

Variable Area Flowmeter

V31

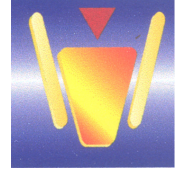
- Housing in stainless steel
- Borosilicate glass
- Only 4 Sealing rings
- Service kind construction
- Replace V16 / V15 / V30
- Limit switches (Options)
- Chip guard

Operating principle

The measuring element is composed of a float and a conical glass tube.

A medium flows from the bottom to the top through the measuring ring, lifting the float until the buoyancy force and the weight of the float establish equilibrium. The height of the float in the measuring ring is the measure of the flow. The flow rate is read directly from a scale inscribed on the glass.

The readings obtained apply solely to the medium for which the device has been calibrated or for a medium with the same density and viscosity.



Applications

The K(& metering device is used for flow metering, dosing, monitoring, and control of liquid and gas media in pipes. The scale on the device shows the flow rate expressed as volume or mass per unit of time.

Applications: flow metering, dosing, monitoring, and control of liquid and gas media.

- The device can be fitted with up to two limit switches for purposes of process monitoring.

Technical Data

| | | | |
|--|--|-----------------------------------|--|
| Measuring range | Turndown ratio | | 1:10 |
| | Smallest measuring range | Water | 3 - 30 l/h |
| | | Air | 36 - 360 NI/h |
| | Largest measuring range | Water | 1000 - 10000 l/h |
| | | Air | 18000 - 180000 NI/h |
| | Dimensions for measured variable | Water | l/h ≤ 2500 l/h |
| m ³ /h ≥ 3000 l/h | | | |
| Air | | l/h ≤ 40000 NI/h | |
| | | m ³ /h ≥ 50000 NI/h | |
| covered to 0 ° C and 1,013 bar abs | | | |
| Accuracy class (according to VDE/VDI 3513, sheet 2) | Liquids | | 1,6% |
| | Gases | | 2,5% |
| | | | q _G 50% |
| Flow direction | from bottom to top | | |
| Materials | Measuring tube | | Borosilicat glass |
| | Connections | | 1.4571, PVDF, PVC |
| | Float | | 1.4571, aluminium, PVDF |
| | Float guiding | | 1.4571 |
| | Seals | | Viton, EPDM, FEP/FFKM |
| | Float Stop | | PVDF / stainless steel |
| | Protection body | | 1.4301 |
| | Shatter protection | | Polycarbonat |
| Ambient conditions | Ambient temperature | | -20...+80 °C (-4...+176 °F) |
| | Ambient temperature PVC | | -20...+80 °C (-3...+176 °F) |
| | Storage temperature | | -20...+60 °C (-4...+140 °F) |
| | Climatic category | | Weatherproof and/or unheated operation site, class C according to DIN IEC 654 part 1 |
| | Shock resistance / vibration resistance | | The device should be protected against extreme shock and vibration, either of which could cause damage |
| Medium Conditions | Pressure Resistance | Ranges B1 bis C7 | max. 15 bar (at max. 80 °C ; 176 °F) |
| | | Ranges D1 bis D8 | max. 10 bar (at max. 80 °C ; 212 °F) |
| | | Ranges E1 bis E5 | max. 6 bar (at max. 80 °C ; 176 °F) |
| | | Connections in PVDF | max. 10 bar (at max. 20 °C ; 68 °F) |
| | | | max. 4 bar (at max. 40 °C ; 104 °F) |
| | | Connections in PVC | max. 2,5 bar (at max. 50 °C ; 122 °F) |
| | max. 10 bar (at max. 20 °C ; 68 °F) | | |
| | max. 4 bar (at max. 40 °C ; 104 °F) | | |
| | Media Temperature | Float material st.st. / Aluminium | -10° - +150 °C (+14° - +176 °F) |
| | | Float material PVDF | -10° - +100 °C (+14° - +176 °F) |
| | | PVC Glue connection | -10° - +50 °C (+14° - +122 °F) |
| | Status | liquid or gaseous | |
| | Density | Liquids | ≤ 2,0 kg/l |
| Gases | | - / - | |
| Inlet and outlet straight | Inlet and outlet straight are not required as long as the flow profile is laminar. On strongly non laminar flow profiles e.g. regulating and shutoff devices inlet straight of 250 mm, see also directive VDI/VDE 3513 | | |
| Pressure Loss | see measuring ranges | | |
| Limit contacts | Model | Switching type | Power |
| | K17A | reed contact N/O | AC 250 V/ 0,5 A / 10 VA |
| | K17B | reed contact N/C | DC 250 V/0,5 A / 5W |
| | K33 | reed contact SPDT | 250 V AC/DC/1,5A/150VA/100W |
| | K33i | inductive contact N/C | 5-25 V DC |



Measuring ranges

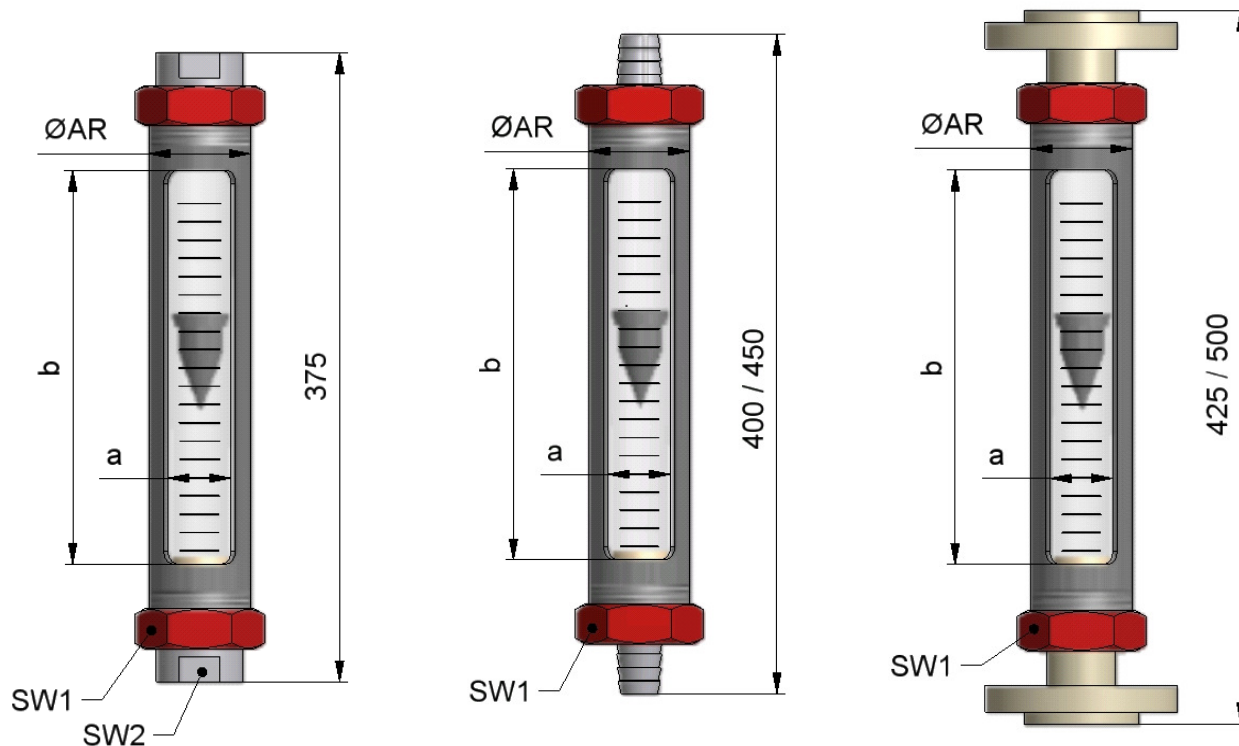
Liquids

| V31 model | Connection Sizes <u>Standard</u> | Ranges acc. Range code | Pressure loss mbar(psi) | Float 1.4571 c/w and w/o guiding | Float 1.4571+ magnet | Float 1.4571 - viscosity stable | Float PVDF weighted w. magnet |
|-----------|-----------------------------------|------------------------|-------------------------|--|----------------------|---------------------------------|-------------------------------|
| | | | | Standard ranges for liquids - l/h - (p=1kg/l(62,43 lb/cu.ft), viscosity 1 mPas(1cp)) (turndown ratio 1:10) | | | |
| S 04 | G 1/4" 3/8" 1/2" | B1 | 10 (0,145) | 3 - 30 | - | - | 1,1 - 11 |
| | | B2 | | 4 - 40 | - | - | 1,5 - 15 |
| | | B3 | | 5 - 50 | - | - | 2 - 20 |
| | | B4 | | 6,5 - 65 | - | - | 2,5 - 25 |
| | | B5 | | 8 - 80 | - | - | 3,2 - 32 |
| | | B6 | | 10 - 100 | - | - | 4 - 40 |
| S 05 | G 1/4" 3/8" 1/2" | C1 | 20 (0,290) | 12,5 - 125 | 12 - 120 | 10 - 100 | 6,5 - 65 |
| | | C2 | | 16 - 160 | 15 - 150 | 12,5 - 125 | 9 - 90 |
| | | C3 | | 20 - 200 | 18 - 180 | 16 - 160 | 11 - 110 |
| | | C4 | 40 (0,580) | 25 - 250 | 24 - 240 | 20 - 200 | 14 - 140 |
| | | C5 | | 31,5 - 315 | 30 - 300 | 24 - 240 | 17,5 - 175 |
| | | C6 | | 40 - 400 | 36 - 360 | 30 - 300 | 22 - 220 |
| | | C7 | | 50 - 500 | 48 - 480 | 36 - 360 | 25 - 250 |
| S 06 | G 1/2" 3/4" 1" | D1 | 19 (0,280) | 40 - 400 | 40 - 400 | - | 32 - 320 |
| | | D2 | | 65 - 650 | 60 - 600 | 40 - 400 | 50 - 500 |
| | | D3 | | 80 - 800 | 75 - 750 | 50 - 500 | 60 - 600 |
| | | D4 | | 100 - 1000 | 95 - 950 | 60 - 600 | 75 - 750 |
| | | D5 | | 120 - 1200 | 120 - 1200 | 75 - 750 | 100 - 1000 |
| | | D6 | 24 (0,350) | 160 - 1600 | 150 - 1500 | 100 - 1000 | 125 - 1250 |
| | | D7 | | 200 - 2000 | 180 - 1800 | 120 - 1200 | 160 - 1600 |
| | | D8 | 33 (0,480) | 250 - 2500 | 240 - 2400 | 140 - 1400 | 200 - 2000 |
| | | D9 | | 300 - 3000 | 280 - 2800 | 180 - 1800 | 240 - 2400 |
| S 07 | G 1" 1 1/4" 1 1/2" 2" | E1 | 25 (0,360) | 400 - 4000 | 380 - 3800 | 250 - 2500 | 320 - 3200 |
| | | E2 | | 500 - 5000 | 480 - 4800 | 300 - 3000 | 380 - 3800 |
| | | E3 | | 650 - 6500 | 640 - 6400 | 400 - 4000 | 500 - 5000 |
| | | E4 | | 800 - 8000 | 750 - 7500 | 450 - 4500 | 640 - 6400 |
| | | E5 | | 1000 - 10000 | 950 - 9500 | 550 - 5500 | 750 - 7500 |

Gases

| V31 model | Connection Sizes <u>Standard</u> | Ranges acc. Range code | Pressure loss mbar(psi) | Float Aluminum c/w and w/o guiding | Float Aluminum + magnet | Float PVDF | Float PVDF weighted w. magnet |
|-----------|-----------------------------------|------------------------|-------------------------|---|-------------------------|----------------|-------------------------------|
| | | | | Standard ranges for air - NI/h - (Pabs =1,013 bar(14,69psi) at T= 20 °C(68 ° F), p=1,293kg/m³, V=0,0181 mPas) (Turndown ratio 1:10) | | | |
| S 04 | G 1/4" 3/8" 1/2" | B1 | 4 (0,058) | 5 - 500 | - | 36 - 360 | - |
| | | B2 | | 65 - 650 | - | 50 - 500 | - |
| | | B3 | | 80 - 800 | - | 65 - 650 | - |
| | | B4 | | 110 - 1100 | - | 80 - 800 | - |
| | | B5 | | 140 - 1400 | - | 100 - 1000 | - |
| | | B6 | | 160 - 1600 | - | 125 - 1250 | - |
| S 05 | G 1/4" 3/8" 1/2" | C1 | 20 (0,290) | 200 - 2000 | 250 - 2500 | 150 - 1500 | 200 - 2000 |
| | | C2 | | 300 - 3000 | 320 - 3200 | 200 - 2000 | 300 - 3000 |
| | | C3 | | 360 - 3600 | 400 - 4000 | 250 - 2500 | 360 - 3600 |
| | | C4 | 40 (0,580) | 400 - 4000 | 500 - 5000 | 300 - 3000 | 450 - 4500 |
| | | C5 | | 500 - 5000 | 640 - 6400 | 360 - 3600 | 600 - 6000 |
| | | C6 | | 640 - 6400 | 800 - 8000 | 500 - 5000 | 700 - 7000 |
| | | C7 | | 800 - 8000 | 1000 - 10000 | 550 - 5500 | 950 - 9500 |
| S 06 | G 1/2" 3/4" 1" | D1 | 19 (0,280) | 750 - 7500 | 850 - 8500 | 520 - 5200 | 750 - 7500 |
| | | D2 | | 1000 - 10000 | 1200 - 12000 | 800 - 8000 | 1000 - 10000 |
| | | D3 | | 1300 - 13000 | 1500 - 15000 | 900 - 9000 | 1300 - 13000 |
| | | D4 | | 1600 - 16000 | 2000 - 20000 | 1200 - 12000 | 1600 - 16000 |
| | | D5 | | 2000 - 20000 | 2400 - 24000 | 1500 - 15000 | 2000 - 20000 |
| | | D6 | 24 (0,350) | 2800 - 28000 | 3200 - 32000 | 2000 - 20000 | 2800 - 28000 |
| | | D7 | | 3600 - 36000 | 4000 - 40000 | 2500 - 25000 | 3600 - 36000 |
| | | D8 | 33 (0,480) | 4000 - 40000 | 5000 - 50000 | 3000 - 30000 | 4000 - 40000 |
| | | D9 | | 5000 - 50000 | 6000 - 60000 | 3600 - 36000 | 5000 - 50000 |
| S 07 | G 1" 1 1/4" 1 1/2" 2" | E1 | 25 (0,360) | 6400 - 64000 | 7500 - 75000 | 5000 - 50000 | 6400 - 64000 |
| | | E2 | | 8000 - 80000 | 10000 - 100000 | 6500 - 65000 | 8000 - 80000 |
| | | E3 | | 10000 - 100000 | 12500 - 125000 | 8000 - 80000 | 10000 - 100000 |
| | | E4 | | 14000 - 140000 | 15000 - 150000 | 10000 - 100000 | 14000 - 140000 |
| | | E5 | | 16000 - 160000 | 18000 - 180000 | 12500 - 125000 | 16000 - 160000 |

Construction details



| V 31 | Body | | | | | Connection | | | | |
|-------|--------|----|-----|-----|-----|----------------|------------------|-------------------|----------------------------|-----------------------------------|
| Model | Ø AR | a | b | SW1 | SW2 | Female thread | Hose connector | Bonded connection | Flange | |
| S04 | Ø 33.7 | 19 | 235 | 39 | 24 | G / NPT | Ø 13, Ø 19 | DN 15 d = 20 mm | DN 10/15/20/25 PN 40 | ASME 1/4", 3/8", 1/2" 150 lb |
| S05 | | | | | | 1/4", 2", 1/2" | | | | |
| S06 | Ø 60.3 | 38 | 235 | 67 | 46 | G / NPT | Ø 19, Ø 25, Ø 38 | DN 32 d = 40 mm | DN 25/40 PN 40 | ASME 1", 1 1/2" 150 lb |
| S07 | Ø 88.9 | 58 | 235 | 100 | 65 | G / NPT | Ø 38, Ø 50 | DN 50 d = 63 mm | DN 40/50 PN 40 DN 65 PN 16 | ASME 1 1/2", 2", 2 1/2" 150 lb |

Standard connections are underlined

| Weights | Treaded conn. | | Flanged conn | |
|---------|---------------|--------|--------------|--------|
| S 04 | G 1/2 | 0,7 Kg | DN 15 | 2,0 Kg |
| S 05 | G 1/3 | 0,7 Kg | DN 15 | 2,0 Kg |
| S 06 | G 1 | 2,0 Kg | DN 25 | 3,9 Kg |
| S 07 | G 2 | 4,0 Kg | DN 50 | 8,9 Kg |

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VARIABLE AREA FLOWMETER

Glass Tube

(S04 / 30 - 100 l/h Water)

max. 15 bar

Temp. min. -10 °C, max. 80 °C

Accuracy: 2,5% Gas / 1,6% Liquid $q_G=50\%$



Description

Block Nr. 1,2,3,4,5,6

V31 -

Base price

| |
|--------|
| 40001F |
| 40001S |
| 40101F |
| 40101S |
| 40201F |
| 40201S |
| 60101F |
| 60101S |
| 60201F |
| 60201S |
| 60301F |
| 60301S |

| Thread | Length | connection - wetted parts |
|-------------|--------|---------------------------|
| G 1/4"(F) | 375 mm | PVDF |
| G 1/4"(F) | 375 mm | Stainless steel |
| G 3/8"(F) | 375 mm | PVDF |
| G 3/8"(F) | 375 mm | Stainless steel |
| G 1/2"(F) | 375 mm | PVDF |
| G 1/2"(F) | 375 mm | Stainless steel |
| NPT 1/4"(F) | 375 mm | PVDF |
| NPT 1/4"(F) | 375 mm | Stainless steel |
| NPT 3/8"(F) | 375 mm | PVDF |
| NPT 3/8"(F) | 375 mm | Stainless steel |
| NPT 1/2"(F) | 375 mm | PVDF |
| NPT 1/2"(F) | 375 mm | Stainless steel |

| |
|--------|
| 301B3S |
| 301B5S |
| 305B3F |
| 305B3S |
| 305B5F |
| 305B5S |
| 3A5B3F |
| 3A5B3S |
| 3A5B5F |
| 3A5B5S |
| 309B3F |
| 309B3S |
| 309B5F |
| 309B5S |
| 201R3F |
| 201R3S |
| 201R5F |
| 201R5S |
| 202R3F |
| 202R3S |
| 202R5F |
| 202R5S |
| 203R3F |
| 203R3S |
| 203R5F |
| 203R5S |

| Flange | Length | connection - wetted parts |
|-------------------------------------|--------|---------------------------|
| DN10 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN10 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN15 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN15 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN15 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN20 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN20 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN20 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN20 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| 1/2" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 1/2" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 3/4" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 3/4" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 3/4" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 3/4" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 1" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 1" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 1" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 1" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |

| |
|--------|
| 62102S |
| 62102F |
| 62152S |
| 62152F |

| Hose clip | Length | connection - wetted parts |
|--------------------------|--------|---------------------------|
| 1/2"- inner diameter Ø13 | 400 mm | Stainless steel |
| 1/2"- inner diameter Ø13 | 400 mm | PVDF |
| 3/8"- inner diameter Ø19 | 400 mm | Stainless steel |
| 3/8"- inner diameter Ø19 | 400 mm | PVDF |

| |
|----|
| 01 |
| 06 |
| 08 |
| 99 |

| Type of float, Material | guide rod 1.4571 |
|-------------------------|------------------|
| Stainless steel 1.4571 | without |
| PVDF - weighted | without |
| Aluminium 3.1645 | without |
| Special Customer Demand | |

| |
|-----|
| B1W |
| B2W |
| B3W |
| B4W |
| B5W |
| B6W |

| Measuring range - stainless steel float (not guided) | |
|--|------------------|
| H2O: 3 - 30 l/h | 1000kg/m³, 1mPas |
| H2O: 4 - 40 l/h | 1000kg/m³, 1mPas |
| H2O: 5 - 50 l/h | 1000kg/m³, 1mPas |
| H2O: 6,5 - 65 l/h | 1000kg/m³, 1mPas |
| H2O: 8 - 80 l/h | 1000kg/m³, 1mPas |
| H2O: 10 - 100 l/h | 1000kg/m³, 1mPas |

| |
|-----|
| B1W |
| B2W |
| B3W |
| B4W |
| B5W |
| B6W |

| Measuring range - PVDF float (weighted) | |
|---|------------------|
| H2O: 1,1 - 11 l/h | 1000kg/m³, 1mPas |
| H2O: 1,5 - 15 l/h | 1000kg/m³, 1mPas |
| H2O: 2 - 20 l/h | 1000kg/m³, 1mPas |
| H2O: 2,5 - 25 l/h | 1000kg/m³, 1mPas |
| H2O: 3,2 - 32 l/h | 1000kg/m³, 1mPas |
| H2O: 4 - 40 l/h | 1000kg/m³, 1mPas |

| |
|-----|
| B1L |
| B2L |
| B3L |
| B4L |
| B5L |
| B6L |

| Measuring range - Aluminium float (not guided) | |
|--|-----------------|
| Air: 50 - 500 NI/h | 1013 mbar, 20°C |
| Air: 65 - 650 NI/h | 1013 mbar, 20°C |
| Air: 80 - 800 NI/h | 1013 mbar, 20°C |
| Air: 110 - 1100 NI/h | 1013 mbar, 20°C |
| Air: 140 - 1400 NI/h | 1013 mbar, 20°C |
| Air: 160 - 1600 NI/h | 1013 mbar, 20°C |

| | | |
|-----|---|----------------------------------|
| | Measuring range - PVDF float (weighted) | |
| B1L | Air: 36 - 360 NI/h | 1013 mbar, 20°C |
| B2L | Air: 50 - 500 NI/h | 1013 mbar, 20°C |
| B3L | Air: 65 - 650 NI/h | 1013 mbar, 20°C |
| B4L | Air: 80 - 800 NI/h | 1013 mbar, 20°C |
| B5L | Air: 100 - 1000 NI/h | 1013 mbar, 20°C |
| B6L | Air: 125 - 1250 NI/h | 1013 mbar, 20°C |
| | Gasket | |
| B | EPDM | |
| F | Viton® | FKM |
| V | FEP/Perfluor | FFKM |
| | Float - stop | |
| F | PVDF | |
| S | Stainless steel | |
| X | Special Customer Demand | |
| | Union nut | |
| A | Aluminium lacquered | |
| S | Stainless steel | |
| | Shatter protection max. 80°C | |
| 0 | without | |
| 1 | with | required for ATEX approval |
| | electrical output | |
| 0 | without | |
| 1 | 1 x K 17 A Contact closes below limit | |
| 2 | 1 x K 17 B Contact closes above limit | |
| 3 | 1 x K 33 two way contact | |
| 4 | 1 x K 33i Inductive contact closes on descending float | |
| 5 | 2 x K 33i Inductive contact closes on descending float | |
| 6 | Special Customer Demand | |
| | Scale | |
| 1 | %-Scale (H2O) | |
| 2 | Measuring range-scale (H2O) | |
| 3 | %-Scale (Medium) | |
| 4 | Measuring range-scale (Medium) | |
| 5 | graven scale | |
| 6 | Special Customer Demand | |
| | Approvals | |
| 0 | without | |
| 1 | Works certificate 2.1 EN10204 | 1) |
| 2 | Inspection certificate 3.1 with materialanalysis (DIN EN 10204:2004) on stainless steel parts | 1) |
| | Calibration certificate | |
| 0 | without | |
| 1 | Standard | confirmed accuracy class (4.2.1) |
| 2 | 5-Points | 5 point protocol |
| 3 | Special scaling | Accuracy 1% |
| 9 | Special Customer Demand | |
| | Cleaning according works standard (free of oil and grease) | |
| 0 | without | |
| 1 | Cleaning of stainless steel parts with marking free of oil and grease | |
| | Pressure / leakage test | |
| 0 | without | |
| 1 | pressure test according EN 10204 with certificate 3.1 | |
| 2 | leakage test according EN 10204 with certificate 3.1 | |
| | Approvals | |
| 0 | without | |
| 1 | ATEX 2 GD IIC TX (BVS 10 ATEX H/B 119) | requires shatter protection |
| | Marking | |
| 0 | without | |
| 1 | stainless steel plate 40x20mm | |
| | Accessories | |
| 0 | without | |
| 1 | with (separate specification) | |



VARIABLE AREA FLOWMETER

Glass Tube
(S05 / 125-500 l/h Wasser)

max. 15 bar
Temp. min. -10 °C, max. 80 °C
Accuracy: 2,5% Gas / 1,6% Liquid $q_0=50\%$



Description

Block Nr. 1,2,3,4,5,6
V31 -

| |
|--------|
| 40001F |
| 40001S |
| 40101F |
| 40101S |
| 40201F |
| 40201S |
| 60101F |
| 60101S |
| 60201F |
| 60201S |
| 60301F |
| 60301S |

Base price

| Thread | Length | connection - wetted parts |
|-------------|--------|---------------------------|
| G 1/4"(F) | 375 mm | PVDF |
| G 1/4"(F) | 375 mm | Stainless steel |
| G 3/8"(F) | 375 mm | PVDF |
| G 3/8"(F) | 375 mm | Stainless steel |
| G 1/2"(F) | 375 mm | PVDF |
| G 1/2"(F) | 375 mm | Stainless steel |
| NPT 1/4"(F) | 375 mm | PVDF |
| NPT 1/4"(F) | 375 mm | Stainless steel |
| NPT 3/8"(F) | 375 mm | PVDF |
| NPT 3/8"(F) | 375 mm | Stainless steel |
| NPT 1/2"(F) | 375 mm | PVDF |
| NPT 1/2"(F) | 375 mm | Stainless steel |

| |
|--------|
| 301B3S |
| 301B5S |
| 305B3F |
| 305B3S |
| 305B5F |
| 305B5S |
| 3A5B3F |
| 3A5B3S |
| 3A5B5F |
| 3A5B5S |
| 309B3F |
| 309B3S |
| 309B5F |
| 309B5S |
| 201R3F |
| 201R3S |
| 201R5F |
| 201R5S |
| 202R3F |
| 202R3S |
| 202R5F |
| 202R5S |
| 203R3F |
| 203R3S |
| 203R5F |
| 203R5S |

| Flange | Length | connection - wetted parts |
|-------------------------------------|--------|---------------------------|
| DN10 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN10 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN15 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN15 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN15 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN15 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN20 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN20 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN20 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN20 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Stainless steel |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Stainless steel |
| 1/2" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 1/2" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 3/4" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 3/4" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 3/4" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 3/4" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 1" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 1" 150lbs RF ASME B16.5-2003 | 425 mm | Stainless steel |
| 1" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |
| 1" 150lbs RF ASME B16.5-2003 | 500 mm | Stainless steel |

| |
|--------|
| 62102S |
| 62102F |
| 62152S |
| 62152F |

| Hose clip | Length | connection - wetted parts |
|--------------------------|--------|---------------------------|
| 1/2"- inner diameter Ø13 | 400 mm | Stainless steel |
| 1/2"- inner diameter Ø13 | 400 mm | PVDF |
| 3/4"- inner diameter Ø19 | 400 mm | Stainless steel |
| 3/4"- inner diameter Ø19 | 400 mm | PVDF |

| |
|----|
| 01 |
| 02 |
| 03 |
| 04 |
| 05 |
| 06 |
| 07 |
| 08 |
| 09 |
| 10 |
| 99 |

| Type of float, Material | guide rod 1.4571 |
|--|------------------|
| Stainless steel 1.4571 | without |
| Stainless steel 1.4571 - guided | with |
| Stainless steel 1.4571 - with magnet | without |
| Stainless steel 1.4571 - independent of viscosity $\geq 3 \text{ mPa}\cdot\text{s}$ (cp) | with |
| PVDF | without |
| PVDF - weighted | without |
| PVDF - with magnet | without |
| Aluminium 3.1645 | without |
| Aluminium 3.1645 - guided | with |
| Aluminium 3.1645 - with magnet | without |
| Special Customer Demand | |

| |
|-----|
| C1W |
| C2W |
| C3W |
| C4W |
| C5W |
| C6W |
| C7W |

| Measuring range - stainless steel float (guide and not guided) | |
|--|------------------|
| H2O: 12,5 - 125 l/h | 1000kg/m³, 1mPas |
| H2O: 16 - 160 l/h | 1000kg/m³, 1mPas |
| H2O: 20 - 200 l/h | 1000kg/m³, 1mPas |
| H2O: 25 - 250 l/h | 1000kg/m³, 1mPas |
| H2O: 31,5 - 315 l/h | 1000kg/m³, 1mPas |
| H2O: 40 - 400 l/h | 1000kg/m³, 1mPas |
| H2O: 50 - 500 l/h | 1000kg/m³, 1mPas |

| |
|-----|
| C1W |
| C2W |
| C3W |
| C4W |
| C5W |
| C6W |
| C7W |

| Measuring range - stainless steel float with magnet | |
|---|------------------|
| H2O: 12 - 120 l/h | 1000kg/m³, 1mPas |
| H2O: 15 - 150 l/h | 1000kg/m³, 1mPas |
| H2O: 18 - 180 l/h | 1000kg/m³, 1mPas |
| H2O: 24 - 240 l/h | 1000kg/m³, 1mPas |
| H2O: 30 - 300 l/h | 1000kg/m³, 1mPas |
| H2O: 36 - 360 l/h | 1000kg/m³, 1mPas |
| H2O: 48 - 480 l/h | 1000kg/m³, 1mPas |

| |
|-----|
| C1W |
| C2W |
| C3W |
| C4W |
| C5W |
| C6W |
| C7W |

| Measuring range - stainless steel float independent of viscosity $\geq 3 \text{ mPa}\cdot\text{s}$ (cp) | |
|---|------------------|
| H2O: 10 - 100 l/h | 1000kg/m³, 1mPas |
| H2O: 12,5 - 125 l/h | 1000kg/m³, 1mPas |
| H2O: 16 - 160 l/h | 1000kg/m³, 1mPas |
| H2O: 20 - 200 l/h | 1000kg/m³, 1mPas |
| H2O: 24 - 240 l/h | 1000kg/m³, 1mPas |
| H2O: 30 - 300 l/h | 1000kg/m³, 1mPas |
| H2O: 36 - 360 l/h | 1000kg/m³, 1mPas |

| |
|-----|
| C1L |
| C2L |
| C3L |
| C4L |
| C5L |

| Measuring range - PVDF float | |
|------------------------------|-----------------|
| Air: 150-1500 NI/h | 1013 mbar, 20°C |
| Air: 200-2000 NI/h | 1013 mbar, 20°C |
| Air: 250-2500 NI/h | 1013 mbar, 20°C |
| Air: 300-3000 NI/h | 1013 mbar, 20°C |
| Air: 360-3600 NI/h | 1013 mbar, 20°C |

| | | |
|---|---|--|
| C6L | Air: 500-5000 NI/h | 1013 mbar, 20°C |
| C7L | Air: 550-5500 NI/h | 1013 mbar, 20°C |
| Measuring range - PVDF float (weighted or with magnet) | | |
| C1W | H2O: 6.5-65 l/h | 1000kg/m ³ , 1mPas |
| C2W | H2O: 9-90 l/h | 1000kg/m ³ , 1mPas |
| C3W | H2O: 11-110 l/h | 1000kg/m ³ , 1mPas |
| C4W | H2O: 14-140 l/h | 1000kg/m ³ , 1mPas |
| C5W | H2O: 17.5-175 l/h | 1000kg/m ³ , 1mPas |
| C6W | H2O: 22-220 l/h | 1000kg/m ³ , 1mPas |
| C7W | H2O: 25-250 l/h | 1000kg/m ³ , 1mPas |
| Measuring range - PVDF float (with magnet) | | |
| C1L | Air: 200-2000 NI/h | 1013 mbar, 20°C |
| C2L | Air: 300-3000 NI/h | 1013 mbar, 20°C |
| C3L | Air: 360-3600 NI/h | 1013 mbar, 20°C |
| C4L | Air: 450-4500 NI/h | 1013 mbar, 20°C |
| C5L | Air: 600-6000 NI/h | 1013 mbar, 20°C |
| C6L | Air: 700-7000 NI/h | 1013 mbar, 20°C |
| C7L | Air: 950-9500 NI/h | 1013 mbar, 20°C |
| Measuring range - Aluminium float (guided and not guided) | | |
| C1L | Air: 200 - 2000 NI/h | 1013 mbar, 20°C |
| C2L | Air: 300 - 3000 NI/h | 1013 mbar, 20°C |
| C3L | Air: 360 - 3600 NI/h | 1013 mbar, 20°C |
| C4L | Air: 400 - 4000 NI/h | 1013 mbar, 20°C |
| C5L | Air: 500 - 5000 NI/h | 1013 mbar, 20°C |
| C6L | Air: 640 - 6400 NI/h | 1013 mbar, 20°C |
| C7L | Air: 800 - 8000 NI/h | 1013 mbar, 20°C |
| Measuring range - Aluminium float (with magnet) | | |
| C1L | Air: 250 - 2500 NI/h | 1013 mbar, 20°C |
| C2L | Air: 320 - 3200 NI/h | 1013 mbar, 20°C |
| C3L | Air: 400 - 4000 NI/h | 1013 mbar, 20°C |
| C4L | Air: 500 - 5000 NI/h | 1013 mbar, 20°C |
| C5L | Air: 640 - 6400 NI/h | 1013 mbar, 20°C |
| C6L | Air: 800 - 8000 NI/h | 1013 mbar, 20°C |
| C7L | Air: 1000 - 10000 NI/h | 1013 mbar, 20°C |
| Gasket | | |
| B | EPDM | |
| F | Viton® | FKM |
| V | FEP/Perfluor | FFKM |
| Float - stop | | |
| F | PVDF | |
| S | Stainless steel | |
| X | Special Customer Demand | |
| Union nut | | |
| A | Aluminium lacquered | |
| S | Stainless steel | |
| Shatter protection max. 80°C | | |
| 0 | without | |
| 1 | with | required for ATEX approval |
| electrical output | | |
| 0 | without | |
| 1 | 1 x K 17 A | Contact closes below limit |
| 2 | 1 x K 17 B | Contact closes above limit |
| 3 | 1 x K 33 | two way contact |
| 4 | 1 x K 33i | Inductive contact closes on descending float |
| 5 | 2 x K 33i | Inductive contact closes on descending float |
| 6 | Special Customer Demand | |
| Scale | | |
| 1 | %-Scale (H2O) | |
| 2 | Measuring range-scale (H2O) | |
| 3 | %-Scale (Medium) | |
| 4 | Measuring range-scale (Medium) | |
| 5 | graven scale | |
| 6 | Special Customer Demand | |
| Approvals | | |
| 0 | without | |
| 1 | Works certificate 2.1 EN10204 | 1) |
| 2 | Inspection certificate 3.1 with materialanalysis (DIN EN 10204:2004) on stainless steel parts | 1) |
| Calibration certificate | | |
| 0 | without | |
| 1 | Standard | confirmed accuracy class (4.2.1) |
| 2 | 5-Points | 5 point protocol |
| 3 | Special scaling | Accuracy 1% |
| 9 | Special Customer Demand | |
| Cleaning according works standard (free of oil and grease) | | |
| 0 | without | |
| 1 | Cleaning of stainless steel parts with marking free of oil and grease | |
| Pressure / leakage test | | |
| 0 | without | |
| 1 | pressure test according EN 10204 with certificate 3.1 | |
| 2 | leakage test according EN 10204 with certificate 3.1 | |
| Approvals | | |
| 0 | without | |
| 1 | ATEX 2 GD IIC TX (BVS 10 ATEX H/B 119) | requires shatter protection |
| Marking | | |
| 0 | without | |
| 1 | stainless steel plate 40x20mm | |
| Accessories | | |
| 0 | without | |
| 1 | with (separate specification) | |



VARIABLE AREA FLOWMETER

Glass Tube

(S06 / 400-3000 l/h Wasser)

max. 10 bar

Temp. min. -10 °C, max. 80 °C

Accuracy: 2,5% Gas / 1,6% Liquid $q_0=50\%$



Block Nr. 1,2,3,4,5,6
V31 -

Description

Base price

40301F
40301S
40401F
40401S
60401F
60401S
60501F
60501S

| Thread | Length | connection - wetted parts |
|---------------------------|--------|---------------------------|
| G 3/4"(F) Verschraubung | 375 mm | PVDF |
| G 3/4"(F) Verschraubung | 375 mm | Edelstahl |
| G 1"(F) Verschraubung | 375 mm | PVDF |
| G 1"(F) Verschraubung | 375 mm | Edelstahl |
| NPT 3/4"(F) Verschraubung | 375 mm | PVDF |
| NPT 3/4"(F) Verschraubung | 375 mm | Edelstahl |
| NPT 1"(F) Verschraubung | 375 mm | PVDF |
| NPT 1"(F) Verschraubung | 375 mm | Edelstahl |

309B3F
309B3S
309B5F
309B5S
317B3F
317B3S
317B5F
317B5S
203R3F
203R3S
203R5F
203R5S
205R3F
205R3S
205R5F
205R5S

| Flange | Length | connection - wetted parts |
|-------------------------------------|--------|---------------------------|
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | PVDF |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Edelstahl |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | PVDF |
| DN25 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Edelstahl |
| DN40 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | PVDF |
| DN40 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Edelstahl |
| DN40 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | PVDF |
| DN40 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Edelstahl |
| 1" 150lbs RF ASME B16.5-2003 | 425 mm | PVDF |
| 1" 150lbs RF ASME B16.5-2003 | 425 mm | Edelstahl |
| 1" 150lbs RF ASME B16.5-2003 | 500 mm | PVDF |
| 1" 150lbs RF ASME B16.5-2003 | 500 mm | Edelstahl |
| 1 1/2" 150lbs RF ASME B16.5-2003 | 425 mm | PVDF |
| 1 1/2" 150lbs RF ASME B16.5-2003 | 425 mm | Edelstahl |
| 1 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | PVDF |
| 1 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | Edelstahl |

62202S
62202F
62302S
62302F
62404S
62404F
-

| Hose clip | Length | connection - wetted parts |
|----------------------------|--------|---------------------------|
| 3/4"- inner diameter Ø19 | 400 mm | Edelstahl |
| 3/4"- inner diameter Ø19 | 400 mm | PVDF |
| 1"- inner diameter Ø25 | 400 mm | Edelstahl |
| 1"- inner diameter Ø25 | 400 mm | PVDF |
| 1 1/2"- inner diameter Ø38 | 450 mm | Edelstahl |
| 1 1/2"- inner diameter Ø38 | 450 mm | PVDF |

01
02
03
04
05
06
07
08
09
10
99
-

| Type of float, Material | guide rod 1.4571 |
|---|------------------|
| Stainless steel 1.4571 | without |
| Stainless steel 1.4571 - guided | with |
| Stainless steel 1.4571 - with magnet | without |
| Stainless steel 1.4571 - independent of viscosity ≥ 3 mPa·s (cp) | with |
| PVDF | without |
| PVDF - weighted | without |
| PVDF - with magnet | without |
| Aluminium 3.1645 | without |
| Aluminium 3.1645 - guided | with |
| Aluminium 3.1645 - with magnet | without |
| Special Customer Demand | |

D1W
D2W
D3W
D4W
D5W
D6W
D7W
D8W
D9W

| Measuring range - stainless steel float (guide and not guided) | |
|--|-------------------------------|
| H2O: 40-400 l/h | 1000kg/m ³ , 1mPas |
| H2O: 65 - 650 l/h | 1000kg/m ³ , 1mPas |
| H2O: 80 - 800 l/h | 1000kg/m ³ , 1mPas |
| H2O: 100 - 1000 l/h | 1000kg/m ³ , 1mPas |
| H2O: 120 - 1200 l/h | 1000kg/m ³ , 1mPas |
| H2O: 160 - 1600 l/h | 1000kg/m ³ , 1mPas |
| H2O: 200 - 2000 l/h | 1000kg/m ³ , 1mPas |
| H2O: 250 - 2500 l/h | 1000kg/m ³ , 1mPas |
| H2O: 300 - 3000 l/h | 1000kg/m ³ , 1mPas |

D1W
D2W
D3W
D4W
D5W
D6W
D7W
D8W
D9W

| Measuring range - stainless steel float with magnet | |
|---|-------------------------------|
| H2O: 40-400 l/h | 1000kg/m ³ , 1mPas |
| H2O: 60 - 600 l/h | 1000kg/m ³ , 1mPas |
| H2O: 75 - 750 l/h | 1000kg/m ³ , 1mPas |
| H2O: 95 - 950 l/h | 1000kg/m ³ , 1mPas |
| H2O: 120 - 1200 l/h | 1000kg/m ³ , 1mPas |
| H2O: 150 - 1500 l/h | 1000kg/m ³ , 1mPas |
| H2O: 180 - 1800 l/h | 1000kg/m ³ , 1mPas |
| H2O: 240 - 2400 l/h | 1000kg/m ³ , 1mPas |
| H2O: 280 - 2800 l/h | 1000kg/m ³ , 1mPas |

D2W
D3W
D4W
D5W
D6W
D7W
D8W
D9W

| Measuring range - stainless steel float independent of viscosity ≥ 3 mPa·s (cp) | |
|--|-------------------------------|
| H2O: 40 - 400 l/h | 1000kg/m ³ , 1mPas |
| H2O: 50 - 500 l/h | 1000kg/m ³ , 1mPas |
| H2O: 60 - 600 l/h | 1000kg/m ³ , 1mPas |
| H2O: 75 - 750 l/h | 1000kg/m ³ , 1mPas |
| H2O: 100 - 1000 l/h | 1000kg/m ³ , 1mPas |
| H2O: 120 - 1200 l/h | 1000kg/m ³ , 1mPas |
| H2O: 140 - 1400 l/h | 1000kg/m ³ , 1mPas |
| H2O: 180 - 1800 l/h | 1000kg/m ³ , 1mPas |

D1L
D2L
D3L
D4L
D5L
D6L
D7L
D8L
D9L

| Measuring range - PVDF float | |
|------------------------------|-----------------|
| Air: 520 - 5200 NI/h | 1013 mbar, 20°C |
| Air: 800 - 8000 NI/h | 1013 mbar, 20°C |
| Air: 900 - 9000 NI/h | 1013 mbar, 20°C |
| Air: 1200 - 12000 NI/h | 1013 mbar, 20°C |
| Air: 1500 - 15000 NI/h | 1013 mbar, 20°C |
| Air: 2000 - 20000 NI/h | 1013 mbar, 20°C |
| Air: 2500 - 25000 NI/h | 1013 mbar, 20°C |
| Air: 3000 - 30000 NI/h | 1013 mbar, 20°C |
| Air: 3600 - 36000 NI/h | 1013 mbar, 20°C |

D1W
D2W
D3W
D4W
D5W
D6W
D7W
D8W

| Measuring range - PVDF float (weighted or with magnet) | |
|--|-------------------------------|
| H2O: 32-320 l/h | 1000kg/m ³ , 1mPas |
| H2O: 50 - 500 l/h | 1000kg/m ³ , 1mPas |
| H2O: 60 - 600 l/h | 1000kg/m ³ , 1mPas |
| H2O: 75 - 750 l/h | 1000kg/m ³ , 1mPas |
| H2O: 100 - 1000 l/h | 1000kg/m ³ , 1mPas |
| H2O: 125 - 1250 l/h | 1000kg/m ³ , 1mPas |
| H2O: 160 - 1600 l/h | 1000kg/m ³ , 1mPas |
| H2O: 200 - 2000 l/h | 1000kg/m ³ , 1mPas |

| | | |
|---|---|----------------------------------|
| D9W | H2O: 240 - 2400 l/h | 1000kg/m ³ , 1mPas |
| Measuring range - PVDF float (with magnet) | | |
| D1L | Air: 750 - 7500 NI/h | 1013 mbar, 20°C |
| D2L | Air: 1000 - 10000 NI/h | 1013 mbar, 20°C |
| D3L | Air: 1300 - 13000 NI/h | 1013 mbar, 20°C |
| D4L | Air: 1600 - 16000 NI/h | 1013 mbar, 20°C |
| D5L | Air: 2000 - 20000 NI/h | 1013 mbar, 20°C |
| D6L | Air: 2800 - 28000 NI/h | 1013 mbar, 20°C |
| D7L | Air: 3600 - 36000 NI/h | 1013 mbar, 20°C |
| D8L | Air: 4000 - 40000 NI/h | 1013 mbar, 20°C |
| D9L | Air: 5000 - 50000 NI/h | 1013 mbar, 20°C |
| Measuring range - Aluminium float (guided and not guided) | | |
| D1L | Air: 750 - 7500 NI/h | 1013 mbar, 20°C |
| D2L | Air: 1000 - 10000 NI/h | 1013 mbar, 20°C |
| D3L | Air: 1300 - 13000 NI/h | 1013 mbar, 20°C |
| D4L | Air: 1600 - 16000 NI/h | 1013 mbar, 20°C |
| D5L | Air: 2000 - 20000 NI/h | 1013 mbar, 20°C |
| D6L | Air: 2800 - 28000 NI/h | 1013 mbar, 20°C |
| D7L | Air: 3600 - 36000 NI/h | 1013 mbar, 20°C |
| D8L | Air: 4000 - 40000 NI/h | 1013 mbar, 20°C |
| D9L | Air: 5000 - 50000 NI/h | 1013 mbar, 20°C |
| Measuring range - Aluminium float (with magnet) | | |
| D1L | Air: 850 - 8500 NI/h | 1013 mbar, 20°C |
| D2L | Air: 1200 - 12000 NI/h | 1013 mbar, 20°C |
| D3L | Air: 1500 - 15000 NI/h | 1013 mbar, 20°C |
| D4L | Air: 2000 - 20000 NI/h | 1013 mbar, 20°C |
| D5L | Air: 2400 - 24000 NI/h | 1013 mbar, 20°C |
| D6L | Air: 3200 - 32000 NI/h | 1013 mbar, 20°C |
| D7L | Air: 4000 - 40000 NI/h | 1013 mbar, 20°C |
| D8L | Air: 5000 - 50000 NI/h | 1013 mbar, 20°C |
| D9L | Air: 6000 - 60000 NI/h | 1013 mbar, 20°C |
| - | | |
| Gasket | | |
| B | EPDM | |
| F | Viton® | FKM |
| V | FEP/Perfluor | FFKM |
| Float - stop | | |
| F | PVDF | |
| S | Stainless steel | |
| X | Special Customer Demand | |
| Union nut | | |
| A | Aluminium lacquered | |
| S | Stainless steel | |
| Shatter protection max. 80°C | | |
| 0 | without | |
| 1 | with | required for ATEX approval |
| electrical output | | |
| 0 | without | |
| 1 | 1 x K 17 A Contact closes below limit | |
| 2 | 1 x K 17 B Contact closes above limit | |
| 3 | 1 x K 33 two way contact | |
| 4 | 1 x K 33i Inductive contact closes on descending float | |
| 5 | 2 x K 33i Inductive contact closes on descending float | |
| 6 | Special Customer Demand | |
| Scale | | |
| 1 | %-Scale (H2O) | |
| 2 | Measuring range-scale (H2O) | |
| 3 | %-Scale (Medium) | |
| 4 | Measuring range-scale (Medium) | |
| 5 | graven scale | |
| 6 | Special Customer Demand | |
| - | | |
| Approvals | | |
| 0 | without | |
| 1 | Works certificate 2.1 EN10204 | 1) |
| 2 | Inspection certificate 3.1 with materialanalysis (DIN EN 10204:2004) on stainless steel parts | 1) |
| Calibration certificate | | |
| 0 | without | |
| 1 | Standard | confirmed accuracy class (4.2.1) |
| 2 | 5-Points | 5 point protocol |
| 3 | Special scaling | Accuracy 1% |
| 9 | Special Customer Demand | |
| Cleaning according works standard (free of oil and grease) | | |
| 0 | without | |
| 1 | Cleaning of stainless steel parts with marking free of oil and grease | |
| Pressure / leakage test | | |
| 0 | without | |
| 1 | pressure test according EN 10204 with certificate 3.1 | |
| 2 | leakage test according EN 10204 with certificate 3.1 | |
| Approvals | | |
| 0 | without | |
| 1 | ATEX 2 GD IIC TX (BVS 10 ATEX H/B 119) | requires shatter protection |
| Marking | | |
| 0 | without | |
| 1 | stainless steel plate 40x20mm | |
| Accessories | | |
| 0 | without | |
| 1 | with (separate specification) | |
| - | | |



VARIABLE AREA FLOWMETER

Glass Tube

(S07 / 4000-10000 l/h-Wasser)

max. 6 bar

Temp. min. -10 °C, max. 80 °C

Accuracy: 2,5% Gas / 1,6% Liquid $q_G=50\%$



Description

Block Nr. 1,2,3,4,5,6

V31 -

Base price

| |
|--------|
| 40501F |
| 40501S |
| 40601F |
| 40601S |
| 40701F |
| 40701S |
| 60601F |
| 60601S |
| 60701F |
| 60701S |
| 60801F |
| 60801S |

| Thread | Length | connection - wetted parts |
|---------------------------|--------|---------------------------|
| G 1/4"(F) Verschraubung | 375 mm | PVDF |
| G 1/4"(F) Verschraubung | 375 mm | Edelstahl |
| G 1/2"(F) Verschraubung | 375 mm | PVDF |
| G 1/2"(F) Verschraubung | 375 mm | Edelstahl |
| G 2"(F) Verschraubung | 375 mm | PVDF |
| G 2"(F) Verschraubung | 375 mm | Edelstahl |
| NPT 1/4"(F) Verschraubung | 375 mm | PVDF |
| NPT 1/4"(F) Verschraubung | 375 mm | Edelstahl |
| NPT 1/2"(F) Verschraubung | 375 mm | PVDF |
| NPT 1/2"(F) Verschraubung | 375 mm | Edelstahl |
| NPT 2"(F) Verschraubung | 375 mm | PVDF |
| NPT 2"(F) Verschraubung | 375 mm | Edelstahl |

| |
|--------|
| 317B3F |
| 317B3S |
| 317B5F |
| 317B5S |
| 320B3F |
| 320B3S |
| 320B5F |
| 320B5S |
| 325B3F |
| 325B3S |
| 325B5F |
| 325B5S |
| 225R3F |
| 225R3S |
| 225R5F |
| 225R5S |
| 226R3F |
| 226R3S |
| 226R5F |
| 226R5S |
| 227R3F |
| 227R3S |
| 227R5F |
| 227R5S |

| Flange | Length | connection - wetted parts |
|-------------------------------------|--------|---------------------------|
| DN40 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | PVDF |
| DN40 PN10/16/25/40 Form B1 EN1092-1 | 425 mm | Edelstahl |
| DN40 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | PVDF |
| DN40 PN10/16/25/40 Form B1 EN1092-1 | 500 mm | Edelstahl |
| DN50 PN10/16 Form B1 EN1092-1 | 425 mm | PVDF |
| DN50 PN10/16 Form B1 EN1092-1 | 425 mm | Edelstahl |
| DN50 PN10/16 Form B1 EN1092-1 | 500 mm | PVDF |
| DN50 PN10/16 Form B1 EN1092-1 | 500 mm | Edelstahl |
| DN65 PN10/16 Form B1 EN1092-1 | 425 mm | PVDF |
| DN65 PN10/16 Form B1 EN1092-1 | 425 mm | Edelstahl |
| DN65 PN10/16 Form B1 EN1092-1 | 500 mm | PVDF |
| DN65 PN10/16 Form B1 EN1092-1 | 500 mm | Edelstahl |
| 1 1/2" 150lbs RF ASME B16.5-2003 | 425 mm | PVDF |
| 1 1/2" 150lbs RF ASME B16.5-2003 | 425 mm | Edelstahl |
| 1 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | PVDF |
| 1 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | Edelstahl |
| 2" 150lbs RF ASME B16.5-2003 | 425 mm | PVDF |
| 2" 150lbs RF ASME B16.5-2003 | 425 mm | Edelstahl |
| 2" 150lbs RF ASME B16.5-2003 | 500 mm | PVDF |
| 2" 150lbs RF ASME B16.5-2003 | 500 mm | Edelstahl |
| 2 1/2" 150lbs RF ASME B16.5-2003 | 425 mm | Edelstahl |
| 2 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | PVDF |
| 2 1/2" 150lbs RF ASME B16.5-2003 | 500 mm | Edelstahl |

| |
|--------|
| 62604S |
| 62604F |
| 42501V |
| - |

| Hose clip | Length | connection - wetted parts |
|------------------------------------|--------|---------------------------|
| Schlauchtülle 2"- lichte Weite Ø50 | 450 mm | Edelstahl |
| Schlauchtülle 2"- lichte Weite Ø50 | 450 mm | PVDF |
| Klebeanschluss DN50 - d = 63 mm | 375 mm | PVC |

| |
|----|
| 02 |
| 03 |
| 04 |
| 05 |
| 06 |
| 07 |
| 08 |
| 09 |
| 10 |
| 99 |
| - |

| Type of float, Material | guide rod 1.4571 |
|---|------------------|
| Stainless steel 1.4571 - guided | with |
| Stainless steel 1.4571 - with magnet | without |
| Stainless steel 1.4571 - independent of viscosity ≥ 3 mPa·s (cp) | with |
| PVDF | without |
| PVDF - weighted | without |
| PVDF - with magnet | without |
| Aluminium 3.1645 | without |
| Aluminium 3.1645 - guided | with |
| Aluminium 3.1645 - with magnet | without |
| Special Customer Demand | |

| |
|-----|
| E1W |
| E2W |
| E3W |
| E4W |
| E5W |

| Measuring range - stainless steel float (guided) | |
|--|-------------------------------|
| H2O: 400 - 4000 l/h | 1000kg/m ³ , 1mPas |
| H2O: 500 - 5000 l/h | 1000kg/m ³ , 1mPas |
| H2O: 650 - 6500 l/h | 1000kg/m ³ , 1mPas |
| H2O: 800 - 8000 l/h | 1000kg/m ³ , 1mPas |
| H2O: 1000 - 10.000 l/h | 1000kg/m ³ , 1mPas |

| |
|-----|
| E1W |
| E2W |
| E3W |
| E4W |
| E5W |

| Measuring range - stainless steel float with magnet | |
|---|-------------------------------|
| H2O: 380 - 3800 l/h | 1000kg/m ³ , 1mPas |
| H2O: 480 - 4800 l/h | 1000kg/m ³ , 1mPas |
| H2O: 640 - 6400 l/h | 1000kg/m ³ , 1mPas |
| H2O: 750 - 7500 l/h | 1000kg/m ³ , 1mPas |
| H2O: 950 - 9500 l/h | 1000kg/m ³ , 1mPas |

| |
|-----|
| E1W |
| E2W |
| E3W |
| E4W |
| E5W |

| Measuring range - stainless steel float independent of viscosity ≥ 3 mPa·s (cp) | |
|--|-------------------------------|
| H2O: 250 - 2500 l/h | 1000kg/m ³ , 1mPas |
| H2O: 300 - 3000 l/h | 1000kg/m ³ , 1mPas |
| H2O: 400 - 4000 l/h | 1000kg/m ³ , 1mPas |
| H2O: 450 - 4500 l/h | 1000kg/m ³ , 1mPas |
| H2O: 550 - 5500 l/h | 1000kg/m ³ , 1mPas |

| |
|-----|
| E1L |
| E2L |
| E3L |
| E4L |
| E5L |

| Measuring range - PVDF float | |
|------------------------------|-----------------|
| Air: 5000 - 50000 NI/h | 1013 mbar, 20°C |
| Air: 6500 - 65000 NI/h | 1013 mbar, 20°C |
| Air: 8000 - 80000 NI/h | 1013 mbar, 20°C |
| Air: 10000 - 100000 NI/h | 1013 mbar, 20°C |
| Air: 12500 - 125000 NI/h | 1013 mbar, 20°C |

| | |
|---|--|
| Measuring range - PVDF float (weighted or with magnet) | |
| E1W | H2O: 320 - 3200 l/h 1000kg/m ³ , 1mPas |
| E2W | H2O: 380 - 3800 l/h 1000kg/m ³ , 1mPas |
| E3W | H2O: 500 - 5000 l/h 1000kg/m ³ , 1mPas |
| E4W | H2O: 640 - 6400 l/h 1000kg/m ³ , 1mPas |
| E5W | H2O: 750 - 7500 l/h 1000kg/m ³ , 1mPas |
| Measuring range - PVDF float (with magnet) | |
| E1L | Air: 6400 - 64000 NI/h 1013 mbar, 20°C |
| E2L | Air: 8000 - 80000 NI/h 1013 mbar, 20°C |
| E3L | Air: 0000 - 100000 NI/h 1013 mbar, 20°C |
| E4L | Air: 14000 - 140000 NI/h 1013 mbar, 20°C |
| E5L | Air: 16000 - 160000 NI/h 1013 mbar, 20°C |
| Measuring range - Aluminium float (guided and not guided) | |
| E1L | Air: 6400 - 64000 NI/h 1013 mbar, 20°C |
| E2L | Air: 8000 - 80000 NI/h 1013 mbar, 20°C |
| E3L | Air: 10000 - 100000 NI/h 1013 mbar, 20°C |
| E4L | Air: 14000 - 140000 NI/h 1013 mbar, 20°C |
| E5L | Air: 16000 - 160000 NI/h 1013 mbar, 20°C |
| Measuring range - Aluminium float (with magnet) | |
| E1L | Air: 7500 - 75000 NI/h 1013 mbar, 20°C |
| E2L | Air: 10000 - 100000 NI/h 1013 mbar, 20°C |
| E3L | Air: 12500 - 125000 NI/h 1013 mbar, 20°C |
| E4L | Air: 15000 - 150000 NI/h 1013 mbar, 20°C |
| E5L | Air: 18000 - 180000 NI/h 1013 mbar, 20°C |
| - | |
| Gasket | |
| B | EPDM |
| F | Viton® FKM |
| V | FEP/Perfluor FFKM |
| Float - stop | |
| F | PVDF |
| S | Stainless steel |
| X | Special Customer Demand |
| Union nut | |
| A | Aluminium lacquered |
| S | Stainless steel |
| Shatter protection max. 80°C | |
| 0 | without |
| 1 | with required for ATEX approval |
| electrical output | |
| 0 | without |
| 1 | 1 x K 17 A Contact closes below limit |
| 2 | 1 x K 17 B Contact closes above limit |
| 3 | 1 x K 33 two way contact |
| 4 | 1 x K 33i Inductive contact closes on descending float |
| 5 | 2 x K 33i Inductive contact closes on descending float |
| 6 | Special Customer Demand |
| Scale | |
| 1 | %-Scale (H2O) |
| 2 | Measuring range-scale (H2O) |
| 3 | %-Scale (Medium) |
| 4 | Measuring range-scale (Medium) |
| 5 | graven scale |
| 6 | Special Customer Demand |
| - | |
| Approvals | |
| 0 | without |
| 1 | Works certificate 2.1 EN10204 1) |
| 2 | Inspection certificate 3.1 with materialanalysis (DIN EN 10204:2004) on stainless steel parts 1) |
| Calibration certificate | |
| 0 | without |
| 1 | Standard confirmed accuracy class (4.2.1) |
| 2 | 5-Points 5 point protocol |
| 3 | Special scaling Accuracy 1% |
| 9 | Special Customer Demand |
| Cleaning according works standard (free of oil and grease) | |
| 0 | without |
| 1 | Cleaning of stainless steel parts with marking free of oil and grease |
| Pressure / leakage test | |
| 0 | without |
| 1 | pressure test according EN 10204 with certificate 3.1 |
| 2 | leakage test according EN 10204 with certificate 3.1 |
| Approvals | |
| 0 | without |
| 1 | ATEX 2 GD IIC TX (BVS 10 ATEX H/B 119) requires shatter protection |
| Marking | |
| 0 | without |
| 1 | stainless steel plate 40x20mm |
| Accessories | |
| 0 | without |
| 1 | with (separate specification) |
| - | |