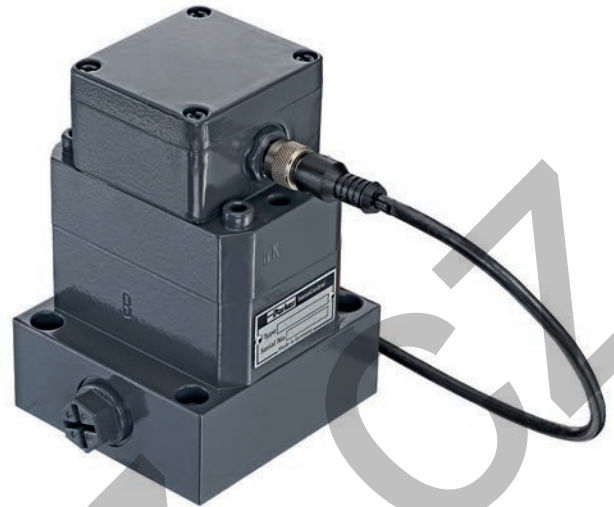


SCVF volume counter

Device features

- Measurement principle: Volume/geared counter
- Eight measurement ranges from 0.01 - 2 to 1 - 300 l/min
- Accuracy $\pm 0.5\%$ FS
- Withstands pressures up to 400 bar (5802 psi)
- High viscosity range
- Low noise
- Exact flow rate measurement over a wide viscosity range
- Versatile usage for different substances



Gear counter for highly accurate flow rate measurements in hydraulic systems

Function

The SCVF geared counter functions as a volume flow meter. A very precisely crafted pair of geared wheels is driven by the fluid flow.

The SCVF works over a wide viscosity range. Different seals permit usage in many different applications.

Applications

Due to the wide viscosity range, any liquid can be measured that can be pumped and has a certain degree of lubricating capability.

- Brake fluid (EPDM seal)
- Skydrol
- Mineral oils
- Hydraulic oil and
- Grease

The SCVF is the ideal solution when carrying out precise flow rate measurements over a wide viscosity range.

SCVF volume counter

Technical data

SCVF-	002	004	015	040	060	080	150	300
Flow measuring range (l/min)	0.01...2.0	0.02...4.0	0.2...15	0.4...40	0.4...60	0.4...80	0.6...150	1.0...300
Pressure range P _N bar / (psi)	400 (5802)	315 (4569)	400 (5802)	400 (5802)	400 (5802)	400 (5802)	315 (4569)	315 (4569)
Overload pressure P _O bar / (psi)	480 (6962)	400 (5802)	480 (6962)	480 (6962)	480 (6962)	480 (6962)	350 (5076)	350 (5076)
Connection	G3/8 BSPP	G3/8 BSPP	G3/8 BSPP	G1/2 BSPP	G1/2 BSPP	G1/2 BSPP	G1 BSPP	G1 BSPP
Sound level dB (A)	< 60	< 60	< 60	< 70	< 70	< 70	< 70	< 72
Resolution (pulses / litre)	40,000	25,000	4082	965	965	965	333.33	191

Accuracy

Deviation from characteristic curve	± 0.3 % FS ≥ 20 cSt. ± 0.5 % FS ≥ 20 cSt.
Response time	< 10 ms
Repeat accuracy	0.01 % FS
Substance *)	Hydraulic oil (25 micron filter)

Material

	Material 1.7139 Contains no non-ferrous metal or silicone
Housing	Steel
Seal	FKM EPDM on request

Ambient conditions

Ambient temperature	0...+55 °C / (32...131°F)
Storage temperature	-25...+85 °C / (-13...185°F)
Fluid temperature	-30...120 °C / (-22...148°F)
Viscosity range	Refer to diagram p. 48
Protection degree	IP65 DIN EN 60529

FS = Full scale value

*) When using other substances, please state the viscosity range and the type of seals. (Attach the data sheet of the substance if possible)

Electrical connection

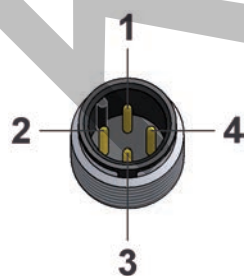
Plug	M12x1; 4-pole
Power supply V ₊	+18...+30 VDC
Current consumption	< 28 mA
Output signal	0...20 mA ± 0...FS l/min
Load	≤ 150 Ω

EM compatibility

Disturbance emissions	EN 61000-6-3
Resistance to interference	EN 61000-6-2

Pin assignment

M12x1; 4-pole

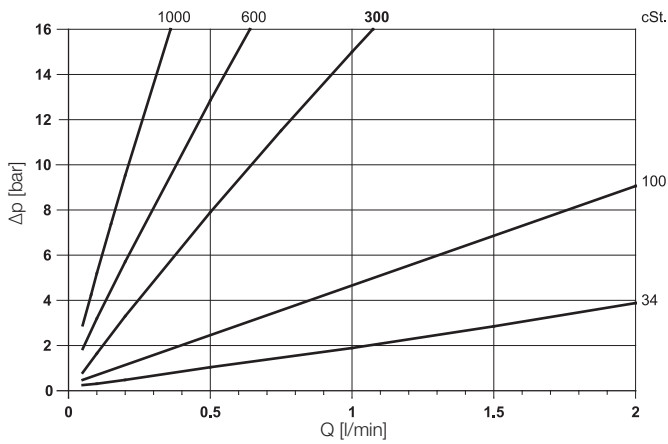


PIN	Assignment
1	V ₊
2	Q-signal
3	0 V / GND
4	—

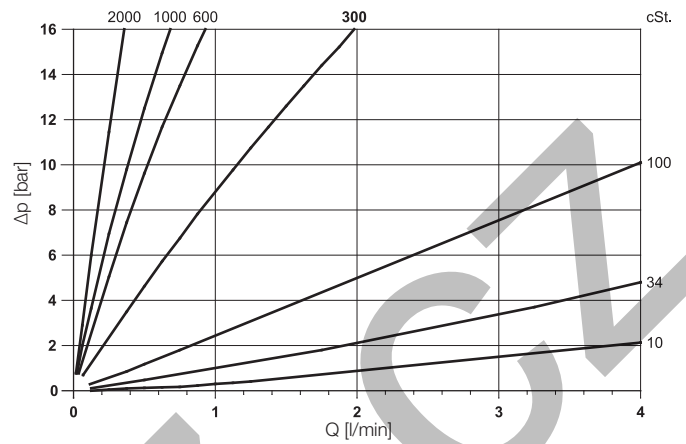
SCVF volume counter

Technical data

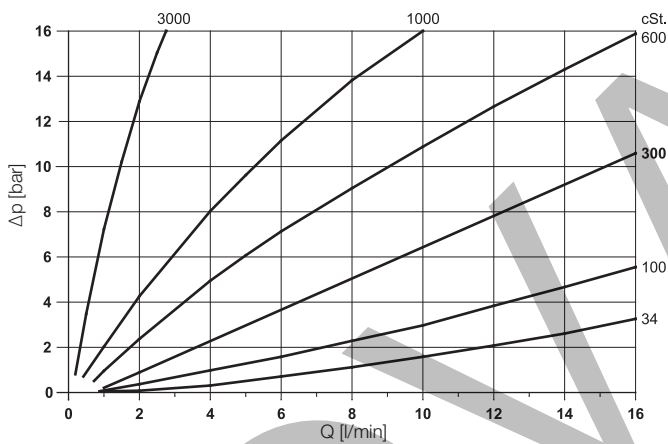
SCVF-002 Δp - Viscosity



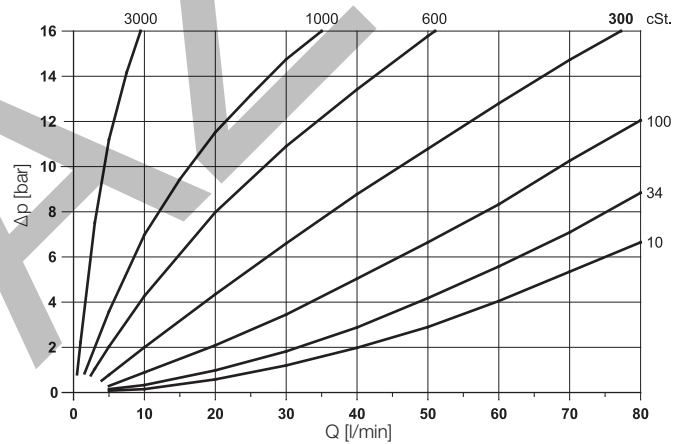
SCVF-004 Δp - Viscosity



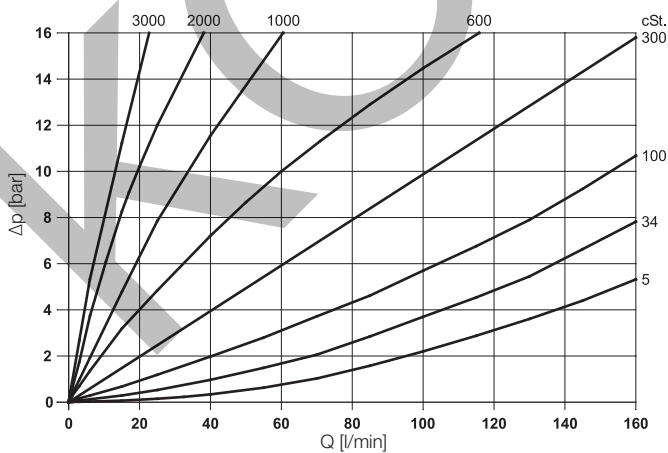
SCVF-015 Δp - Viscosity



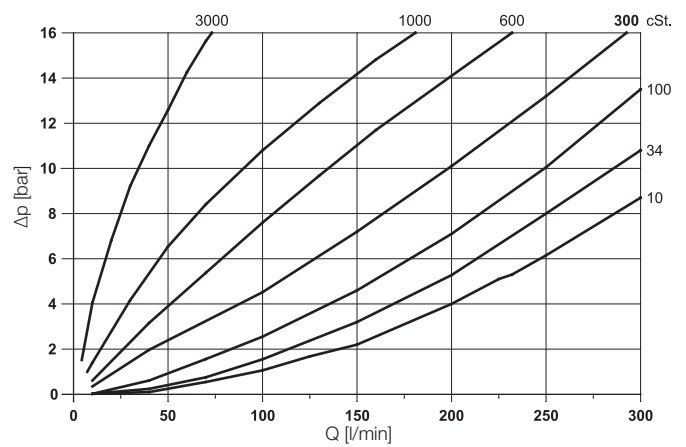
SCVF-040/060/080 Δp - Viscosity



SCVF-150 Δp - Viscosity

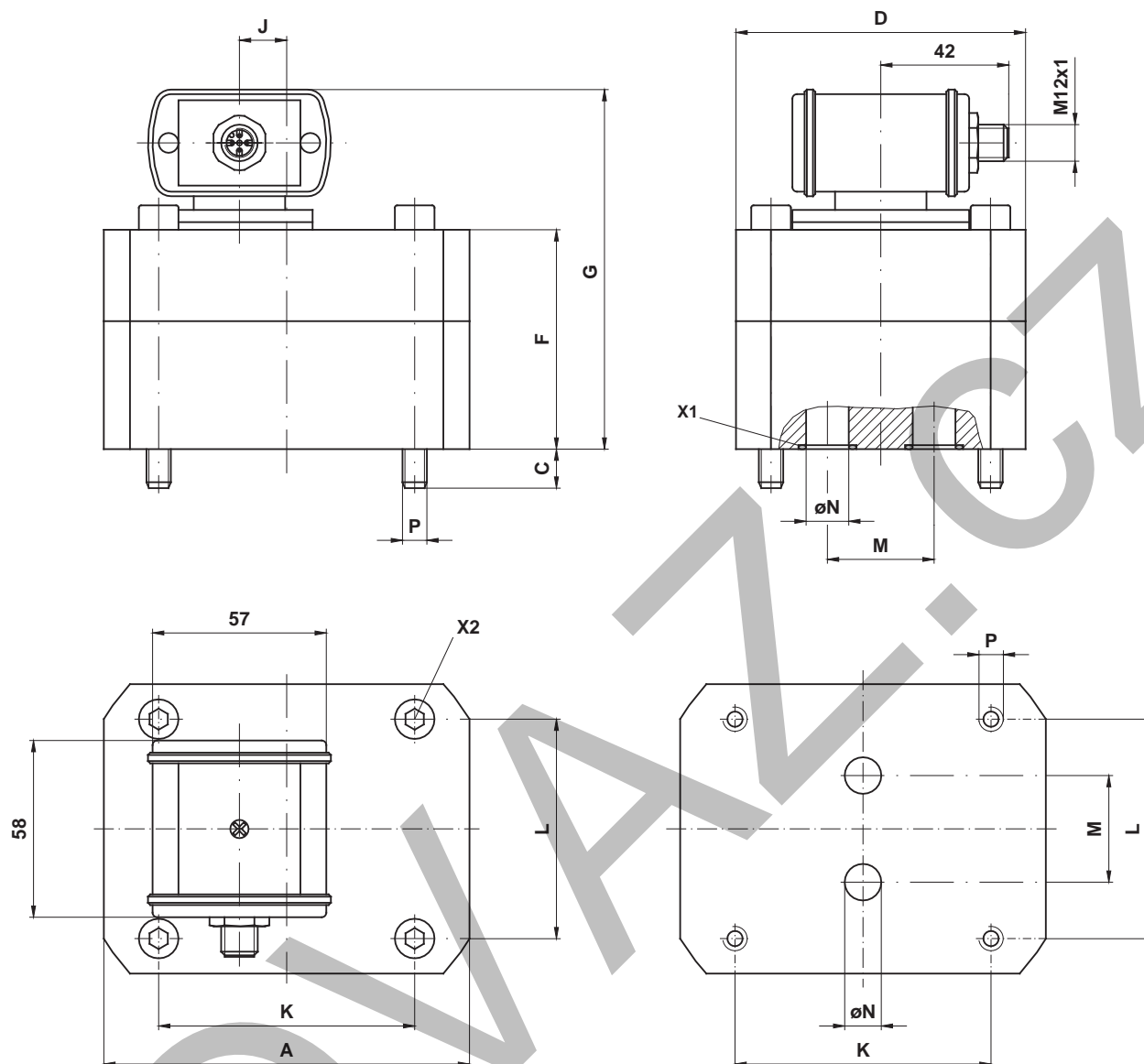


SCVF-300 Δp - Viscosity



Δp = pressure loss

SCVF volume counter

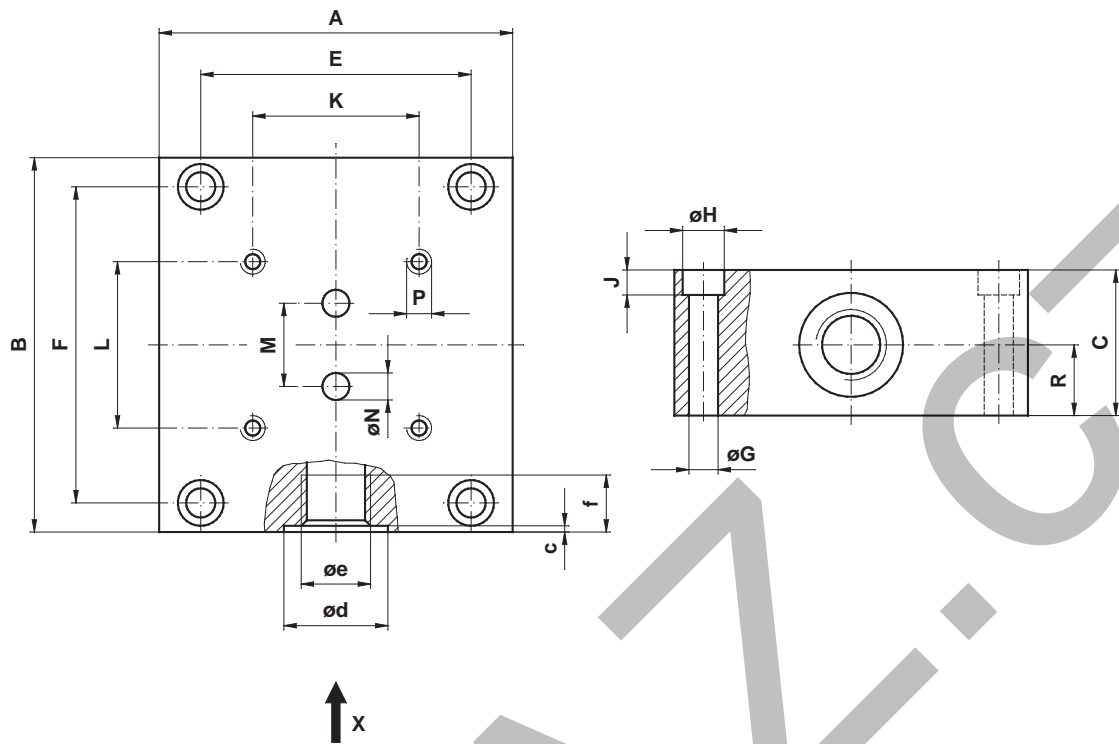


Type	Weight [kg]	Torque [Nm]	A	C	D	F	G	J	K	L	M	øN	P
SCVF-002	1.8	14	85	10	60	50	87	-	70	40	20	6.5	M6
SCVF-004	2	14	85	9	60	56		-	70	40	20	6.5	M6
SCVF-015	2	14	85	13	60	57	94	-	70	40	20	9	M6
SCVF-040	5.2	35	120	13	95	72	109	10.5	84	72	35	16	M8
SCVF-060													
SCVF-080													
SCVF-150	9	120	170	18	120	89	140	46.5	46	95	50	25	M12
SCVF-300	13	120	170	22	120	105	142	40	46	95	50	25	M12

All measurements in mm

SCVF volume counter

Dimensioned drawings connection plate



Type	kg	A	B	C	E	F	øG	øH	J	K	L	M	øN	P	R	c	ød	øe BSPP	f
SCVF-002 SCVF-004 SCVF-015	1.8	85	90	35	65	76	7	11	7	70	40	20	6.5	M6/t = 14	17	0.7	25	G3/8	13
SCVF-040 SCVF-060 SCVF-080	2.9	100	120	37	80	106	7	11	7	84	72	35	12	M8/t = 18	17.5	0.7	29	G 1/2	15
SCVF-150 SCVF-300	14	160	165	80	140	145	9	15	9	46	95	50	25	M12/t = 24	28	1	42	G1	19

All measurements in mm

SCVF volume counter

Order code

SCVF

M12x1, 4-pole; connecting plug; IP65; incl. connection plate

0...20 mA

0.01...2 l/min

SCVF-002-10-07

0.02...4 l/min

SCVF-004-10-07

0.2...15 l/min

SCVF-015-10-07

0.4...40 l/min

SCVF-040-10-07

0.4...60 l/min

SCVF-060-10-07

0.4...80 l/min

SCVF-080-10-07

0.6...150 l/min

SCVF-150-10-07

1...300 l/min

SCVF-300-10-07

Connection cable and single plug

Connection cable, assembled

(open cable end)

SCK-400-xx-xx

Cable length (m)

2 m

02

5 m

05

10 m

10

Connecting plug

M12 cable jack; straight

45

M12 cable jack; 90° angled

55

Single connector

M12 cable jack; straight

SCK-145

M12 cable jack; 90° angled

SCK-155