16 mm FLATPROP EQCMAX
Ultra high flow proportional valve suitable for back pressure

- 2/2 NC pressure compensated proportional valve
- Suitable for back pressure up to 70% of inlet pressure
- Ultra high flow, high precision
- > 450 l/min flow with boosting PWM
- Low power consumption of 2,5 W
- Frictionless design enables high resolution and long lifetime

Technical features

Medium:
Oxygen, neutral gases

Operation:
2/2 NC proportional, pressure compensated

Orifice size:
5,1 mm

Operating pressure:
0 ... 7 bar (0 ... 101 psi)

Back pressure:
Up to 70% of the inlet pressure

Mounting:
Cartridge

Size:
16 mm

Fixing:
2 screws M 3x6 mm (tightening torque 0,45 Nm)

Airflow characteristics:
> 200 Slpm @ 2.0 barg
> 250 Slpm @ 3.0 barg

Kv:
> 5,0 l/min

Life expectancy:
≥ 100 Mio. cycles (with triangular signal), not On/Off

Internal leakage:
< 0,6 ml/min @ 7.0 barg
> 2,0 ml/min @ 7.0 barg (with plasma treated gasket)

External leakage:
< 0,6 ml/min at P= 9,5 barg

Weight:
36 ± 4 g (0,08 lbs)

Ambient/media temperature:
+5 ... +50°C (41 ... +122°F)

Material:
Body material in contact with media: Stainless steel
Seal material in contact with media: Fluoroprene XP and FKM

Assembled without oil or grease

Electrical details

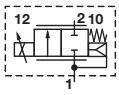
Voltage/frequency	6 V d.c.
Resistance	14,4Ω ±3%
Power consumption	2,5 W
Electrical insulation	500 V a.c.
Insulation class	F (155°C)
Max. coil temperature	< 120°C @ T=50°C ambient temp. valve flowing
Protection class acc. to EN60529	IP51
Duty cycle	100%
Electrical connection	300 mm AWG24 flying leads

Following options on request

NBR, EPDM, FKM seals
264 mA/9,5 V d.c. or 500 mA/5 V coils
Gasket with plasma treatment
Extension of ambient range temperature
Electrical insulation up to 1000 V d.c.
Insulation class H 180°C

File code: LS_DS_FLATPROP-EQCMAX_en/04/24

Technical data – standard models

Symbol	Current (mA)	Resistance (Ω)	Body Material	Seal Material	Model
	104	230	Stainless steel	Fluoropren XP	12-216C-0514F+EQCMAX+BDU
	211	57	Stainless steel	Fluoropren XP	12-216C-0514F+EQCMAX+BED
	417	14,4	Stainless steel	Fluoropren XP	12-216C-0514F+EQCMAX+BEK

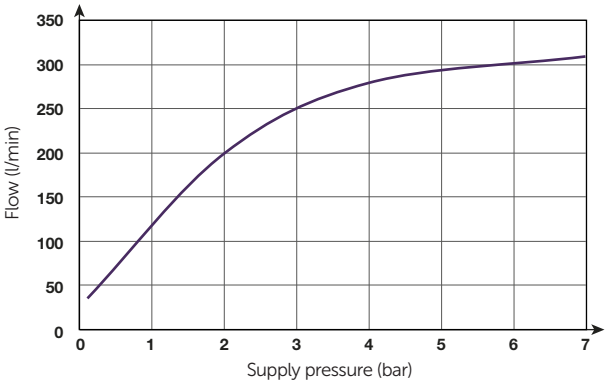
Technical data – standard coils

Valve orifice (mm)	Coil resistance at 20°C (+68°F) ± 3% [R20] (Ω)	Current for maximum flow [nominal] (mA)	Voltage +20°C (+68°F) [nominal] (V)	Power +20°C (+68°F) [nominal] (W)	Max. required voltage for max flow *1) (V)
5,10	14,4	417	6	2,5	9
	57	211	12	2,5	18
	230	104	24	2,5	36

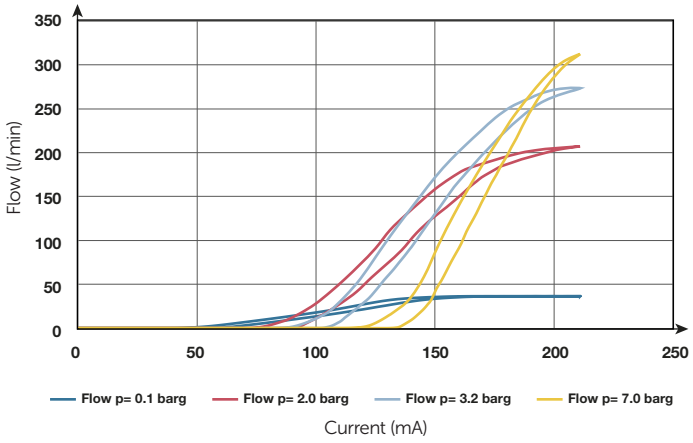
*1) Please refer to instruction K12M.0001 for recommendation on drive signals

Additional information

Typical flows vs. supply pressure
Air, 20°C, without back pressure



Typical hysteresis curves
Air, 20°C, without back pressure



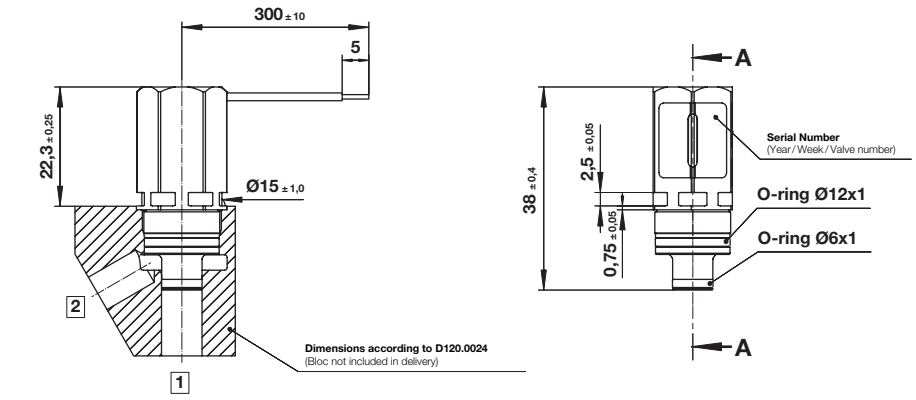
Accessories

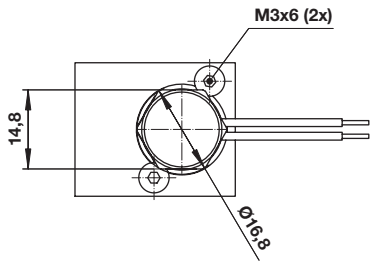
Manifold for cartridge version with G1/4 ports in aluminium

S120.0152

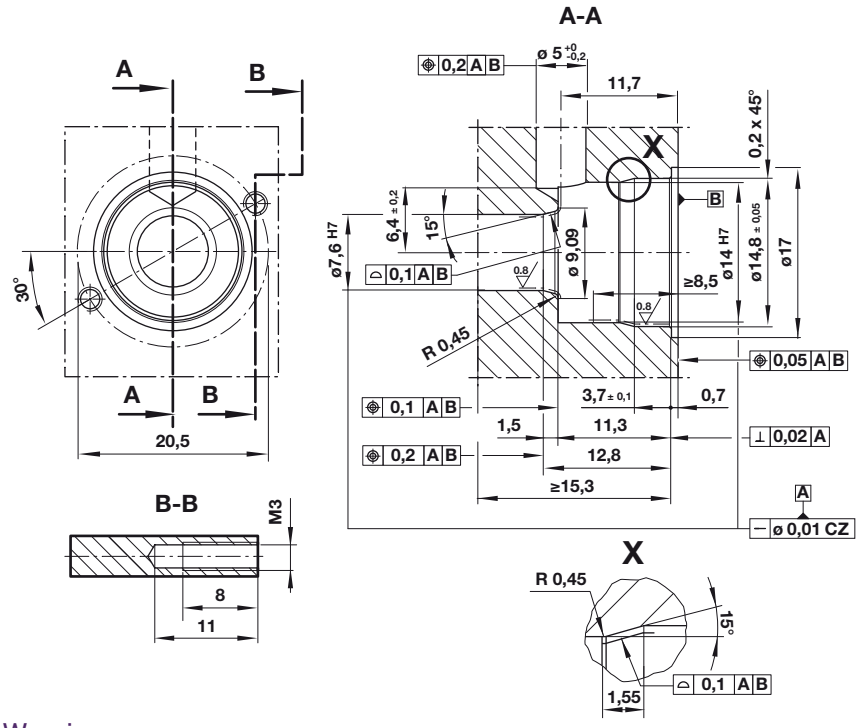
Dimensions

Dimensions in mm
Projection/first angle

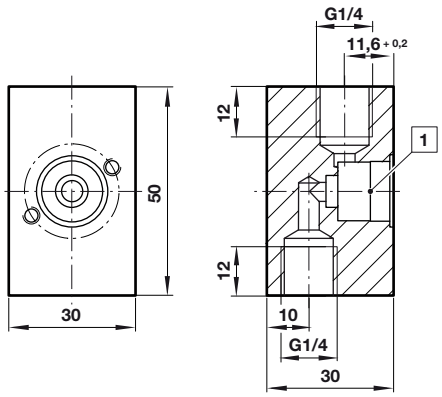




Cartridge fitting D120.0010



Test manifold S120.0152



1 Interface geometry see Cartridge fitting D120.0010

Warning

These products are intended for use in air, oxygen and neutral gas systems only. Do not use these products where pressures and temperatures can exceed those listed under »Technical features«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult IMI Plc., FAS MEDIC SA.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.