo 43 SAE6 1-1/4

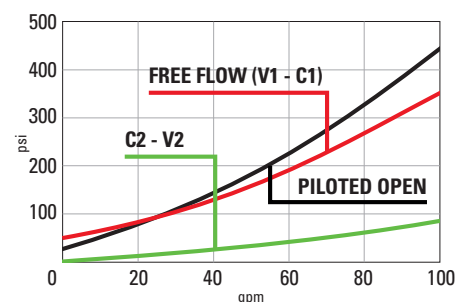
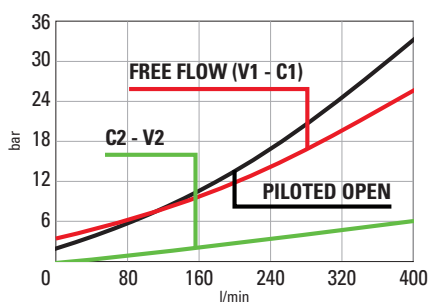


Technical Details

body material	zinc plated steel
capacity	400 lpm (106 gpm)
ports size	V1, V2: 1-1/4 SAE 6000 C1, C2: 1/2
max operating pressure	350 bar (5000 psi)
pilot ratio	6:1
maximum setting	520 bar (7540 psi)
minimum setting	70 bar (1015 psi)
pressure increase per turn	Spring M: 40 bar/turn Spring D: 67 bar/turn
pressure setting established @	cracking pressure (1 in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	10
valve weight	18,9 Kg (41,6 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK29VSH3292X353
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 520 bar please consult factory
- For special ports please consult factory

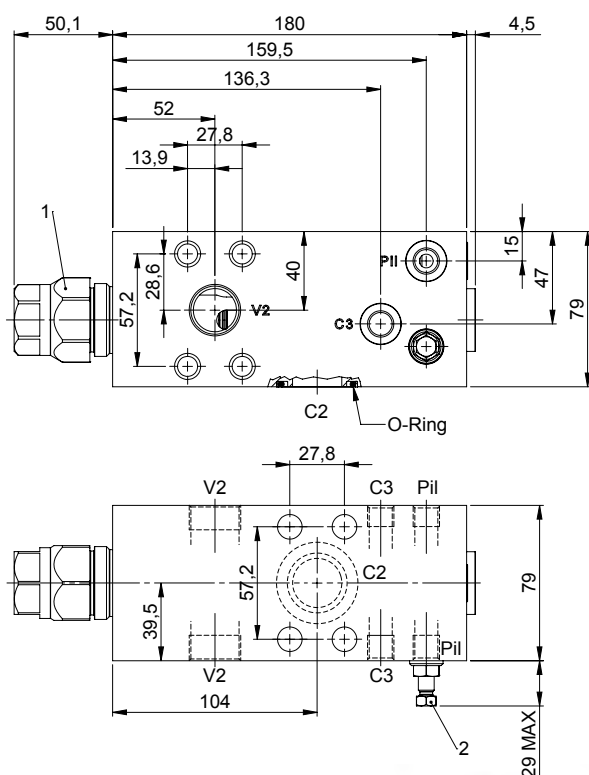
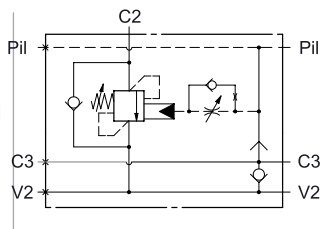
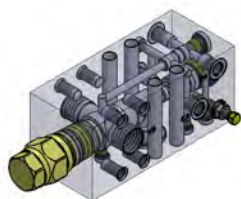
Performance curves



M = 50-210 bar
(Standard Setting 200 bar)
D = 100-350 bar
(Standard Setting 350 bar)

S | R | I | 4 | 3 | 6 | 0 | 6 | 1 | 1 | 4 | | 0 | 0 | 0

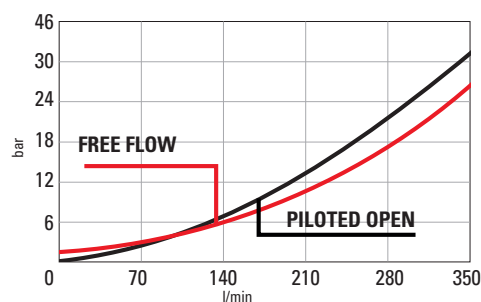
Load holding valves Normale 43 S FW 1



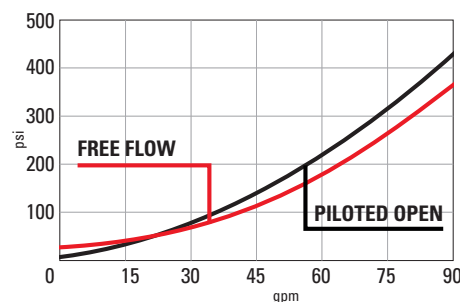
Technical Details

body material	zinc plated steel
capacity	350 lpm (93 gpm)
port sizes	V2: 1" SAE 6000 C2, C3, PII, M: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	13:1
maximum setting	500 bar (7250 psi)
minimum setting	140 bar (750 psi)
pressure increase per turn	40 bar/turn (spring M) 67 bar/turn (spring D)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	280 bar (4000 psi)
valve weight	5,75 kg (12,65 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK190SH3293X353
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum body can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For special ports please consult factory



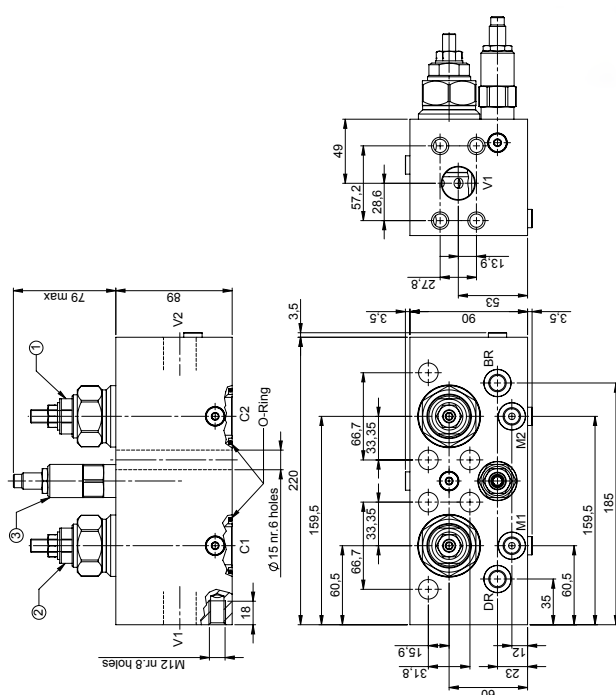
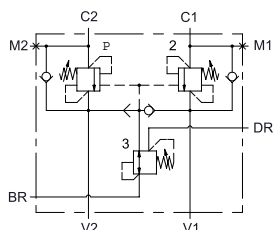
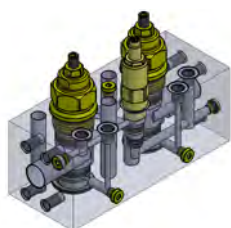
Performance curves



D=140-500 bar
(Standard Setting 500 bar)

S | N | S | 4 | 3 | 6 | 1 | 3 | G | 0 | 1 | | 0 | 0 | 0

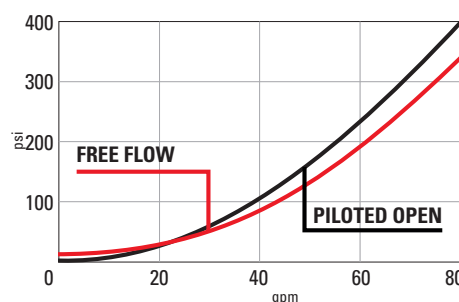
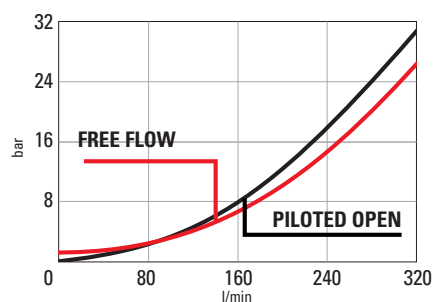
Load holding valves



Technical Details

body material	zinc plated steel
capacity	320 lpm (85 gpm)
port sizes	V1, V2: 1" SAE 6000 C1, C2: 1" 1/4 SAE 6000 Br, Dr, M1, M2: G 1/4
max operating pressure	350 bar (5000 psi)
pilot ratio	8:1
maximum setting	420 bar (6000 psi)
minimum setting	70 bar (1000 psi)
pressure increase per turn	86 bar/turn (spring M) 135 bar/turn (spring D)
pressure setting established @	cracking pressure (1in3/min)
maximum valve leakage at reseal	5 drops / minute
operating characteristic	standard
reseal	>80%
maximum recommended load pressure at maximum setting	330 bar (4800 psi)
adjustment screw internal hex size	5
seal-lock hex size	17
seal-lock torque	15-18 Nm (11-13 lbf ft)
valve weight	11 Kg (24,2 lbs)
external component surface treatment	zinc plating + sealing
seal kit (nbr)	SK270SH3609X353
temperature range	-30 to 100°C (-22 to 212°F) with BunaN seals;
fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
filtration	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14

- Aluminum body can be anodized upon request
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure
- Set your counterbalance valve at least 1.3 times the maximum load induced pressure
- Indicated Reseat value is obtained with valve set @ maximum setting
- For customized settings and for settings from 360 bar to 420 bar please consult factory
- For special ports please consult factory

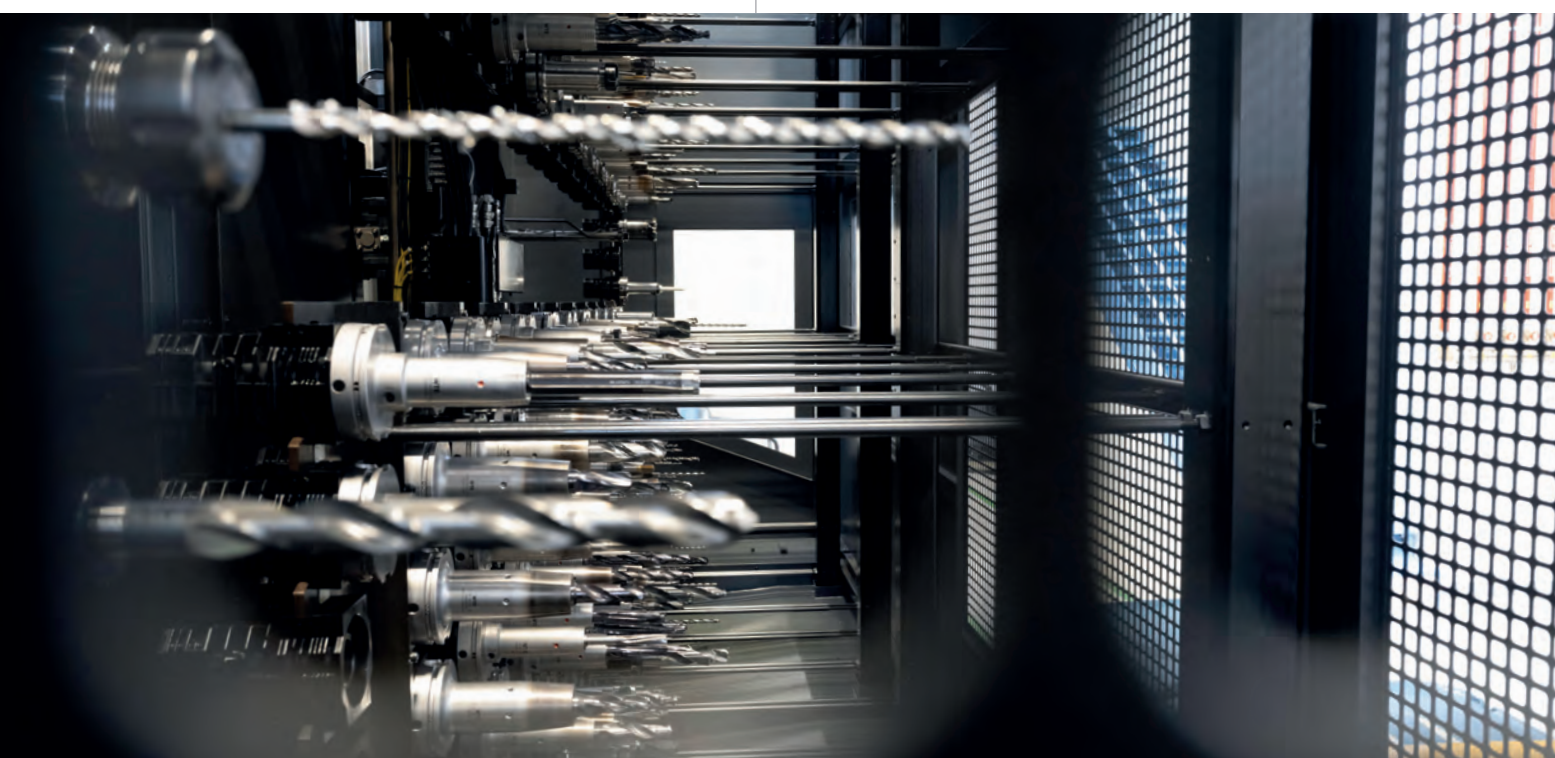


Performance curves

M = 70-210 bar
(Standard Setting 200 bar)
D = 140-420 bar
(Standard Setting 350 bar)

S	N	D	2	0	6	0	8	1	1	4		0	0	0
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Technical Details

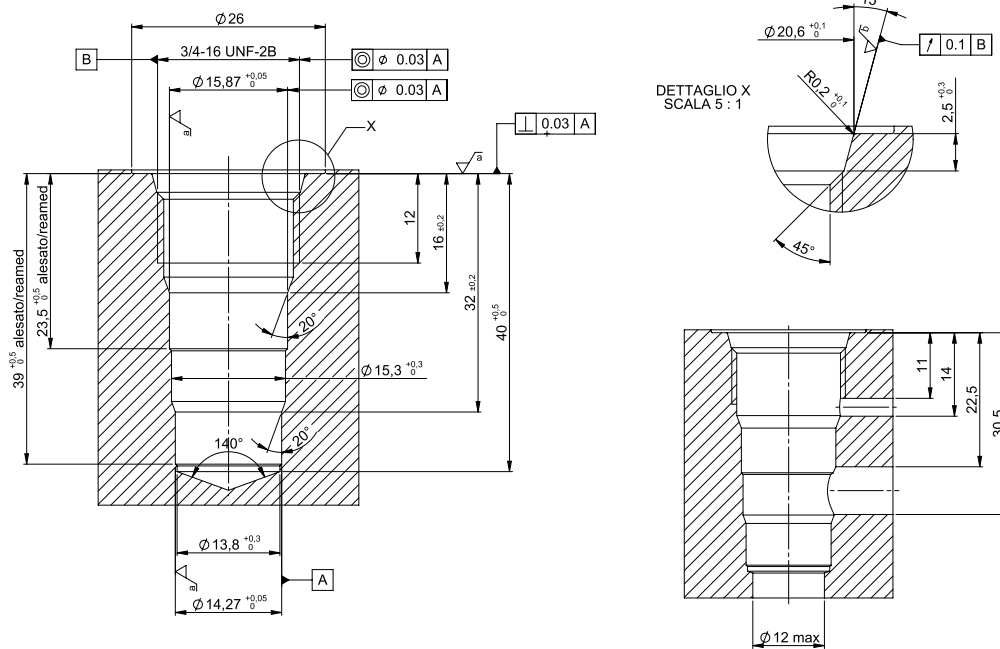


Performance curves

Setting (bar)
Setting (bar)

➤ Cartridge Cavities

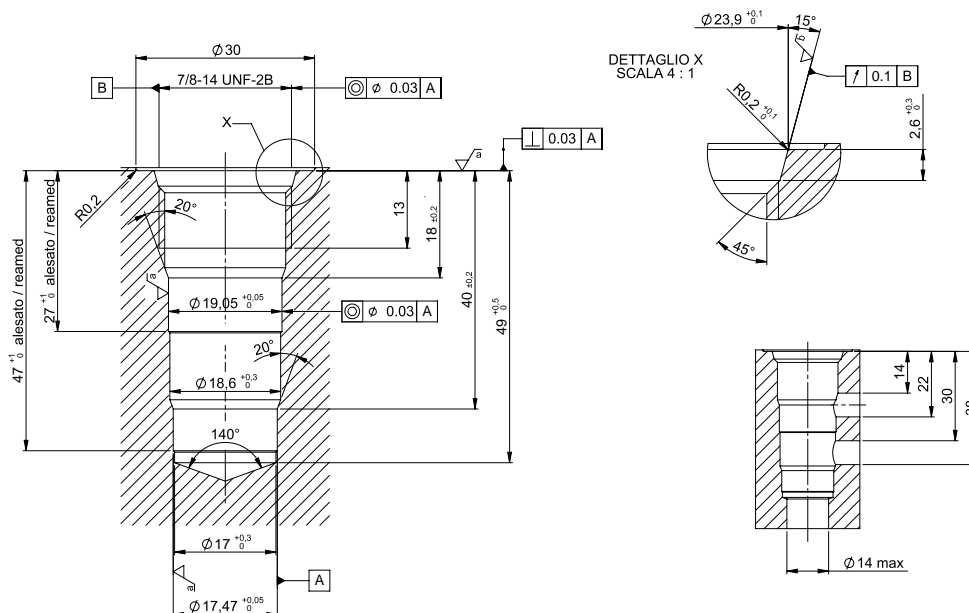
SAE08



\sqrt{a}	$= \sqrt{\frac{Ra}{1.6}}$
\sqrt{b}	$= \sqrt{\frac{Ra}{1.2}}$

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS mm
 TOLERANCES ACCORDING TO (ISO2768-mk)
 BASE SHAFT (H7/g6)
 BASE HOLE (H7/g6)
 LINEAR DIMENSIONS TILL (0.5 \pm 0.05)
 ANGULAR DIMENSIONS TILL (0.5 \pm 0.05)
 FILLETS AND CHAMFERS TILL (0.5 \pm 0.05)
 DEBUR AND BREAK SHARP EDGES (0.1 \pm 0.05)

SAE10

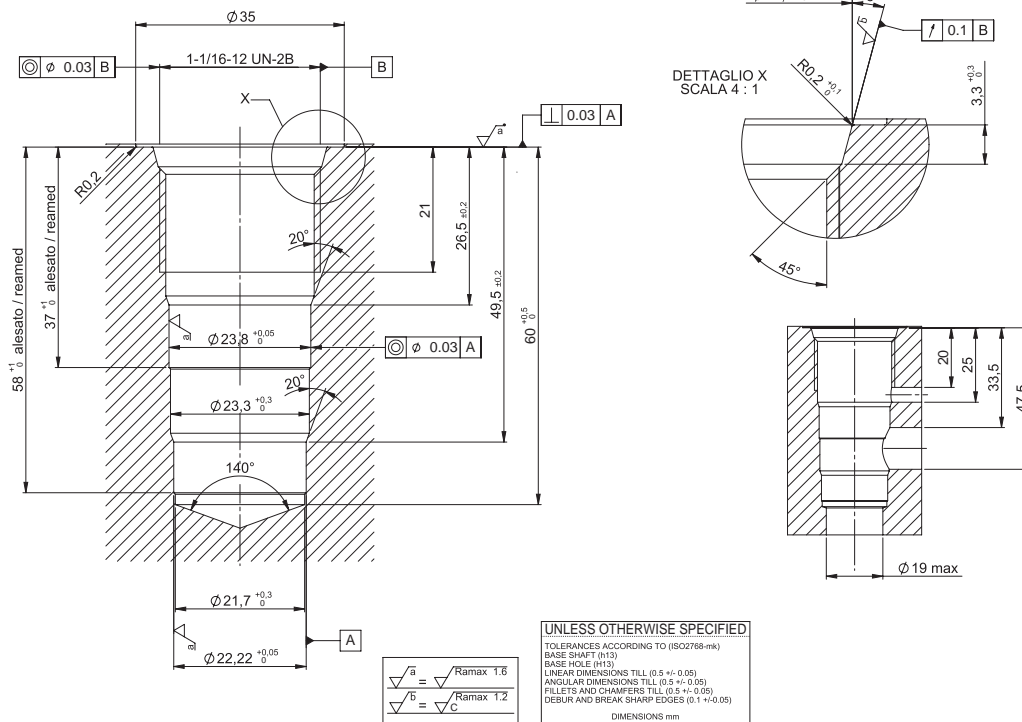


\sqrt{a}	$= \sqrt{\frac{Ra}{1.6}}$
\sqrt{b}	$= \sqrt{\frac{Ra}{1.2}}$

UNLESS OTHERWISE SPECIFIED
 TOLERANCES ACCORDING TO (ISO2768-mk)
 BASE SHAFT (H7/g6)
 BASE HOLE (H7/g6)
 LINEAR DIMENSIONS TILL (0.5 \pm 0.05)
 ANGULAR DIMENSIONS TILL (0.5 \pm 0.05)
 FILLETS AND CHAMFERS TILL (0.5 \pm 0.05)
 DEBUR AND BREAK SHARP EDGES (0.1 \pm 0.05)

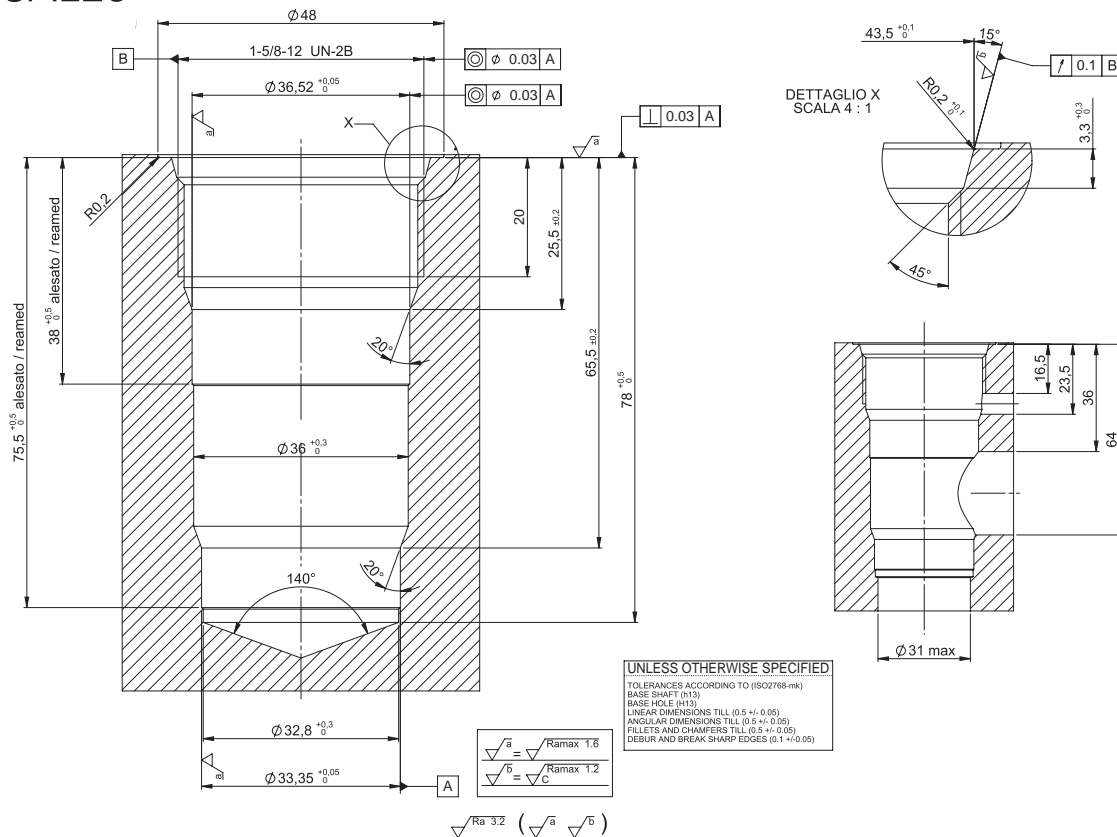
$$\sqrt{Ra} \geq 3.2 \left(\sqrt{a} \sqrt{b} \right)$$

SAE12



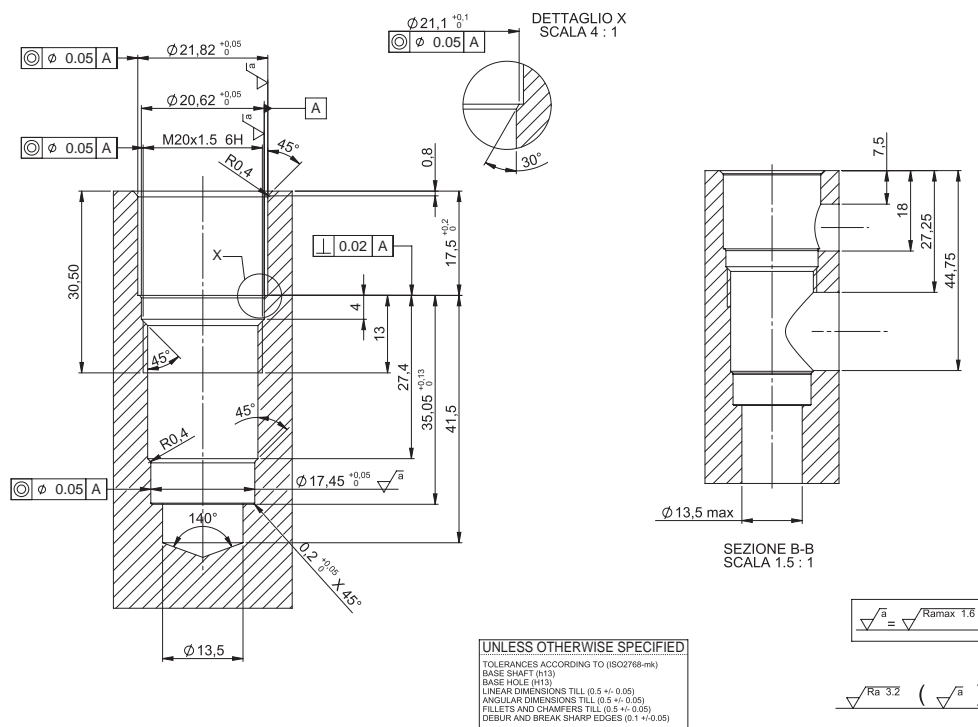
$$\sqrt{Ra 3.2} \left(\sqrt{a} \sqrt{b} \right)$$

SAE20

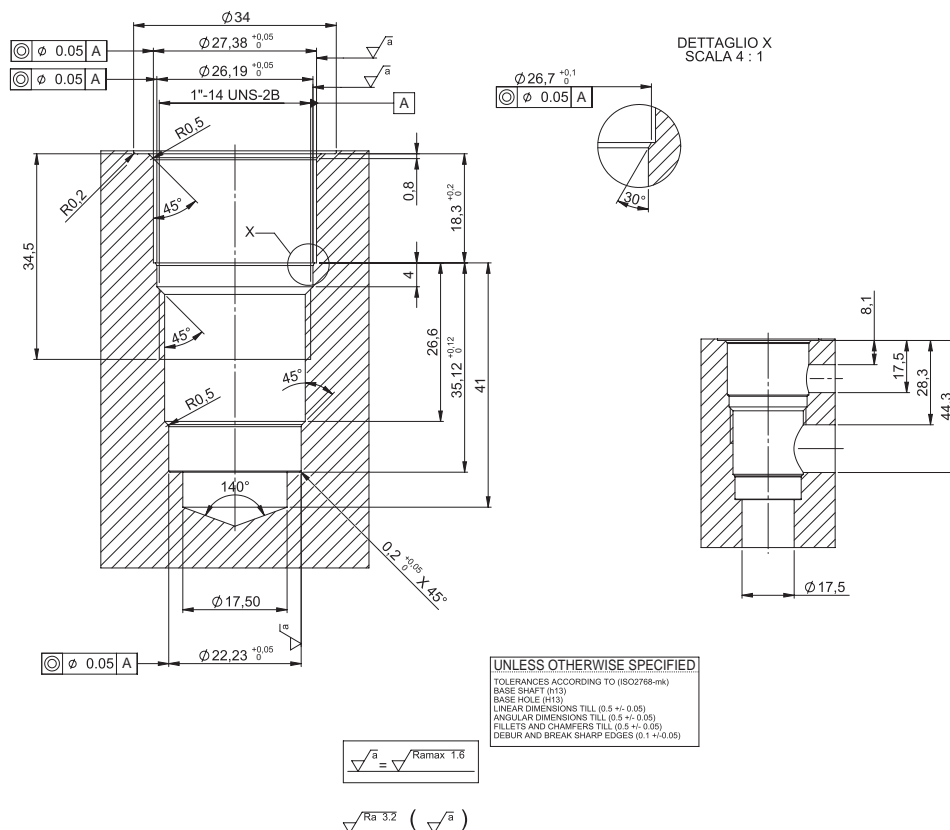


$$\sqrt{Ra 3.2} \left(\sqrt{a} \sqrt{b} \right)$$

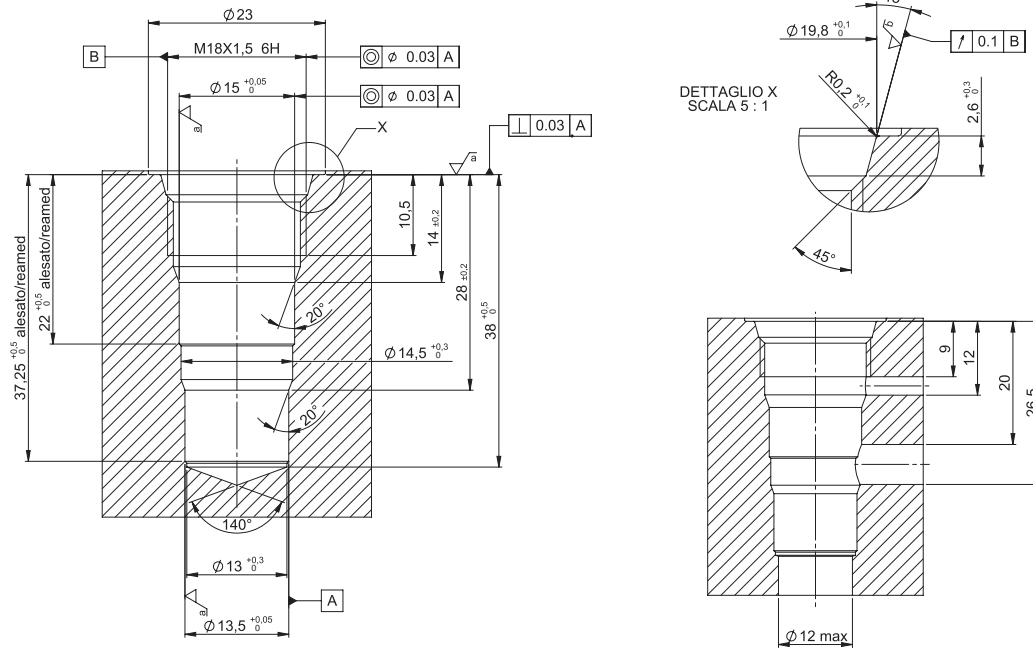
T11A



T2A



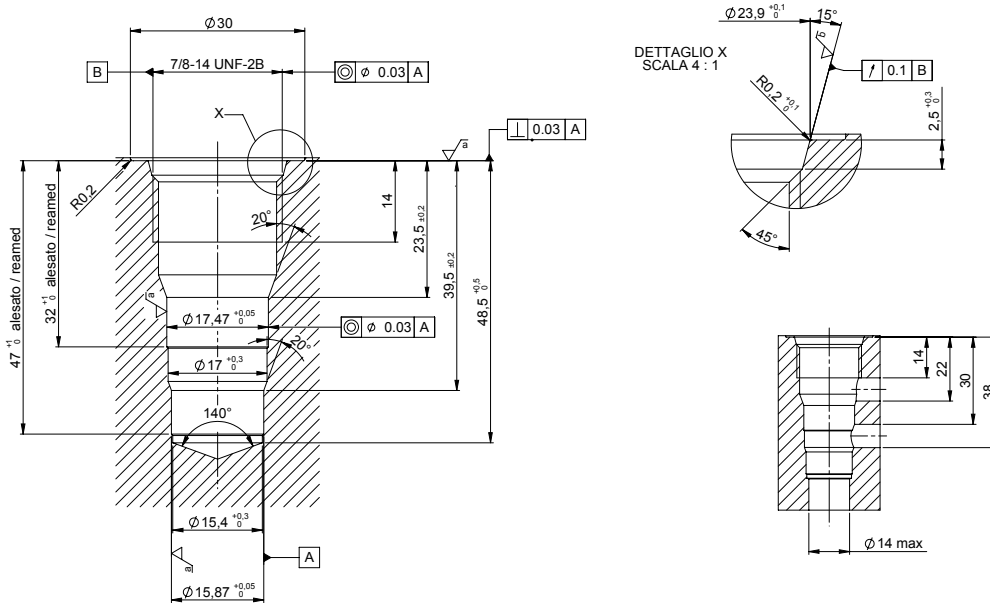
53-1



UNLESS OTHERWISE SPECIFIED	
DIMENSIONS mm	ANGLE PROJECTION
TOLERANCES ACCORDING TO (ISO2768-mk)	
BASE SHAFT (h13)	
BASE HOLE (H13)	
LINEAR DIMENSIONS TILL (0.5 +/- 0.05)	
ANGULAR DIMENSIONS TILL (0.5 +/- 0.05)	
FILLETS AND CHAMFERS TILL (0.5 +/- 0.05)	
DEBUR AND BREAK SHARP EDGES (0.1 +/- 0.05)	

$$\sqrt{a} = \sqrt{R_{max}} \cdot 1.6$$

SAE10 STD



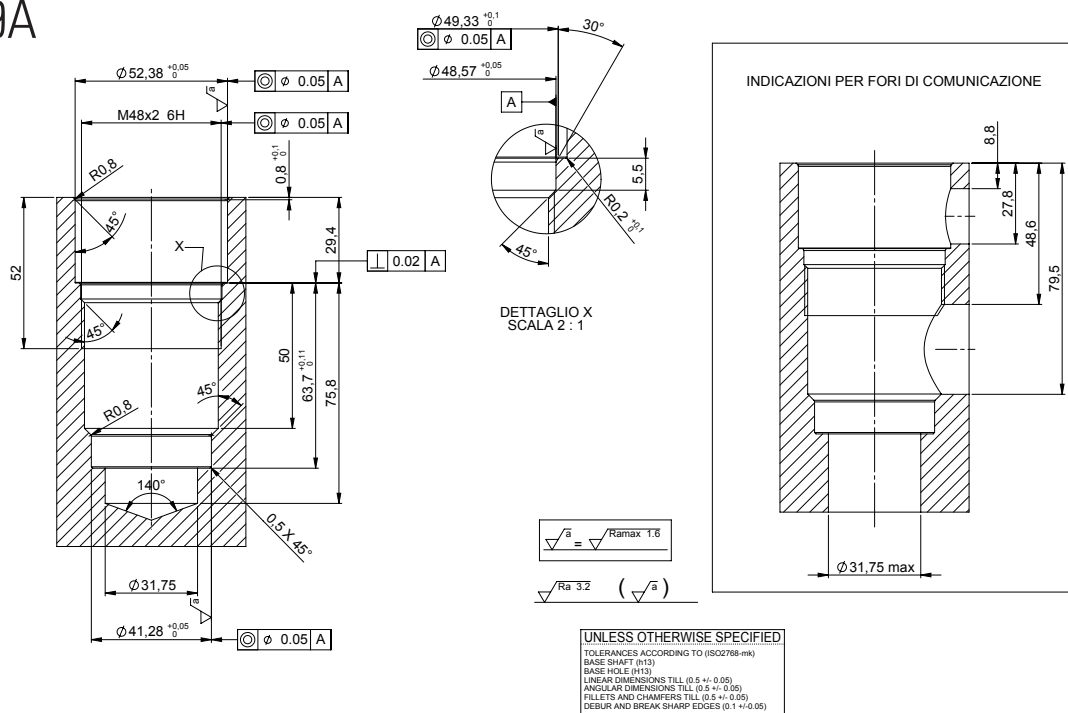
UNLESS OTHERWISE SPECIFIED	
TOLERANCES ACCORDING TO (ISO2768-mk)	
BASE SHAFT (h13)	
BASE HOLE (H13)	
LINEAR DIMENSIONS TILL (0.5 +/- 0.05)	
ANGULAR DIMENSIONS TILL (0.5 +/- 0.05)	
FILLETS AND CHAMFERS TILL (0.5 +/- 0.05)	
DEBUR AND BREAK SHARP EDGES (0.1 +/- 0.05)	

$$\sqrt{a} = \sqrt{R_{max}} \cdot 1.6$$

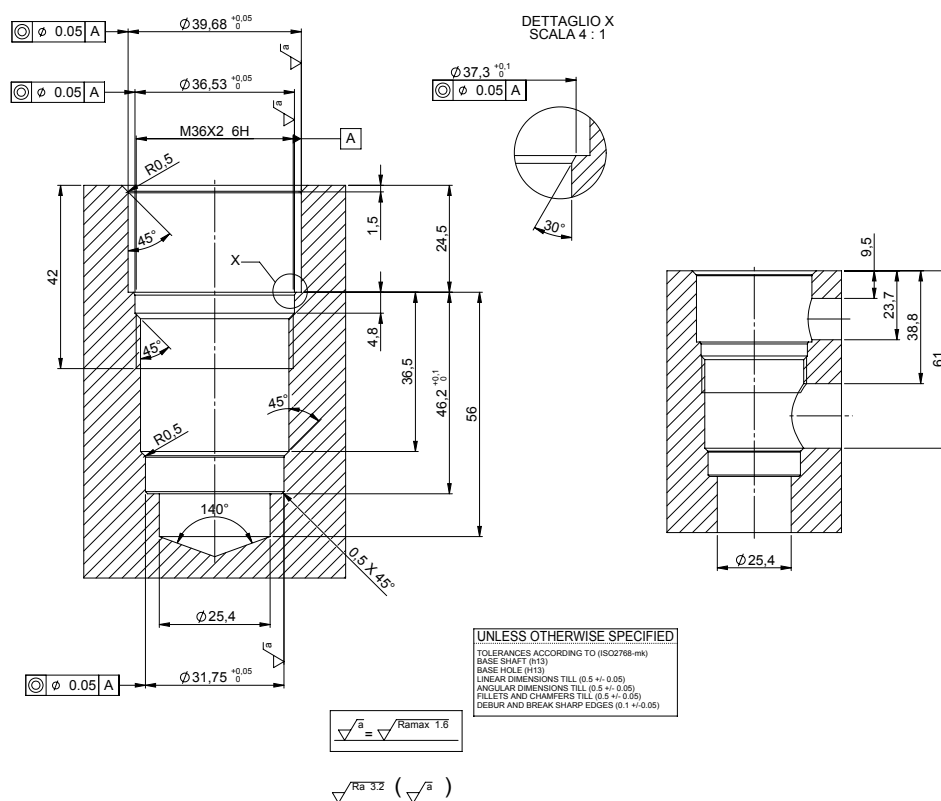
$$\sqrt{b} = \sqrt{R_{max}} \cdot 1.2$$

$$\sqrt{Ra} \cdot 3.2 \left(\sqrt{a} \sqrt{b} \right)$$

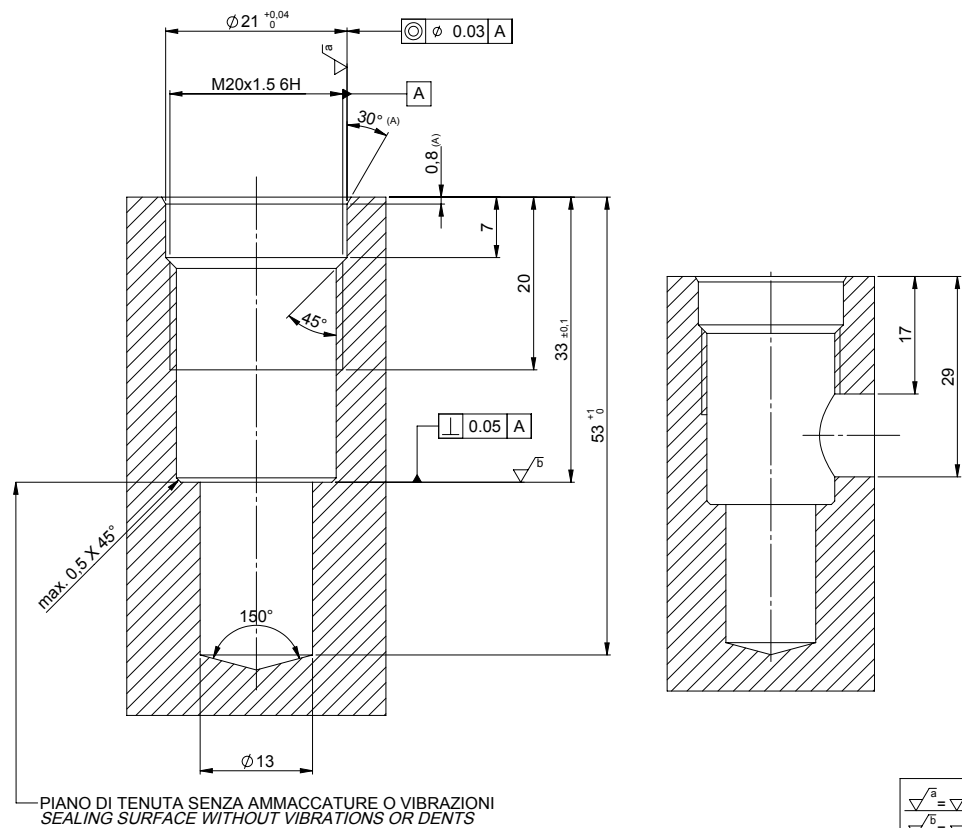
T19A



T17A



vm31



UNLESS OTHERWISE SPECIFIED

TOLERANCES ACCORDING TO (ISO2768-mk)

BASE SHAFT (h13)

BASE HOLE (H13)

LINEAR DIMENSIONS TILL (0.5 +/- 0.05)

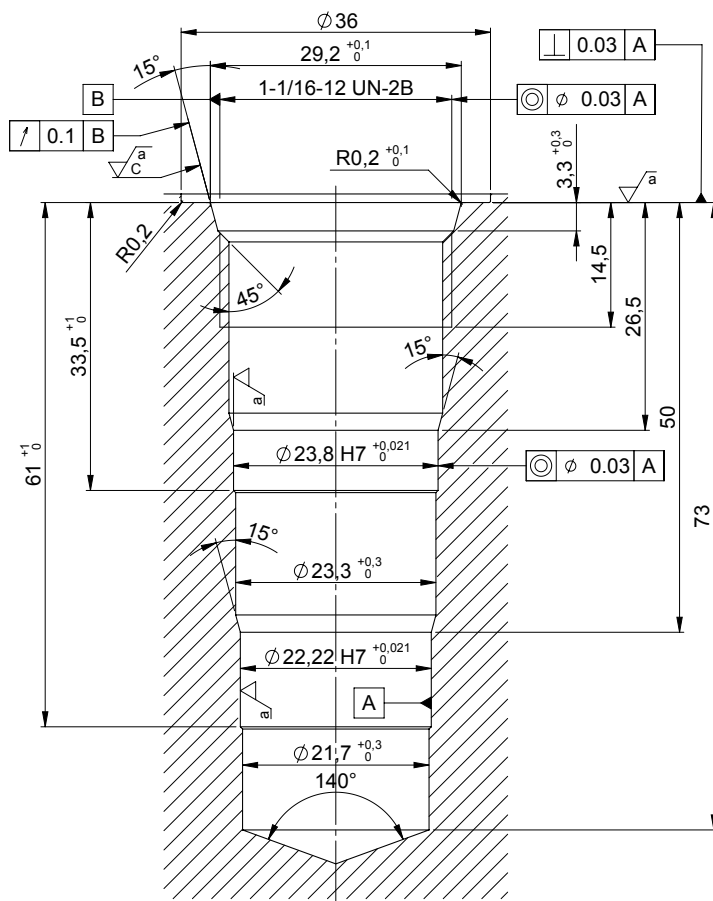
ANGULAR DIMENSIONS TILL (0.5 +/- 0.05)

FILLET AND CHAMFERS TILL (0.5 +/- 0.05)

DEBUR AND BREAK SHARP EDGES (0.1 +/- 0.05)

$$\frac{\sqrt{a}}{\sqrt{b}} = \frac{\sqrt{\text{Ramax } 1.6}}{\sqrt{\text{Ramax } 1.2}}$$

31 pb



UNLESS OTHERWISE SPECIFIED

TOLERANCES ACCORDING TO (ISO2768-mk)

BASE SHAFT (h13)

BASE HOLE (H13)

LINEAR DIMENSIONS TILL (0.5 +/- 0.05)

ANGULAR DIMENSIONS TILL (0.5 +/- 0.05)

FILLETS AND CHAMFERS TILL (0.5 +/- 0.05)

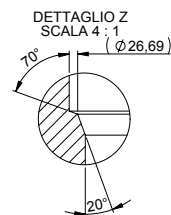
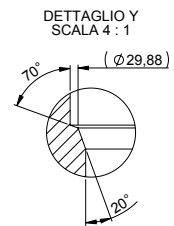
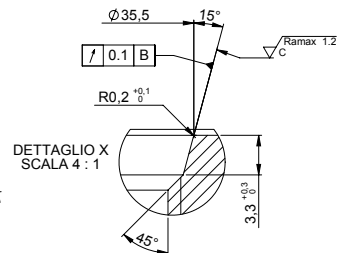
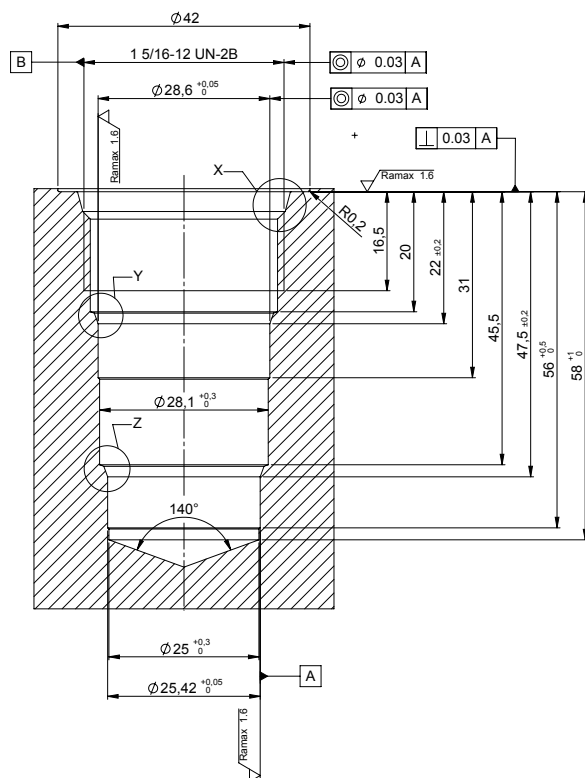
DEBUR AND BREAK SHARP EDGES (0.1 +/- 0.05)

$$\sqrt{a} = \sqrt{\text{Ramax } 1.6}$$

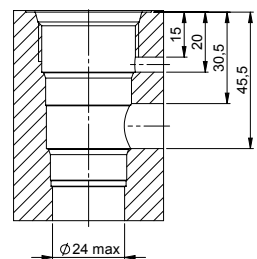
Cavità per 31C

 Ra 3.2 (\sqrt{a})

SAE16

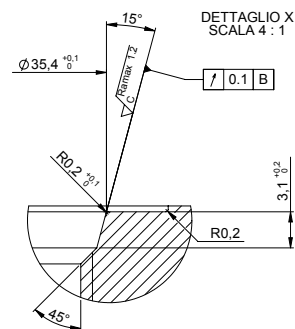
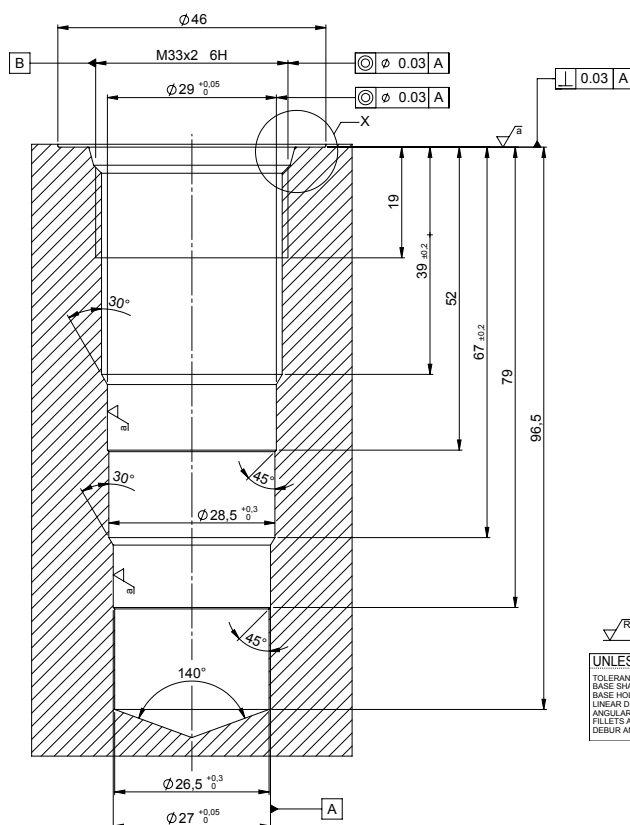


Fori di collegamento
scala 1:1

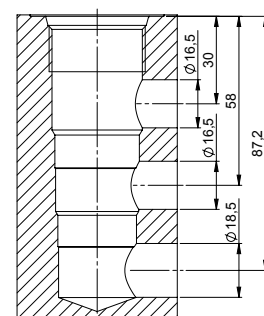


UNLESS OTHERWISE SPECIFIED
TOLERANCES ACCORDING TO (ISO2768-mk)
BASE SHAFT (H13)
BASE HOLE (h13)
LINEAR DIMENSIONS TILL (0,5 \pm 0,05)
ANGULAR DIMENSIONS TILL (0,5 \pm 0,05)
FILLETS AND CHAMFERS TILL (0,5 \pm 0,05)
DEBUR AND BREAK SHARP EDGES (0,1 \pm 0,05)

34pb

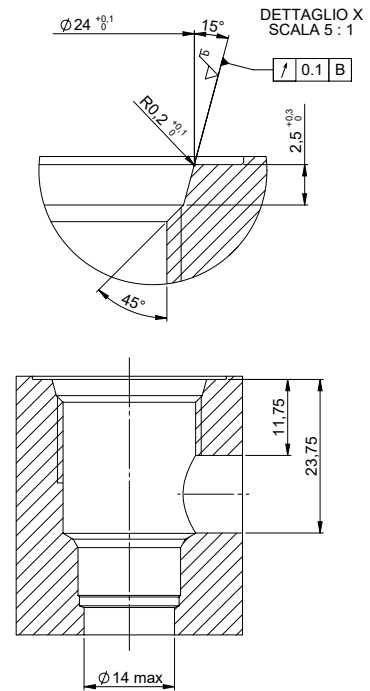
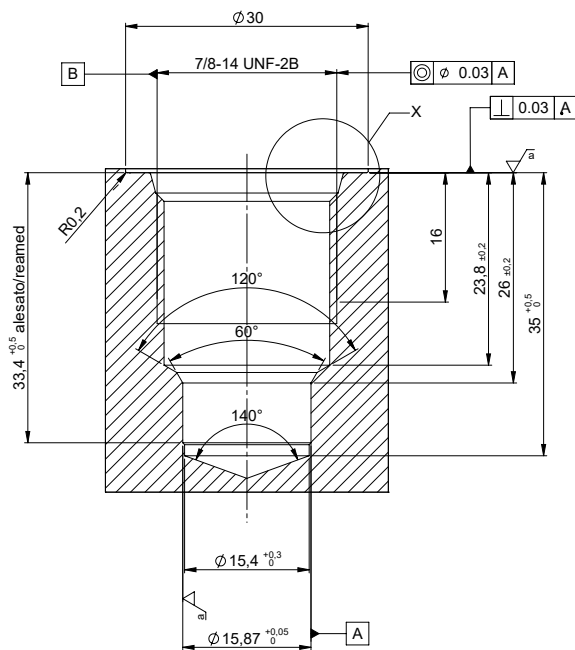


Fori di collegamento:



UNLESS OTHERWISE SPECIFIED
TOLERANCES ACCORDING TO (ISO2768-mk)
BASE SHAFT (H13)
BASE HOLE (h13)
LINEAR DIMENSIONS TILL (0,5 \pm 0,05)
ANGULAR DIMENSIONS TILL (0,5 \pm 0,05)
FILLETS AND CHAMFERS TILL (0,5 \pm 0,05)
DEBUR AND BREAK SHARP EDGES (0,1 \pm 0,05)

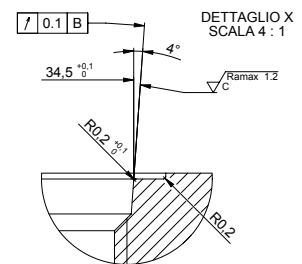
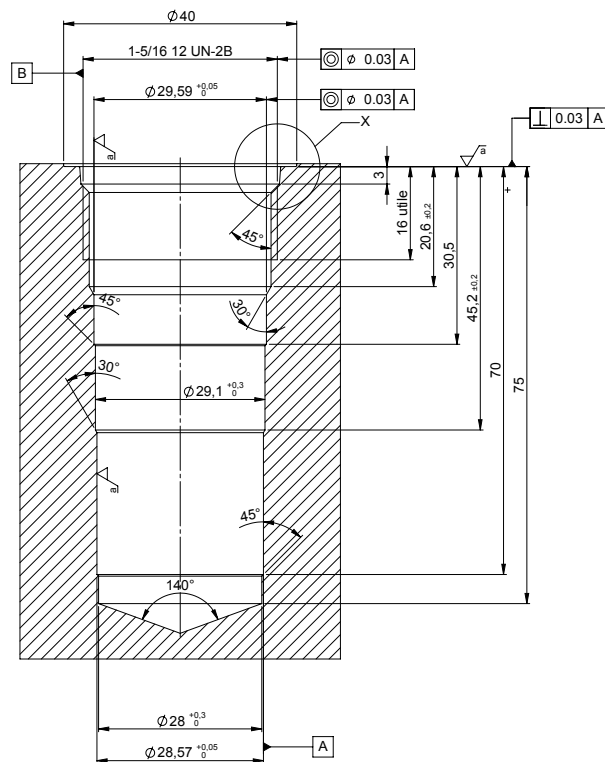
A12370



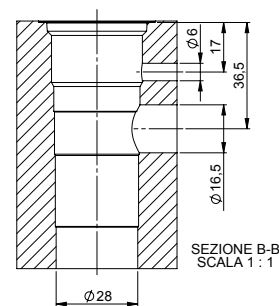
UNLESS OTHERWISE SPECIFIED
TOLERANCES ACCORDING TO (ISO2768-mk)
BASE SHAFT (H7)
BASE HOLE (H7)
LINEAR DIMENSIONS TILL (0.5 ± 0.05)
ANGULAR DIMENSIONS TILL (0.5 ± 0.05)
FILLETS AND CHAMFERS TILL (0.5 ± 0.05)
DEBUR AND BREAK SHARP EDGES (0.1 ± 0.05)

$\sqrt{a} = \sqrt{R_{max} T.5}$
 $\sqrt{b} = \sqrt{R_{max} T.2}$
 $\sqrt{c} = \sqrt{R_{max} T.2}$

A877



Fori di collegamento:

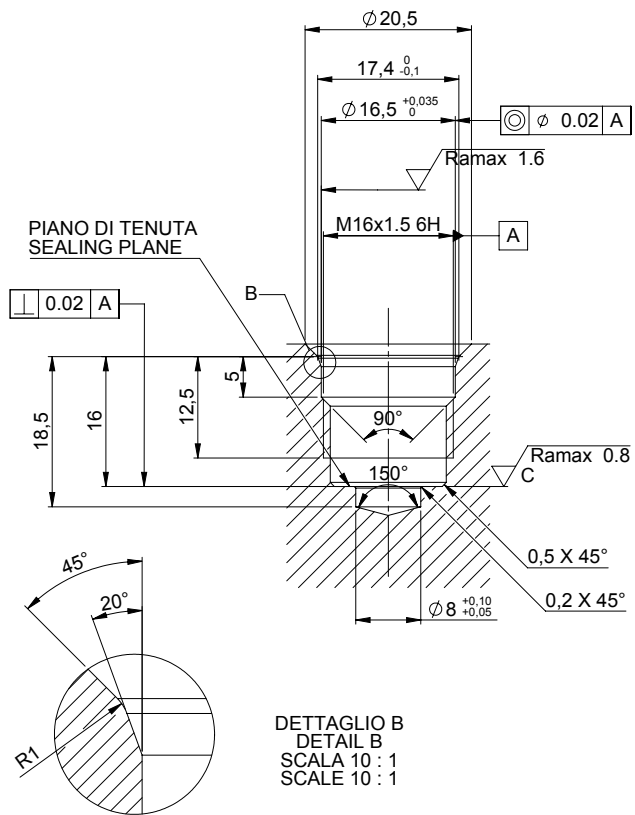


$\sqrt{Ra} 3.2$ (\sqrt{a} $\sqrt{R_{max} T.2}$)

UNLESS OTHERWISE SPECIFIED
TOLERANCES ACCORDING TO (ISO2768-mk)
BASE SHAFT (H7)
BASE HOLE (H7)
LINEAR DIMENSIONS TILL (0.5 ± 0.05)
ANGULAR DIMENSIONS TILL (0.5 ± 0.05)
FILLETS AND CHAMFERS TILL (0.5 ± 0.05)
DEBUR AND BREAK SHARP EDGES (0.1 ± 0.05)

$\sqrt{a} = \sqrt{R_{max} T.5}$

Vm6



UNLESS OTHERWISE SPECIFIED

TOLERANCES ACCORDING TO (ISO2768-mk)

BASE SHAFT (h13)

BASE HOLE (H13)

LINEAR DIMENSIONS TILL (0.5 +/- 0.05)

ANGULAR DIMENSIONS TILL (0.5 +/- 0.05)

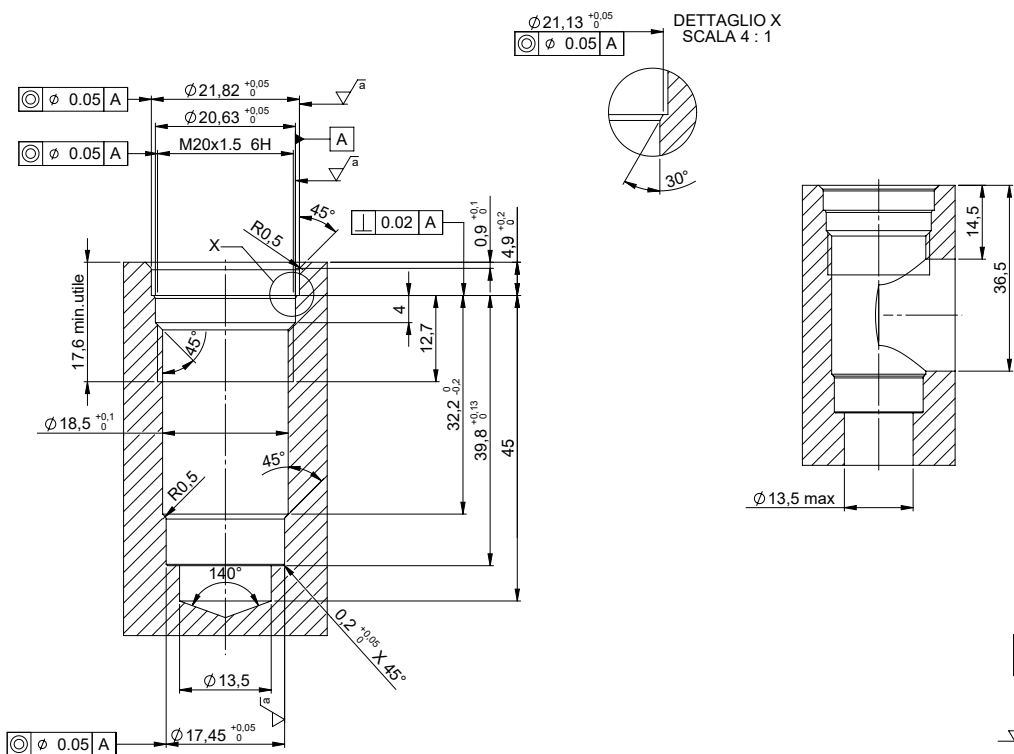
FILLETS AND CHAMFERS TILL (0.5 +/- 0.05)

DEBUR AND BREAK SHARP EDGES (0.1 +/- 0.05)

DETTAGLIO B
 DETAIL B
 SCALA 10 : 1
 SCALE 10 : 1

$$\sqrt[3]{Ra \cdot 3.2} \left(\sqrt[3]{Ra_{max} \cdot 1.6} \sqrt[3]{Ra_{max} \cdot 0.8} \right)^{1/2}$$

T10A



UNLESS OTHERWISE SPECIFIED

TOLERANCES ACCORDING TO (ISO2768-mk)

BASE SHAFT (h13)

BASE HOLE (H13)

LINEAR DIMENSIONS TILL (0.5 +/- 0.05)

ANGULAR DIMENSIONS TILL (0.5 +/- 0.05)

FILLETES AND CHAMFERS TILL (0.5 +/- 0.05)

DEBUR AND BREAK SHARP EDGES (0.1 +/- 0.05)

$$\frac{V}{A} = \frac{V_{\text{Ramax}}}{1.6}$$

$\sqrt{\text{Ra } 3.2}$ (\sqrt{a})

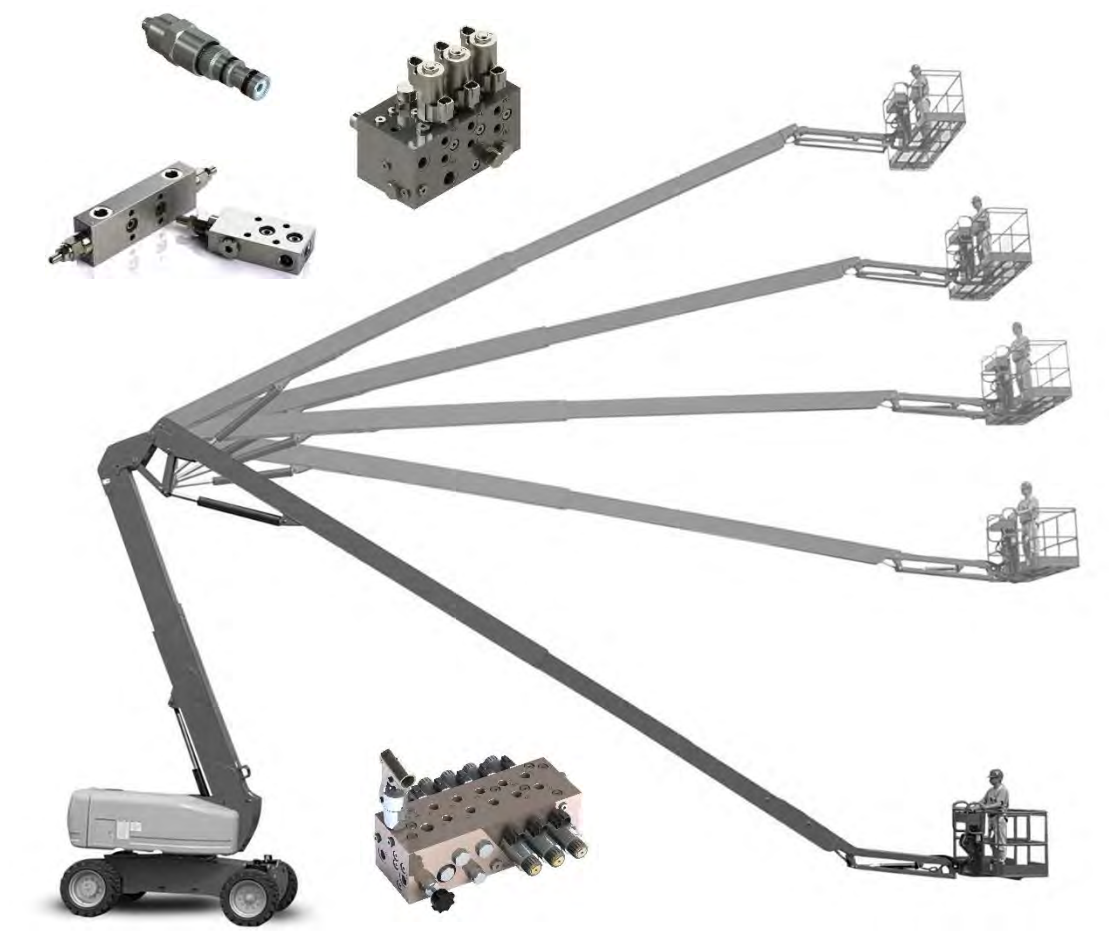
Note



[illegible]

安全 / 舒适 / 节能

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