

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.

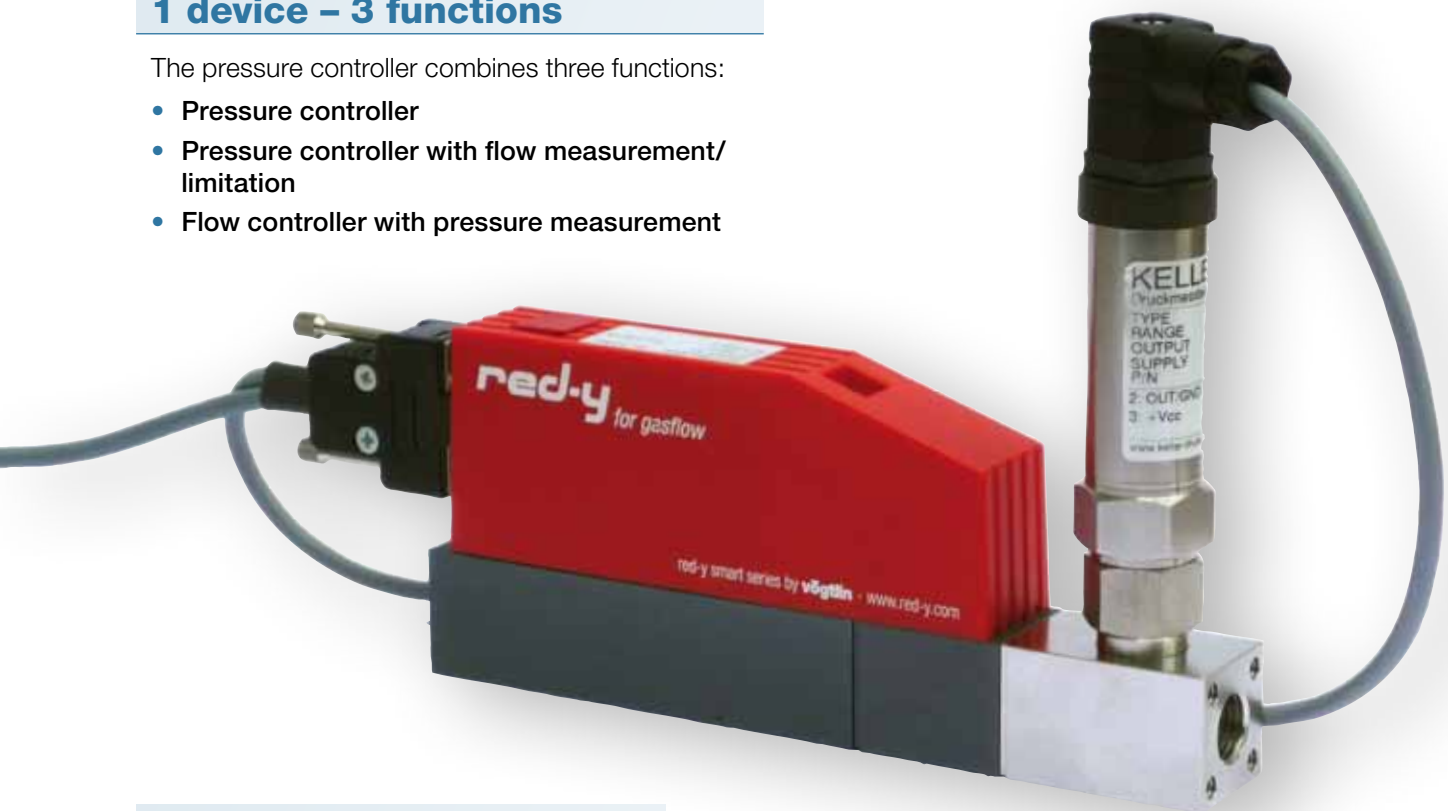
The devices automatically control a predefined process pressure and at the same time measure and/or limit the flow rate.

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

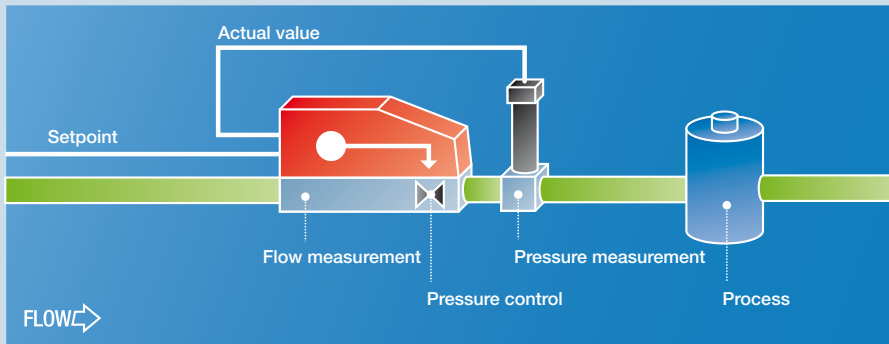
The pressure controllers combine the innovative equipment design of the red-y smart series with the development competence of Vögtlin Instruments AG.

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



Pressure control

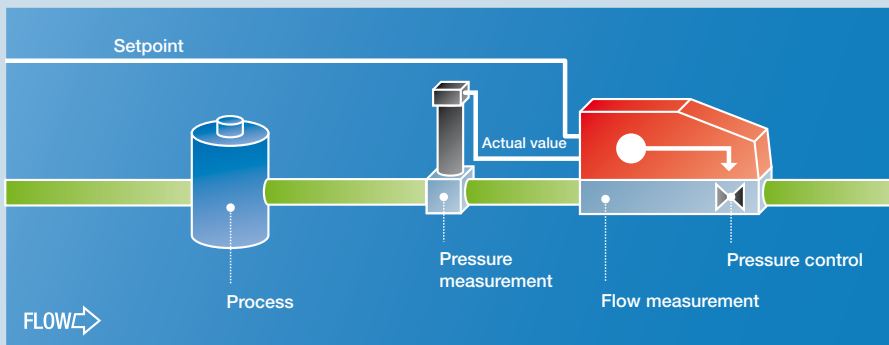
In this application the electronic pressure controller regulates a digitally specified set pressure value. The flow rate depends on the process consumption. Maximum flow limitation enables pressure control of stable gas mixtures, for example.



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

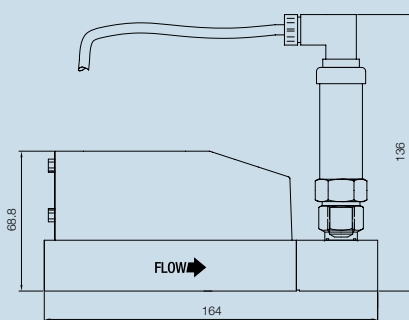
Connection cables, power supplies, software «get red-y»

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.

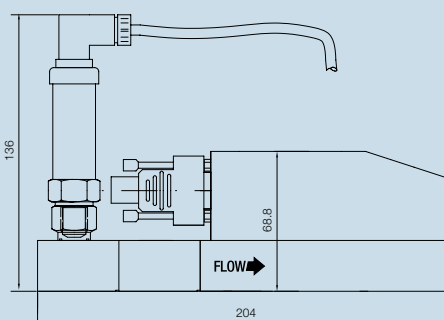
Fittings, filters

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)	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 G $\frac{1}{4}$ " G $\frac{1}{4}$ " G $\frac{1}{4}$ " G $\frac{1}{2}$ "
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 lN/min, G $\frac{1}{2}$ " 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			

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 500mln/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 5'000mln/min)								B	9																				
	5 l n/min (G¼", 25 x 25mm)								C	2																				
	10 l n/min								C	3																				
	20 l n/min								C	4																				
	50 l n/min								C	5																				
	Customer-specific (Divider C, up to 50 l n/min)								C	9																				
	50 l n/min (G½", 35 x 35mm)								D	2																				
	100 l n/min								D	3																				
	200 l n/min								D	4																				
	450 l n/min								D	5																				
	Customer-specific (Divider D, up to 450l n/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											
Full scale of pressure range	Gauge pressure 0.5 bar g																			Q										
	Gauge pressure 1 bar g																			R										
	Gauge pressure 2 bar g																			S										
	Gauge pressure 5 bar g																			T										
	Gauge pressure 10 bar g																			U										
	Absolute pressure 1.2 bar a																			V										
	Absolute pressure 2 bar a																			W										
	Absolute pressure 5 bar a																			X										
	Absolute pressure 10 bar a																			Y										
	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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You will find your local Vögtlin sales partner on the internet:

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