

Description	Thermal mass flow meter and regulator based on CMOS sensor technology. For battery operation or 24V DC supply. Pressure and temperature-insensitive according to the CTA constant-temperature principle. Insensitive to pressure picks.		
Media	air, as option O ₂ , N ₂ , He, Ar, CO ₂ , CH ₄ , C ₃ H ₈ , N ₂ O, SF ₆ , C ₃ H ₆ , CO, C ₄ H ₁₀		
Mount. position	any, > 5 bar horizontal	Front side	48 x 96 mm
Response time	500 ms at 99% accuracy	Operat. pressure	max. 10 bar
Battery	Lithium-type AA, 2-year life	Supply voltage	24V DC ±10%
Heat-up period	30 min. max. accuracy	Temperature	0 °C to 50 °C
Leak rate	< 1x10 ⁻⁸ mbar l/s He	Accuracy	< 1 % FS
Flow switch	SPDT 24V, 1 A, potential-free, for max. and min. signal, adjustable over range. Failsafe mode and alarm suppression can be enabled. Alarm retardation 0-180 s, without hysteresis. Alarm re-set manual or automatic.		
Materials	Body of aluminium, nickelized brass, SST; elastomer of Viton or EPDM/PTFE as option, sensor of PBT		

display regulator

1% accuracy for air or gas
2 - 100 ml / 200 l/min

Dimenisons				Operating pressure max. bar	Connection thread G	Flow rate ml/min / l/min	Order number
B	H	T	C				

Flow meter				aluminium body, Viton, 1% accuracy LCD display, battery life 2 years	VGM*		
114	44	44	25x25	10 bar	G 1/4	2... 100 ml/min 4... 200 ml/min 10... 500 ml/min	VGM - A1 VGM - A2 VGM - A5
						0.02... 1 l/min 0.04... 2 l/min 0.1 ... 5 l/min 0.2 ... 10 l/min 0.4 ... 20 l/min	VGM - B1 VGM - B2 VGM - B5 VGM - C1 VGM - C2
						1... 50 l/min	VGM - C5
160	54	54	35x30	10 bar	G 1/2	2... 100 l/min 4... 200 l/min	VGM - D1 VGM - D2



flow meter portable VGM

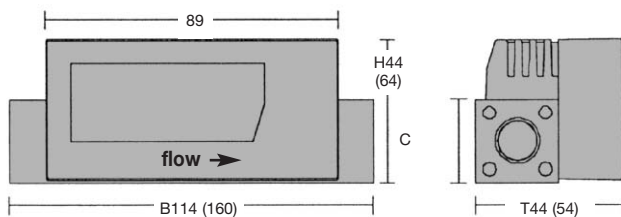
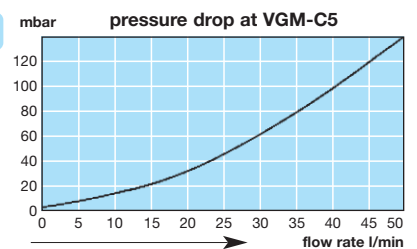
Flow regulator				LCD display and regulator, Viton, 1% accuracy aluminium body / battery life 2 years	VGR*		
114	44	44	25x25	10 bar	G 1/4	2... 100 ml/min 4... 200 ml/min 10... 500 ml/min	VGR - A1 VGR - A2 VGR - A5
						0.02... 1 l/min 0.04... 2 l/min 0.1 ... 5 l/min 0.2 ... 10 l/min 0.4 ... 20 l/min	VGR - B1 VGR - B2 VGR - B5 VGR - C1 VGR - C2
						1... 50 l/min	VGR - C5
						2... 100 l/min	VGR - D1
160	54	54	35x30	10 bar	G 1/2	4... 200 l/min	VGR - D2



flow regulator with display VGR

Special options add the appropriate letter

flow switch	alarm min - max, SPDT 1A, including 24 V DC connection	VG . . . G.
stainless steel	body of SST316, sensor of PBT, VGM	VGM - . . S
stainless steel	body of SST316, sensor of PBT, VGR	VGR - . . S
EPDM	elastomere	VG . . . E
24V DC	external feed	VG . . . 2
panel mounting	48x96 mm, protection class IP65	VG . . . T
calibration	or special range or certificate	VG . . . Z



VGR regulator
T + 25 mm
for knob of
regulator
() for G 1/2

real-gas calibration		
gas		max. l/min
nitrogen	N ₂	200
oxygen	O ₂	200
argon	Ar	100
helium	He	200
hydrogen	H ₂	100
carbon dioxide	CO ₂	75
propane	C ₃ H ₈	100
butane	C ₄ H ₁₀	100
methane	CH ₄	100

* Indicate on order: • media e.g.: • outlet pressure (standard 0 bar) • max. flow • temperature (standard 20 °C) • supply pressure • viscosity / density

Order example:
VGR - C4 air, 20 l/min, P₁: 4 bar