

DATASHEET F-004

Series F-004A, F-004B

Bellows Valves with Pressure Compensation



Control Valves for Low Pressure Drop Applications

These are direct acting control valves similar to the F-001 series. They are also closed by spring force. A bellows compensates the closing force acting on the plunger to such a degree that only a very small magnetic force is required and in this way large orifices can be opened, which is impossible in the F-001 design as it would cause oscillation. The bellows pressure compensated design, however, enables us to smoothly control large flows at extremely low pressures.

Technical specifications

Measurement / control system

Operating temperature	-10... 70 °C
Max. Kv-value	F-004AC / F-004AI: 0,03...0,3 F-004BI: 0,1...1

Mechanical parts

Material (wetted parts)	stainless steel 316L or comparable
Pressure rating (PN)	10 bar(g)
Max. ΔP	for gases: 5 bar(d) for liquids: 2 bar(d)
Process connections	compression type or face seal (VCR/VCO) couplings
Seals	standard: Viton®; options: EPDM, Kalrez® (FFKM)
Weight	F-004AC / F-004AI: 1,2 kg F-004BI: 3,4 kg
Protection class	F-004AC: IP40 F-004AI / F-004BI: IP65

Electrical properties

Power supply	+15...24 Vdc +/-10%
Max. power consumption	max. 3,5 W (at 15 Vdc)

Electrical connection

Control valve options

External actuator options to be connected to the controller

Ex-proof specifications

Approvals / certificates

Technical specifications subject to change without notice.

Technical specifications

Performance

Max. Kv-value	F-004AC/F-004AI: 0,03...0,3 F-004BI: 0,1...1
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Operating temperature	-10...70°C
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Mechanical /Electrical specifications

Material (wetted parts)	stainless steel 316L or comparable
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Pressure rating	10 bar(g)
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Max. ΔP	for gases: 5 bar (d) for liquids: 2 bar (d)
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Process connections	compression type or face seal couplings
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Seals	Standard: Viton [®] ; Optional: EPDM, Kalrez [®]
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Weight	F-004AC/F-004AI: 1,2 kg F-004BI: 3,4 kg
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Protection class	F-004AC: IP40 F-004AI/F-004BI: IP65
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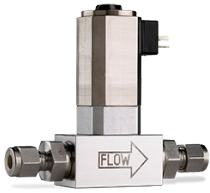
Power supply	+15...24 Vdc +/-10%
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Power consumption (at 15 Vdc)	max. 3,5 W
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Technical specifications subject to change without notice.

For dimensional drawings and hook-up diagrams please visit the [product page](#) on our [website](#)

Related products



SERIES F-001, F-011, F-021

Direct-operated control valves

Flow up to approx. 50
l/min
Pressure up to 64/100/200
bar
Kv-max: 6.6×10^{-2}



SERIES F-033, F-042

Vary-P Control Valves

Flow up to approx. 100
l/min
Pressure up to 400/700 bar
For high (differential)
pressures applications



SERIE F-002A, F-003A, F-003B

Pilot-Operated Control Valves

Flow up to approx. 500
m³n/h
Pressure up to 64/100 bar
Kv: 0.04...6.0



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