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Operation & Maintenance Instructions

Read these operation and maintenance instructions before start up!
To be held for future reference.

General

The main task of injection fittings in metering pumps for liquid chemicals is to mix in the corresponding chemical into the main flow (in most cases water). At the same time most injection fittings avoid a backflow to the metering pump due to their backpressure function.

The **tubing injection fitting S** meets this demand in an extremely compact design. The preloaded tubing provides for ultra-fine spraying of the chemical during the metering stroke.

When lyes with a high carbonate hardness are metered into water flows calcium carbonate is inevitably precipitated at the mixing fitting. Quite often the crystals adhere to the injection fitting and clog it up resulting automatically in a metering failure. Therefore the **extractable tubing injection fitting SAH** allows a dismounting of the injection tube under system pressure. Checking and cleaning of the injection fitting is possible during daily operation. The injection nozzle is applicable to a wide variety of uses, due to its field-adjustable length. The special hose connection eliminates kinked tubing. While removing the injection nozzle from the injection point the red end of the injection nozzle and a noticeable resistance indicates when to close the ball valve.



cause it to widen and the crystals will be eliminated.

A special type of injection fitting is the **self-cleaning injection fitting SKD**. The injection tubing leading the main flow moves permantly thus making it difficult for crystals to accumulate. Nevertheless, should the tubing clog up, the metering pump pressure will

Mixing of the chemical and the main water flow occurs at the open end of the tubing. The backpressure function - being at quite a distance - consequently will not be affected by possible carbonate precipitation.

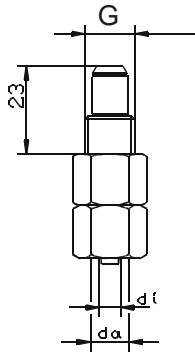
Technical data

	Type S		Type SAH extractable	Type SKD
Opening pressure [bar]	1.1		1.1	0.2
Nominal width	DN4		DN4	DN4
Max. flow rate for uniform flow*	70 l/h		70 l/h	70 l/h
suitable for main tubes	from DN32 up		DN100-400	from DN32 up
Process connection	G 1/4	G 1/2	R 1/2	G 1/2
Metering connection	4/6, 6/8, 6/12	see MB 1 23 01/4	4/6, 6/8, 6/12	see MB 1 23 01/4
Materials	PVC/FPM Ms/FPM 1.4571	PVC/FPM 1.4571/FPM	PVC/FPM	PVC/FPM PVC/EPDM

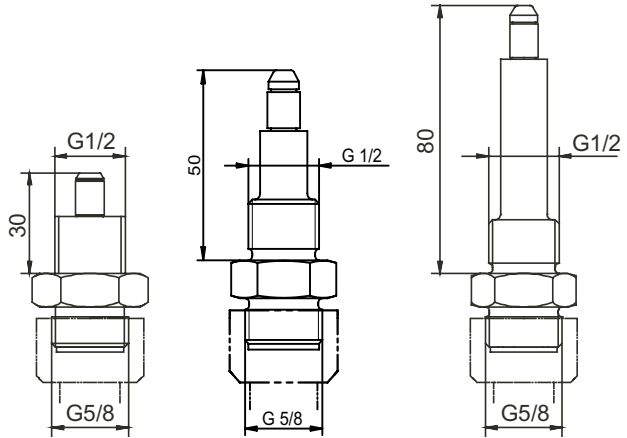
Other connections and materials upon request.
(The injection tubing is also available in EPDM.)

* Flow values for uniform flow. Without pulsation dampers the max. flow rate for motor pumps amounts to 1/3 and for solenoid pumps to 1/10 of the indicated value.

Type S
(with integrated connection)



Type S
(with separate connection)



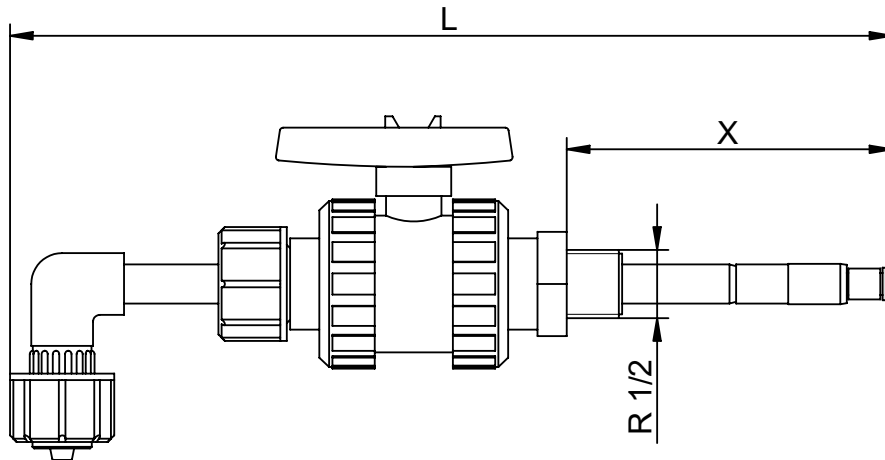
Housing/ tubing material	Tubing connection di/da	Article number	
		G 1/4	G 1/2
Ms/FPM	4/6	12326321	-
	6/8	12326322	-
	6/12	12321985	-
PVC/FPM	4/6	12327059	12332557
	6/8	12327060	-
	6/12	12327061	12328494
1.4571/FPM	4/6	12327062	-
	6/8	12327063	-
	6/12	12327064	-

Housing/ tubing material	Article no.		
	G 1/2		
	L=30mm	L=50 mm	L=80mm
PVC/FPM	12328489	12338119	12334373
1.4571/FPM	12328490	-	-

For connections, cf. connection table MB 1 23 01 / 4

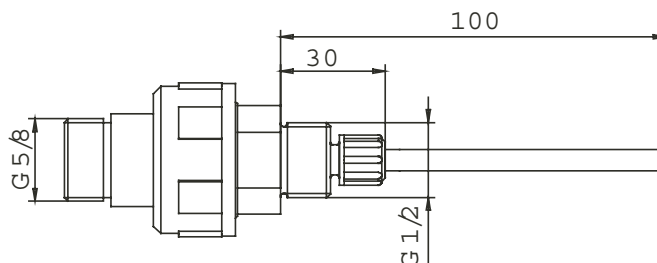
Opening pressure 1.1bar corresponding to German test regulation DVGW-W504.

Type SAH extractable



Housing / tubing / material	Tubing connection di/da	Length of injection tube X [mm]	for tube	Total length L [mm]	Articel No.
R 1/2					
PVC/FPM	-	0 - 100	DN100 - DN150	267	12302001
	-	100 - 200	DN150 - DN400	367	12302002
	6/12	0 - 100	DN100 - DN150	271	12302005
	6/9	0 - 100	DN100 - DN150	271	12302006
	4/6	0 - 100	DN100 - DN150	271	12302007
	6/12	100 - 200	DN150 - DN400	371	12302011
	6/9	100 - 200	DN150 - DN400	371	12302012
	4/6	100 - 200	DN150 - DN400	371	12302013
PVC/EPDM	-	0 - 100	DN100 - DN150	267	12302003
	-	100 - 200	DN150 - DN400	367	12302004
	6/12	0 - 100	DN100 - DN150	271	12302008
	6/9	0 - 100	DN100 - DN150	271	12302009
	4/6	0 - 100	DN100 - DN150	271	12302010
	6/12	100 - 200	DN150 - DN400	371	12302014
	6/9	100 - 200	DN150 - DN400	371	12302015
	4/6	100 - 200	DN150 - DN400	371	12302016

Type SKD self-cleaning



Housing / tubing material	Thread connection	Length of injection tubing	Article No.
G1/2			
PVC/FPM	G5/8	100	12335495
PVC/EPDM	G5/8	100	12335496

For connections, cf. connection table MB 1 23 01 / 4

Warranty



Please copy and send with the device.

If the device breaks down within the period of warranty,
please return it in a cleaned condition with the complete warranty application, filled out.

Sender

Company:..... Phone:..... Date:.....

Address:.....

Contact person:

Manufacturer order-no.: Delivery date:.....

Device type:..... Serial no.:.....

Nominal capacity/nominal pressure:

Description of fault:.....

.....

.....

Type of fault:

1. Mechanical fault

- premature wear
- wear parts
- breakage/other damage
- damage in transit

2. Electrical fault

- loose connections such as plug connector or cable
- operating elements (e.g.. switches/buttons)
- electronics - corrosion

3. Leaks

- connections
- dosing head

4. No or inadequate function

- defective diaphragm
- other

Service conditions of the device

Point of use / system designation:.....

Accessories used (Suction line, etc.):.....

.....

.....

Commissioning (date):.....

Duty peroid (approx. operating hours):.....

Please describe the specifics of the installation and provide a simple diagram with details of the material, diameter, length and levels.

