

# DATASHEET F-033

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Series F-033, F-042

## Vary-P Control Valves



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## High Pressure Control Valves for Gases

F-033 / F-042 are 2-phase control valves for applications with high differential pressures, up to 350 bar and a maximum operating pressure of 350 resp. 650 bar! These unique valves feature a pressure compensation mechanism, maintaining a constant pressure difference of 4 bar across the flow control section. By doing so both the inlet pressure and the outlet pressure may change without having any impact on the Vary-P valve function.

Technical specifications

Measurement / control system

Operating temperature	F-033C: -10...70°C F-033CI / F-042CI: -10...70°C F-033CX: -10...65°C
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Mechanical parts

Material (wetted parts)	stainless steel 316L or comparable
Pressure rating (PN)	F-033 series: 350 bar(a) F-042 series: 650 bar(a)
Min. ΔP	6 bar(d)
Max. ΔP	up to 350 bar(d)
Process connections	F-033 series: compression type or face seal (VCR/VCO) couplings; F-042 series: none (female thread); special high pressure connections on request
Seals	standard: Viton®; on request (F-033 series only): EPDM, Kalrez®
Protection class	F-033C: IP40 F-033CI / F-042CI: IP65 F-033CX-XBB: II 1 G/D Ex ia IIC T6 F-033CX-XCB: II 2 G/D Ex e mb II T4

Electrical properties

Electrical connection

Control valve options

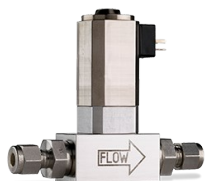
External actuator options to be connected to the controller

Ex-proof specifications

Approvals / certificates

Technical specifications subject to change without notice.

## 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:  $6.6 \times 10^{-2}$



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

**Pilot-Operated Control Valves**

Flow up to approx. 500  
m<sup>3</sup>n/h  
Pressure up to 64/100  
bar  
Kv: 0.04...6.0



**SERIES F-004A, F-004B**

**Bellows Valves with Pressure Compensation**

Flow up to approx. 1000  
l/min  
For low (differential)  
pressure applications  
Kv: 0.03...1.0