

red-y smart PRESSURE CONTROLLER



Electronic pressure controller with integrated flow measurement

The new electronic red-y smart pressure controllers combine the reliable technology of our 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.

Pressure and flow in a single device:

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: ± 0.5 % of full scale
- Integrated back pressure control
Accuracy: ± 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.

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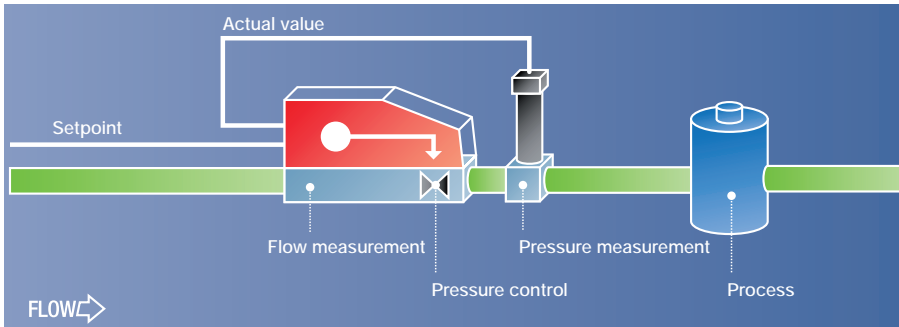


red-y smart PRESSURE CONTROLLER

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.

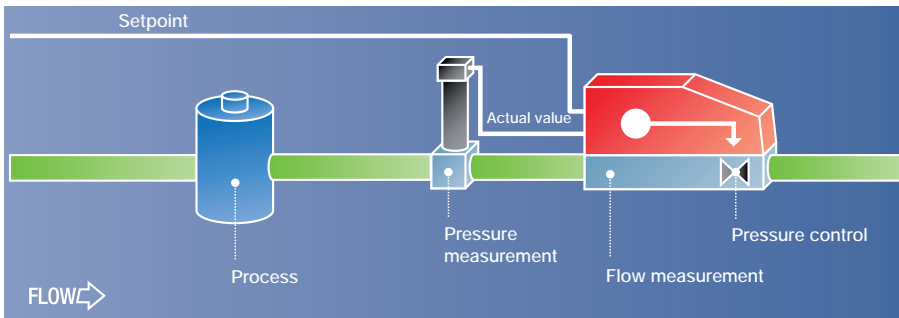


Application example:

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

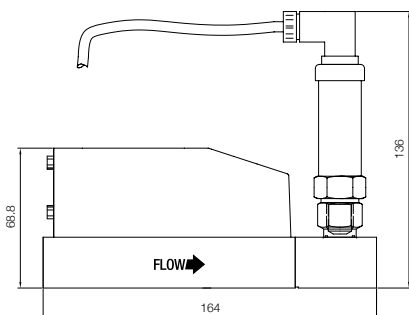
Connection cables, power supplies, software «get red-y»

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.

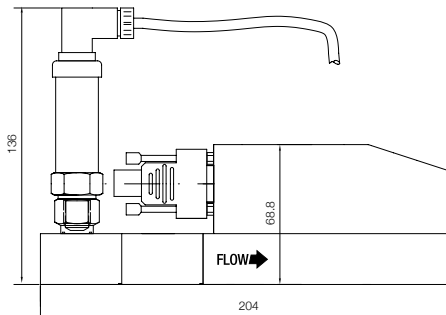
Fittings, filters

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

Dimensions G $\frac{1}{4}$ " (Dimensions G $\frac{1}{2}$ " on request)





red-y smart pressure controller GSP



red-y smart back pressure controller GSB

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red-y smart PRESSURE CONTROLLER

Technical Data		
Instrument types		
	red-y smart pressure controller GSP Electronic pressure controller Pressure controller with external transmitter and customer-specific solutions on request	red-y smart back pressure controller GSB Electronic back pressure controller
Instrument versions flow	«Standard» – The economic solution	
	Accuracy: $\pm 1.0\%$ of full scale Turndown ratio: 1 : 50	
Instrument versions pressure	«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 _n /min / GSC < 150 l _n /min (air)	
Measuring ranges flow (Air)	Pressure control Accuracy: $\pm 0.5\%$ of full scale	
	Back pressure control Accuracy: $\pm 0.5\%$ of full scale	
Measuring ranges pressure	Differential pressure controller according to customer specifications	
	Full scale freely selectable	Type Measuring range (Air) Connection
Performance data	pressure controller GSP	GSX-A from 0...25 ml _n /min to 0...600 ml _n /min G¼"
	back pressure controller GSB	GSX-B from 0...600 ml _n /min to 0...6000 ml _n /min G¼"
Integration	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	
Safety	Output signals	
	analog (for actual value flow only)	0..20 mA, 4..20 mA, 0..5 V, 1..5 V, 0..10 V, 2..10 V
	digital (for pressure and flow)	RS-485; Modbus RTU (Slave); Lab View-VI's available Option: ProfiBus DP-V0, DP-V1
	Process connection	G¼" female less than 60 l _n /min, G½" female less than 450 l _n /min
	Inlet section	None required
Safety	Electrical connection	Sub D plug, 9 pole
	Mounting orientation	Any orientation (horizontal only above 5 bar)
	Test pressure	16 bar a
	Leak rate	< 1 x 10 ⁻⁶ mbar l/s He
	Environmental protection	IP-50
Safety	EMC	EN 61326-1

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red-y smart PRESSURE CONTROLLER

Type code											
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	
	1'000 mln/min								B	3	
	2'000 mln/min								B	4	
	5'000 mln/min								B	5	
	Customer-specific (Divider B, up to 6'000mln/min)								B	9	
	5 ln/min (G¼", 25 x 25mm)								C	2	
	10 ln/min								C	3	
	20 ln/min								C	4	
	50 ln/min								C	5	
	Customer-specific (Divider C, up to 60 ln/min)								C	9	
	50 ln/min (G½", 35 x 35mm)								D	2	
	100 ln/min								D	3	
	200 ln/min								D	4	
	450 ln/min								D	5	
Customer-specific (Divider D, up to 450ln/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	
	Kundenspezifisch / 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) defined by manufacturer	Nozzle 0.1 mm									2	1
	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

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