

flow technology

Variable Area Flowmeters for Gases and Liquids



Welcome



Vögtlin Instruments is specialized in the development and the production of professional flow measuring and controller devices for gases and liquids.

This folder gives you an overview of the float type instruments for smaller flows made by Vögtlin Instruments. Application areas are mainly laboratories and device and system construction.

Our devices distinguish themselves by robustness, accuracy and modularity. To be mentioned in particular is the micro valve, which ensures fine adjustment of the control over the whole measuring range.

If your application requires a special version or other specifications, we will be happy to provide you with a no-obligation proposal. Customized versions are our speciality.

Yours sincerely,

Fabian V. Waltz, Marketing Manager

Innovations – Targeted to your needs

We make optimal use of advances in technology, always finding the best possible instrument for your applications.

Professionalism – In everything we do

Our trained specialists would be pleased to present you with a proposal corresponding to your requirements and the exact conditions of the job at hand.

Engagement – You determine the pace

With our flexible assembly division, our in-stock selection of standard instruments and our own calibration laboratory, we are able to promptly respond to your requests.

Competent consulting

Detailed information at no obligation: Our team of experts would be happy to answer any questions you may have by phone and prepare specific offers via fax or e-mail.

Consistent quality

With ISO 9001:2000 certification since 1996, our products and processes are subjected to continual quality controls. You always receive the same high-level performance, regardless of project size.

The Flow Series

Q-Flow Series

Q-Flow is a new, modern variable area flow meter for gases and liquids. The flow meter has been developed in active co-operation with users and combines our long experience with the requirements of practice. A Plug-in unit lets you plug in or remove the device from the front without loosening the connections. We are certain that we have a suitable solution for your application with an interesting price in our product range.

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V-100 Series

V-100 is a classical variable area flow meter for gases and liquids. It has been constantly perfected in active co-operation with users so that it was developed into a reliable measuring instrument that has proven itself many times. Note in particular the many models, the durable construction and the extensive options. We are certain that we have a suitable solution for your application in our product range.

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M-Flow Series

M-flow micro valves were developed for fine dosages of gases and liquids. They are an integrated constituent of the float-rotameters by Vögtlin and are often used as separate valve units for OEM applications. 5 different needle sizes permit an optimal control for any flow.

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New Digital Flowmeters

Are you also interested in **thermal mass flow meters & controllers**? At www.red-y.com, you will find the red-y for gasflow product line. The compact series with internal battery supply is the ideal solution for applications in which variable area flowmeters can also be used.

→ www.red-y.com



red-y compact regulator GCR

Q-Flow Series



Features

- **Construction:** Short mounting length, 3 unit sizes
- **Measuring module:** Plug in unit; can be plugged in or removed from the front without loosening the connections
- **Scale:** 3 Versions: mm scale, product scale or scale defined by you
The scales are attached with a special procedure and are wear-resistant
- **Floated type:** Spherical
- **Valve:** Finely adjustable, 15-turn micro valve, practically hysteresis-free
The setting range is adapted to the measuring range
- **Rotary knob:** 3 different versions are available (see page 8)
- **Fitting material:** Aluminium or stainless steel
- **Seal material:** FKM as standard, EPDM or Buna-N
- **Customization:** We also implement customized versions



Versions

* = Standard

Style	Standard* Installation into control panel, retracted Block assembly, block provided by the user Customized, custom design
Material	Aluminium / FKM* Stainless steel / FKM Stainless steel / EPDM
Connection	G 1/4" female* G 1/8" female NPT 1/4" female
Valve at input* or output	With standard knob* With Digi-knob, 100 Divisions With hex socket and locking nut Without valve

Technical data

Type	Q-Flow 55	Q-Flow 80	Q-Flow 140
Measuring range width	10:1	10:1	10:1
Accuracy in % of the final value	±5%	±4%	±2%
Graduated measuring glass 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, created on our calibration stand
- Device inscription with customer logo or plain
- Female hose connectors 6 mm or 8 mm, PVC

V-100 Series



Features

- Construction: Stable, modular, 4 unit sizes
- Ports: From the back, the side or axial
- Scale: 3 Versions: mm scale, product scale or scale defined by you
The scales are attached with a special procedure and are wear-resistant
- Float type: Spherical
- Valve: Finely adjustable, 15-turn precision valve, practically hysteresis-free
The setting range is adapted to the measuring range
- Fitting material: Aluminium or stainless steel
- Seal material: FKM as standard, EPDM, Buna-N or PTFE
- Customization: We also implement customized versions



Versions

* =Standard

Style	Type S* Or type Z, T or A (cf. page 7) With flow controllers for constant flow rate for varying pre-pressure or subsequent pressure
Material	Aluminium / FKM* Stainless steel / FKM Stainless steel / EPDM Stainless steel / PTFE / Chemraz
Valve	G 1/4" female* G 1/8" female* G 1/4" female for compression fitting NPT 1/4" female*
Valve at input* or output	With standard knob* With Digi-knob, 100 Divisions With hex socket and locking nut Without valve

Technical data

Type	V 100 – 55	V 100 – 80	V 100 – 140	V 100 – 300
Measuring range width	10:1	10:1	10:1	10:1
Accuracy in % of the final value	±5%	±4%	±2%	±1%
Graduated measuring glass length	55 mm	80 mm	140 mm	300 mm
Scale length	40 mm	65 mm	120 mm	285 mm
Float	spherical	spherical	spherical	spherical
Max. pressure	20 bar	20 bar	16 bar	10 bar
Max. temperature	100°C	100°C	100°C	100°C
Max. pressure drop	20 mbar	20 mbar	30 mbar	40 mbar

Options

- Calibration report, created on our calibration stand
- Device inscription with customer logo or plain
- Laboratory base
- Min. limit indicator: without relays, with relays 230 V/50 Hz, with relay 24 V
- Max. limit indicator: without relays, with relays 230 V/50 Hz, with relay 24 V
- Back cover, Plexiglass, milky
- Female hose connectors 6 mm or 8 mm, PVC
- Front plate for the installation of 1, 2 or 3 pc. V-100

Measuring range for product scale

* = on request

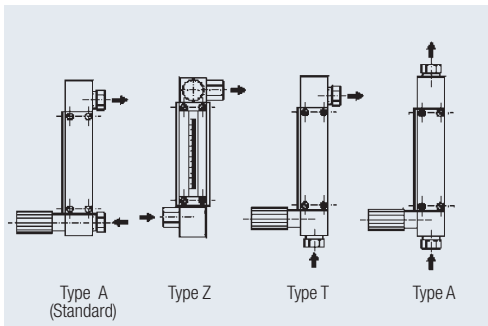
Medium	Air, NI/h				Water, l/h		
	1.21 bara, 20°C				20°C		
Type	V-100 55	V-100 80	V-100 140	V-100 300	V-100 55	V-100 140	V-100 300
Nr. 01	0.12 – 1.2	0.12 – 1.2	–	–	–	–	–
Nr. 02	0.2 – 2	0.2 – 2	0.2 – 2	–	–	–	–
Nr. 03	0.3 – 3	0.3 – 3	0.3 – 3	0.3 – 3	–	–	–
Nr. 04	0.5 – 5	0.5 – 5	0.5 – 5	0.5 – 5	–	–	–
Nr. 05	0.8 – 8	1 – 10	0.8 – 8	0.8 – 8	–	–	–
Nr. 06	1.6 – 16	1.6 – 16	1.6 – 16	1.6 – 16	–	–	–
Nr. 07	4 – 40	4 – 40	4 – 40	4 – 40	–	–	–
Nr. 08	6 – 60	6 – 60	6 – 60	6 – 60	0.25 – 2.5	0.25 – 2.5	0.7 – 7
Nr. 09	10 – 100	10 – 100	10 – 100	9 – 90	0.50 – 5	0.50 – 5	1 – 10
Nr. 10	25 – 250	25 – 250	25 – 250	14 – 140	1.2 – 12	1.2 – 12	1.6 – 16
Nr. 11	50 – 500	50 – 500	50 – 500	25 – 250	2.5 – 25	2.5 – 25	2.5 – 25
Nr. 12	80 – 800	80 – 800	80 – 800	30 – 300	4 – 40	4 – 40	4 – 40
Nr. 13	120 – 1200	120 – 1200	120 – 1200	42 – 420	6 – 60	6 – 60	–
Nr. 14	140 – 1400	–	140 – 1400	50 – 500	7 – 70	7 – 70	–
Nr. 15	–	–	200 – 2000	80 – 800	–	–	–

Measuring range for mm scale

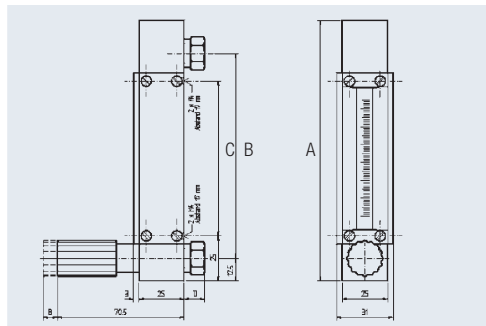
The mm scale with the corresponding flow table permits measurement of almost all media and medium mixtures.

Medium	Air, NI/h		Water, l/h	
Reference data	1.013 bara, 20°C		20°C	
Measuring Range	smallest	highest	smallest	highest
V-Flow 80	0.15 – 1.5	500 – 5000	0.002 – 0.02	17 – 170
V-Flow 140	0.2 – 2	500 – 5000	0.002 – 0.02	17 – 170
V-Flow 300	1.2 – 12	450 – 4500	0.002 – 0.025	20 – 150

Designs



Dimensional drawings (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
V-100 300	365.5	334.5	306.5

For the design of the graduated measuring glass, please give us 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

Please indicate your operating parameters. We will promptly propose you an optimal flow meter for your application.

M-Flow Series

Features

- Compact, modular construction
- Stable and precise regulation
- Leak-proof when closed
- Customer specific versions

Characteristics

- Aluminium or stainless steel
- Different seal materials
- Straight valve, corner valve or insert
- 15 turn spindle, no hysteresis
- Cw- or ccw-closing
- Max. pressure: 20 bar
- Temperature range -40 to +150°
- Flow Range min 0 – 10 NI/h, max 0 – 3100 NI/h with delta-p 1 bar



straight valve



corner valve

Versions

* = standard

Style	Straight valve Corner valve Valve insert without body
Material	Aluminium / FKM* Stainless steel / FKM Stainless steel / EPDM Stainless steel / PTFE / Chemraz
Connection	G 1/4" female* G 1/8" female G 1/4" female for compression fitting NPT 1/4" female
Regulation	With standard knob* Cw-* or ccw-closed With Digi-knob, 100 Divisions (ccw closed) With hex socket and locking nut

Graph

