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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Visit product website ▸

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1. General technical data

Note:
Other variants, non standard scales for gases, mediums with special viscosity or special measuring units on request

Product properties	
Dimensions	Further information can be found in chapter "4. Dimensions" on page 4.
Material	
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 according to ASTM/ANSI • PVC-U thread according to ISO 228/1, RP DIN 2999 • PP-H weld socket according to DIN 16962 • PP welded connection • Malleable cast iron thread according to ISO 228/1, RP DIN 2999 • Stainless steel 1.4571 thread according to ISO 228/1, RP DIN 2999
Seal (O-ring)	EPDM (FPM on request)
Nominal diameter	DN 10...DN 65
Nominal pressure	Measurement tube in PVC-U: up to + 25 °C max. 10 bar [1.], at + 60 °C max. 1.5 bar [1.] Measurement tube in TROGAMID: up to + 50 °C max. 10 bar [1.] Measurement tube in 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
Performance data	
Measuring range	3...50,000 l/h
Masuring accuracy	
Measuring accuracy for overall length up to 200 mm, Class 4	Total error of measured value: ± 3 % Total error of final value: ± 1 % According to VDE/VDI 3513 sheet 2
Measuring accuracy for overall length 350 mm, Class 2.5	Total error of measured value: ± 1.875 % Total error of final value: ± 0.625 % According to VDE/VDI 3513:1:2014 and 3513 - 2:2008
Medium data	
Operating medium	Neutral and aggressive fluids
Environment and installation	
Installation	Vertical, medium flow from bottom to top
Ambient temperature	Max. + 60 °C

1.) Pressure data: overpressure to atmospheric pressure

2. Approvals and conformities

2.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available variants can be supplied with the below mentioned approvals or conformities.

2.2. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

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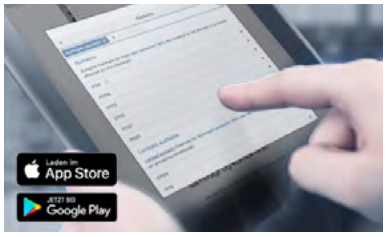
2.3. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

3. Materials

3.1. Bürkert resistApp



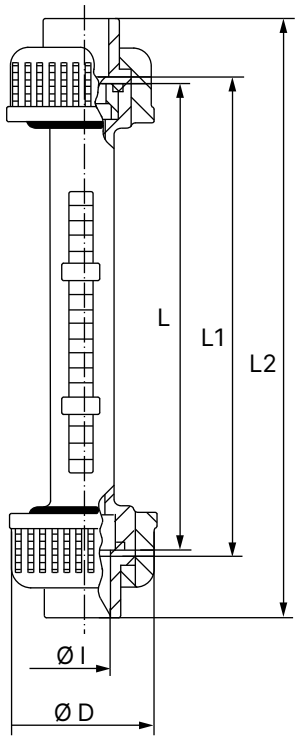
Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

Start chemical resistance check

4. Dimensions

4.1. 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

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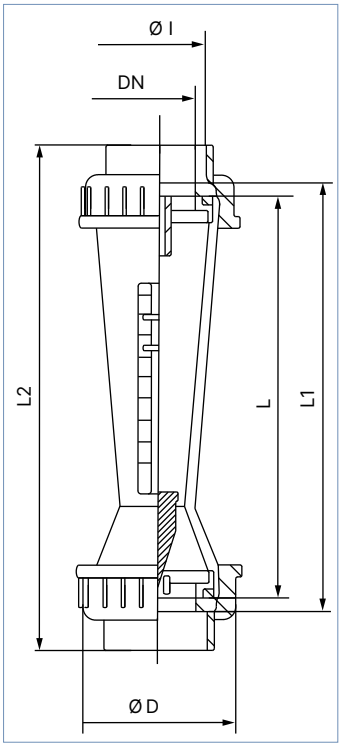
4.2. Overall length 350 mm



DN	Ø I (internal socket)	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

5. Performance specifications

5.1. Pressure/temperature relation

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	10	10	10	8	6	3.5	1.5	–	–	–	–
	PVC-C	–	–	–	10	10	10	10	8	6	3.5	1.5	–	–	–	–
	PP	–	–	–	10	10	10	10	8	6	3.5	1.5	–	–	–	–
	Malleable cast iron	–	–	–	10	10	10	10	8	6	3.5	1.5	–	–	–	–
	Stainless steel	–	–	–	10	10	10	10	8	6	3.5	1.5	–	–	–	–
TROGAMID (PA)	PVC-U	–	–	–	10	10	10	10	8	6	3.5	1.5	–	–	–	–
	PVC-C	–	–	–	10	10	10	10	8.5	6.5	5	3.5	–	–	–	–
	PP	–	–	–	10	10	10	10	8.5	7	5.5	4	–	–	–	–
	Malleable cast iron	15	15	15	15	15	15	15	13.5	12	10.7	9.5	–	–	–	–
	Stainless steel	15	15	15	15	15	15	15	13.5	12	10.7	9.5	–	–	–	–
Polysulfone (PSU)	PVC-U	–	–	–	10	10	10	10	8	6	3.5	1.5	–	–	–	–
	PVC-C	–	–	–	10	10	10	10	8.5	6.5	5	3.5	2.5	1.5	–	–
	PP	–	–	10	10	10	10	10	8.5	7	5.5	4	2.7	1.5	0.8	–
	Malleable cast iron	15	15	15	15	15	15	15	14	13	12	11	9.7	8.5	7.7	6
	Stainless steel	15	15	15	15	15	15	15	14	13	12	11	9.7	8.5	7.7	6

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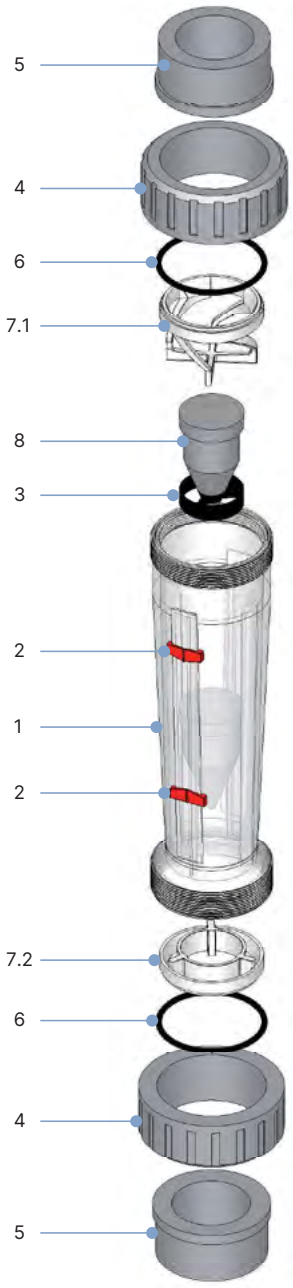
6. Product design and assembly

6.1. Product assembly



No.	Element	Material	Quantity
1	Tube	Transparent PVC-U	1
		TROGAMID (PA)	
		Polysulfone (PSU)	
2	Visual display	PVDF	2
3 [1.)]	Float 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	

1. Only for measured value 10,000...50,000 l/h
2. From DN 25 onwards

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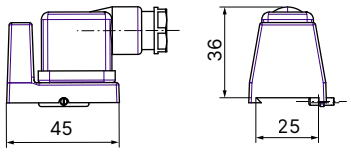
7. Product accessories

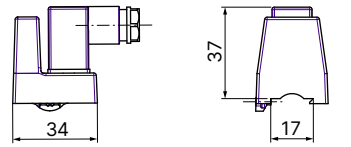
7.1. Control switches

Technical data	
Switching voltage	250 V AC/DC
Inrush current	Max. 0.5 A
Switching capacity	Max. 30 W
Contact assembly	Micro switch, bistable
Contact resistance	< 200 mΩ
Insulation resistance	> 10^{11} Ω
Protection class	IP65
Installation	On guide rod of the flow meter

Variant	Switching hysteresis float way	Control switches		For float flow meter
		Closed, when float is:	Opened, when float is:	
Min. contact	1...2 mm	Below contact	Above contact	See "8. Ordering information" on page 8
	1...2 mm	Above contact	Below contact	See "8. Ordering information" on page 8



774551 and 774553



774552 and 774554

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8. Ordering information

8.1. Bürkert eShop

Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

Order online now

8.2. Bürkert product filter

Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements?
Use the Bürkert product filter and find suitable articles for your application quickly and easily.

Try out our product filter

8.3. Ordering chart

Overall length 165 mm, measuring tube in PSU

Note:
Dimensions see "4. Dimensions" on page 4

Nominal diameter	Connection Ø l	Measuring range water	Pressure loss	Article no.	Article no.
	[mm]	[l/h]	[mbar]	Without solenoid	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 in PSU

Note:
Dimensions see "4. Dimensions" on page 4

Nominal diameter	Connection Ø l	Measuring range water	Pressure loss	Article no.	Article no.
	[mm]	[l/h]	[mbar]	Without solenoid	With solenoid
15	20	10...100	9	774485	774488
15	20	15...160	9	774486	774489
15	20	20...250	9	774487	774490

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Overall length 185 mm, measuring tube in PSU

Note:
Dimensions see "4. Dimensions" on page 4

Nominal diameter	Connection Ø l	Measuring range water	Pressure loss	Article no.	Article no.
	[mm]	[l/h]	[mbar]	Without solenoid	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 in PSU

Note:
Dimensions see "4. Dimensions" on page 4

Nominal diameter	Connection Ø l	Measuring range water	Pressure loss	Article no.	Article no.
	[mm]	[l/h]	[mbar]	Without solenoid	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 in PVC-U

Note:
Dimensions see "4. Dimensions" on page 4

Nominal diameter	Connection Ø l	Measuring range water	Pressure loss	Article no.	Article no.
	[mm]	[l/h]	[mbar]	Without solenoid	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

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Overall length 350 mm, measuring tube in PA

Note:
Dimensions see "4. Dimensions" on page 4

Nominal diameter	Connection Ø l	Measuring range water	Pressure loss	Article no.	Article no.
	[mm]	[l/h]	[mbar]	Without solenoid	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 in PSU

Note:
Dimensions see "4. Dimensions" on page 4

Nominal diameter	Connection Ø l	Measuring range water	Pressure loss	Article no.	Article no.
	[mm]	[l/h]	[mbar]	Without solenoid	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...2500	25	774540	774543
40	50	400...4000	25	774541	774544
40	50	500...5000	25	774542	774545
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

8.4. Ordering chart accessories

Control switches

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

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