



Design and applications

The sprinkler measuring orifice SMB is used for flow measurement in stationary sprinkler systems. The device works according to the principle of differential pressure.

The SMB is integrated into the pipeline as an intermediate flange assembly. A differential pressure occurs at the orifice, which is proportional to square of the volume flow through the pipeline. The differential pressure is indicated by a differential-pressure gauge. Scaling of the pressure gauge is in flow units. The pointer position immediately indicates the current volume flow rate through the pipeline.

The measuring orifice SMB-OE displays the differential pressure as a percentage value on a pressure gauge. The operator can read the equivalent volume from a label fixed to the pressure gauge.

Thanks to its particular articulate design, integration of the SMB is possible in any flow direction. The display pivots by 180 degrees in both directions. In case of vibrations in the pipeline orifice and pressure gauge can be decoupled by the Minimesse hose connection (pressure gauge for wall mounting).

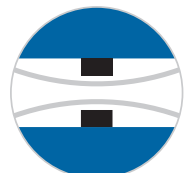
VdS approval

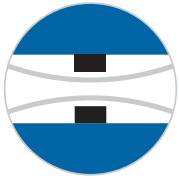
The SMB has been approved by the VdS damage prevention for use in stationary sprinkler systems.

SMB



- **VdS approval no.: G 4990049**
- **all flow directions possible with one device**
- **mounting position freely selectable**
- **dial gauge pivoting by $\pm 180^\circ$**
- **self-centring**
- **five different nominal width**
- **measuring accuracy 2,5 % FS**
- **incl. two flat gaskets SIL 4400**
- **optionally**
 - **indicator with scale in percentages (SMB-OE)**
 - **Minimesse hose connection (gauge for wall mounting in case of vibrations in the pipeline)**





SMB

Sprinkler measuring orifice

Type series

SMB	scaling of scale reading plate in m ³ /min
SMB-OE	scaling of scale reading plate in %
SMB-...-Minimes	display with hose connection

Technical data

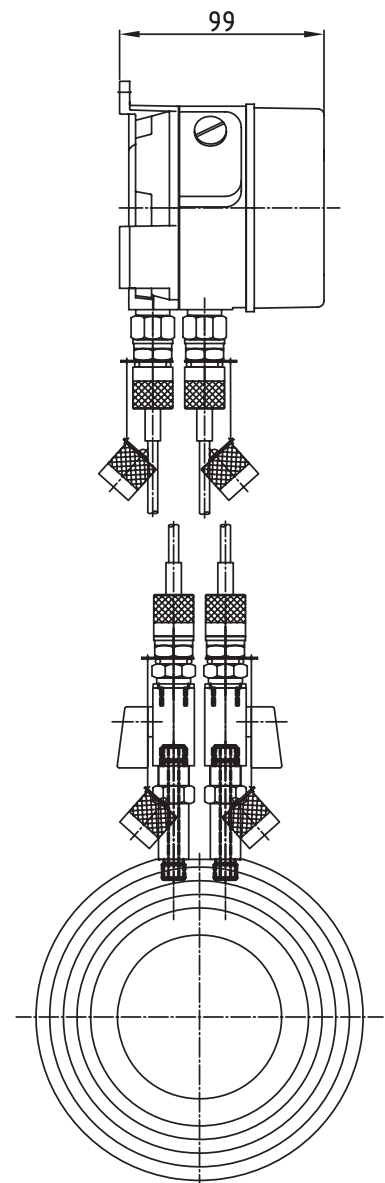
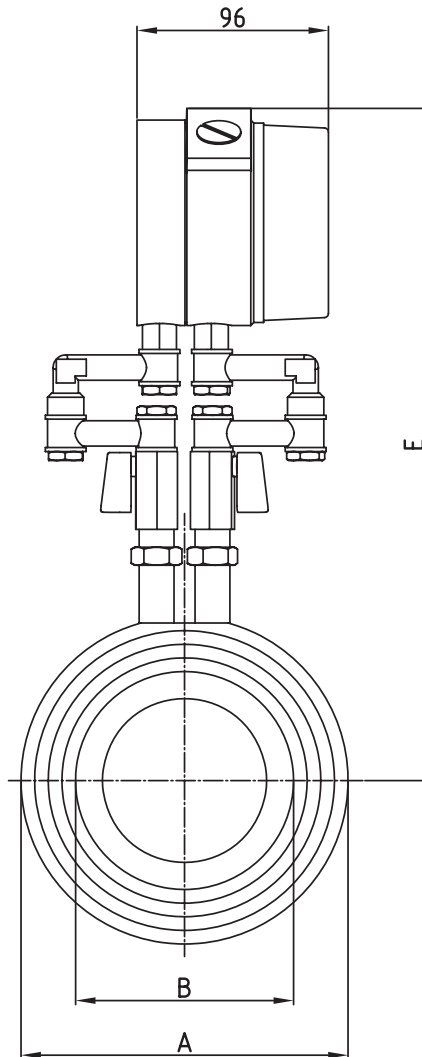
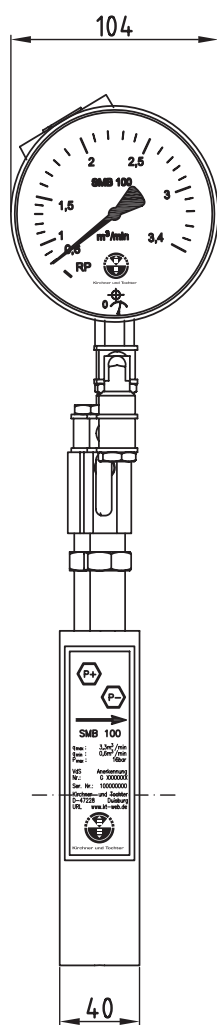
VdS approval	no.: G 4990049
Measuring principle	differential pressure measuring at the orifice
Measuring accuracy	2,5 % at the approved full scale range value
Max. working pressure	16 bar
Terms of installation	VdS guideline CEA 4001 chapter 7.4
Connection	intermediate flange installation PN 16 in accordance with DIN EN 1092-1

Materials

Orifice	aluminium, hard coated
Screwed connections	nickel-plated brass, 1.4308
Ball valves	nickel-plated brass
Dial gauge	aluminium, coated

Dimensions

Model	A	B	E
SMB 80	144	84,1	311
SMB 100	164	108,9	321
SMB 150	220	161,8	349
SMB 200	275	211,1	377
SMB 250	331	264,5	406



SMB/SMB-OE

**SMB/SMB-OE with
Minimesse hose connection**

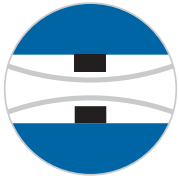
Measuring and accuracy

Model	Nominal width DN	Shown measuring range [m³/min]	VdS approved measuring range [m³/min] (% with SMB-OE)	max. deviation in the approved full scale range [m³/min] (%)
SMB 80	80	0,4 – 2,1	0,6 (28,5 %) – 2,1 (100 %)	± 0,0525 ± 2,5
SMB 100	100	0,6 – 3,4	1 (29,4 %) – 3,4 (100 %)	± 0,085 ± 2,5
SMB 150	150	1,4 – 7,25	2 (27,58 %) – 7,25 (100 %)	± 0,18125 ± 2,5
SMB 200	200	2,6 – 12,35	4 (32,35 %) – 12,35 (100 %)	± 0,30875 ± 2,5
SMB 250	250	3 – 18,12	4 (22,85 %) – 18,12 (100 %)	± 0,453 ± 2,5

2,5 % at the approved full scale range value

5,0 % at the approved measuring range start value

The inter-values for the permitted measuring accuracy are the result by linear interpolation.



SMB

Sprinkler measuring orifice

Proper use

The user is responsible for assessing the suitability of the flow meters for his case of application, for use as prescribed, and for material compatibility regarding the liquid product used in his process.

The manufacturer shall not be liable for any damage arising from incorrect or improper use of the devices.

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. Subject to change without notice. The current valid version of our documents can be found at: www.kt-flow.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.