

XQP.3... OPEN LOOP 2/3 WAY PROPORTIONAL PRESSURE 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.

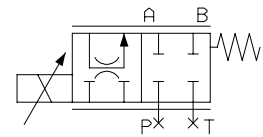
Valves are available in the following versions (see hydraulic symbol):

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

XQP.3...	
STANDARD CONNECTORS	CH. I PAGE 19
"D15P" PROPORT. SOLENOIDS	CH. VIII PAGE 23
REM.S.RA...	CH. IX PAGE 4
SE.3.AN.21.00...	CH. IX PAGE 11
BC.06.XQP3...	CH. VII PAGE 13

ORDERING CODE

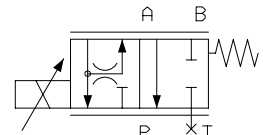
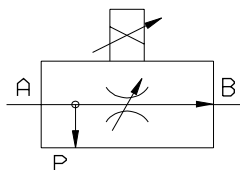
XQP	Open loop 2/3 way proportional compensated flow regulator
3	CETOP 3/NG6
C	2/3 way compensation with priority function
3	3 way version (standard) For to obtain 2-way version the P line must be closed on the subplate
*	Nominal flow rates F = 6 l/min G = 12 l/min H = 22 l/min I = 32 l/min L = 40 l/min
*	S = without decompression D = with decompression
*	Max. current to solenoid E = 2.35 A F = 1.76 A G = 0.88 A
**	Variant (*): S1 = No variant P2 = Rotary emergency R5 = Rotary emergency 180° SV = Viton
2	Serial No.



• In order to obtain the 2 way pressure compensated version the cavities P and T have be closed on the subplate.

HYDRAULIC SYMBOLS

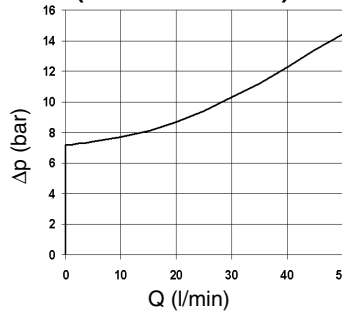
SIMPLIFIED TYPE



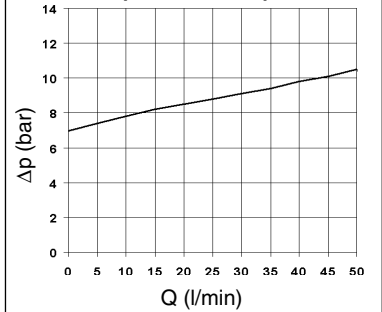
• In order to obtain the 3 way pressure compensated version the cavity T have be closed on the subplate.

DIAGRAMS

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

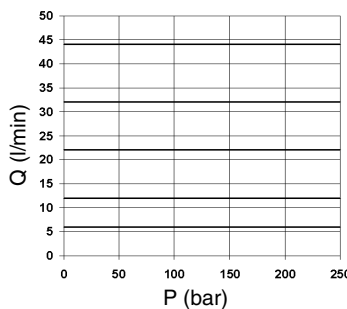


ΔP - SECONDARY LINE FLOW (A → P FREE)



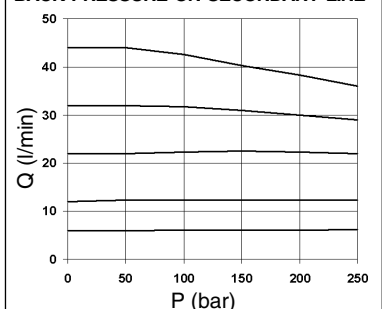
FLOW RATE

BACK PRESSURE ON PRIORITY LINE

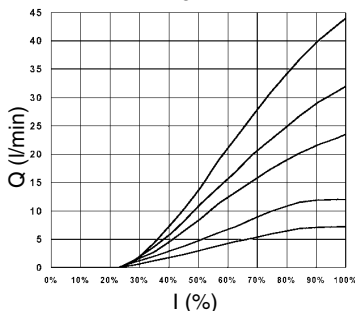


FLOW RATE

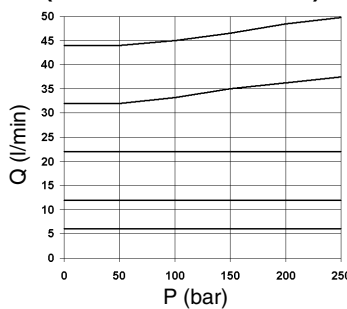
BACK PRESSURE ON SECONDARY LINE



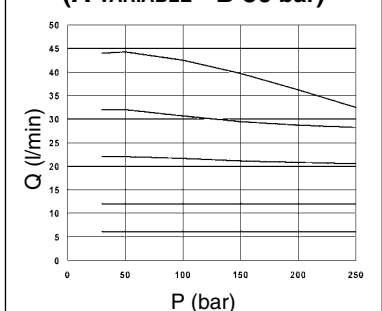
INPUT SIGNAL FLOW



2 WAY COMPENSATION (A 270 bar - B VARIABLE)



2 WAY COMPENSATION (A VARIABLE - B 30 bar)



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

The fluid used is a mineral based oil with a viscosity of 46 mm²/s at 40°C. The tests have been carried out at with a fluid of a 40°C.

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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 ² /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		

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 Δp 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 mm²/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... powered to 24V.

AMPLIFIER UNIT AND CONTROL

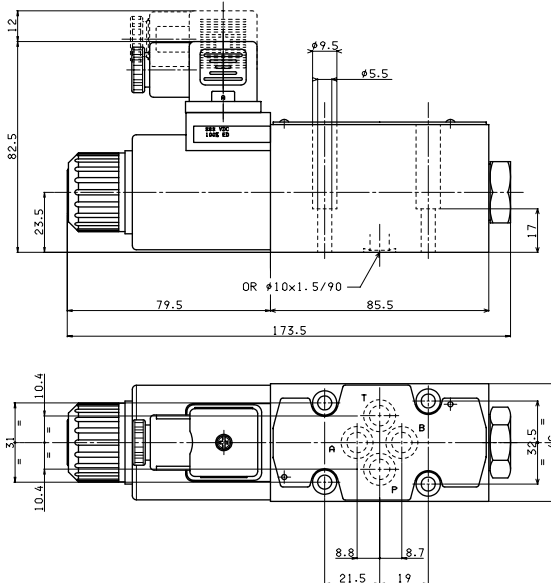
REM.S.RA.*.*...

Electronic card for control single proportional solenoid valve.
Recommended dither frequency 100 Hz.

SE.3.AN.21.00...

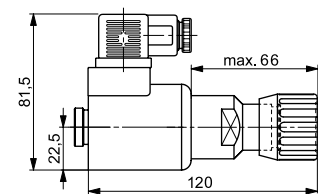
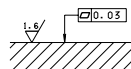
Electronic card format EUROCARD for control single proportional solenoid valve

OVERALL DIMENSIONS

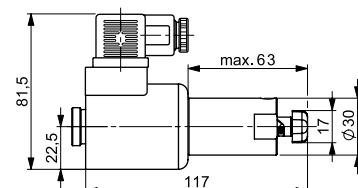


Fixing screws UNI 5931 M5x25
(min. 8.8 material screws are recommended)
Tightening torque 4 ÷ 5 Nm / 0.4 ÷ 0.5 Kgm

Support plane specifications



P2 Rotary emergency (1)

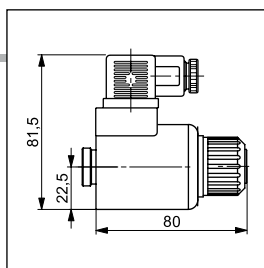


R5 Rotary emergency 180° (2)

(1) **P2** - Adjustable hand emergency.

(2) **R5** - Two positions hand emergency. The regulated flow with emergency actuated can be less than nominal value.

8



"D15P" PROPORTIONAL SOLENOIDS



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

ETD15P - 01/2002/e