

**ADPH.5...**

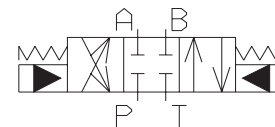
STANDARD SPOOLS FOR ADPH.5	CH. I PAGE 51
TECH. SPECIFICATIONS ADPH5	CH. I PAGE 52
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ADPH5... PILOTED VALVES CETOP 5/NG10 WITH CETOP 2/NG4 PILOT VALVE



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 .

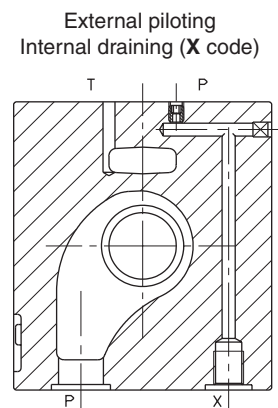
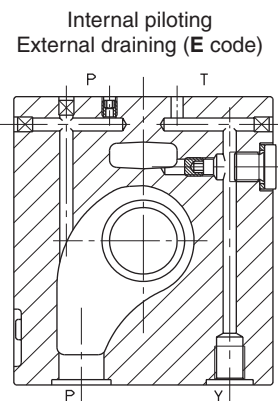
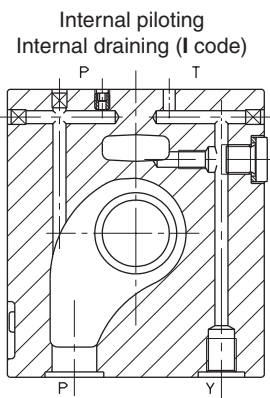
When a short response time is requested, a special version of solenoids with high dynamics is available with the code AD.2.E.**.*FF.2 (Please, contact our Technical Aron Service).

HYDRAULIC SYMBOL**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.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

TAB.2 - PLUGS DISPOSAL

HYDRAULIC SYMBOLS, SPOOLS AND MOUNTING

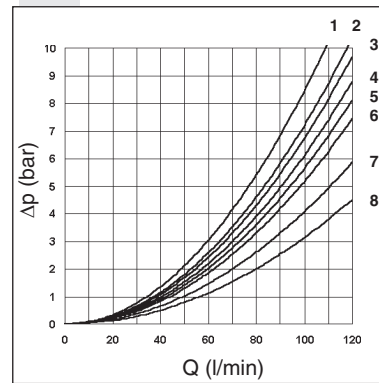
(* Spools with price increasing)

"A" MOUNTING			
Pilot Piloted	AD2E03E... ADPH5**A...		
Scheme			
Spool type		Covering	Transient position
01		+	
02		-	
03		-	
04*		-	
06		+	
15		-	
16		+	

"B" MOUNTING			
Pilot Piloted	AD2E03F... ADPH5**B...		
Scheme			
Spool type		Covering	Transient position
01		+	
02		-	
03		-	
04*		-	
06		+	
15		-	
16		+	

"C" MOUNTING			
Pilot Piloted	AD2E03C... ADPH5**C...		
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.

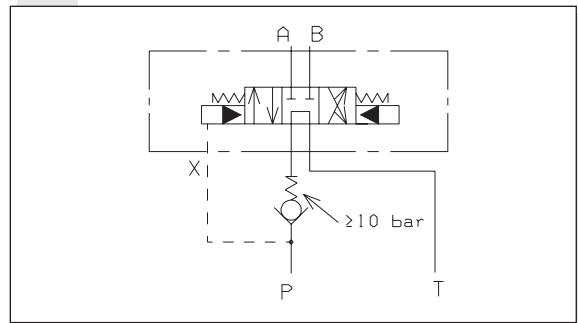
Spool type	Connections				
	P→A	P→B	A→T	B→T	P→T
01	4	4	7	7	
02	6	6	8	8	7
03	3	3	8	8	
04	4	4	2	2	3
06	4	4	7	8	
15	2	2	5	5	
16	1	1	2	2	
Curve No.					

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

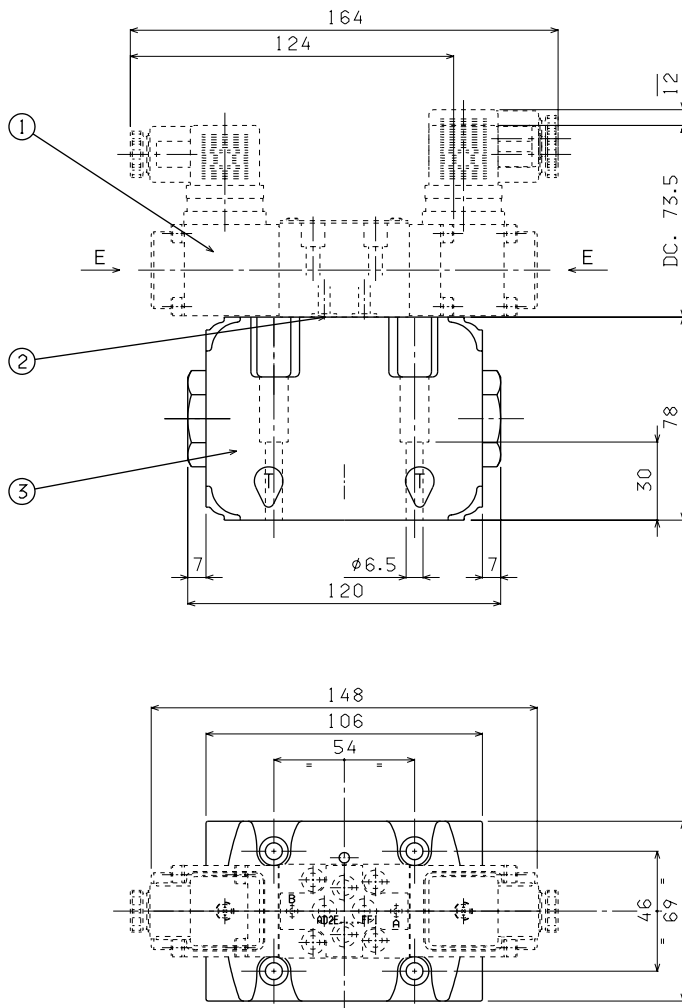
**EXTERNAL BACK PRESSURE ON LINE P
(FOR SPOOL IN THE CENTRE POSITION)**



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



- 1 Pilot solenoid valve
Cetop 2/NG4 type AD2E...FF variant
- 2 Calibrated springs
- 3 Piloted valve ADPH5

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