

ICENTA

V-Flow Line product information



Variable area flowmeters and high-precision control valves for gases and liquids

ICENTA 

In Partnership with

vögtlin 
instruments

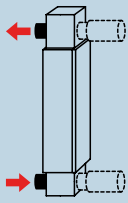
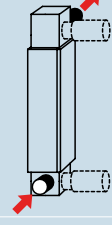
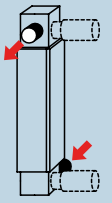
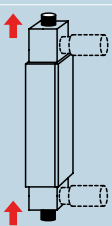
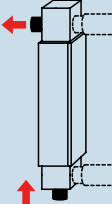
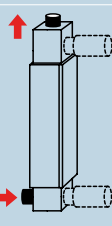
Technical specifications variable area flowmeters V-100

Features	Construction	Short mounting length, 3 instrument sizes
	Connections	Rear, lateral or axial
	Scale	Millimetric scale, direct reading scale and customer-specific scale. The scales are highly wear-resistant
	Float type	Spherical
	Valve	Precisely adjustable, 15-turn micro valve, practically hysteresis-free The control range (Kv-value) is optimized for the full scale
	Body material	Aluminium or stainless steel
	Seals material	FKM, EPDM or FFKM
	Customization	We provide customer-specific versions

Instrument versions	Setup	Type S* (Standard setup) Setup L, R, A, T and O (see below)
	Material	Anodized aluminium/Nickelized brass (valve)/FKM Stainless steel/FKM Stainless steel/EPDM Stainless steel /FFKM
	Connection	G 1/4" female* G 1/8" female G 1/4" female for compression fittings NPT 1/4" female
	Valve at inlet* or outlet	With standard knob* Without valve

Technical data	Type	V-100 55	V-100 80	V-100 140
	Turndown ratio	10:1	10:1	10:1
	Accuracy in % of full scale	±5%	±4%	±2%
	Measuring tube length	55 mm	80 mm	140 mm
	Scale length	40 mm	65 mm	120 mm
	Float	spherical	spherical	spherical
	Max. pressure	20 bar	20 bar	16 bar
	Max. temperature	100 °C	100 °C	100 °C
	Max. pressure drop	20 mbar	20 mbar	30 mbar

Options	Calibration report (factory certificate)
	Additional flow rate table for mm-scale
	Laboratory base
	Back cover (milky plexiglass)
	Limit switch: min. limit switch, max. limit switch
	Relays 24 Vdc for limit switch, relays 230 Vac for limit switch
	Hose connectors PVC
	Customized measuring tube scale

Setup	Setup S (standard)	Setup L (stainless-steel only)	Setup R (stainless-steel only)
			
	Setup A (stainless-steel only)	Setup T (stainless-steel only)	Setup O (stainless-steel only)
			

Measuring ranges variable area flowmeters V-100

The measuring tubes are available with three different scales:

1. Measuring range for direct reading scales – Standard scales						
Medium	Air					
Reference conditions	ln/h / 1.21 bara / 20 °C			mln/min / 1.013 bara / 20 °C		
	V-100 55	V-100 80	V-100 140	V-100 55	V-100 80	V-100 140
	0.12 – 1.2	0.12 – 1.2	–	–	10 – 120	10 – 100
	0.2 – 2	0.2 – 2	0.2 – 2	–	20 – 240	40 – 220
	0.3 – 3	0.3 – 3	0.3 – 3	–	60 – 640	50 – 540
	0.5 – 5	0.5 – 5	0.5 – 5			
	0.8 – 8	0.8 – 8	0.8 – 8			
	1.6 – 16	1.6 – 16	1.6 – 16	ln/min / 1.013 bara / 20 °C		
	4 – 40	4 – 40	4 – 40	V-100 55	V-100 80	V-100 140
	6 – 60	6 – 60	6 – 60	–	0.1 – 1	0.1 – 1
	10 – 100	10 – 100	10 – 100	–	0.3 – 2.2	0.2 – 2.2
	25 – 250	25 – 250	25 – 250	–	0.5 – 5	0.5 – 6.0
	50 – 500	50 – 500	50 – 500	–	2 – 10	1.5 – 10.5
	80 – 800	80 – 800	80 – 800	–	2 – 20	2 – 26
	120 – 1200	120 – 1200	120 – 1200	–	4 – 32	6 – 51
	140 – 1400	–	140 – 1400			
	–	–	200 – 2000			
Medium	Water					
Reference conditions	l/h / 20 °C					
	V-100 55	V-100 80	V-100 140			
	0.25 – 2.5	–	0.25 – 2.5			
	0.5 – 5	–	0.5 – 5			
	–	–	1.2 – 12			
	2.5 – 25	–	2.5 – 25			
	4 – 40	–	4 – 40			
	6 – 60	–	6 – 60			
	7 – 70	–	7 – 70			

2. Measuring range for mm scales (with flow table) – For varying operating conditions (temperature, pressure, medium)				
Medium	Air		Water	
Reference conditions	ln/h / 1.21 bara / 20 °C		l/h / 20 °C	
Measuring range	smallest	highest	smallest	highest
V-100 80	0.04 – 1.75	100 – 5000	0.0005 – 0.015	10 – 100
V-100 140	0.15 – 2.25	500 – 5000	0.001 – 0.018	12 – 150

- ### 3. Customer-specific scales
- For customer-specific scales please provide the following specifications:
- Medium, mixture if applicable and max. flow
 - Pressure in bar, absolute (only required for gases)
 - Medium temperature, if applicable medium viscosity and density

Dimensions variable area flowmeters V-100

The drawing shows two views of the flowmeter. The left view is a side profile with dimensions A (total height), B (height to the top fitting), and C (height to the bottom fitting). The right view is a front view showing the internal scale and a diameter of 25 mm. Various fittings and a blind nipple are also shown with their respective dimensions and thread depths.

Type	Dimensions in mm		
	A	B	C
V-100 55	120.5	89.5	61.5
V-100 80	145.5	114.5	86.5
V-100 140	205.5	174.5	146.5
Fittings		D	Thread depth
G1/4" female		12	7
G1/8" female		12	8
G1/4" female for compression fittings		17	12
NPT 1/4"		16	9
Blind nipple (setup L & R only)		5.5	–

Find detailed dimensions in the V-Flow Line manual

