



Rotameter (Float-type flow meter)

- Flow measurement for translucent liquids and gases
- DN 10 to DN 65 mm

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with



Type TEU007
Limit value switch

Type description

If a medium with sufficient flow rate flows from bottom to top through a vertically inserted measuring tube, then the floated element is raised so far, and the equilibrium between the lift strength of the medium itself and the weight of the floated element is adjusted. Since the average flow rate is proportional to the flow quantity per time unit, the determined equilibrium corresponds to the flow volume. Flow meters with solenoid floated elements can be equipped with limit value contacts.

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1. General technical data

Note:

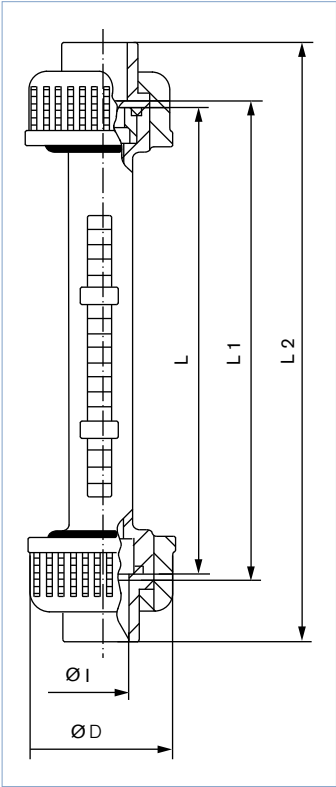
Other versions, non standard scales for gases, medium with special viscosity, special measuring units on request

Product properties	
Dimensions	More detailed information can be found in the chapter "2. Dimensions" on page 4
Materials	
Measuring tube	PVC-U, Trogamid (PA), Polysulfone (PSU)
Float	Stainless steel 1.4571, standard for water (without and with solenoid) PP (Polypropylene), standard for air (without and with solenoid)
Inserts	PVDF
Connection	Standard PVC-U glued socked, metric On request: PVC-U glued socked, ASTM/ANSI PVC-U thread ISO 228/1; RP DIN 2999 PP-H weld socket, DIN 16962 PP welded connection Malleable cast iron thread, ISO 228/1; RP DIN 2999 Stainless steel 1.4571 thread, ISO 228/1; RP DIN 2999
Seal (O-ring)	O-ring EPDM, (FPM on request)
Orifice	DN 10 to DN 65
Nominal pressure	Measurement tube made of PVC-U: up to 25 °C max. 10 bar ^{1.)} ; at 60 °C max. 1.5 bar ^{1.)} Measurement tube made of Trogamid: up to 50 °C max. 10 bar ^{1.)} Measurement tube made of Polysulfone: up to 70 °C max. 10 bar ^{1.)} ; at 100 °C max. 6 bar ^{1.)}
Indicating scale	Absolute in l/h for water 2 adjustable limit indicators
Option	Control switches, measured value sensor with LED visualization
Performance data	
Measuring range	3 to 50000 l/h
Measuring accuracy for overall length up to 200 mm Class 4 acc. to VDE/VDI 3513 sheet 2	Total error v. measured value: $\pm 3\%$ Total error v. final value: $\pm 1\%$
Measuring accuracy for overall length 350 mm Class 2.5 acc. to VDE/VDI 3513:1:2014 and 3513-2:2008	Total error v. measured value: $\pm 1.875\%$ Total error v. final value: $\pm 0.625\%$
Medium data	
Medium	Neutral and aggressive fluids
Environment and installation	
Ambient temperature	Max. +60 °C
Installation	Vertical, medium flow from bottom to top

1.) Pressure values: Overpressure to atmospheric pressure

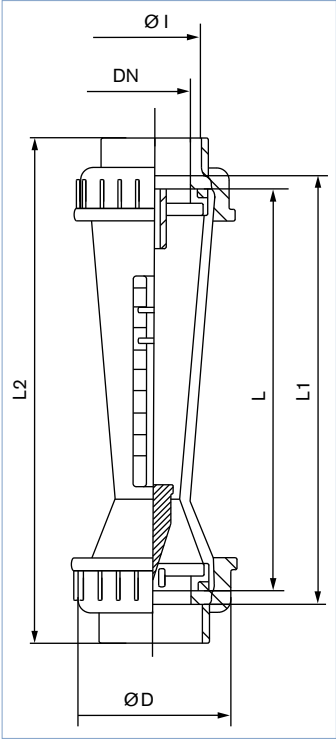
2. Dimensions

2.1. Overall length 165, 170, 185, 200 mm



DN	Ø I (internal socket)	L	L1	L2	Ø D
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
10	16	165	171	199	35
15	20	170	176	208	43
20	25	185	191	229	60
25	32	200	206	250	68

2.2. Overall length 350 mm



DN	da (i)	D	L	L1	L2
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
20	25	60	350	356	394
25	32	68	350	356	400
32	40	72	350	356	408
40	50	83	350	356	418
50	63	103	350	356	432
65	75	122	350	356	444

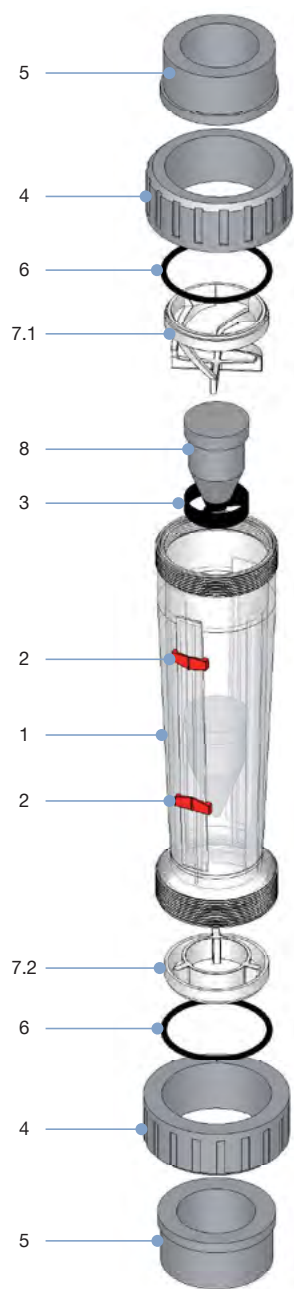
3. Performance specifications

3.1. Pressure/temperature assignment

Temperature °C		-20	-10	0	5	10	20	25	30	40	50	60	70	80	90	100
Tube material	Connection material	Operating pressure [bar]														
PVC-U	PVC-U	–	–	–	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	–	–	–	–
	PVC-C	–	–	–	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	–	–	–	–
	PP	–	–	–	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	–	–	–	–
	Malleable cast iron	–	–	–	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	–	–	–	–
	Stainless steel	–	–	–	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	–	–	–	–
Trogamid (PA)	PVC-U	–	–	–	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	–	–	–	–
	PVC-C	–	–	–	10.0	10.0	10.0	10.0	8.5	6.5	5.0	3.5	–	–	–	–
	PP	–	–	–	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	–	–	–	–
	Malleable cast iron	15.0	15.0	15.0	15.0	15.0	15.0	15.0	13.5	12.0	10.7	9.5	–	–	–	–
	Stainless steel	15.0	15.0	15.0	15.0	15.0	15.0	15.0	13.5	12.0	10.7	9.5	–	–	–	–
Polysulfone (PSU)	PVC-U	–	–	–	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	–	–	–	–
	PVC-C	–	–	–	10.0	10.0	10.0	10.0	8.5	6.5	5.0	3.5	2.5	1.5	–	–
	PP	–	–	10.0	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	2.7	1.5	0.8	–
	Malleable cast iron	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.0	13.0	12.0	11.0	9.7	8.5	7.7	6.0
	Stainless steel	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.0	13.0	12.0	11.0	9.7	8.5	7.7	6.0

4. Product design and assembly

4.1. Product assembly



No.	Element	Material	Amount
1	Tube	Transparent PVC-U	1
		Trogamid (PA)	
		Polysulfone (PSU)	
2	Visual display	PVDF	2
3 ^{1.)}	Floating-Wing	PVDF	1
4	Union nut	PVC-U	2
		PVC-C	
		PP	
		Stainless steel	
		Malleable cast iron	
5	Insert component	PVC-U	2
		PVC-C	
		PP	
		Stainless steel	
		Malleable cast iron	
6	O-ring	EPDM	2
		FPM	
7.1	Upper floating stop	PVDF	1
7.2 ^{2.)}	Lower floating stop	PVDF	1
8	Float	Stainless steel	1
		PP	

Note:

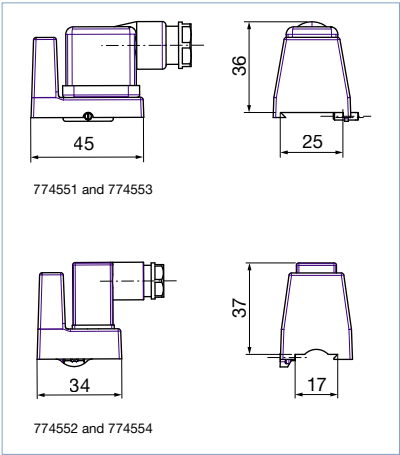
1. Only for measured value 10000 - 50000 l/h
2. From DN 25

5. Product accessories

5.1. Control switches

Technical data - control switches	
Switching voltage	250 V AC/DC
Inrush current	Max. 0.5 A
Switching capacity	Max. 30 Watt
Contact assembly	Micro switch, bistable
Contact resistance	<200 mΩ (mOhm)
Insulation resistance	> 10 ¹¹ Ohm
Protection class	IP65
Installation	On guide rod of the flow meter

Version	Switching hysteresis float way	Control switches		For float flow meter
		closed, when float	opened, when float	
Min. Contact	1 to 2 mm	lower contact	upper contact	See “6. Ordering information” on page 9
	1 to 2 mm	upper contact	lower contact	See “6. Ordering information” on page 9



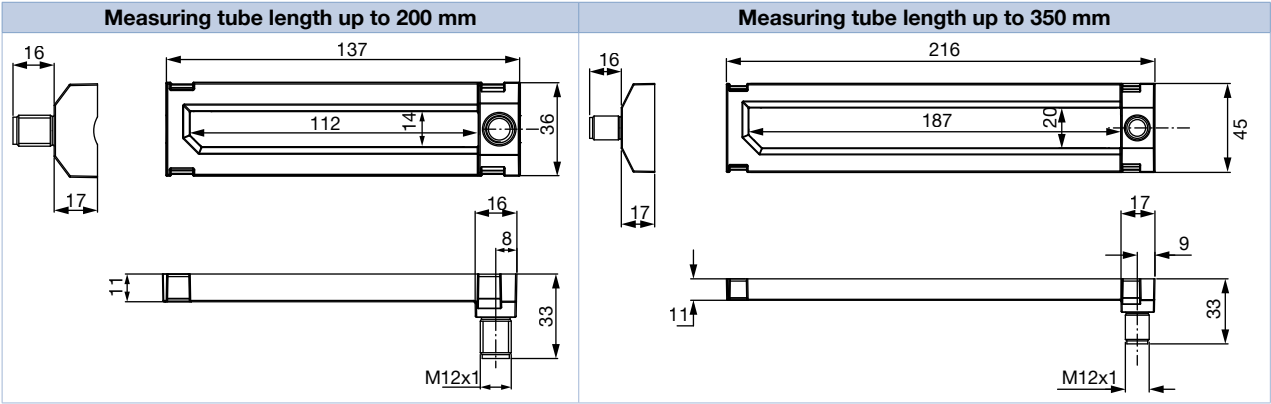
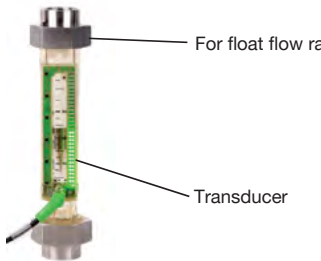
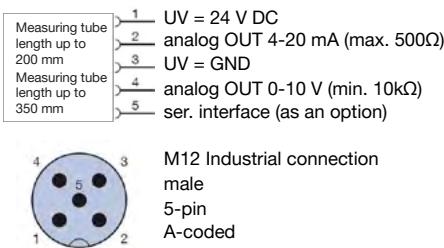
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5.2. Transducer

Technical data - control switches	
Switching voltage	24 V DC
Output signal	4...20 mA / 0...10 V
Visualization	31/50 LEDs
Accuracy	± 1 %
Body material	PPSU
Temperature	- 10°...+ 70 °C
Protection class	IP67
Electrical connection	Multipol plug M12, 5 pin a-coded

Version	For float flow rate
	Overall length
Transducer	165 to 200 mm
Transducer	350 mm

Electrical connection, M12 connector



6. Ordering information

6.1. Bürkert eShop – Easy ordering and quick delivery



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6.2. Bürkert product filter



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6.3. Ordering chart

Overall length 165 mm measuring tube PSU

Note:

Dimensions see “2. Dimensions” on page 4

Orifice DN [mm]	Connection da [mm]	Measuring range H ₂ O [l/h]	Max. pressure loss [mbar]	Article no. without solenoid	Article no. with solenoid
10	16	3...30	7	774479	774482
10	16	4...40	7	774480	774483
10	16	10...100	7	774481	774484

Overall length 170 mm measuring tube PSU

Note:

Dimensions see “2. Dimensions” on page 4

Orifice DN [mm]	Connection da [mm]	Measuring range H ₂ O [l/h]	Max. pressure loss [mbar]	Article no. without solenoid	Article no. with solenoid
15	20	10...100	9	774485	774488
15	20	15...160	9	774486	774489
15	20	20...250	9	774487	774490

Overall length 185 mm measuring tube PSU

Note:

Dimensions see "2. Dimensions" on page 4

Orifice DN [mm]	Connection da [mm]	Measuring range H ₂ O [l/h]	Pressure value loss [mbar]	Article no. without solenoid	Article no. with solenoid
20	25	25...250	12	774883 	774887 
20	25	40...400	12	774884 	774888 
20	25	50...600	12	774885 	774889 
20	25	100...1100	12	774886 	774890 

Overall length 200 mm measuring tube PSU

Note:

Dimensions see "2. Dimensions" on page 4

Orifice DN [mm]	Connection da [mm]	Measuring range H ₂ O [l/h]	Pressure value loss [mbar]	Article no. without solenoid	Article no. with solenoid
25	32	40...400	15	774491 	774494 
25	32	50...600	15	774492 	774495 
25	32	100...1000	15	774493 	774496 

Overall length 350 mm measuring tube PVC-U

Note:

Dimensions see "2. Dimensions" on page 4

Orifice DN [mm]	Connection da [mm]	Measuring range H ₂ O [l/h]	Pressure value loss [mbar]	Article no. without solenoid	Article no. with solenoid
25	32	40...400	16	774497 	774499 
25	32	60...640	16	774498 	774500 
25	40	100...1000	16	770431 	770444 
32	40	150...1600	22	774501 	774503 
32	40	200...2500	22	774502 	774504 
40	50	200...2500	25	774505 	774508 
40	50	400...4000	25	774506 	774509 
40	50	500...5000	25	774507 	774510 
50	63	600...6000	33	770437 	774511 
50	63	1000...10000	33	770438 	774512 
65	75	2000...20000	42	770440 	774514 
65	75	10000...50000	42	774513 	774515 

Overall length 350 mm measuring tube PA

Note:

Dimensions see "2. Dimensions" on page 4

Orifice DN [mm]	Connection da [mm]	Measuring range H ₂ O [l/h]	Pressure value loss [mbar]	Article no. without solenoid	Article no. with solenoid
25	32	40...400	16	774516 	774518 
25	32	60...640	16	774517 	774519 
25	32	100...1000	16	770379 	770392 
32	40	150...1600	22	774520 	774522 
32	40	200...2500	22	774521 	774523 
40	50	200...2500	25	774524 	774527 
40	50	400...4000	25	774525 	774528 
40	50	500...5000	25	774526 	774529 
50	63	6000...6000	33	770385 	770398 
50	63	1000...10000	33	770386 	770399 
65	75	2000...20000	42	770388 	770401 
65	75	10000...50000	42	774530 	774531 

Overall length 350 mm measuring tube PSU

Note:

Dimensions see "2. Dimensions" on page 4

Orifice DN [mm]	Connection da [mm]	Measuring range H ₂ O [l/h]	Pressure value loss [mbar]	Article no. without solenoid	Article no. with solenoid
25	32	40...400	16	774532 	774534 
25	32	60...640	16	774533 	774535 
25	32	100...1000	16	770405 	770418 
32	40	150...1600	22	774536 	774538 
32	40	200...2500	22	774537 	774539 
40	50	200...3000	25	774540 	774543 
40	50	400...4000	25	774541 	774544 
40	50	500...5000	25	774542 	774544 
50	63	600...6000	33	770411 	770424 
50	63	1000...10000	33	770412 	770425 
65	75	2000...20000	42	770414 	770427 
65	75	10000...50000	42	774546 	774547 

6.4. Ordering chart accessories

Control switches

Version	For float flow meter	Article no.
Min. contact	Overall length 200 mm and 350 mm	774551 
	Overall length 165, 170 and 185 mm	774552 
Max. contact	Overall length 200 mm and 350 mm	774553 
	Overall length 165, 170 and 185 mm	774554 

Transducer

Version	For float flow meter	Article no.
Transducer	Overall length up to 200 mm	774548 
Transducer	Overall length up to 350 mm	774549 
Connection cable M12, angled	Cable length 5 m	774550 

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