

## V-100 product information

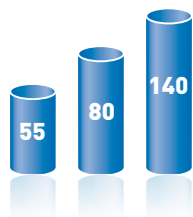


Variable area flowmeters  
for gases and liquids

# Wide-ranging and modular: Variable area flowmeters V-100

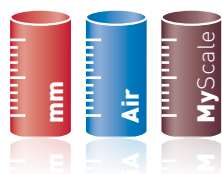
Highly modular and adaptable for almost any requirement: Variable area flow meter with a wide range of options.

## Measuring tubes in 3 sizes



The flow meters are available with three different glass tube lengths

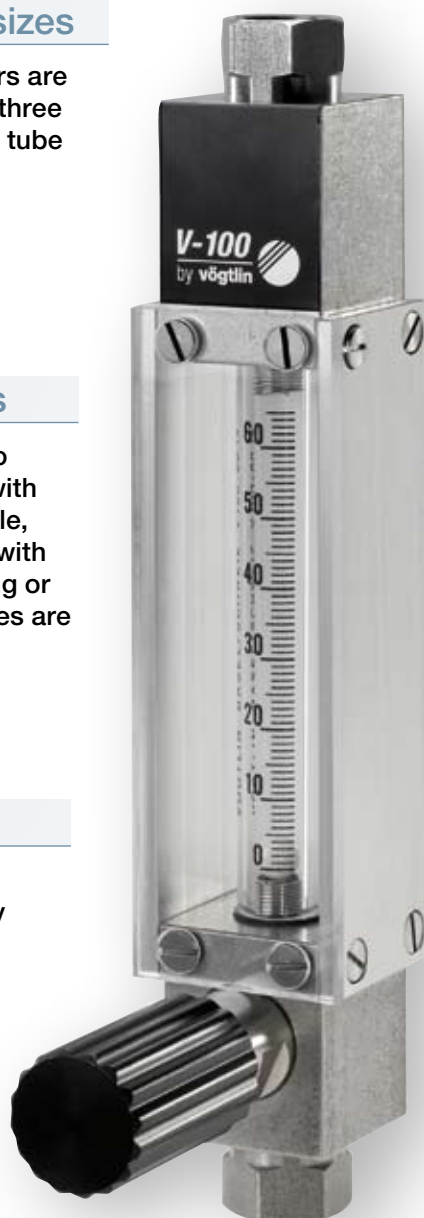
## Measuring tube scales



In addition to mm scales with flow rate table, glass tubes with direct reading or custom scales are available

## Precise control valves

The devices are equipped with precise, hysteresis-free 15-way control valves. The valves are tightly closing



## Different device setups



In addition to standard rear ports, devices with lateral and vertical ports are available

## Aluminium or stainless steel



The bodies are available in aluminium or stainless steel. Sealing materials FKM or EPDM

## Various instruments options

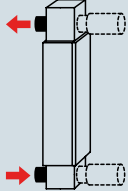

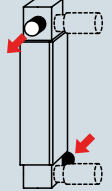
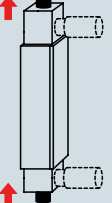
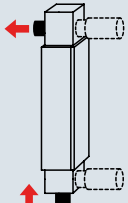
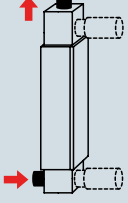
We offer a range of options for the flow meters:

- Laboratory base
- Limit contact (inductive)
- Adaptation to customized gas line routing



Variable area flowmeters V-100 140 with laboratory base

# Technical specifications variable area flowmeters V-100

<b>Features</b>	<b>Construction</b>	Short mounting length, 3 instrument sizes		
	<b>Connections</b>	Rear, lateral or axial		
	<b>Scale</b>	Millimetric scale, direct reading scale and customer-specific scale. The scales are highly wear-resistant		
	<b>Float type</b>	Spherical		
	<b>Valve</b>	Precisely adjustable, 15-turn micro valve, practically hysteresis-free The control range (Kv-value) is optimized for the full scale		
	<b>Body material</b>	Aluminium or stainless steel		
	<b>Seals material</b>	FKM, EPDM or FFKM		
	<b>Customization</b>	We provide customer-specific versions		
<b>Instrument versions</b>	<b>Setup</b>	Type S* (Standard setup) Setup L, R, A, T and O (see below)		
	<b>Material</b>	Anodized aluminium/Nickelized brass (valve)/FKM Stainless steel/FKM Stainless steel/EPDM Stainless steel /FFKM		
	<b>Connection</b>	G 1/4" female* G 1/8" female G 1/4" female for compression fittings NPT 1/4" female		
	<b>Valve at inlet* or outlet</b>	With standard knob* Without valve		
<b>Technical data</b>	<b>Type</b>	<b>V-100 55</b>	<b>V-100 80</b>	<b>V-100 140</b>
	<b>Turndown ratio</b>	10:1	10:1	10:1
	<b>Accuracy in % of full scale</b>	±5%	±4%	±2%
	<b>Measuring tube length</b>	55 mm	80 mm	140 mm
	<b>Scale length</b>	40 mm	65 mm	120 mm
	<b>Float</b>	spherical	spherical	spherical
	<b>Max. pressure</b>	20 bar	20 bar	16 bar
	<b>Max. temperature</b>	100 °C	100 °C	100 °C
<b>Max. pressure drop</b>	20 mbar	20 mbar	30 mbar	
<b>Options</b>	<b>Calibration report (factory certificate)</b>			
	<b>Additional flow rate table for mm-scale</b>			
	<b>Laboratory base</b>			
	<b>Back cover (milky plexiglass)</b>			
	<b>Limit switch: min. limit switch, max. limit switch</b>			
	<b>Relays 24 Vdc for limit switch, relays 230 Vac for limit switch</b>			
	<b>Hose connectors PVC</b>			
	<b>Customized measuring tube scale</b>			
<b>Setup</b>	<b>Setup S (standard)</b>	<b>Setup L</b>	<b>Setup R</b>	
				
	<b>Setup A (stainless-steel only)</b>	<b>Setup T (stainless-steel only)</b>	<b>Setup O (stainless-steel only)</b>	
				

\*Standard – Subject to technical alterations

# 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	ln/min / 1.013 bara / 20 °C		
	0.8 – 8	0.8 – 8	0.8 – 8	V-100 55	V-100 80	V-100 140
	1.6 – 16	1.6 – 16	1.6 – 16	–	0.1 – 1	0.1 – 1
	4 – 40	4 – 40	4 – 40	–	0.3 – 2.2	0.2 – 2.2
	6 – 60	6 – 60	6 – 60	–	0.5 – 5	0.5 – 6.0
	10 – 100	10 – 100	10 – 100	–	0.2 – 10	1.5 – 10.5
	25 – 250	25 – 250	25 – 250	–	2 – 20	2 – 26
	50 – 500	50 – 500	50 – 500	–	4 – 32	6 – 51
	80 – 800	80 – 800	80 – 800	–	–	–
	120 – 1200	120 – 1200	120 – 1200	–	–	–
	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	–	1.2 – 12			
	2.5 – 25	–	2.5 – 25			
	4 – 40	–	4 – 40			
	6 – 60	–	6 – 60			
	7 – 70	–	7 – 70			

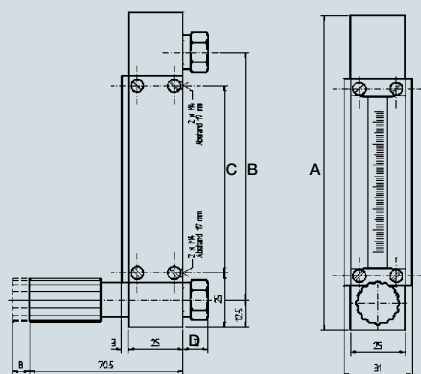
2. Measuring range for mm scales (with flow table) – For varying operating conditions (temperature, pressure, medium)				
Medium	Air		Water	
Reference conditions	ln/h / 1.21 bara / 20 °C		l/h / 20 °C	
Measuring range	smallest	highest	smallest	highest
V-100 80	0.04 – 1.75	100 – 5000	0.0005 – 0.015	10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

Type	Dimensions in mm		
	A	B	C
V-100 55	102.5	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



# Type code variable area flowmeters V-100

<b>Instrument type</b>	V-100	F	L	V																
<b>Instrument size</b>	55									A										
	80									B										
	140									C										
<b>Materials (body, seals)</b>	Aluminium/brass, FKM									S										
	Stainless steel, FKM									E										
	Stainless steel, EPDM									T										
	Stainless steel, FFKM									W										
	Customer-specific / OEM									K										
<b>Setup</b>	Setup S**									S										
	Setup L									L										
	Setup R									R										
	Setup A (stainless steel only)									A										
	Setup T (stainless steel only)									T										
	Setup O (stainless steel only)									O										
	Customer-specific / OEM									K										
<b>Valve (position)</b>	Valve at the inlet**									S										
	Valve at the outlet									A										
	Without valve									O										
	Customer-specific / OEM									K										
<b>Process connection (in- and outlet)</b>	G 1/4" female**																			S
	G 1/8" female																			B
	G 1/4" female (for compression fittings)																			C
	NPT 1/4" female																			D
	Customer-specific / OEM																			K
<b>Measuring tube scale</b>	Millimetric scale																			M
	Direct reading scale																			D
	Customer-specific / OEM																			K
<b>Options</b>	Additional flow rate table for mm-scale																			T
	Calibration report																			P
	Laboratory base																			F
	Back cover, plexiglass, milky																			R
	Min. limit switch																			G
	Max. limit switch																			I
	Relays 24 Vdc for limit switch																			J
	Relays 230 Vac for limit switch																			H
	Hose connectors PVC, G 1/4" / 4mm																			N
	Hose connectors PVC, G 1/4" / 6mm																			O
	Hose connectors PVC, G 1/4" / 8mm																			Q
	Customized measuring tube scale																			M
	Customer-specific / OEM																			K
<b>Type code</b>		F	L	V	-															

\*\* Standard

Please contact our sales for all questions concerning configuration settings and customized versions: **+41 61 756 63 00** or **sales@voegtlin.com**

Do you have any questions about our products? Give us a call:

**+41 (0) 61 756 63 00**

Or send us an e-mail:

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You will find your local Vögtlin sales partner on the internet:

**www.voegtlin.com**