

**Very compact design**

**High flow rate**

**Low power consumption**

**Long life – in excess of 100 million cycles  
(triangular signal, not on/off)**



### Technical data

Medium:

Air, neutral gases

Operation:

Poppet valve, directly actuated and pressure compensated with spring return

Mounting:

2 x M3 x 6 mm

Operating pressure:

0 to 7 bar

Back pressure = less than 10% of the inlet pressure

Static pressure = 10 bar

Flow characteristics:

Flow	kv	Orifice range
2 ... 250 l/min	0,025 ... 2,8	0,2 ... 4,5 mm

Fluid temperature:

+10°C to +50°C

Ambient temperature:

+10°C to +50°C

Weight:

Cartridge: 30g

Sub-base mounted: 35g

### Materials

(in contact with medium)

Body: brass, stainless steel, PEEK (subbase valve only)

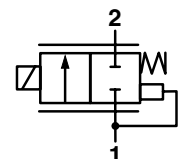
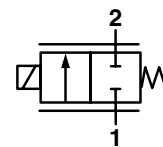
Operator: stainless steel

Elastomers: NBR

### Alternative option on request

Orifice size, Voltage

Please contact Norgren for your local FAS product specialist



## Standard models Cartridge

Symbol	Function	Orifice (mm)	Flow l/min kv	Operating pressure (bar)	Manual override	Hit & hold	Model Ordering number	Voltage	Power (W)	Drawing no.
	2/2	0,2	2 0,025	0 ... 12	None	No	12-216C-00220++BED	12V	0,5	1
	2/2	0,8	30 0,33	0 ... 10	None	No	12-216C-01-20++BED	12V	2,5	1
	2/2	1,6	70*1) 0,8	0 ... 5	None	No	12-216C-03-20++BED	12V	2,5	1
	2/2	4,5	250 2,8	0 ... 7	None	No	12-216C-04520+EQIFIL+BED	12V	2,5	1

## Sub-base mounted

Symbol	Function	Orifice (mm)	Flow l/min kv	Operating pressure (bar)	Manual override	Hit & hold	Model Ordering number	Voltage	Power (W)	Drawing no.
	2/2	0,2	2 0,025	0 ... 12	None	No	12-216P-00220++BED	12V	0,5	2
	2/2	0,8	30 0,33	0 ... 10	None	No	12-216P-01-20++BED	12V	2,5	2
	2/2	1,6	70*1) 0,8	0 ... 5	None	No	12-216P-03-20++BED	12V	2,5	2
	2/2	4,5	250 2,8	0 ... 7	None	No	12-216P-04520+EQIFIL+BED	12V	2,5	2

Note: Electrical connection: flying leads

kv is not constant at all pressure, please refer to following chart for more details

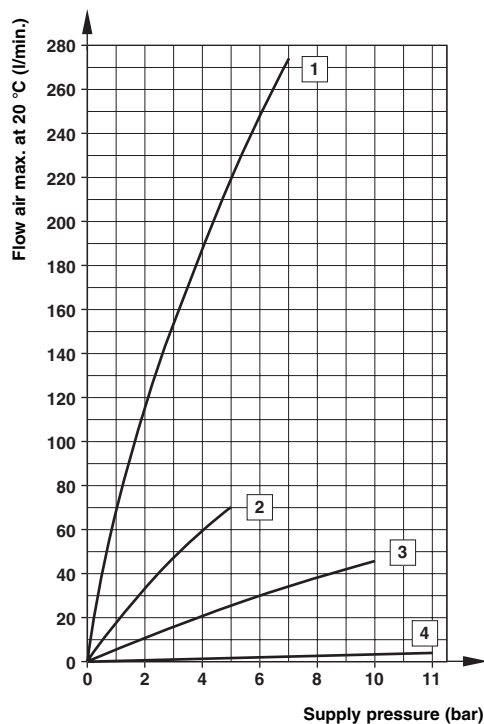
\*1) Standard Flow is given here as an indicative information as the valve pressure range is below 6 bar

## Electrical details

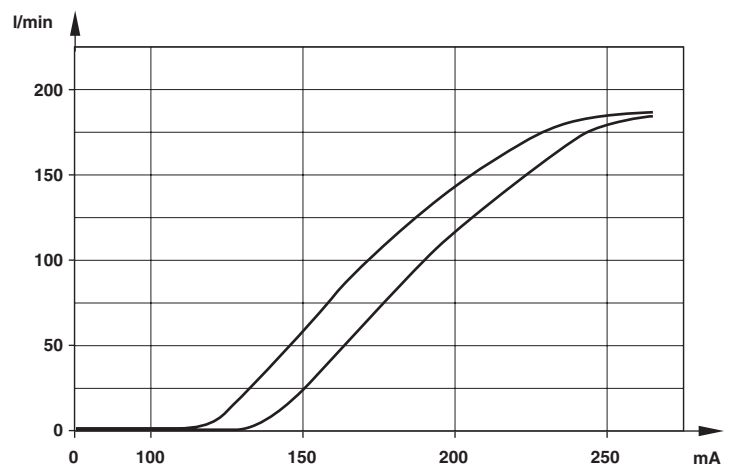
Voltage: nominal (U max.)*2)	Current mA/coil resistance @ T= -20°
12 V (18V)	211 mA; 57 Ω ± 3%
Response time (typical):	10 ms energising (ON) 10 ms de-energising (OFF)
Protection class:	IP51
Electrical insulation:	1000 V a.c.
Insulation class:	155°C

\*2) Voltage can increase up to 50% depending on the ambient temperature

## Flow characteristics



## Hysteresis chart

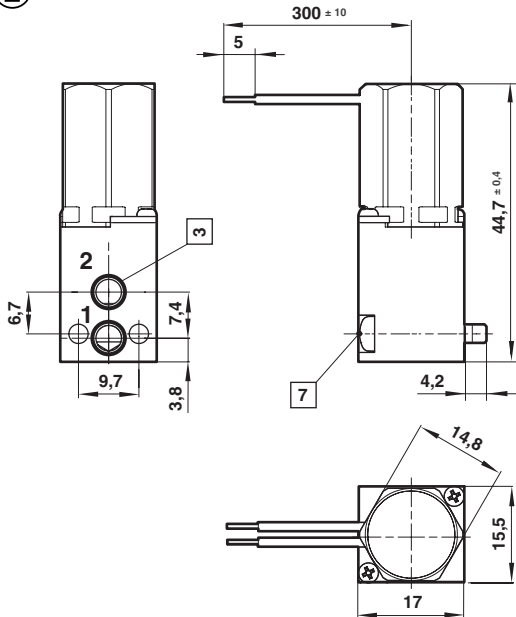


- 1 Orifice 4,5 mm, Kv 2,8
- 2 Orifice 1,6 mm, Kv 0,8
- 3 Orifice 0,8 mm, Kv 0,33
- 4 Orifice 0,2 mm, Kv 0,025

**Basic dimensions**

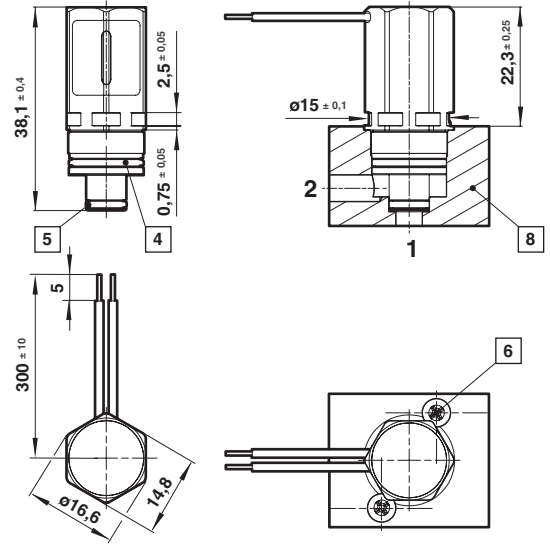
**Subbase valve**

②



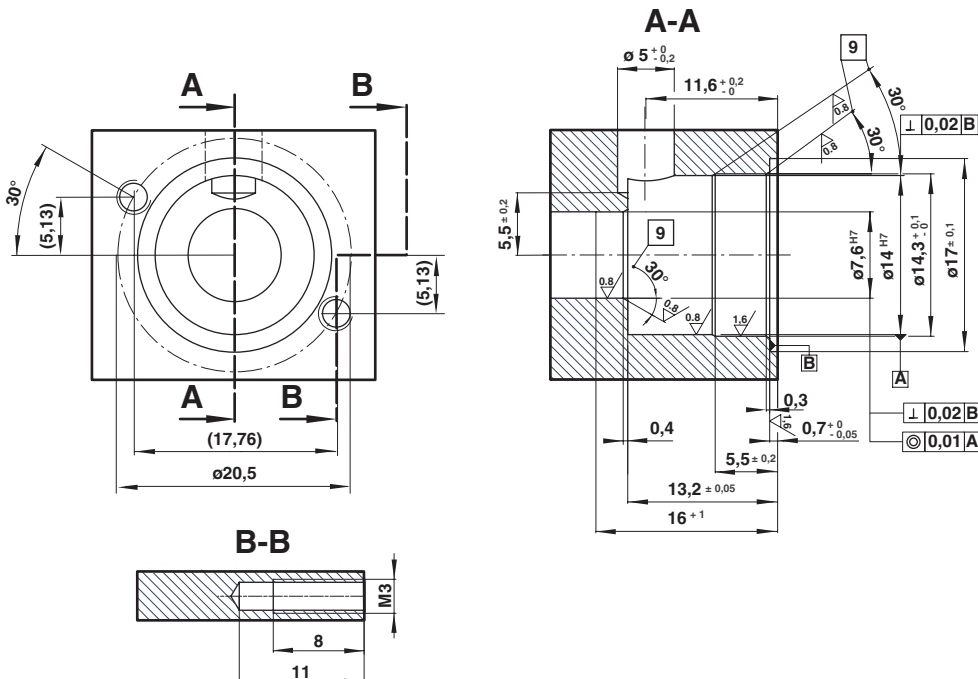
**Cartridge valve**

①



- |   |               |   |   |
|---|---------------|---|---|
| 3 | O-ring 4 x 1  | 6 | Screw M3 x 6                                  |
| 4 | O-ring 12 x 1 | 7 | Screw M3 x 18                                 |
| 5 | O-ring 6 x 1  | 8 | Block not included in delivering (see page 3) |

**Cartridge fitting dimensions**



- |   |               |
|---|---------------|
| 9 | without burrs |
|---|---------------|

**Warning**

The technical information given describe the normal features of our products and do not constitute a warranty declaration

The customer is responsible for checking whether its intended purpose is served by the goods ordered. The end of the usual life span of wear and tear parts does not represent a defect.

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.