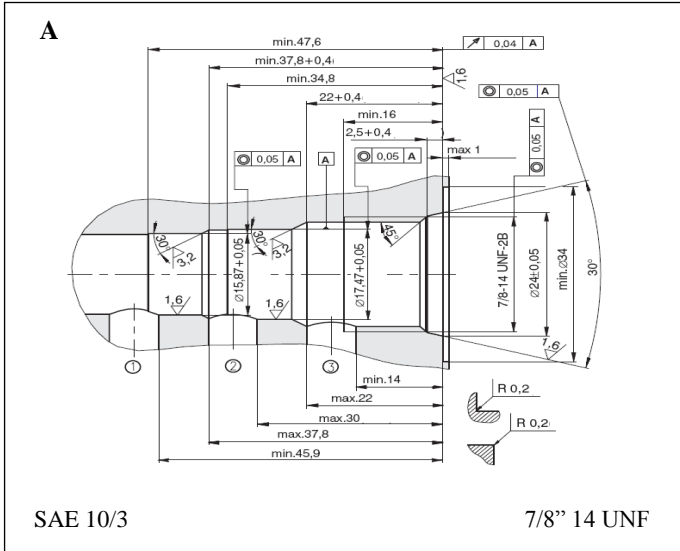


# Screw in, 3-way solenoid operated directional valve cavity 7/8" 14 UNF – SAE 10/3 - spool type EV3\*.78.\*



**2 FUNCTIONAL SYMBOL**  
For 2 positions valves

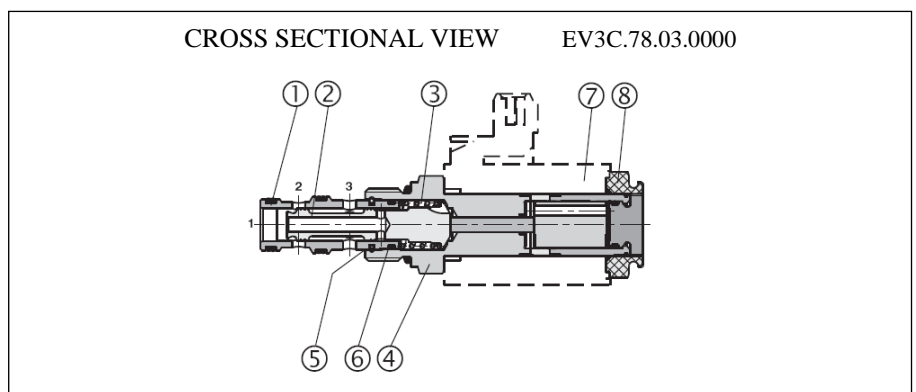
**C**

**O**

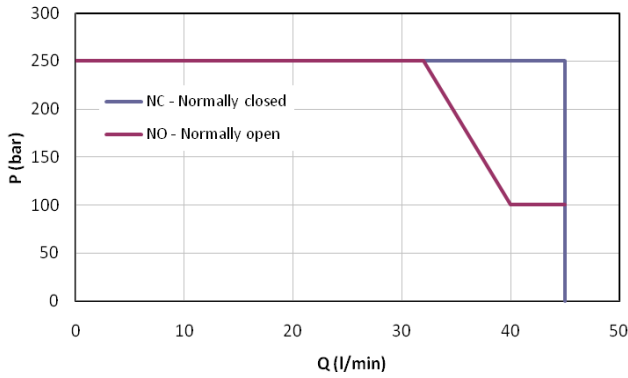
Recommended use of ports  
3=P; 1=T; 2=user

**3 DESCRIPTION**  
Screw-in 3/2 solenoid valves type EV3\*.78 are composed by a valve sleeve ①, a control spool ②, a return spring ③, and an actuating assembly ④ that comprises the magnetic parts and the screwing section. An energizing electric solenoid coil ⑦ is fastened to the assembly by means of a retaining nut ⑧. When solenoid coils ⑦ is energized, a magnetic mobile armature shifts and by means of a rod installed inside assembly ④, moves the control spool which makes hydraulic connections between 1,2,3 ports.

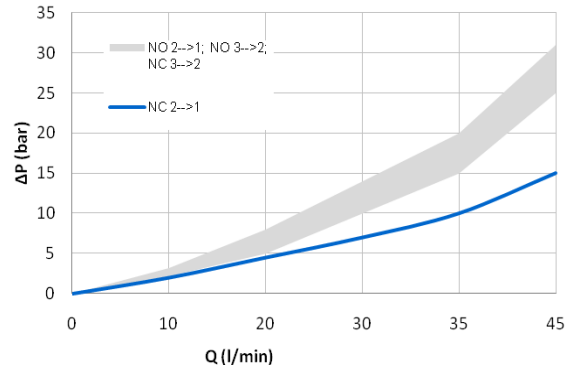
- 1 HOW TO READ THE MODEL CODE FOR VALVES EV3(C).78.(04).(012C).\*/\*\***
- EV3 (C) . 78 . 04 . (012C) . \* / \*\***  
 ① ② ③ ④ ⑤ ⑥ ⑦
- ① EV3 : 3-way solenoid operated spool type
  - ② (C) : spool type (see 2)  
C: normally closed  
O: normally open
  - ③ 78 : cavity 7/8" 14 UNF – see A
  - ④ (04) : valves variants (see 9)  
03: without manual override  
04: manual override push type (standard)  
05: manual override screw type
  - ⑤ (012C) : electric voltage and solenoid coils (see 6)  
0000 : no coil(s)  
012C : coil(s) for V12DC  
024C : coil(s) for V24DC  
115A : coil(s) for V110/50 – V 115/60 AC  
230A : coil(s) for V220/50 – V 230/60 AC
  - ⑥ \* : options for coil connection  
- : standard connection ISO4400/DIN43650/A  
/ : /D:Deutsch; /A: AMP Junior Timer; /AMPX
  - ⑦ \*\* : design number (progressive) of the valves



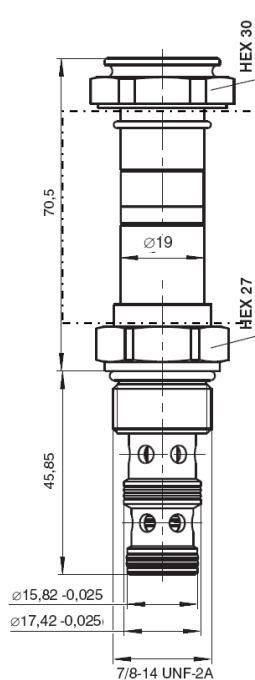
Hydraulic limits of use



Typical diagram



**5 INSTALLATION DIMENSIONS**



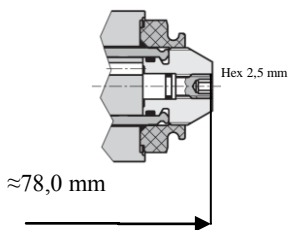
**Seals:**

- Body  
 Dualseal –PU:  
 1pcs- 13,87x15,87x3,1  
 1pcs- 17,47x15,07x3,1  
 O-ring – NBR  
 1 pcs- 19,4x2,1
- Solenoid and retaining nut  
 O-ring- NBR  
 1-pcs- 18,0x1,5

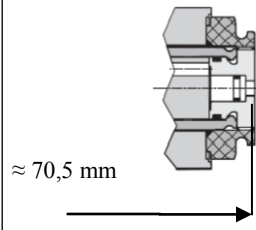
All dimensions are mm

**9 VARIANTS OF MANUAL OVERRIDE**

05: manual override screw type



04: manual override push type (standard)



**4 TECHNICAL DATA**

- Nominal flow rate 32 l/min  
 Maximum rec.flow rate 40 l/min  
 Max pressure 25 MPa (250 bar)  
 Dimensions see 5  
 Installation see 8  
 Electric features see 6  
 Duty cycle ED 100%

Mass (without coil) 0,24 kg.

**6 ELECTRIC FEATURES**

Those solenoid operated valves are normally equipped by coils type B02, which are energized:

- directly from a D.C. voltage supply  
 V 12 DC = 012C  
 V 24 DC = 024C
- by the use of coils that incorporate a full wave bridge rectifier, from A.C. voltage supply :  
 V 110/50 - V 115/60 = 115A  
 V 220/50 - V 230/60 = 230A

**7 CONNECTORS**

All connectors must conform to ISO 4400 (DIN 43650) and electric circuitry must be able to carry the following rated current values :

- V 12 DC = 2,4 A V 115/50 = 0,26 A  
 V 24 DC = 1,2 A V 230/50 = 0,14 A

Coils with 2 electric pins, conforming with AMP connectors, are only available for DC supply (example of code : B02-012C AMP).

**8 INSTALLATION**

EV3\*.78 valves are to be installed in cavity 7/8" 14 UNF (see A).

Check the appropriate state and position of the seals, screw the valve in the cavity and lock it with a torque of about 40 Nm applied on the 27 mm hexagon.

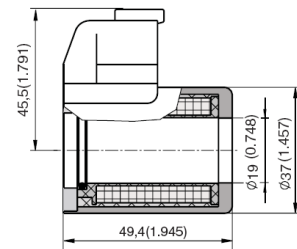
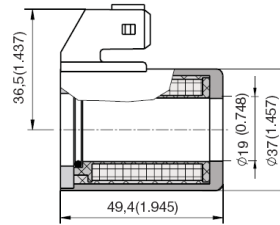
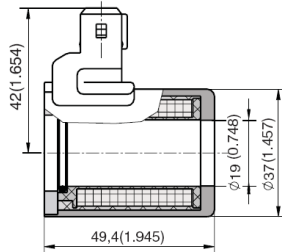
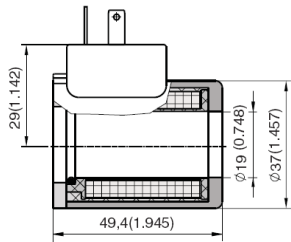
**⑩ COILS TYPE B02 (Ø 19 mm)**

**DIN 4365/A-ISO 4400**

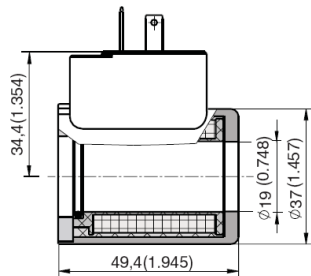
**AMP (Amp Junior Timer)**

**AMPX (Amp Junior Axial)**

**Deutsch**



**DIN 4365/A-ISO 4400  
With Built-in rectifier**



LINE ASSEMBLY BODY	Ports	Material	Mass
<b>LAB-78-3/38</b>	3/8" BSP	Aluminium Alloy	0,60 Kg