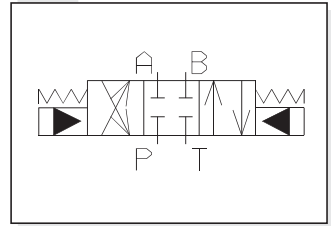




ADPH.5... PILOTED VALVES CETOP 5/NG10 WITH CETOP 2/NG4 PILOT VALVE



HYDRAULIC SYMBOL



These ADPH 5 valves are used primarily for controlling the starting, stopping and direction of fluid flow. These kind of distributors are composed by a main stage crossed by the big flow from the pump (ADPH.5) and by a cetop 2 pilot directional solenoid valve (AD.2.E) available with different mounting type .

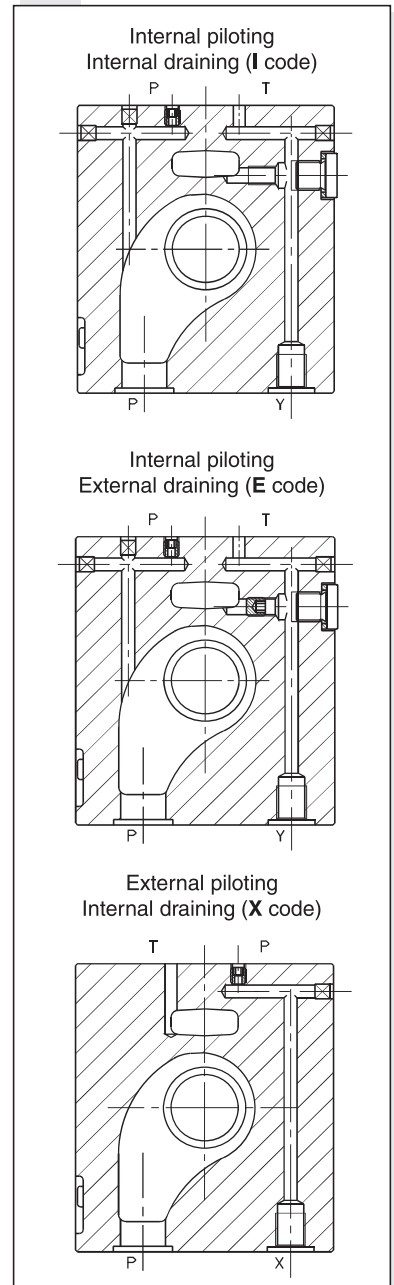
When a short response time is requested, a special version of solenoids with high dynamics is available with the code AD.2.E.**.*FF.2 (Please, contact our Technical Aron Service).

ADPH.5...	
STANDARD SPOOLS FOR ADPH.5	CH. I PAGE 47
TECH. SPECIFICATIONS ADPH5	CH. I PAGE 48
CETOP 2/NG04	CH. I PAGE 2
AD.2.E...	CH. I PAGE 4
"A09" DC COILS	CH. I PAGE 4
STANDARD CONNECTORS	CH. I PAGE 20

ORDERING CODE

- ADPH** Piloted valve
The pilot valves AD.2.E... must be ordered separately
- 5** CETOP 5/NG10
- **** Spool type (Table next page)
- *** Mounting (Table next page)
Standard orifice at port P: \varnothing 1mm
- *** Orifice type on Cetop 2 valves (Table 1)
0 = none
A/B/C/D/E/F/G = orifice on line A
H/I/L/M/N/P/Q = orifice on line B
- *** Piloting and draining type (Tab.2)
I = internal piloting
internal draining
E = internal piloting
external draining
X = external piloting
internal draining
(special body)
- 00** No variant
- 1** Serial No.

TAB.2 - PLUGS DISPOSAL



TAB.1 - ORIFICE ON LINE A/B

On line A	On line B	\varnothing (mm)
0	0	None
A	H	0.5
B	I	0.6
C	L	0.7
D	M	0.8
E	N	0.9
F	P	1
G	Q	1,2

HYDRAULIC SYMBOLS, SPOOLS AND MOUNTING

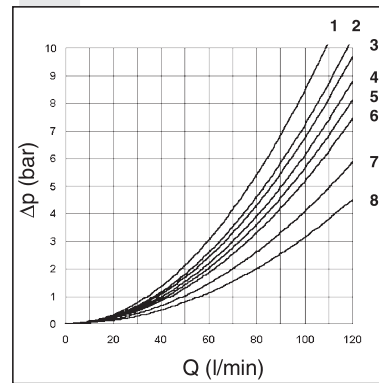
(* Spools with price increasing)

"A" MOUNTING			
Pilot Piloted			
Scheme			
Spool type		Covering	Transient position
01		+	
02		-	
03		-	
04*		-	
06		+	
15		-	
16		+	

"B" MOUNTING			
Pilot Piloted			
Scheme			
Spool type		Covering	Transient position
01		+	
02		-	
03		-	
04*		-	
06		+	
15		-	
16		+	

"C" MOUNTING			
Pilot Piloted			
Scheme			
Spool type		Covering	Transient position
01		+	
02		-	
03		-	
04*		-	
06		+	

PRESSURE DROPS



The diagram at the side shows the pressure drop curves for spools during normal usage. The used fluid is a mineral oil with a viscosity of 46 mm²/s at 40°C; the tests have been carried out at a fluid temperature of 40°C. For flow rates higher than those in the diagram, the losses will be those expressed by the following formula:

$$\Delta p_1 = \Delta p \times (Q_1/Q)^2$$

where Δp will be the value for the losses for a specific flow rate Q which can be obtained from the diagram, Δp_1 will be the value of the losses for the flow rate Q1 that is used.

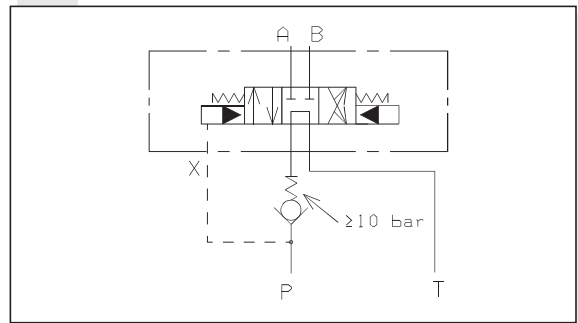
Spool type	Connections				
	P→A	P→B	A→T	B→T	P→T
01	4	4	7	7	
02	6	6	8	8	7
03	3	3	8	8	
04	4	4	2	2	3
06	4	4	7	8	
15	2	2	5	5	
16	1	1	2	2	
Curve No.					

1

PILOT SOLENOID CONTROL VALVE SPECIFICATIONS

Max. operating pressure: ports P/A/B	250 bar
Max. operating pressure: port T (dynamic)	70 bar
Max. piloting pressure	250 bar
Min. piloting pressure	10 bar
Max. flow	120 l/min
Switching times (*see note below)	Energizing: 20 ms De-energizing: 50 ms
Piloting oil volume for engagement	1 cm ³
Hydraulic fluid	mineral oil DIN 51524
Fluid viscosity	10 ÷ 500 mm ² /s
Fluid temperature	-20°C ÷ 75°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Mounting	plate
Weight ADPH5 without pilot valve	3,4 Kg
Weight ADPH5 with pilot valve with one solenoid	4,3 Kg
Weight ADPH5 with pilot valve with two solenoids	4,5 Kg

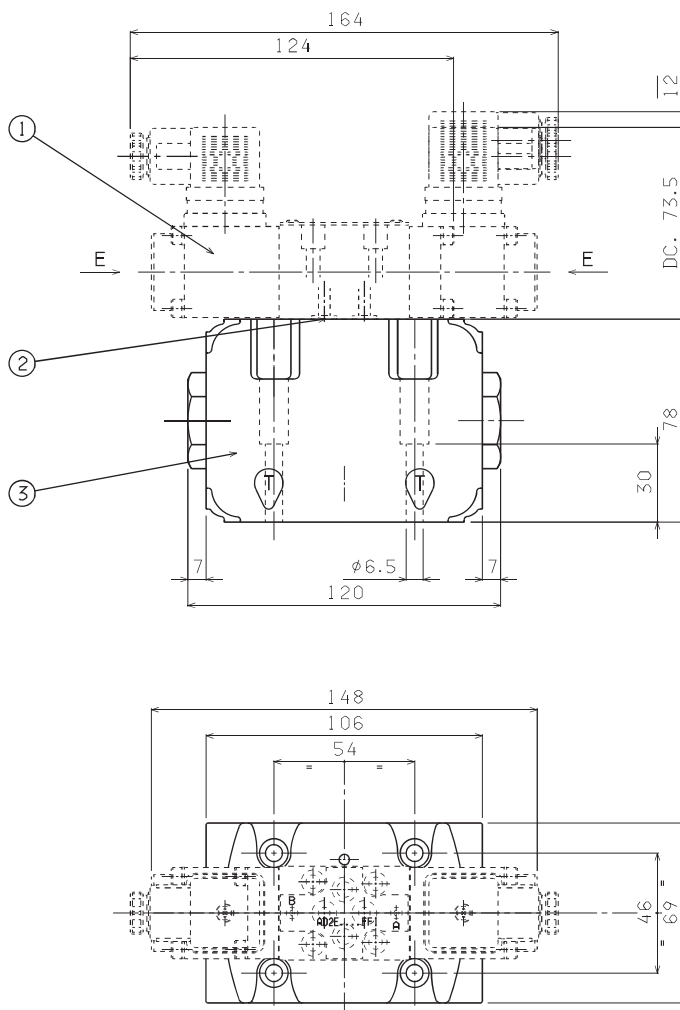
EXTERNAL BACK PRESSURE ON LINE P (FOR SPOOL IN THE CENTRE POSITION)



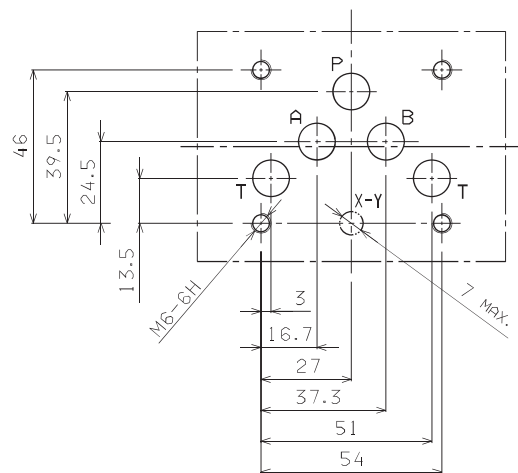
When the main spool connect P to T in the centre position, the minimum pressure of 10 bar is needed to move the main spool (see the "Specifications"); for this reason a check valve on the P line (see the drawing above) is necessary.

(*) All the tests have been carried out with AD.2.E pilot valve with variant FF, mounting type C, spool 03, flow 100 l/min, pressure 160 bar, back pressure on the T line of 2 bar and oil temperature 40°C.

OVERALL DIMENSIONS AND MOUNTING SURFACE



Mounting surface



- 1 Pilot solenoid valve
Cetop 2/NG4 type AD.2.E...FF variant
- 2 Calibrated springs
- 3 Piloted valve ADPH.5

Fixing screws UNI 5931 M6x40
with material specifications 12.9
Tightening torque 8 ÷ 10 N / 0,8 ÷ 1 Kgm