

VA Flow Meters

SKP / SKT / SKPVC

Design and applications

The injection molded flow meters SKT, SKP and SKPVC are based on the float principle.

The flowrate is indicated on a scale printed on the measuring tube by the indicator edge of the float. The indicator edge is identical with the largest diameter of the float. The standard scale has been designed in l/h and in % for the medium water (20°C) and has two adjustable nominal value indications. Special scales for other substances are available on request.

Our technical documents provide a detailed explanation of the function and the measuring principle of VA flow meters.



- break proof and corrosion resistant
- radially extendable
- special scales for air, NaOH and HCl
- optionally available with a limit value switch
- optionally available with an analogue output 4-20 mA
- cost effective
- floats of synthetic materials and inserts made of PVDF

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Types

Design	
SKT	Measuring tube made of Trogamide
SKP / SKP k	Measuring tube made of Polysulphone
SKPVC / SKPVC k	Measuring tube made of PVC

Technical data

Level of nominal pressure of the armature	PN 10 at 20 °C
Operating temperature	Polyvinyl chloride: 0 to 40 °C Trogamid: 0 to 60 °C Polysulfon: 0 to 100 °C
Measuring range	1:10
Accuracy	4 acc. to VDI/VDE 3513, sheet 2
Special scales	See separate table
Connection	Glued socket acc. to DIN 8063, optionally thread acc. to DIN 228 T 1 Pipe fittings with female thread acc. to ISO 7-1, welded sleeve / butt welded nipple acc. to DIN / ISO (PP, PVDF, PE)

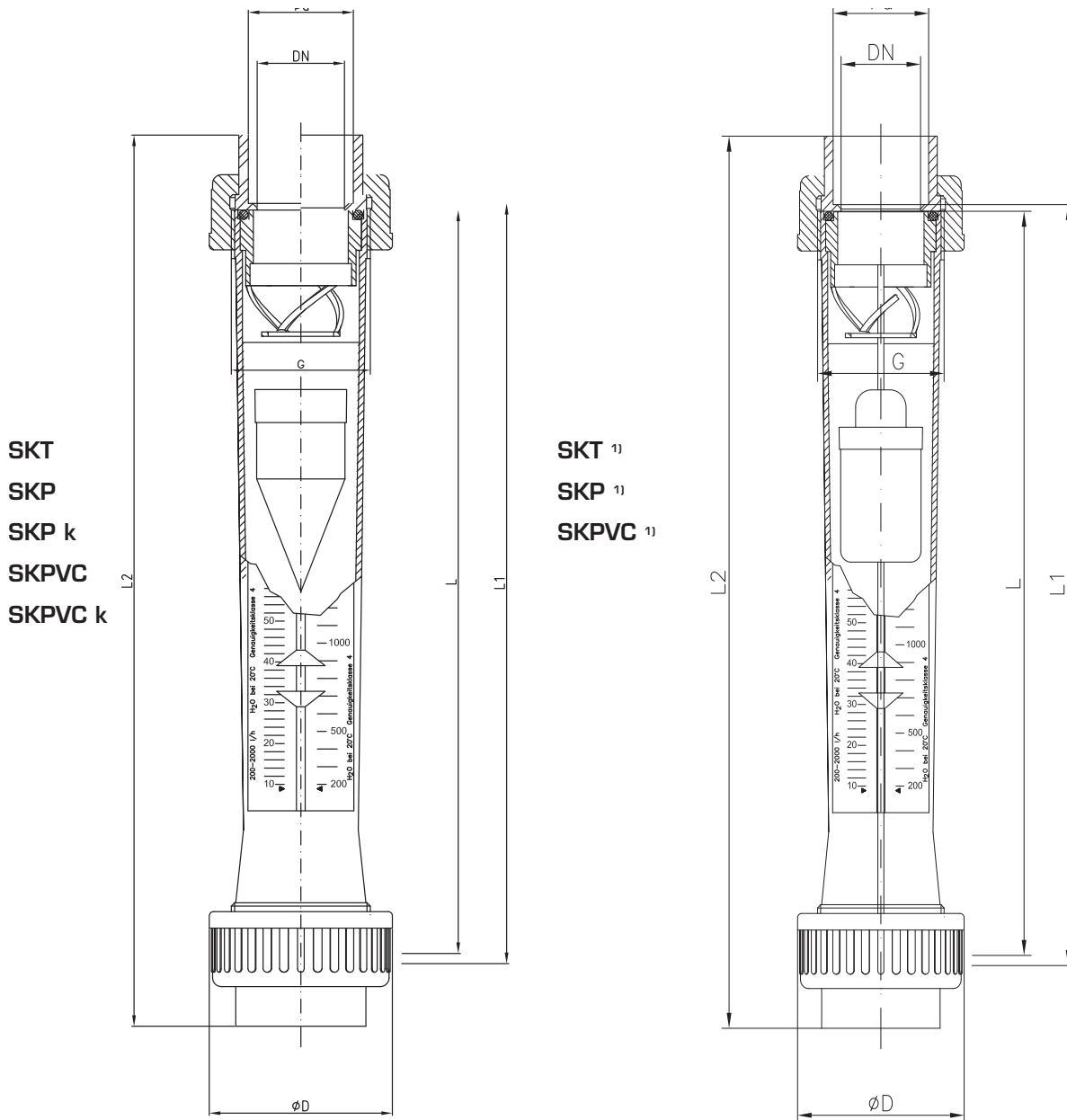
Maße

DN	G	SKT / SKP / SKPVC				
		L	L ₁	L ₂	∅ d	∅ D
25	1 1/2	335	341	385	32	60
32	2	335	341	393	40	72
40	2 1/4	335	341	403	50	83
50	2 3/4	335	341	417	63	103
65	3 1/2	335	341	429	75	122

DN	G	SKP k / SKPVC k				
		L	L ₁	L ₂	∅ d	∅ D
10	3/4	165	171	199	16	35
15	1	185	191	223	20	43
25	1 1/2	200	206	250	32	60

Materials

	SKT	SKP / SKP k	SKPVC / SKPVC k
Measuring tube	Trogamide	Polysulphone	Polyvinyl chloride
Float	PVDF red 1.4571 for DN 65 8.000 - 60.000 l/h		
Float receptacles	PVDF		
Fittings and insertion parts	PVC-Glued socket optionally PP-, PVDF-, PE-Welded sleeve / butt welded nipple, malleable casting, Zn, 1.4571		
Gaskets	EPDM, optionally Perbunan (SKT, SKP, SKP k, SKPVC k) FPM (SKPVC)		
Guiding rod	Peek (from DN 50 - 1.500 - 15.000 l/h) 1.4571 DN 65 - 8.000 - 60.000 l/h		



Measuring ranges

DN SKT, SKP and SKPVC	Measuring range l/h H ₂ O	Pressure loss in mbar	DN SKP k / SKPVC k	Measuring range l/h H ₂ O	Pressure loss in mbar
25	50 - 500 100 - 1000	23	10	1,5 - 15 2,5 - 25 5 - 50 10 - 100	4,6
32	150 - 1.500 250 - 2.500	23			
40	200 - 2.000 300 - 3.000 600 - 6.000	25	15	8 - 80 15 - 150 20 - 200	4,5
50	600 - 6.000 1.000 - 10.000 1.500 - 15.000 ¹⁾	25 29	25	15 - 150 30 - 300 50 - 500 100 - 1.000	6
65	2.000 - 20.000 ¹⁾ 3.000 - 30.000 ¹⁾ 8.000 - 60.000 ²⁾	46 48			

Measuring ranges for other substances and operating conditions on request

¹⁾ with guiding rod (made of Peek)

²⁾ with guiding rod (made of 1.4571)

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Optionen

Limit value switches Z 40 / Z 42

In order to realise a local display with monitoring function, the VA flow meter can be equipped with limit value switches. The limit value switch consists of a bistable Reed-contact (dry-reed switch) switched by the magnet integrated into the float. The limit value contact is infinitely adjustable over the full measuring range. Dry reed switches are characterized by a bistable performance.

In case of inductive or capacitive load applications, e.g. caused by contactors or solenoid valves, uncontrollable surge currents or voltage peaks may occur. Depending on their geometry such peaks also occur in lines, if they exceed a certain length. It is therefore recommended to use an additionally available arc suppression relay MSR. This increases the switching capacity and avoids the occurrence of inductive and capacitive peaks. It thereby ensures an extended lifetime of the contacts.

Technical data of limit value switches

Version	Z 40, Z 42
Switching voltage	max. 230 V~
Switching current	max. 0,5 A
Switching capacity	max. 10 W / 12 VA
Volume resistance	< 200 mOhm
Insulation resistance	> 10 ¹¹ Ohm
Temperature range	0 to + 55 °C
Degree of protection	IP 65 acc. to DIN 40050
Make/break hysteresis	1 - 2 mm way of float

Switching state of limit value switches

Limit value switch	Float above	Float below
Z 40 min	open	closed
Z 42 max	closed	open

Low voltage directive

Above 50 V AC/75 V DC, contacts are subject to the EU Low-Voltage Directive. The user is required to verify their use accordingly.

Safety notes

Avoid excessive pressure shocks..

The equipment from **Kirchner und Tochter** has been tested in compliance with applicable CE-regulations of the European Community.

The respective declaration of conformity is available on request.

Technical data supplied without liability. The current valid version of our documents can be found under this URL: www.kt-web.de

The **Kirchner und Tochter** QM-System is certified in accordance with DIN-EN-ISO 9001:2008. The quality is systematically adapted to the continuously increasing demands.