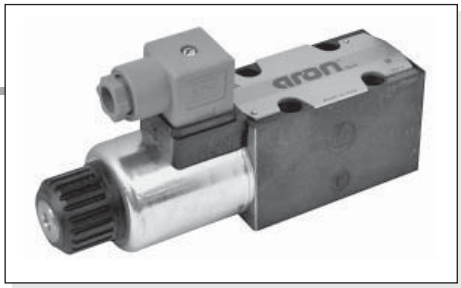


XQP.3... OPEN LOOP 2/3 WAY PROPORTIONAL PRESSURE COMPENSATED FLOW REGULATORS

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.

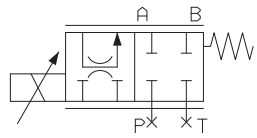
Valves are available in the following versions (see hydraulic symbol):
- 2 way pressure compensated - 3 way pressure compensated with priority function.
- 3 way pressure compensated with priority and venting function.

XQP.3...	
STANDARD CONNECTORS	CH. I PAGE 19
"D15P" PROPORT. SOLENOIDS	CH. VIII PAGE 21
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.

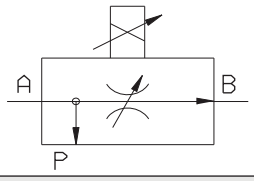
(*) All variants are considered without connectors. The connectors must be order separately.
See Ch. I Page 19

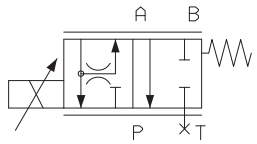


• In order to obtain the 2 way pressure compensated version the cavities P and T have be closed on the subplate.

HYDRAULIC SYMBOLS

SIMPLIFIED TYPE

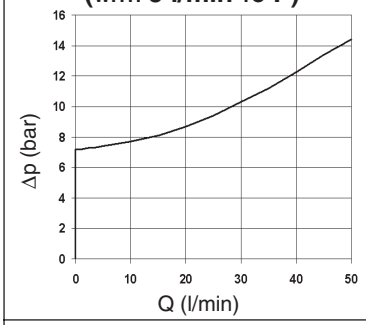




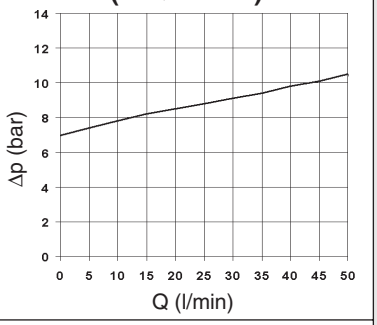
• In order to obtain the 3 way pressure compensated version the cavity T have be closed on the subplate.

DIAGRAMS

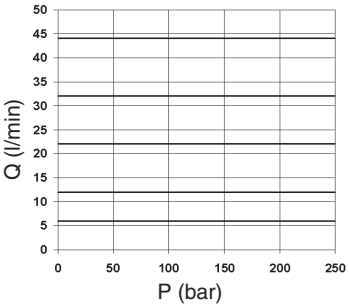
ΔP - FLOW RATE A → B (WITH 5 l/min TO P)



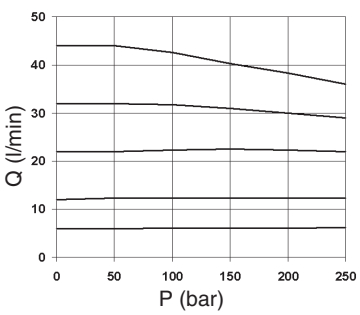
ΔP - SECONDARY LINE FLOW (A → P FREE)



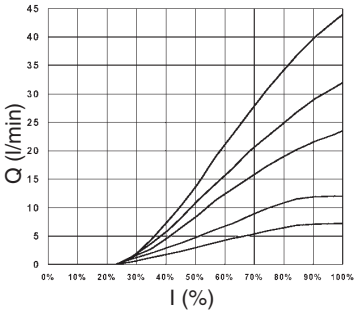
FLOW RATE
BACK PRESSURE ON PRIORITY LINE



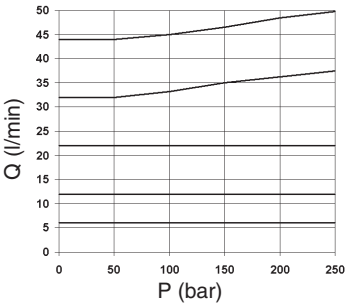
FLOW RATE
BACK PRESSURE ON SECONDARY LINE



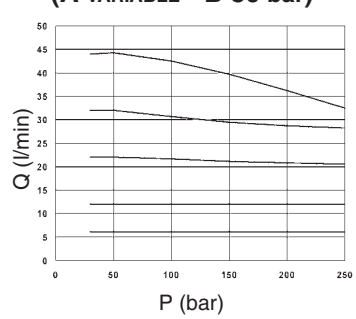
INPUT SIGNAL
FLOW



2 WAY COMPENSATION (A 270 bar - B VARIABLE)



2 WAY COMPENSATION (A VARIABLE - B 30 bar)



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.

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 mm²/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			
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 Δp = 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.

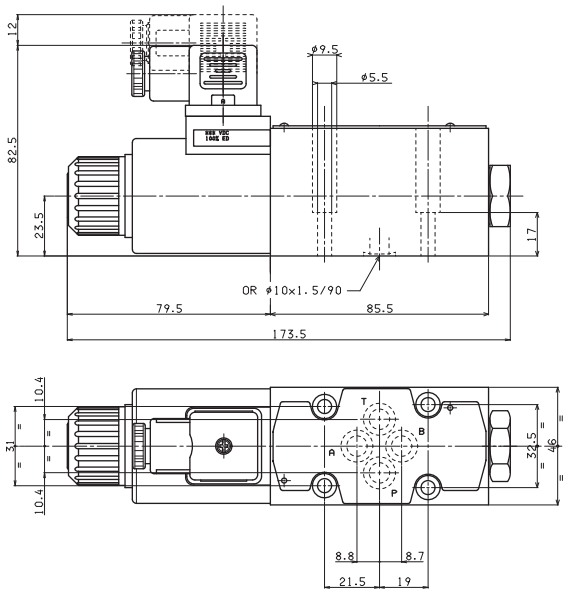
Performance data are carried out using the specified Aron power amplifier SE.3.AN... powered to 24V.

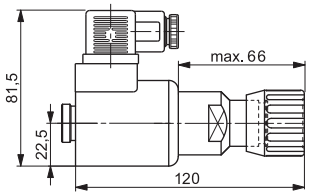
AMPLIFIER UNIT AND CONTROL

REM.S.RA.*.*...
Electronic card for control single proportional solenoid valve

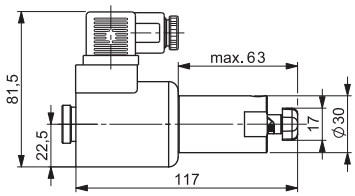
SE.3.AN.21.00...
Electronic card format EUROCARD for control single proportional solenoid valve

OVERALL DIMENSIONS





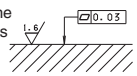
P2 Rotary emergency

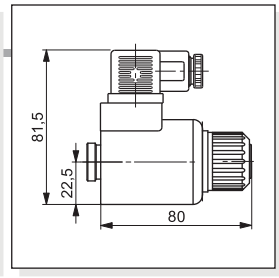


R5 Rotary emergency 180°

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





"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