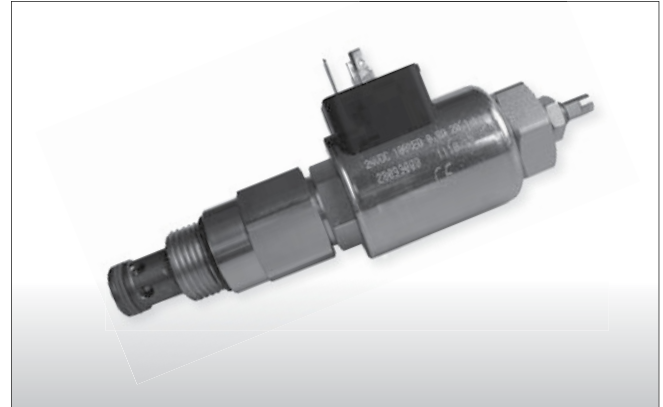
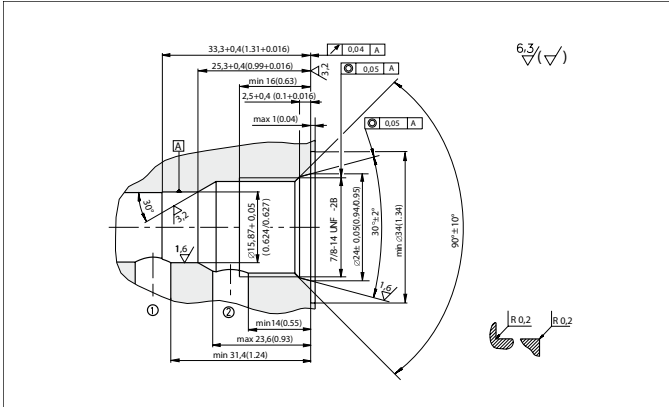


**PROPORTIONAL PILOT OPERATED  
PRESSURE RELIEF VALVE  
TYPE PMO-78.\***



60 l/min - 350 bar

**2 FUNCTIONAL SYMBOL**

**1 HOW TO READ THE MODEL CODE FOR PMO-78.\***

**PMO (\*) . 78 / (\*) . (024C) (-)**

①      ②      ③   ④      ⑤      ⑥

① **PMO** : Proportional pressure relief valve

② **(\*)** : function  
          - : Standard (relief 0 bar with 0 current)  
          P : Positive (relief 180 bar with 0 current)

③ **78** : cavity SAE10 (7/8" 14 UNF)

④ **(\*)** : Pressure range  
          12 : up to 120 bar (1740 PSI)  
          21 : up to 210 bar (3046 PSI)  
          35 : up to 350 bar (5076 PSI)

⑤ **(024C)** : Electric voltage and solenoid coils  
          012C : coil(s) for V12DC with quenching diode  
          024C : coil(s) for V24DC with quenching diode

⑥ **-** : Coil connection  
          - : DIN 43650-A ISO 4400  
          AMP : Amp Junior Timer  
          D : Deutsch DT04-2P

**3 DESCRIPTION**

The valve is designed for continuous regulation of pressure in the circuit. It is pilot operated from a pilot stage. The increase/decrease of the pressure P in the system is proportional to the energizing current at solenoid.

For a self bleeding of the valve it is recommended to install the valve in vertical position with coil on the bottom. If it is not possible, it is necessary to act on the bleeding screw in order to assure a proper function of the valve.

Example PMO.78

**4 TYPICAL DIAGRAMS**

Typical P-Q curves for valves PMO\*.78 in standard configuration, with mineral oil at  $v=32 \text{ mm}^2/\text{s}$  and at  $T=40^\circ\text{C}$ .

**p-I Chart** Measured at  $v = 32 \text{ mm}^2/\text{s}$  (156 SUS)  
 $p = f(I), Q = 5 \text{ L/min}$  (1.321 GPM)

Attention :  
 The proportional pressure relief valve is not mechanically protected and it does not perform the relief valve function.

3	Pressure range 35
2	Pressure range 21
1	Pressure range 12

**p-Q Chart** Measured at  $v = 32 \text{ mm}^2/\text{s}$  (156 SUS)

4	Pressure range 35
3	Pressure range 21
2	Pressure range 12
1	Min. pressure (range 35)

**p-Q Characteristics** PMOP.78 pressure setting  
 Valve performance  
 flow 5 dm<sup>3</sup>/min, direction P-T

**5 TECHNICAL DATA**

Nominal flow 50 l/min  
 Maximum rec. flow rate 60 l/min

Maximum nominal pressure 35 MPa (350 bar)

Performances see 4  
 Electric characteristics see 6  
 Optimal dither control 250 Hz  
 Valve Hysteresis <5 %

Protection IP 67  
 Duty cycle 100%  
 Dimensions see 7  
 Installation see 7  
 Valve Body Steel  
 Mass 0,58 kg

Note: pressure in T line influences valve performances

**6 ELECTRIC CHARACTERISTICS**

Valve type PMO\*.78 are operated by solenoid that are energized from a D.C. voltage supply  
 V 12 DC = 012C  
 V 24 DC = 024C  
 with an appropriate electrical driver in order to control the input current at the valve

Coils have an integrated quenching diode and their characteristics are:  
 V 12 DC - limit current 1,0 A - 6,5 Ohm  
 V 24 DC - limit current 0,6 A - 20,8 Ohm

**7 INSTALLATION DIMENSIONS PMO.78**  
 (dimensions are mm)

**8 HYDRAULIC FLUID**

Seals and materials used on standard valves PMO\*.78 are fully compatible with hydraulics fluids of mineral base, upgraded with anti-foaming and anti oxidizing agents.  
 The hydraulic fluid must be kept clean and filtered to ISO 4406 class 19/17/14, or better, and used in a recommended viscosity range from 10 cSt to 60 cSt.