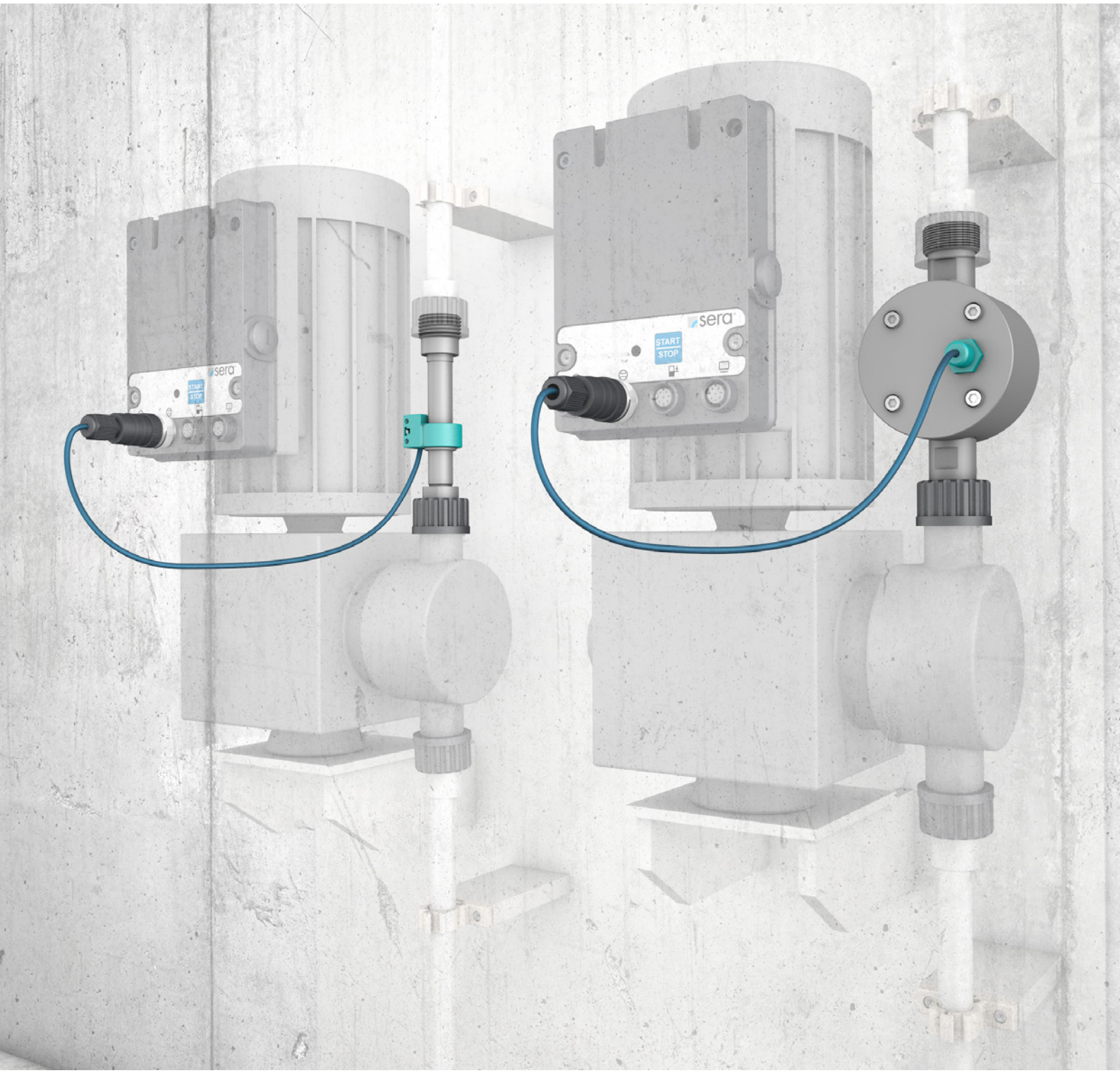
PRODUCT INFORMATION

MEASURING INSTRUMENTS

for **sera** dosing pumps with control electronics



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FLOW METER

GENERAL

The connection of a **sera** flow meter to controllable dosing pumps enables an extended flow rate display with control of the flow rate.

FUNCTION

The flow meters are used to measure and monitor the flow rate and can only be used in conjunction with controllable dosing pumps. The media must be solids-free.
The speed of rotation of the oval wheels (1) is proportional to the flow rate. The rotation of the oval wheels is recorded with an inductive sensor whose pulse signal is evaluated by the controllable pumps.

INSTALLATION

The flow meter must be installed vertically onto the discharge or suction connection (see „SUCTION AND PRESSURE SIDE USE“) of the dosing pump and connected to the pump control via the flow monitoring input (see operating instructions for the controller).

⚠ CAUTION

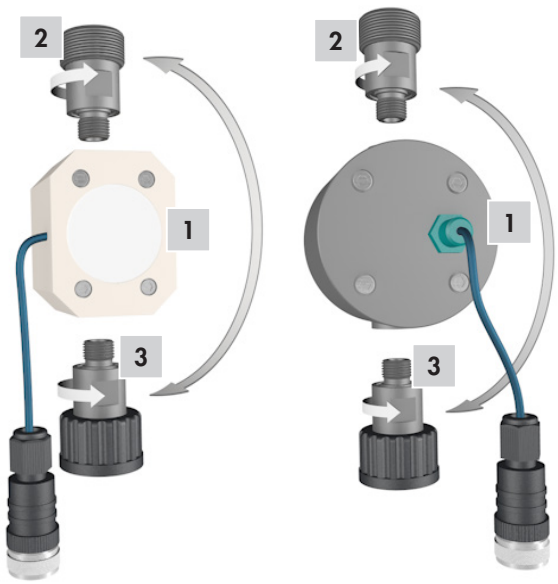
- For a reliable function, a back pressure of min. 1.5 bar required!
- Air pockets in the pumped medium can influence the measurement result.
- In order to rule out any measurement errors, recalibration of the dosing pump is required if the operating conditions change.

SUCTION AND PRESSURE SIDE USE

Standard design:
for pressure side use

For suction side use, the flow meter must be rebuilt as follows:

Unscrew transition piece (2) and insert neck (3) and screw in each time on the opposite side.

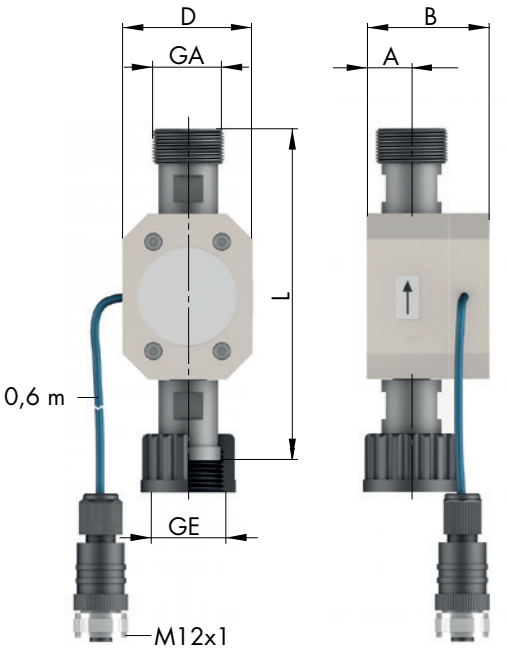


TECHNICAL DATA / DIMENSIONS

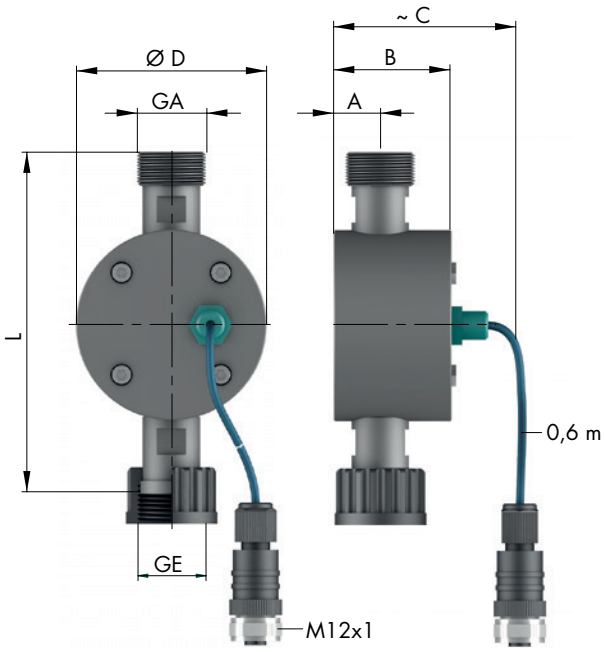
		8010.1	8011.1	8012.1	8013.1	8014.1	8015.1	8016.1	8017.1
Measuring range for oscillating dosing pumps	l/h	3-14	8-50	6-30	10-80	40-180	70-350	80-600	120-1200
Flow rate per stroke	ml/stroke	0,3-2	0,6-4	0,7-4	2-10	4-22	8-40	15-100	25-250
Max. operating pressure	bar	8	8	10	10	10	10	10	10
Max. loss of pressure [2]	bar	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Enclosure	IP	65	65	65	65	65	65	65	65
Viscosity [1]	mPas	1-200	1-200	1-1000	1-1000	1-1000	1-1000	1-1000	1-1000

[1] the max. viscosity always depends on the material version of the pump dosing head.
[2] with water-like media, with increasing viscosity the flow increases.

8010.1 / 8011.1



8012.1 - 8017.1



	8010.1	8011.1	8012.1	8013.1	8014.1	8015.1			8016.1		8017.1
GA	G¾	G¾	G¾	G¾	G¾	G¾	G1	G1¼	G1	G1¼	G1¼
GE	G¾	G¾	G¾	G¾	G¾	G¾	G1	G1¼	G1	G1¼	G1¼
A	16	16	18	18	22	27	27	27	27	27	27
B	74,5	45	45	45	49	67	67	67	67	67	87
C	–	–	90	90	90	125	125	125	125	125	125
D	44	48	73	73	73	108	108	108	108	108	108
L	115	122	131	131	131	196	200	194	200	194	194

(Dimensions in mm)

FLOW CONTROLLER

GENERAL

The flow switch works on the float principle. It can only be used in conjunction with controllable dosing pumps.

⚠ CAUTION

The flow controller is **not** a flow meter!

It only detects the set stroke volume of the pump within the specified setting range. Changing the stroke frequency has no effect on the adjustment and function.
The field of application is limited to water-like media regarding density and viscosity.

FUNCTION

At each stroke, the float is raised and actuates contactless the height-adjustable inductive ring initiator (1).
The switching pulse is reported to the pump electronics and evaluated there. The number of faulty strokes and the function of flow monitoring are adjustable.the flow is indicated by an asterisk „*“ in the operating messages. If there is no flow, the star is hidden.

INSTALLATION

The flow controller is screwed vertically onto the discharge connection (8191.1 - 8193.1) or to the suction connection (8291.1) of the controllable dosing pump and connected to the pump electronics via the input for flow monitoring (see operating instructions of the control unit).

⚠ CAUTION

For the flow controllers 8191.1 - 8193.1,
a back pressure of min. 1.5 bar is required!

Adjusting the flow controller:

i NOTE

Before adjusting the flow controller, dosing monitoring must be activated (see operating instructions for the control).

⚠ CAUTION

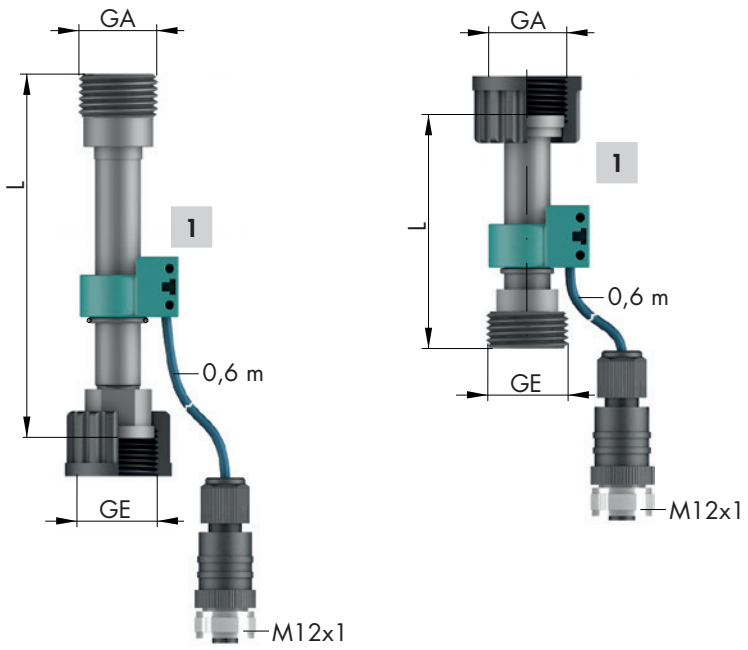
When adjusting the stroke length or changing operating conditions, the flow controller must be readjusted.

TECHNICAL DATA / DIMENSIONS

		8291.1	8191.1	8192.1	8193.1
Application for oscillating dosing pumps	l/h	0,03-50	0,6-14	18-180	200-350
Min./max. pressure in the inlet of the flow controller	bar	-0,3/0,5	–	–	–
Min. stroke volume	ml/Hub	1,75	0,065	1,5	17
Max. stroke volume	ml/Hub	4,39	3,3	20	40
Max. loss of pressure	bar	0,8	1,5	1,5	1,5
Max. viscosity	mPas	70	70	70	70
Min./max. density	kg/dm³	1/1,5	1/1,5	1/1,5	1/1,5
Enclosure [1]	IP	65	65	65	65

[1] with connected cable socket

PRESSURE SIDE 8191.1-8193.1 **SUCTION SIDE 8291.1**



	8291.1	8191.1	8192.1	8193.1
GA	G¾	G¾	G¾	G1¼
GE	G¾	G¾	G¾	G1¼
L	75	119	125	129

(Dimensions in mm)

MATERIALS

MATERIALS FLOW METERS		8010.1	8011.1	8012.1	8013.1	8014.1	8015.1	8016.1	8017.1
Oval wheel flow sensor	ECTFE	■	■						
	PP			■	■	■	■	■	■
Joints	PP	■	■	■	■	■	■	■	■
	PVC-U	■	■						
	PVDF	■	■						
Seals	EPDM	■	■	■	■	■	■	■	■
	FPM	■	■	■	■	■	■	■	■

MATERIALS FLOW CONTROLLER		8291.1	8191.1	8192.1	8193.1
Joints	PP		■	■	■
	PVC-U	■	■	■	■
Seals	EPDM	■			
	FPM	■	■	■	■

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