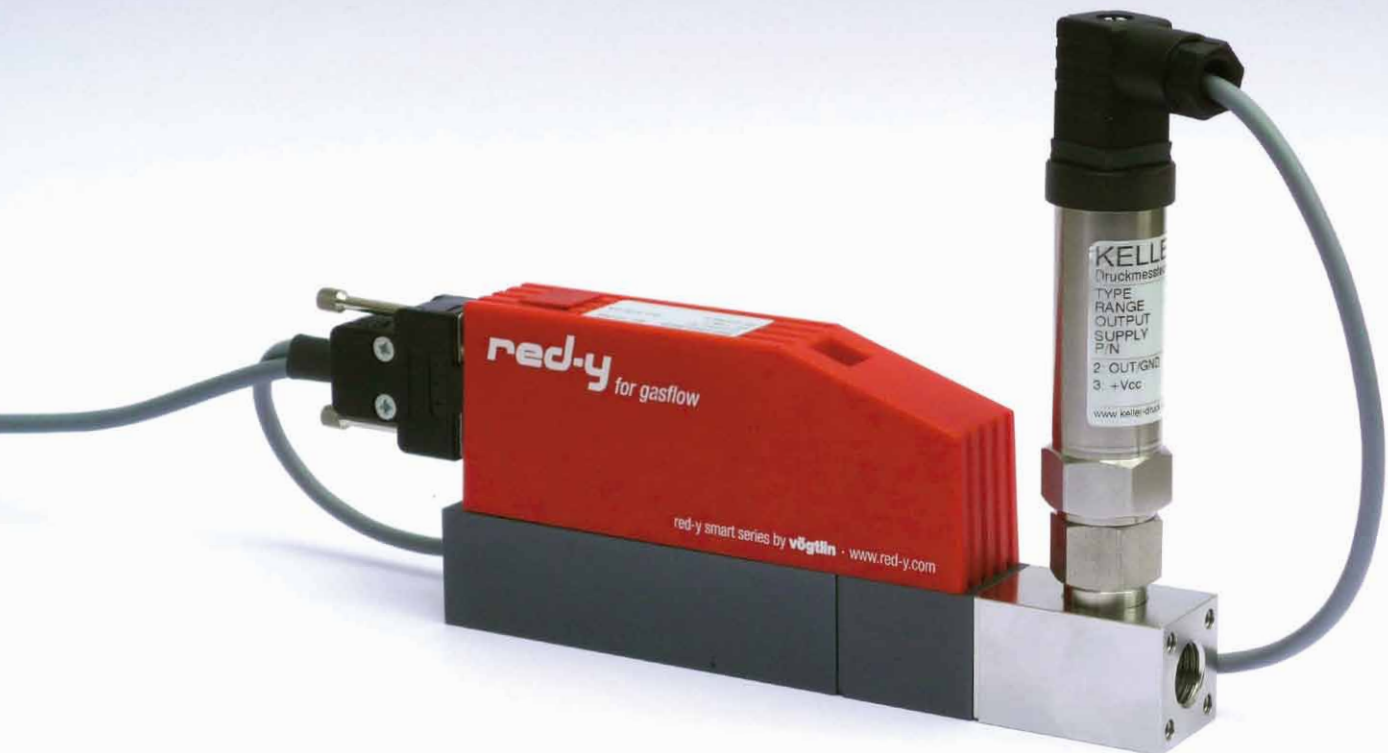


red-y smart pressure controller product information



**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.

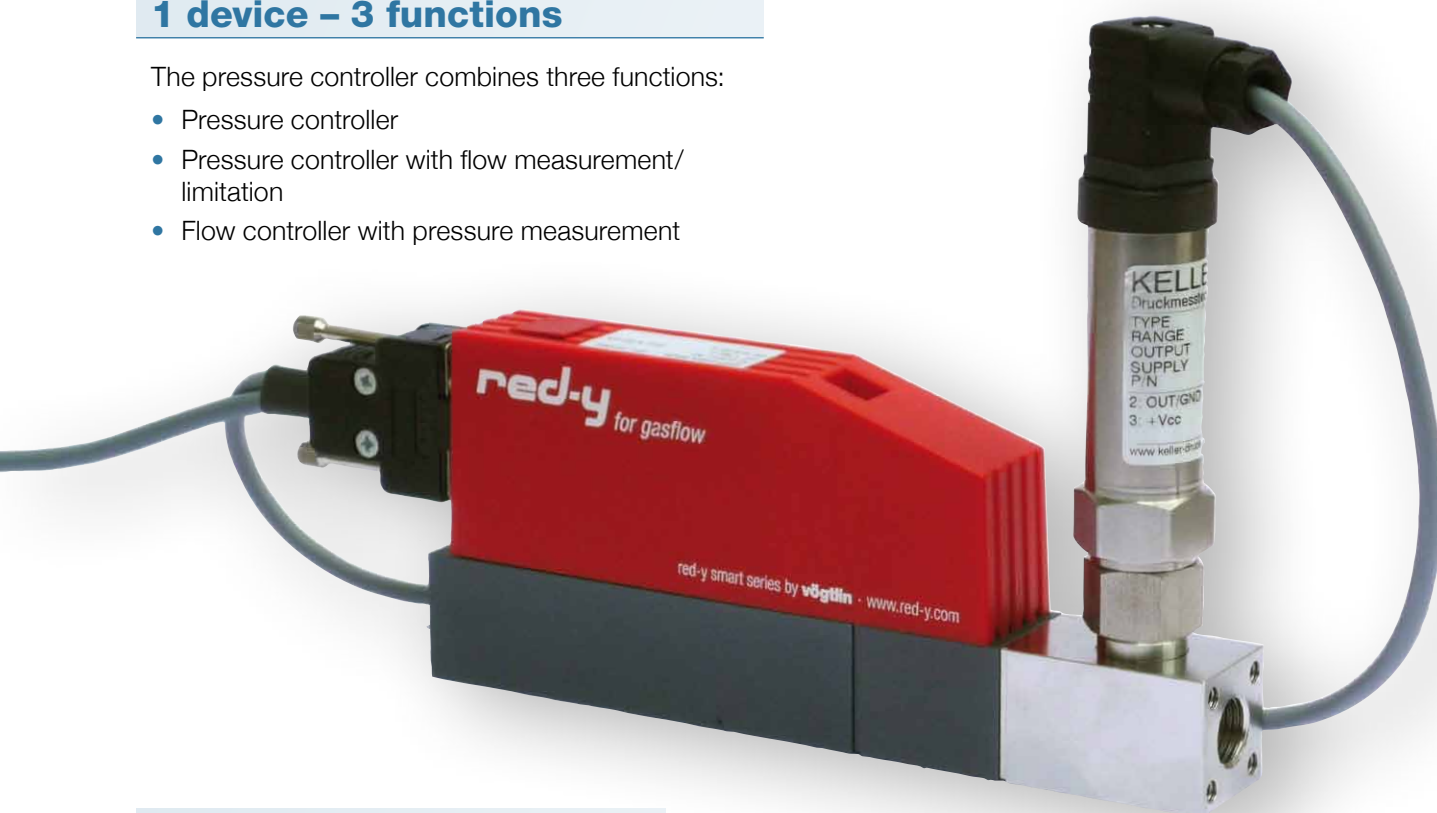
The devices automatically control a predefined process pressure and at the same time measure and/or limit the flow rate.

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

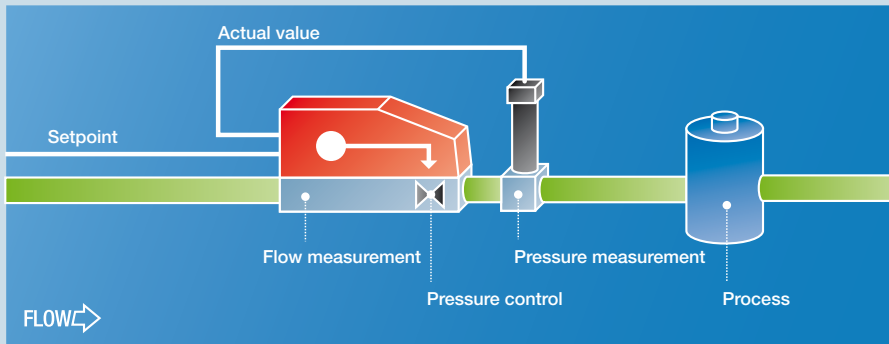
The pressure controllers combine the innovative equipment design of the red-y smart series with the development competence of Vögtlin Instruments AG.

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



Pressure control

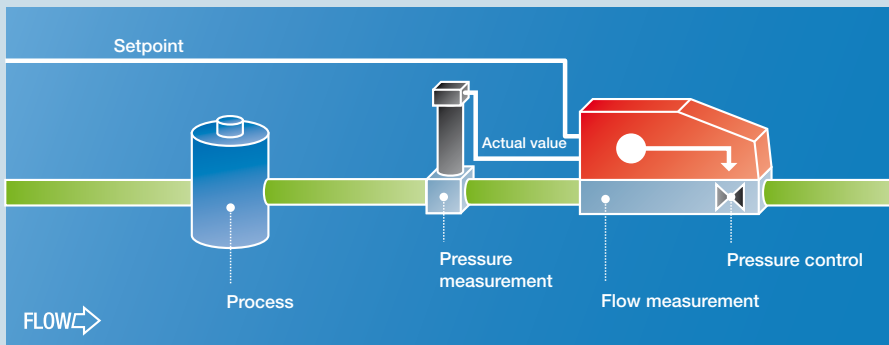
In this application the electronic pressure controller regulates a digitally specified set pressure value. The flow rate depends on the process consumption. Maximum flow limitation enables pressure control of stable gas mixtures, for example.



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

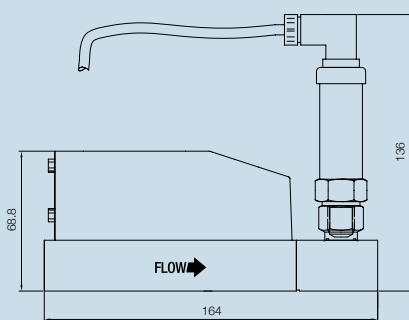
Connection cables, power supplies, software «get red-y»

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.

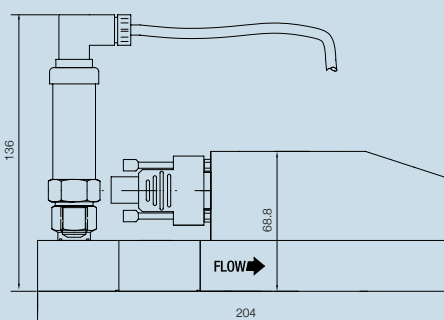
Fittings, filters

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 l/min / GSC < 150 l/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 colspan="2">Measuring range (Air)</th> <th>Connection</th> </tr> </thead> <tbody> <tr> <td>pressure controller GSP</td> <td>GSX-A</td> <td>from 0 ... 25 ml/min</td> <td>to 0 ... 600 ml/min</td> <td>G$\frac{1}{4}$"</td> </tr> <tr> <td>back pressure controller GSB</td> <td>GSX-B</td> <td>from 0 ... 600 ml/min</td> <td>to 0 ... 6000 ml/min</td> <td>G$\frac{1}{4}$"</td> </tr> <tr> <td></td> <td>GSX-C</td> <td>from 0 ... 6 l/min</td> <td>to 0 ... 60 l/min</td> <td>G$\frac{1}{4}$"</td> </tr> <tr> <td></td> <td>GSX-D</td> <td>from 0 ... 60 l/min</td> <td>to 0 ... 450 l/min</td> <td>G$\frac{1}{2}$"</td> </tr> <tr> <td></td> <td colspan="4">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 ml/min	to 0 ... 600 ml/min	G $\frac{1}{4}$ "	back pressure controller GSB	GSX-B	from 0 ... 600 ml/min	to 0 ... 6000 ml/min	G $\frac{1}{4}$ "		GSX-C	from 0 ... 6 l/min	to 0 ... 60 l/min	G $\frac{1}{4}$ "		GSX-D	from 0 ... 60 l/min	to 0 ... 450 l/min	G $\frac{1}{2}$ "		Other ranges on request			
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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, O ₂ , N ₂ , He, Ar, CO ₂ , H ₂ , CH ₄ , C ₃ H ₈ 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 N ₂) 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 G $\frac{1}{4}$ " female less than 60 l/min, G $\frac{1}{2}$ " female less than 450 l/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																																

Type code «red-y smart pressure controller»

Instrument type	red-y smart series (Gas)	G	S																		
Function	Pressure controller									P											
	Back pressure controller									B											
	With external pressure transmitter									K											
Full scale of measuring range (Air)	25 mln/min (G¼", 25 x 25mm)									A	1										
	50 mln/min									A	2										
	100 mln/min									A	3										
	200 mln/min									A	4										
	500 mln/min									A	5										
	Customer-specific (Divider A, up to 600mln/min)									A	9										
	500 mln/min (G¼", 25 x 25mm)									B	2										
	1000 mln/min									B	3										
	2000 mln/min									B	4										
	5000 mln/min									B	5										
	Customer-specific (Divider B, up to 6'000mln/min)									B	9										
	5 lln/min (G¼", 25 x 25mm)									C	2										
	10 lln/min									C	3										
	20 lln/min									C	4										
	50 lln/min									C	5										
	Customer-specific (Divider C, up to 60 lln/min)									C	9										
	50 lln/min (G½", 35 x 35mm)									D	2										
	100 lln/min									D	3										
	200 lln/min									D	4										
	450 lln/min									D	5										
	Customer-specific (Divider D, up to 450lln/min)									D	9										
Instruments version	Standard (±1.0% full scale, 1 : 50)									S											
	Hi-Performance (±0.3% full scale, ±0.5% reading, 1 : 100)									T											
	Customer-specific / OEM									K											
Materials (Body, seals)	Aluminium, FKM**									A											
	Aluminium, EPDM									B											
	Stainless steel, FKM									S											
	Stainless steel, EPDM									T											
	Customer-specific / OEM									K											
Analog signals (Output)	Current 4..20 mA**																			B	
	Current 0..20 mA																			C	
	Voltage 0..5 V																			D	
	Voltage 1..5 V																			E	
	Voltage 0..10 V																			F	
	Voltage 2..10 V																			G	
	Customer-specific / OEM																			K	
Analog output signals pressure transmitter	Current 4..20 mA**																			B	
	Current 0..20 mA																			C	
	Voltage 0..5 V																			D	
	Voltage 1..5 V																			E	
	Voltage 0..10 V																			F	
	Voltage 2..10 V																			G	
	Not defined																			N	
	Customer-specific / OEM																			K	
Control valve (integrated)	Nozzle 0.1 mm																			2	1
<i>defined by manufacturer</i>	Nozzle 0.2 mm																			2	2
	Nozzle 0.5 mm																			2	3
	Nozzle 1.2 mm																			2	6
	Nozzle 4.5 mm																			1	2
	Nozzle 8.0 mm																			1	3
	Valve not defined																			8	8
	Valve mounted																			9	5
	Customer-specific / OEM																			9	9
	No valve																			0	0
Type code		G	S	-																	

**Standard

Do you have any questions about our products?

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