

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.

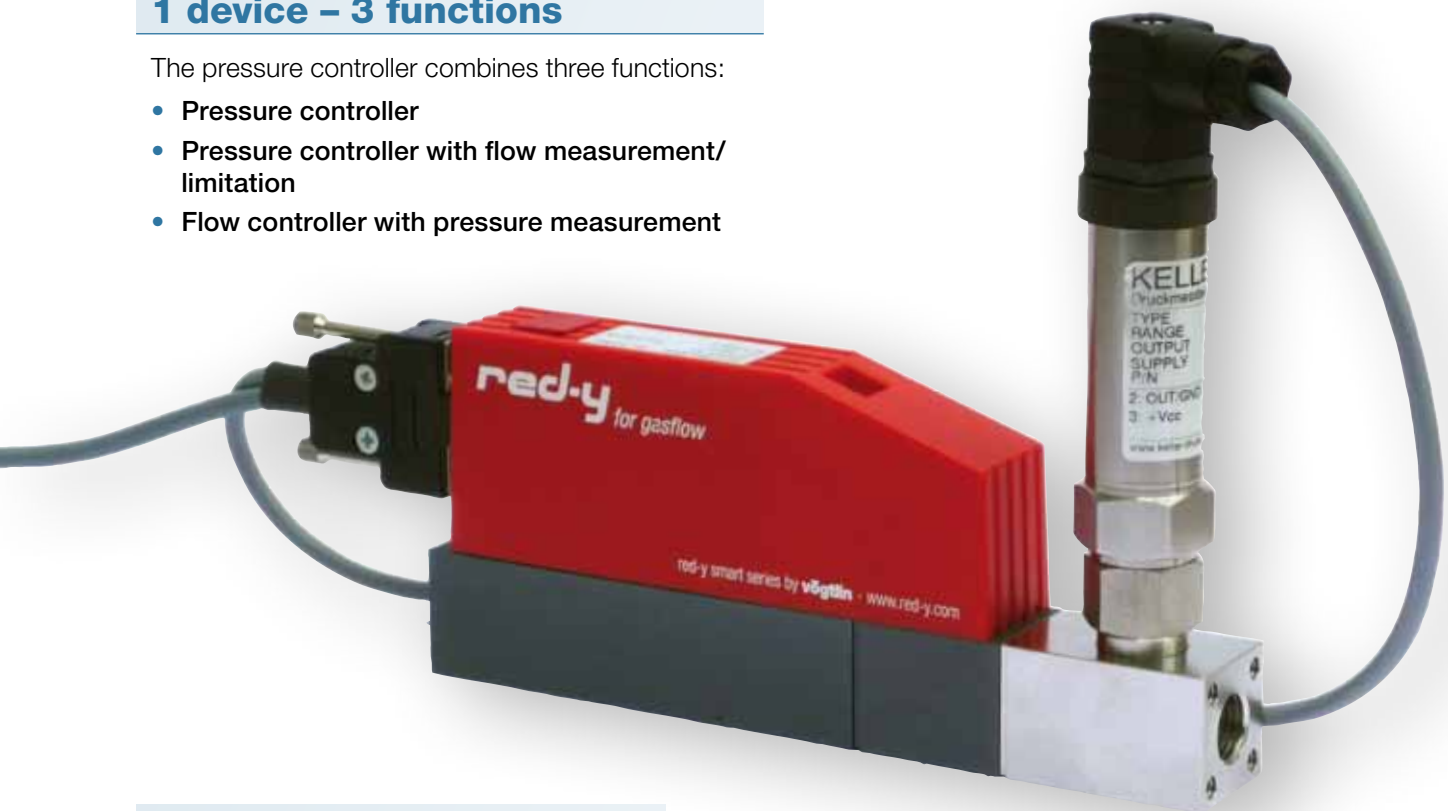
The devices automatically control a predefined process pressure and at the same time measure and/or limit the flow rate.

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

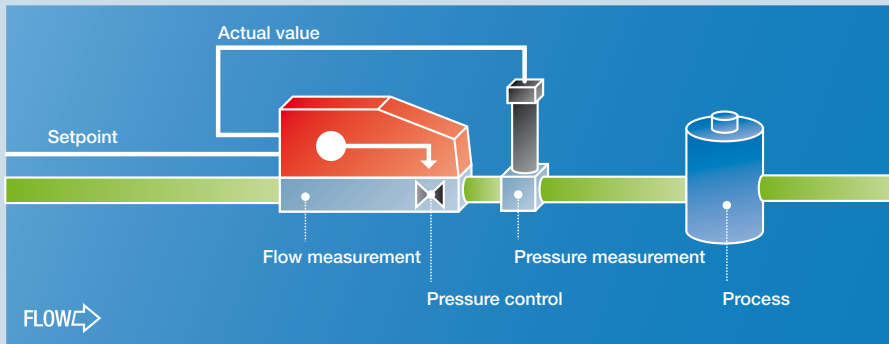
The pressure controllers combine the innovative equipment design of the red-y smart series with the development competence of Vögtlin Instruments AG.

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



Pressure control

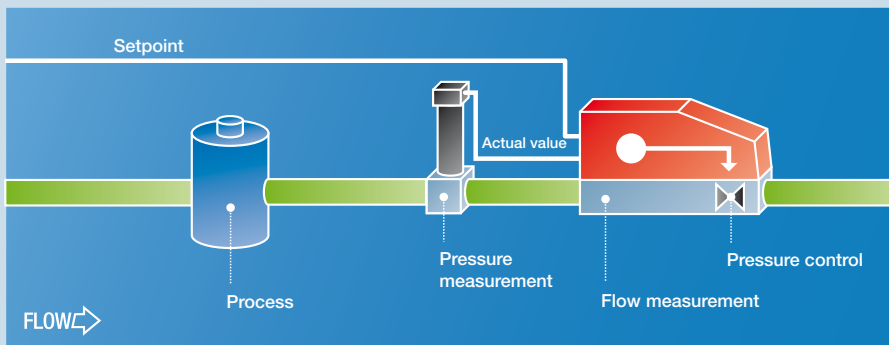
In this application the electronic pressure controller regulates a digitally specified set pressure value. The flow rate depends on the process consumption. Maximum flow limitation enables pressure control of stable gas mixtures, for example.



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

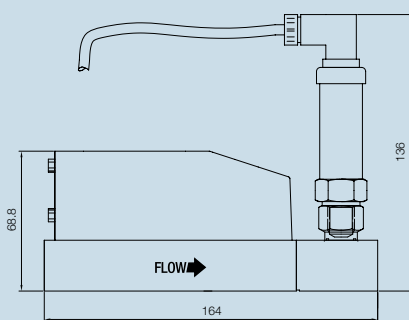
Connection cables, power supplies, software «get red-y»

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.

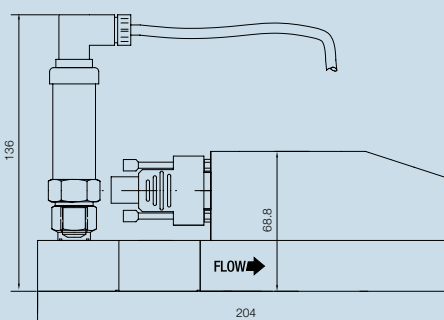
Fittings, filters

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	<p>«Standard» – The economic solution</p> <p>Accuracy: $\pm 1.0\%$ of full scale Turndown ratio: 1 : 50</p> <p>«Hi-Performance» – With highest accuracy and turndown ratio</p> <p>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)</p>			
Instrument versions pressure	<p>Pressure control</p> <p>Accuracy: $\pm 0.5\%$ of full scale</p> <p>Back pressure control</p> <p>Accuracy: $\pm 0.5\%$ of full scale</p> <p>Differential pressure controller according to customer specifications</p>			
Measuring ranges flow (Air)	Full scale freely selectable pressure controller GSP back pressure controller GSB	Type GSX-A GSX-B GSX-C GSX-D Other ranges on request	Measuring range (Air) from 0 ... 25 mlN/min from 0 ... 600 mlN/min from 0 ... 6 lN/min from 0 ... 60 lN/min	Connection G1/4" G1/4" G1/4" G1/2"
Measuring ranges pressure	<p>Full scale gauge pressure 0.5 bar g, 1 bar g, 2 bar g, 5 bar g, 10 bar g</p> <p>Full scale absolute pressure 1.2 bar a, 2 bar a, 5 bar a, 10 bar a</p>			
Performance data	<p>Media (real gas calibration) Air, O2, N2, He, Ar, CO2, H2, CH4, C3H8 Other gases and gas mixtures on request</p> <p>Response time 50 ms</p> <p>Repeatability $\pm 0.2\%$ of full scale</p> <p>Longterm stability < 1% of measured value / year</p> <p>Power supply 24 Vdc (18 – 30 Vdc), 15 Vdc on request</p> <p>Current consumption max. 250mA</p> <p>Temperature (environment/gas) 0 – 50°C</p> <p>Materials Anodized aluminium, optional stainless steel electropolished</p> <p>Seals FKM, optional EPDM</p> <p>Pressure sensitivity < 0.2% / bar of reading (typical N2)</p> <p>Temperature sensitivity < 0.025% FS measuring range type / °C</p>			
Integration	<p>Output signals</p> <p><i>analog</i> (for actual value flow only) 0..20 mA, 4..20 mA, 0..5 V, 1..5 V, 0..10 V, 2..10 V</p> <p><i>digital</i> (for pressure and flow) RS-485; Modbus RTU (Slave); Lab View-VI's available Option: ProfiBus DP-V0, DP-V1</p> <p>Process connection G1/4" female less than 60 lN/min, G1/2" female less than 450 lN/min</p> <p>Inlet section None required</p> <p>Electrical connection Sub D plug, 9 pole</p> <p>Mounting orientation Any orientation (horizontal only above 5 bar)</p>			
Safety	<p>Test pressure 16 bar a</p> <p>Leak rate < 1 x 10⁻⁶ mbar l/s He</p> <p>Environmental protection IP-50</p> <p>EMC EN 61326-1</p>			

