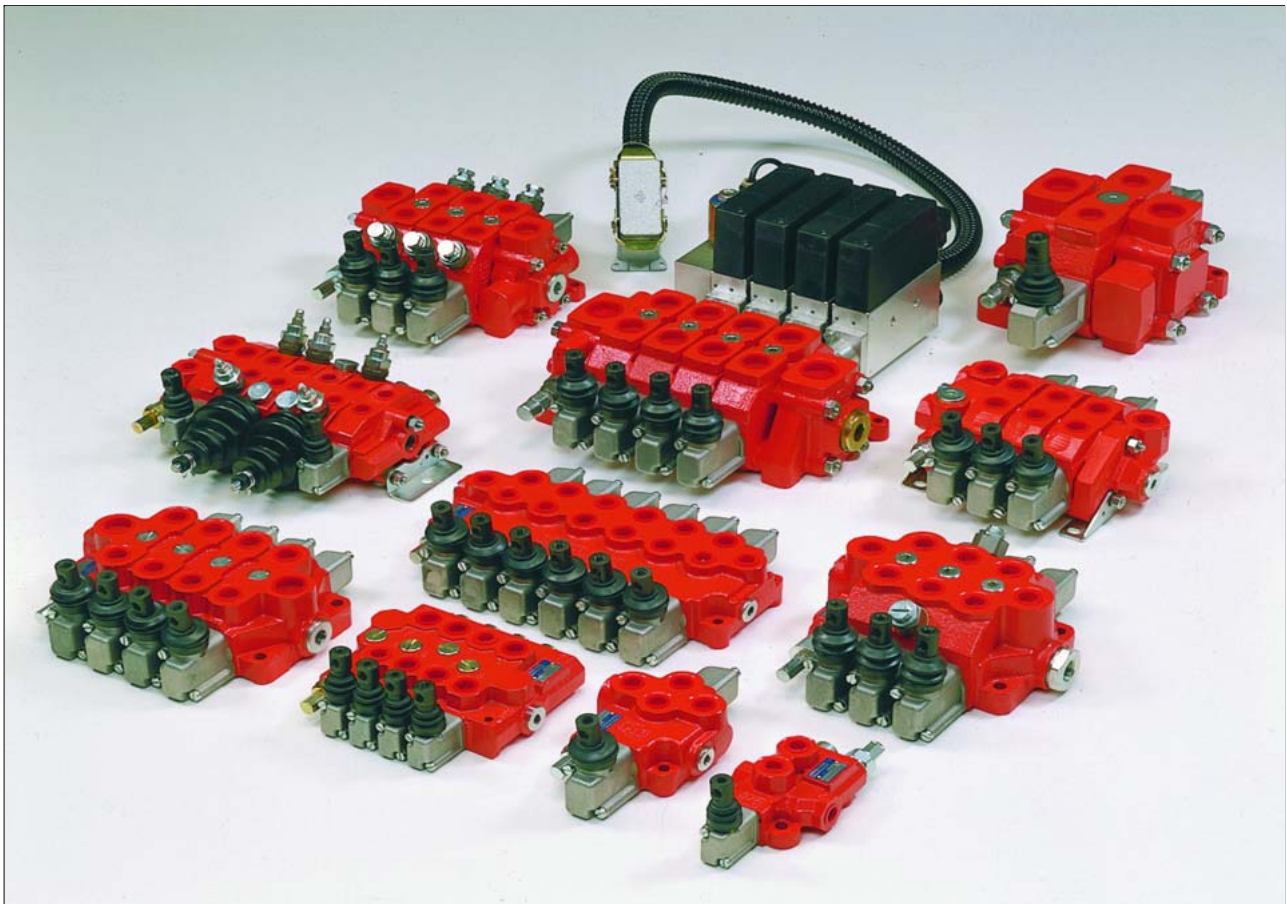


Monobloc and Sectional Directional Control Valves



motion and progress

2 Monobloc directional control valves HDM140



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2.1 General specifications

Technical specification		
Max flow rate	l/min. U.S.G.P.M.	40 10
Max continuous operating pressure supply port P	bar PSI	250 3600
Max intermittent peak pressure work port A/B	bar PSI	320 4600
Max back pressure tank port T	bar PSI	30 430
Oil temperature	° C ° F	-10 to +80 14 to 180
Oil viscosity	mm ² /s	16 to 75
Oil filtration	μ	≤ 30

Spool leakage at 100 bar (1450 PSI), Temp. 50° C (120° F), viscosity 27 mm ² /s:		
Maximum	cm ³ /min. Cu. In./min.	12 0.732
Average	cm ³ /min. Cu. In./min.	6 0.366
Lower values on demand (to be agreed with our Sales Dept..)		

Number of spools	1
Adjustable direct operated relief valve (tamper-proof seal available on request)	RV
Single load hold check valve	LC

2.1.1 Weight

Version	kg	lb
HDM140	1.75	3.85

2.1.2 Material specification:

Body: High strength cast-iron.
Spool: Hardened steel.
Seals: Buna "N".

2.1.3 Standard features:

- 1) Balanced interchangeable spools (provides minimum leakage, smooth operation)
- 2) Wide selection inlets, work ports, and outlets threaded ports.
- 3) Negative overlapping of the spool.

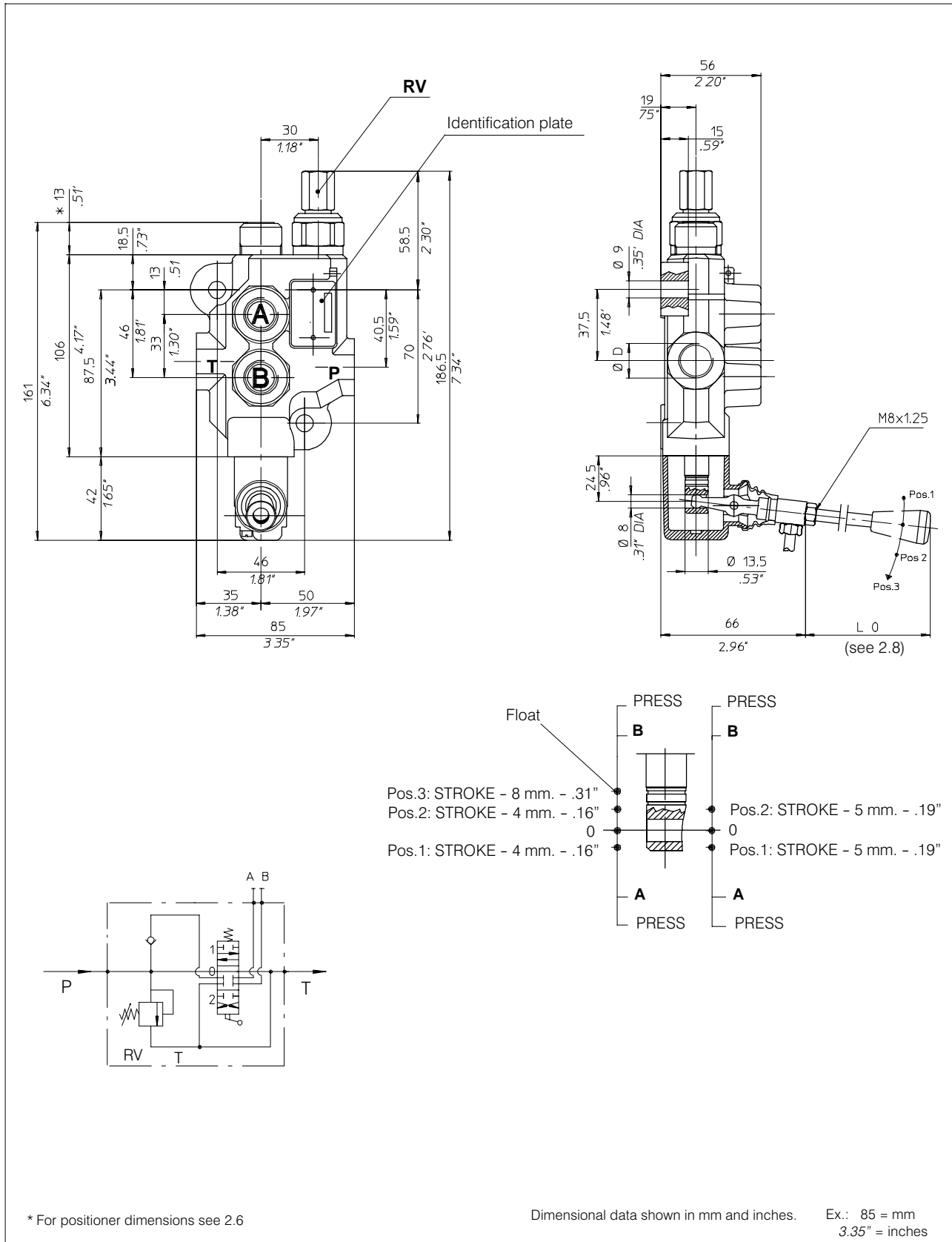
2.1.4 Optional features available:

- 1) Open or closed centre positions, 3 or 4 way operations, 3 or 4 position (float position), full open centre (motor spool) and other spool options.
- 2) Complete lever assembly.
- 3) Wide range spool positioners.

2.1.5 Symbols:

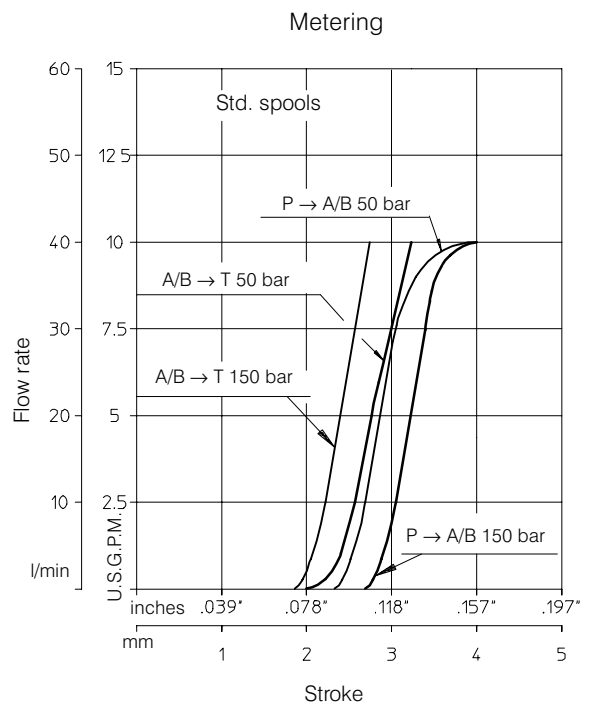
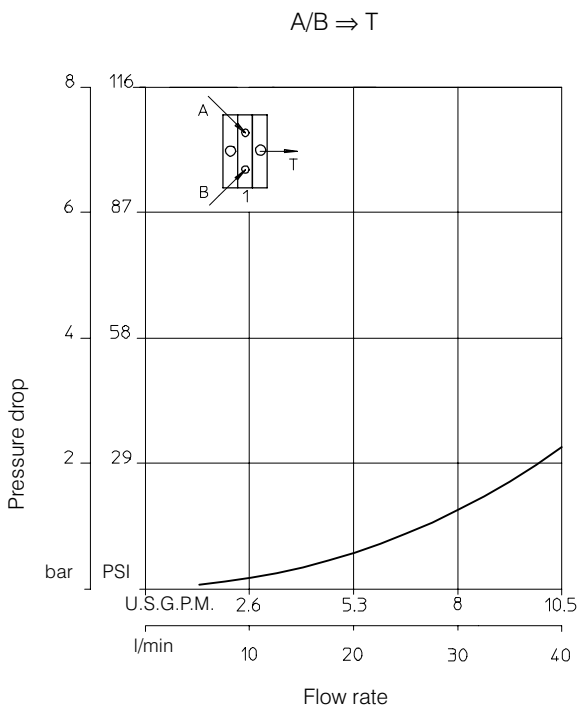
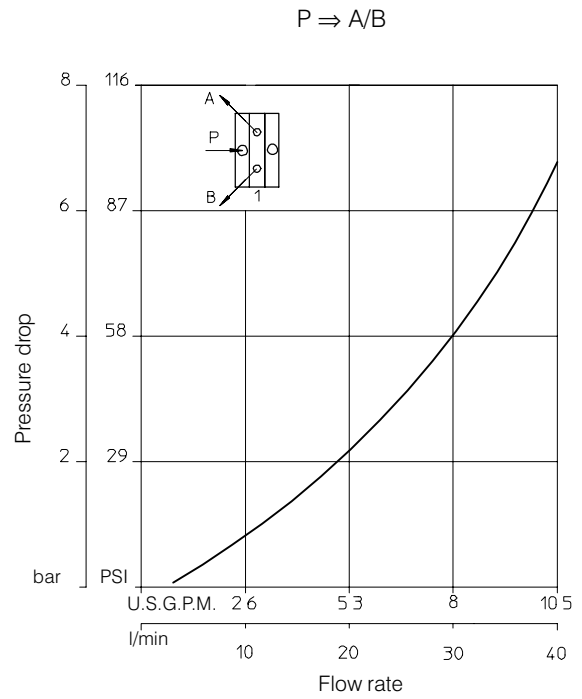
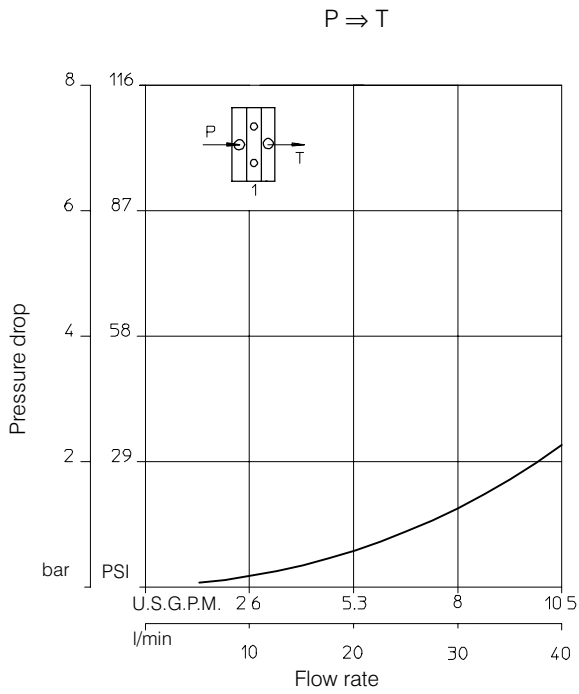
P: inlet port
T: outlet port
A/B: work ports
RV: relief valve
3.1.0.2: spool position
P: pressure line
T: exhaust line
E: center line (by pass).

2.2 Dimensional data

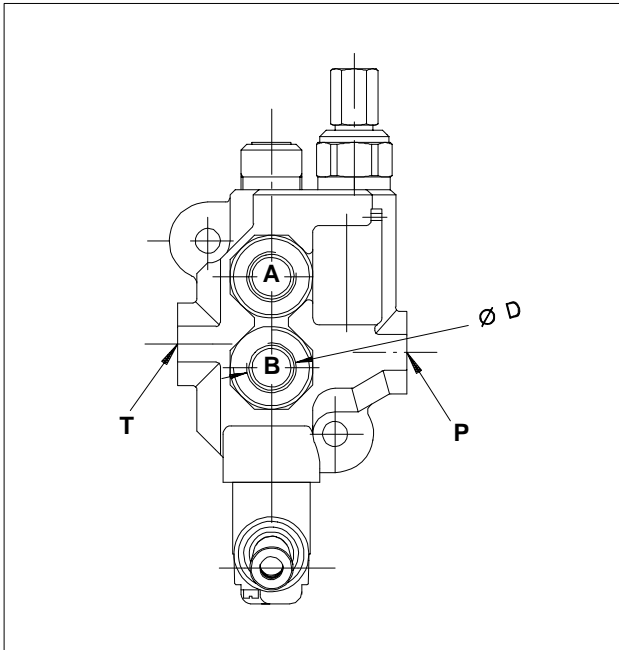


2.3 Performance curves

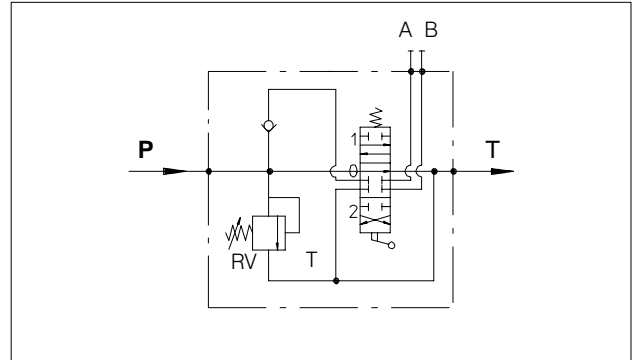
Oil: Shell Tellus T37
 Temperature: 50° C (120° F)
 Viscosity: 27 mm²/s



2.4 Monobloc bodies



Ø D	Type	Code
M18X1.5	K01	200.9421.1001.0
3/8" BSP	K02	200.9421.2001.0
SAE8	K05	200.9421.7001.0



Note: Body codes consist of: machined casting, seals, plugs and check valve only. Not to be used for complete valve order.

2.5 Adjustable direct acting Relief Valve RV

Pressure set range bar (PSI)	Std. setting bar (PSI)	Type	Spring colour
30 - 95 (400 - 1300)	60 (860)	06	Yellow (YE)
96 - 210 (1300 - 3000)	150 (2100)	15	Green (GR)
211 - 320 (3000 - 4600)	260 (3700)	26	Blue (BL)

2.6 Spool positioners

F (N)**	Type	Code*
200	01 standard	200.7685.1001.0
140	79	200.7685.1092.0

3 position spring return to neutral

Type	Code*
02	200.7685.3001.0

2 position detent - spring centre

Type	Code*
03	200.7685.2001.0

3 position detent

Type	Code
04	200.7685.4003.0

4 position float
Plastic plug code: 200.6780.0009.0

Type	Code*
05	200.7685.2005.0

2 position detent

Type	Code*
06	200.7685.1005.0

2 position spring return

Type	Code*
07	200.7685.2027.0

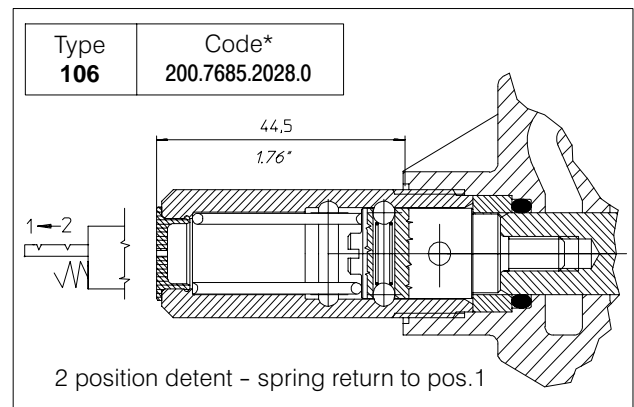
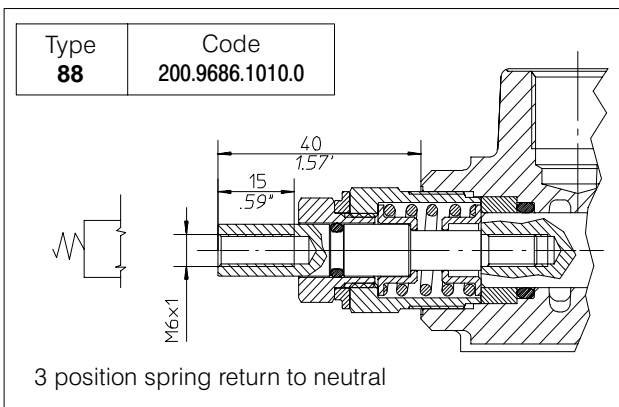
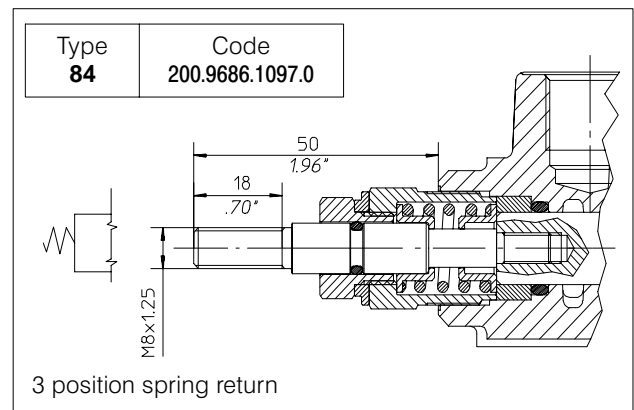
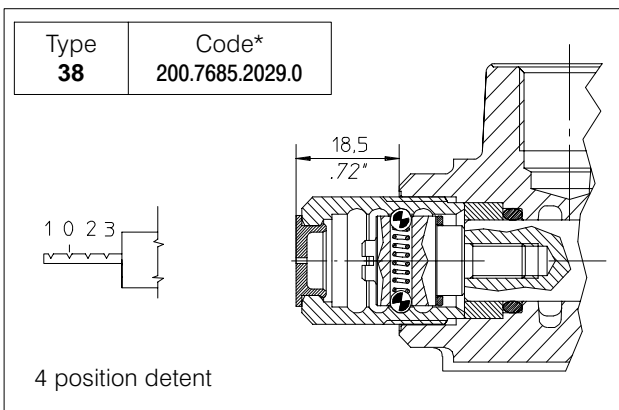
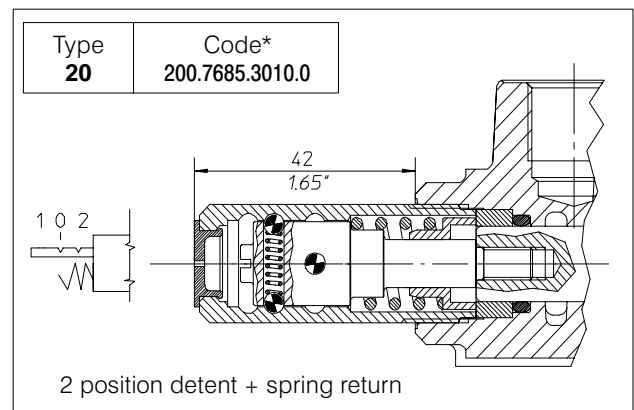
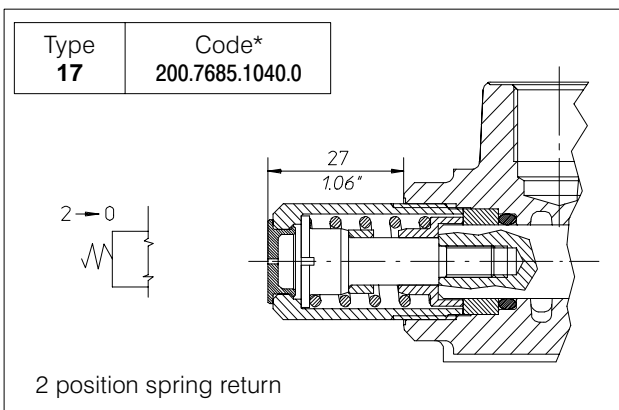
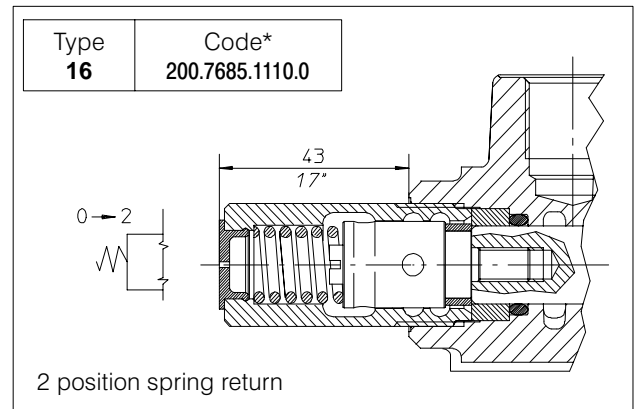
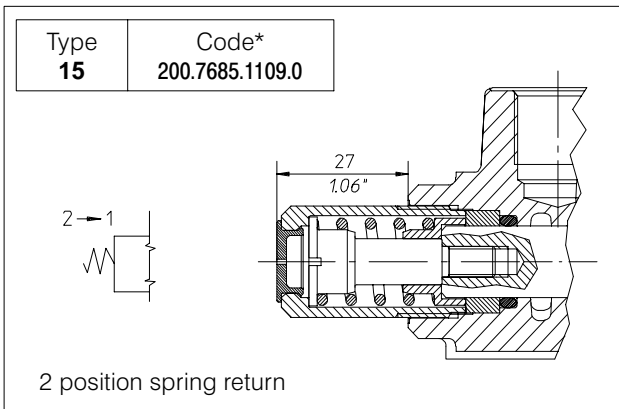
2 position detent

Type	Code*
12	200.7685.1021.0

2 position spring return

* : code without plastic plug; plastic plug code: 200.6780.0008.0

F (N)**: Force in Newton (N) needed to operate the spool.



* : code without plastic plug; plastic plug code: 200.6780.0008.0

2.6.1 Microswitch control

Type 30	Code 200.9686.1050.0	Microswitch is operated when the spool is in pos. 1		
Type 32	Code 200.9686.1060.0	Microswitch is operated when the spool is in pos. 2		
Type 34	Code 200.9686.1064.0	Microswitch is operated when the spool is in pos. 1 and 2		

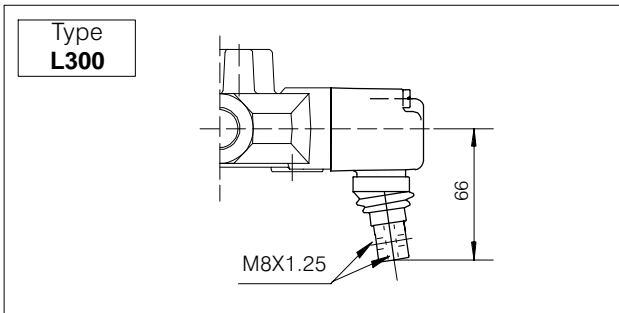
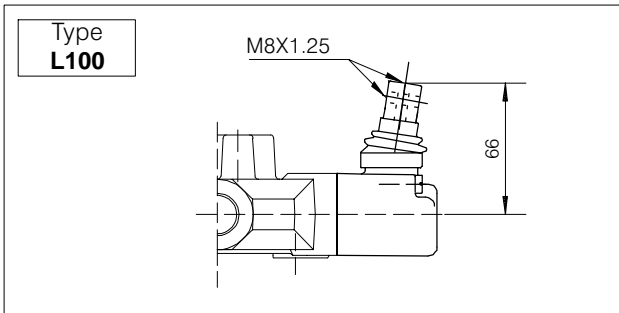
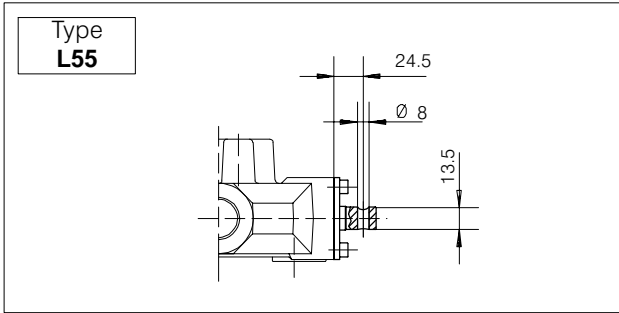
* The microswitch is supplied only on customer's request.

2.7 Spool charts

Spool scheme	Spool features	Type		
	4 way - 3 position A/B closed E open by pass	A		3 way - 3 position B closed E open by pass G
	4 way - 3 position A/B-E closed	B		4 way - 3 position with regenerative spool in 1 st position R**
	4 way - 3 position A/B to tank in neutral E open by pass	C		3 way - 3 position A closed E open by pass S
				4 way - 4 position 4 th floating position Z

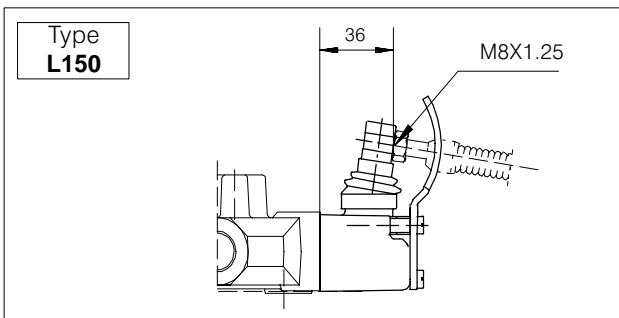
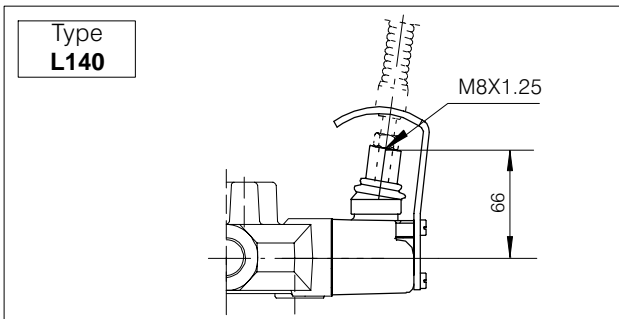
** : special body required

2.8 Lever styles



Lo		Type	Code
mm	inches		
150	5.90	AL001 standard	200.7022.1019.0
200	7.87	AL002	200.7022.1003.0
250	9.84	AL003	200.7022.1005.0
300	11.81	AL004	200.7022.1006.0

2.8.1 Safety levers



Lo		Type	Code
mm	inches		
160	6.30	AL014	200.7022.1009.0
180	7.08	AL018	200.7022.1011.0

2.8.2 Remote cable control

Lever Support	Code 200.7609.0013.0
----------------------	-------------------------

M10X1.5

Optional 200.6772.0048.0

Lo		Type	Code
mm	inches		
185	7.28	AL001	200.7022.2001.0
250	9.84	AL002	200.7022.2003.0
300	11.81	AL003	200.7022.2004.0
350	13.78	AL004	200.7022.2005.0

Cable	
--------------	--

Cable length	Code
1000 mm	200.5441.04002
1500 mm	200.5441.04005
2000 mm	200.5441.04006
2500 mm	200.5441.04007
3000 mm	200.5441.04008
4000 mm	200.5441.04009

Cables are assembled on the valve only on request and with an extra charge.

Spool Kit

Code: 200.9609.0037.0

2.9 Hydraulic-Pneumatic control ON-OFF

Type	Code
HP 24	200.9686.5049.0

Operating conditions
 Hydraulic control:
 Pressure range: (bar) Min. 6 - Max. 15
 (PSI) Min. 85 - Max. 215
 Pneumatic control:
 Pressure range: (bar) Min. 6 - Max. 10
 (PSI) Min. 85 - Max. 145

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