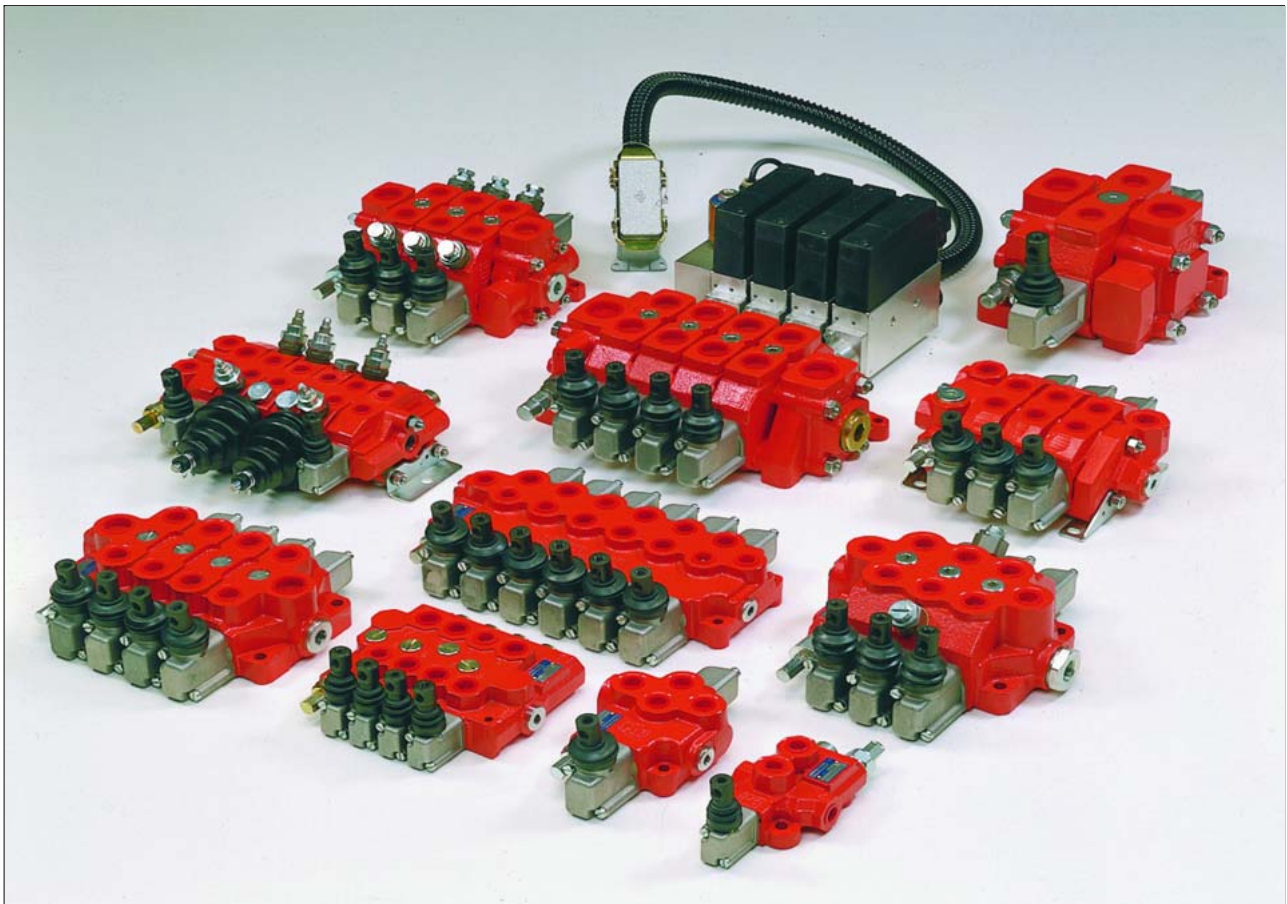


Monobloc and Sectional Directional Control Valves



HDM140

2 Monobloc directional control valves HDM140**Contents**

2.1	General specifications	9
2.2	Dimensional data	10
2.3	Performances curves	11
2.4	Monobloc bodies	12
2.5	Adjustable direct acting Relief Valve	12
2.6	Spool positioners	13
2.7	Spool charts	15
2.8	Lever styles	16
2.9	Hydraulic-Pneumatic control ON-OFF	17

HDM140

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:

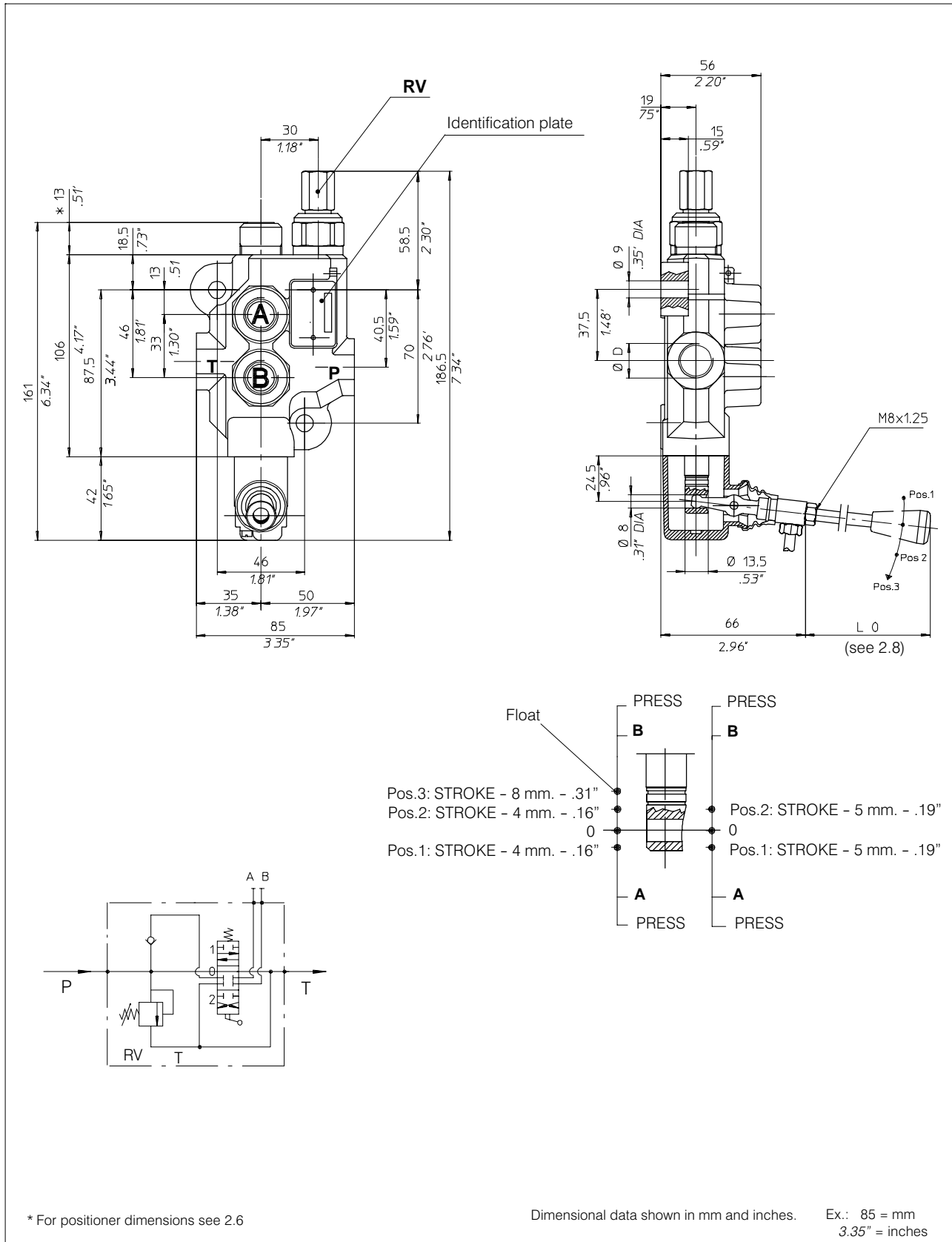
- 1) Open or closed centre positions, 3 or 4 way operations, 3 or 4 position (float position), full open centre (motor spool) and other spool options.
- 2) Complete lever assembly.
- 3) Wide range spool positioners.

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).

HDM140

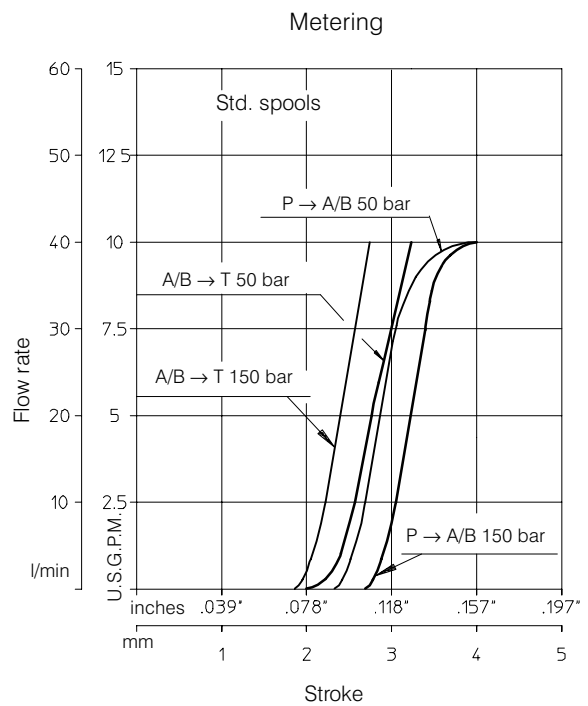
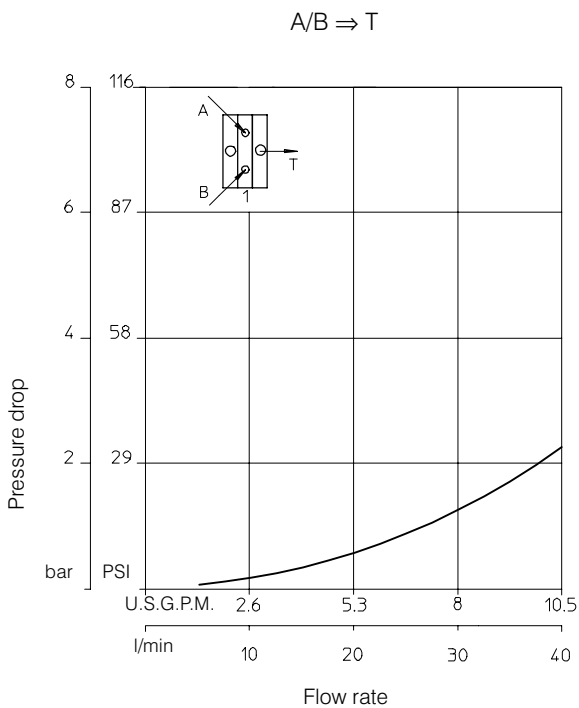
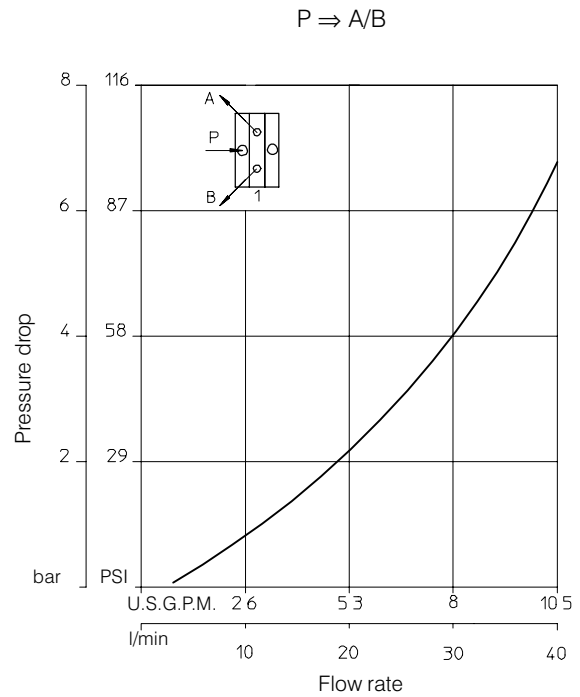
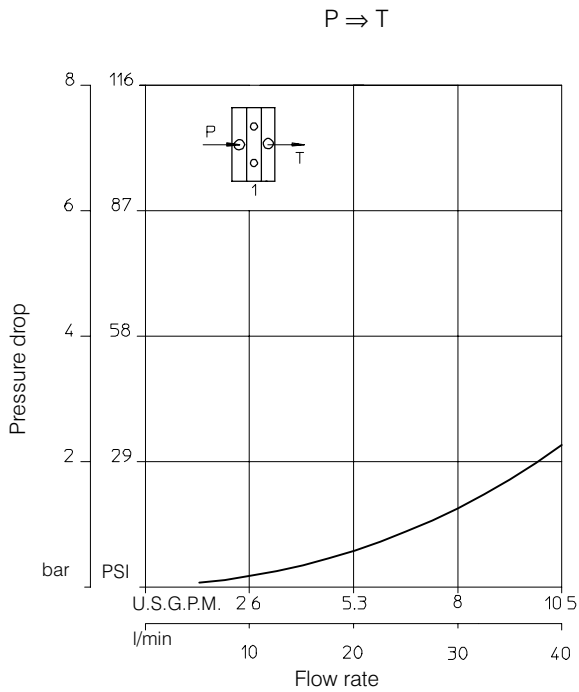
2.2 Dimensional data



HDM140

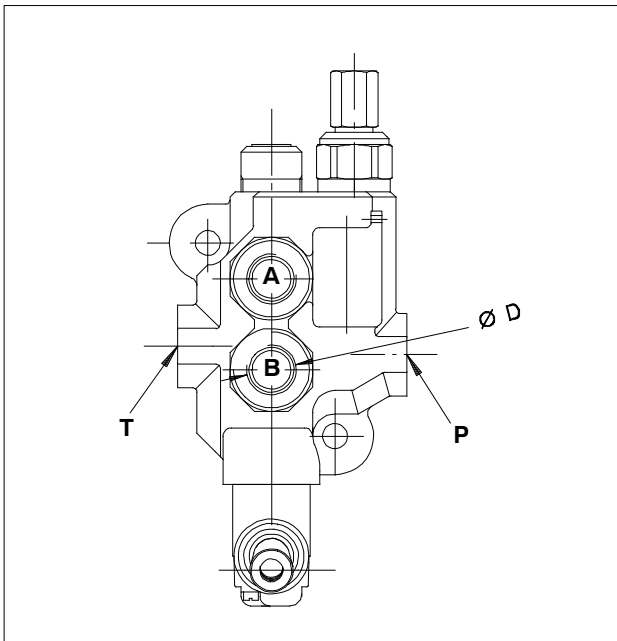
2.3 Performance curves

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

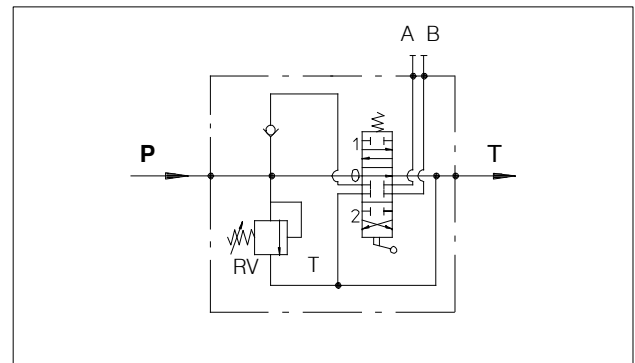


HDM140

2.4 Monobloc bodies

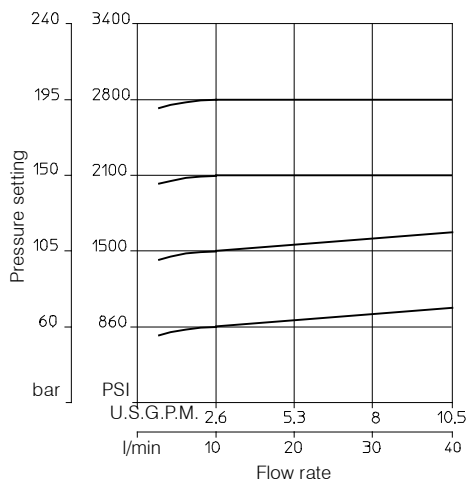
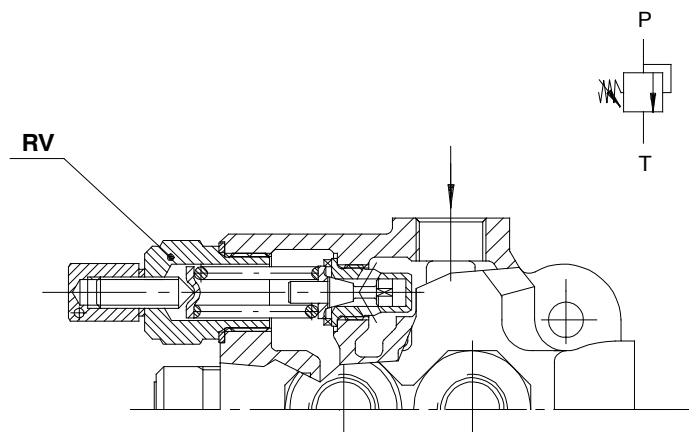
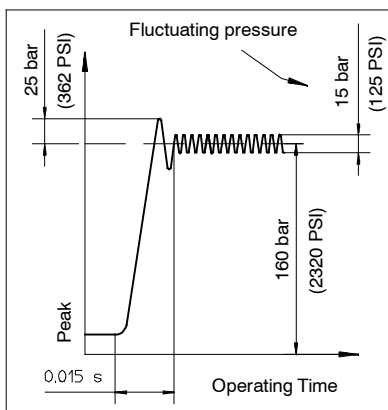


Ø D	Type	Code
M18X1.5	K01	200.9421.1001.0
3/8" BSP	K02	200.9421.2001.0
SAE8	K05	200.9421.7001.0



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



Relief valve set at 30 l/min (8 U.S.G.P.M.)

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)

* The maximum operating pressure for each valve series is indicated in the "Technical specification" at the first page of each valve section.

HDM140

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

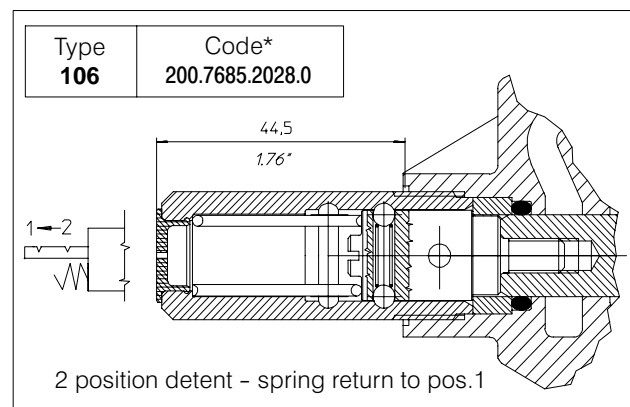
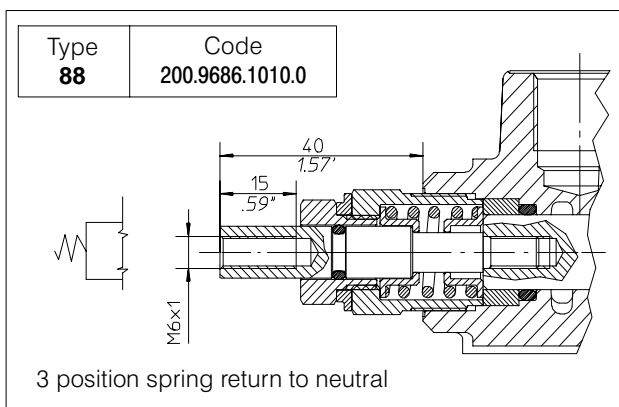
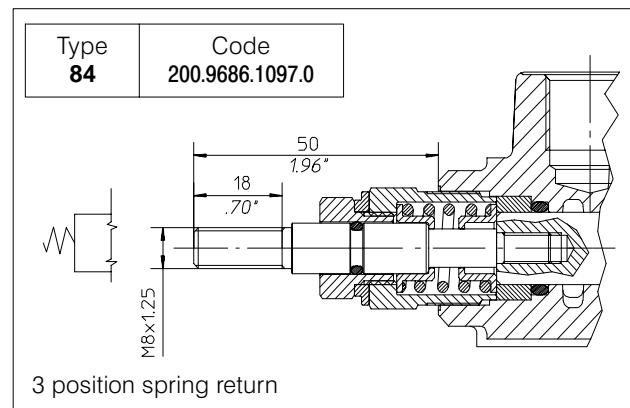
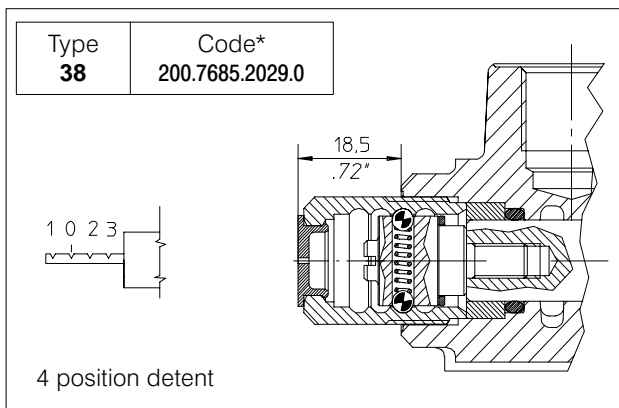
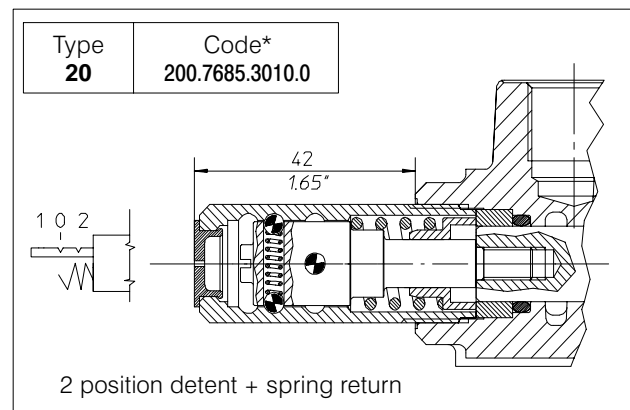
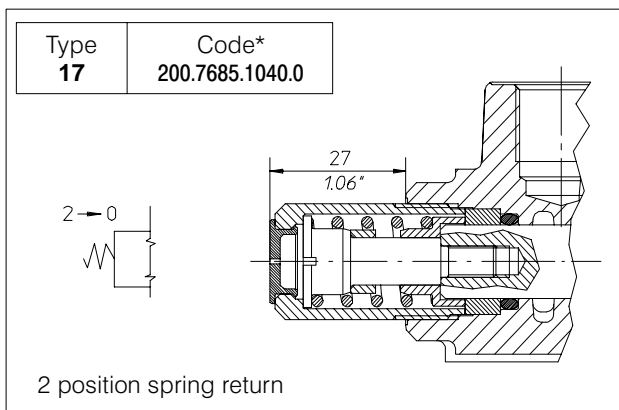
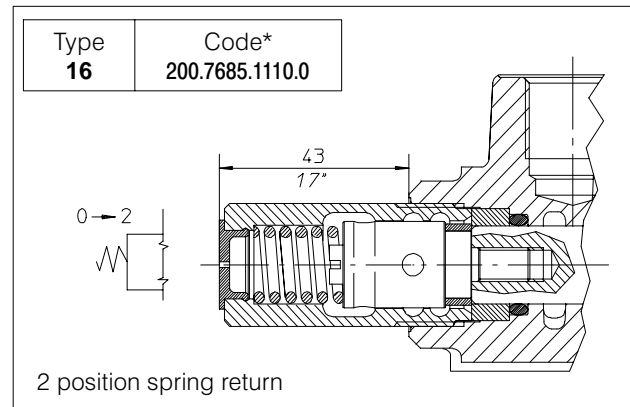
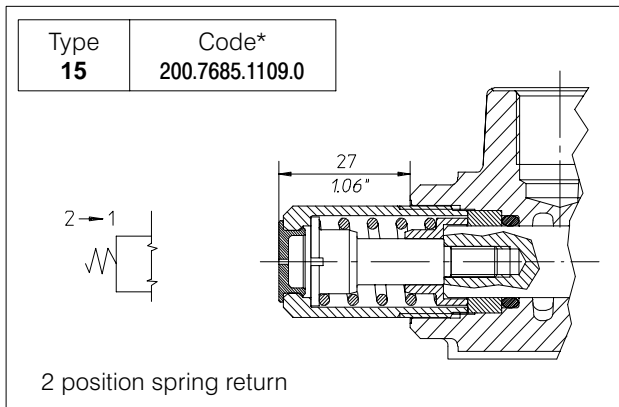
Type	Code*
12	200.7685.1021.0

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.

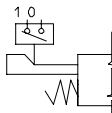
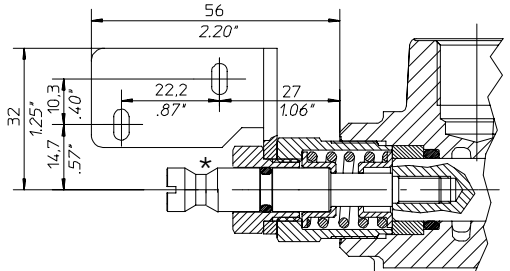
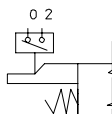
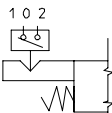
HDM140



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

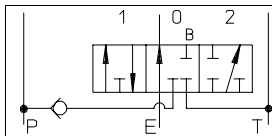
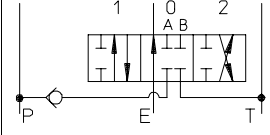
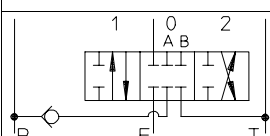
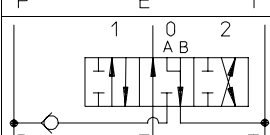
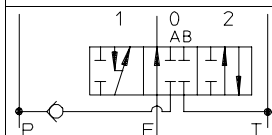
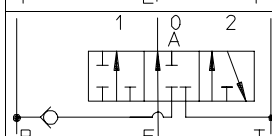
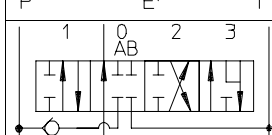
HDM140

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.

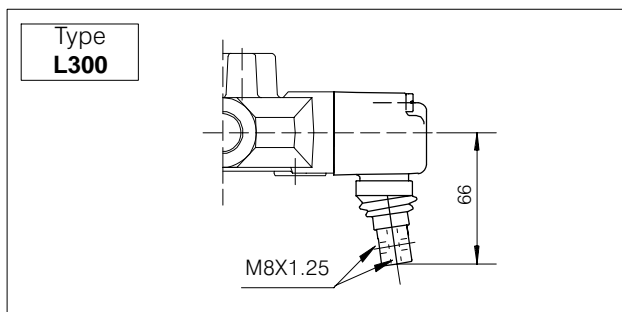
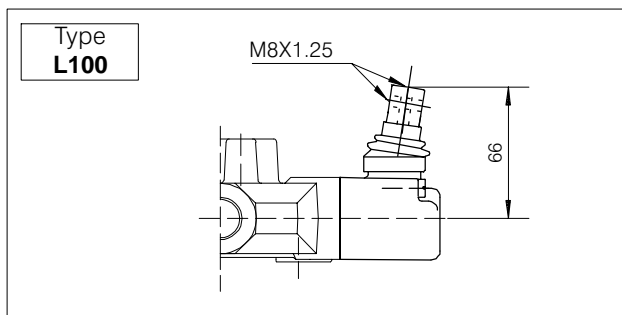
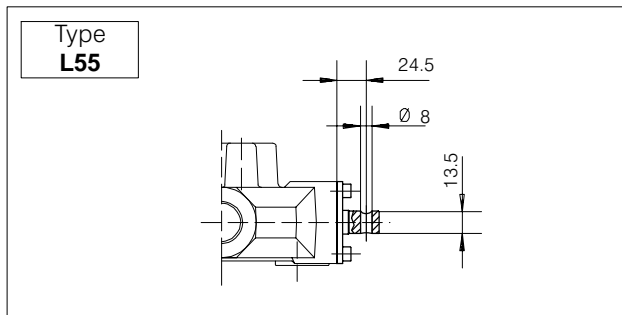
2.7 Spool charts

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

** : special body required

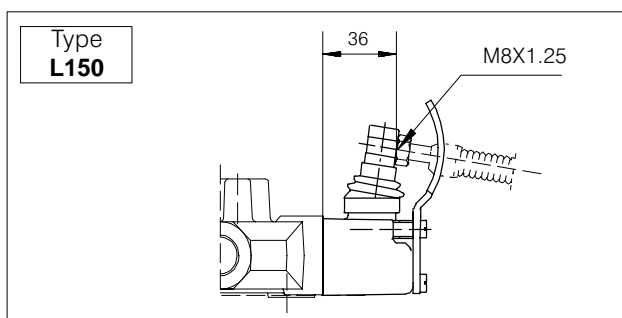
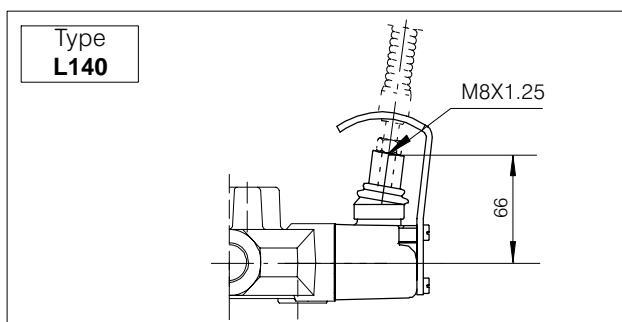
HDM140

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

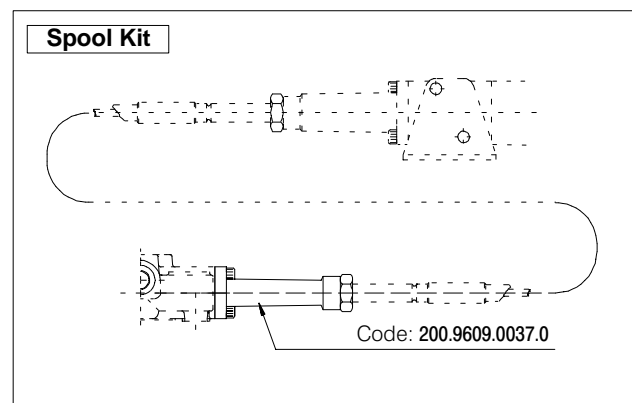
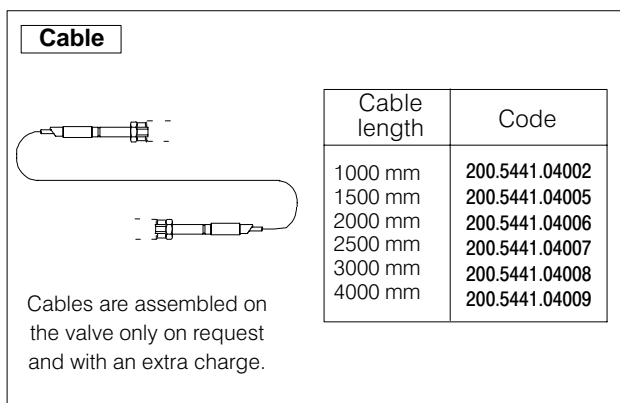
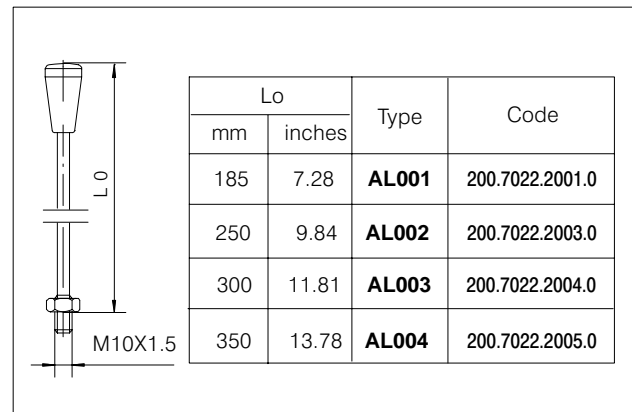
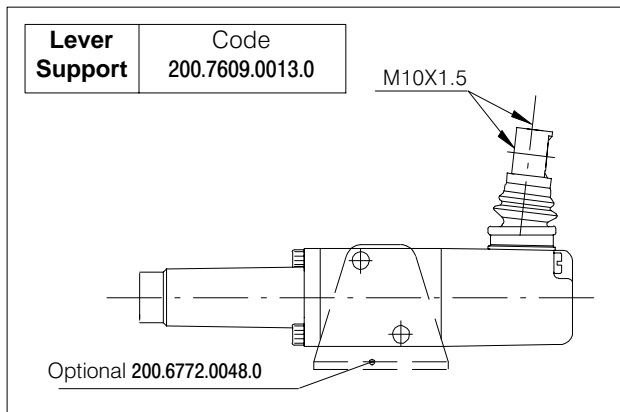
2.8.1 Safety levers



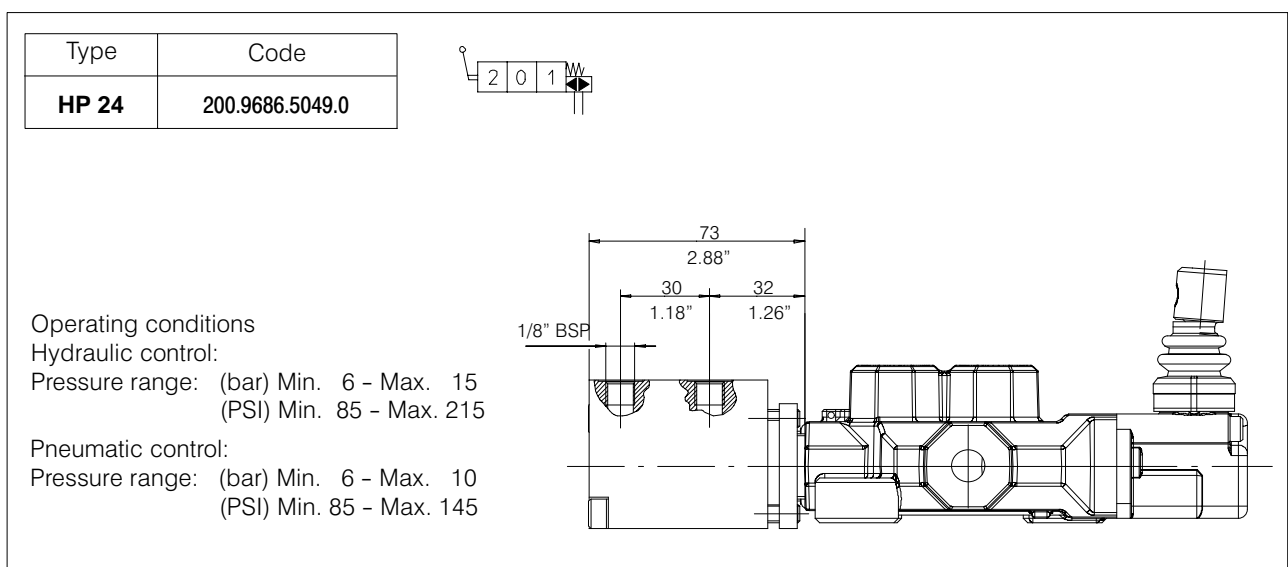
Lo		Type	Code
mm	inches		
160	6.30	AL014	200.7022.1009.0
180	7.08	AL018	200.7022.1011.0

HDM140

2.8.2 Remote cable control



2.9 Hydraulic-Pneumatic control ON-OFF



BUCHER HYDRAULICS

www.bucherhydraulics.com

Germany

Phone +49 7742 85 20
Fax +49 7742 71 16
info.de@bucherhydraulics.com

France

Phone +33 389 64 22 44
Fax +33 389 65 28 78
info.fr@bucherhydraulics.com

Netherlands

Phone +31 79 34 26 24 4
Fax +31 79 34 26 28 8
info.nl@bucherhydraulics.com

UK

Phone +44 24 76 35 35 61
Fax +44 24 76 35 35 72
info.uk@bucherhydraulics.com

USA

Phone +1 262 605 82 80
Fax +1 262 605 82 78
info.wi@bucherhydraulics.com

Switzerland

Phone +41 33 67 26 11 1
Fax +41 33 67 26 10 3
info.ch@bucherhydraulics.com

Italy

Phone +39 0522 92 84 11
Fax +39 0522 51 32 11
info.it@bucherhydraulics.com

Austria

Phone +43 6216 44 97
Fax +43 6216 44 97 4
info.at@bucherhydraulics.com

China

Phone +86 10 64 44 32 38
Fax +86 10 64 44 32 35
info.bj@bucherhydraulics.com

Product Center (Elevator)

Phone +41 41 757 03 33
Fax +41 41 755 16 49
info.nh@bucherhydraulics.com

We reserve the right of modification without prior notice.