

ORDERING CODE

<b>AD</b>	Directional valve
<b>3</b>	CETOP 3/NG6
<b>E</b>	Type of operator For other operator see next pages
<b>**</b>	Spool see page I•10
<b>*</b>	Mounting type (table 1)
<b>*</b>	Voltage (table 2)
<b>**</b>	Variants (table 3)
<b>*</b>	Serial No.

**3** = DC voltage ("D15" coil)  
**3** = AC voltage ("B14" solenoid)

TAB.2 - VOLTAGE

AC SOLENOID B14	
<b>A</b>	24V/50-60 Hz
<b>B</b>	48V/50-60 Hz
<b>J</b>	115V/50Hz - 120V/60Hz
<b>Y</b>	230V/50Hz - 240V/60Hz
<b>K</b>	AC without coils
Other voltages available on request.	
DC COIL D15 (30W)	
<b>L</b>	12V
<b>M</b>	24V
<b>V</b>	28V*
<b>N</b>	48V*
<b>Z</b>	102V*
<b>P</b>	110V*
<b>X</b>	205V*
<b>W</b>	DC without coils

115Vac/50Hz  
120Vac/60Hz  
with rectifier

230Vac/50Hz  
240Vac/60Hz  
with rectifier

Voltage codes are not stamped on the plate, their are readable on the coils.  
 (\*) Special voltage

TAB.1- MOUNTING

STANDARD	
<b>C</b>	
<b>D</b>	
<b>E</b>	
<b>F</b>	
SPECIALS (WITH PRICE INCREASING)	
<b>G</b>	
<b>H</b>	
<b>I</b>	
<b>L</b>	
<b>M</b>	

- **Mounting type D** is only for valves with detent
- In case of **mounting D** with detent a maximum supply time of 2 sec is needed (only for AC coils).

TAB.3 - VARIANTS (\*)

VARIANT	CODE	◆	PAGE
No variant (without connectors)	S1		
Viton	SV		
Emergency control lever for directional control valves type ADC3 and AD3E	LF		I•20
Emergency button	ES		I•18
Rotary emergency button	P2		I•18
Rotary emergency button (180°)	R5		I•18
Preset for microswitch (E/F/G/H mounting only) (see below note ◊)	MS	◆	I•11- I•14
Cable gland "PG 11"	C1		I•19
Emergency button+ Viton	VU		
5 micron clearance	SQ	◆	
Spool movement speed control (only VDC) with ø 0.3 mm orifice	3S	◆	I•12
Spool movement speed control (only VDC) with ø 0.4 mm orifice	JS	◆	I•12
Spool movement speed control (only VDC) with ø 0.5 mm orifice	5S	◆	I•12
Spool movement speed control (only VDC) with ø 0.6 mm orifice	6S	◆	I•12
AMP Junior coil - for12V or 24V DC voltage only	AJ		I•18
AMP Junior coil and integrated diode - for12V or 24V DC voltage only	AD		I•18
Coil with flying leads (175 mm) - for12V or 24V DC voltage only	SL		I•18
D15 plastic type coil - for12V, 24V, 28V or 110V DC voltage only	RS		
Deutsch DT04-2P coil - for12V or 24V DC voltage only	CZ		I•18

Other variants relate to a special design

◊ = Maximum counter-pressure on T port: 8 bar  
 ◆ = Variant codes stamped on the plate

(\*) All variants are considered without connectors. The connectors must be order separately. See Ch. I Page 19

**TWO SOLENOIDS, SPRING CENTRED “C” MOUNTING**

Spool type		Covering	Transient position
01		+	
02		-	
03		+	
04*		-	
44*		-	
05		+	
66		+	
06		+	
07*		+	
08*		+	
09*		+	
10*		+	
22*		+	
11*		+	
12*		+	
13*		+	
14*		-	
28*		-	

**ONE SOLENOID, SIDE A “E” MOUNTING**

Spool type		Covering	Transient position
01		+	
02		-	
03		+	
04*		-	
44*		-	
05		+	
66		+	
06		+	
08*		+	
10*		+	
12*		+	
15		-	
16		+	
17		+	
14*		-	
28*		-	

**DIRECTIONAL CONTROL VALVES  
STANDARD SPOOLS CETOP 3/NG6**



**NOTE**

(\*) Spool with price increasing

• With spools 15 / 16 / 17 only mounting E / F are possible

• 16 / 19 / 20 / 21 spool not planned for AD.3.E...J\*

• For lever operated the spools used are different.

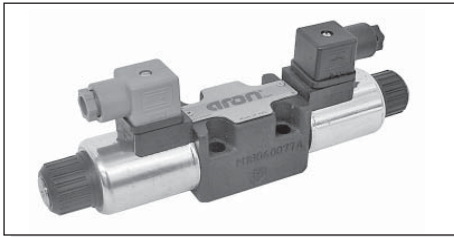
Available spools for this kind of valve are: 01 / 02 / 03 / 04 / 05 / 06 / 66 / 07 / 22 / 13 / 15 / 16 / 17

**ONE SOLENOID, SIDE B “F” MOUNTING**

Spool type		Covering	Transient position
01		+	
02		-	
03		+	
04*		-	
44*		-	
05		+	
66		+	
06		+	
08*		+	
09*		+	
10*		+	
22*		+	
12*		+	
13*		+	
07*		+	
15		-	
16		+	
17		+	
14*		-	
28*		-	

**TWO SOLENOIDS “D” MOUNTING**

Spool type		Covering	Transient position
19*		-	
20*		+	
21*		+	



A max. counter-pressure of 8 bar at T is permitted for the variant with a microswitch (MS).

(\*) DC: Dynamic pressure allowed for 2 millions of cycles.

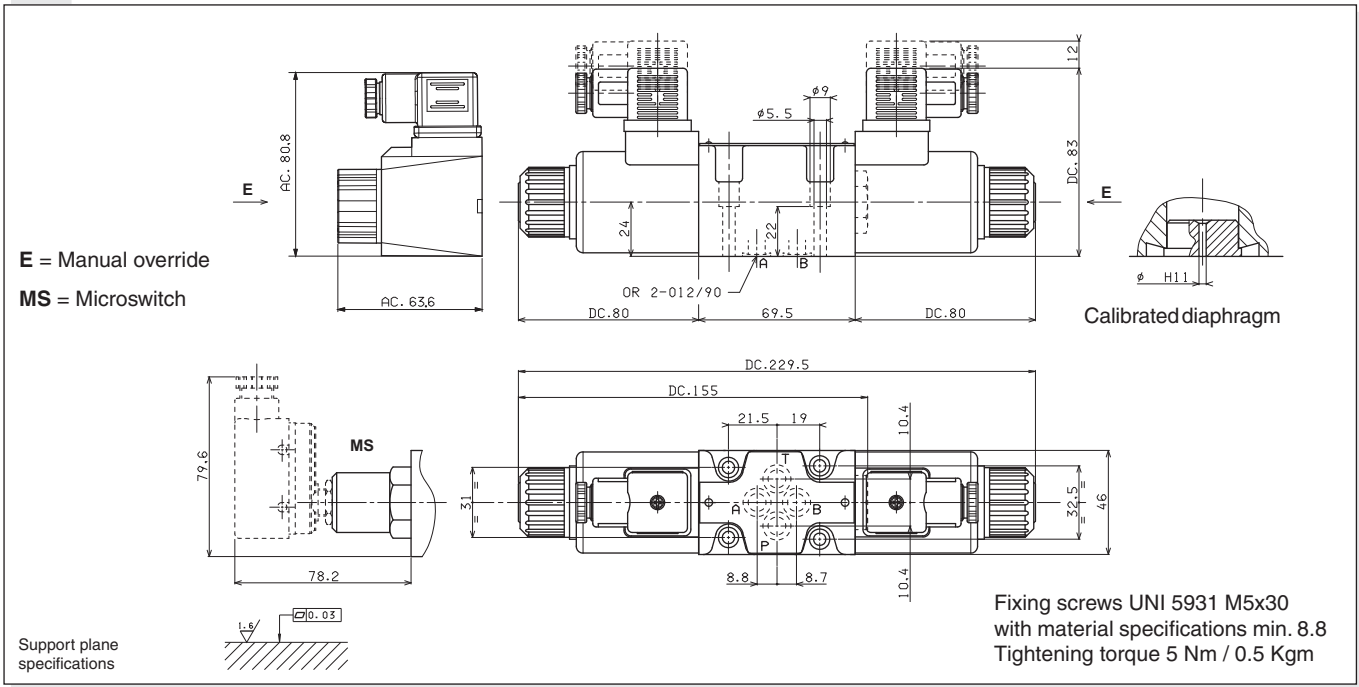
AC: Dynamic pressure allowed for 350.000 of cycles. For dynamic pressure of 100 bar are allowed 1 million cycles.

Max. pressure port P/A/B	350 bar
Max. pressure port T (for DC) see note (*)	250 bar
Max. pressure port T (for AC) see note (*)	160 bar
Max. flow	60 l/min
Max. excitation frequency	3 Hz
Duty cycle	100% ED
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter β <sub>25</sub> ≥75
Weight with one DC solenoid	1,65 Kg
Weight with two DC solenoids	2 Kg
Weight with one AC solenoid	1,31 Kg
Weight with two AC solenoids	1,72 Kg

CALIBRATED DIAPHRAGMS (**)	
ø (mm)	Code
blind	M52.05.0023/4
0.5	M52.05.0023/1
0.6	M52.05.0023/6
0.7	M52.05.0023/8
0.8	M52.05.0023
1.0	M52.05.0023/2
1.2	M52.05.0023/3
1.5	M52.05.0023/7
2.0	M52.05.0023/10
2.2	M52.05.0023/9
2.5	M52.05.0023/5

(\*\*) For high differential pressure please contact our technical department.

OVERALL DIMENSIONS

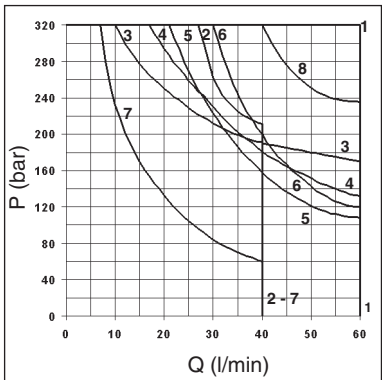


LIMITS OF USE (MOUNTING C-E-F)

The tests have been carried out with solenoids at operating temperature and a voltage 10% less than rated voltage with a fluid temperature of 40°C. The fluid used was a mineral oil with a viscosity of 46 mm<sup>2</sup>/s at 40°C. The values in the diagram refers to tests carried out with the oil flow in two directions simultaneously T = 2 bar (e.g.. from P to A and the same time B to T). In the case where valves 4/2 and 4/3 were used with the flow in one direction only, the limits of use could have variations which may even be negative. Rest times: the values are indicative and depend on following parameters: hydraulic circuit, fluid used and variations in hydraulic scales (pressure P, flow Q, temperature T). The limit of use for AC solenoids were detected with 50 Hz power.

Direct current:	Energizing	30 ÷ 50 ms.	Alternating current:	Energizing	8 ÷ 30 ms.
	De-energizing	10 ÷ 30 ms.		De-energizing	15 ÷ 55 ms.

DIRECT CURRENT SOLENOIDS (DC)



Spool type	Solenoids	
	DC	AC
01	1	9
02	1	9
03	8	10
04	6	15
44	1	9
05	3	16
06 - 66	5	13
11 - 22	4	17
14 - 28	2	12
15	7	14
16	1	11
	Curves	

ALTERNATING CURRENT SOLENOIDS (AC)

