XQ.3... Proportional flow control valves pressure compensated CETOP 3

This is a proportional valve where both the flow rate and pressure control flow functions have been integrated according to the 3 way regulation concept.

The interface UNI ISO 4401 - 03 - 02 - 0 - 94 standard (ex CETOP R 35 H 4.2-4-03) allows for direct mounting on modular block or multiple sub-bases, which makes possible many advantageous and extremely compact application solution as a consequence of their simplicity of installation.

The 3 way type pressure compensator, inserted into the valve, holds the pressure drop across the flow rate proportional regulator constant (approx. 8 bar) independently from the controlled load variations, whereby ensuring proportional between the set flow rate and the electrical command signal.

Additionally, the system maximum safety pressure can be regulated through a manual command. This valve, if mounted on the feed line to the manifold block, can be used to control several circuits which are not operating at the same time.

XQ.3...	
Standard connectors	Ch. I page 19
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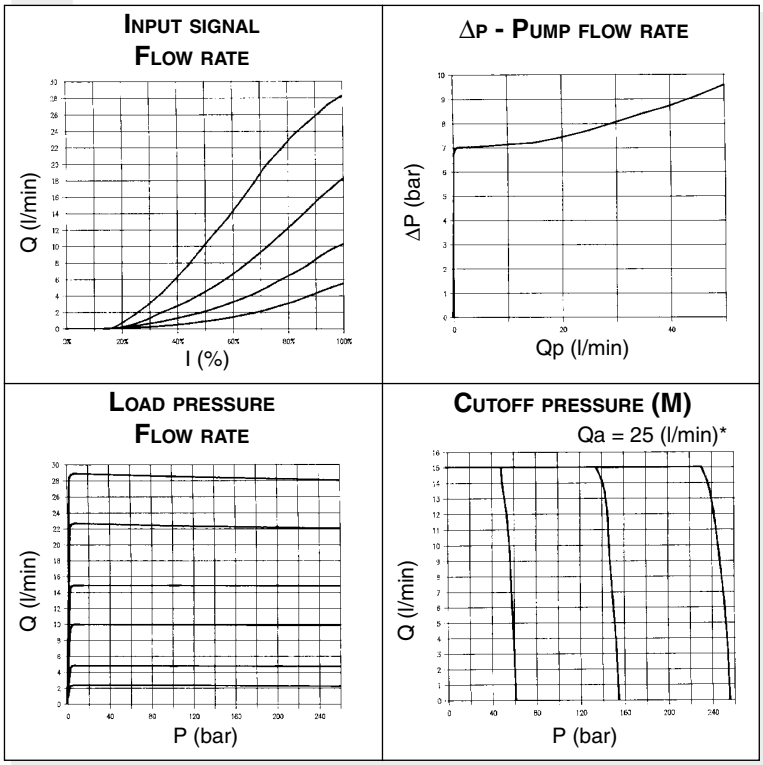
Ordering code

XQ	Proportional flow control valve
3	No. of way
C	Pressure compensation
3	CETOP 3/NG6
*	Flow rates **F** = 5 l/min **G** = 10 l/min **H** = 16 l/min **I** = 28 l/min
*	**M** = With manual pressure limiter **S** = Without manual pressure limiter
*	Setting ranges **1** = 8 ÷ 50 bar **2** = 25 ÷ 170 bar **3** = 50 ÷ 315 bar Omit for **XQ.3.C.*.S** version
*	**E** = With rotary emergency (type **P2**) **S** = Without rotary emergency
*	Voltage **E** = 9VDC (2,35 A) **F** = 12VDC (1.76 A) **G** = 24VDC (0.88 A)
**	Variant (*): **S1** = No variant (without connectors) **SV** = Viton **L5** = emergency lever **R5** = Rotary emergency180°
2	Serial No.

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

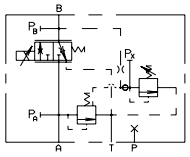
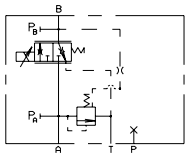
Diagrams



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.

(*) Tested with 25 l/min supply

Table 1 - Flow / pressure specifications

Model	Hydraulic symbol	Max flow rate (l/min)	Max flow in P (l/min)	Max limiter pressure (bar)	Max load pressure (bar)	Δp Control (bar)
XQ.3.C.3.*.M		5 10 16 28	40	8÷50 25÷170 50÷315	250	8
XQ.3.C.3.*.S		5 10 16 28	40		250	8

Max. operat. pressure ports A/B / With P port blocked on subplate	315 bar
Max. operating pressure ports T - for dynamic pressure see note (*)	250 bar
Regulated flow rate	See diagram page before
Relative duty cycle	Continuous 100% ED
Type of protection	IEC 144 class IP 65
Flow rate gain	See diagrams
Hysteresis with connection P/A/B/T Δp = 5 bar (P/A)	≤4% of max. flow rate
Fluid viscosity	10 ÷ 500 mm²/s
Fluid temperature	-20°C ÷ 75°C
Max. contamination level	class 8 in accordance with NAS 1638 with filter $ß_{10}≥75$
Weight version XQ.3.C.*.M...	2,89 Kg
Weight version XQ.3.C.*.S...	2,39 Kg

	9V	12V	24V
Type of voltage			
Max. current	2.35A	1.76 A	0.88 A
Solenoid coil resistance at 25°C (77°F)	2.25 Ohm	4.0 Ohm	16.0 Ohm

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

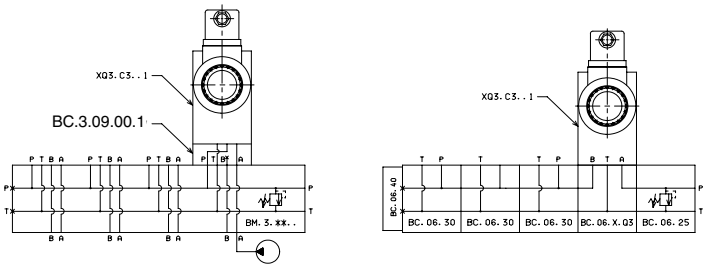
ELECTRONIC CONTROL UNIT

REM.S.RA.*.*.
Card type control for single solenoid.
Recommended dither frequency 100 Hz.

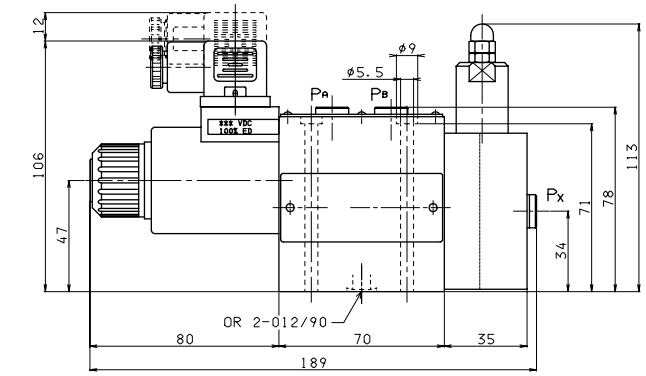
SE.3.AN.21.00...
EUROCARD type control for single solenoid

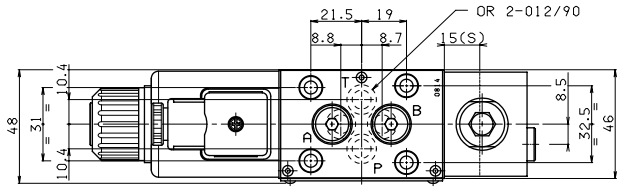
• Operating specifications are valid for fluid with 46 mm²/s viscosity at 40°C, using the specified ARON electronic control units

TYPICAL INSTALLATION



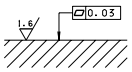
OVERALL DIMENSIONS

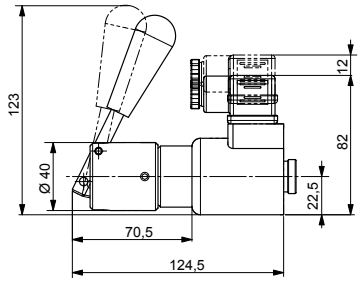




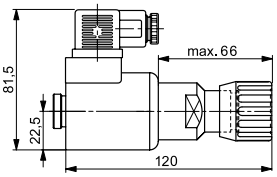
Fixing screws UNI 5931 M5x80 (min. 8.8 material screws are recommended)
Tightening torque 4 ÷ 5 Nm / 0.4 ÷ 0.5 Kgm

Support plane specification

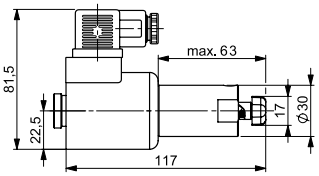




L5 Emergency lever



Rotary emergency version XQ.3.C.3.*.*.**E**



R5 Rotary emergency 180°*(1)*

(1) Two positions hand emergency. The regulated flow with emergency actuated can be less than nominal value.

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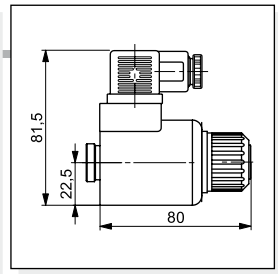

"D15P" PROPORTIONAL SOLENOIDS

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