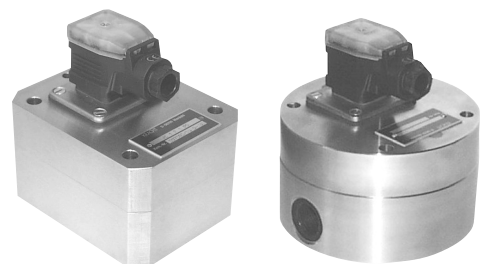


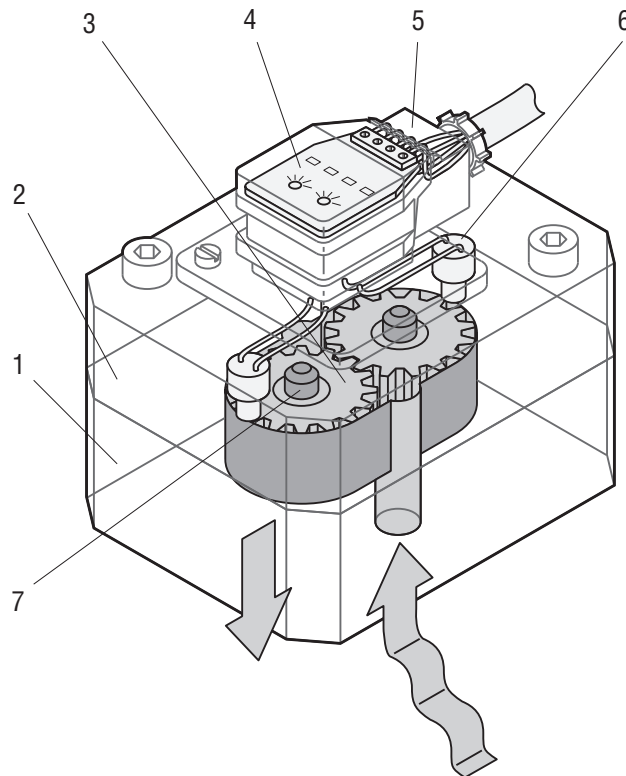
KRACHT®



Gear Type Flow Meter

VC

Construction and Function



Construction

- 1 Housing
- 2 Cover
- 3 Gear
- 4 Preamplifier
- 5 Connector
- 6 Sensor
- 7 Bearing assembly

Function

- The measuring gears are driven by the liquid flow on the principle of a gear motor.
- The gears run without contact in the measuring chamber. The bearing elements are low-friction ball or plain bearings.
- The movement of the gears is sampled without contact by means of two sensors located in the cover. Between sensor compartment and measuring chamber is located a pressure-resistant, non-magnetic separator plate.
- When the measuring mechanism rotates by one tooth pitch, the sensor emits a signal which corresponds to the geometrical tooth volume V_{gz} .
- The signal is converted into a square-wave signal by the preamplifier.
- The two-channel sampling permits better resolution as well as recognition of the flow direction.

Product Characteristics

- Optimized for individual applications because the series have been rendered media-specific by means of differing clearances, bearing variants and materials.
- Wide measuring ranges with sizes graduated to meet specific requirements.
- Measurement independent of viscosity within the specified ranges
- Low pressure drop
- High-response measurement
- High working pressure
- Low noise emission
- High-precision measurement with outstanding reproducibility
- Temperature-independent output signals over a wide temperature range
- High degree of accuracy, even with low flow rates at the bottom end of the measuring range
- High working reliability of the electronics
- Easy to use terminal of the preamplifier
- Working indication of the electronic
- Sensor system and preamplifier in EMC-compatible design
- Explosion-proof version available for all volume counters

Typical Applications

| Application | Medium | Version | Series |
|---|---|---|--------|
| Flow rate measurement (hydraulic test stand) | oil, brake fluid, skydrol, diesel lubricating low viscosity | cast iron ball bearings minimal clearances | 1 |
| Oil metering (metering plant) | gear oil lubricating medium viscosity | cast iron ball bearings increased clearances | 2 |
| Consumption measurement (Printing press) | offset ink lubricating high viscosity | cast iron bronze plain bearings large clearances | 3 |
| Ratio control (2 component plant) | polyol + isocyanate, adhesives, resin, silicon low lubricity medium viscosity | cast iron carbide plain bearings increased clearances | 4 |
| Batching control (lacquering plant) | clear lacquer, cavity waxes low lubricity medium viscosity | stainless steel carbide plain bearings increased clearances | 5 |
| Flow rate measurement (lacquering plant) | solvent lubricating low viscosity | stainless steel ball bearings minimal clearances | 6 |

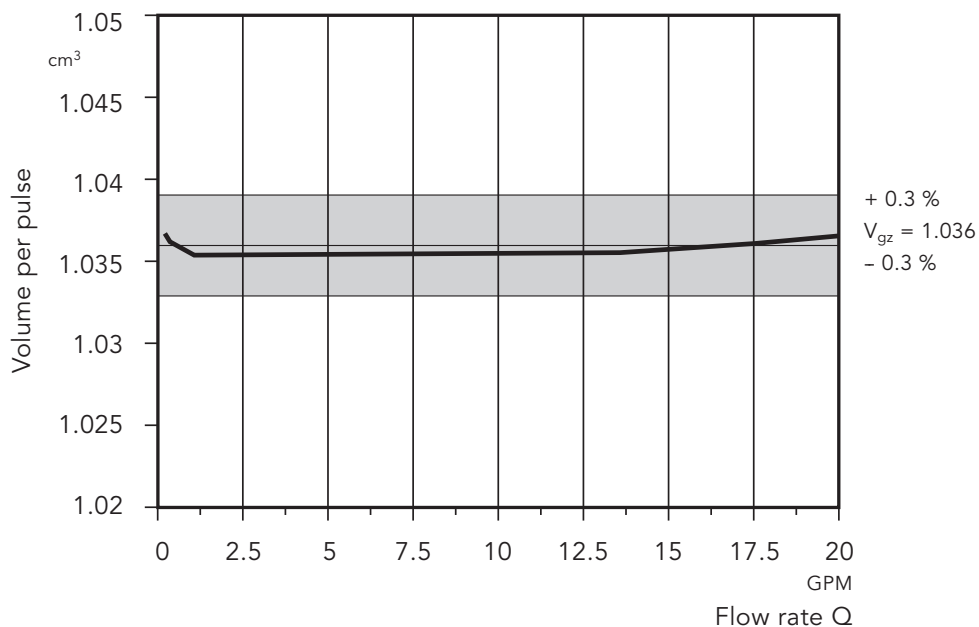
For fluids with a low viscosity and poor lubricity a hybrid ball bearing (with ceramic balls) is available for sizes VC 0.025, VC 0.04, VC 0.2 and VC 1.

Flow meters with hybrid ball bearing are available in cast iron (**series 7**) and stainless steel (**series 8**).

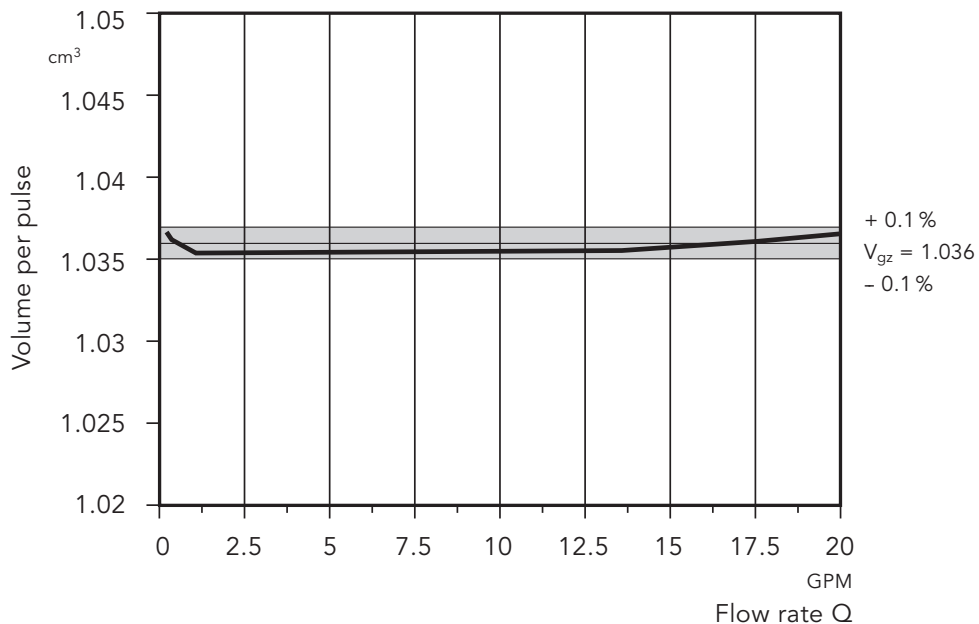
Accuracy Characteristics

- The accuracy figures quoted by KRACHT refer to the geometric tooth volume V_{gz} , that is to say the percentage deviation applies to the current value in each case.
- The linearity error over the entire measuring range is $< \pm 0.1 \%$
- Reproducibility of a measured value is $< 0.1 \%$
- Accuracy checking forms part of quality inspection in every case.
- On request the result of the test will be documented in the form of an accuracy characteristic curve; an example relating to a series 1 VC 1 is given below.
- The accuracy values quoted by Kracht are confirmed by the DKD (German Calibration Service).

Accuracy



Linearity





General Characteristics

| | |
|--------------------|--|
| Design | gear motor |
| Connection type | plate mounting/pipe connection |
| Mounting position | optional |
| Flow direction | optional |
| Viscosity | 1...1.000.000 cSt, (according to series) |
| Max. pressure drop | $\Delta p_{\max} = 16 \text{ bar} / 230 \text{ psi}$ |

Working Characteristics

| Nominal size | geom. tooth-volume V_{gz} cm^3 | max. working pressure | | Peak pressure | | Sound pressure level L_A dB (A) | Resolution Impulse/l Impulse/gal. |
|--------------|---|---|--|--|---|---|---|
| | | Standard-version p_{\max} bar / psi | High pressure version (/79) p_{\max} bar / psi | Standard-version \hat{p} bar / psi | High pressure version (/79) \hat{p} bar / psi | | |
| 0.025 | 0.025 | 400 / 5800 | – | 480 / 6960 | – | < 60 | 40,000.00 151,417.60 |
| 0.04 | 0.04 | 400 / 5800 | – | 480 / 6960 | – | < 60 | 25,000.00 94,636.00 |
| 0.1 | 0.1 | 400 / 5800 | – | 480 / 6960 | – | < 60 | 10,000.00 37,854.00 |
| 0.2 | 0.245 | 400 / 5800 | – | 480 / 6960 | – | < 60 | 4,081.63 15,450.77 |
| 0.4 | 0.4 | 400 / 5800 | – | 480 / 6960 | – | < 70 | 2,500.00 9,463.60 |
| 1 | 1.036 | 400 / 5800 | – | 480 / 6960 | – | < 70 | 965.25 3,653.90 |
| 3 | 3.000 | 315 / 4570 | 400 / 5800 | 350 / 5080 | 480 / 6960 | < 70 | 333.33 1,261.81 |
| 5 | 5.222 | 315 / 4570 | 400 / 5800 | 350 / 5080 | 480 / 6960 | < 72 | 191.50 724.90 |
| 12 | 12.000 | 400 / 5800 | – | 480 / 6960 | – | < 80 | 83.33 315.45 |
| 16 | 16.000 | 400 / 5800 | – | 480 / 6960 | – | < 80 | 62.50 236.59 |

Permitted Temperature Ranges

| Series | Sealing materials | | | |
|---|--|--|--|---|
| | FKM | EPDM | FEP | FFKM |
| Ambient temperature | -15 °C ... +80 °C +5 °F ... +176 °F | -30 °C ... +80 °C -22 °F ... +176 °F | -30 °C ... +80 °C -22 °F ... +176 °F | -15 °C ... +80 °C +5 °F ... +176 °F |
| Medium temperature for standard version | 1, 2, 6, 7, 8 -15 °C ... +120 °C +5 °F ... +248 °F | -30 °C ... +120 °C -22 °F ... +248 °F | -30 °C ... +120 °C -22 °F ... +248 °F | -15 °C ... +120 °C +5 °F ... +248 °F |
| | 3, 4, 5 -15 °C ... +80 °C +5 °F ... +176 °F | -30 °C ... +80 °C -22 °F ... +176 °F | -30 °C ... +80 °C -22 °F ... +176 °F | -15 °C ... +80 °C +5 °F ... +176 °F |
| Medium temperature for high temperature version | 1, 2, 6, 7, 8 -15 °C ... +150 °C +5 °F ... +302 °F | -30 °C ... +130 °C -22 °F ... +266 °F | -30 °C ... +150 °C -22 °F ... +302 °F | -15 °C ... +150 °C +5 °F ... +302 °F |
| | 3, 4, 5 on request | on request | on request | on request |
| for high temperature PLUS version | 1, 2, 6, 7, 8 -15 °C ... +150 °C +5 °F ... +302 °F | – | -30 °C ... +220 °C* -22 °F ... +428 °F* | -15 °C ... +220 °C* +5 °F ... +428 °F* |
| Medium temperatur for  -version | 1, 2, 6, 7, 8 -15 °C ... +80 °C +5 °F ... +176 °F | -30 °C ... +80 °C -22 °F ... +176 °F | -30 °C ... +80 °C -22 °F ... +176 °F | -15 °C ... +80 °C +5 °F ... +176 °F |
| | 3, 4, 5 -15 °C ... +80 °C +5 °F ... +176 °F | -30 °C ... +80 °C -22 °F ... +176 °F | -30 °C ... +80 °C -22 °F ... +176 °F | -15 °C ... +80 °C +5 °F ... +176 °F |
| for  -version high temperature PLUS | 1, 2, 6, 7, 8 – | – | – | -30 °C ... +200 °C -22 °F ... +392 °F |

* for sizes VC 0.025 ... VC 0.1 max. +180 °C / +356 °F

Series Selection / Summary of Variants

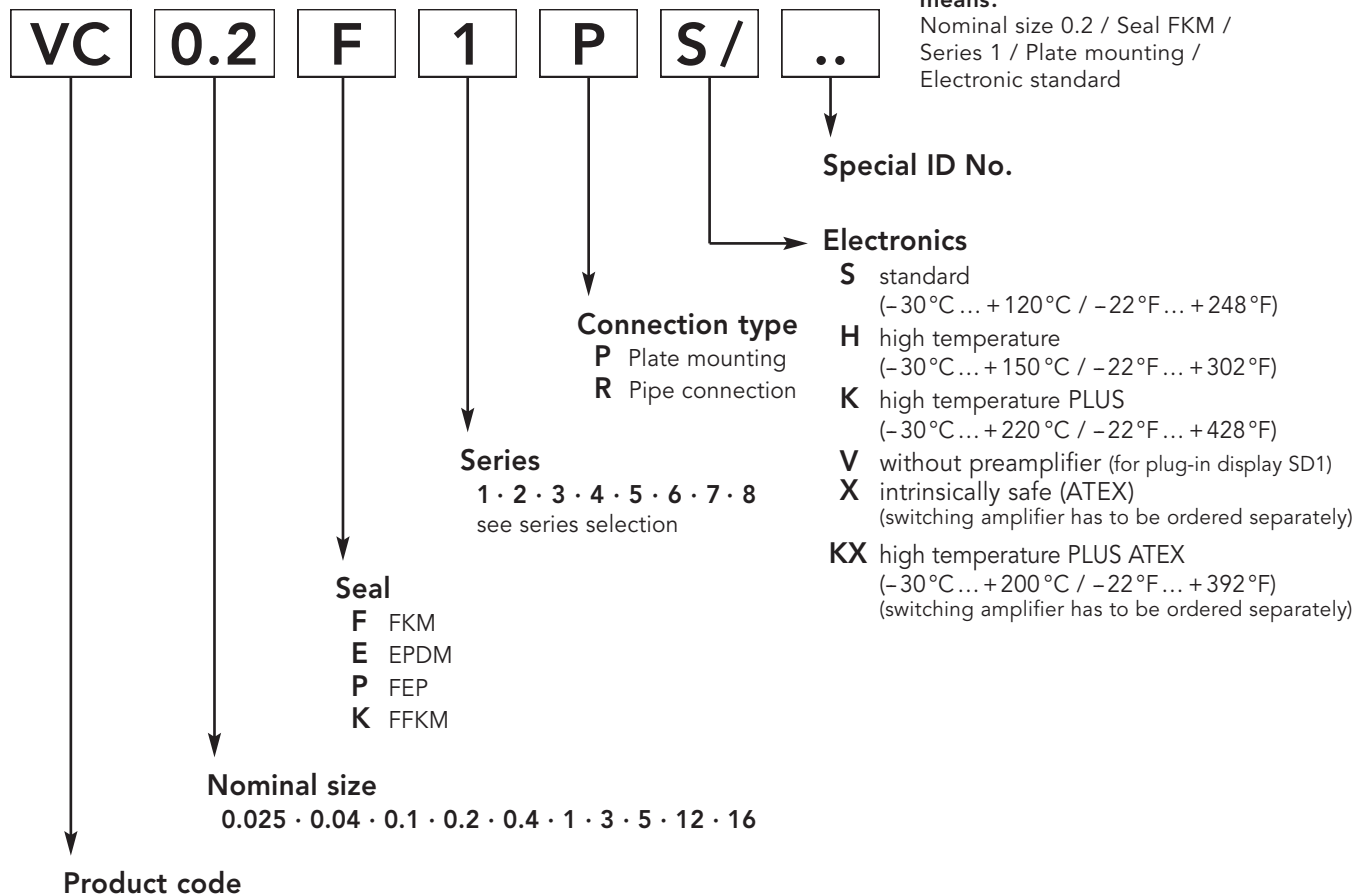
| Series | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------|----------------------------------|---------------------------------------|---------------------------|
| Material housing | Spheroidal cast iron EN-GJS-400-15 (/79 EN-GJS-600-3) | Spheroidal cast iron EN-GJS-400-15 | Spheroidal cast iron EN-GJS-400-15 | Spheroidal cast iron EN-GJS-400-15 | stainless steel 1.4404 | stainless steel 1.4404 | Spheroidal cast iron EN-GJS-400-15 | stainless steel 1.4404 |
| Material gears | steel 1.7139 | steel 1.7139 | steel 1.7139 | steel 1.7139 | stainless steel 1.4462 | stainless steel 1.4462 | steel 1.7139 | stainless steel 1.4462 |
| Bearing | ball bearings | ball bearings | bronze- plain bearings | carbide plain bearings | carbide plain bearings | stainless steel ball bearings | hybrid plain bearings | hybrid ball bearings |
| Connection | P | P | P | P | P/R | P/R | P | P/R |
| Max. perm. foreign particle size in the medium (µm) | 20 | 30 | 50 | 30 | 30 | 20 | 20 | 20 |
| Accuracy (from measuring value) | ± 0.3 % at ≥ 20 cSt | ± 0.5 % at ≥ 50 cSt | ± 1 % at ≥ 100 cSt | ± 0.5 % at ≥ 100 cSt | ± 0.5 % at ≥ 100 cSt | ± 0.3 % at ≥ 20 cSt | ± 1 % at ≥ 20 cSt | ± 1 % at ≥ 20 cSt |

| Nominal size | Starting point at l/min gal./min | Measuring range | | | | | | | |
|-----------------|---|-------------------|----------|-----------|----------|-------------|------------|------------|------------|
| | | l/min gal./min | | | | | | | |
| 0.025 | 0.001 | 0.008-2 | – | – | – | 0.02-2* | 0.008-2 | 0.008-2 | 0.008-2 |
| | 0.0003 | 0.002-0.53 | – | – | – | 0.005-0.53* | 0.002-0.53 | 0.002-0.53 | 0.002-0.53 |
| 0.04 | 0.004 | 0.02-4 | – | – | – | – | 0.02-4 | 0.02-4 | 0.02-4 |
| | 0.001 | 0.005-1.06 | – | – | – | – | 0.005-1.06 | 0.005-1.06 | 0.005-1.06 |
| 0.1 | 0.008 | 0.04-8 | – | – | 0.04-8 | – | 0.04-8 | 0.04-8 | 0.04-8 |
| | 0.002 | 0.01-2.1 | – | – | 0.01-2.1 | – | 0.01-2.1 | 0.01-2.1 | 0.01-2.1 |
| 0.2 | 0.010 | 0.16-16 | 0.16-16 | – | 0.16-16 | 0.16-16 | 0.16-16 | 0.16-16 | 0.16-16 |
| | 0.003 | 0.04-4.2 | 0.04-4.2 | – | 0.04-4.2 | 0.04-4.2 | 0.04-4.2 | 0.04-4.2 | 0.04-4.2 |
| 0.4 | 0.01 | 0.2-40 | – | – | 0.2-30 | 0.2-30 | – | – | – |
| | 0.003 | 0.05-10.6 | – | – | 0.05-8 | 0.05-8 | – | – | – |
| 1 | 0.02 | 0.4-80 | 0.4-80 | 0.6-40 | 0.3-60 | 0.3-60 | 0.4-80 | 0.4-80 | 0.4-80 |
| | 0.005 | 0.1-21 | 0.1-21 | 0.15-10.6 | 0.08-16 | 0.08-16 | 0.1-21 | 0.1-21 | 0.1-21 |
| 3 | 0.03 | 0.6-160 | 0.6-160 | – | 0.6-100 | 0.6-100 | 0.6-160 | – | – |
| | 0.008 | 0.16-42 | 0.16-42 | – | 0.16-26 | 0.16-26 | 0.16-42 | – | – |
| 5 | 0.04 | 1-250 | 1-250 | 1.2-80 | 1-160 | 1-160 | 1-250 | – | – |
| | 0.01 | 0.26-66 | 0.26-66 | 0.32-21 | 0.26-42 | 0.26-42 | 0.26-66 | – | – |
| 12 | 0.1 | 2-600 | – | – | – | – | – | – | – |
| | 0.03 | 0.53-159 | – | – | – | – | – | – | – |
| 16 | 0.2 | 3-700 | – | – | – | – | – | – | – |
| | 0.05 | 0.79-185 | – | – | – | – | – | – | – |

* Measuring accuracy ± 3 %; Linearity ± 1.5 %

Type Key

Ordering example

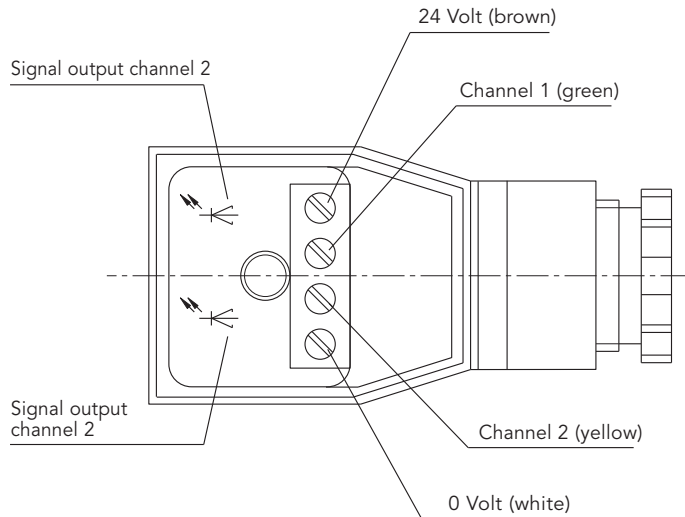


Special Versions

| Special ID | Series | Description |
|------------|--------|---|
| 55 | 1 – 8 | version with aluminium connection box and preamplifier VV12 with Cannon plug |
| 71 | 1 – 8 | version with Hirschmann connector and round connector M 12 x 1 |
| 74 | 1 – 8 | version with Hirschmann connector and preamplifier VV12 for 12 Volt power supply (10.5 – 16 Volt) |
| 79 | 1 | VC 3 and VC 5 in high pressure version (400 bar / 5800 psi) |
| 155 | 1 | VC 3 and VC 5 in high pressure version (400 bar / 5800 psi) Skydrol resistant, with aluminium connection box and Cannon plug. |
| 156 | 1 | Skydrol resistant, with aluminium connection box and Cannon plug. |

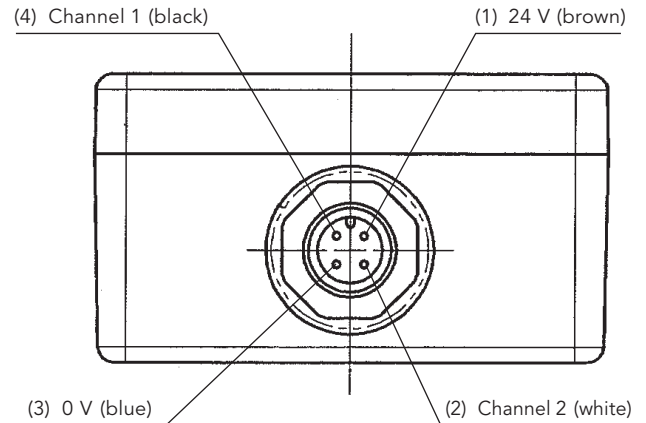
Electrical Connection

Standard version / High temperature version



High temperature PLUS version

Electrical connection (Round connector M 12 x 1/4-pin)



Electrical Characteristics

| | | | |
|--------------------------------------|---|-----------------------------------|---|
| Number of measuring channels | 2 | Pulse offset between two channels | $90^\circ \pm 30^\circ$ |
| Operating voltage | $U_{op} = 12 \dots 30 \text{ VDC}$ polarized | Power requirement | $P_{b \max} = 0.9 \text{ W}$ |
| Pulse amplitude | $U_A \geq 0.8 U_B$ | Output power/channel | $P_{a \max} = 0.3 \text{ W}$ short-circuit-proof |
| Pulse shape with symm. output signal | square wave pulse duty factor/channel $1:1 \pm 15 \%$ | Degree of protection | IP 65 DIN 40050 |
| Signal output | PNP (NPN on request) | | |

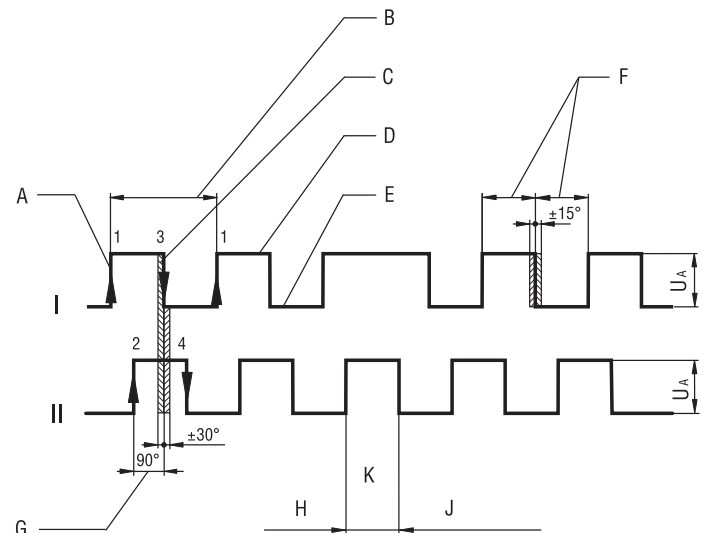
Signal Characteristics

Channel I

- A rising edge
- B one pulse
(corr. to flow rate of geom. tooth volume V_{gz})
- C falling edge
- D ON phase
- E OFF phase
- F pulse duty factor $1:1 \pm 15 \%$

Channel II

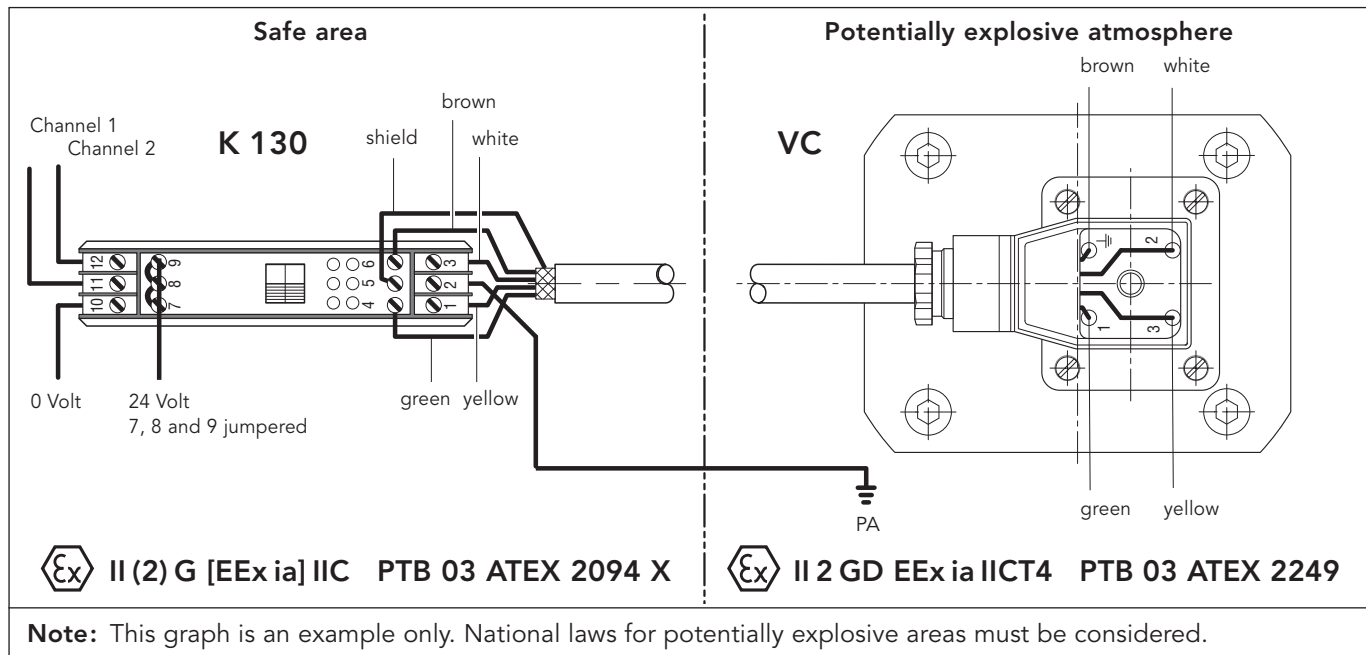
- G channel offset
- H flow direction 1
- K reversal of flow direction
- J flow direction 2



Explosion-Proof Design (ATEX)

Function

- All volume counters are available in explosion-proof design according to ATEX.
- The explosion-proof design consists of the volume counter (intrinsically safe electrical apparatus) and the switching amplifier K 130 (associated electrical apparatus). The type of protection „intrinsic safety“ applies to this construction.
- The volume counter is installed in the potentially explosive atmosphere.
- The mounting of the amplifier K 130 is carried out in the safe area.
- Volume counter and switching amplifier are electrically connected to each other. The switching amplifier evaluates the sensor signals and converts them to square-wave signals.
- Without switching amplifier, the volume counter must not be operated in the potentially explosive atmosphere.
- Cable lengths of up to 400 m / 1312 ft are possible between volume counter and switching amplifier.
- LED's for monitoring line breaks / short circuits, channel switching state and power supply are located on the switching amplifier.



Technical Data of Switching Amplifier K-130/3-E-10

Power supply

Supply voltage cl. 7 (L+), cl. 10 (L-)
Ripple content white Wss

DC 24 Volt $\pm 20\%$
< 10 %

Outputs (non-intrinsically safe)

Characteristics cl. 9, 12, 8, 11

Electronics outputs
Short-circuit current
Signal level 1-signal
Signal level 0-signal

electrically isolated via optoelectronic coupler
approx. 25 mA
0.8 x supply voltage with $R_L > 2\text{ k ohm}$
inhibited output, residual current < 10 uA

Ambience conditions

Minimum limiting temperature
Maximum limiting temperature

248 K (-25 °C / -13 °F)
333 K (+60 °C / +140 °F)

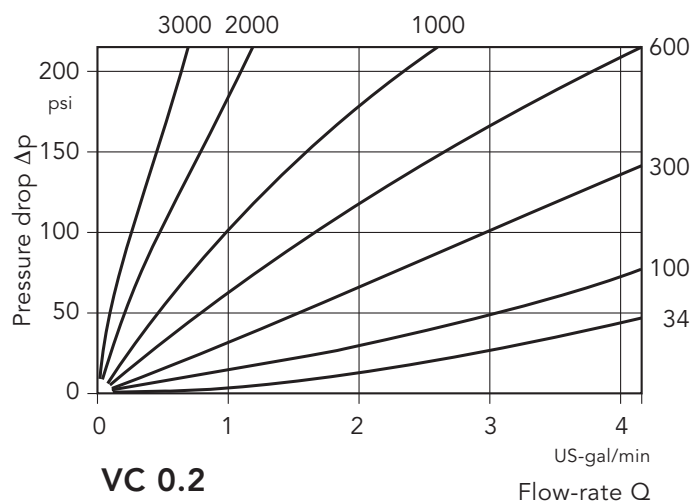
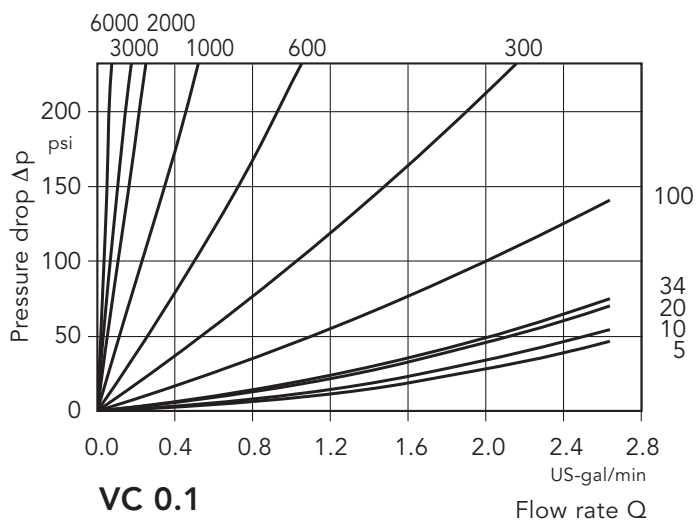
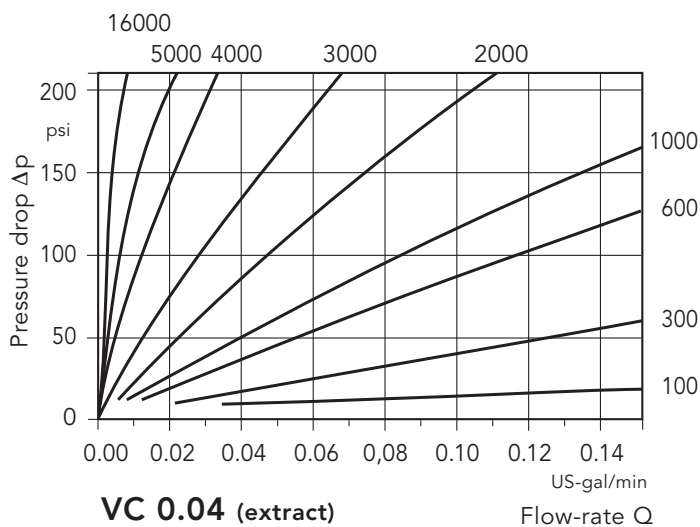
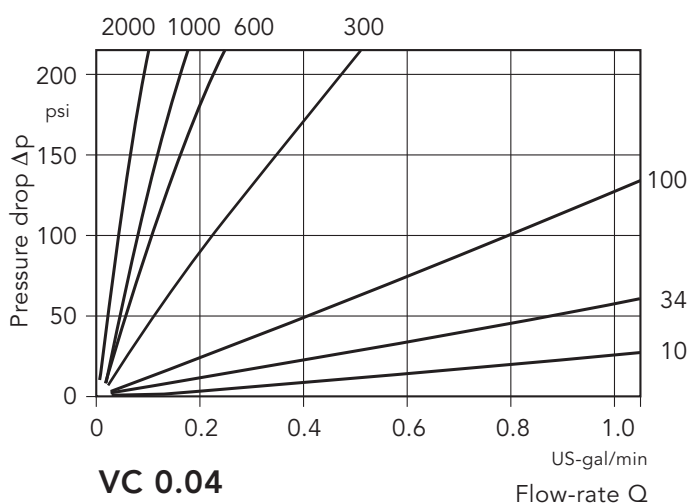
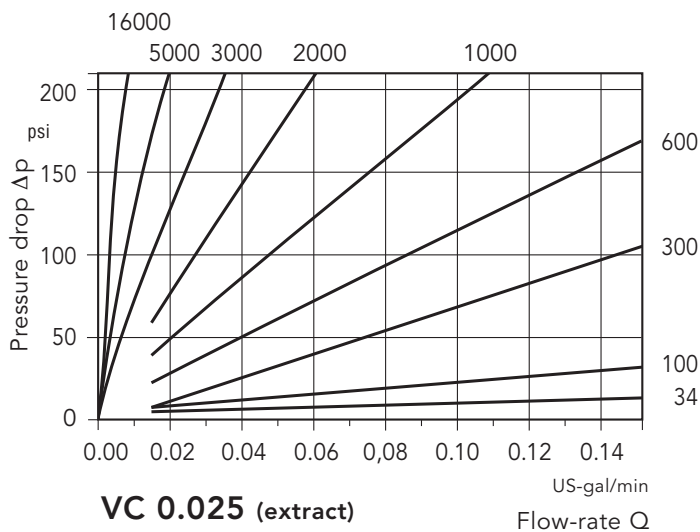
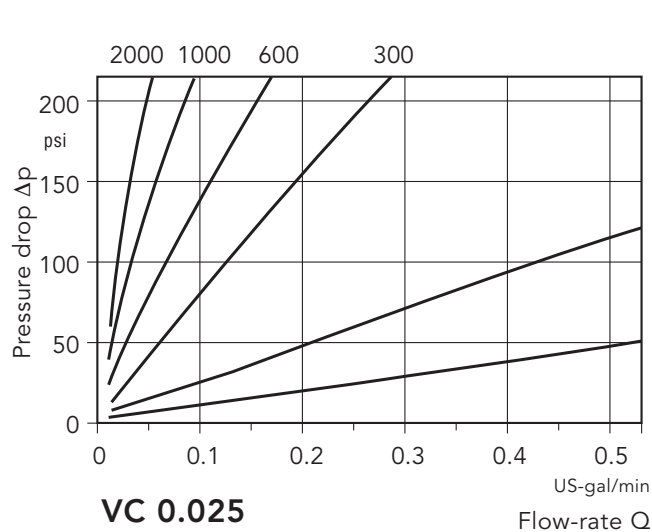
Mechanics

Dimensions
Connection possibility
Weight

107.5 x 92 x 22 mm
can be snapped on a 35 mm mounting channel DIN 46277
approx. 150 g / 0.33 lb

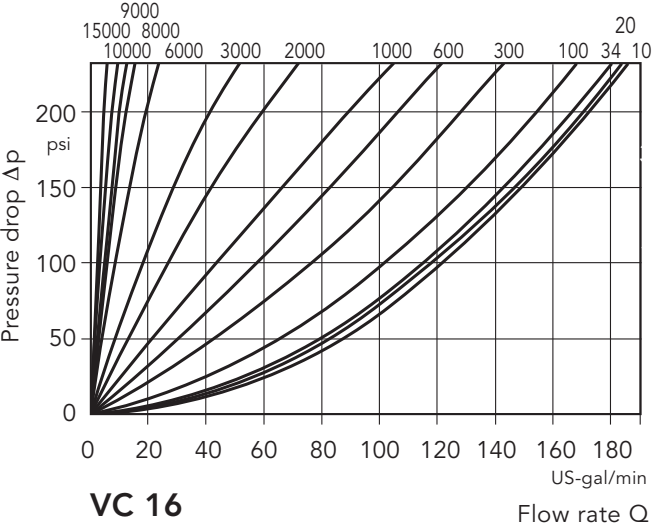
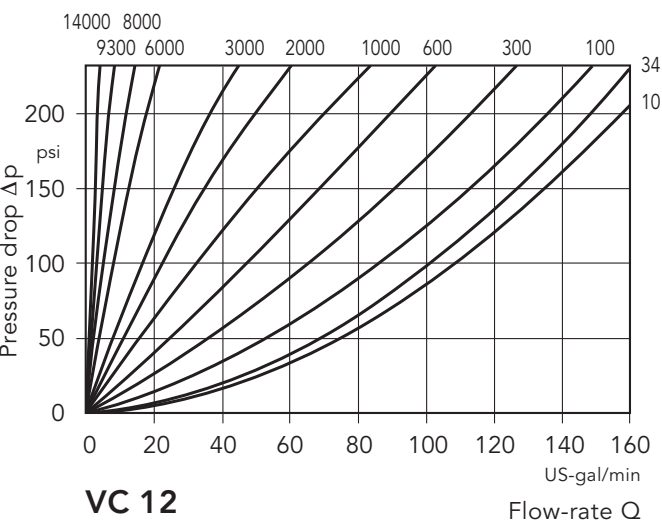
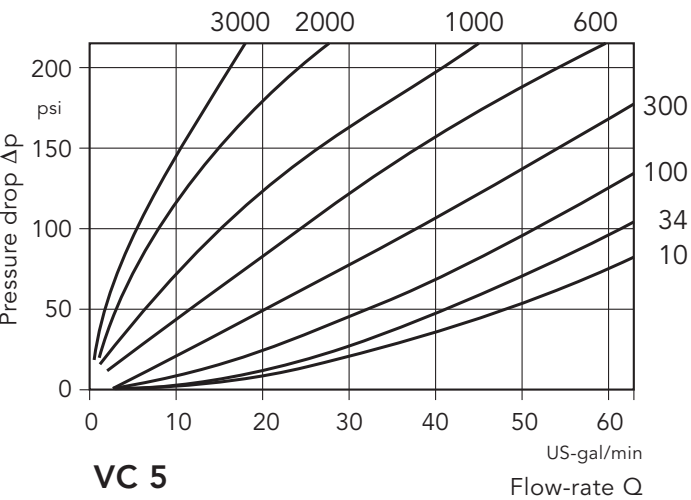
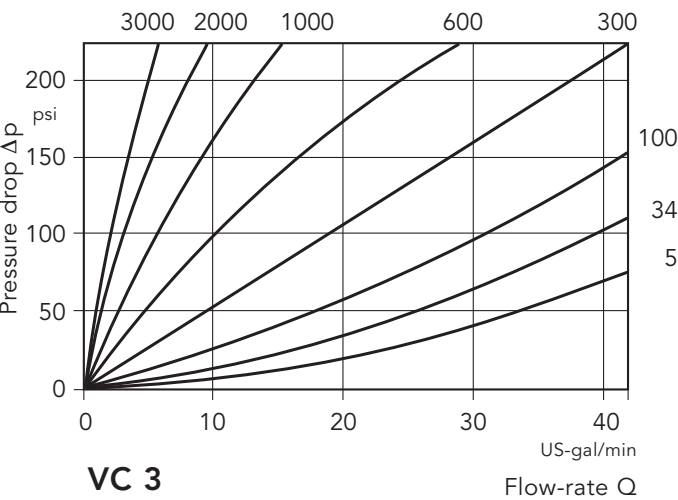
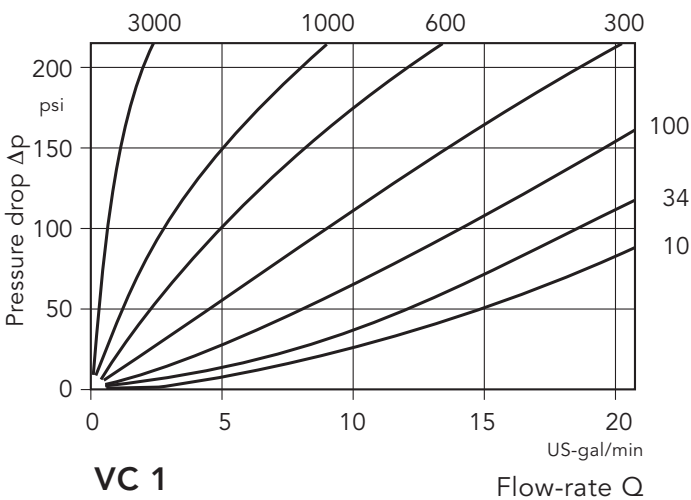
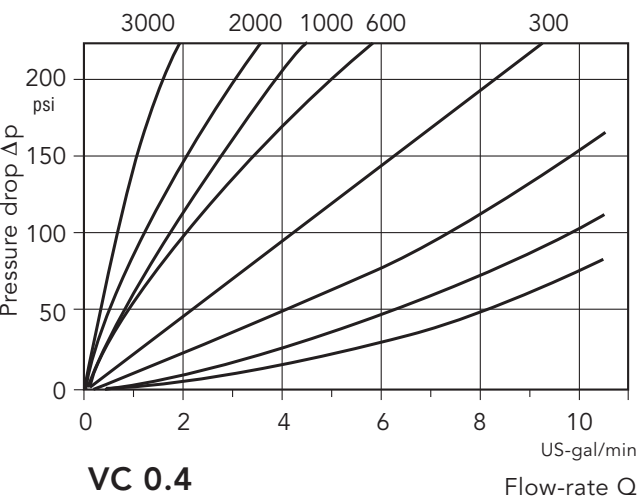
Pressure Drop

Series 1, 2, 6, 7 and 8 Parameter: Viscosity (cst)



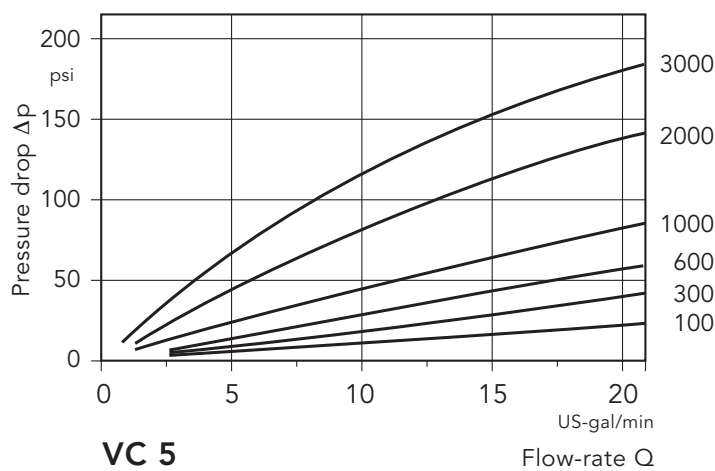
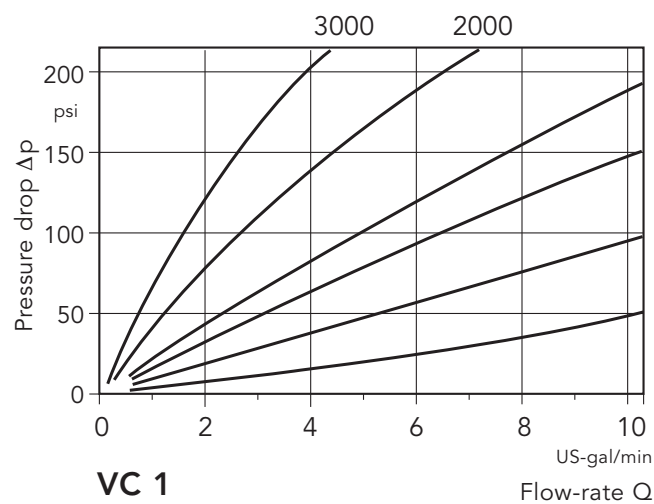
Pressure Drop

Series 1, 2, 6, 7 and 8 Parameter: Viscosity (cst)



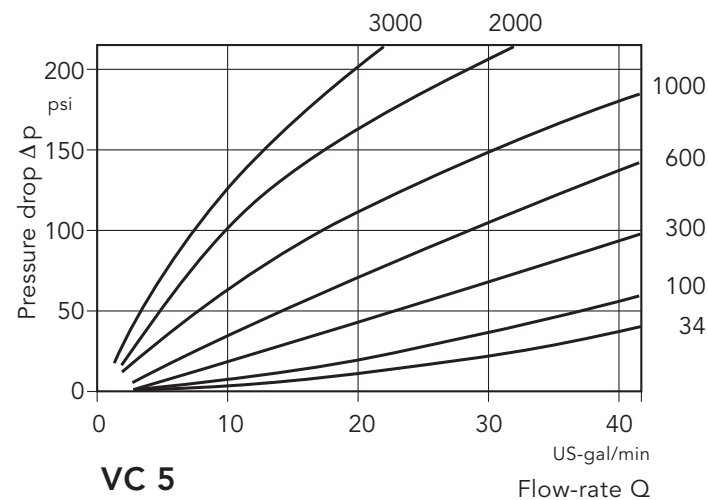
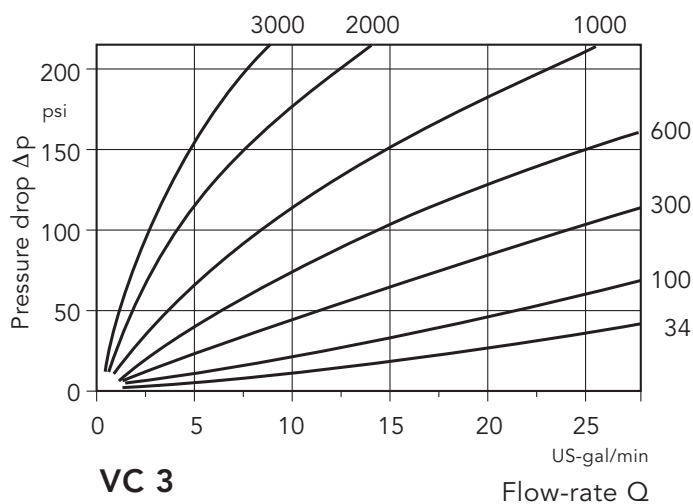
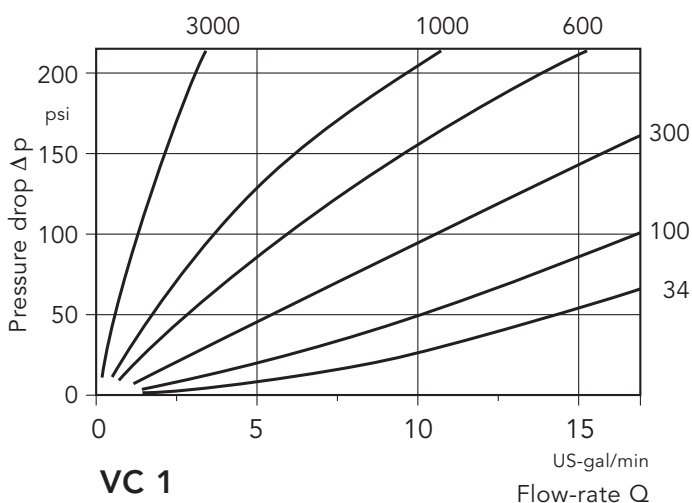
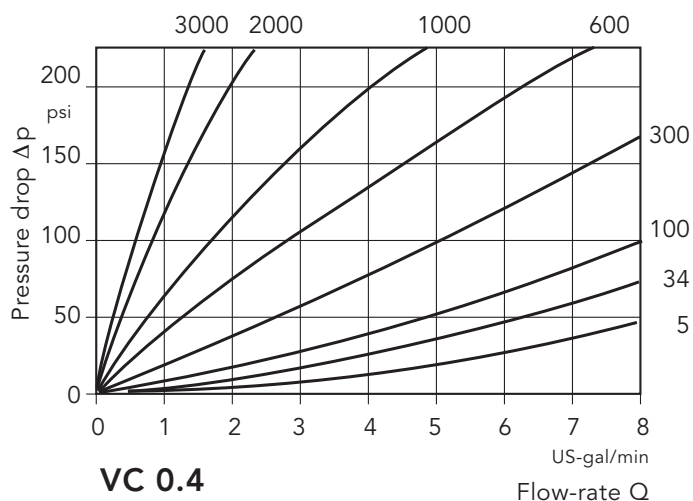
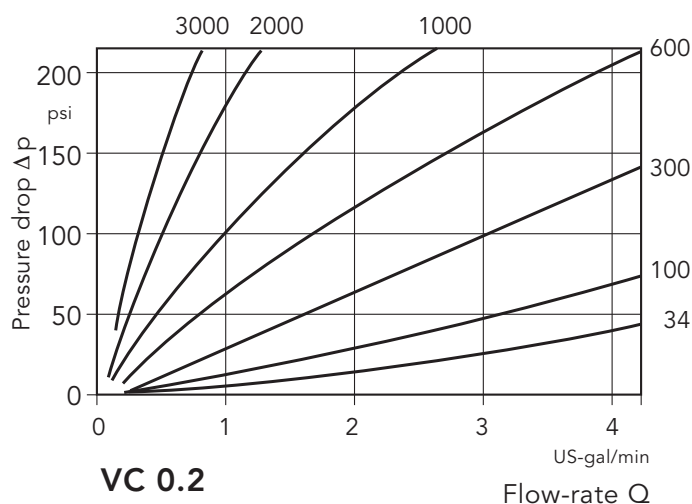
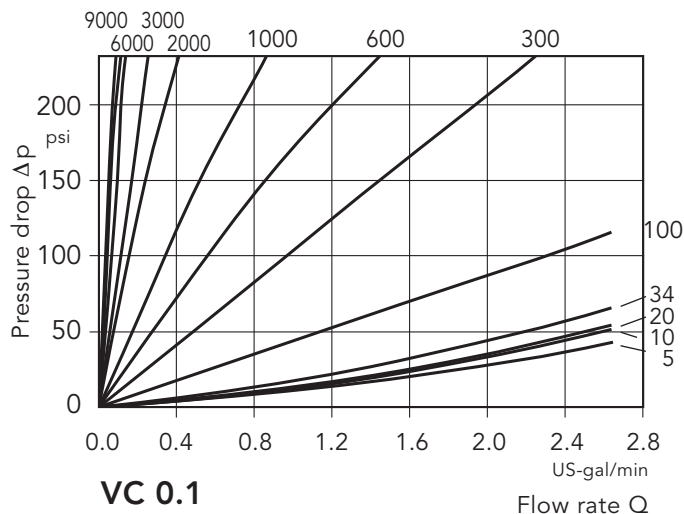
Pressure Drop

Series 3 Parameter: Viscosity (cst)



Pressure Drop

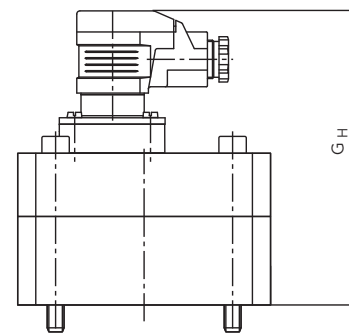
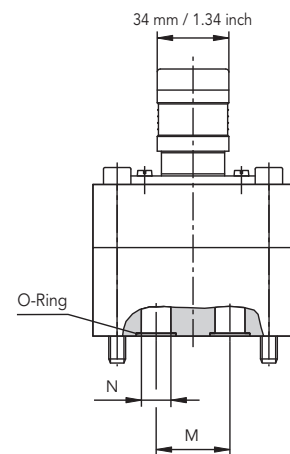
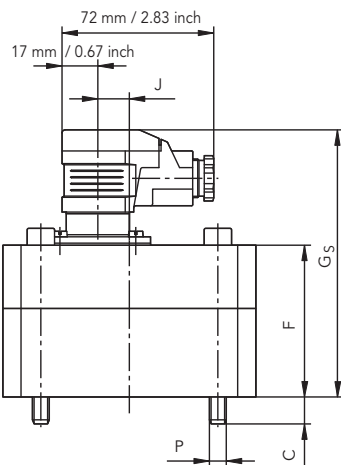
Series 4/5 Parameter: Viscosity (cst)



Dimensions

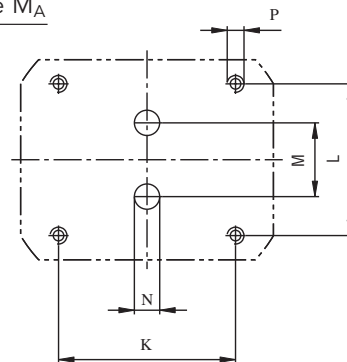
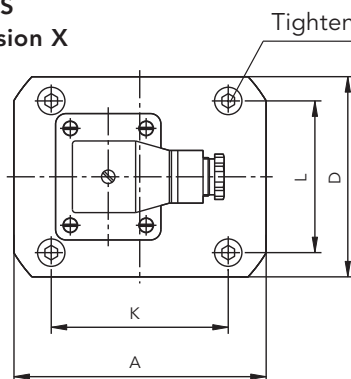
Series 1, 2, 3, 4, 7 – Connection type P

| Nominal size | Available series | Weight kg | Tightening torque in Nm | Dimensions in mm | | | | | | | | | | | | |
|--------------|------------------|-----------|-------------------------|------------------|--------------------|------|-----|------|------|------|------|------|------|------|------|---|
| | | | | m | M _A | A | C | D | F | Gs | GH | J | K | L | M | N |
| VC 0.025 | 1, 7 | 1.8 | 14 | 85 | 10 | 60 | 50 | 101 | 114 | – | 70 | 40 | 20 | 6.5 | M 6 | |
| VC 0.04 | 1, 7 | 2.0 | 14 | 85 | 9 | 60 | 56 | 107 | 120 | – | 70 | 40 | 20 | 6.5 | M 6 | |
| VC 0.1 | 1 | 2.3 | 14 | 85 | 10 | 60 | 65 | 116 | 129 | – | 70 | 40 | 20 | 6.7 | M 6 | |
| VC 0.2 | 1, 2, 4, 7 | 2.0 | 14 | 85 | 13 | 60 | 57 | 108 | 121 | – | 70 | 40 | 20 | 9 | M 6 | |
| VC 0.4 | 1, 4 | 3.7 | 35 | 100 | 17 | 90 | 63 | 114 | 127 | – | 80 | 38 | 34 | 16 | M 8 | |
| VC 1 | 1, 2, 3, 4, 7 | 5.2 | 35 | 120 | 13 | 95 | 72 | 123 | 136 | 15.5 | 84 | 72 | 35 | 16 | M 8 | |
| VC 3 | 1, 2, 4 | 9.0 | 120 | 170 | 18 | 120 | 89 | 140 | 153 | 46.5 | 46 | 95 | 50 | 25 | M 12 | |
| VC 5 | 1, 2, 3, 4 | 13.0 | 120 | 170 | 22 | 120 | 105 | 156 | 169 | 46.5 | 46 | 95 | 50 | 25 | M 12 | |
| | | pounds | torque in Lbs | | Dimensions in inch | | | | | | | | | | | |
| | | m | M _{Ab} | A | C | D | F | Gs | GH | J | K | L | M | N | P | |
| VC 0.025 | 1, 7 | 4 | 123 | 3.35 | 0.39 | 2.36 | 2.0 | 3.98 | 4.49 | – | 2.76 | 1.57 | 0.79 | 0.26 | M 6 | |
| VC 0.04 | 1, 7 | 4.4 | 123 | 3.35 | 0.35 | 2.36 | 2.2 | 4.21 | 4.72 | – | 2.76 | 1.57 | 0.79 | 0.26 | M 6 | |
| VC 0.1 | 1 | 5.1 | 123 | 3.35 | 0.39 | 2.36 | 2.6 | 4.57 | 5.08 | – | 2.76 | 1.57 | 0.79 | 0.26 | M 6 | |
| VC 0.2 | 1, 2, 4, 7 | 4.4 | 123 | 3.35 | 0.51 | 2.36 | 2.2 | 4.25 | 4.76 | – | 2.76 | 1.57 | 0.79 | 0.35 | M 6 | |
| VC 0.4 | 1, 4 | 8.2 | 309 | 3.94 | 0.67 | 3.54 | 2.5 | 4.49 | 5.00 | – | 3.15 | 1.50 | 1.34 | 0.63 | M 8 | |
| VC 1 | 1, 2, 3, 4, 7 | 11.5 | 309 | 4.72 | 0.51 | 3.74 | 2.8 | 4.84 | 5.35 | 0.61 | 3.31 | 2.83 | 1.38 | 0.63 | M 8 | |
| VC 3 | 1, 2, 4 | 19.8 | 1061 | 6.69 | 0.71 | 4.72 | 3.5 | 5.51 | 6.02 | 1.83 | 1.81 | 3.74 | 1.97 | 0.98 | M 12 | |
| VC 5 | 1, 2, 3, 4 | 28.6 | 1061 | 6.69 | 0.87 | 4.72 | 4.1 | 6.14 | 6.65 | 1.83 | 1.81 | 3.74 | 1.97 | 0.98 | M 12 | |



Version H

Version S and Version X



Connection dimensions

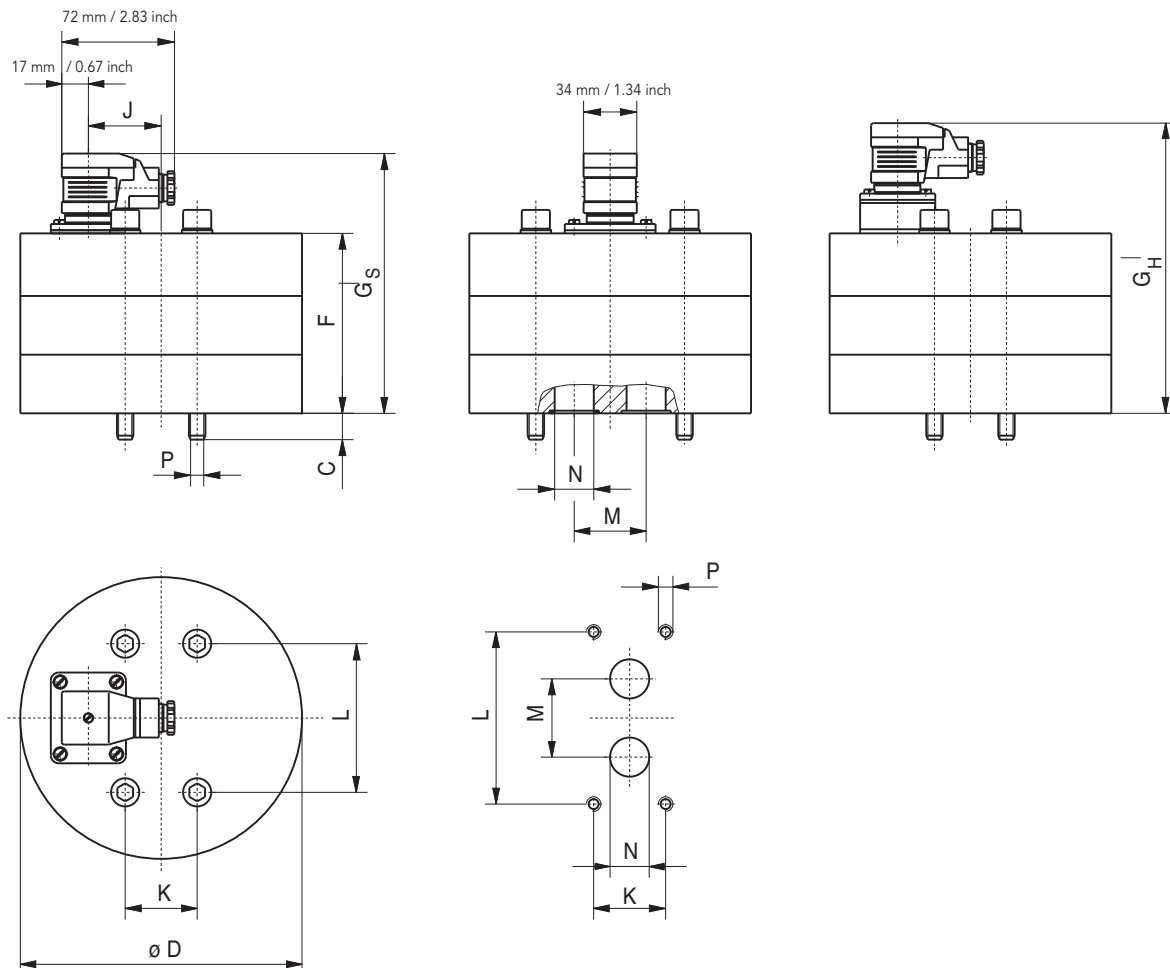
Dimensions

Series 1 – High pressure version (/79)

| Nominal size | Weight kg | Tightening torque in Nm | Dimensions in mm | | | | | | | | | | |
|--------------|-----------|-------------------------|--------------------|------|-----|----------------|----------------|------|------|------|------|------|------|
| | m | M _A | C | D | F | G _S | G _H | J | K | L | M | N | P |
| VC 3 | 16.3 | 145 | 24.5 | 180 | 99 | 150 | 163 | 46.5 | 46 | 95 | 50 | 25 | M 12 |
| VC 5 | 18.9 | 145 | 22 | 180 | 115 | 166 | 179 | 46.5 | 46 | 95 | 50 | 25 | M 12 |
| | pounds | torque in Lbs | Dimensions in inch | | | | | | | | | | |
| VC 3 | 35.9 | 1283 | 0.96 | 7.09 | 3.9 | 5.91 | 6.42 | 1.83 | 1.81 | 3.74 | 1.97 | 0.98 | M 12 |
| VC 5 | 41.7 | 1283 | 0.87 | 7.09 | 4.5 | 6.54 | 7.05 | 1.83 | 1.81 | 3.74 | 1.97 | 0.98 | M 12 |

Series 1 – Standard version

| Nominal size | Weight kg | Tightening torque in Nm | Dimensions in mm | | | | | | | | | | |
|--------------|-----------|-------------------------|--------------------|------|------|----------------|----------------|------|------|------|------|------|------|
| | m | M _A | C | D | F | G _S | G _H | J | K | L | M | N | P |
| VC 12 | 53.5 | 400 | 44 | 249 | 168 | 219 | 232 | 77 | 120 | 140 | 70 | 38 | M 20 |
| VC 16 | 57.4 | 400 | 44 | 249 | 184 | 235 | 248 | 77 | 120 | 140 | 70 | 38 | M 20 |
| | pounds | torque in Lbs | Dimensions in inch | | | | | | | | | | |
| VC 12 | 118 | 3540 | 1.73 | 9.80 | 6.61 | 8.62 | 9.13 | 3.03 | 4.72 | 5.51 | 2.76 | 1.50 | M 20 |
| VC 16 | 127 | 3540 | 1.73 | 9.80 | 7.24 | 9.25 | 9.76 | 3.03 | 4.72 | 5.51 | 2.76 | 1.50 | M 20 |



Dimensions

Connection plate (cast iron) for VC 3/79 and VC 5/79 (high pressure) with side SAE flange connection

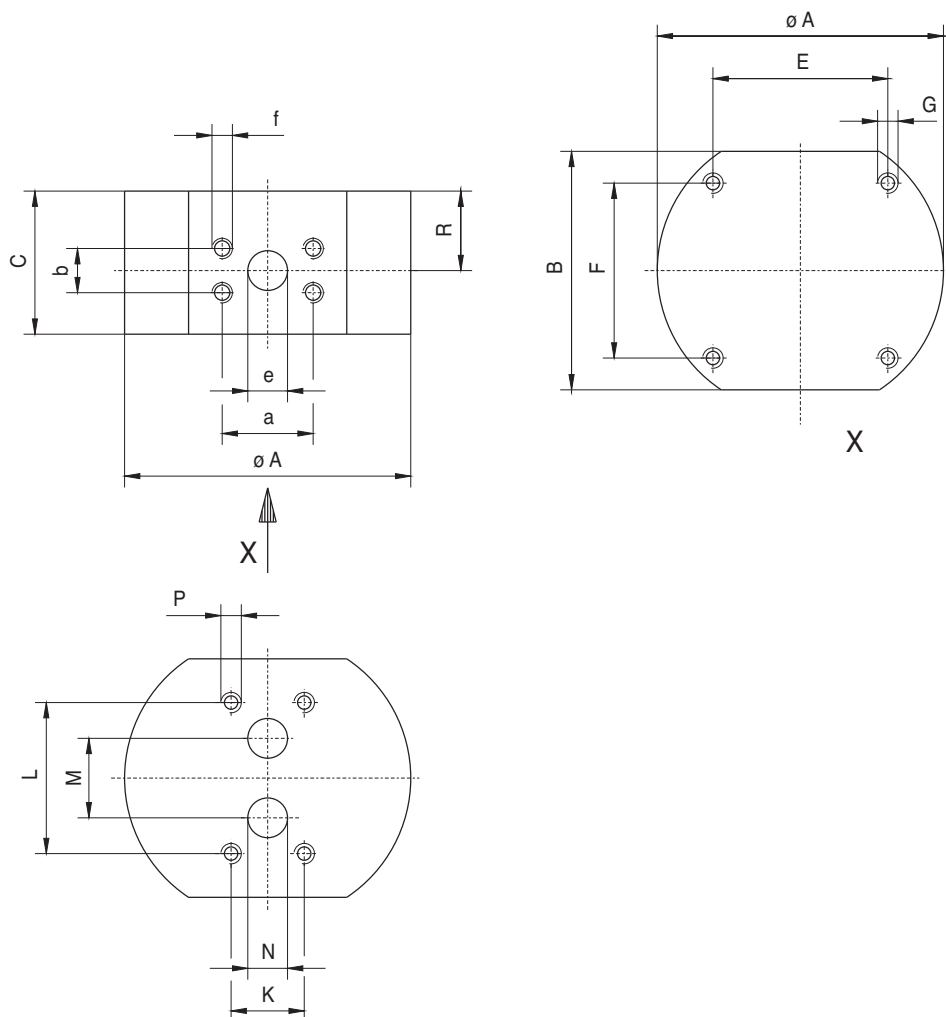
| Ordering code | Weight kg | Dimensions in mm | | | | | | | | | | | | | | | |
|------------------|--------------|--------------------|------|------|------|------|-----------|------|------|------|------|------------|------|------|------|------|------------|
| | | m | A | B | C | E | F | G | K | L | M | N | P | R | a | b | e |
| MVC 5 V1 E09* | 14.2 | 180 | 150 | 90 | 110 | 110 | M8/15 t | 46 | 95 | 50 | 25 | M12/24 t | 50 | 57.2 | 27.8 | 25 | M12/24 t |
| pounds | | Dimensions in inch | | | | | | | | | | | | | | | |
| MVC 5 V1 E09* | 31.3 | 7.09 | 5.91 | 3.54 | 4.33 | 4.33 | M8/t=0.59 | 1.81 | 3.74 | 1.97 | 0.98 | M12/t=0.94 | 1.97 | 2.25 | 1.09 | 0.98 | M12/t=0.94 |

* fits for VC 3 and VC 5

Connection plate for VC 12 and VC 16 with side SAE flange connection

| Ordering code | Weight kg | Dimensions in mm | | | | | | | | | | | | | | | |
|------------------|--------------|--------------------|------|------|------|------|------------|------|------|------|------|------------|------|------|------|------|------------|
| | | m | A | B | C | E | F | G | K | L | M | N | P | R | a | b | e |
| MVC 12 V1 G09** | 41.2 | 249 | 200 | 140 | 120 | 140 | M10/20 t | 120 | 140 | 70 | 38 | M20/45 t | 70 | 79.4 | 36.5 | 38 | M16/25 t |
| pounds | | Dimensions in inch | | | | | | | | | | | | | | | |
| MVC 12 V1 G09** | 90.8 | 9.80 | 7.87 | 5.51 | 4.72 | 5.51 | M10/t=0.79 | 4.72 | 5.51 | 2.76 | 1.50 | M20/t=1.77 | 2.76 | 3.13 | 1.44 | 1.50 | M16/t=0.98 |

** fits for VC 12 and VC 16

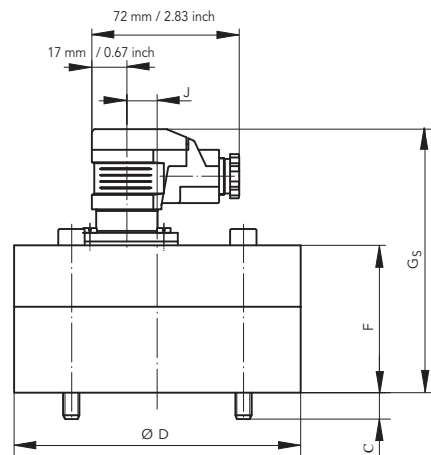


Dimensions

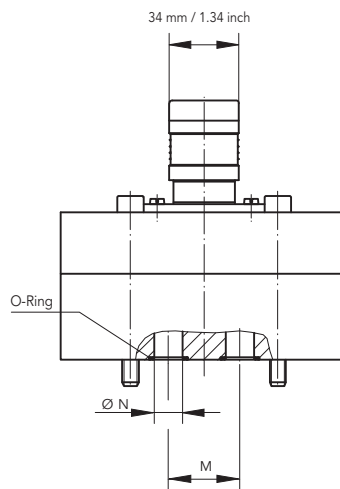
Series 5, 6 and 8 (stainless steel) – Connection type P

| Nominal size | Available series | Weight kg | Tightening torque in Nm | Dimensions in mm | | | | | | | | | | |
|--------------|------------------|-----------|-------------------------|------------------|----------------|-----|-----|-----|----------------|----------------|----|----|-----|------|
| | | | | m | M _A | C | D | F | G _S | G _H | J | K | L | M |
| VC 0.025 | 5, 6, 8 | 3 | 14 | 15 | 94 | 55 | 106 | 119 | – | 70 | 40 | 20 | 6.5 | M 6 |
| VC 0.04 | 6, 8 | 3 | 14 | 9 | 94 | 56 | 107 | 120 | – | 70 | 40 | 20 | 6.7 | M 6 |
| VC 0.1 | 6, 8 | 3 | 14 | 10 | 94 | 65 | 116 | 129 | – | 70 | 40 | 20 | 6.7 | M 6 |
| VC 0.2 | 5, 6, 8 | 3.1 | 14 | 13 | 94 | 57 | 108 | 121 | – | 70 | 40 | 20 | 9 | M 6 |
| VC 0.4 | 5 | 4.8 | 35 | 17 | 118 | 63 | 114 | 127 | – | 80 | 38 | 34 | 16 | M 8 |
| VC 1 | 5, 6, 8 | 7 | 35 | 13 | 124 | 72 | 123 | 136 | 15.5 | 84 | 72 | 35 | 16 | M 8 |
| VC 3 | 5, 6 | 15.9 | 120 | 21 | 170 | 89 | 140 | 153 | 46.5 | 46 | 95 | 50 | 25 | M 12 |
| VC 5 | 5, 6 | 18.7 | 120 | 25 | 170 | 105 | 156 | 169 | 46.5 | 46 | 95 | 50 | 25 | M 12 |

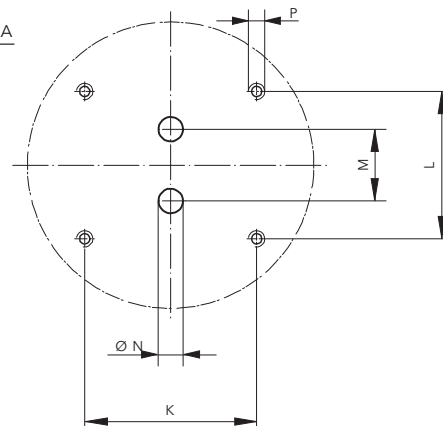
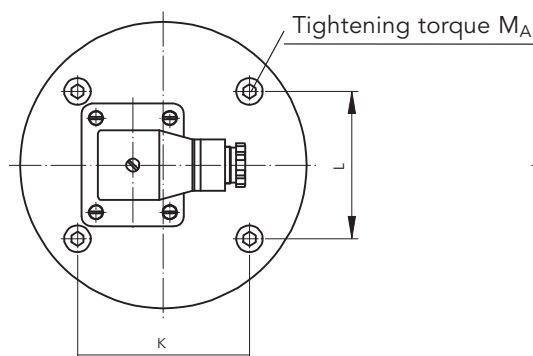
| | | pounds | torque in Lbs | Dimensions in inch | | | | | | | | | | |
|----------|---------|--------|-----------------|--------------------|------|-----|----------------|----------------|------|------|------|------|------|------|
| | | m | M _{AB} | C | D | F | G _S | G _H | J | K | L | M | N | P |
| VC 0.025 | 5, 6, 8 | 6.6 | 123 | 0.59 | 3.70 | 2.2 | 4.17 | 4.69 | – | 2.76 | 1.57 | 0.79 | 0.26 | M 6 |
| VC 0.04 | 6, 8 | 6.6 | 123 | 0.35 | 3.70 | 2.2 | 4.21 | 4.72 | – | 2.76 | 1.57 | 0.79 | 0.26 | M 6 |
| VC 0.1 | 6, 8 | 6.6 | 123 | 0.39 | 3.70 | 2.6 | 4.57 | 5.08 | – | 2.76 | 1.57 | 0.79 | 0.26 | M 6 |
| VC 0.2 | 5, 6, 8 | 6.8 | 123 | 0.51 | 3.70 | 2.2 | 4.25 | 4.76 | – | 2.76 | 1.57 | 0.79 | 0.35 | M 6 |
| VC 0.4 | 5 | 10.6 | 309 | 0.67 | 4.65 | 2.5 | 4.49 | 5.0 | – | 3.15 | 1.50 | 1.34 | 0.63 | M 8 |
| VC 1 | 5, 6, 8 | 15.4 | 309 | 0.51 | 4.88 | 2.8 | 4.84 | 5.35 | 0.61 | 3.31 | 2.83 | 1.38 | 0.63 | M 8 |
| VC 3 | 5, 6 | 35.1 | 1061 | 0.83 | 6.69 | 3.5 | 5.51 | 6.02 | 1.83 | 1.81 | 3.74 | 1.97 | 0.98 | M 12 |
| VC 5 | 5, 6 | 41.2 | 1061 | 0.98 | 6.69 | 4.1 | 6.14 | 6.65 | 1.83 | 1.81 | 3.74 | 1.97 | 0.98 | M 12 |



Version S
and Version X



Version H

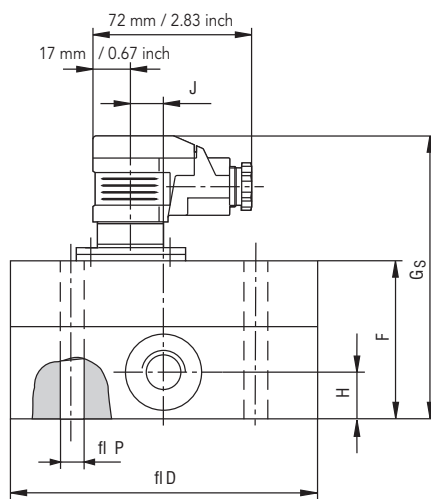


Connection dimensions

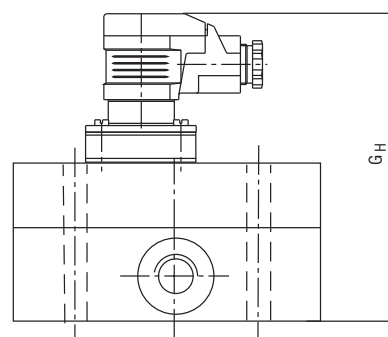
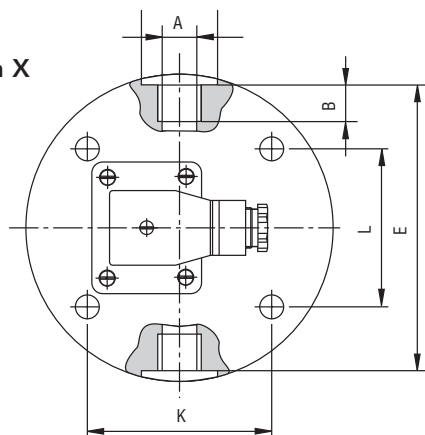
Dimensions

Series 5, 6 and 8 (stainless steel) – Connection type R

| Nominal size | Available series | Weight kg | Dimensions in mm | | | | | | | | | | | | |
|--------------|------------------|-----------|--------------------|------|------|------|------|-----|------|------|------|------|------|------|------|
| | | | m | A | B | C | D | E | F | Gs | GH | H | J | K | L |
| VC 0.025 | 5, 6, 8 | 3 | G ⅛ | 9 | 17 | 94 | 90 | 55 | 106 | 119 | 15 | – | 70 | 40 | 6.7 |
| VC 0.04 | 6, 8 | 3 | G ¼ | 13 | 21 | 94 | 90 | 56 | 107 | 120 | 15 | – | 70 | 40 | 6.7 |
| VC 0.1 | 6, 8 | 3 | G ⅜ | 13 | 25 | 94 | 90 | 65 | 116 | 129 | 20 | – | 70 | 40 | 6.7 |
| VC 0.2 | 5, 6, 8 | 3.1 | G ⅜ | 13 | 25 | 94 | 90 | 57 | 108 | 121 | 16 | – | 70 | 40 | 6.7 |
| VC 0.4 | 5 | 4.8 | G ½ | 15 | 29 | 118 | 112 | 63 | 114 | 127 | 17.5 | – | 80 | 38 | 9 |
| VC 1 | 5, 6, 8 | 7 | G ½ | 15 | 29 | 124 | 120 | 72 | 123 | 136 | 22 | 15.5 | 84 | 72 | 9 |
| VC 3 | 5, 6 | 15.9 | G 1 | 19 | 42 | 170 | 162 | 89 | 140 | 153 | 30 | 46.5 | 46 | 95 | 13 |
| VC 5 | 5, 6 | 18.7 | G 1 | 19 | 42 | 170 | 162 | 105 | 156 | 169 | 30 | 46.5 | 46 | 95 | 13 |
| pounds | | | Dimensions in inch | | | | | | | | | | | | |
| | | m | A | B | C | D | E | F | Gs | GH | H | J | K | L | P |
| VC 0.025 | 5, 6, 8 | 6.6 | G ⅛ | 0.35 | 0.67 | 3.70 | 3.54 | 2.2 | 4.17 | 4.69 | 0.59 | – | 2.76 | 1.57 | 0.26 |
| VC 0.04 | 6, 8 | 6.6 | G ¼ | 0.51 | 0.83 | 3.70 | 3.54 | 2.2 | 4.21 | 4.72 | 0.59 | – | 2.76 | 1.57 | 0.26 |
| VC 0.1 | 6, 8 | 6.6 | G ⅜ | 0.51 | 0.98 | 3.70 | 3.54 | 2.6 | 4.57 | 5.08 | 0.79 | – | 2.76 | 1.57 | 0.26 |
| VC 0.2 | 5, 6, 8 | 6.8 | G ⅜ | 0.51 | 0.98 | 3.70 | 3.54 | 2.2 | 4.25 | 4.76 | 0.63 | – | 2.76 | 1.57 | 0.26 |
| VC 0.4 | 5 | 10.6 | G ½ | 0.59 | 1.14 | 4.65 | 4.41 | 2.5 | 4.49 | 5.00 | 0.69 | – | 3.15 | 1.49 | 0.35 |
| VC 1 | 5, 6, 8 | 15.4 | G ½ | 0.59 | 1.14 | 4.88 | 4.72 | 2.8 | 4.84 | 5.35 | 0.87 | 0.61 | 3.31 | 2.83 | 0.35 |
| VC 3 | 5, 6 | 35 | G 1 | 0.75 | 1.65 | 6.69 | 6.38 | 3.5 | 5.51 | 6.02 | 1.18 | 1.83 | 1.81 | 1.97 | 0.51 |
| VC 5 | 5, 6 | 41.2 | G 1 | 0.75 | 1.65 | 6.69 | 6.38 | 4.1 | 6.14 | 6.65 | 1.18 | 1.83 | 1.81 | 1.97 | 0.51 |



Version S
and Version X



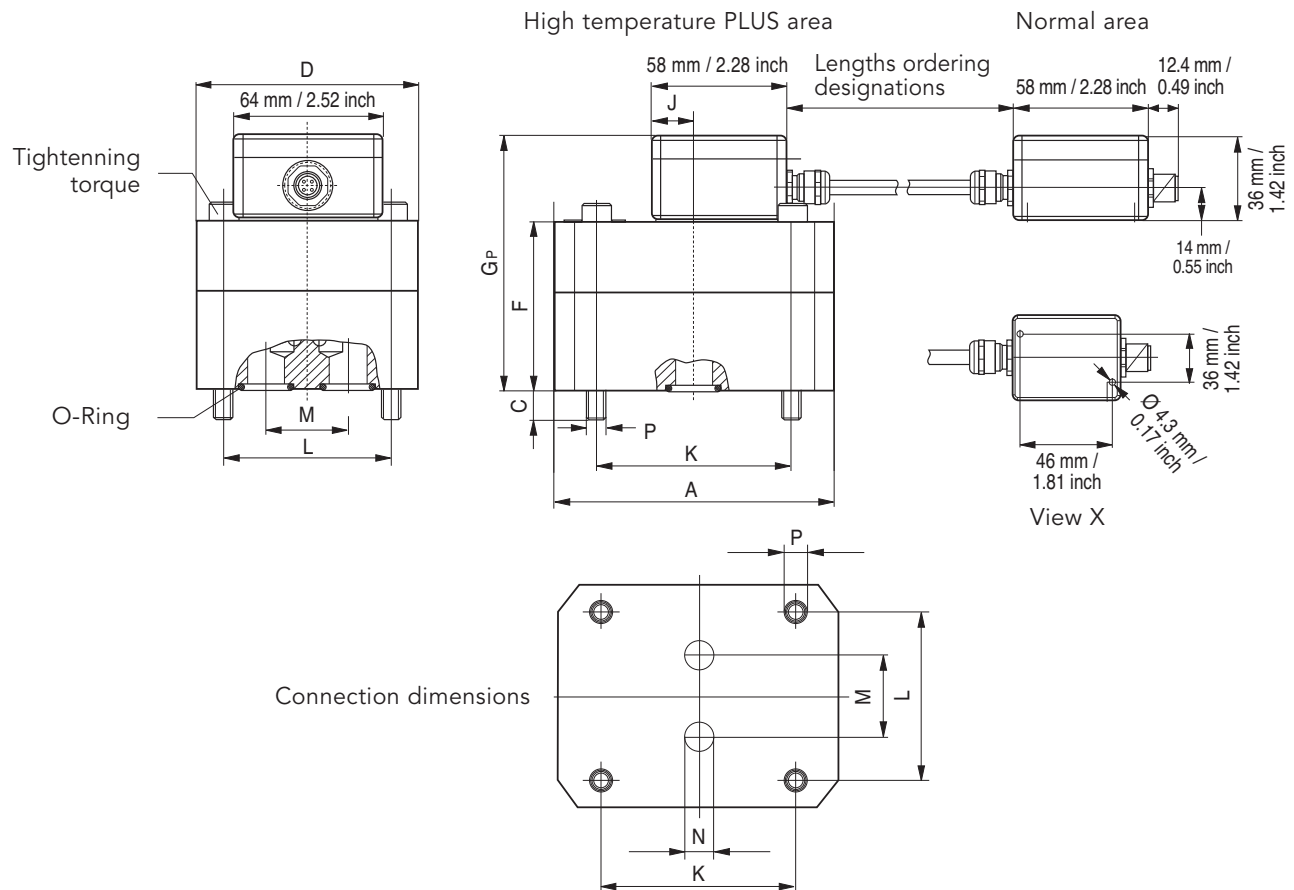
Version H

Dimensions

VC High Temperature PLUS

| Nominal size | Weight kg | Tightening torque in Nm | Dimensions in mm | | | | | | | | | | |
|--------------|-----------|-------------------------|------------------|----|-----|-----|----------------|------|----|----|----|-----|------|
| | m | M _A | A | C | D | F | G _P | J | K | L | M | N | P |
| VC 0.025 | 1.8 | 14 | 85 | 10 | 60 | 50 | 87 | – | 70 | 40 | 20 | 6.5 | M 6 |
| VC 0.04 | 2 | 14 | 85 | 9 | 60 | 56 | 93 | – | 70 | 40 | 20 | 6.5 | M 6 |
| VC 0.1 | 2.3 | 14 | 85 | 10 | 60 | 65 | 102 | – | 70 | 40 | 20 | 6.7 | M 6 |
| VC 0.2 | 2 | 14 | 85 | 13 | 60 | 57 | 94 | – | 70 | 40 | 20 | 9 | M 6 |
| VC 0.4 | 3.7 | 35 | 100 | 17 | 90 | 63 | 100 | – | 80 | 38 | 34 | 16 | M 8 |
| VC 1 | 5.2 | 35 | 120 | 13 | 95 | 72 | 109 | 18.5 | 84 | 72 | 35 | 16 | M 8 |
| VC 3 | 9 | 120 | 170 | 18 | 120 | 89 | 126 | 11 | 46 | 95 | 50 | 25 | M 12 |
| VC 5 | 13 | 120 | 170 | 22 | 120 | 105 | 142 | 11 | 46 | 95 | 50 | 25 | M 12 |

| | pounds | torque in Lbs | Dimensions in inch | | | | | | | | | | |
|----------|--------|-----------------|--------------------|------|------|------|----------------|------|------|------|------|------|------|
| | m | M _{Ab} | A | C | D | F | G _P | J | K | L | M | N | P |
| VC 0.025 | 4.0 | 124 | 3.35 | 0.39 | 2.36 | 1.97 | 3.43 | – | 2.76 | 1.57 | 0.79 | 0.26 | M 6 |
| VC 0.04 | 4.4 | 124 | 3.35 | 0.35 | 2.36 | 2.20 | 3.66 | – | 2.76 | 1.57 | 0.79 | 0.26 | M 6 |
| VC 0.1 | 5.1 | 124 | 3.35 | 0.39 | 2.36 | 2.56 | 4.02 | – | 2.76 | 1.57 | 0.79 | 0.26 | M 6 |
| VC 0.2 | 4.4 | 124 | 3.35 | 0.51 | 2.36 | 2.24 | 3.70 | – | 2.76 | 1.57 | 0.79 | 0.35 | M 6 |
| VC 0.4 | 8.2 | 310 | 3.94 | 0.67 | 3.54 | 2.48 | 3.94 | – | 3.15 | 1.50 | 1.34 | 0.63 | M 8 |
| VC 1 | 11.5 | 310 | 4.72 | 0.51 | 3.74 | 2.83 | 4.29 | 0.73 | 3.31 | 2.83 | 1.38 | 0.63 | M 8 |
| VC 3 | 19.8 | 1062 | 6.69 | 0.71 | 4.72 | 3.50 | 4.96 | 0.43 | 1.81 | 3.74 | 1.97 | 0.98 | M 12 |
| VC 5 | 28.7 | 1062 | 6.69 | 0.87 | 4.72 | 4.13 | 5.59 | 0.43 | 1.81 | 3.74 | 1.97 | 0.98 | M 12 |

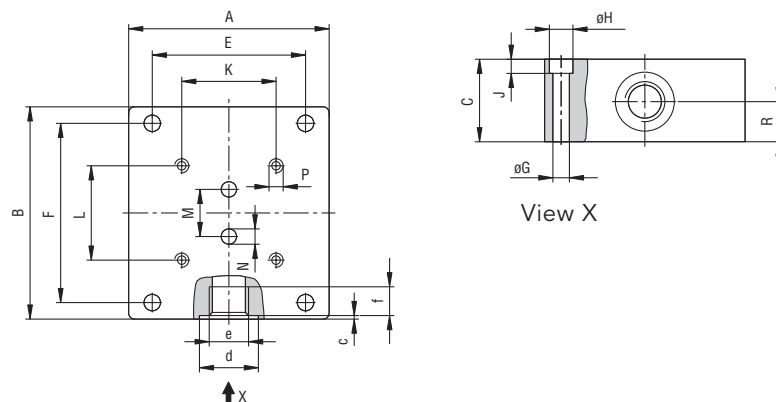


Connection plates (cast iron) with side threaded connection

| Ordering code | Weight kg | Dimensions in mm | | | | | | | | | | | | | | | | | | |
|-------------------|-----------|--------------------|------|------|------|-----|------|------|------|------|------|------|------|------------|------|------|-----|----------------|------|---|
| | | m | A | B | C | E | F | G | H | J | K | L | M | N | P | R | c | d | e | f |
| MVC 0.2 U 3 B 05* | 1.8 | 85 | 90 | 35 | 65 | 76 | 7 | 11 | 7 | 70 | 40 | 20 | 6.5 | M 6/14t | 17 | 0.7 | 25 | 9/16-18UNF-2B | 13 | |
| MVC 0.2 U 3 C 05* | 1.7 | 85 | 90 | 35 | 65 | 76 | 7 | 11 | 7 | 70 | 40 | 20 | 6.5 | M 6/14t | 17.5 | 0.7 | 29 | 3/4-16UNF-2B | 15 | |
| MVC 0.4 U 1 C 09 | 2.7 | 100 | 110 | 37 | 86 | 96 | 7 | 11 | 7 | 80 | 38 | 34 | 16.0 | M 8/18t | 18.5 | 0.7 | 29 | 3/4-16UNF-2B | 15 | |
| MVC 0.4 U 1 D 09 | 2.9 | 100 | 110 | 42 | 86 | 96 | 7 | 11 | 7 | 80 | 38 | 34 | 16.0 | M 8/18t | 21 | 1 | 36 | on request | 17 | |
| MVC 1 U 2 C 05 | 2.9 | 100 | 120 | 37 | 80 | 106 | 7 | 11 | 7 | 84 | 72 | 35 | 12.0 | M 8/18t | 17.5 | 0.7 | 29 | 3/4-16UNF-2B | 15 | |
| MVC 1 U 3 D 05 | 4.9 | 120 | 120 | 42 | 80 | 106 | 7 | 11 | 7 | 84 | 72 | 35 | 13.0 | M 8/18t | 21 | 1 | 36 | 1-1/16-12UN-2B | 17 | |
| MVC 1 U 2 E 05 | 4.9 | 100 | 120 | 65 | 80 | 106 | 7 | 11 | 8 | 84 | 72 | 35 | 13.0 | M 8/18t | 32.5 | 1 | 42 | 1-5/16-12UN-2B | 19 | |
| MVC 5 U 2 E 05** | 14.0 | 160 | 165 | 80 | 140 | 145 | 9 | 15 | 9 | 46 | 95 | 50 | 25.0 | M12/24t | 28 | 1 | 42 | 1-5/16-12UN-2B | 19 | |
| MVC 5 U 2 G 09** | 17.8 | 170 | 165 | 100 | 140 | 145 | 9 | 15 | 9 | 46 | 95 | 50 | 25.0 | M12/24t | 42 | 1 | 58 | on request | 23 | |
| pounds | | Dimensions in inch | | | | | | | | | | | | | | | | | | |
| | m | A | B | C | E | F | G | H | J | K | L | M | N | P | R | c | d | e | f | |
| MVC 0.2 U 3 B 05* | 4.0 | 3.35 | 3.54 | 1.38 | 2.56 | 3.0 | 0.28 | 0.43 | 0.28 | 2.76 | 1.57 | 0.79 | 0.26 | M 6/t=0.55 | 0.67 | 0.03 | 1.0 | 9/16-18UNF-2B | 0.51 | |
| MVC 0.2 U 3 C 05* | 3.7 | 3.35 | 3.54 | 1.38 | 2.56 | 3.0 | 0.28 | 0.43 | 0.28 | 2.76 | 1.57 | 0.79 | 0.26 | M 6/t=0.55 | 0.69 | 0.03 | 1.1 | 3/4-16UNF-2B | 0.59 | |
| MVC 0.4 U 1 C 09 | 6.0 | 3.94 | 4.33 | 1.46 | 3.39 | 3.8 | 0.28 | 0.43 | 0.28 | 3.15 | 1.50 | 1.34 | 0.63 | M 8/t=0.71 | 0.73 | 0.03 | 1.1 | 3/4-16UNF-2B | 0.59 | |
| MVC 0.4 U 1 D 09 | 6.4 | 3.94 | 4.33 | 1.65 | 3.39 | 3.8 | 0.28 | 0.43 | 0.28 | 3.15 | 1.50 | 1.34 | 0.63 | M 8/t=0.71 | 0.83 | 0.04 | 1.4 | on request | 0.67 | |
| MVC 1 U 2 C 05 | 6.4 | 3.94 | 4.72 | 1.46 | 3.15 | 4.2 | 0.28 | 0.43 | 0.28 | 3.31 | 2.83 | 1.38 | 0.47 | M 8/t=0.71 | 0.69 | 0.03 | 1.1 | 3/4-16UNF-2B | 0.59 | |
| MVC 1 U 3 D 05 | 8.8 | 4.72 | 4.72 | 1.65 | 3.15 | 4.2 | 0.28 | 0.43 | 0.28 | 3.31 | 2.83 | 1.38 | 0.51 | M 8/t=0.71 | 0.83 | 0.04 | 1.4 | 1-1/16-12UN-2B | 0.67 | |
| MVC 1 U 2 E 05 | 10.8 | 3.94 | 4.72 | 2.56 | 3.15 | 4.2 | 0.28 | 0.43 | 0.35 | 3.31 | 2.83 | 1.38 | 0.51 | M 8/t=0.71 | 1.38 | 0.04 | 1.7 | 1-5/16-12UN-2B | 0.75 | |
| MVC 5 U 2 E 05** | 30.9 | 6.30 | 6.50 | 3.15 | 5.51 | 5.7 | 0.35 | 0.59 | 0.35 | 1.81 | 3.74 | 1.97 | 0.98 | M12/t=0.94 | 1.10 | 0.04 | 1.7 | 1-5/16-12UN-2B | 0.75 | |
| MVC 5 U 2 G 09** | 39.2 | 6.69 | 6.50 | 3.94 | 5.51 | 5.7 | 0.35 | 0.59 | 0.35 | 1.81 | 3.74 | 1.97 | 0.98 | M12/t=0.94 | 1.65 | 0.04 | 2.3 | on request | 0.91 | |

* fits for VC 0.025, VC 0.04,
VC 0.1 and VC 0.2

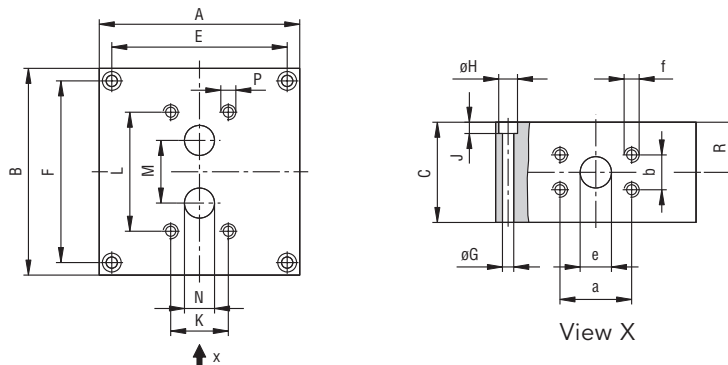
** fits for VC 3 and VC 5



Connection plates (cast iron) with side SAE flange connection

| Ordering code | Weight kg | Dimensions in mm | | | | | | | | | | | | | | | | | | |
|------------------|--------------|--------------------|------|------|------|-----|------|------|------|------|------|------|------|------------|------|------|------|------|------------|---|
| | | m | A | B | C | E | F | G | H | J | K | L | M | N | P | R | a | b | e | f |
| MVC 5 V 2 E 05** | 14 | 160 | 165 | 80 | 140 | 145 | 9 | 15 | 9 | 46 | 95 | 50 | 25 | M12/24t | 40 | 57.2 | 27.8 | 25 | M12/24t | |
| MVC 5 V 1 F 09 | 15.1 | 160 | 165 | 90 | 140 | 145 | 9 | 15 | 9 | 46 | 95 | 50 | 25 | M12/24t | 50 | 66.7 | 31.8 | 31.5 | M14/25t | |
| | pounds | Dimensions in inch | | | | | | | | | | | | | | | | | | |
| | m | A | B | C | E | F | G | H | J | K | L | M | N | P | R | a | b | e | f | |
| MVC 5 V 2 E 05** | 30.9 | 6.30 | 6.50 | 3.14 | 5.51 | 5.7 | 0.35 | 0.59 | 0.35 | 1.81 | 3.74 | 1.97 | 0.98 | M12/t=0.94 | 1.57 | 2.25 | 1.09 | 0.98 | M12/t=0.94 | |
| MVC 5 V 1 F 09 | 33.3 | 6.30 | 6.50 | 3.54 | 5.51 | 5.7 | 0.35 | 0.59 | 0.35 | 1.81 | 3.74 | 1.97 | 0.98 | M12/t=0.94 | 1.97 | 2.62 | 1.25 | 1.24 | M14/t=0.98 | |

** fits for VC 3 and VC 5

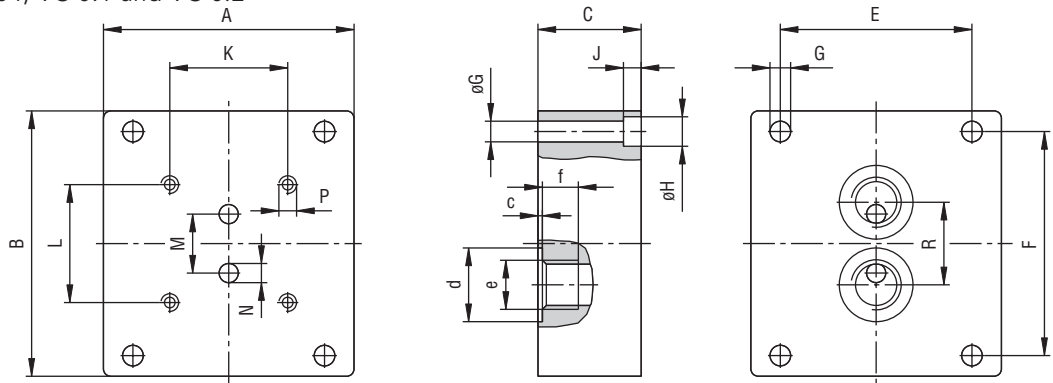


Connection plates (cast iron) with rear threaded connection

| Ordering code | Weight kg | Dimensions in mm | | | | | | | | | | | | | | | | | |
|--------------------|--------------|--------------------|------|------|------|-----|------|------|------|------|------|------|------|------------|------|------|-----|----------------|------|
| | | m | A | B | C | E | F | G | H | J | K | L | M | N | P | R | c | d | e |
| MVC 0.2 U 3 B 04 * | 1.6 | 85 | 90 | 35 | 65 | 76 | 7 | 11 | 7 | 70 | 40 | 20 | 6.5 | M 6/14 t | 28 | 0.7 | 25 | 9/16-18UNF-2B | 13 |
| MVC 0.4 U 1 C 08 | 2.5 | 100 | 110 | 37 | 86 | 96 | 7 | 11 | 7 | 80 | 38 | 34 | 16 | M 8/18 t | 46 | 0.7 | 29 | on request | 15 |
| MVC 0.4 U 1 D 08 | 2.9 | 100 | 110 | 42 | 86 | 96 | 7 | 11 | 7 | 80 | 38 | 34 | 16 | M 8/18 t | 52 | 1 | 36 | on request | 17 |
| MVC 1 U 2 C 04 | 2.7 | 100 | 120 | 37 | 80 | 106 | 7 | 11 | 7 | 84 | 72 | 35 | 12 | M 8/18 t | 50 | 0.7 | 29 | 3/4-16UNF-2B | 15 |
| MVC 5 U 2 E 04** | 9.6 | 160 | 165 | 55 | 140 | 145 | 9 | 15 | 9 | 46 | 95 | 50 | 25 | M12/24 t | 55 | 1 | 42 | 1-5/16-12UN-2B | 19 |
| | pounds | Dimensions in inch | | | | | | | | | | | | | | | | | |
| | m | A | B | C | E | F | G | H | J | K | L | M | N | P | R | c | d | e | f |
| MVC 0.2 U 3 B 04 * | 3.5 | 3.35 | 3.54 | 1.38 | 2.56 | 3.0 | 0.28 | 0.43 | 0.28 | 2.76 | 1.57 | 0.79 | 0.26 | M6/t=0.55 | 1.10 | 0.03 | 1.0 | 9/16-18UNF-2B | 0.51 |
| MVC 0.4 U 1 C 08 | 5.5 | 3.94 | 4.33 | 1.46 | 3.39 | 3.8 | 0.28 | 0.43 | 0.28 | 3.15 | 1.50 | 1.34 | 0.63 | M8/t=0.71 | 1.81 | 0.03 | 1.1 | on request | 0.59 |
| MVC 0.4 U 1 D 08 | 6.4 | 3.94 | 4.33 | 1.65 | 3.39 | 3.8 | 0.28 | 0.43 | 0.28 | 3.15 | 1.50 | 1.34 | 0.63 | M8/t=0.71 | 2.05 | 0.04 | 1.4 | on request | 0.67 |
| MVC 1 U 2 C 04 | 6.0 | 3.94 | 4.72 | 1.46 | 3.15 | 4.2 | 0.28 | 0.43 | 0.28 | 3.31 | 2.83 | 1.38 | 0.47 | M8/t=0.71 | 1.97 | 0.03 | 1.1 | 3/4-16UNF-2B | 0.59 |
| MVC 5 U 2 E 04** | 21.20 | 6.30 | 6.50 | 2.17 | 5.51 | 5.7 | 0.35 | 0.59 | 0.35 | 1.81 | 3.74 | 1.97 | 0.98 | M12/t=0.94 | 2.17 | 0.04 | 1.7 | 1-5/16-12UN-2B | 0.75 |

* fits for VC 0.025, VC 0.04, VC 0.1 and VC 0.2

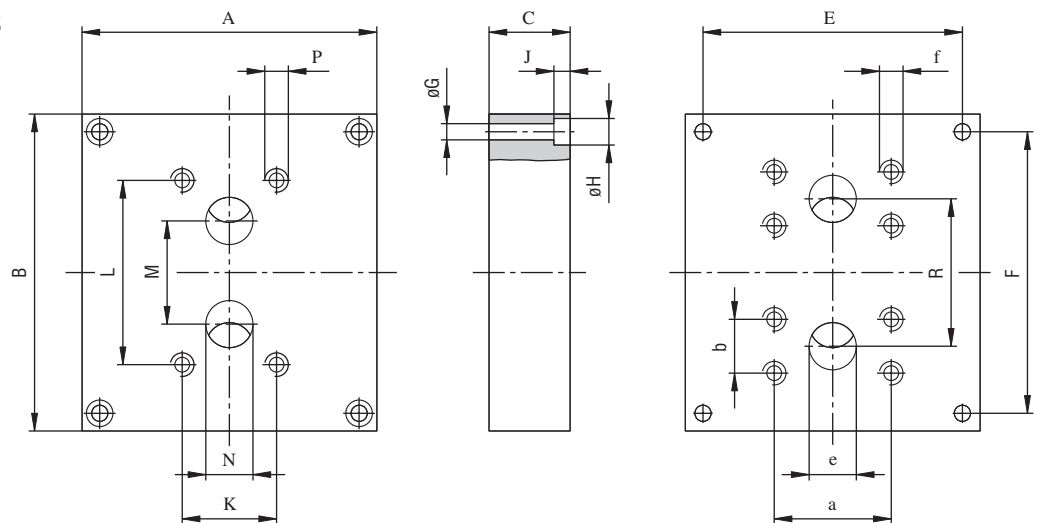
** fits for VC 3 and VC 5



Connection plates (cast iron) with rear SAE flange connection

| Ordering code | Weight kg | Dimensions in mm | | | | | | | | | | | | | | | | | |
|------------------|-----------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------------|------|------|------|------|------------|
| | | m | A | B | C | E | F | G | H | J | K | L | M | N | P | R | a | b | e |
| MVC 5 V 2 E 04** | 9.5 | 160 | 165 | 55 | 140 | 145 | 9 | 15 | 9 | 46 | 95 | 50 | 25 | M12/24 t | 80 | 57.2 | 27.8 | 25 | M12/24 t |
| | pounds | Dimensions in inch | | | | | | | | | | | | | | | | | |
| | | m | A | B | C | E | F | G | H | J | K | L | M | N | P | R | a | b | e |
| MVC 5 V 2 E 04** | 20.9 | 6.30 | 6.50 | 2.17 | 5.51 | 5.71 | 0.35 | 0.59 | 0.35 | 1.81 | 3.74 | 1.97 | 0.98 | M12/t=0.94 | 3.15 | 2.25 | 1.09 | 0.98 | M12/t=0.94 |

** fits for VC 3 and VC 5

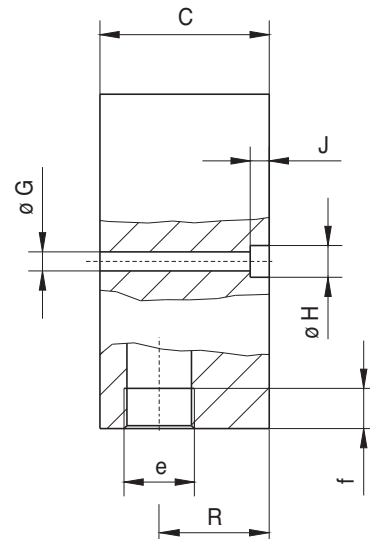
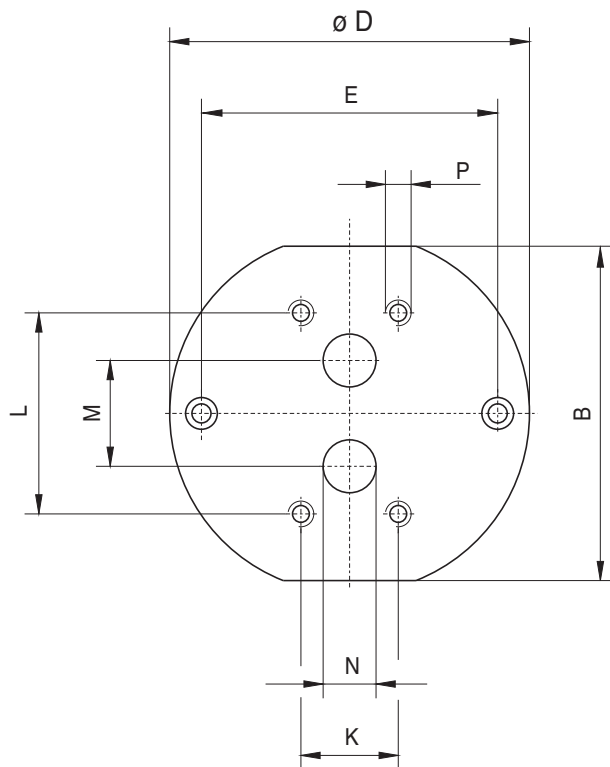


Connection plates (Stainless steel) with side threaded connection

| Ordering code | Weight kg | Dimensions in mm | | | | | | | | | | | | | | | |
|-----------------|-----------|--------------------|------|------|------|------|------|------|------|------|------|------|-------------|------|---------|------|---|
| | | m | B | D | C | E | G | H | J | K | L | M | N | P | R | e | f |
| MVC 0.2 R4 B11* | 1.7 | 85 | 94 | 35 | 75 | 7 | 11 | 7 | 70 | 40 | 20 | 6.5 | M 6/14 t | 18 | G 3/8 | 13 | |
| MVC 1 R3 C11 | 3.2 | 116 | 124 | 37 | 100 | 9 | 15 | 9 | 84 | 72 | 35 | 12 | M 8/18 t | 19.5 | G 1/2 | 15 | |
| MVC 1 R2 D11 | 3.5 | 116 | 124 | 42 | 100 | 9 | 15 | 9 | 84 | 72 | 35 | 12 | M 8/18 t | 21 | G 3/4 | 17 | |
| MVC 5 R2 E11** | 13.9 | 158 | 170 | 80 | 140 | 9 | 15 | 9 | 46 | 95 | 50 | 25 | M 12/24 t | 52 | G 1 | 19 | |
| MVC 5 R2 G11** | 17.9 | 158 | 170 | 105 | 140 | 9 | 15 | 9 | 46 | 95 | 50 | 25 | M 12/24 t | 63 | G 1 1/2 | 23 | |
| | pounds | Dimensions in inch | | | | | | | | | | | | | | | |
| | | m | B | D | C | E | G | H | J | K | L | M | N | P | R | e | f |
| MVC 0.2 R4 B11* | 3.7 | 3.35 | 3.70 | 1.38 | 2.95 | 0.28 | 0.43 | 0.28 | 2.76 | 1.57 | 0.79 | 0.26 | M 6/t=0.55 | 0.71 | G 3/8 | 0.51 | |
| MVC 1 R3 C11 | 7.1 | 4.57 | 4.88 | 1.46 | 3.94 | 0.35 | 0.59 | 0.35 | 3.31 | 2.83 | 1.38 | 0.47 | M 8/t=0.71 | 0.77 | G 1/2 | 0.59 | |
| MVC 1 R2 D11 | 7.7 | 4.57 | 4.88 | 1.65 | 3.94 | 0.35 | 0.59 | 0.35 | 3.31 | 2.83 | 1.38 | 0.47 | M 8/t=0.71 | 0.83 | G 3/4 | 0.67 | |
| MVC 5 R2 E11** | 30.6 | 6.22 | 6.69 | 3.15 | 5.51 | 0.35 | 0.59 | 0.35 | 1.81 | 3.74 | 1.97 | 0.98 | M 12/t=0.94 | 2.05 | G 1 | 0.75 | |
| MVC 5 R2 G11** | 39.5 | 6.22 | 6.69 | 4.13 | 5.51 | 0.35 | 0.59 | 0.35 | 1.81 | 3.74 | 1.97 | 0.98 | M 12/t=0.94 | 2.48 | G 1 1/2 | 0.91 | |

* fits for VC 0.025, VC 0.04, VC 0.1 and VC 0.2

** fits for VC 3 and VC 5



This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.

Product Portfolio

Transfer Pumps

Transfer pumps for lubricating oil supply equipment, low pressure filling and feed systems, dosing and mixing systems.

Mobile Hydraulics

Single and multistage high pressure gear pumps, hydraulic motors and valves for construction machinery, vehicle-mounted machines.

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Gear and turbine flow meters and electronics for volume and flow metering technology in hydraulics, processing and laquering technology.

Industrial Hydraulics / Test Bench Construction

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Technology Test benches / Fluid Test benches.



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