

# XQP.3... OPEN LOOP 2/3 WAY PROPORTIONAL COMPENSATED FLOW REGULATORS

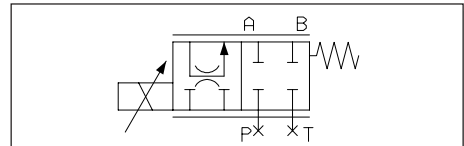


The open loop proportional flow regulator is 2 and 3 way compensated with priority function. It is designed to regulate flow in proportion to an applied electrical current (REM or SE3AN power amplifier). Flow regulation is load independent - B port. Load compensation is achieved by a spool compensator which holds the pressure drop constant across the proportional spool.

Valves are available in the following versions (see hydraulic symbol):

- 2 way pressure compensated - 3 way pressure compensated with priority function.
- 3 way pressure compensated with priority and venting function.

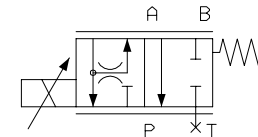
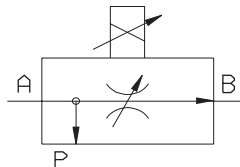
<b>XQP.3...</b>	
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• In order to obtain the 2 way pressure compensated version the cavities P and T have be closed on the subplate.

## HYDRAULIC SYMBOLS

### SIMPLIFIED TYPE



• In order to obtain the 3 way pressure compensated version the cavity T have be closed on the subplate.

## ORDERING CODE

**XQP**

Open loop 2/3 way proportional compensated flow regulator

**3**

CETOP 3/NG6

**C**

2/3 way compensation with priority function

**3**

3 way version (standard)  
For to obtain 2-way version the P line must be closed on the subplate

**\***

Nominal flow rates

- F = 6 l/min
- G = 12 l/min
- H = 22 l/min
- I = 32 l/min
- L = 40 l/min

**\***

S = without decompression  
D = with decompression

**\***

Max. current to solenoid

- E = 2.35 A
- F = 1.76 A
- G = 0.88 A

**\*\***

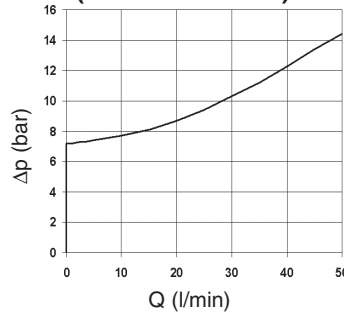
00 = No variant  
P1 = Rotary emergency  
P5 = Rotary emergency 180°  
V1 = Viton

**2**

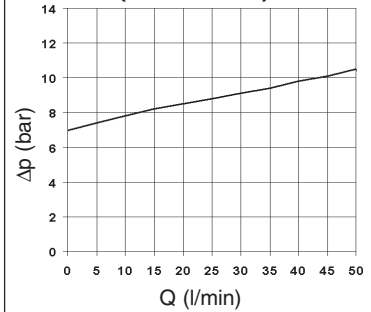
Serial No.

## DIAGRAMS

**ΔP - FLOW RATE A → B (WITH 5 l/min TO P)**

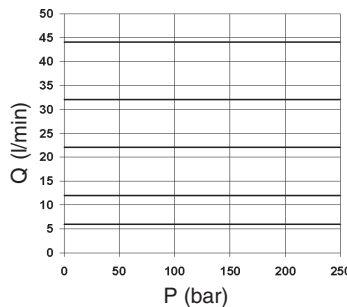


**ΔP - SECONDARY LINE FLOW (A → P FREE)**



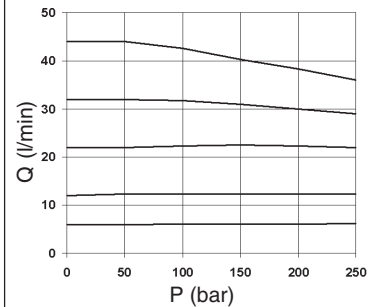
### FLOW RATE

**BACK PRESSURE ON PRIORITY LINE**

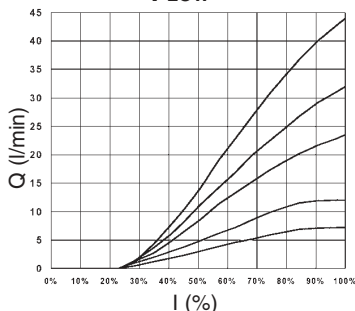


### FLOW RATE

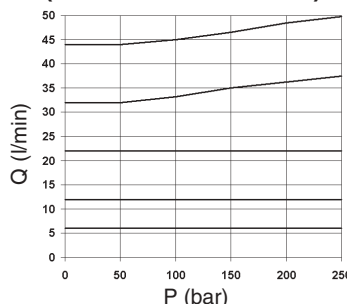
**BACK PRESSURE ON SECONDARY LINE**



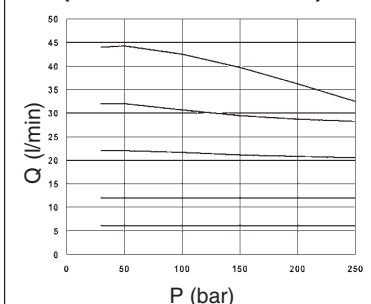
**INPUT SIGNAL FLOW**



**2 WAY COMPENSATION (A 270 bar - B VARIABLE)**



**2 WAY COMPENSATION (A VARIABLE - B 30 bar)**



The fluid used is a mineral based oil with a viscosity of 46 mm<sup>2</sup>/s at 40°C. The tests have been carried out at with a fluid of a 40°C.

# XQP.3... OPEN LOOP 2/3 WAY PROPORTIONAL PRESSURE COMPENSATED FLOW REGULATORS

## OPERATING SPECIFICATIONS

Max. operat. pressure ports A/B /P see note (*) With T port blocked on subplate	250 bar		
Regulated flow rate	6 / 12 / 22 / 32 / 40 l/min		
Decompression drain flow	max 0,7 l/min		
Relative duty cycle	Continuous 100% ED		
Type of protection (in relation to the connector used)	IP 65		
Flow rate gain	See diagram "Input signal flow"		
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s		
Fluid temperature	-20°C ÷ 75°C		
Ambient temperature	-20°C ÷ 70°C		
Max. contamination level	from class 7 to 9 in accordance with NAS 1638 with filter $\beta_{10} \geq 75$		
Weight	1,7 Kg		

	2.33A	1.76 A	0.88 A
Max. current	2.33A	1.76 A	0.88 A
Solenoid coil resistance at 25°C (77°F)	2.25 Ohm	4.0 Ohm	16.0 Ohm
Hysteresis with $\Delta p$ 7 bar	≤5%	<5%	<8%
Response to step $\Delta p = 7$ bar			
0 ÷ 100%	32 ms	40 ms	85 ms
100% ÷ 0	33 ms	33 ms	33 ms
Frequency response -3db (Input signal 50% ± 25% Vmax.)			
	22Hz	22Hz	12Hz

(\*) Pressure dynamic allowed for 2 millions of cycles

**Operating specifications are valid for fluids with 46 mm<sup>2</sup>/s viscosity at 40°C, using specified ARON electronic control units.**

**Performance data are carried out using the specified Aron power amplifier SE.3.AN...**

## AMPLIFIER UNIT AND CONTROL

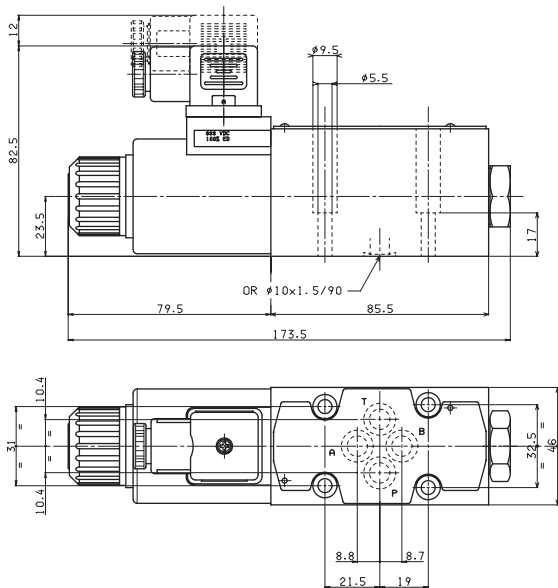
### REM.S.RA.\*.\*...

Electronic card for control single proportional solenoid valve

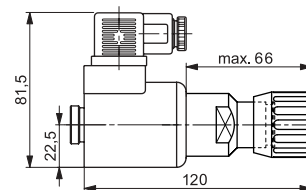
### SE.3.AN.21.00...

Electronic card format EUROCARD for control single proportional solenoid valve

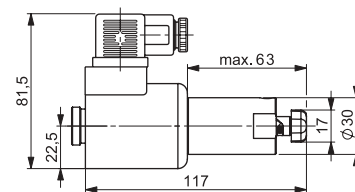
## OVERALL DIMENSIONS



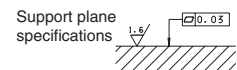
Fixing screws UNI 5931 M5x25  
(min. 8.8 material screws are recommended)  
Tightening torque 4 ÷ 5 Nm / 0.4 ÷ 0.5 Kgm



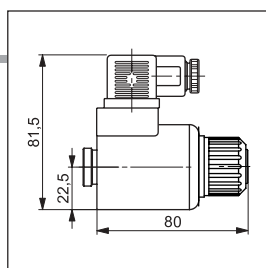
P1 Rotary emergency



P5 Rotary emergency 180°



8



## "D15P" PROPORTIONAL SOLENOIDS



Type of protection (in relation to connector used)	IP 66
Duty cycle	100% ED
Insulation class	H
Weight (coil)	0,354 Kg
Weight (solenoid)	0,608 Kg

ETD15P - 01/2002/e