

red-y smart pressure controller product information



**Electronic pressure controller
with integrated flow measurement**

Pressure and flow in a single device:

Electronic pressure controller for gases with integrated flow measurement

The new electronic red-y smart pressure controllers combine the reliable technology our of thermal mass flow controllers with electronic pressure control.

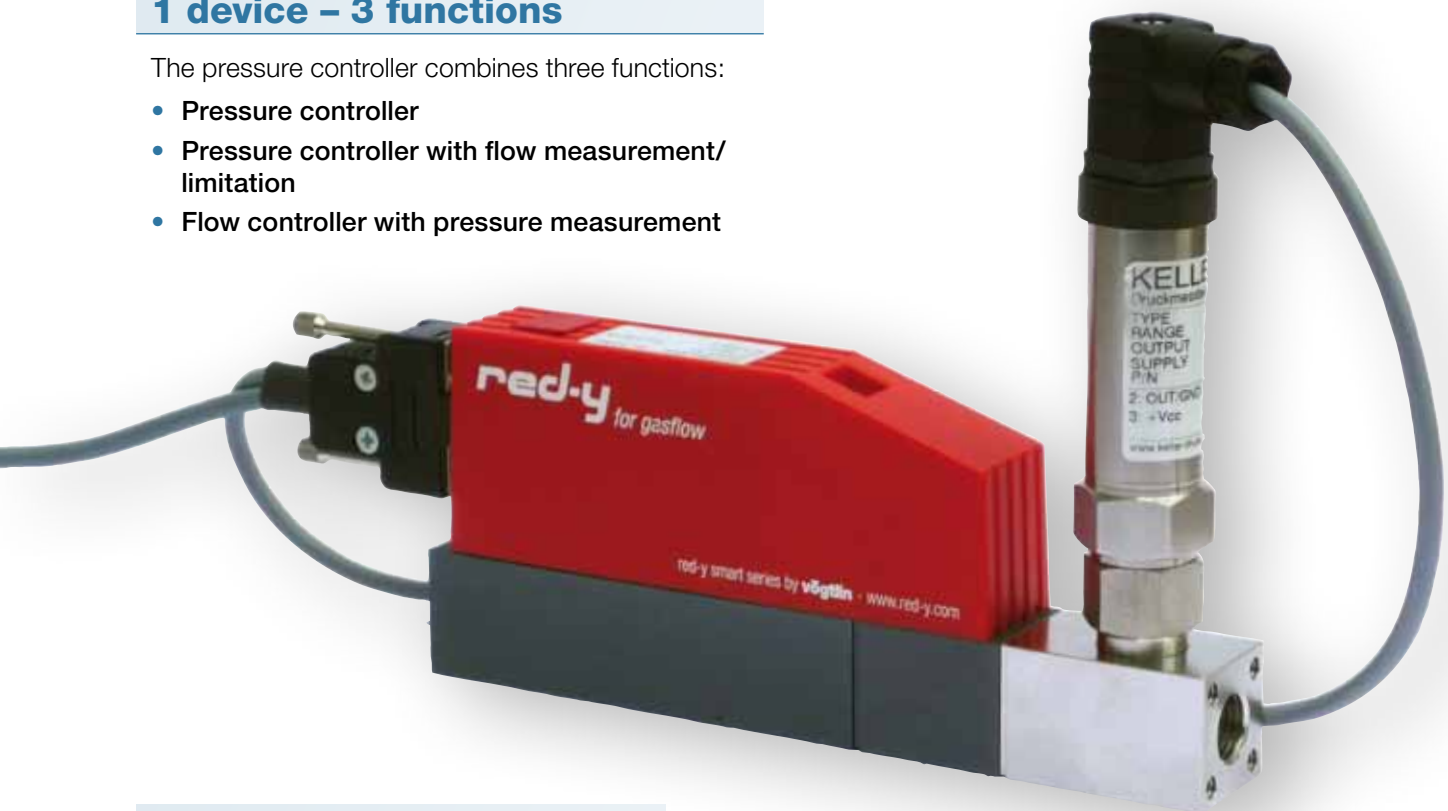
The devices automatically control a predefined process pressure and at the same time measure and/or limit the flow rate.

On-the-fly switching between pressure control and flow control offers maximum flexibility.

1 device – 3 functions

The pressure controller combines three functions:

- Pressure controller
- Pressure controller with flow measurement/ limitation
- Flow controller with pressure measurement



Instrument versions

- Integrated pressure control
Accuracy: $\pm 0.5\%$ of full scale
- Integrated back pressure control
Accuracy: $\pm 0.5\%$ of full scale
- Pressure control with external pressure transmitters
- Pressure controller with gas mixer function

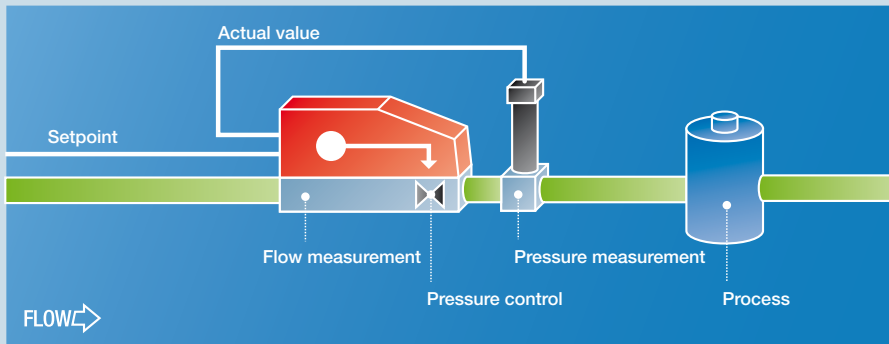
It's a red-y smart

The pressure controllers combine the innovative equipment design of the red-y smart series with the development competence of Vögtlin Instruments AG.

High-quality components ensure long and trouble-free operation.

Pressure control

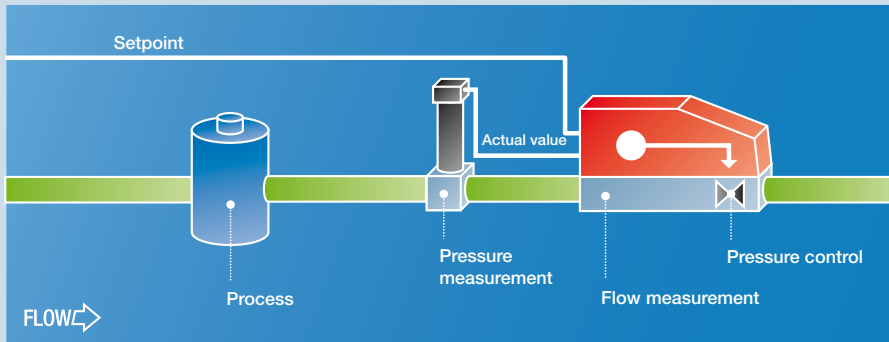
In this application the electronic pressure controller regulates a digitally specified set pressure value. The flow rate depends on the process consumption. Maximum flow limitation enables pressure control of stable gas mixtures, for example.



Application example:
Pressure control of a pressure vessel containing a stable gas mixture for laser gas or welding applications.

Back pressure control

In this configuration the effect of the control valve is reversed. The process generates a certain pressure, which must be readjusted.



Application example:
Overpressure control of a sterile chamber. The flow rate is used as a leakage indicator.

Wide range of accessories – ready for operation

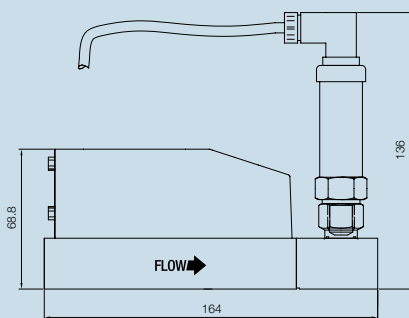
Connection cables, power supplies, software «get red-y»

Optimal range of cables and power supply units for fast integration of the pressure controllers. With the free software «get red-y» you can easily define functions and parameters.

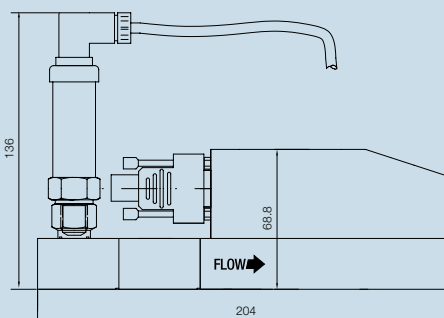
Fittings, filters

All flow meters and controllers are available with fittings and filters.

Dimensions G $\frac{1}{4}$ " *




red-y smart pressure controller GSP



red-y smart back pressure controller GSB

*Dimensions G $\frac{1}{2}$ " on request

Technical Data «red-y smart pressure controller»

| Instrument types |  | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------|------|-----------------------|------------|-------------------------|-------|--------------------------------------------|-----|------------------------------|-------|----------------------------------------------|-----|--|-------|----------------------------------------|-----|--|-------|------------------------------------------|-----|--|-------------------------|--|--|
| | red-y smart pressure controller GSP <i>Electronic pressure controller</i> | red-y smart back pressure controller GSB <i>Electronic back pressure controller</i> | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pressure controller with external transmitter and customer-specific solutions on request | | | | | | | | | | | | | | | | | | | | | | | | | |
| Instrument versions flow | «Standard» – The economic solution Accuracy: $\pm 1.0\%$ of full scale Turndown ratio: 1 : 50 «Hi-Performance» – With highest accuracy and turndown ratio Accuracy: $\pm 0.3\%$ of full scale + $\pm 0.5\%$ of reading Turndown ratio: 1 : 100 for GSM < 200 lN/min / GSC < 150 lN/min (air) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Instrument versions pressure | Pressure control Accuracy: $\pm 0.5\%$ of full scale Back pressure control Accuracy: $\pm 0.5\%$ of full scale Differential pressure controller according to customer specifications | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measuring ranges flow (Air) | <table border="1"> <thead> <tr> <th>Full scale freely selectable</th> <th>Type</th> <th>Measuring range (Air)</th> <th>Connection</th> </tr> </thead> <tbody> <tr> <td>pressure controller GSP</td> <td>GSX-A</td> <td>from 0 ... 25 mlN/min to 0 ... 600 mlN/min</td> <td>G¼"</td> </tr> <tr> <td>back pressure controller GSB</td> <td>GSX-B</td> <td>from 0 ... 600 mlN/min to 0 ... 6000 mlN/min</td> <td>G¼"</td> </tr> <tr> <td></td> <td>GSX-C</td> <td>from 0 ... 6 lN/min to 0 ... 60 lN/min</td> <td>G¼"</td> </tr> <tr> <td></td> <td>GSX-D</td> <td>from 0 ... 60 lN/min to 0 ... 450 lN/min</td> <td>G½"</td> </tr> <tr> <td></td> <td colspan="3">Other ranges on request</td> </tr> </tbody> </table> | | Full scale freely selectable | Type | Measuring range (Air) | Connection | pressure controller GSP | GSX-A | from 0 ... 25 mlN/min to 0 ... 600 mlN/min | G¼" | back pressure controller GSB | GSX-B | from 0 ... 600 mlN/min to 0 ... 6000 mlN/min | G¼" | | GSX-C | from 0 ... 6 lN/min to 0 ... 60 lN/min | G¼" | | GSX-D | from 0 ... 60 lN/min to 0 ... 450 lN/min | G½" | | Other ranges on request | | |
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| | GSX-C | from 0 ... 6 lN/min to 0 ... 60 lN/min | G¼" | | | | | | | | | | | | | | | | | | | | | | | |
| | GSX-D | from 0 ... 60 lN/min to 0 ... 450 lN/min | G½" | | | | | | | | | | | | | | | | | | | | | | | |
| | Other ranges on request | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measuring ranges pressure | Full scale gauge pressure 0.5 bar g, 1 bar g, 2 bar g, 5 bar g, 10 bar g Full scale absolute pressure 1.2 bar a, 2 bar a, 5 bar a, 10 bar a | | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance data | Media (real gas calibration) Air, O2, N2, He, Ar, CO2, H2, CH4, C3H8 Other gases and gas mixtures on request Response time 50 ms Repeatability $\pm 0.2\%$ of full scale Longterm stability < 1% of measured value / year Power supply 24 Vdc (18 – 30 Vdc), 15 Vdc on request Current consumption max. 250mA Temperature (environment/gas) 0 – 50°C Materials Anodized aluminium, optional stainless steel electropolished Seals FKM, optional EPDM Pressure sensitivity < 0.2% / bar of reading (typical N2) Temperature sensitivity < 0.025% FS measuring range type / °C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integration | Output signals <i>analog (for actual value flow only)</i> 0..20 mA, 4..20 mA, 0..5 V, 1..5 V, 0..10 V, 2..10 V <i>digital (for pressure and flow)</i> RS-485; Modbus RTU (Slave); Lab View-VI's available Option: ProfiBus DP-V0, DP-V1 Process connection G¼" female less than 60 lN/min, G½" female less than 450 lN/min Inlet section None required Electrical connection Sub D plug, 9 pole Mounting orientation Any orientation (horizontal only above 5 bar) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Safety | Test pressure 16 bar a Leak rate < 1 x 10 ⁻⁶ mbar l/s He Environmental protection IP-50 EMC EN 61326-1 | | | | | | | | | | | | | | | | | | | | | | | | | |

Do you have any questions about our products?

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