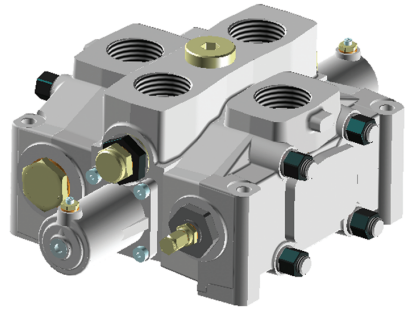
HC-D40 Series

Sectional Directional Control Valve

General specifications



Universal products and solutions

HC-D40 control valve belongs to the wide range of Hydrocontrol S.p.A. modular sectional valves and is capable of working with a maximum flow of 700 litres/min. at an operating pressure of 350 bar.

Numerous integrated valve features in addition to countless configuration options make HC-D40 highly flexible and easily adaptable to the widest applications range.

Sections are equipped with auxiliary valves and a wide variety of interchangeable spools.

Standard working conditions

- FLOW RATE . . . . . **185 GPM**
- PRESSURE RATE . . . . . **5000 PSI**
- MAX PRESSURE ON (T) . . . . . **290 PSI**
- OPERATING TEMPERATURE. . . . . **-25°C / +80°C**
- KINEMATIC VISCOSITY . . . . . **da 10 a 460 mm²/s**
- CONTAMINATION LEVEL. . . . . ***19/16 ISO 4406***
- FILTRATION LEVEL . . . . . **β 10 > 75**

Technical specifications

- WORKING SECTION NUMBER . . . . . **1 - 12**
- SPOOL STROKE. . . . . **....0,6 + 0,6 in**
- SPOOLS PITCH . . . . . **3,6 in**

Fluid compatability

TYPE OF FLUID (Oil and Solution)	TEMP. (C°) min	TEMP. (C°) max	GASKET NBR	GASKET VITON(*)
Mineral oil HPL (DIN 51524)	-25	+80	•	•
Oil in water emulsion HFA(*)	+5	+55	•	•
Water in oil emulsion HFB(*)	+5	+55	•	•
Polyglycol-based aqueous sol. HFC(*)	-25	+60	•	
Ester of phosphoric acid HCD(*)	-20	+150		•

(*) : for this application, please contact our technical sales office.
NBR : nitrile rubber compatible with mineral-bases oils ASTIM 1
VITON : fluorinated elastomer for use at high temperature, compatible with fluids ASTIM 1 and ASTIM 3.

Unit of measure - Conversion factors

Systems / Unit	METRIC	BSP
LENGTH	1 mm = 0,0394 in	1 in = 25,4 mm
MASS	1 kg = 2,205 lb	1 lb = 0,4536 kg
FORCE	1 Nm = 0,1020 kgf	1 kgf = 9,8067 Nm
VOLUME	1 l = 0,2200 gal UK 1 i = 0,2642 gal US	1 gal UK = 4,546 l 1 gal US = 3,785 l
PRESSURE	1 bar = 100000 Pa 1 bar = 14,5 psi	1 Pa = 0,00001 bar 1 psi = 0.0689 bar

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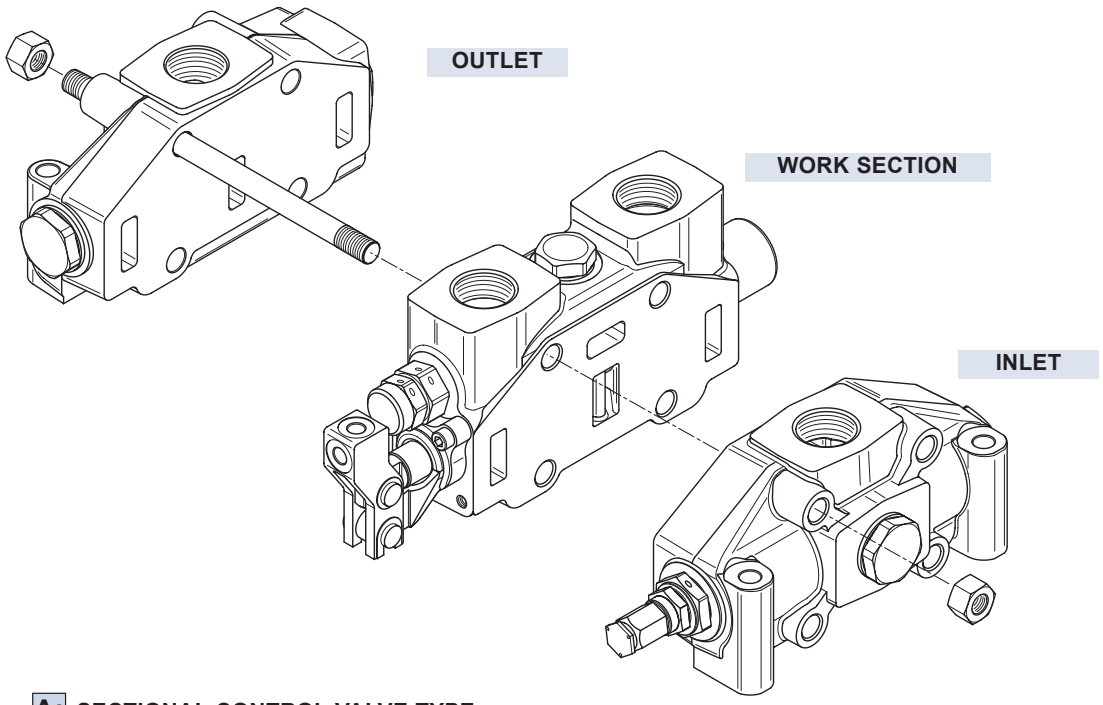
ORDER MODALITY

Order example:

HC-D40/1	IR 009 (150) A G09	W001A H101 F001A RP G09 01PA(120) 05PB	TJ A G09
A	B	C	D



A: SECTIONAL CONTROL VALVE TYPE

D40 = product type
/1 = number of sections

B: INLET ARRANGEMENT

IR 009 = inlet side and valve type
150 = setting (bar)
A G09 = inlet and thread position

C: WORK SECTION ARRANGEMENT

W001A = spool
H101 = spool actuation
F001A = spool return action
RP G09 = type and thread section
01PA120 = auxiliary valve (port A)
05PB = auxiliary valve (port B)

NOTE: ordering row C must be repeated for every work section.

D: OUTLET ARRANGEMENT

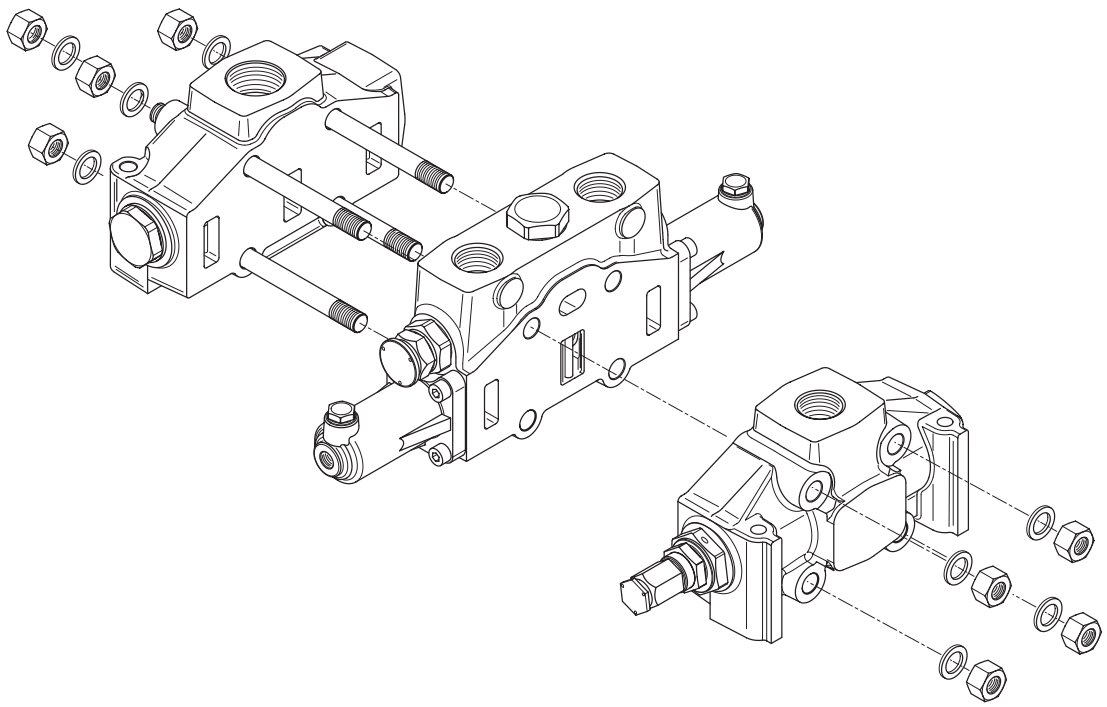
TJ = outlet type
A G09 = outlet and thread position

Order modality

Assembly specifications

Tie rod kit allows the correct assembling of HC-D40. Tie rods length depends on number of sections.

Tie-rod kit



TIE ROD LENGTH

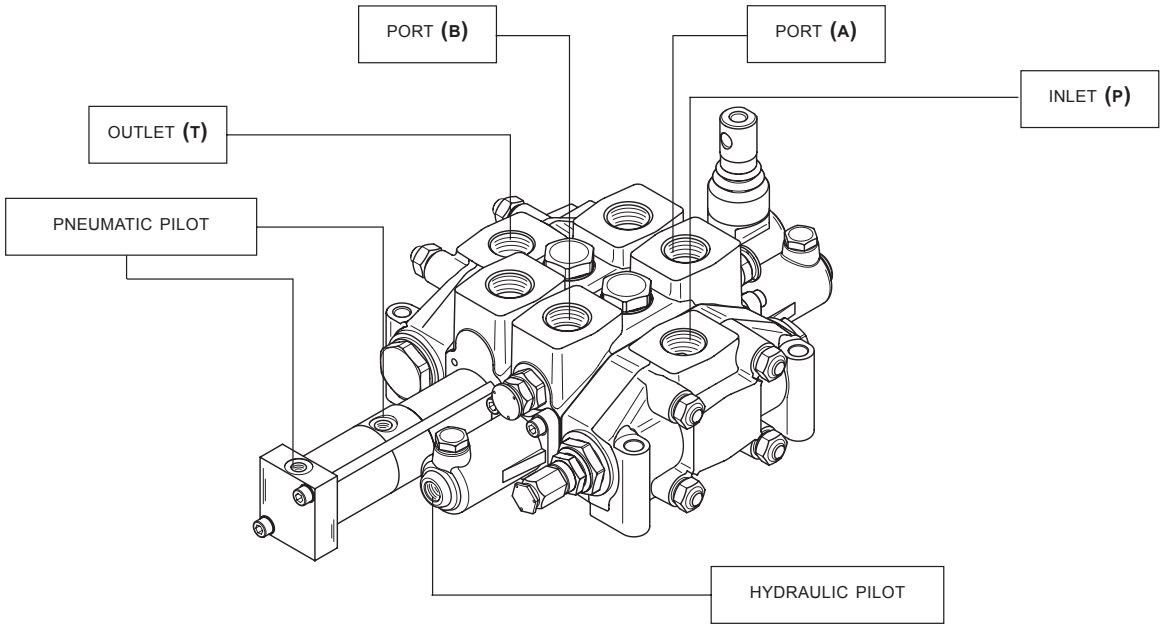
Type	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
mm	334	425	516	607	698	789	880	971	1062	1153	1244	1335
in	*13,2*	*16,7*	*20,2*	*23,7*	*27,2*	*30,7*	*34,2*	*37,7*	*41,2*	*44,7*	*48,2*	*51,7*

Tie-rod clamping torque	150 Nm
	15,3 Kgf

NOTE*:* each valve is assembled with N° 4 tie rod kits including a tie rod, two nuts and two washers.

Dimensions

Standard thread



PORTS	thread (BSP) ISO-228	thread (METRIC) ISO-262
Inlet (P)	G 2”	3000-1”1/2(MA) / 3000-1”1/2(UNC) / 3000-2”(MA) 3000-2”(UNC) / 6000-1”1/2(MA) / 6000-1”1/2(UNC)
Ports A- B	G 2”	3000-1”1/2(MA) / 3000-1”1/2(UNC) / 3000-2”(MA) 3000-2”(UNC) / 6000-1”1/2(MA) / 6000-1”1/2(UNC)
Outlet (T)	G 2”	3000-2”(MA) / 3000-2”(UNC) 6000-1”1/2(MA) / 6000-1”1/2(UNC)
Carry-over (HPCO)	G 2”	3000-2”(MA) / 3000-2”(UNC) 6000-1”1/2(MA) / 6000-1”1/2(UNC)

Hydraulic pilot	G 1/4”

Ordering codes

2” BSP	SAE 3000 1”1/2 MA	SAE 3000 1”1/2 UNC	SAE 3000 2” MA
G09	S09	S10	S11

SAE 3000 2” UNC	SAE 6000 1”1/2 MA	SAE 6000 1”1/2 UNC
S12	S39	S40

HC-D40 Series

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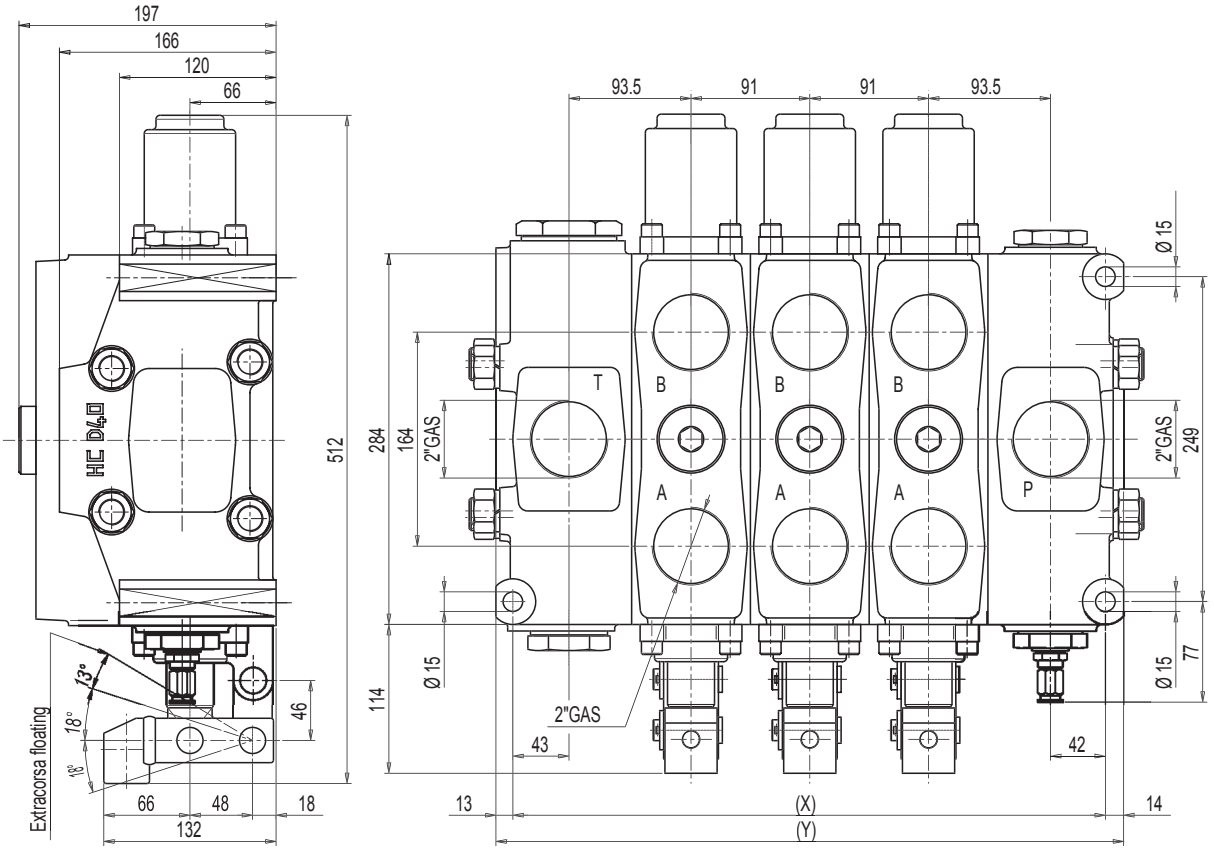
Dimensions

Dimensional drawing:



VARIABLE DIMENSIONS

Type	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
X (mm)	272	363	454	545	636	727	818	909	1000	1091	1182	1039
X (in)	*10,7*	*14,3*	*17,9*	*21,5*	*25,1*	*28,7*	*32,3*	*35,9*	*39,5*	*43,1*	*46,7*	*50,3*
Y (mm)	299	390	481	572	663	757	845	936	1027	1118	1209	1300
Y (in)	*11,7*	*15,3*	*18,9*	*22,5*	*26,1*	*29,7*	*33,3*	*36,9*	*40,5*	*44,1*	*47,7*	*51,3*

WEIGHTS

Type	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
Kg	75	104	133	162	191	220	249	278	307	336	365	394
lb	*165*	*229*	*293*	*357*	*421*	*485*	*549*	*613*	*677*	*741*	*805*	*868*

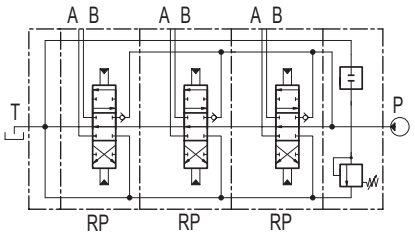
HC-D40 Series

Sectional Directional Control Valve

HYDRAULIC SPECIFICATIONS

Parallel circuit

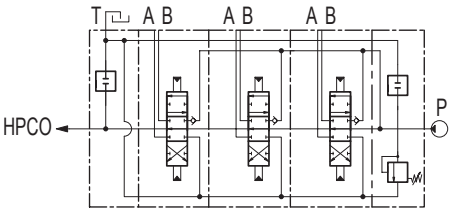
When the spool is operated it intercepts the switch gallery by diverting the flow of oil to service ports A or B. If two or more spools are actuated at the same time, the oil will power the service port that has the lower load by selecting the path with the least resistance; by throtting the spools,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



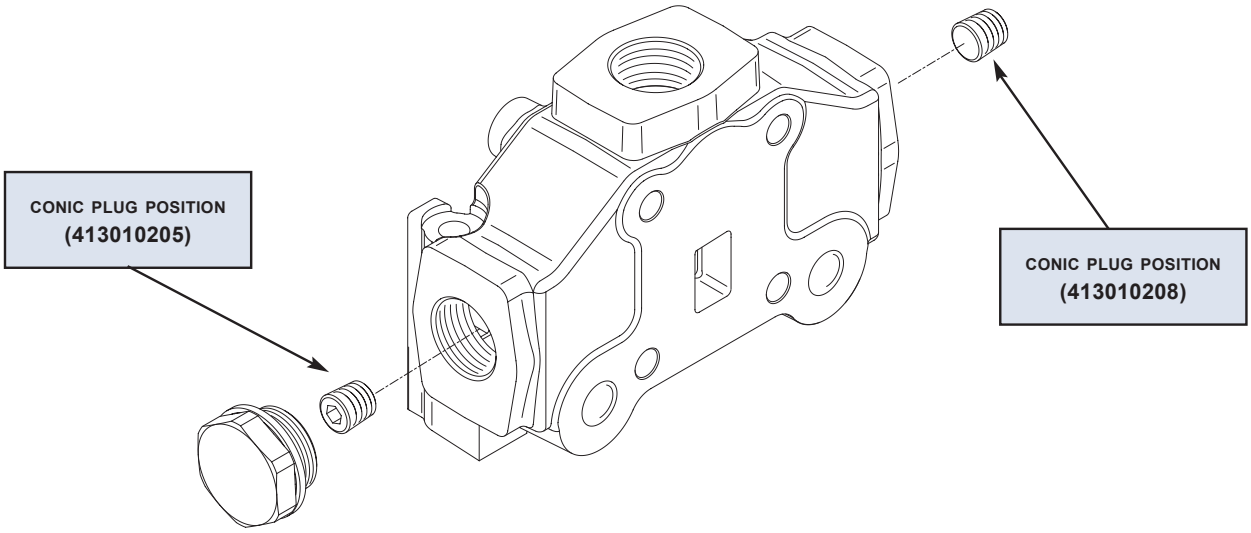
Carry-over connection (HPCO)

This option, available on all HC-D40, allows the monoblock to feed a second valve, by extending the free flow channel. In this configuration, the valve needs a separated port for the connection to tank.

IT IS POSSIBLE TO TRANSFORM SECTIONAL VALVE FROM STANDARD TO HPCO VERSION JUST BY ORDERING TWO CONIC PLUG:
1” x 25,6 (CODE 413010208)
3/4” x 20,5 (CODE 413010205)



LAYOUT

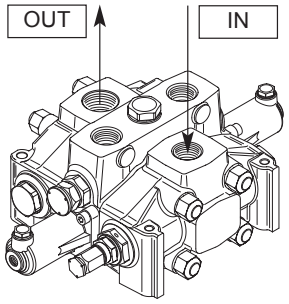


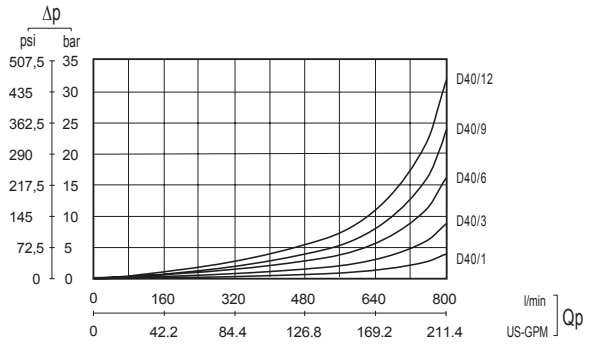
HC-D40 Series

Sectional Directional Control Valve

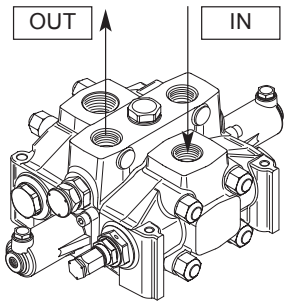
TYPICAL CURVES

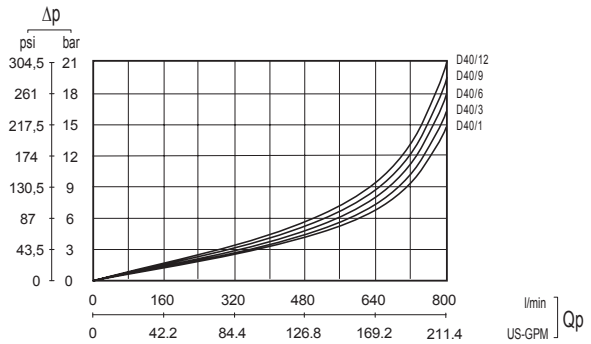
Pressure drop (P - T)



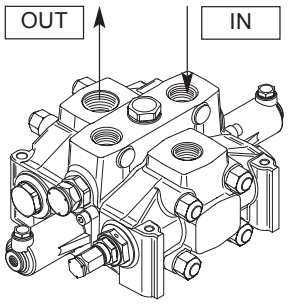


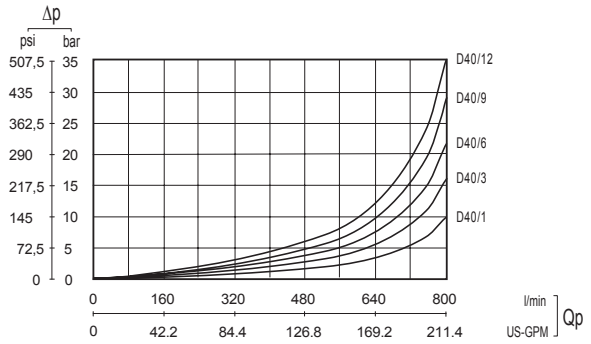
Pressure drop (P - A/B)



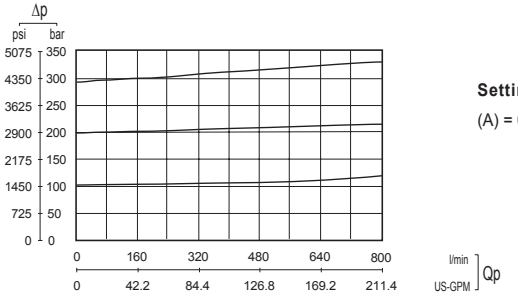


Pressure drop (A/B - T)





Pilot relief valve curve



Setting range

(A) = 0 / 350 (bar)

NOTE: indicated values have been tested with standard sectional valve and W001A spools.

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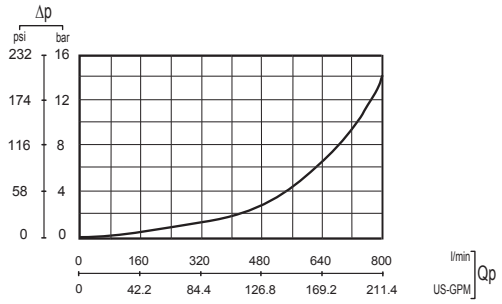
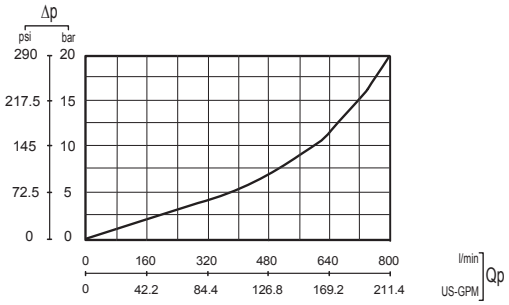
Sectional Directional Control Valve

TYPICAL CURVES

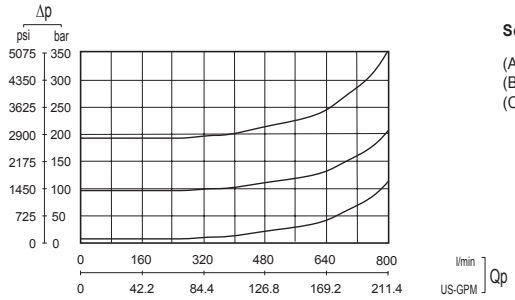
Main anticavitation valve curve



Anticavitation check valve curve



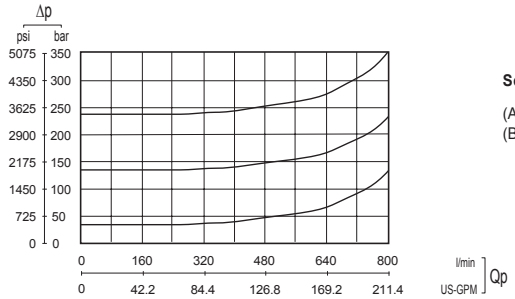
Antishock valve curve



Setting ranges

(A) = 0 / 150 (at full flow)
(B) = 151/200 (at full flow)
(C) = 201/350 (at full flow)

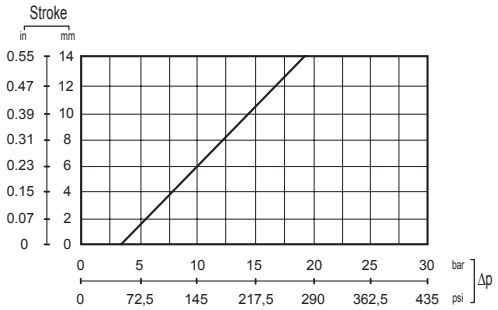
Combined valve curve



Setting ranges

(A) = 30 / 110 (at full flow)
(B) = 111/350 (at full flow)

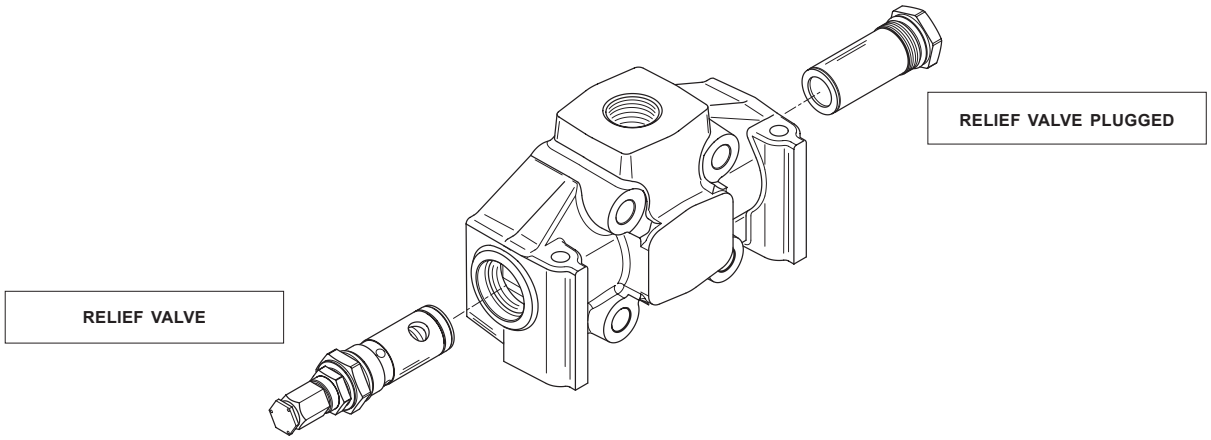
Hydraulic pilot control curve



NOTE: the graphic show the spool stroke as a function of the pressure operating.

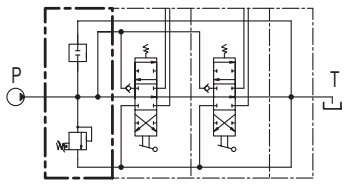
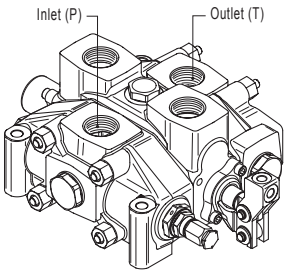
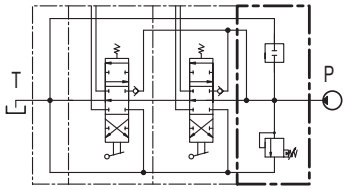
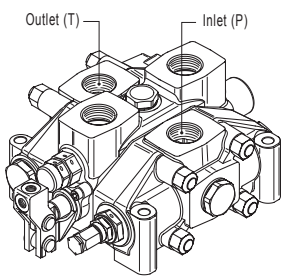
INLET SECTION

Order example:



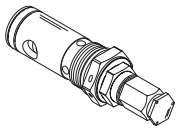
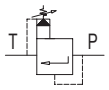
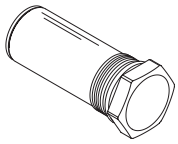
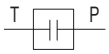
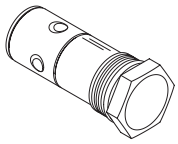
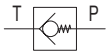
IR	inlet side
009	valve arrangement
(150)	setting direct acting pressure valve
A G09	inlet and thread position

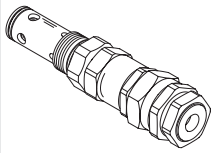
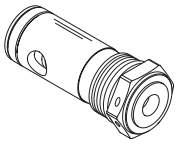
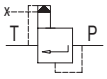
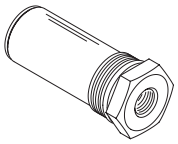
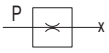
Inlet side

HYDRAULIC DIAGRAM	LAYOUT	DESCRIPTION + CODE
		LEFT INLET SECTION **IL**
		RIGHT INLET SECTION **IR**

INLET ARRANGEMENT

Valves identification

TYPE	DESIGN	DIAGRAM	DESCRIPTION
2			Pilot operated pressure relief valve
3			Relief valve plugged
4			Main anticavitation check valve

TYPE	DESIGN	DIAGRAM	DESCRIPTION
5			2 stage pilot operated relief valve
6			Externally piloted valve
11			Plug with pressure gauge connection

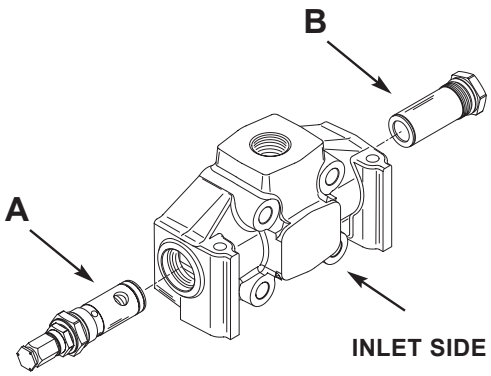
Valve arrangement on inlet section

Example: **009 = 2A-3B**

Pressure relief valve in port A side

Plug replaces pressure relief valve in port B side

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



Valves combination

009	010	011	016	018	019	020	021	022	027	029	030	031	032
2A-3B	2A-4B	2A-6B	2A-11B	3A-2B	3A-3B	3A-4B	3A-51B	3A-6B	3A-11B	4A-2B	4A-3B	4A-5B	4A-6B

037	038	039	040	045	047	049	050	052	085	086	087	088	089
4A-11B	5A-13B	5A-4B	5A-6B	5A-11B	6A-2B	6A-4B	6A-5B	6A-11B	11A-2B	11A-3B	11A-4B	11A-5B	11A-6B

INLET ARRANGEMENT

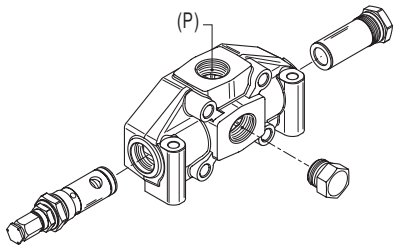
Inlet and thread available

A

Upper inlet

G09 S09 S10 S11

S12 S39 S40

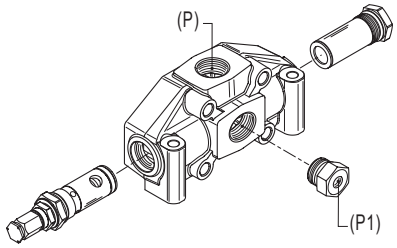


B

Upper inlet - P1 with pressure-gauge connection 1/4” BSP

G09 S09 S10 S11

S12 S39 S40

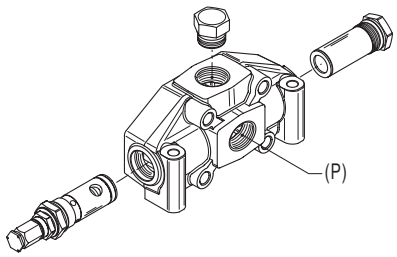


C

Central side inlet

G09 S09 S10 S11

S12 S39 S40

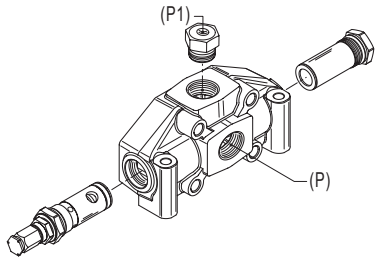


D

Central side inlet - P1 with pressure-gauge connection 1/4” BSP

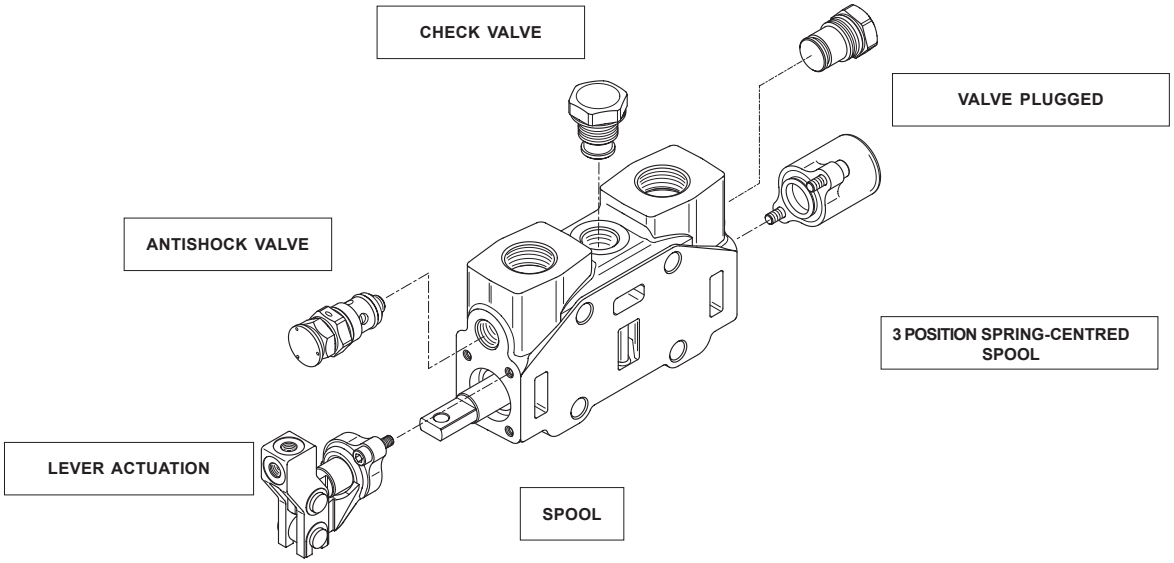
G09 S09 S10 S11

S12 S39 S40



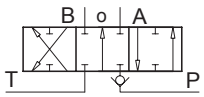
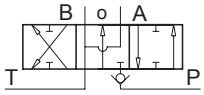
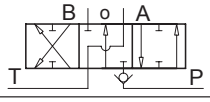
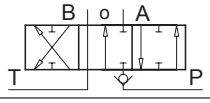
Work section

Order example:



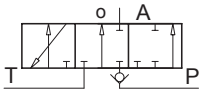
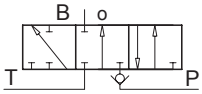
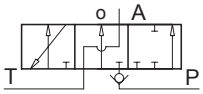
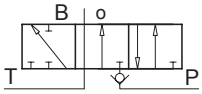
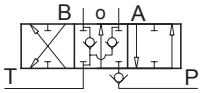
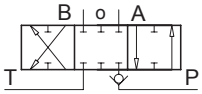
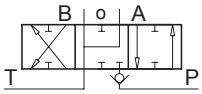
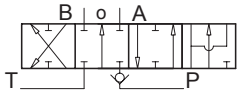
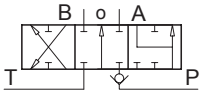
W001A	spool type
H101	spool actuation type
F001A	spool return action type
RP G09	type and thread section
01PA	auxiliary valve (port A)
(120)	setting (port A)
05PB	auxiliary valve (port B)

Spools identification

HYDRAULIC SCHEMATIC	CIRCUIT DESCRIPTION	CODE
	3 positions double-acting	**W001**
	3 positions double-acting A and B to tank	**W002**
	3 positions double-acting A to tank B blocked	**W003**
	3 positions double-acting A blocked B to tank	**W004**

SPOOL TYPE

Spools identification

	3 positions single-acting on A	**W005**
	3 positions single-acting on B	**W006**
	3 positions single-acting on A (A to tank)	**W007**
	3 positions single-acting on B (B to tank)	**W008**
	3 positions double-acting with anticavitation valves	**W009**
	3 positions double-acting switch port closed (A and B blocked)	**W010**
	3 positions double-acting switch port closed (A and B to tank)	**W011**
	4 positions double-acting with float in the 4th position	**W012**
	3 positions double-acting regenerative	**W013**

NOTE: W012, and W013 spools need a special machining on the valve body.

SPOOL TYPE

Spool type

STANDARD	METERED
A	B

Spool identification example:

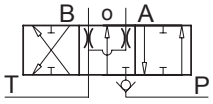
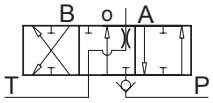
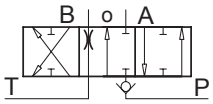
W001A

Spool 3 positions double-acting
STANDARD

W001B

Spool 3 positions double-acting
METERED

Spools with restricted service ports

HYDRAULIC SCHEMATIC	CIRCUIT	RESTRICTION ON DIAMETER (MM)	CODE	SECTION (MM^2)
	A-B IN T	0,10 0,15 0,20	**J10** **J15** **J20**	5,65 8,47 11,28
	A IN T	0,10 0,15 0,20	**K10** **K15** **K20**	5,65 8,47 11,28
	B IN T	0,10 0,15 0,20	**Y10** **Y15** **Y20**	5,65 8,47 11,28

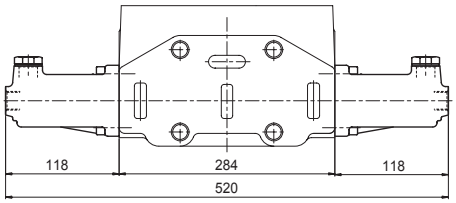
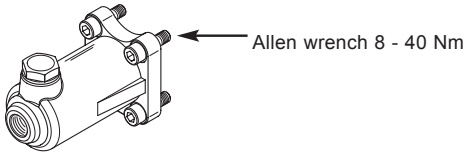
Order example

W002A **J10**

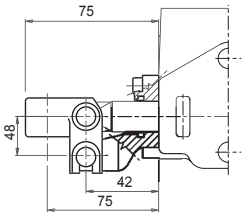
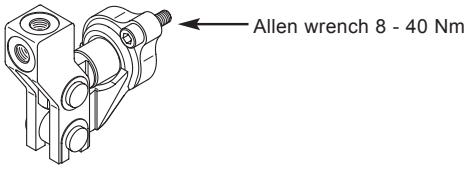
- J10 — Restriction on diameter (0,10 mm in A and B)
- W002A — Spool 3 positions double-acting A and B to tank STANDARD

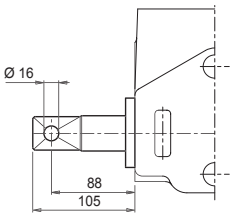
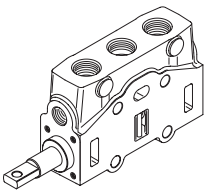
SPOOL ACTUATION

Spool actuation identification

DIMENSIONS	CLAMPING TORQUE
	
DESCRIPTION	**ORDERING CODE**
Hydraulic actuation	**H005**

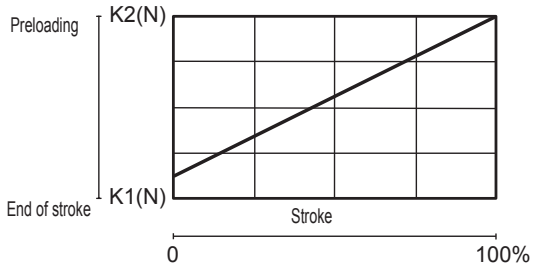
NOTE: leave out the spool return action code

DIMENSIONS	CLAMPING TORQUE
	
DESCRIPTION	**ORDERING CODE**
Unprotected lever	**H101**
Unprotected lever rotated 180°	**H102**

DIMENSIONS	CLAMPING TORQUE
	
DESCRIPTION	**ORDERING CODE**
Male clevis end	**H117**

SPOOL RETURN ACTION

Springs load values



STANDARD SPRING

A

Preloading

275,6 N

End of stroke

593,5 N

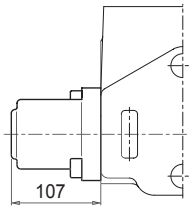
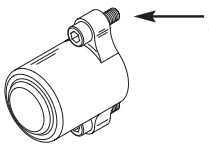
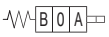
Spool return kit identification example

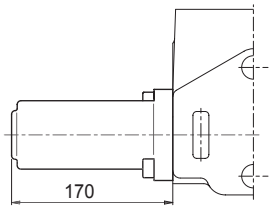
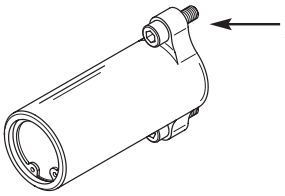
F001A

3 positions spring-centred spool
(**standard spring**)

SPOOL RETURN ACTION

Spools return action identification

DIMENSIONS	CLAMPING TORQUE	DESCRIPTION	ORDERING CODE
		3 positions spring-centred spool 	F001A

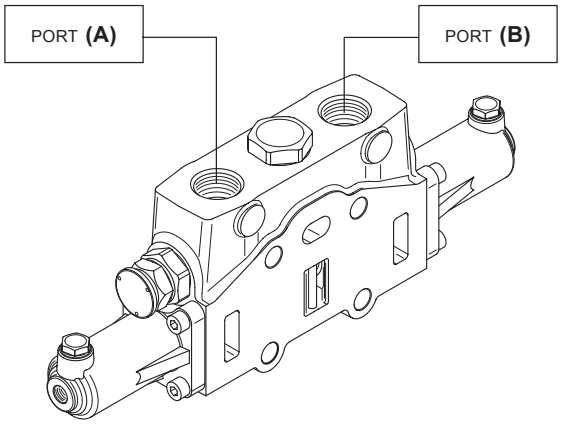
DIMENSIONS	CLAMPING TORQUE	DESCRIPTION	ORDERING CODE
		3 positions spring-centred spool detent in A and B 	F002A
3 positions spring-centred spool detent in A 			F003A
3 positions spring-centred spool detent in B 			F004A
4 positions spring-centred spool detent in 4th position 			F005A only for W012

WORK SECTION TYPE

Section work identification

DESCRIPTION	ORDERING CODE
Parallel circuit section	RP

Thread type



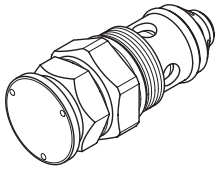
SERVICE PORTS (A - B)

G09 | S09 | S10 | S11 | S12 | S39 | S40

AUXILIARY VALVES

Auxiliary valves identification

ANTISHOCK VALVE (ARV)



HYDRAULIC SCHEMATIC

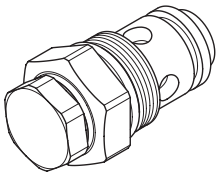
ORDERING CODES

01PA	01PB
port (A)	port (B)

SETTING RANGES (BAR)

Range (**A**)	Range (**B**)	Range (**C**)
0 / 150 (at full flow)	151 / 200 (at full flow)	201 / 350 (at full flow)

ANTICAVITATION VALVE

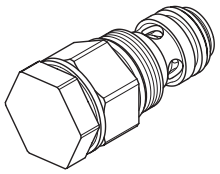


HYDRAULIC SCHEMATIC

ORDERING CODES

02PA	02PB
port (A)	port (B)

PILOT COMBINED VALVE (ORV)



HYDRAULIC SCHEMATIC

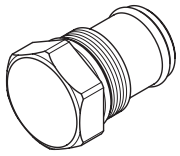
ORDERING CODES

04PA	04PB
port (A)	port (B)

SETTING RANGES (BAR)

Range (**A**)	*Range* (**B**)
30 / 110 (at full flow)	111 / 350 (at full flow)

PLUGGED VALVE



HYDRAULIC SCHEMATIC

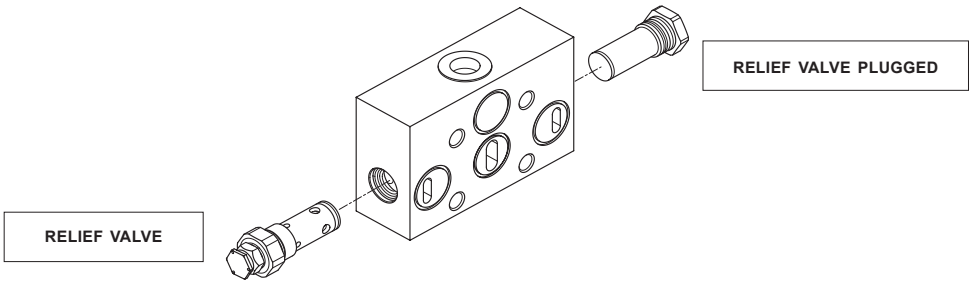
ORDERING CODES

05PA	05PB
port (A)	port (B)

NOTE: sections designed to house auxiliary valve option require double choice on work ports A and B.
Always indicate setting value when using antishock auxiliary valves and cambinated valves:
SETTING AT FULL FLOW = 01 PA **120**

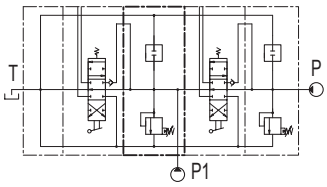
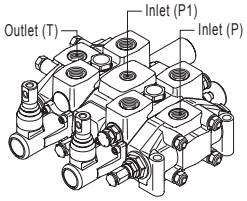
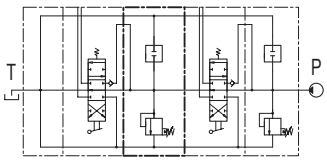
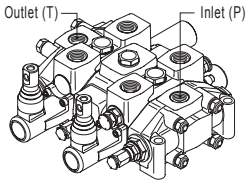
INTERMEDIATE SECTIONS

Order example:
INTERMEDIATE INLET SECTION



BE	intermediate inlet section type
009	valve arrangement
(150)	setting direct acting pressure valve
A G07	inlet and thread position

Classification

HYDRAULIC DIAGRAM	LAYOUT	DESCRIPTION + CODE
		INTERMEDIATE INLET SECTION **BE**
		INTERMEDIATE SECTION WITH PRESSURE RELIEF VALVE **BV***

(*) Omit the code for inlet positioning and type of thread

Operating principle

TYPE E

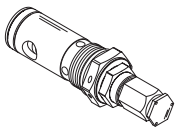
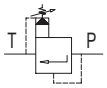
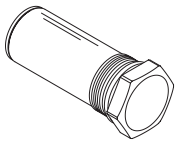
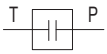
The intermediate inlet section is driven by two pumps (P+P1). The downstream elements can be set to a lower pressure than those the upstream one by adjusting the pressure relief valve of the intermediate section in question.

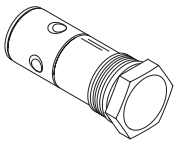
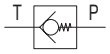
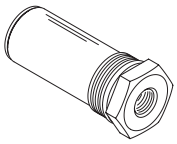
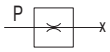
TYPE V

The intermediate inlet section and the elements are driven by a single pump (P). The downstream elements can be set to a lower pressure than those the upstream one by adjusting the pressure relief valve of the intermediate section in question.

INTERMEDIATE SECTIONS

Valves identification

TYPE	DESIGN	DIAGRAM	DESCRIPTION
2			Pilot operated pressure relief valve
3			Relief valve plugged

TYPE	DESIGN	DIAGRAM	DESCRIPTION
4			Main anticavitation check valve
11			Plug with pressure gauge connection

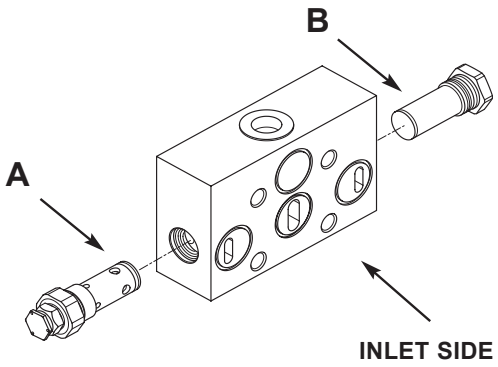
Valve arrangement on inlet intermediate section

Example: **009 = 2A-3B**

Pressure relief valve in port A side

Plug replaces pressure relief valve in port B side

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



Valves combination

009	010	016	018	019	027	029	030	037	085	086	087	201
2A-3B	2A-4B	2A-11B	3A-2B	3A-3B	3A-11B	4A-2B	4A-3B	4A-11B	11A-2B	11A-3B	11A-4B	1A

INTERMEDIATE SECTIONS

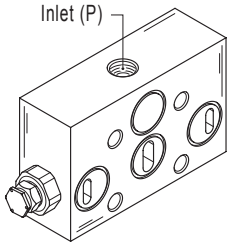
Inlet and thread avalaible

A

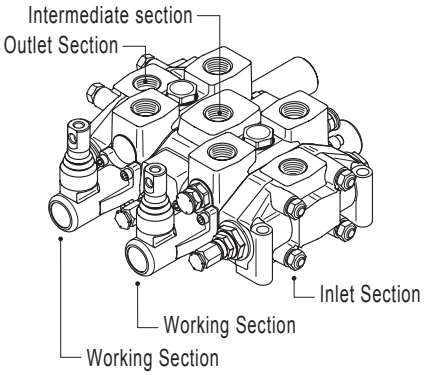
Upper inlet

G09 | S09 | S10 | S11

S12 | S39 | S40



Complete configuration samples for HC-D40 with intermediate inlet section (BE)



HC-D40/2

IR 009 150 A G09 ..... Right inlet section

W001A H101 F001A RP GO9 .....Working section

BE 009 120 A G09 ..... Intermediate inlet section

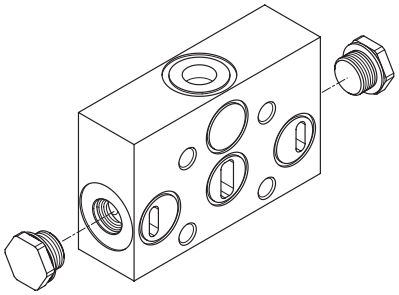
W001A H101 F001A RP GO9 .....Working section

TJ A GO9..... Outlet section

INTERMEDIATE SECTIONS

Order example:
INTERMEDIATE OUTLET SECTION

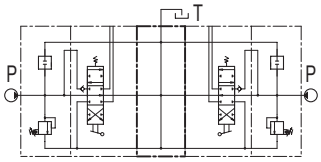
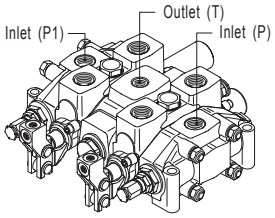
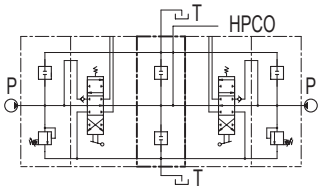
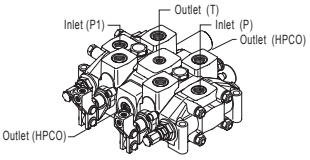
PLUG KIT



PLUG KIT

BF	intermediate outlet section type
A G09	outlet and thread position

Classification

HYDRAULIC DIAGRAM	LAYOUT	DESCRIPTION + CODE
		INTERMEDIATE OUTLET SECTION WITH SINGLE TANK RETURN **BF**
		INTERMEDIATE OUTLET SECTION WITH TWO TANK RETURNS **BG**

Operating principle

TYPE F

The above outlet section allows the flow of oil of the two pumps and the tank ports to be piped to a single outlet T.

TYPE G

The section in question allows the flow of oil of the two pumps to be piped in two outlets:
- HPCO for powering another directionale control valve
- T for discharge of the work ports

In order to obtain this, the two T need to be linked.

INTERMEDIATE SECTIONS

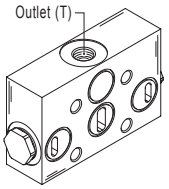
Outlet and thread available

BF

A

Upper inlet

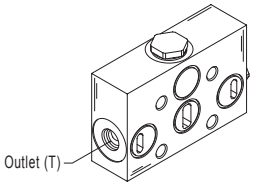
G09 S11 S12



G

Front outlet side A

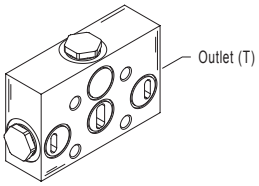
G09 S11 S12



H

Rear outlet side B

G09 S11 S12

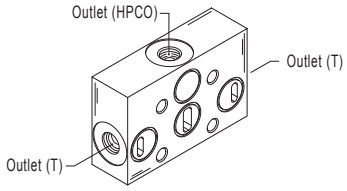


BG

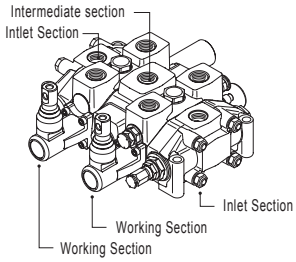
J

Upper outlet HPCO - front side A and rear side B to T

G09 S39 S40



Complete configuration samples for HC-D40 with intermediate outlet section (BF)



HC-D40/2

IR 009 150 A G09 ..... Right inlet section

W001A H101 F001A RP GO9 ..... Working section

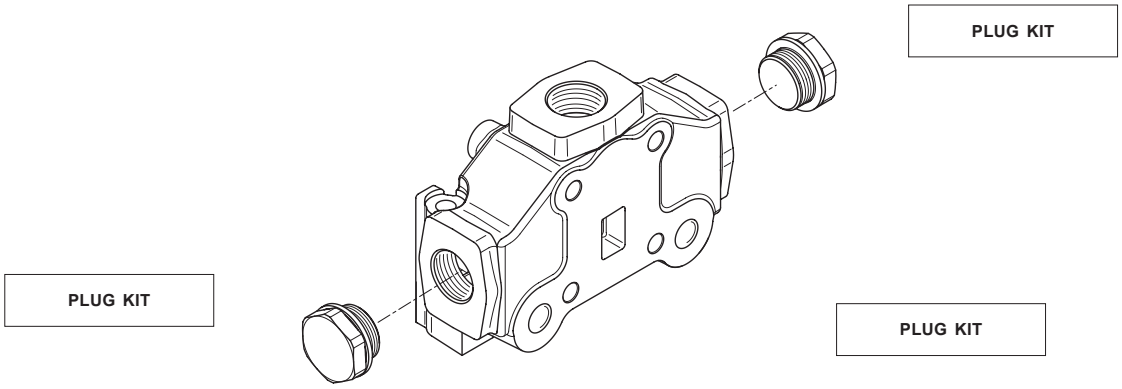
BF A G09 ..... Intermediate inlet section

W001A H101 F001A RP GO9 ..... Working section

IL 009 150 A G09 ..... Left inlet section

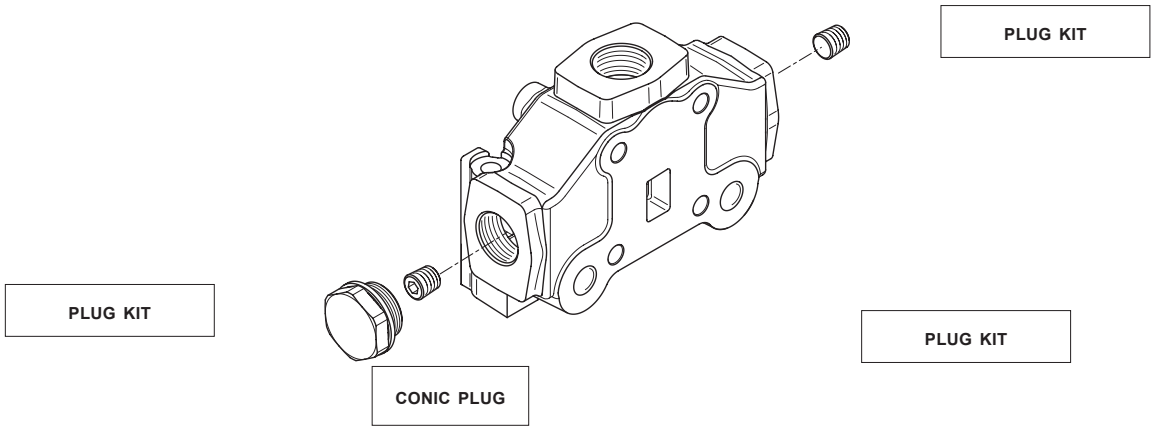
Outlet section

Order example:
1 outlet



TJ	outlet side type
A G09	outlet and thread available

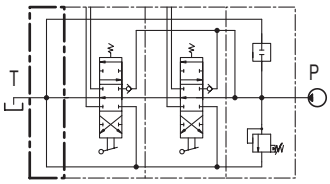
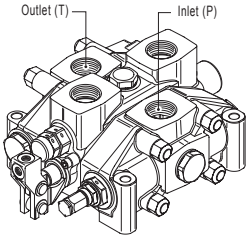
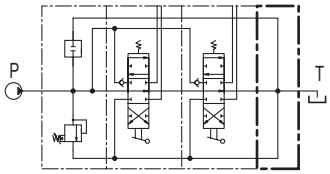
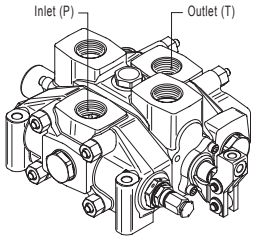
Order example:
HPCO version outlet



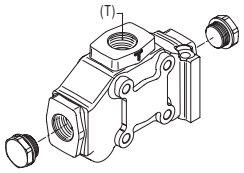
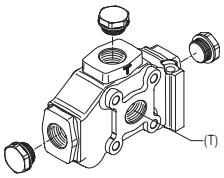
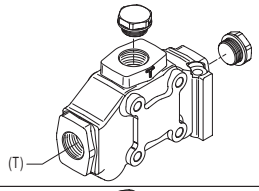
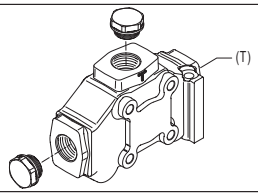
TM	outlet side type
M G09	outlet and thread available

OUTLET SECTION

Outlet with single tank clssification

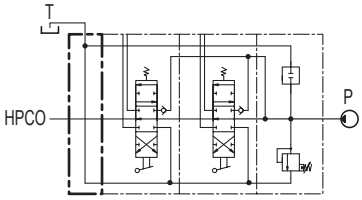
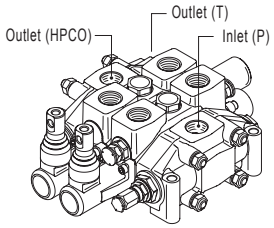
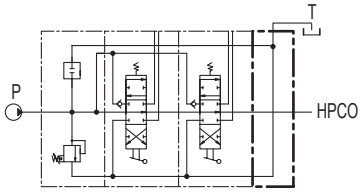
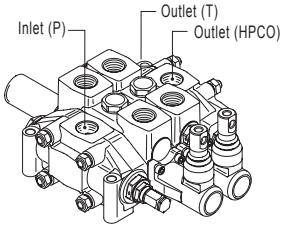
HYDRAULIC DIAGRAM	LAYOUT	DESCRIPTION + CODE
		OUTLET SECTION WITH SINGLE RETURN (T) RIGHT-SIDE INLET (P) **TJ**
		OUTLET SECTION WITH SINGLE RETURN (T) LEFT-SIDE INLET (P) **TK**

Outlet and thread available

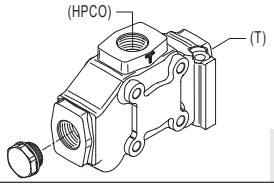
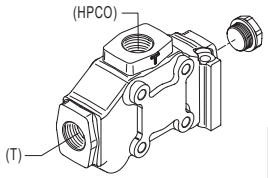
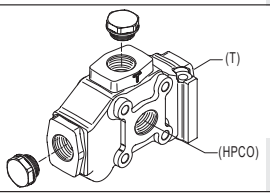
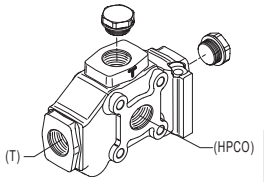
A	Upper inlet	**G09**	**S11**	**S12**	
C	Central outlet	**G09**	**S11**	**S12**	
G	Front outlet side A	**G09**	**S11**	**S12**	 ONLY FOR **TK**
H	Rear outlet side B	**G09**	**S11**	**S12**	 ONLY FOR **TJ**

OUTLET SECTION

Outlet with 2 tanks clssification

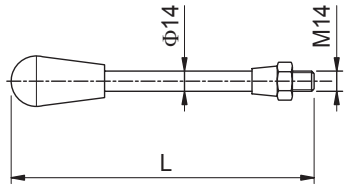
HYDRAULIC DIAGRAM	LAYOUT	DESCRIPTION + CODE
		OUTLET SECTION WITH TWO RETURN RIGHT-SIDED INLET (P) **TM**
		OUTLET SECTION WITH TWO RETURNS LEFT-SIDED INLET (P) **TN**

Outlet and thread available

M	HPCO upper outlet T (TANK) side outlet B **G09** **S11** **S12** **S39** **S40**		ONLY FOR **TM**
N	HPCO upper outlet T (TANK) side outlet A **G09** **S11** **S12** **S39** **S40**		ONLY FOR **TN**
P	HPCO central outlet T (TANK) side outlet B **G09** **S11** **S12** **S39** **S40**		ONLY FOR **TM**
Q	HPCO central outlet T (TANK) side outlet A **G09** **S11** **S12** **S39** **S40**		ONLY FOR **TN**

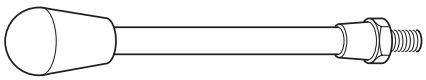
Features

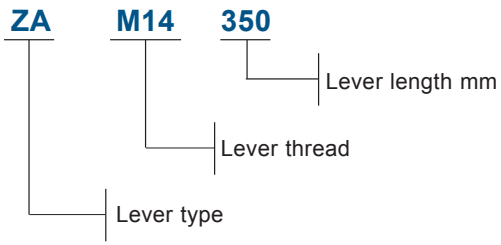
Lever identification

DIMENSIONS	CLAMPING TORQUE
	**L (mm) = 350 - 590** ***L (in) = 13,8 - 23,2***

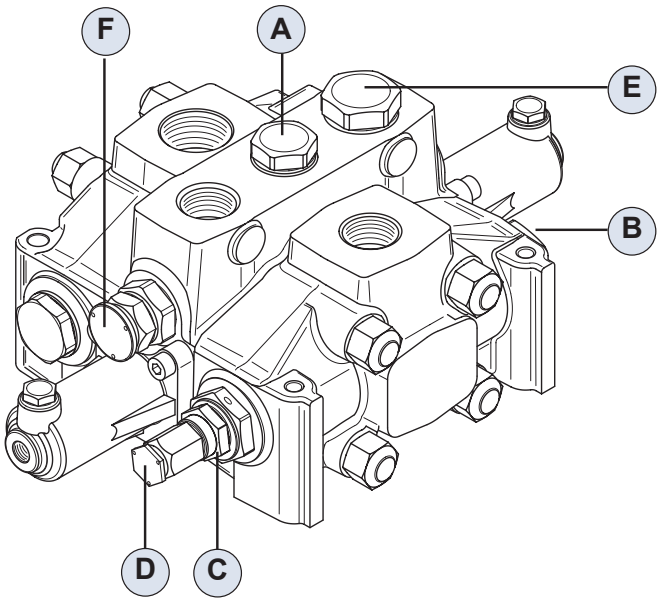
DESCRIPTION	ORDERING CODE
Lever with knob	**ZA**

Order example





INSTALLATION AND MAINTENANCE



General clamping torque

POSITION	DESCRIPTION	CLAMPING TORQUE (Nm)
A	load check valve plug	540
B	plug to replace pressure relief valve	650
C	pressure relief valve body	650
D	pressure relief valve cap	20
E	fittings in service ports A-B-P-T	G09 = 350
F	clamping torque auxiliary valve	see table (X)

TABLE (X)

ANTISHOCK VALVE PLUG **210 Nm**	ANTICAVITATION VALVE PLUG **210 Nm**	COMBINATED VALVE PLUG **210 Nm**
ANTISHOCK VALVE CAP **350 Nm**	ANTICAVITATION VALVE CAP **350 Nm**	COMBINATED VALVE CAP **350 Nm**
PILOT COMBINATED VALVE PLUG **210 Nm**	PILOT COMBINATED VALVE CAP **350 Nm**	PLUG REPLACES VALVE **350 Nm**

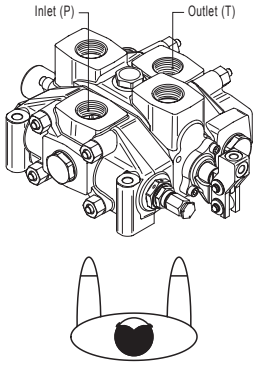
INSTALLATION AND MAINTENANCE

Assembly instructions

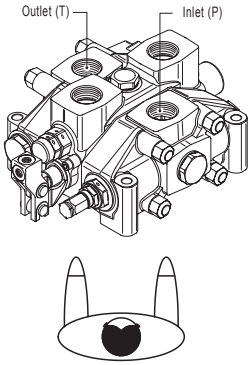
Since our directional control valve casings have symmetrical galleries, they can be converted from right-side inlet (IR) to left-side inlet (IL) simply by turning the spool and relative controls through 180°.

This opertation is not possible when using spool types: 012- 013.

Recommended curve for our standard directional control valves **A01** (see remote controls catalogue).



Directional control valve with left inlet (IL)



Directional control valve with right inlet (IR)

Product identification

An identification plate is put on every HC-D40 sectional valve.