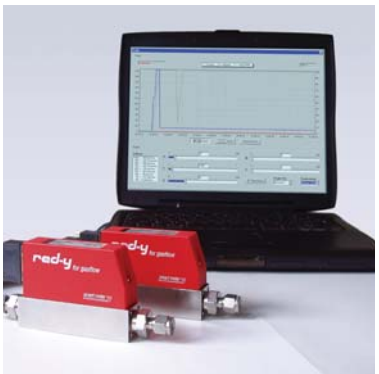
Fast, accurate, flexible... all this as standard

The thermal mass flow meters and controllers of the smart series are especially well suited for measurement and control applications in industry and process as well as for customer-specific OEM applications. The products are provided with a multitude of features which can be easily optimized to meet a customer's individual requirements.

***smart controller GSC** G1/4"*

MFC with standard digital and analog output and integrated control valve



Software 'get red-y'

Runs on any PC with Windows operating system

Instrument characteristics

- ***Digital and analog interface as standard***
- ***Insensitive to pressure and temperature changes***
- ***CMOS sensor technology***
- ***Short response time for meters and controllers***
- ***High accuracy and turndown ratio***
- ***Minimum pressure loss***
- ***Temperature measurement as standard (digital)***
- ***Compact design, simple installation***
- ***Easy to service and maintain***
- ***Materials: Aluminium or stainless steel***
- ***3-year warranty***

Instrument versions

standard: The economic solution
hi-performance: With highest accuracy and turndown ratio

Software 'get red-y'

With the free software *'get red-y'*, the thermal mass meters and regulators of the *red-y smart series* easily communicate with your computer:
With a mouse click, you define the function parameters, record measuring data and optimize your application in just a few steps.

Applications

Thanks to their modular design, suitability for mounting in any position, exceptional ease of cleaning (without recalibration), and innovative CMOSens™ technology, the flowmeters of the *red-y* family are extremely attractive for a wide range of applications:

Analyzers, surface coating installations, semiconductor production, welding, lasers, furnaces, burners, fuel cells, fermenters, machinery manufacture, gas distribution systems, compressed air systems, laboratory use, etc.

swiss technology made by vögtlin

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vögtlin instruments

Version 0505en

Instrument types

smart meter GSM	Thermal mass flow meter
smart controller GSC	Thermal mass flow meter with integrated control valve
smart flowmodul GSF	Thermal mass flow meter & controller for OEM

Instrument versions

	standard	**hi-performance**
Accuracy	+/- 1,5% of full scale	+/- 0,3% of full scale and +/- 0,5% of reading
Turndown ratio	1 : 30	1 : 100 (higher on request)

Performance data

Media	Air, O2, N2, He, Ar, CO2, H2, CH4, C3H8, N2O, SF6, C3H6, CO, C4H10, etc.
Response time	< 150 ms (within specified accuracy)
Power supply	+ 24 Vdc +10% / -5%
Current consumption	Meter: about 60 mA (power 1,6 W)
	Controller: about 170 mA (power 4 W)
Pressure	Up to 10 bar g
Temperature	0 – 50°C
Materials	Aluminium, optional stainless steel electropolished, flow element PBT
Seals	FKM, optional EPDM
Pressure sensitivity	< 0.2%/bar

Measuring ranges

Type	Range	Connection	Type	Range	Connection
GSM-A	25 ... 500 mln/min	G1/4“	GSC-A	25 ... 500 mln/min	G1/4“
GSM-B	500 ... 5000 mln/min	“	GSC-B	500 ... 5000 mln/min	“
GSM-C	5 ... 50 ln/min	“	GSC-C	5 ... 50 ln/min	“
GSM-D	50 ... 200 ln/min	G1/2“	GSC-D	50 ... 200 ln/min	G1/2“

Other gases see price list (Real gas calibration)

Integration

Output signals	
analog	4 – 20 mA, 0 – 5 V, 0 – 10 V, 0 – 20 mA, 1 – 5 V, 2 – 10 V
digital	RS-485 (Modbus RTU protocol) for flow and temperature
Process connection	Up to 50 ln/min G 1/4", up to 200 ln/min G 1/2" female threads
Inlet section	None required
Electrical connection	Sub D plug, 9 pole
Mounting position	Any position, from 5 bar horizontal

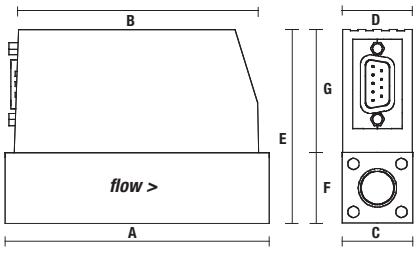
Safety

Test pressure	1,5 x max. operating pressure
Leak rate	Meter < 1 x 10^{-8} mbar l/s He, Controller < 1 x 10^{-6} mbar l/s He
Environmental protection	IP-50
EMC	EN 50081, EN 50082

Software ‘get red-y’

Reading the actual values (flow, temperature)
Adjusting the control parameters – Changing gases
Option: Recording of measuring data via a logging functions

Dimensions



(Dimensions in mm)

	A	**B**	**C**	**D**	**E**	**F**	**G**
smart meter G1/4”	94	87	25	25	69	25	44
smart meter G1/2”	145	87	35	25	79	35	44
smart controller G1/4”	124	117	25	25	69	25	44
smart controller G1/2”	170	117	35	25	79	35	44
smart flowmodul	-	87	-	25	-	-	44

Subject to technical alterations