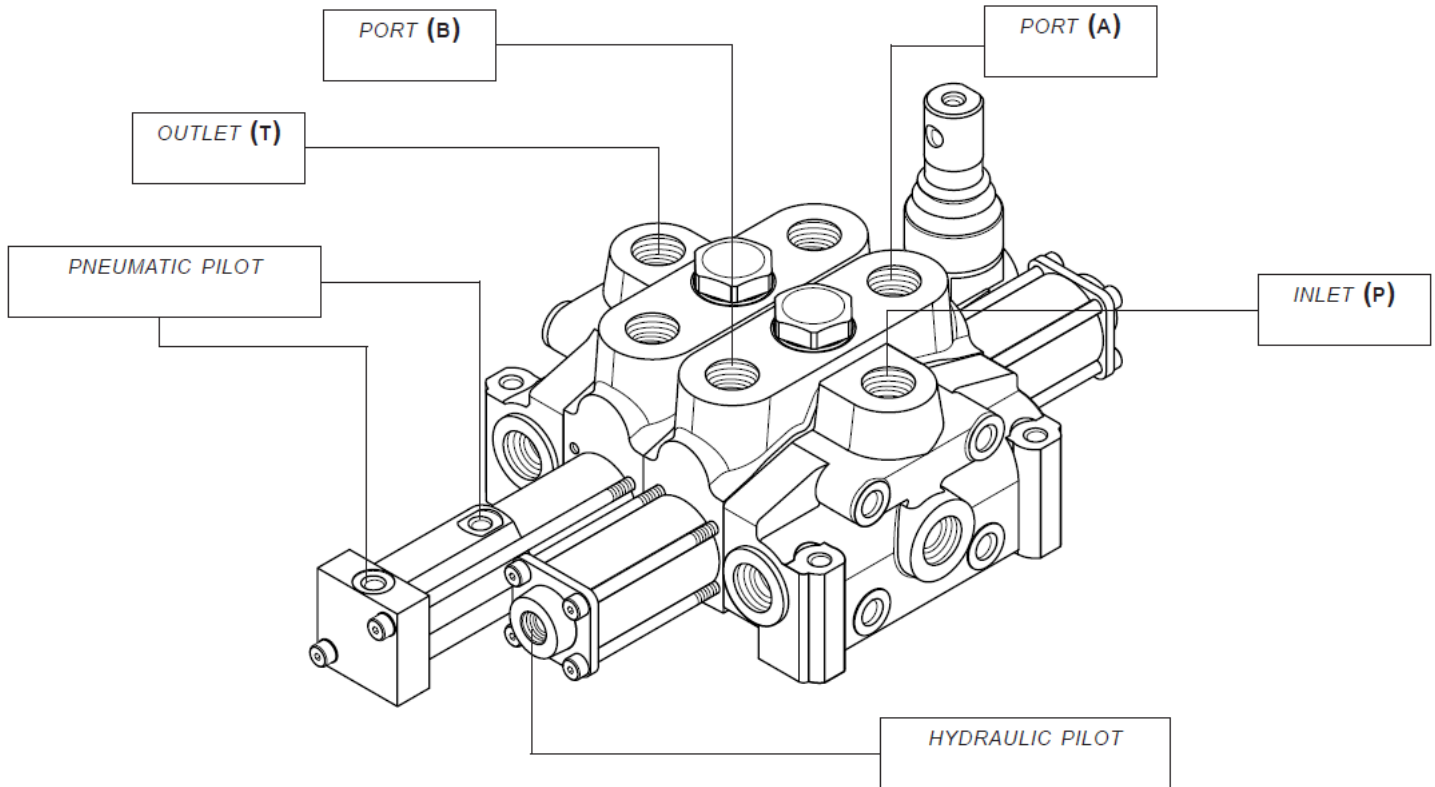
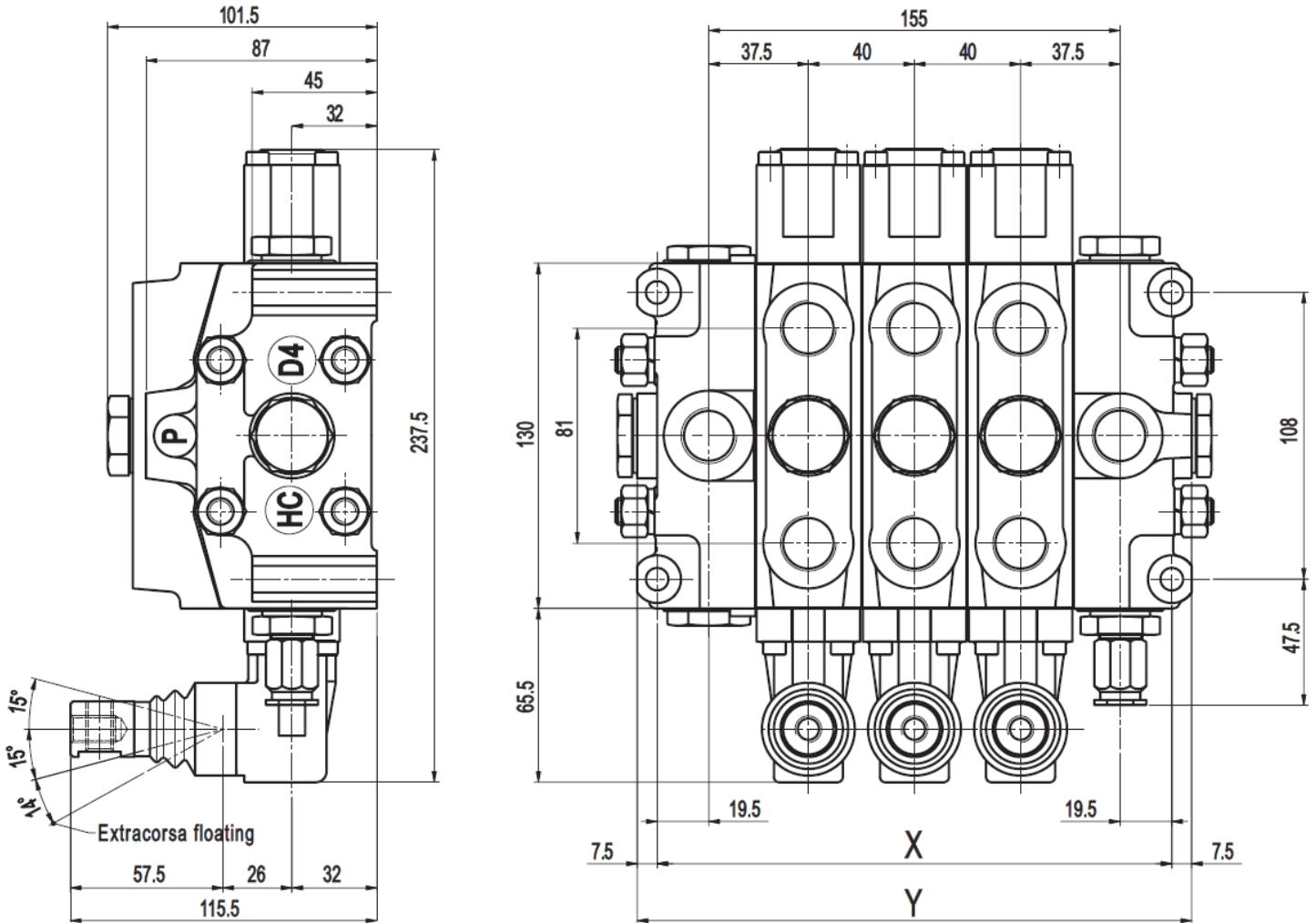


DIMENSIONS *Standard thread*



PORTS	BSP Thread ISO-228	PORTS Thread Size
<i>Inlet - Ingresso (P)</i>	G 1/2	<i>Hydraulic pilot</i>
<i>Ports - Utilizzi (A-B)</i>	G 1/2	G 1/4" - G-04 BSP ISO-228
<i>Outlet - Scarico (T)</i>	G 1/2	<i>Pneumatic pilot</i>
<i>Carry-over (HPCO)</i>	G 1/2	G 1/8" - G-02 BSP ISO-228

Dimensional drawing



VARIABLE DIMENSIONS

- /1 = 1x HC-D4-I (Inlet Section) + 1x HC-D4-W-PR (Work Section) + 1x HC-D4-O (Outlet Section)
- /2 = 1x HC-D4-I + 2x HC-D4-W-PR + 1x HC-D4-O
- /3 = 1x HC-D4-I + 3x HC-D4-W-PR + 1x HC-D4-O etc.

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
X (in)	4,5	6,1	7,6	9,2	10,8	12,4	14	15,5	17,1	18,7	20,2	21,8
Y (mm)	129	169	209	249	289	329	369	409	449	489	529	569
Y (in)	5,1	6,7	8,2	9,8	11,4	13	14,6	16,1	17,7	19,3	20,8	22,4

Type	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
Kg	8	10,8	13,7	16,5	19,4	22,3	25,2	28	30,8	33,7	36,6	39,5

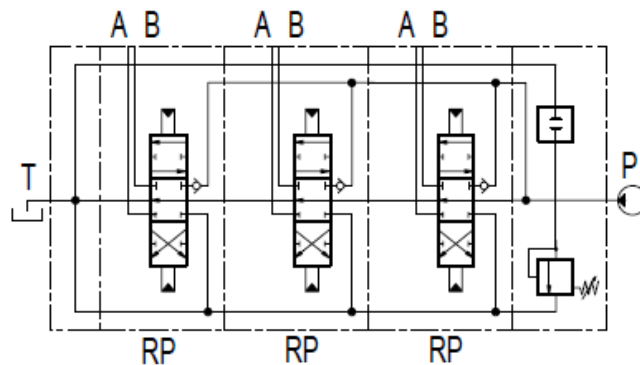
HYDRAULIC SPECIFICATIONS

Parallel circuit

When the spool is operated it intercepts the switch 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 selecting the path with the least resistance; by throttling the spools, the flow of oil can be divided between two or more service ports.

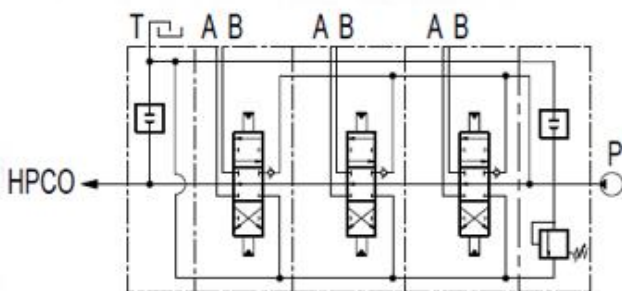
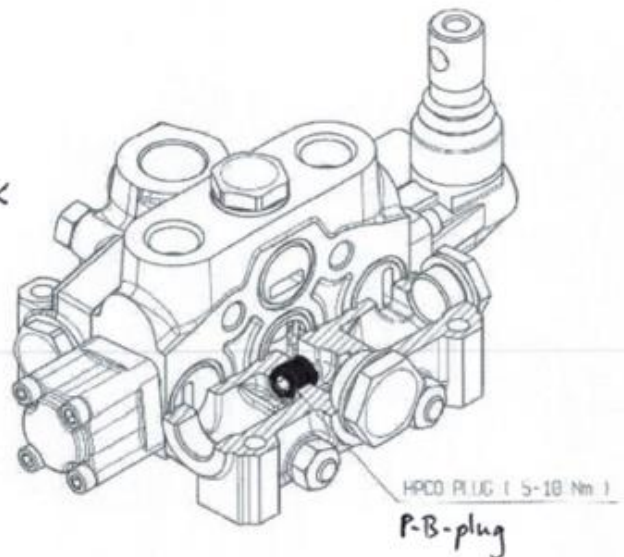
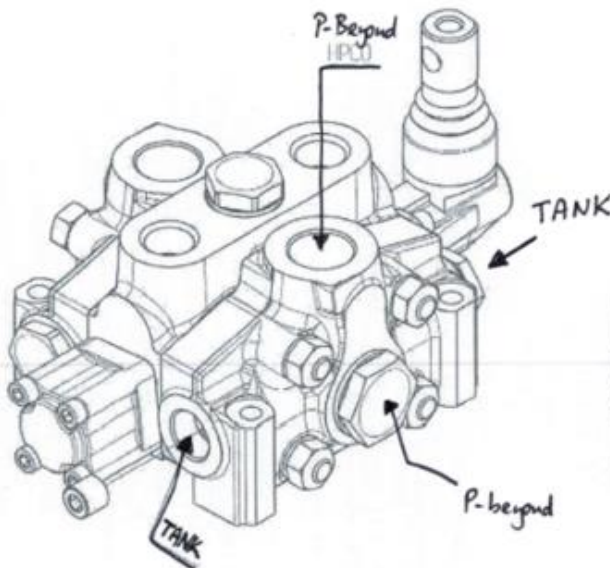
Parallel-Tandem circuit

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.



If you are going to use a Power Beyond Plug / Conic Plug see below instructions:

HPCO ASSEMBLY INSTRUCTION FOR D4

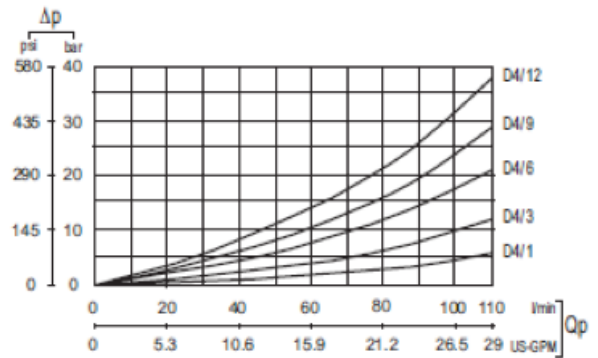
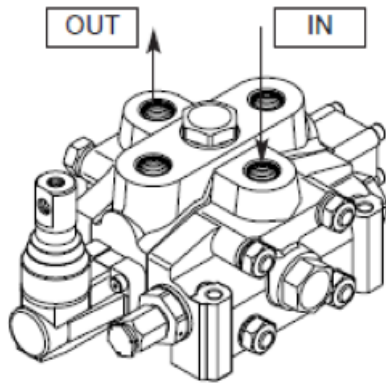


Power Beyond Plug always goes into the Outlet Section

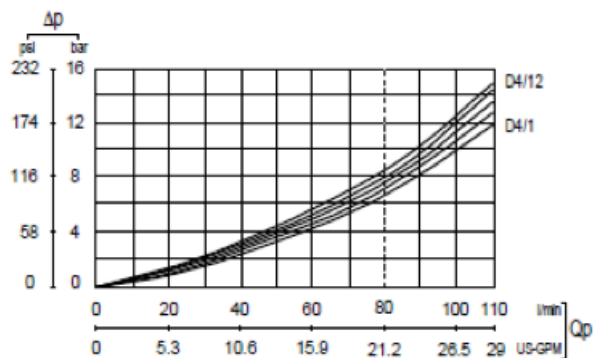
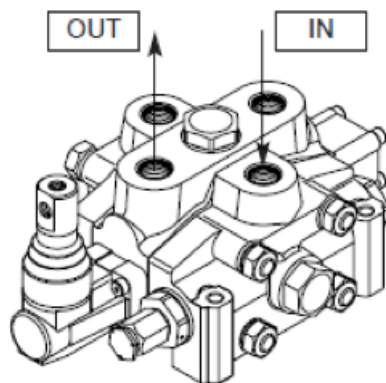
Pressure Setting Options

TYPICAL CURVES - These are the options available to be indicated when ordering

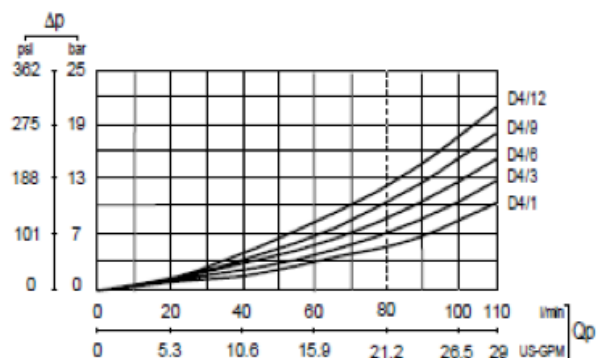
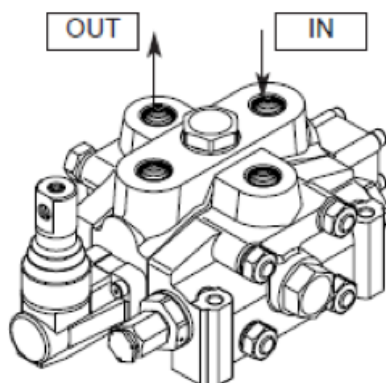
Pressure drop (P - T)



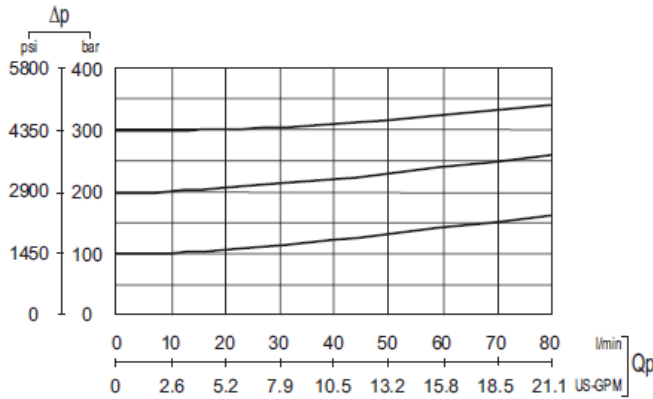
Pressure drop (P - A/B)



Pressure drop (A/B - T)



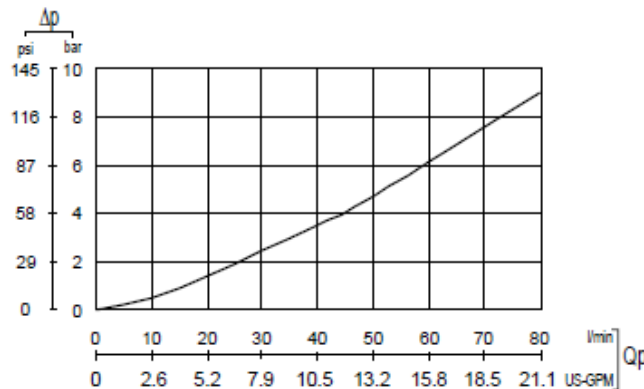
Direct relief valve curve



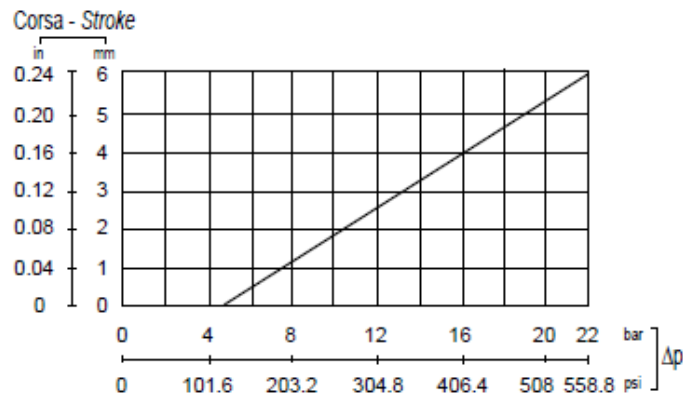
Setting Ranges:

- (A) = 120/150 bar
- (B) = 151/200 bar
- (C) = 201/250 bar
- (D) = 251/350 bar

Main anticavitation check valve curve



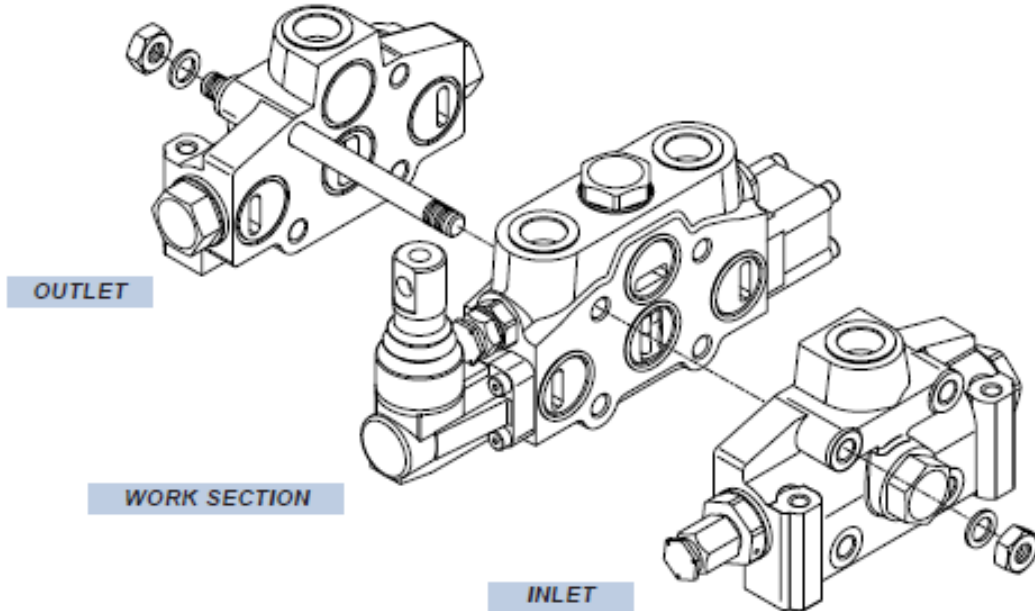
Hydraulic pilot control curve



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

HC-D4-I | Inlet Section G08 1/2" BSP + Main Relief 80Lpm 350Bar | INLET SECTION

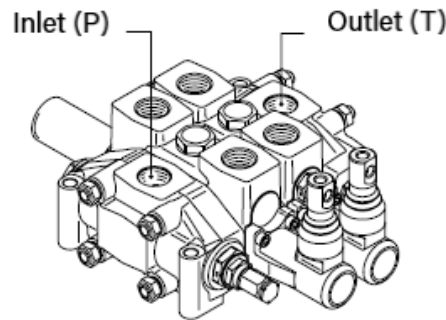
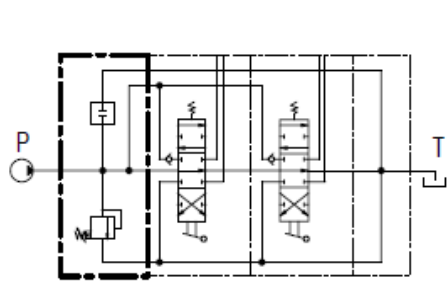
All our HC-D4 valves are Left | Left Inlet Section | Inlet on P port | Outlet on T Port



Inlet side

HC-D4-I ordering code

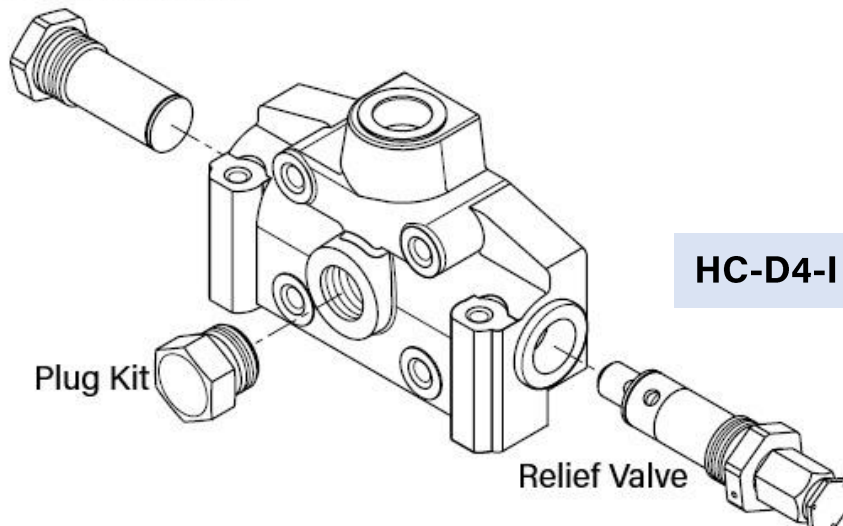
HYDRAULIC DIAGRAM	LAYOUT	DESCRIPTION + CODE
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LEFT INLET SECTION

IL

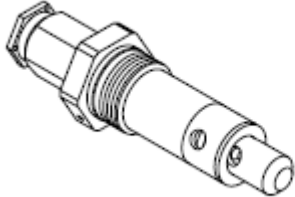
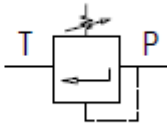
Relief Valve Plug



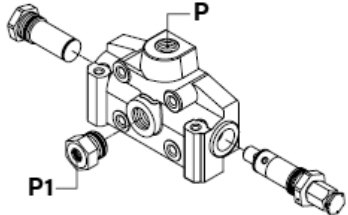
HC-D4-I ordering code

INLET ARRANGEMENT

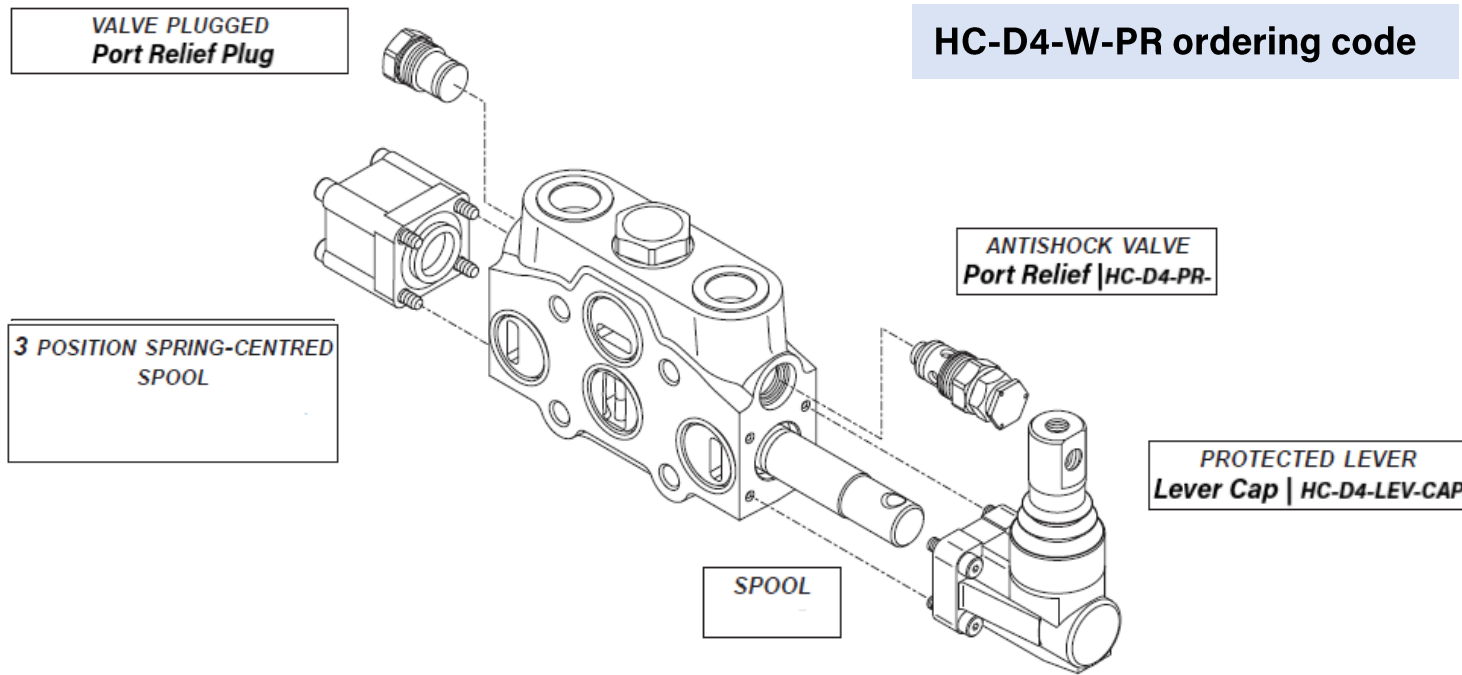
Valves identification

TYPE	DESIGN	DIAGRAM	DESCRIPTION
1			Direct acting pressure relief valve

Inlet position and available thread type

B	<p>Upper inlet - P1 with pressure-gauge connection 1/4" BSP</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-top: 10px;">G04</div>	
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WORK SECTION



Spools identification

STANDARD Spool

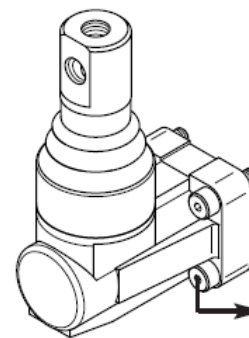
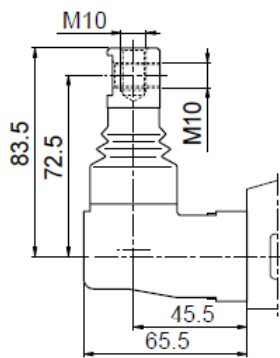
HYDRAULIC SCHEMA	CIRCUIT DESCRIPTION	CODE
	3 Positions Double-Acting	W001

SPOOL ACTUATION

Spool Actuation Options

HC-D4-LEV-CAP | D4 Lever Cap | DIMENSIONS

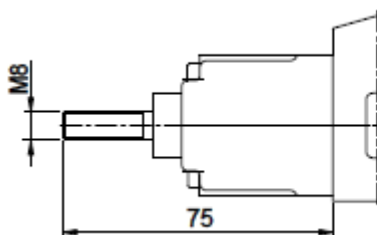
CLAMPING TORQUE



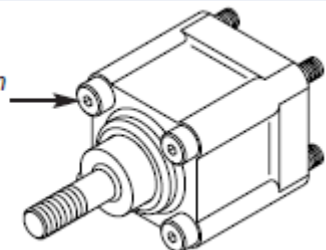
Allen wrench 4 - 6 Nm

HC-D4-EXT | D4 Extention End Cape | DIMENSIONS

CLAMPING TORQUE

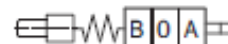


Allen wrench 4 - 6 Nm



DESCRIPTION

3 positions spring-centred spool
prearrangement dual command

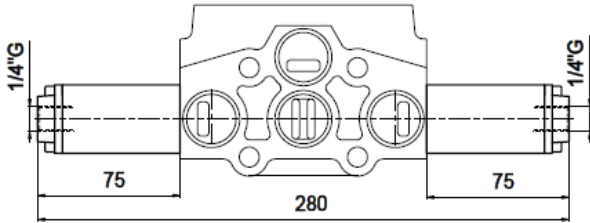


SPOOL ACTUATION

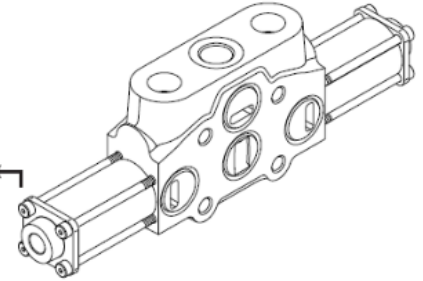
Spool Actuation Options

HC-D4-HYD-PIL | D4 Hydraulic Pilot Actuator | DIMENSIONS

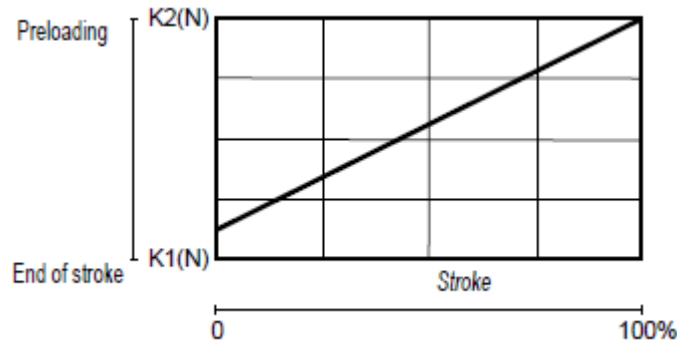
2X HC-D4-HYD-PIL Hydraulic Actuators are needed



CLAMPING TORQUE
Allen wrench 4 - 6 Nm



Springs load values



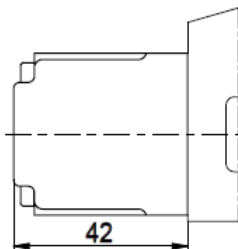
STANDARD SPRING - **A** | Preloading - 117,7 N | End of Stroke - 145,2 N

3 Positions Spring-Centred Spool **F001A** Standard Spring

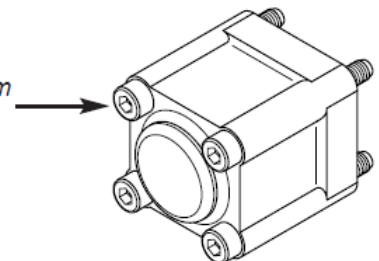
SPOOL RETURN ACTION

HC-D4-END-CAP | D4 End Cap | DIMENSIONS

CLAMPING TORQUE

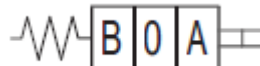


Allen wrench 4 - 6 Nm



DESCRIPTION

3 positions spring-centred spool

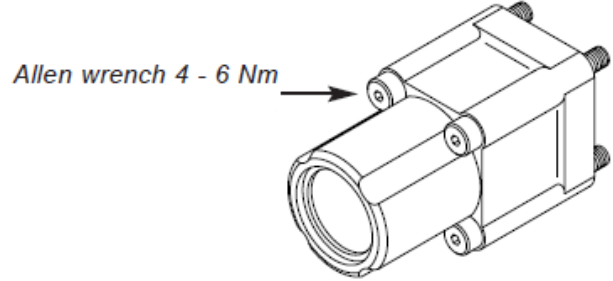
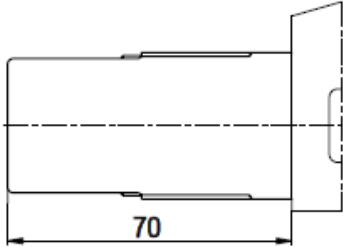


F001C

SPOOL RETURN ACTION

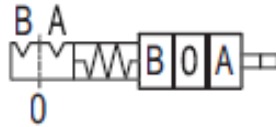
HC-D4-DETENT-3 | Detent Kit 3Pos on A&B | DIMENSIONS

CLAMPING TORQUE



DESCRIPTION

3 positions spring-centred spool detent in A and B



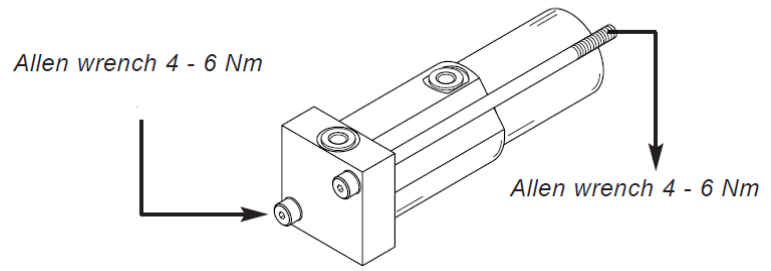
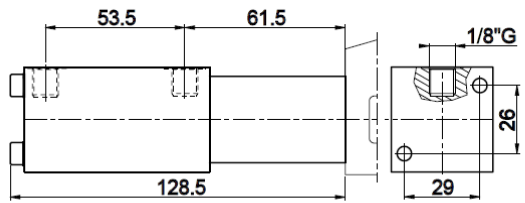
F002A

HC-D4-DETENT-3

Pneumatic control classification

HC-D4-PNU-PIL | D4 Pneumatic Pilot Actuator | DIMENSIONS

1X HC-D4-PNU-PIL Needed | CLAMPING TORQUE



DESCRIPTION

Pneumatic control ON - OFF



F020A

WORK SECTION TYPE - HC-D4-W-PR | G08 + Port Relief

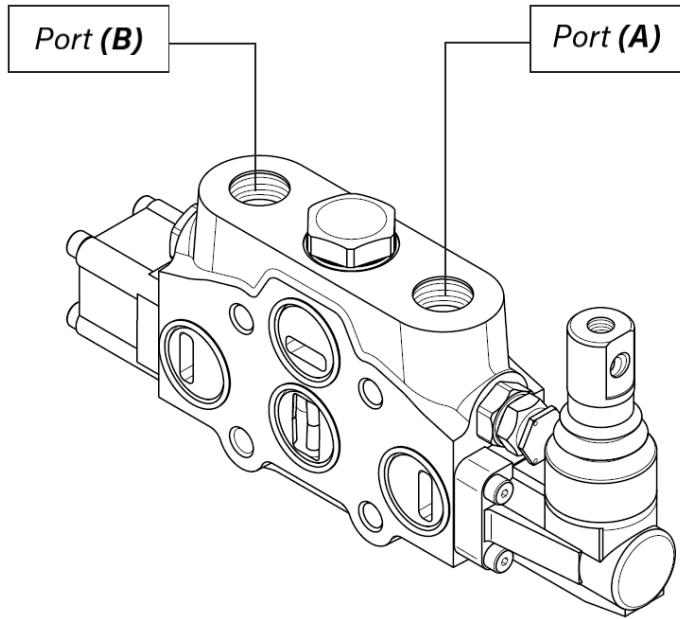
Work section identification

DESCRIPTION

Parallel circuit section

RP

Thread type



SERVICE PORTS (A - B) | G-08 1/2" BSP

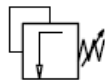
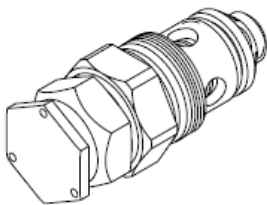
AUXILIARY VALVES

Auxiliary valves identification

ANTISHOCK VALVE | Port Relief Valve (ARV)

HYDRAULIC SCHEMA

ORDERING CODES



01 PA

port - (A)

01 PB

port - (B)

SETTING RANGES

HC-D4-PR-180 | Range (C) | Port Relief | 180Bar

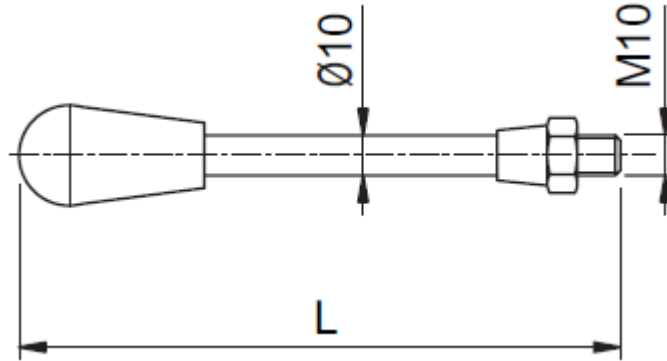
151Bar / 250Bar - At Full Flow | 96Bar / 220Bar - At Min. Flow

HC-D4-PR-400 | Range (D) | Port Relief | 200-400Bar

251Bar / 350Bar - At Full Flow | 221Bar / 280Bar - At Min. Flow

Lever identification

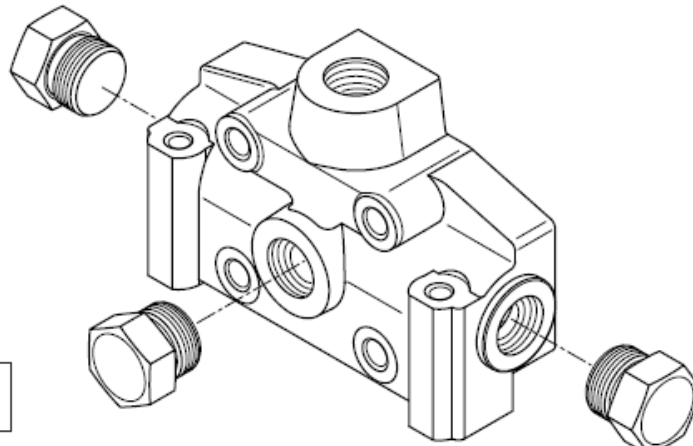
HC-LEVER-M10 \ Length between 200 & 250mm



Outlet Section Options Available

*Order example
1 outlet*

Plug Kit



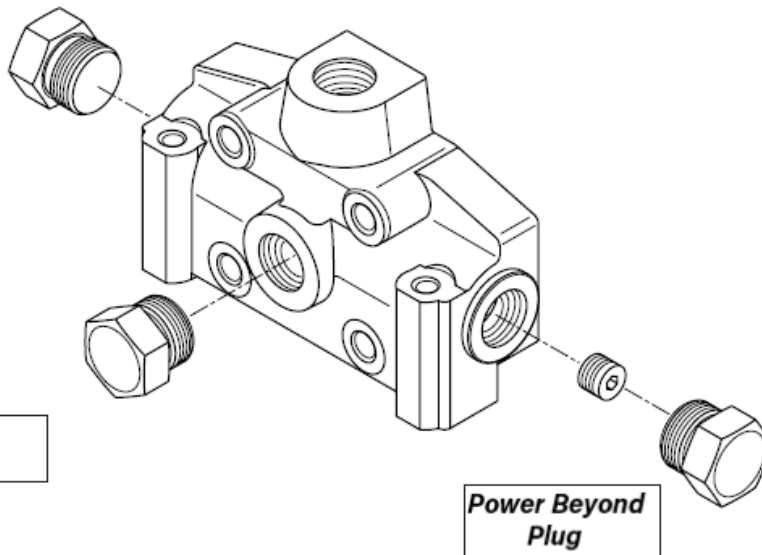
Plug Kit

Plug Kit

*Order example
HPCO version outlet*

HPCO = High Pressure Carry Over Outlet Option

Plug Kit



Plug Kit

**Power Beyond
Plug**

Plug Kit

Look at Page 4 for Assembly instructions for the HPCO - how to insert a Power Beyond Plug

OUTLET SECTION - Left-Side Inlet | HC-D4-O | G08 1/2" BSP 80Lpm 350Bar

Outlet with single tank classification

HYDRAULIC DIAGRAM	LAYOUT	DESCRIPTION
		<p>OUTLET SECTION WITH SINGLE RETURN (T) LEFT-SIDE INLET (P)</p> <p style="text-align: center;">TK</p>

Outlet position and available thread type

<p style="font-size: 2em; font-weight: bold; color: blue;">A</p>	<p>Upper Outlet</p> <p>G04 = 1/2" BSP G-08</p>	
--	--	--

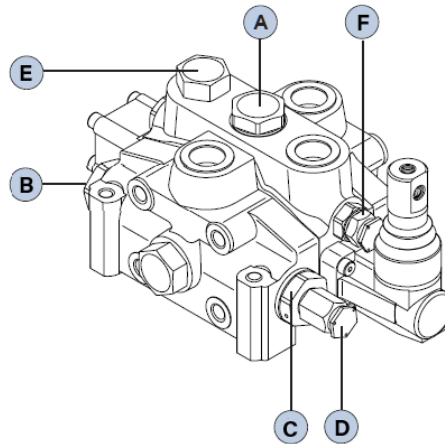
Outlet with two tanks classification

HYDRAULIC DIAGRAM	LAYOUT	DESCRIPTION
<p>HPCO = High Pressure Carry Over</p>		<p>OUTLET SECTION WITH TWO RETURNS LEFT-SIDED INLET (P)</p> <p style="text-align: center;">TN</p>

Outlet position and available thread type

<p style="font-size: 2em; font-weight: bold; color: blue;">M</p>	<p>HPCO High Pressure Carry Over Upper Outlet T (Tank) Side Outlet B</p> <p>G04 = 1/2" BSP G-08</p>	
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INSTALLATION AND MAINTENANCE



TABLE

ANTISHOCK VALVE PLUG	25 Nm
PORT RELIEF VALVE PLUG	25 Nm
ANTISHOCK VALVE BODY	60 Nm
PORT RELIEF VALVE	60 Nm

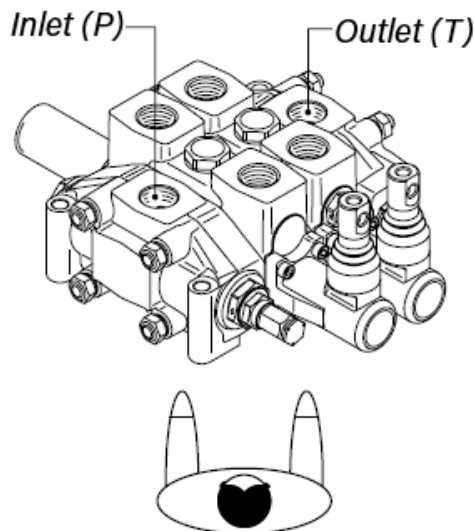
General clamping torque

POSITION	DESCRIPTION	CLAMPING TORQUE (Nm)
A	load check valve plug	80
B	plug to replace pressure relief valve	80
C	pressure relief valve body	80
D	pressure relief valve cap	20
E	fittings in service ports A-B-P-T	G04 = 40
F	clamping torque auxiliary valve	see table

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°.

Recommended curve for our standard directional control valves **A01**



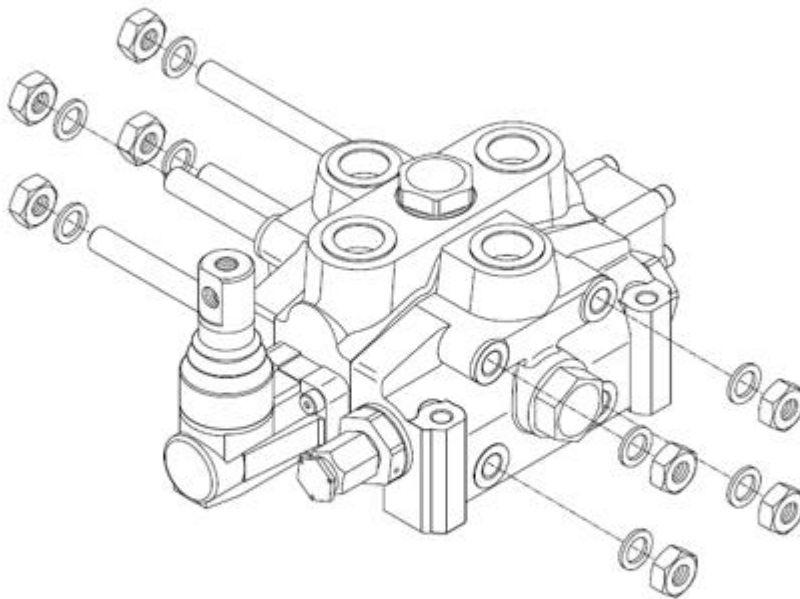
Sectional valve with left inlet (IL)

D4 Valves Bolt Kit | Tie Rod Kit

Assembly specifications

Tie rod kit allows the correct assembling of HC-D4. Tie rods length depends on number of sections.

Tie rod kit | D4 Stud-bolt kit



Tie Rod | D4-Stud-Bolts Length in inch & mm | 4x bolts and nuts included in kits

Fluidco Code HC- D4-BK-1 | D4-BK-2 | D4-BK-3 | D4-BK-4 | D4-BK-5 | D4-BK-6

Type	/1	/2	/3	/4	/5	/6
mm	140	180	220	260	300	340
in	5,5	7,1	8,7	10,3	11,9	13,5



HC-D4 Valves
Additional Data.pdf