

MONDLOCK DIRECTIONAL CONTROL VALVE



MM 100

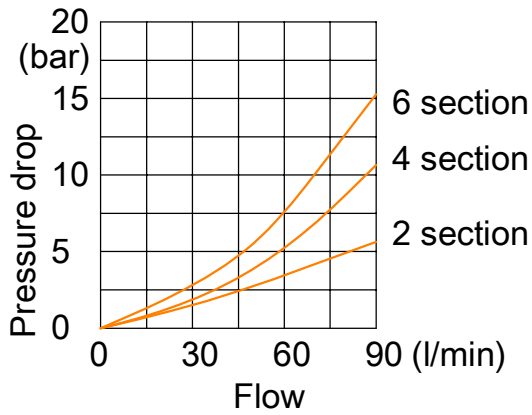
B HYDRAULIC PRODUCT

SYSTEM OF FLUID POWER

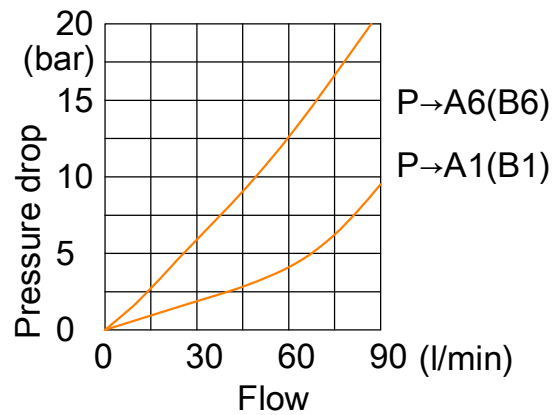
MM-100

RATING DIAGRAM

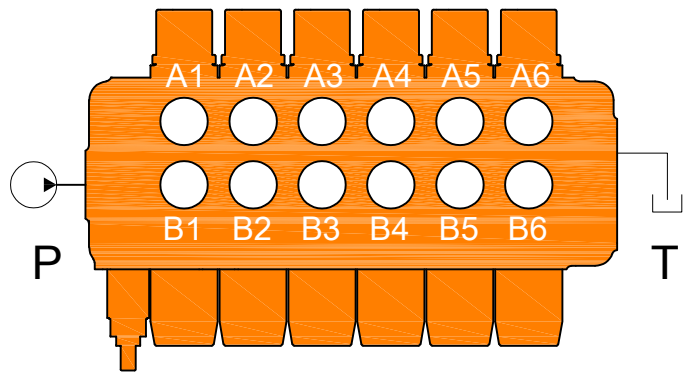
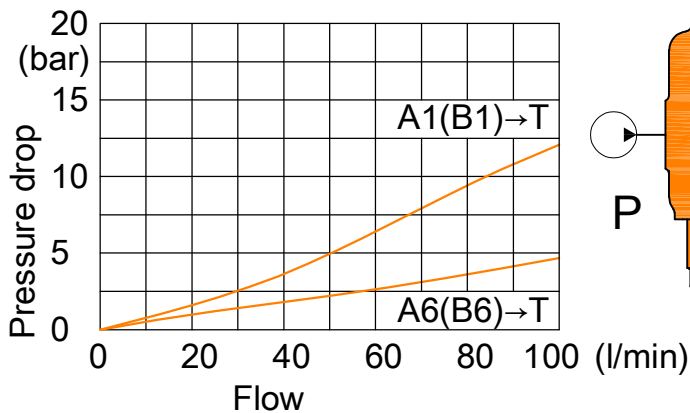
Open centre
From side inlet to side outlet



Inlet to work port
From side inlet to A port (spool in position 1) or B port (spool in position 2)



Work port to outlet
From A port (spool in position 2) or B port (spool in position 1) to side outlet





SYSTEM OF FLUID POWER

MM-100

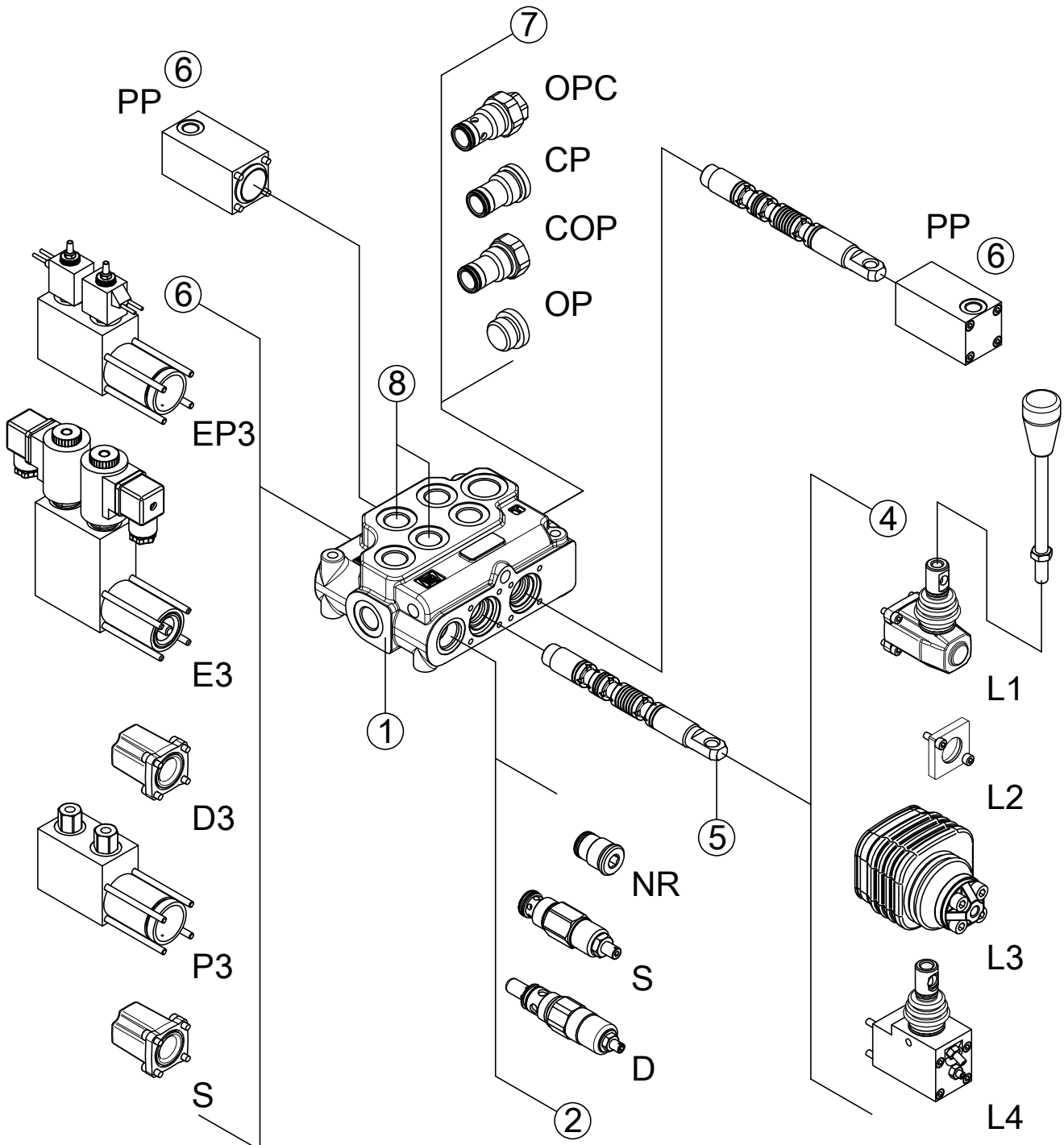
ORDERING CODE NUMBER EXAMPLE

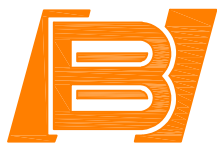
┌ 1st section ─┐ ┌ 2nd section ─┐

MM-100/ 2 / S(200) / PC / L1 A1 S / A1 PP / OP / BSP / ECK1/2-CS01

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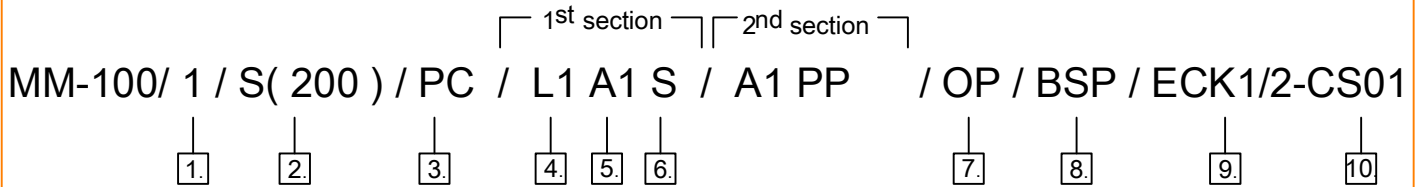
1. 2. 3. 4. 5. 6. 7. 8. 9. 10.





MM-100

ORDERING CODE NUMBER EXAMPLE



1. Body kits

Type	Description
1	Parallel, 1 sections.
2	Parallel, 2 sections.
3	Parallel, 3 sections.
4	Parallel, 4 sections.
5	Parallel, 5 sections.
6	Parallel, 6 sections.

2. Inlet main relief valve page.77

Type	Description
NR	Relief valve blanking plug.
S(200)	Pilot operated relief valve, range 30 to 380 bar/ 200 to 2900 psi. standard setting 200 bar / 2900psi.
D(200)	Direct-acting relief valve, range 200 to 315 bar/ 2900 to 4570 psi. standard setting 220 bar / 3200psi.
SL(200)	Pilot operated relief valve with capping, range 200 to 315 bar/ 2900 to 4570 psi. standard setting 220 bar / 3200psi.
DL(200)	Direct-acting relief valve with capping, range 200 to 315bar/ 2900 to 4570 psi. standard setting 220 bar / 3200psi.

3. Hydraulic circuit page.78

Type	Description
PC	Parallel circuit.

4. "B" side option page.79

Type	Description
L1	Standard lever aluminum pivot box. with neoprene gatie.
L1A	Standard lever with an extra screw to adjust either side of spool stroke.
L2	Without lever with L2 dust cover.
L3	joystick lever(+axis) with left fulcrum.
L4	Standard lever set as L1A, able to adjust both side of spool stroke.

5. Spool options page.80

Type	Description
A1	Double acting, 3 positions with A and B closed in neutral position.
A2	Double acting, 3 positions with A and B open to tank in neutral position.
A3	Single acting on A, 3positions, B plugged requires G1/2 plug.
A4	Double acting, 3 positions with A open to tank in neutral position.
A5	Double acting, 3 positions with B open to tank in neutral position.
A6	Double acting, 3 positions with A and B partially open to tank in neutral position.

6. "A" side spool positioners page.81

Type	Description
S	Spring return to neutral.
SA	Adjust single side of spool stroke. Spring return to neutral.
P3	On/off pneumatic control. Min. pressure 5 bar(70 psi) Max. pressure 10 bar (140 psi).
D1R	Detent in positions1.Spring return to neutral.
D2R	Detent in positions2.Spring return to neutral.
D12R	Detent in positions 1 or 2.Spring return to neutral.
D3	Detent in three positions.
LH1	External hydraulic pilot to position 1. Spring return to neutral.
LH2	external hydraulic pilot to position 2. Spring return to neutral.
LH3	external hydraulic pilot to position 1 and 2. Spring return to neutral.



MM-100

ORDERING CODE NUMBER EXAMPLE

6."A" side spool positioners page.81

Type	Description
E1	On/off electro-hydraulic control with extrnal pilot and solenoid function to position 1.Spring return to neutral.
E2	On/off electro-hydraulic control with extrnal pilot and solenoid function to position 2.Spring return to neutral.
E3	On/off electro-hydraulic control with extrnal pilot and solenoid function to position 1 and 2.Spring return to neutral.
EP1	On/off electro-pneumatic control with extrnal pilot and solenoid function to position 1. Spring return to neutral.
EP2	On/off electro-pneumatic control with extrnal pilot and solenoid function to position 2. Spring return to neutral.
EP3	On/off electro-pneumatic control with extrnal pilot and solenoid function to position 1 and 2. Spring return to neutral.
PP	Proportional hydraulic control.

9.EL control pilot kit page.86

Type	Description
ECK1/1-6	Compele kit for connection to the main circuit.
ECKS/1-6	Manifold kit to feed low pressure circuit, with X pilot and Y drain.

10.Coli series page.87

Type	Description
CS01	Connection:DIN EN 175 301-803-A/ISO 4400 (43650) Voltage: 12-24VDC
CS02	Connection:Lead wires Voltage: 12-24VDC
CS03	Connection:AMP Junior Voltage: 12-24VDC
CS04	Connection:Kostal M24x1 Voltage: 12-24VDC
EP	Connection:lead wires connection Voltage : 12-24VDC ("A" side has to be used with EP)

7.Outlet port options page.84

Type	Description
OP	Open centre plug.
OPC	Open centre with check valves.
CP	Closed centre plug.
COP	Carry-over plug.
COPC	Carry-over plug with check valves.

8.Port threads option page.85

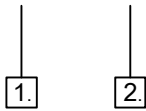
Type	Description
BSP	G.
SAE	UN-UNF.

MM-100

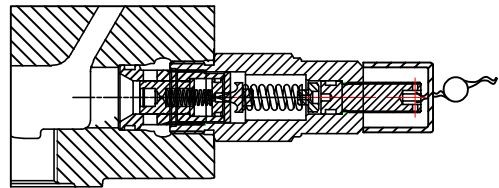
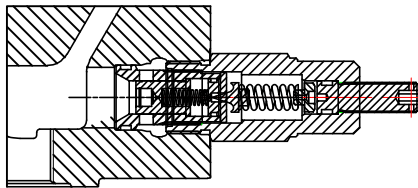
2. Inlet cover main relief valve

Main relief valve position

S (200)

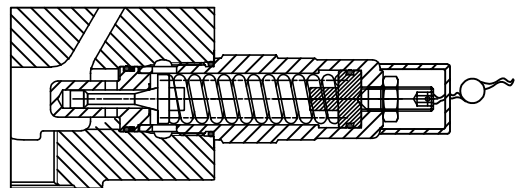
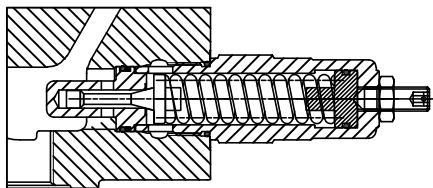


1. Main relief type(S, D)
Optional: with capping (SL, DL)
NR=None relief valve.



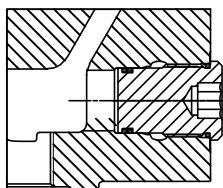
S : Pilot operated relief valve

SL : Pilot operated relief valve with capping



D : Direct-acting relief valve

DL : Direct-acting relief valve with capping



2. S / SL : Standard pressure setting in 30~380bar.
Standard pressure 200bar /2900psi.

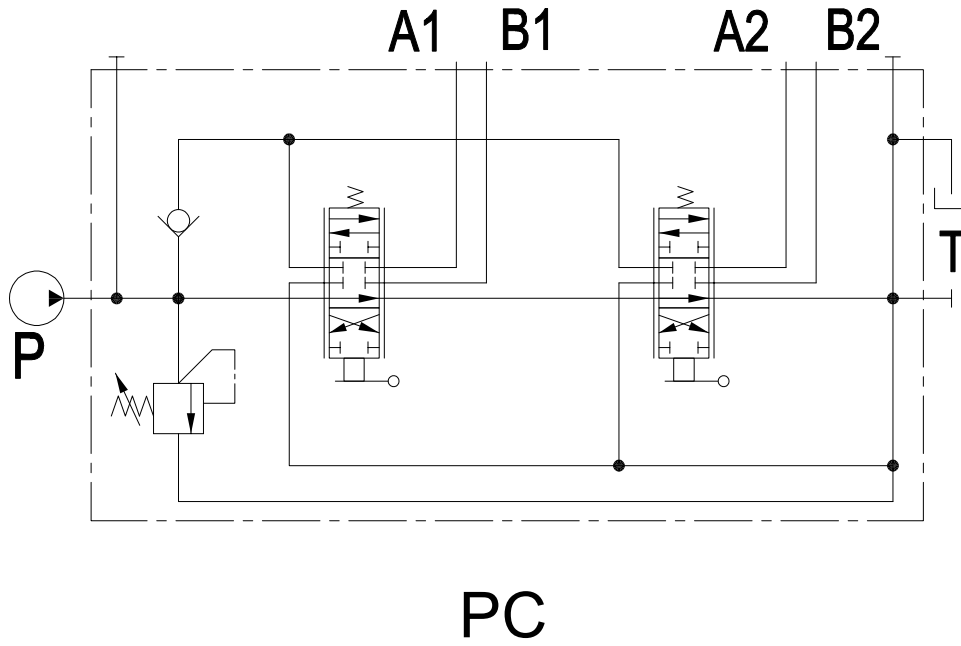
NR : Relief valve blanking plug

D / DL : Standard pressure setting in 200~315bar.
Standard pressure 220bar /3200psi.

MM-100

3. Hydraulic circuit

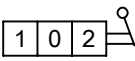
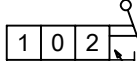
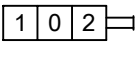
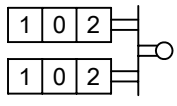
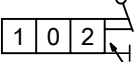
Parallel circuit

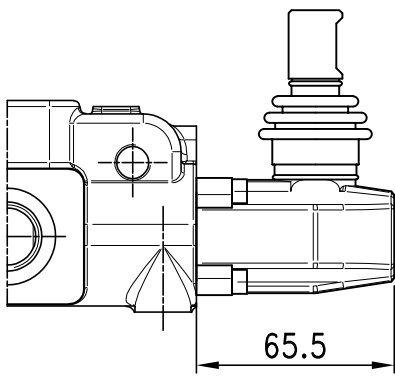


MM-100

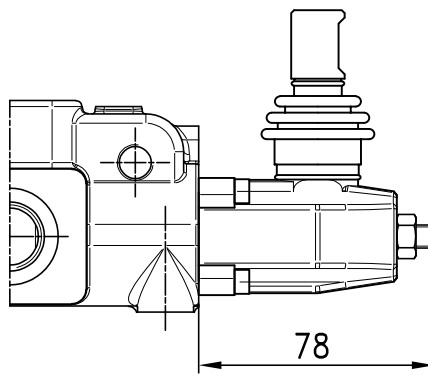
4. "B" side option

Spool control B port side

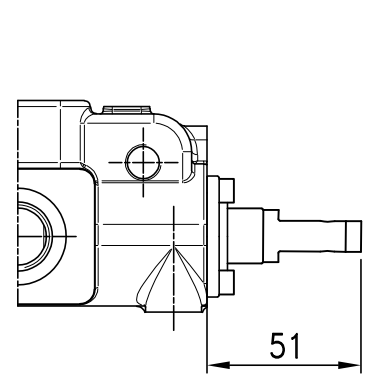
Type	Scheme	Description	Type	Scheme	Description
L1		Standard lever aluminum pivot box with neoprene gaiter.	L1A		Standard lever with an extra screw to adjust either side of spool stroke
L2		Without lever with L2 dust cover.	L3		"L3 of 4 Type" joystick lever(+ axis) with left fulcrum.
L4		Standard lever set as L1A, able to adjust both side of spool stroke			



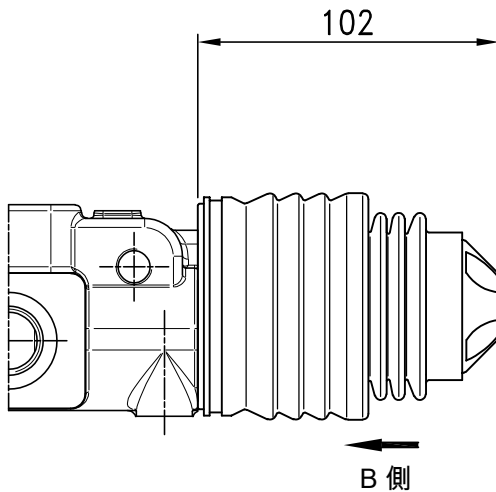
L1



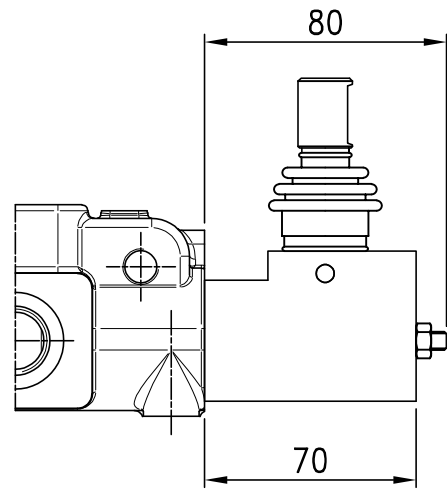
L1A



L2



L3

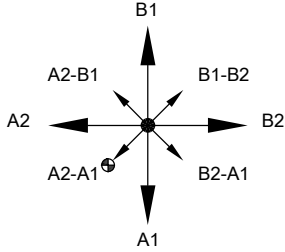


L4

MM-100

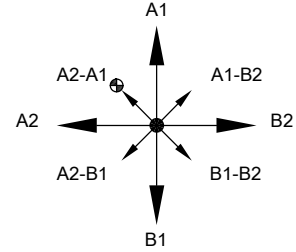
L3-1

View from B side



Bottom fulcrum

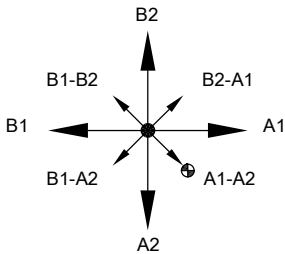
L3-3



Top fulcrum

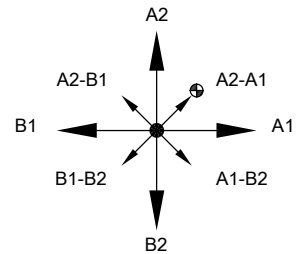
L3-2

View from B side



Bottom fulcrum

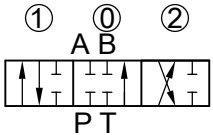
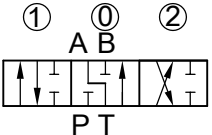
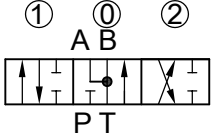
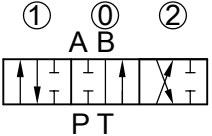
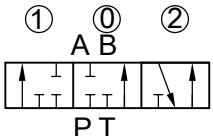
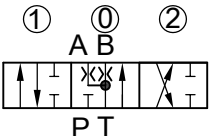
L3-4



Top fulcrum

5. Spool option

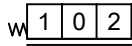
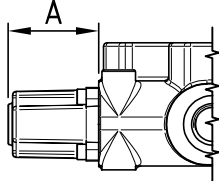
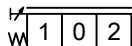
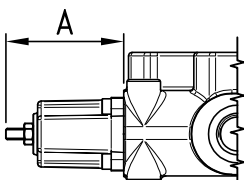
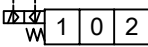
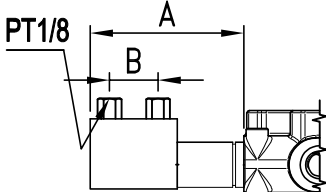
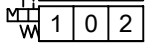
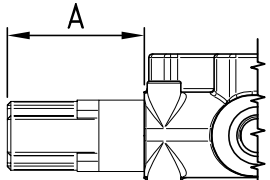
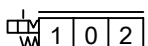
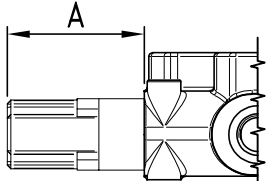
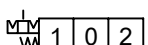
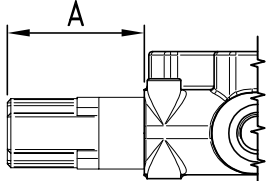
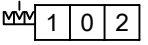
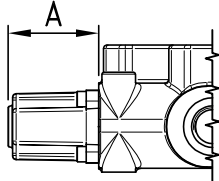
Spool

Type	Scheme	Type	Scheme
A1		A4	
A2		A5	
A3		A6	

MM-100

6. "A" side spool positioners

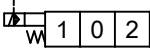
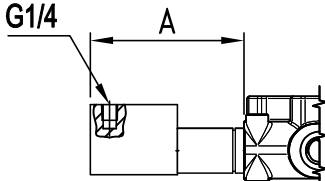
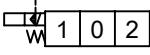
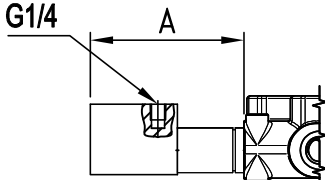
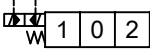
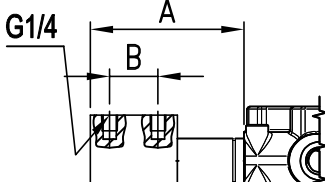
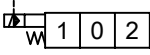
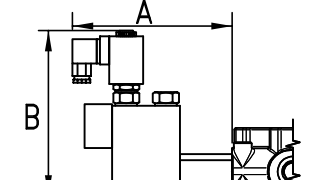
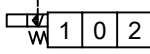
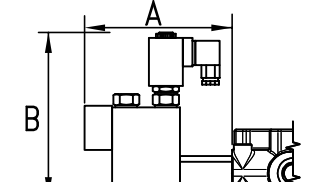
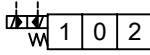
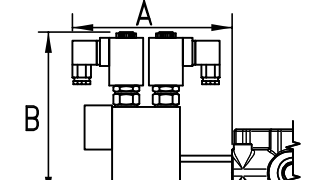
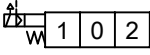
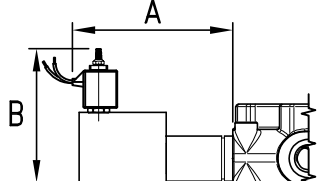
Spool control A port side

Type	Scheme	Description	Dimensions
S		S = Spring return to neutral.	 50 (1.97)
SA		SA = Spring return to neutral. Adjust single side of spool stroke.	 65(MAX) (2.56)
P3		P3 = On/off pneumatic control. Min. pressure 5 bar(70psi) Max. pressure 10 bar(140psi)	 A 127 (5) B 40 (1.57)
D1R		D1R = Detent in positions1. Spring return to neutral.	 68 (2.68)
D2R		D2R = Detent in position2. Spring return to neutral.	 68 (2.68)
D12R		D12R = Detent in positions1 or 2. Spring return to neutral.	 68 (2.68)
D3		D3 = Detent in three positions.	 50 (1.97)

MM-100

6. "A" side spool positioners

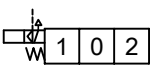
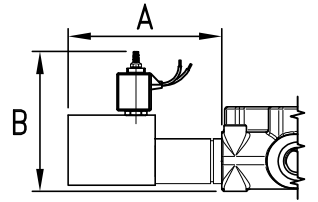
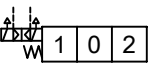
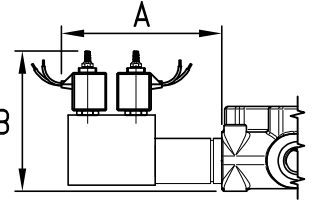
Spool control A port side

Type	Scheme	Description	Dimensions
LH1		LH1 = External hydraulic pilot to position 1. Spring return to neutral.	 G1/4 A 127 (5)
LH2		LH2 = External hydraulic pilot to position 2. Spring return to neutral.	 G1/4 A 127 (5)
LH3		LH3 = External hydraulic pilot to position 1 and 2. Spring return to neutral.	 G1/4 A B 127 (5) 40 (2.28)
E1		E1=On/off electro-hydraulic control with external pilot and solenoid function to position 1. Spring centered. Voltage:12VDC,24VDC	 A B 164 (6.45) 153 (6)
E2		E2=On/off electro-hydraulic control with external pilot and solenoid function to position 2. Spring centered. Voltage:12VDC,24VDC	 A B 149 (5.87) 153 (6)
E3		E3=On/off electro-hydraulic control with external pilot and solenoid function to position 1 and 2. Spring centered. Voltage:12VDC,24VDC	 A B 164 (6.45) 153 (6)
EP1		EP1=On/off electro-pneumatic control with external pilot and solenoid function to position 1. Spring centered. Voltage:12VDC,24VDC	 A B 132.5 (5.21) 115.9 (4.56)

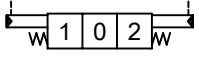
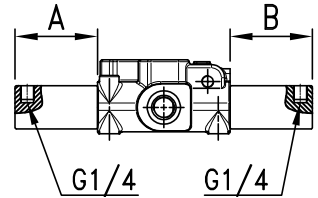
MM-100

6. "A" side spool positioners

Spool control A port side

Type	Scheme	Description	Dimensions	
EP2		EP2=On/off electro-pneumatic control with external pilot and solenoid function to position 2. Spring centered. Voltage:12VDC,24VDC		A 127 (5) B 115.9 (4.56)
EP3		EP3=On/off electro-pneumatic control with external pilot and solenoid function to position 1 and 2. Spring centered. Voltage:12VDC,24VDC		A 132.5 (5.21) B 115.9 (4.56)

Spool control A and B-port side

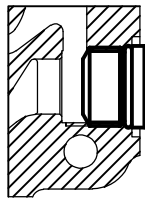
PP		PP = Proportional hydraulic control.		A 78 (3.07) B 78 (3.07)
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MM-100

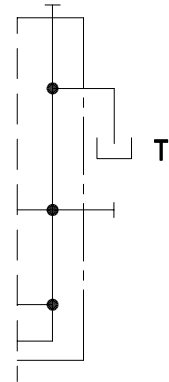
7. Outlet port options

Plug option

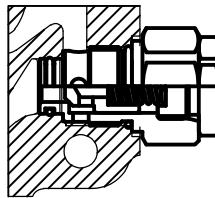
Open centre plug



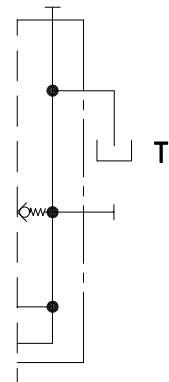
OP



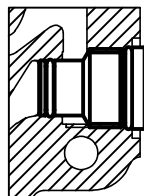
Open centre with check valves



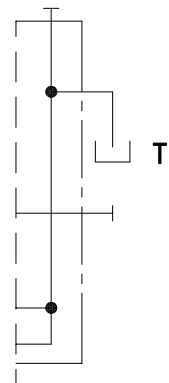
OPC



Closed centre plug

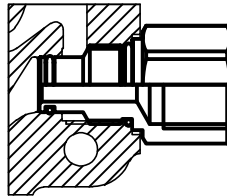


CP

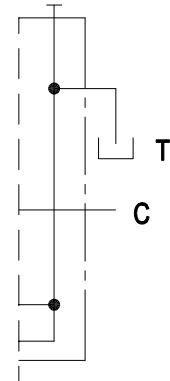


MM-100

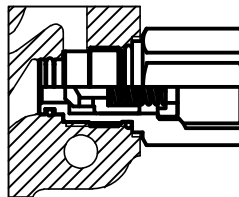
Carry-over plug



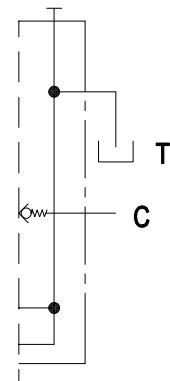
COP



Carry-over plug with check valves



COPC



8. Port threads option

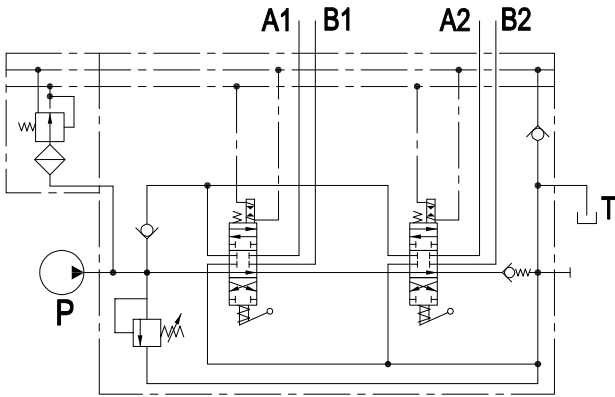
Port threads

PORT	BSP	SAE
P	G1/2	7/8-14UNF
A and B port	G1/2	3/4-16UNF
T	G3/4	7/8-14UNF

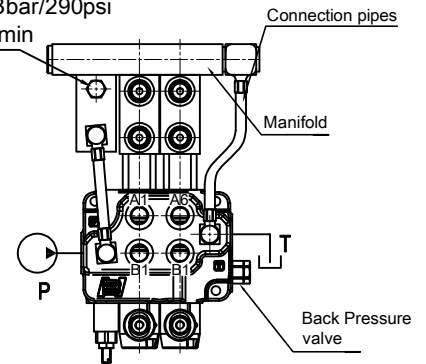
MM-100

9.EL control pilot kit

EL control pilot kit



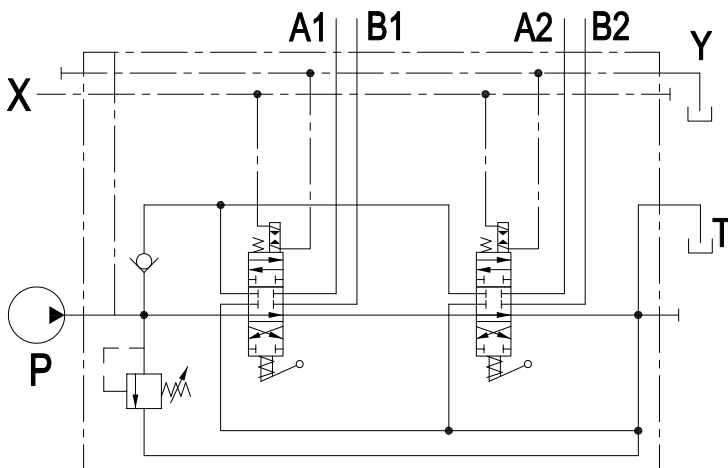
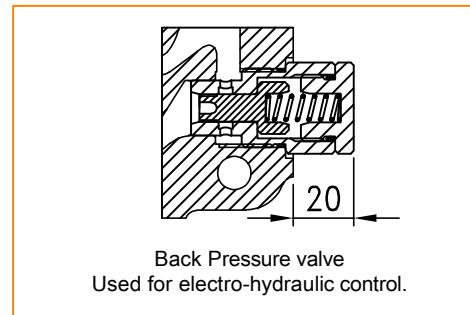
Pressure reducing valve
 Outlet pressure :20Bbar/290psi
 Max. flow :8 l/min



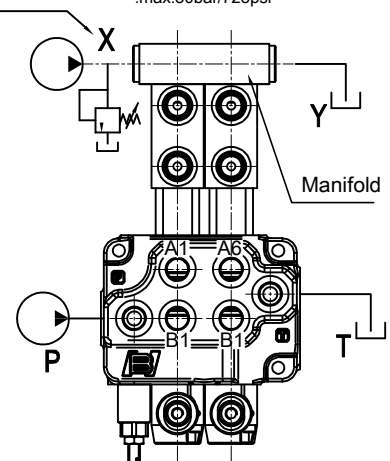
(Outlet port options should be OPC or COPC)
 (Back Pressure valve works pressure: 10bar)

Compele kit for connection to the main circuit.

ECK1/1-6



Poerating features
 Pilot pressure.....:min.10bar/145psi
 :max.50bar/725psi



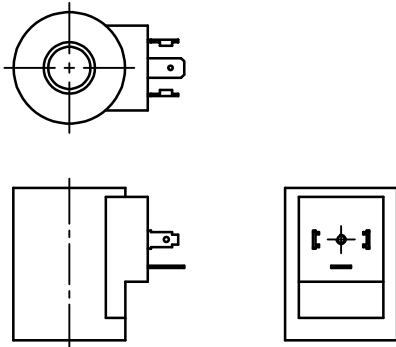
Manifold kit to feed low pressure circuit, with X pilot and Y drain.

ECKS/1-6

MM-100

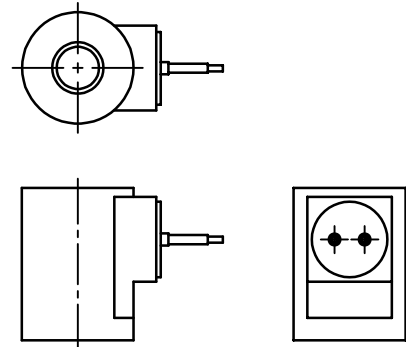
10. Coil Series

Coil series option



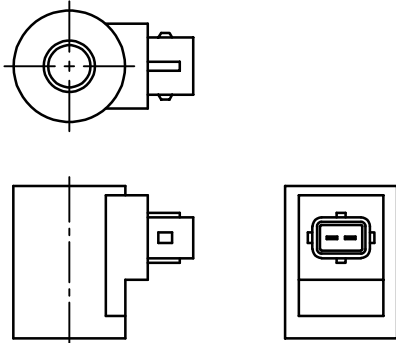
Type : CS01

Connection: DIN EN 175 301-803-A/ISO 4400 (43650)
Voltage: 12-24VDC



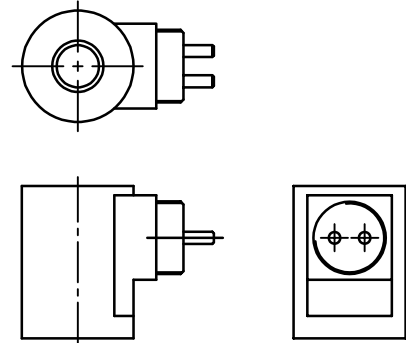
Type : CS02

Connection: Lead wires
Voltage: 12-24VDC



Type : CS03

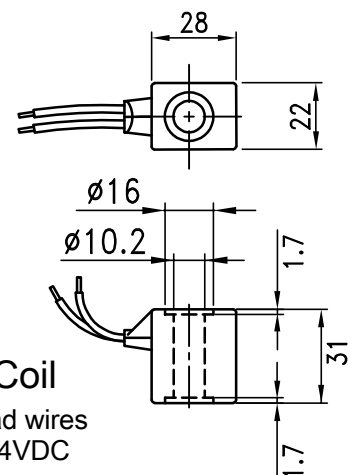
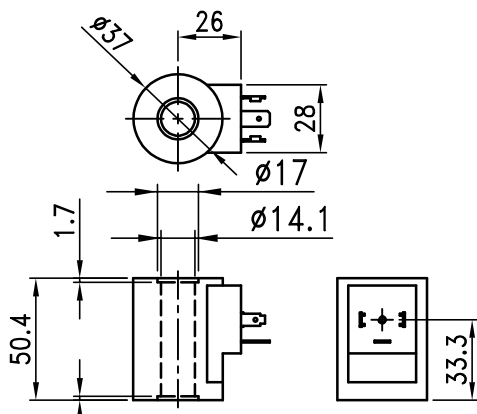
Connection: AMP Junior
Voltage: 12-24VDC



Type : CS04

Connection: Kostal M24x1
Voltage: 12-24VDC

DIMENSIONS



Type : EP Coil

Connection: Lead wires
Voltage: 12-24VDC