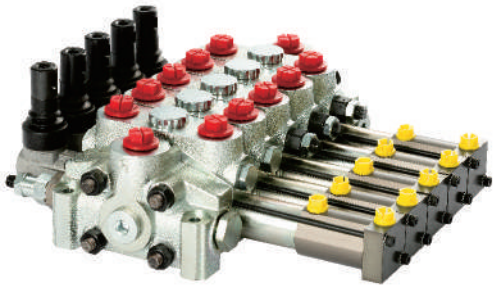


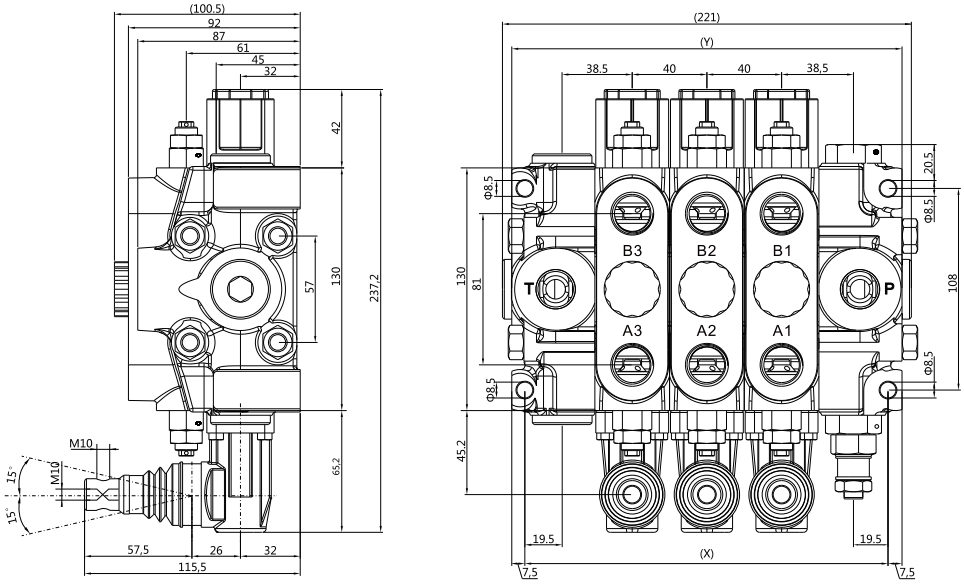
Technical specifications

Working section number	1 - 12
Rated flow	80 l/min
Rated pressure	350 bar
Spool stroke	6 + 6 mm
Spool pitch	40 mm
Circuit type	Parallel, series, tandem

Applications

Excavators (max 7 t), Cranes and aerial platforms, Backhoe loaders, Wheel loaders, Backhoes, Compactor, hook and skip loaders, Drilling machines, Forklifts.

MA-D4 family has different intermediate sections available:
Intermediate section for second pump inlet (BE type)
Intermediate section to house a second main relief valve (BV type)
Intermediate outlet for two pumps systems (BF type with a single T port and BG type for HPCO connection)
Intermediate adjustable flow regulator

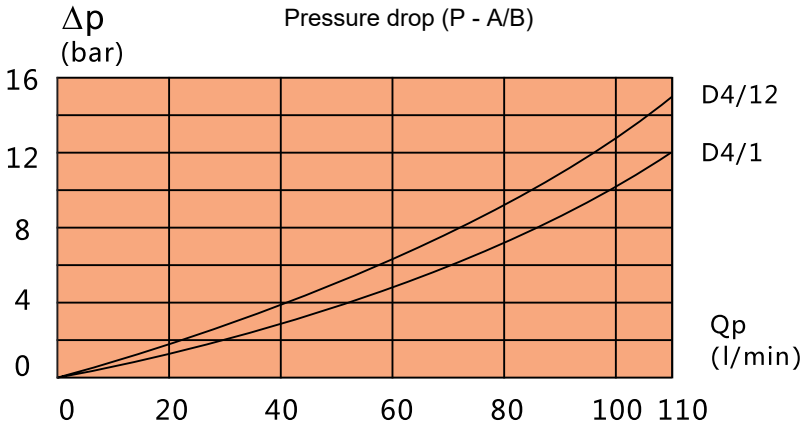


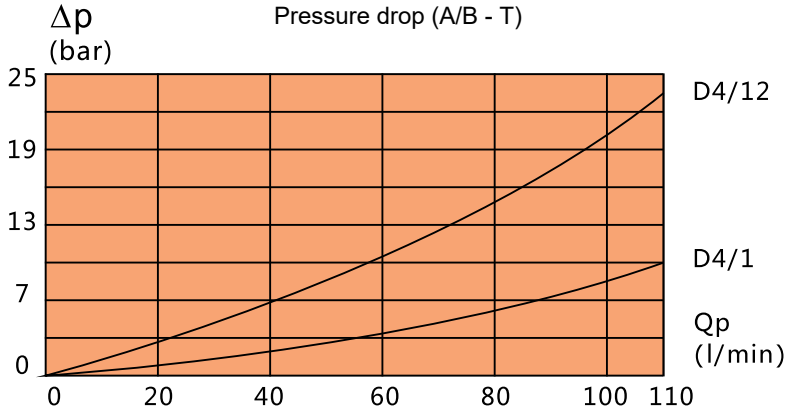
TYPE	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
X(mm)	114	154	194	234	274	314	354	394	434	474	514	554
Y(mm)	129	169	209	249	289	329	369	409	449	489	529	569
Weights (kg)	8	10.8	13.7	16.5	19.4	22.3	25.2	28	30.8	33.7	36.6	39.5

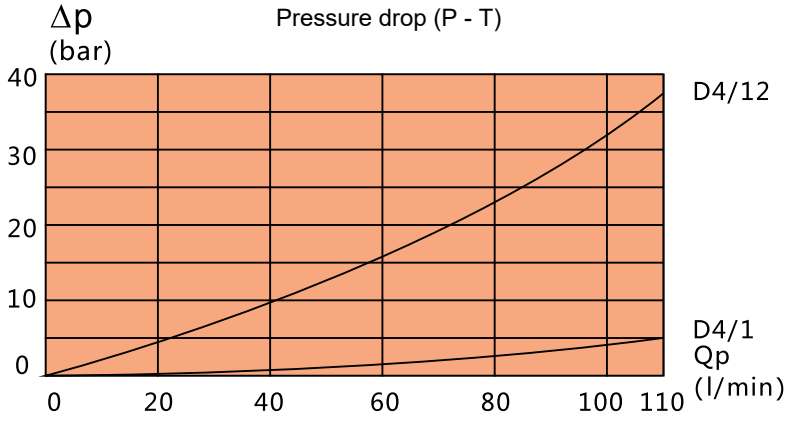
PORTS	Inlet (P)	Ports (A-B)	Outlet (T)	Outlet (HPCO)
BSP Thread (tSO 1 (P))	G1/2-G3/4	G1/2	G1/2-G3/4	G1/2-G3/4
UN-UNF Thread (ISO 11926-1)	7/8"-14UNF	7/8"-14UNF	7/8"-14UNF 1"1/16-12UNF	7/8"-14UNF 1"1/16-12UNF
METRIC Thread (ISO 9974-1)	M18X1.5	M18X1.5	M22X1.5	M22X1.5

Typical curves

Indicated values have been tested with standard sectional valve and S001A spools.

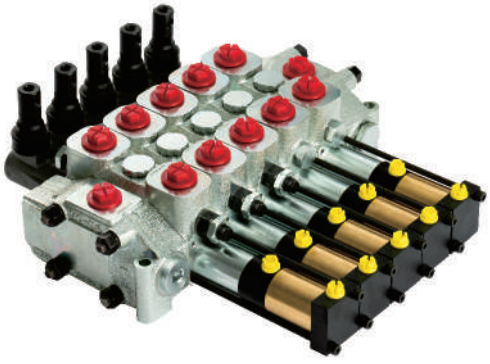






Features

The valve is available with manual, direct electric, hydraulic remote, pneumatic, electrohydraulic and electropneumatic controls.
Working sections have auxiliary valves and a broad range of interchangeable spools.



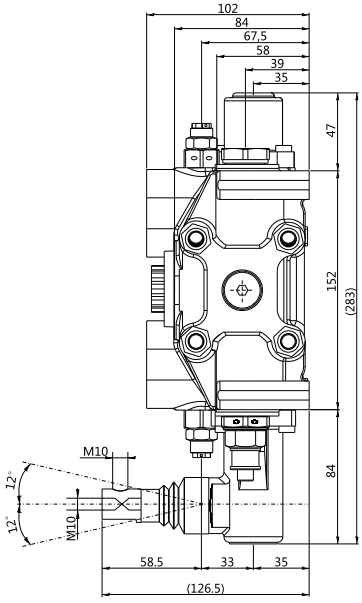
Technical specifications

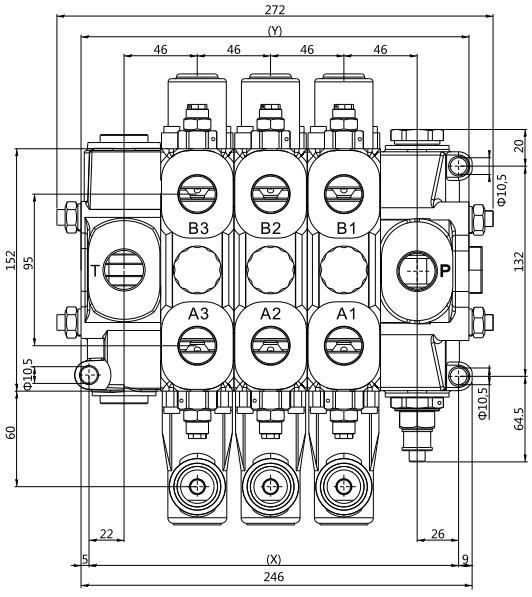
Working section number	1 - 12
Rated flow	100 l/min
Rated pressure	350 bar
Spool stroke	7 + 7 mm
Spool pitch	46 mm
Circuit type	Parallel, series, tandem

Applications

Backhoe loaders, Wheel loaders, Backhoes
Compactor, Hook and Skip loaders, Drilling machines

MA-D6 family has different intermediate sections available:
Intermediate section for second pump inlet (BE type)
Intermediate section to house a second main relief valve (BV type)
Intermediate outlet for two pumps systems (BF type with a single T port and BG type for HPCO connection) Intermediate adjustable flow regulator



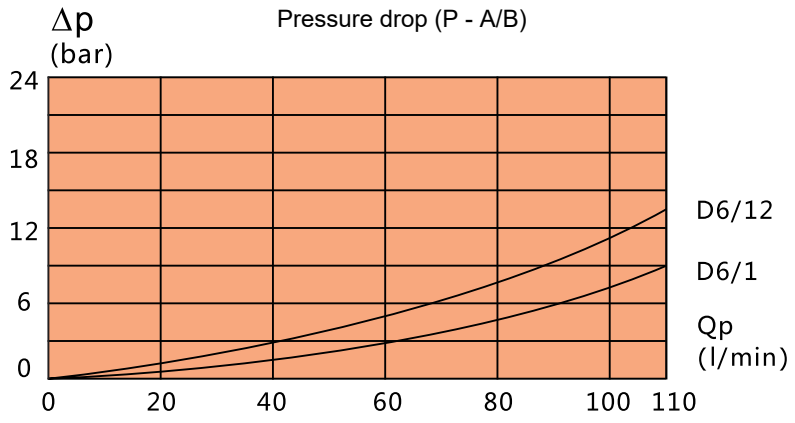


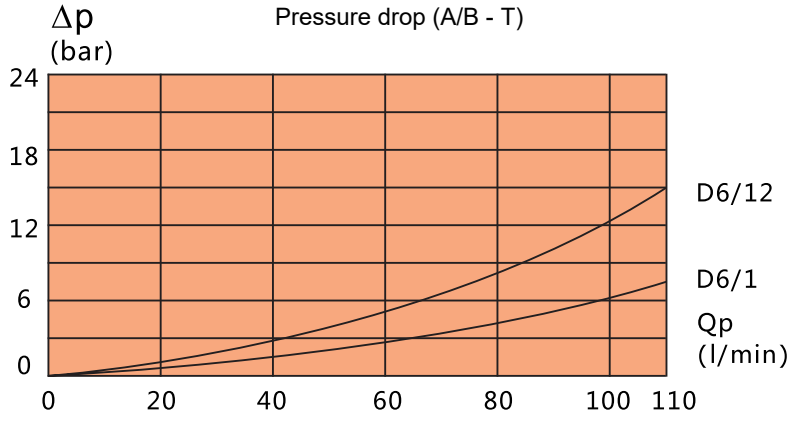
TYPE	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
X(mm)	140	186	232	278	324	370	416	462	508	554	600	646
Y(mm)	156	202	248	294	340	386	432	478	524	570	616	662
Weights (kg)	11.6	16.1	20.5	25	29.4	33.9	38.3	42.8	47.2	51.7	56.1	60.6

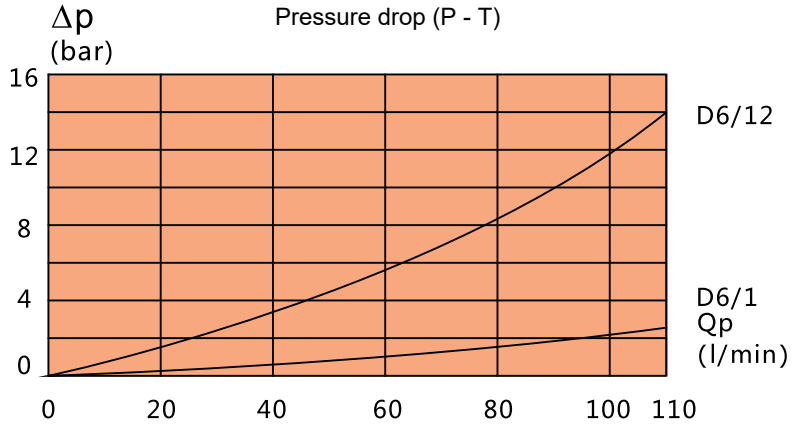
PORTS	Inlet (P)	Ports (A-B)	Outlet (T)	Outlet (HPCO)
BSP Thread (ISO 1179-1)	G1/2-G3/4	G1/2-G3/4	G3/4-G1	G3/4-G1
UN-UNF Thread (ISO 11926-1)	7/8"-14UNF	7/8"-14UNF	1"1/16-12UNF	1"1/16-12UNF

Typical curves

Indicated values have been tested with standard sectional valve and W001A spools.







Features

The valve is available with manual, hydraulic remote, pneumatic, electrohydraulic and electropneumatic controls. Numerous configurations and solutions are possible.
Working sections have auxiliary valves and a broad range of interchangeable spools.

General specifications

TYPE	MA-D4	MA-D6
Working sections number	1-12	1-12
Parallel	•	•
Series	•	•
Tandem	•	•
Parallel circuit stroke (mm)	6	7
Series circuit stroke (mm)	6	5
Float spool extra stroke (mm)	5.5	6
Spools pitch (mm)	40	46
Flow rate (l/min)	80	100
Flow rate (GPM)	22	27
Max working pressure (bar)	350	350
Max working pressure (PSI)	5000	5000

Options chart

TYPE	MA-D4	MA-D6
Direct acting pressure relief valv	•	
Pilot operated pressure relief valve	•	•
2 stage pilot operated relief valve	•	•
Externally piloted valve	•	•
Solenoid dump valve (12 Vdc)	•	•
Solenoid dump valve (24 Vdc)	•	•
Main anticavitation check valve	•	•
Clamping valve	•	
Manual control	•	•
Without lever	•	•
90° joystick control	•	•
Hydraulic control	•	•
Direct electric control (12-24 Vdc)	•	
Spring return	•	•
Detent in A - in B - in A/B	•	•
Detent in 4th position	•	•
Arrangement for dual control	•	•
Hydraulic load limit	•	•
Pneumatic control ON - OFF	•	•
Proportional pneumatic control	•	•
Electrical load limit	•	•
Electrohydraulic control ON-OFF (12-24 Vdc)	•	•
Electrohydraulic control PROP. (12-24 Vdc)	•	•
Electropneumatic control (12-24 Vdc)	•	•
Antishock valve	•	•
Anticavitation valve	•	•
Antishock and anticavitation valve		•
Pilot operated Antishock and anticavitation valve		

Standard working conditions - Sectional valve

Operating temperature range	-20°C / +80°C
Kinematic viscosity range	10 ÷ 300 cSt
Max contamination level	9 (NAS 1638) - 20/18/15 (ISO 4406:1999)
Recommended filtration level	b10 > 75 (ISO 16889:2008)

All information and diagrams in this catalogue refer to a mineral base oil VG46 at 50°C temperature (32 cSt kinematic viscosity)

Fluid options

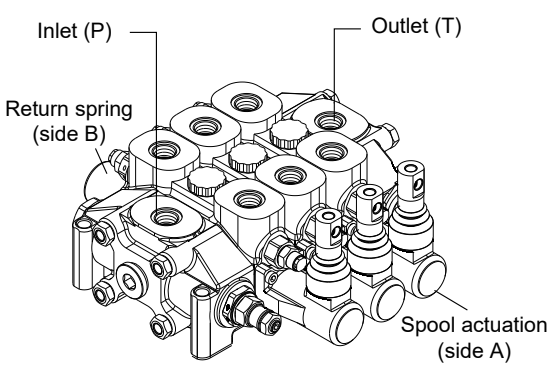
Types of fluid (according to IS0 6743/4) Oil and Solutions	Temperature (°C)		Compatible gasket
	min	max	
Mineral Oil HL, HM (or HLP acc. to DIN 51524)	-25	+80	NBR
Oil in water emulsions HFA	+5	+55	NBR
Water in oil emulsions HFB	+5	+55	NBR
Polyglycol-based aqueous solution HFC	-10	+60	NBR

For special applications and different fluids, please call our Technical Department.

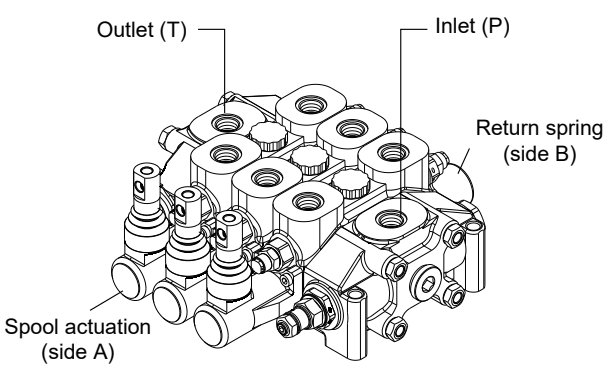
General classification

MA sectional valves have symmetric bodies: thanks to this characteristic, it is possible to change the control side, by simply reversing the spool 180°.
All valves can easily be changed from right inlet (P1) to left inlet (P2) and vice versa.

SECTIONAL VALVES WITH LEFT INLET

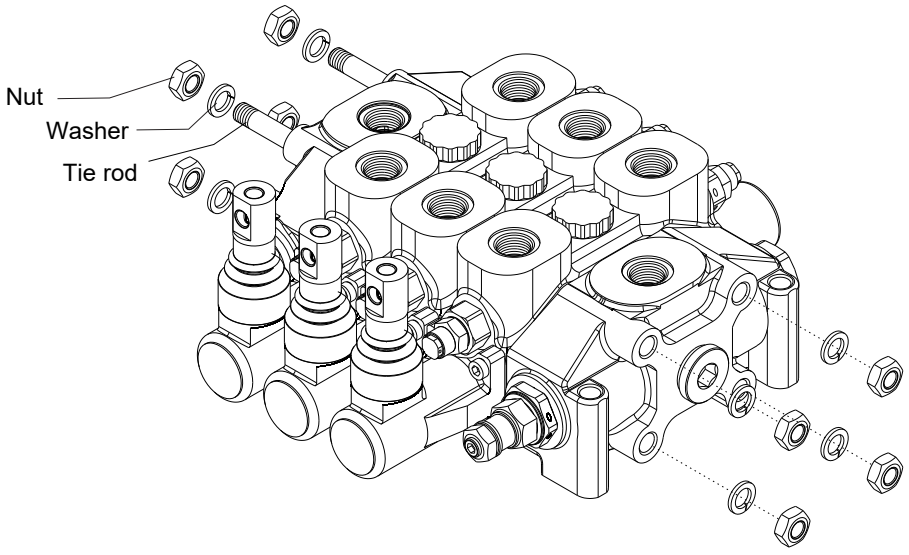


SECTIONAL VALVES WITH RIGHT INLET



Tie-rod kit classification for sectional valve

Tie rod kit allows the correct assembling of sectional valves. Tie rods lenght depends on number of sections; each valve is assembled with tie rod kits including a tie rod, two nuts and two washers.



TYPE	MA-D4	MA-D6
Tie-rod kit quantity (for sectional valve)	4	4
CLAMPING TORQUE	MA-D4	MA-D6
Value (Nm)	35	50

Special body classification - Sectional valve

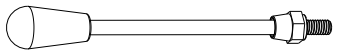
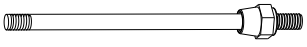
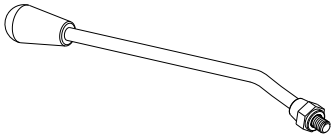
The following spools may require bodies with special machining (SPC):
bodies with special machinings are not symmetrical and it is not possible to reverse spools.

TYPE / SPOOL	MA-D4	MA-D6
S012 (4 pos. double-acting with float in 4th position)	SPC*	
S013 (3 pos. double-acting regenerative)	SPC	SPC
S016 (3 pos. double-acting series A-B to tank)		SPC
S019 (3 pos. double-acting regenerative A-B to tank)		SPC

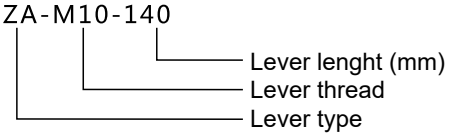
* = only on hydraulic control
S016 needs special CL body (see table pg. 22)

Kit lever identification

Maxma can supply a lever kit to be assembled on the valve's manual controls; different lengths and threads are available. Lever kits must be ordered separately.

CLASSFICATION LEVER					
ZA	Lever with knob	**ZB**	Lever without knob	**ZC**	Lever with knob for joystick control
					

Order example



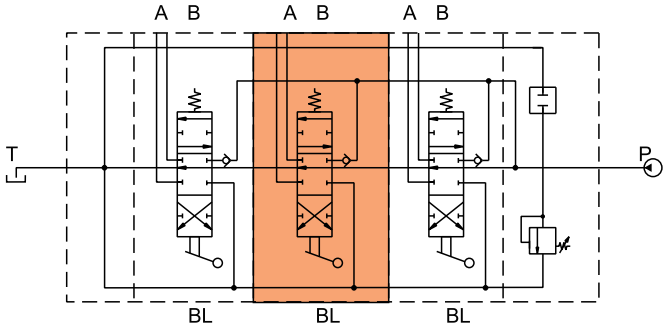
Option Chart - Sectional valve

TYPE / CODE	MA-D4	MA-D6	MA-M45		
ZA - M8 - 135 (cod. 600299010)			•		
ZA - M8 - 210 (cod. 600299011)			•		
ZA - M8 - 295 (cod. 600299012)			•		
ZB - M8 - 180 (cod. 600299013)			•		
ZB - M8 - 230 (cod. 600299014)			•		
ZA - M10 - 140 (cod. 600299015)	•				
ZA - M10 - 190 (cod. 600299003)	•				
ZA - M10 - 240 (cod. 600299016)	•	•			
ZC - M10 - 210 (cod. 600299021)	•	•			
ZC - M10 - 250 (cod. 600299022)	•	•			
ZA - M10 - 190 (cod. 600299023)		•			
ZA - M10 - 415 (cod. 600299025)		•			
ZB - M10 - 180 (cod. 600299026)		•			
ZB - M10 - 230 (cod. 600299027)		•			
ZB - M10 - 405 (cod. 600299028)		•			

Hydraulic schematic - Sectional valve

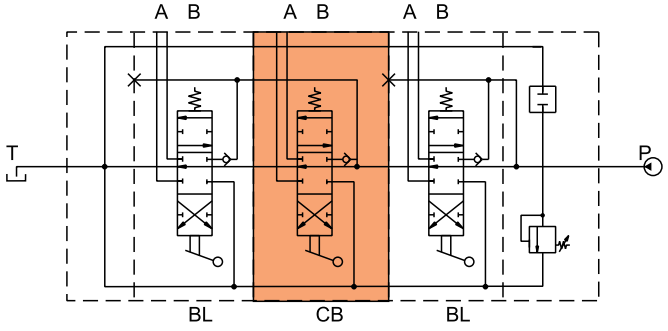
Parallel circuit

When the spool is operated it intercepts the by-pass gallery by diverting the flow of oil to service port A or B. If two or more spools are actuated at the same time, the oil will power the service port that has the lower load; by throttling the spools, the flow of oil can be divided between two or more service ports.



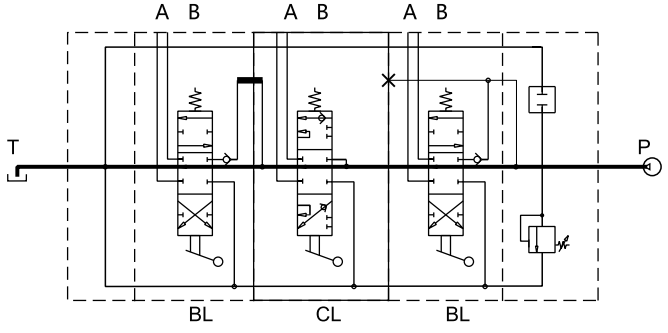
Parallel-Tandem circuit

When the spool is operated it intercepts the switch gallery by diverting the flow of oil to service port A or B. The Tandem circuit is powered by the switch gallery thus permitting the use of just one work section at a time. The section downstream from the tandem section that has been actuated does not operate, the upstream section has priority.



Series circuit

When the spool is operated it intercepts the switch gallery by diverting the flow of oil to service port A or B. The oil that flows back from the actuator is carried to the switch gallery thus making it available to the service ports downstream from the series section. The pressure drop downstream is added to the pressure drop of the section itself.



Order example - Sectional valve

MA-D4/1: P1 001 150 A G08 - S001A C001 F001A BL G08 01 PA 100 01 PB 120 - T1 A G08

PRODUCT TYPE:

D4 / D6 product type
/1 working section number

1) INLET ARRANGEMENT:

1.1 P1 001 inlet side and valve type
(150) setting (bar)
A G08 inlet position and available thread type

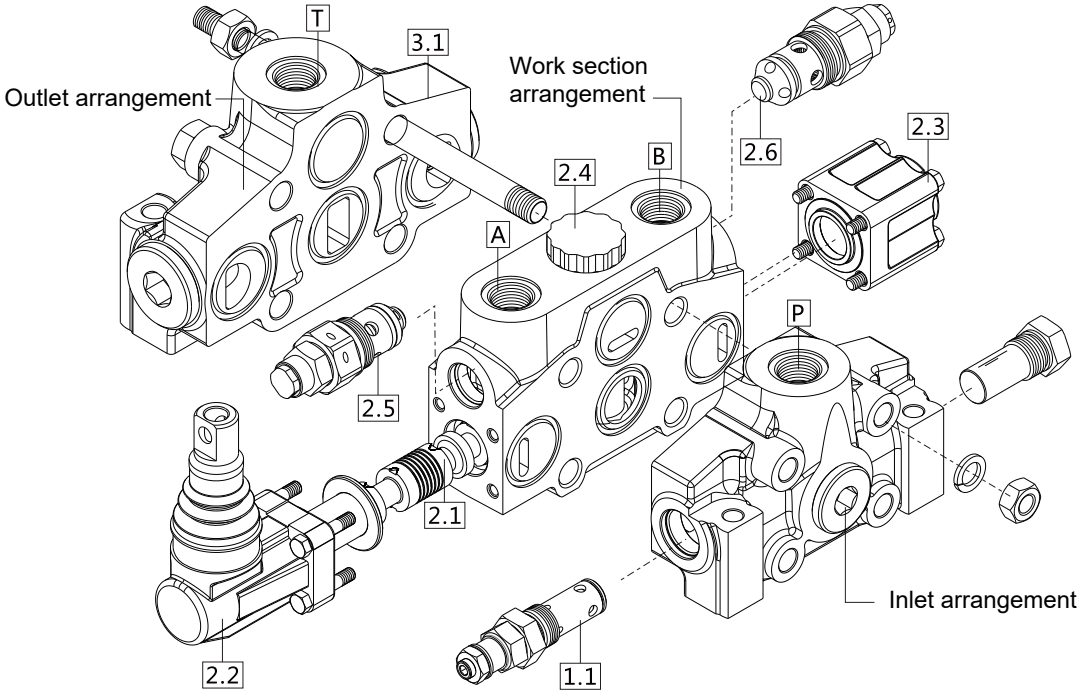
2) WORK SECTION ARRANGEMENT:

2.1 S001A spool type
2.2 C001 spool actuation type
2.3 F001A spool return action type
2.4 BL G08 section type and port threads
2.5 01 PA 100 auxiliary valve (port A)
2.6 01 PB 120 auxiliary valve (port B)

3) OUTLET ARRANGEMENT:

3.1 T1 outlet type
A G08 outlet position and available thread type

Ordering row 2 must be repeated for every work section



Features

Sectional valves are assembled through tie rod kits; tie rod length changes according to the valve family and to the number of sections.
Every valve includes 4 tie rod kits; every kit includes bolts and washers.
Lever kits are not included in the valve controls: they must be ordered separately (see page 10).

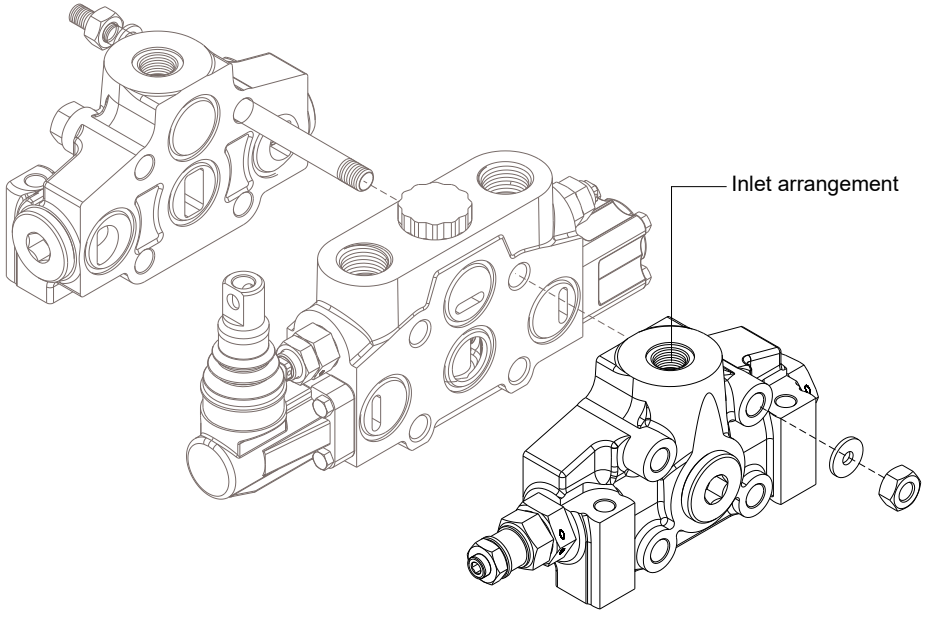
Inlet arrangement

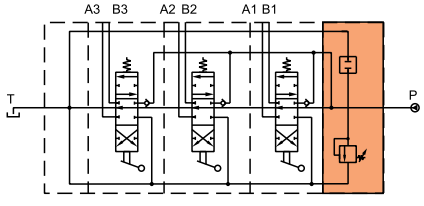
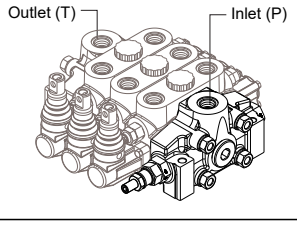
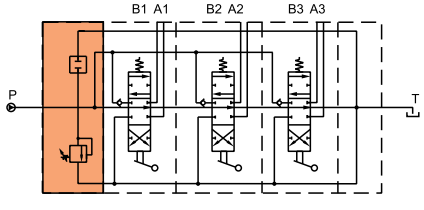
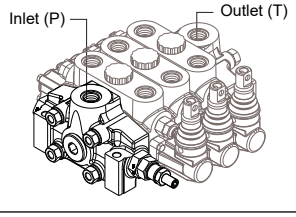
This code part indicates inlet side, type and thread, and the kind of valves assembled in the inlet section. The P port available threads change according to valve size (see table on page 169).
On all sectional valves it is possible to choose a right or left inlet (see drawings on page 8)

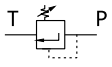
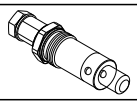
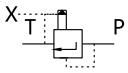
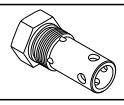
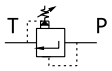
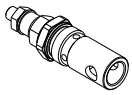
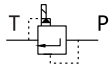
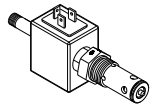
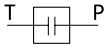
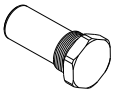
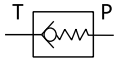
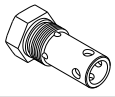
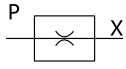
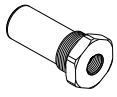
Order example

P1 001 (150) A G08

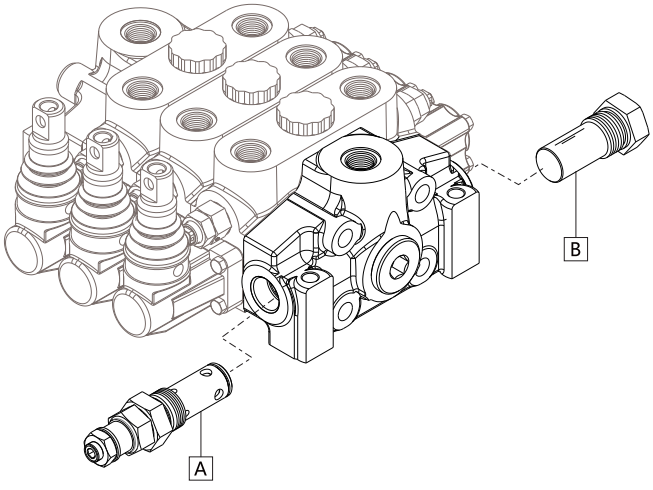
1. P1 inlet side
2. 001 valve arrangement
   (150) setting (bar); when ordering a main relief valve it is necessary to specify setting
3. A G08 inlet position and available thread type



Inlet side classification			
code	description	schema	configuration
P1	Sectional valve with **right** inlet section		
P2	Sectional valve with **left** inlet section		

valve identification							
type	schema	layout	description	type	schema	layout	description
1			Direct acting pressure relief valve	**6**			Externaly piloted valve
2			Pilot operated pressure relief valve	**7**			Solenoid dump valve 12 Vdc
3			Port plugged	**8**			Solenoid dump valve 24 Vdc
4			Main anticavitation check valve	**11**			Plug with pressure-gauge connection

NOTE:
According to different families valves can be differently combined and even assembled on A side (control side) or B side (return spring side).



Combination valve example: 009 = 2A - 3B

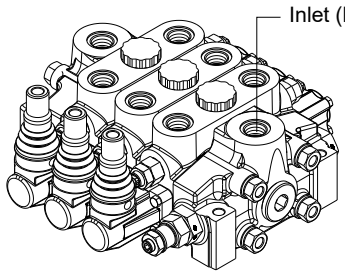
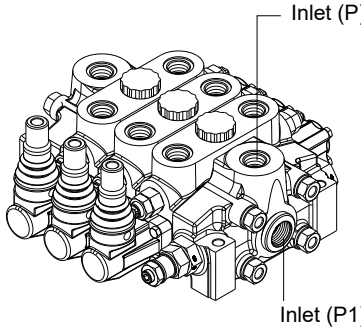
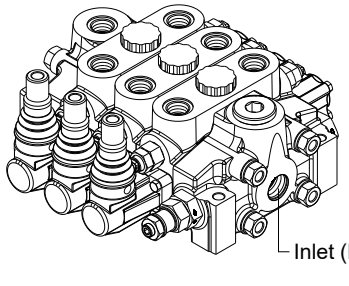
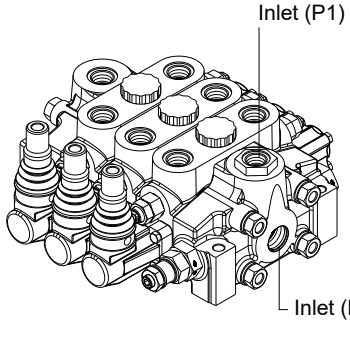
009 Combination valve
2A Pressure relief valve in port A
3B Plug in port B

The code identifies:
with a number, the type of valve;
with a letter ,its position on the inlet section.
(A) = spool action side (B) = spool return action side

NOTE:
when ordering a main relief valve it is necessary to specify setting (example 150 bar)

valves combination		MA-D4		MA-D6	
		P1	P2	P1	P2
1A-3B	001	•	•		
1A-4B	002	•	•		
1A-6B	003	•	•		
1A-7B	004	•	•		
1A-8B	005	•	•		
1A-11B	008	•	•		
2A-3B	009	•	•	•	•
2A-4B	010	•	•	•	•
2A-6B	011	•	•	•	•
2A-7B	012	•	•	•	•
2A-8B	013	•	•	•	•
2A-11B	016	•	•	•	•
3A-1B	017	•	•		
3A-2B	018	•	•	•	•
3A-3B	019	•	•	•	•
3A-4B	020	•	•	•	•
3A-6B	022	•	•	•	•
3A-7B	023	•	•	•	•
3A-8B	024	•	•	•	•
3A-11B	027	•	•	•	•
4A-1B	028	•	•		
4A-2B	029	•	•	•	•
4A-3B	030	•	•	•	•
4A-6B	032	•	•	•	•

valves combination		MA-D4		MA-D6	
		P1	P2	P1	P2
4A-7B	033	•	•	•	•
4A-8B	034	•	•	•	•
4A-11B	037	•	•	•	•
6A-1B	046	•	•		
6A-2B	047	•	•	•	•
6A-3B	048	•	•	•	•
6A-4B	049	•	•	•	•
6A-11B	052	•	•	•	•
7A-1B	053	•	•		
7A-2B	054	•	•	•	•
7A-3B	055	•	•	•	•
7A-4B	056	•	•	•	•
7A-11B	059	•	•	•	•
8A-1B	060	•	•		
8A-2B	061	•	•	•	•
8A-3B	062	•	•	•	•
8A-4B	063	•	•	•	•
8A-11B	066	•	•	•	•
11A-1B	084	•	•		
11A-2B	085	•	•	•	•
11A-3B	086	•	•	•	•
11A-4B	087	•	•	•	•
11A-6B	089	•	•	•	•
11A-7B	090	•	•	•	•
11A-8B	091	•	•	•	•

Inlet position and thread			directional control valve	
code		configuration	**MA-D4**	**MA-D6**
A	Upper inlet (P)		G08	G08
			G10	G10
			U03	U04
			U04	
			M01	
			M02	
code		configuration	**MA-D4**	**MA-D6**
B	Upper inlet (P) (P1) with pressure-gauge connection 1/4” BSP		G08	G08
			G10	G10
			U03	U04
			U04	
			M01	
			M02	
code		configuration	**MA-D4**	**MA-D6**
C	Central side inlet (P)		G08	G08
			G10	G10
			U03	U04
			U04	
			M01	
			M02	
code		configuration	**MA-D4**	**MA-D6**
D	Central side inlet (P) (P1) with pressure-gauge connection 1/4” BSP		G08	G08
			G10	G10
			U03	U04
			U04	
			M01	
			M02	

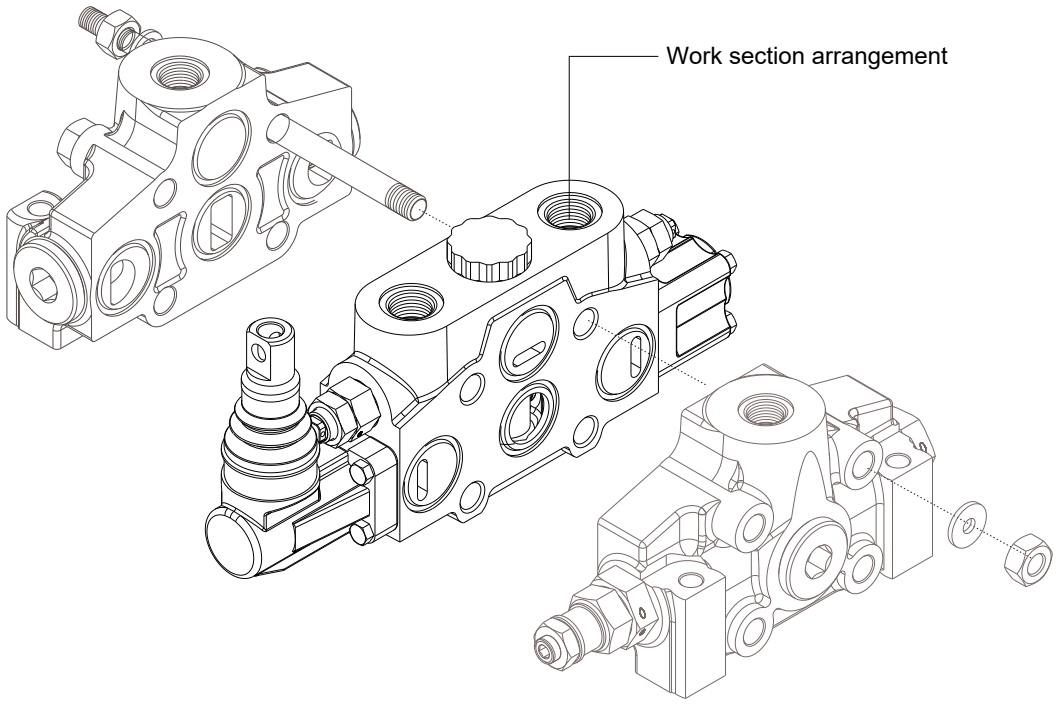
Working section

This code indicates the complete working section set up: spool, control, return spring kit, circuit and auxiliary valves.
Elements designed to house auxiliary-valve option require double choise on work ports A-B.
Should you order the working section only, please specify the entry side:
R = right
L = left
When ordering a port relief valve or port antishock and anticavitation valve it is necessary to specify the setting (example 120 bar).

Order example

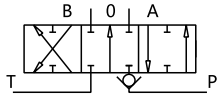
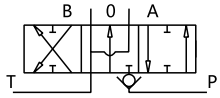
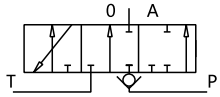
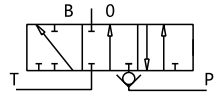
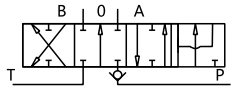
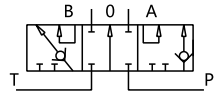
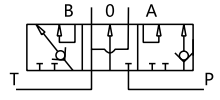
S001A C001 F001A BL G08 01 PA (100) 01 PB (120)

1. S001A spool type
2. C001 spool actuation type
3. F001A spool return action type
4. BL section type
   G08 thread type
5. 01 PA auxiliary valve (port A - handle side)
   (100) setting
6. 01 PB auxiliary valve (port B - cap side)
   (120) setting



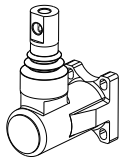
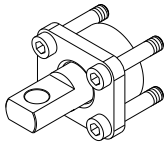
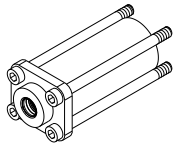
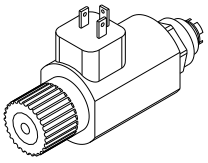
Spools classification

Spools Hydrocontrol fall into three categories:
A = standard spool
B = metered spool
E = solenoid operated spool
Please contact our sales department for informations about spools with restricted connection to tank.

Spool identification				directional control valve	
code		schema	description	**MA - D 4**	**MA - D 6**
S001A	standard		3 positions double-acting	•	•
S001B	metered			•	•
S001E	solenoid operated			•	
S002A	standard		3 positions double-acting A and B to tank	•	•
S002B	metered			•	•
S002E	solenoid operated			•	
S005A	standard		3 positions single-acting on A	•	•
S005B	metered			•	•
S005E	solenoid operated			•	
S006A	standard		3 positions single-acting on B	•	•
S006B	metered			•	•
S006E	solenoid operated			•	
S012A	standard		4 positions double-acting with float in the 4th position	•	•
S012B	metered				
S015A	standard		3 positions double-acting series	•	•
S015B	metered				
S016A	standard		3 positions double-acting series A and B to tank	•	•
S016B	metered				

The spools shown correspond to standard configurations; for different applications contact our Commercial Department.

NOTE:
Float spools (S012) need special detent kit (F005).
Regenerative spool (S013) need special return spring kits.
All section with single acting spool include plug to close the unused port.
Electrical spool (type E) needs special body, special spool actutions and special return action.

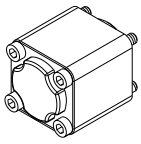
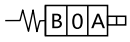
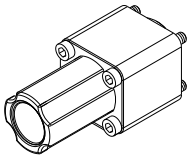
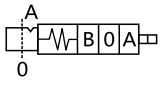
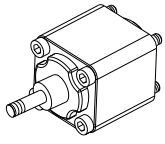
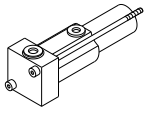
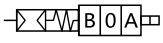
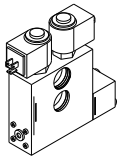
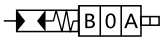
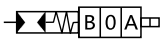
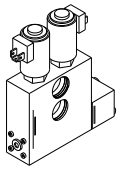
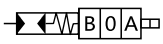
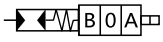
Spool actuation identification			directional control valve			
code	configuration	description	MA-D4	MA-D6		
C001		protected lever	•	•		
C002		protected lever rotated 180°	•	•		
code	configuration	description	MA-D4	MA-D6		
C004		control without lever	•	•		
code	configuration	description	MA-D4	MA-D6		
C005 leave out the spool return action code		hydraulic actuation	•	•		
code	configuration	description	MA-D4	MA-D6		
C036 leave out the spool return action code		Direct electric control 12 Vdc (45W - 3 A	•			
C037 leave out the spool return action code		Direct electric control 24 Vdc (45W - 1,5 A)	•			

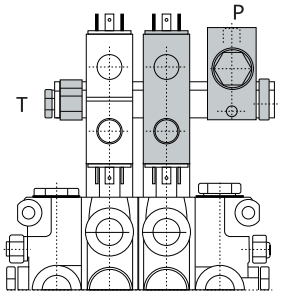
The spool actuation shown correspond to standard configurations; for different applications or different controls contact our Commercial Department.

Direct electric control specifications

Type	**MA-D4**	
Rated voltage	12 VDC	24 VDC
Rated current	3.75A	1.88A
Rated power	45W	
Permitted working voltage	±10% Nominal	
Max ambient temperature	+40°C	
Max oil temperature	+80°C	
Operation time	S1(100%)	
Protection degree	IP65	
Insulation degree	H	
Standard connector	DIN 43650	
Spool stroke	2.8+2.8mm	

The C036 and C037 direct electric controls come as two kits each including a: spring, solenoid and adapter.
The Direct electric controls use a type E special spool and a type special body.
The ON-OFF Electric Control kit includes a manually operated emergency push-button.

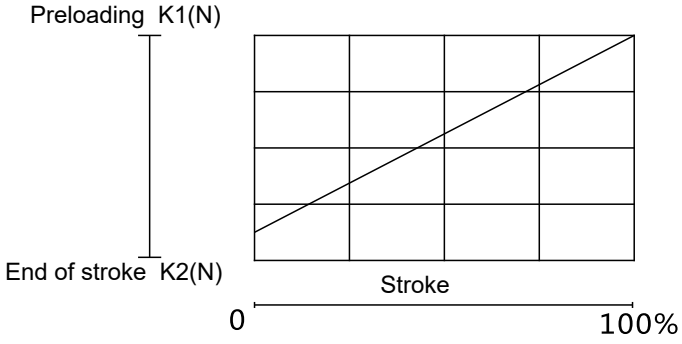
Spool return action identification			directional control valve		
code	configuration	description	MA-D4	MA-D6	
F001A **F001B** **F001C**		return spring 	• • •	• • •	
F002A		detent in A and B 	•	•	
F003A		detent in A 	•	•	
F004A		detent in B 	•	•	
F005A only available for spool type S012		detent in 4th position 	•	•	
F013A **F013B** **F013C**		prearrangement dual command 	• • •	• • •	
F020A		pneumatic control ON-OFF 	•	•	
F022A		proportional pneumatic control ON-OFF 	•	•	
F1600		electrohydraulic control ON - OFF 12 vdc 	•	•	
F1610		electrohydraulic control ON-OFF 24 vdc 	•	•	
F2600		electrohydraulic control proportional solenoid 12 vdc 	•	•	
F2610		electrohydraulic control proportional solenoid 24 vdc 	•	•	

Spool return action identification			directional control valve	
code	configuration	description	MA-D4	MA-D6
F1520	P-T=G1/4  	Electrohydraulic control ON - OFF (fixed pressure reducing valve) 12 Vdc	•	•
F1530		Electrohydraulic control ON - OFF (fixed pressure reducing valve) 24 Vdc	•	•
F2520		Electrohydraulic control PROPORTIONAL (fixed pressure reducing valve) 12 Vdc	•	•
F2530		Electrohydraulic control PROPORTIONAL (fixed pressure reducing valve) 24 Vdc	•	•

The spool return action shown correspond to standard configurations; for different applications contact our Commercial Department.

Springs load values

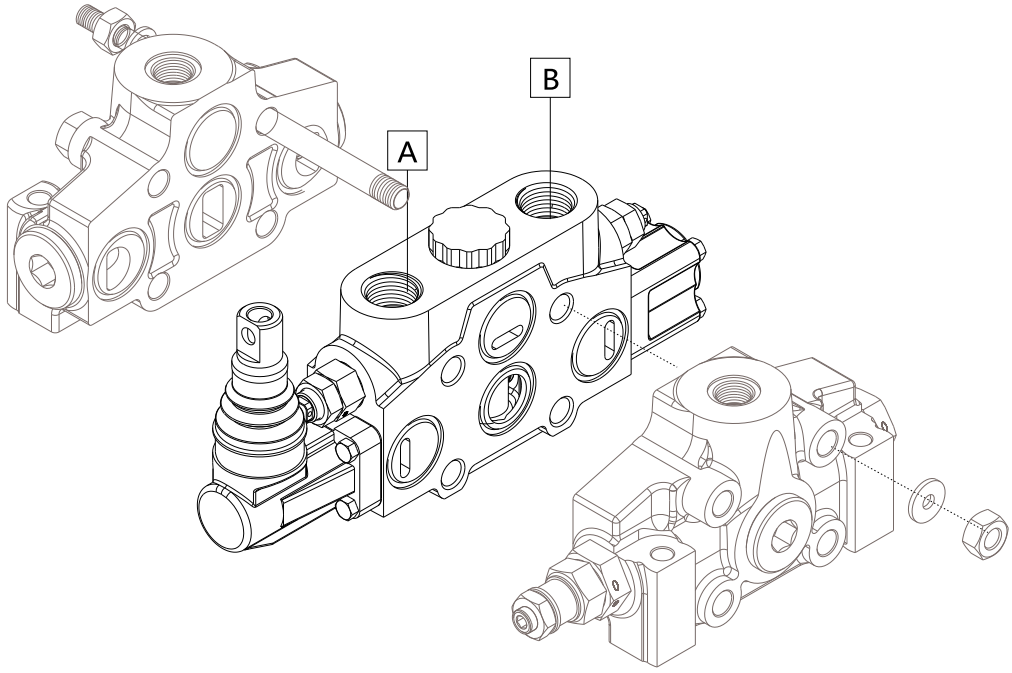
Spool return kits have three different spring types; following the codes depending on spring loads.

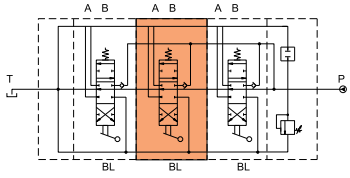
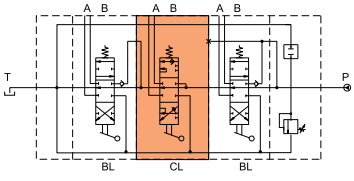
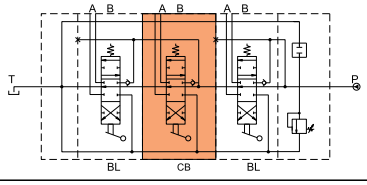


Spring type			directional control valve	
code		value	MA-D4	MA-D6
A	standard spring	K1 (N)	117.7	137.3
		K2 (N)	145.2	176.6
B	soft spring	K1 (N)	101	109.8
		K2 (N)	117.7	141.2
C	heavy spring	K1 (N)	172.6	168.7
		K2 (N)	246.2	259

Working section identification

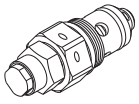
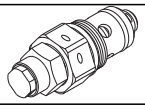
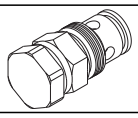
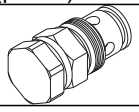
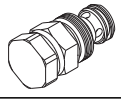
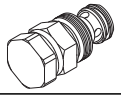
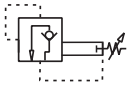
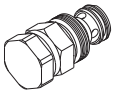
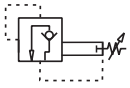
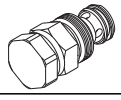
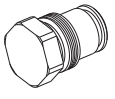
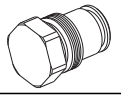
A and B ports dimensions and threads depends on the valve size (see table on page 169).



Work section and thread type		directional control valve	
code	configuration	MA-D4	MA-D6
BL		G08	G08
		U03	G10
		U04	U04
		M01	
	sercice ports A-B parallel circuit section		
code	configuration	MA-D4	MA-D6
CL only available or spool type: S016		G08	G08
		U03	G10
		U04	U04
		M01	
	sercice ports A-B series circuit section		
code	configuration		
CB		MA-D4	MA-D6
		G08	G08
		U03	G10
		U04	U04
		M01	
	sercice ports A-B tandem circuit section		

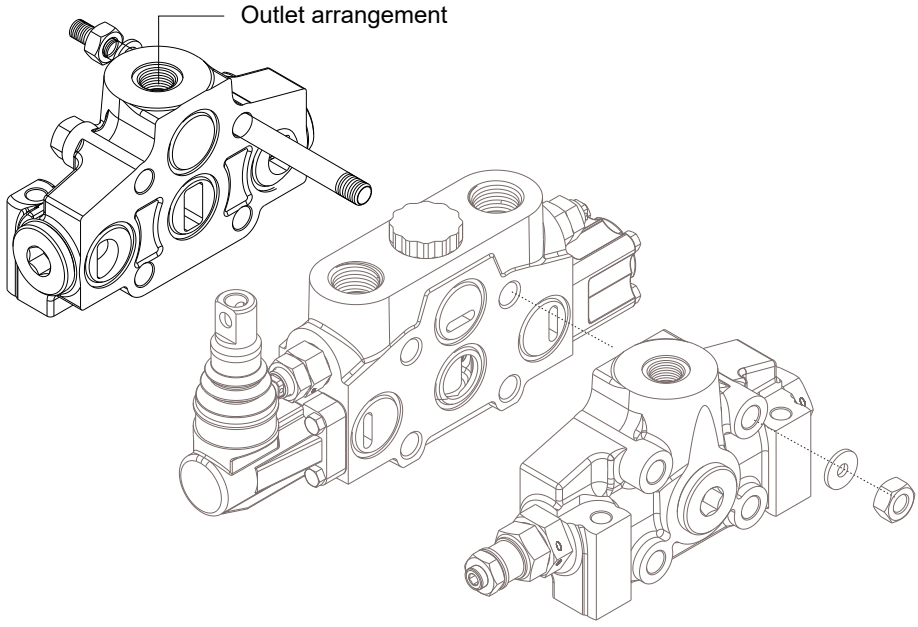
Auxiliary valve classification

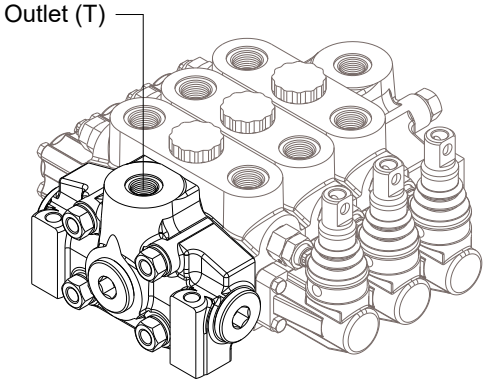
Sections designed to house auxiliary valve option require double choice on work ports A and B: port PA - port PB
Always indicate setting value when using Service line relief valve, Antichock and anticavitation valve, and Pilot operated antishock and anticavitation valve.
Example: 01 PA (120) = setting at full flow / 01 PA (120-A) = setting at min. flow

Auxiliary valve type			directional control valve			
code	schema	configuration	MA-D4	MA-D6		
01 PA			•	•		
	Service line relief valve (port A)					
01 PB						
	Service line relief valve (port B)					
code	schema	configuration	MA-D4	MA-D6		
02 PA			•	•		
	Anticavitation valve (port A)					
02 PB						
	Anticavitation valve (port B)					
code	schema	configuration	MA-D4	MA-D6		
03 PA				•		
	Antishock and anticavitation valve (port A)					
03 PB						
	Antishock and anticavitation valve (port B)					
code	schema	configuration	MA-D4	MA-D6		
04 PA				•		
	Pilot operated Antishock and anticavitation valve (port A)					
04 PB						
	Pilot operated Antishock and anticavitation valve (port B)					
code	schema	configuration	MA-D4	MA-D6		
05 PA			•	•		
	prearrangement valve (service port A)					
05 PB						
	prearrangement valve (service port B)					

Outlet Section Arrangement

This code indicates the characteristics on the outlet section: ports position and thread, simple T port or HPCO connection. It is possible to have simple T port or two ports configuration for HPCO connection: HPCO allows to extend the by pass channel and connect a second valve. T ports dimensions and threads depends on the valve size (see table on page 169).

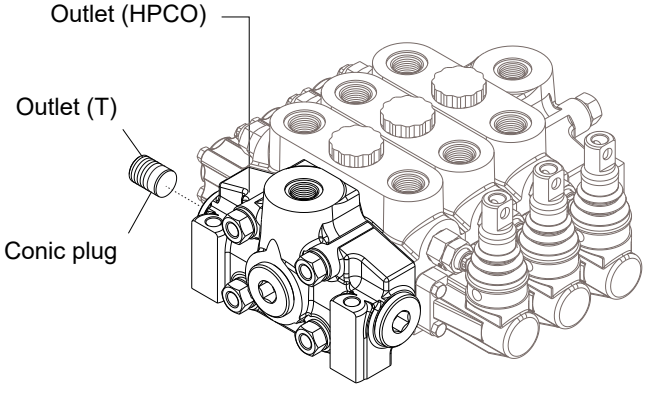




Order example - version 1 outlet

T1 A G08

1. T1 outlet section type
2. A G08 outlet position and available thread type

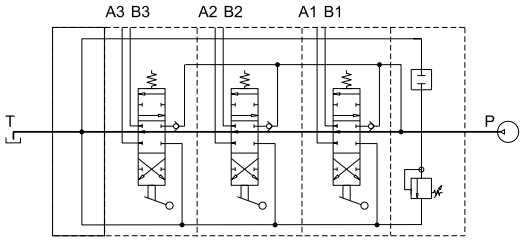
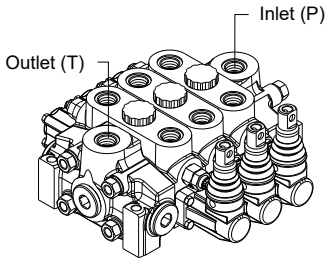
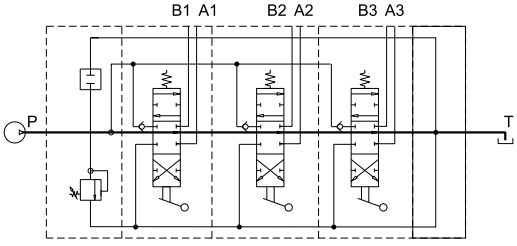
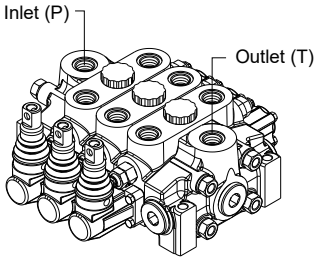


Order example - HPCO version Outlet

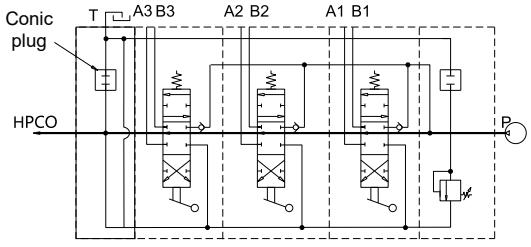
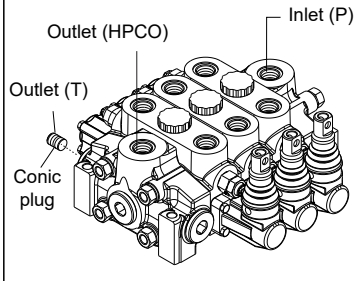
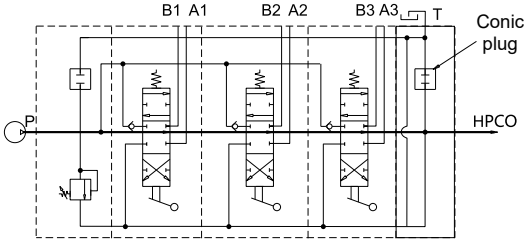
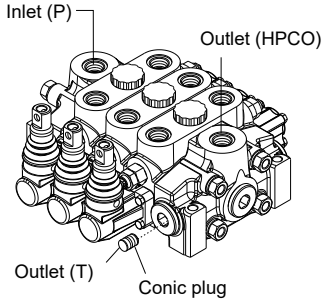
T3 A G08

1. T3 outlet section type
2. A G08 outlet position and available thread type

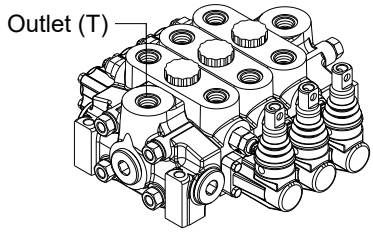
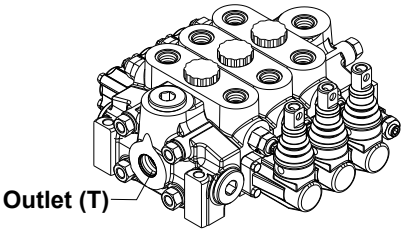
Outlet side classification - version 1 outlet

code	description	schema	configuration
T1	Outlet section with single return (T) right side inlet (P)		
T2	Outlet section with single return (T) left side inlet (P)		

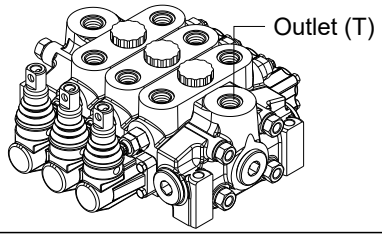
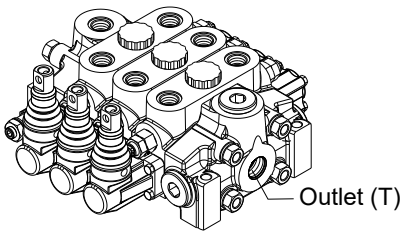
Outlet side classification - HPCO version outlet

code	description	schema	configuration
T3	Outlet section with two returns (T - HPCO) right side inlet (P)		
T4	Outlet section with two returns (T - HPCO) left side inlet (P)		

Outlet section with single tank return outlet position “T1”

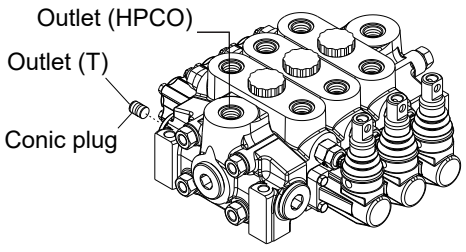
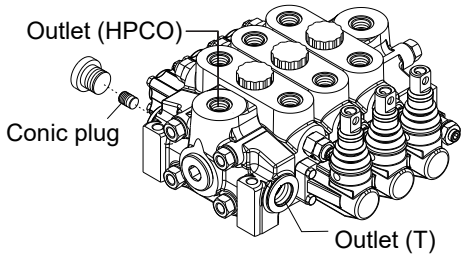
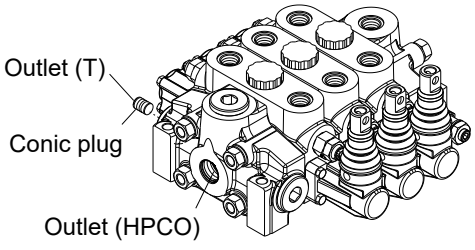
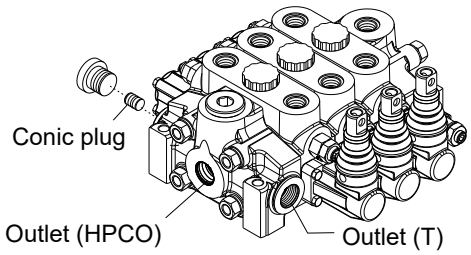
Outlet position and thread			directional control valve	
code		configuration	MA-D4	MA-D6
A	Upper outlet (T)		G08	G10
			U03	G16
			U04	U05
			M02	
code		configuration	MA-D4	MA-D6
C	Central outlet (T)		G08	G10
			U03	G16
			U04	U05
			M02	

Outlet section with single tank return outlet position “T2”

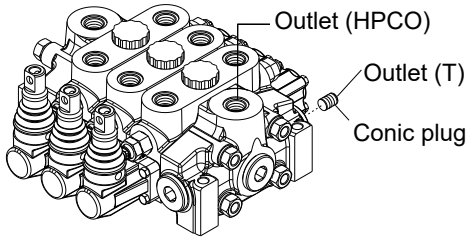
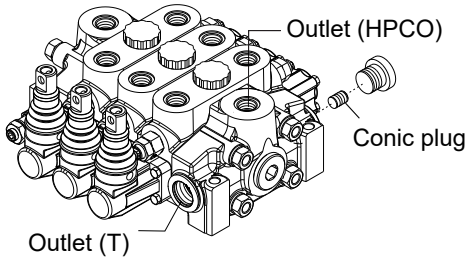
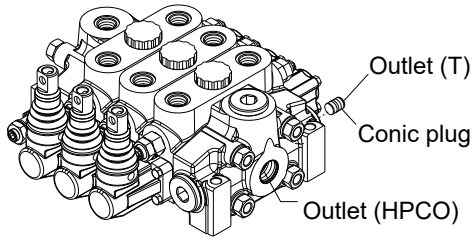
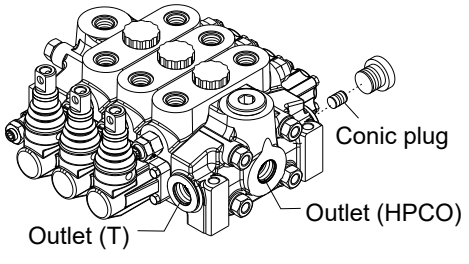
Outlet position and thread			directional control valve	
code		configuration	MA-D4	MA-D6
A	Upper outlet (T)		G08	G10
			U03	G16
			U04	U05
			M02	
code		configuration	MA-D4	MA-D6
C	Central outlet (T)		G08	G10
			U03	G16
			U04	U05
			M02	

HPCO position on outlet section with two tanks “T3”

The threads under montioned refer to hpco only; for T see outlet section with single return type T1

Outlet position and thread			directional control valve	
code		configuration	MA-D4	MA-D6
M	HPCO upper outlet (T) TANK side outlet B		G08	G10
			U03	G16
			U04	U05
			M02	
code		configuration	MA-D4	MA-D6
N	HPCO upper outlet (T) TANK front outlet side A		G08	G10
			U03	G16
			U04	U05
			M02	
code		configuration	MA-D4	MA-D6
P	HPCO central outlet (T) TANK side outlet B		G08	G10
			U03	G16
			U04	U05
			M02	
code		configuration	MA-D4	MA-D6
Q	HPCO central outlet (T) TANK front outlet side A		G08	G10
			U03	G16
			U04	U05
			M02	

HPCO position on outlet section with two tanks “T4”
The threads under montioned refer to hpco only; for T see outlet section with single return type T2

Outlet position and thread			directional control valve	
code		configuration	MA-D4	MA-D6
M	HPCO upper outlet (T) TANK side outlet B		G08	G10
			U03	G16
			U04	U05
			M02	
code		configuration	MA-D4	MA-D6
N	HPCO upper outlet (T) TANK front outlet side A		G08	G10
			U03	G16
			U04	U05
			M02	
code		configuration	MA-D4	MA-D6
P	HPCO central outlet (T) TANK side outlet B		G08	G10
			U03	G16
			U04	U05
			M02	
code		configuration	MA-D4	MA-D6
Q	HPCO central outlet (T) TANK front outlet side A		G08	G10
			U03	G16
			U04	U05
			M02	

Carry-over connection (HPCO)

All outlet section of all product families can be easily transformed from simple T port to HPCO configuration just by installing conic plug(s), (see following table).

Conic plug identification			
Type	Code	Description	Q.ty
MA-D4	601099034	G 1/4 x 13 plug	1
MA-D6	601099034	G 1/4 x 13 plug	1

Type	Conversion of a discharge section with a single outlet T1 into one with two outlets T3	Conversion of a discharge section with a single outlet T2 into one with two outlets T4
MA-D4 **MA-D6**