

Flowmeters (rotameters)



INECO[®]

**Air and Vacuum
Components**

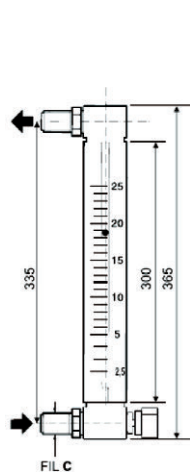
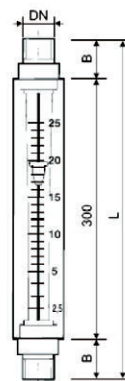
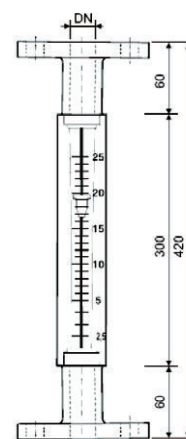
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Flowmeters

Flowmeters / model LB/89

Laboratory flowmeters


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The LB/89 series flowmeters are instantaneous measuring devices suitable for small flow rates of liquids or gases.

The flowmeters can have threaded axial, threaded square or flanged axial connections. They are produced entirely in acrylic material (PMMA). Max. thermal endurance is 70 °C. On request, they can be equipped with a min./max. flow rate indicator.

Versions:

1. with nickel-plated brass or stainless steel needle valve
2. with threaded axial connections in PVC or AISI 304
3. with flanged connections in PVC or AISI 304

Maximal thermal endurance: 70 °C.

Maximal test pressure: 10 bar.

Accuracy: +/- 5 %

Air l/min	Water l/h	C	Flanged connec- tions DN	B	C	L
10	25	3/8" 1/2"	10 - 15	35	35	370
20	60					
30	100					
50	150					
70	200					

Air m ³ /h	Water l/h	C	Flanged connec- tions DN	B	C	L
6 8 10	320	1/2"	10 - 15	40	40	380
	420					
	600					
	800					

Flowmeters / model R

Acrylic (PMMA) flowmeters for medium flow rates

page 1 of 2



The “R” series flowmeters are produced entirely in acrylic material (PMMA) with a calibrated and polished conical measuring hole placed directly in the structure. Max. thermal endurance is 70 °C. The guided or free float is produced in different materials: AISI 316, Hastelloy, PVC, PTFE, Moplen etc. The flowmeters can have threaded axial, threaded square or flanged axial connections. On request, they can be also produced for PN16, PN25 and PN40.

Maximal thermal endurance: 70 °C.

Maximal test pressure: 10 bar, PN16, PN25, PN40.

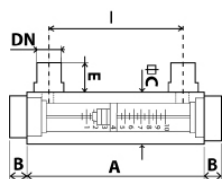
Accuracy: +/-5 %.

Flowmeters / model R

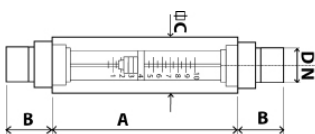
Acrylic (PMMA) flowmeters for medium flow rates

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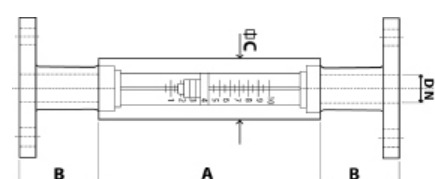
Square threaded connections



Axial threaded connections



Axial flanged connections



Type	Water l/h	Air m³/h	Threaded connections				Flanged connections			
			DN	A	B	C	DN	A	B	C
R1	120	6	1/2"	127	35	40	15	127	60	35
	200	8								
	300	10								
	400	12								
	500	12								
R2	600	15	1/2"	160	40	45	15	160	80	40
	800	15	1/2"				15			
	1200	15	3/4"				20			
	1500	25	3/4"				20			
	2000	25	1"				25			
R3	3000	40	1"	190	40	50	25	190	80	45
	4000									
R4	6000	60	1"	190	40	60	40	190	80	60
	8000	60	1 1/4"							
	12000	100	1 1/2"							

Type	Square connections					
	DN	A	B	C	E	I
R1	3/8" - 1/2"	127	15	40	40	95
R2	1/2" - 3/4" - 1"	160	15	45	45	115
R3	3/4" - 1"	190	15	50	50	125
R4	1" - 1 1/4" - 1 1/2"	238	16	60	40	165

Flowmeters / model PL

Acrylic (PMMA) flowmeters for middle and large flow rates

page 1 of 2



The "PL" series flowmeters are produced entirely in acrylic material (PMMA) with a calibrated and polished conical measuring hole placed directly in the structure. Max. thermal endurance is 70 °C. The guided or free float is produced in different materials: AISI 316, Hastelloy, PVC, PTFE, Moplen etc. The flowmeters can have threaded axial, threaded square or flanged axial connections.

On request, they can be also produced for PN16, PN25 and PN40.

Maximal thermal endurance: 70 °C.

Maximal test pressure: 10 bar, PN16, PN25, PN40.

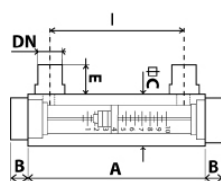
Accuracy: +/-5 %.

Flowmeters / model PL

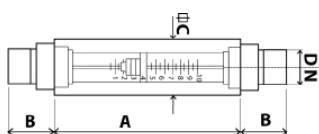
Acrylic (PMMA) flowmeters for middle and large flow rates

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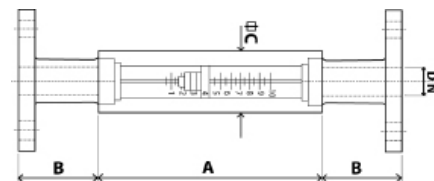
Square threaded connections



Axial threaded connections



Axial flanged connections

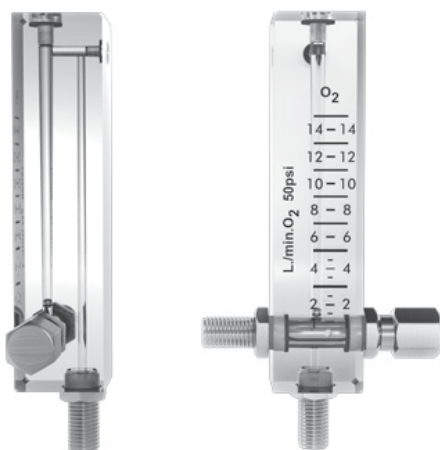


Type	Water l/h	Air m ³ /h	Threaded connections				Flanged connections			
			DN	A	B	C	DN	A	B	C
PL1	200	6	1/2"	180	35	40	15	180	60	35
	400	8					20			
	600	10					25			
PL2	800	15	1/2"	220	40	45	15	220	80	40
	1200		3/4"				20			
	2000	25	1"				25			
PL3	4000	40	1"	260	40	50	25	260	80	45
PL4	6000	60	1 1/2"	260	40	60	40	260	80	60
PL5	12000	100	1 1/2"	260	40	75	40	260	80	75
	15000		2"				50			
	20000		2 1/2"				65			
	30000		2 1/2"				65			

Type	Square connections					
	DN	A	B	C	E	I
PL1	3/8" - 1/2"	180	15	40	35	145
PL2	1/2" - 3/4" - 1"	220	15	45	35	175
PL3	3/4" - 1"	260	15	50	40	195
PL4	1" - 1 1/4" - 1 1/2"	260	15	60	40	195
PL5	1 1/2" - 2" - 2 1/2"	260	82,5	75	45	350

Flowmeters / model A/M

Acrylic (PMMA) flowmeters for small flow rates

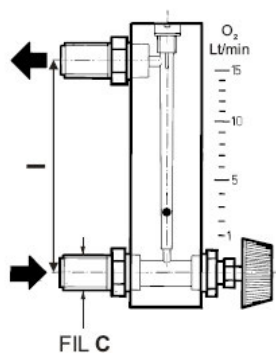


The “A/M” series flowmeters are suitable for measuring of small flow rates of liquids and gases. They are produced entirely in acrylic material (PMMA) with a conical measuring hole placed directly in the structure. Max. thermal endurance is 70 °C. The float is usually spherical in AISI 316, and according to the fluid being used, it may be in nylon, glass, aluminium or other materials. The flowmeter is equipped with the needle valve in nickel-plated brass or stainless steel material for dosing of medium to the required value. It is produced with square or lateral threaded connections.

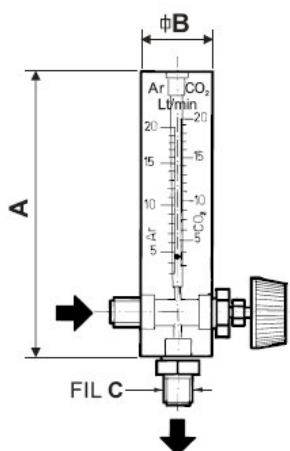
Maximal thermal endurance: 70 °C.

Maximal test pressure: 10 bar.

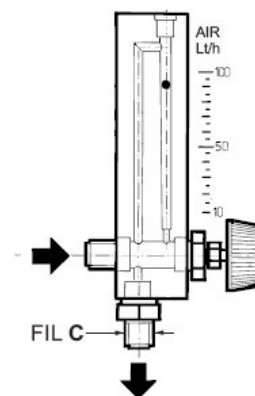
Accuracy: +/-5 %.



Square connections



Lateral connections

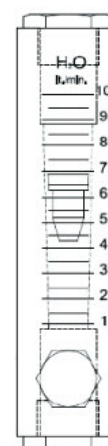
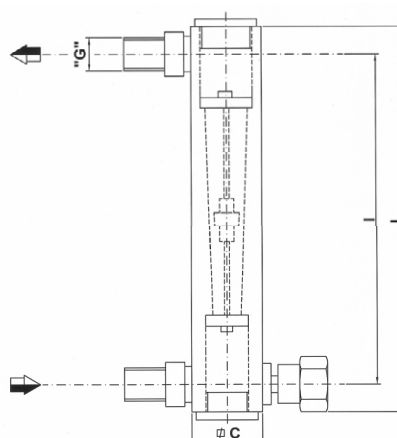
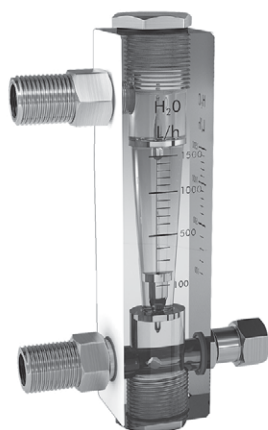


Frontal type
Lateral connections

Type	A	B	C "	I	Construction	Water l/h max.	Air l/min P.A. max.
a-m 95	95	30	1/4"- 3/8"	65	1 * 2 * 3	40	15
a-m 120	120	30	1/4"- 3/8"	90	1 * 2 * 3	50	35
a-m 145	145	30	3/8"	115	1 * 2 * 3	120	50
a-m 185	185	30	1/4"- 3/8"	155	1	150	80

Flowmeters / model R-R

Acrylic (PMMA) flowmeters for medium flow rates with the needle valve



The "R-R" flowmeters with the needle valve are produced in acrylic material (PMMA) only and with the indicator made by different materials: AISI 316, Hastelloy or PVC for the aggressive liquids.

Max. thermal endurance is 70 °C. They are equipped with the needle valve in nickel-plated brass or stainless steel.

The flowmeters can have threaded square connections.

Maximal thermal endurance: 70 °C.

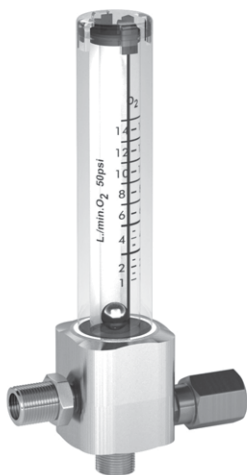
Maximal test pressure: 10 bar.

Accuracy: +/-5 %.

Type	Standard flow rate		Threaded connections			
	water	air				
	l/h	m³/h	G	L	I	C
R-1/R	120	6	3/8" - 1/2"	160	115	40
	200					
	300	8				
	400					
	500	10				
R-2/R	600		3/8" - 1/2"	190	140	45
	800	15				
	1200					
	1500	25				
	2000					

Flowmeters / model A/S

Flowmeters for small flow rates



The flowmeters "A/S" are produced in acrylic material (PMMA), fitted on a metallic body with the regulative needle valve. Max. thermal endurance is 70 °C. The flowmeters with the lateral connections are suitable for measuring of the therapeutic or welding gases (Oxygen, Air, Nitrogen, Nitrous oxide, etc).

Maximal thermal endurance: 70 °C.

Maximal test pressure: 10 bar.

Accuracy: +/-5 %.

Flowmeters / model MK

Direct reading flowmeters



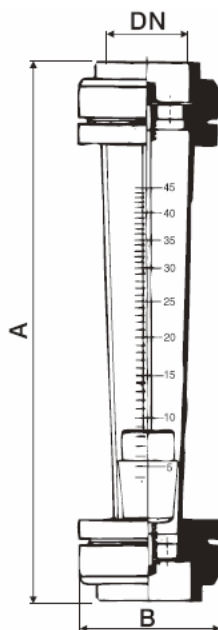
Standard connection of the flowmeters enables quick installation and reduces maintenance time. The structure is produced in antacid PVC (max. thermal endurance is 75 °C). On request flowmeter body can be produced in polypropylene with maximal thermal endurance 100 °C. The float is made of AISI 316, but for particular requirements, it can be made of PVC, PTFE etc.

The flowmeters can have threaded axial connections.

Maximal thermal endurance: antacid PVC: 75 °C, polypropylene: 100 °C.

Maximal test pressure: 10 bar.

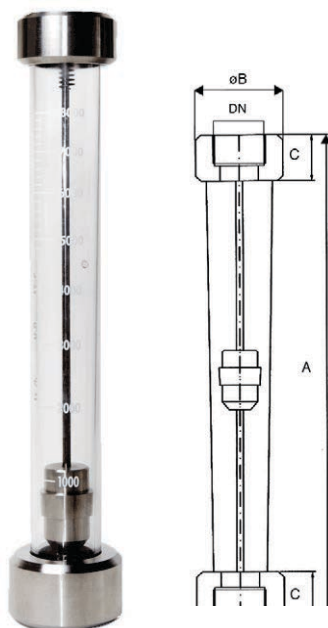
Accuracy: +/- 5 %.



Typ	Water l/h	Air m ³ /h	Threaded connections DN	A	B
MKF	320	6	1/2"	430	80
	420	8	3/4"		
	600	10	1"		
	800	10	1"		
MKE	1200	20	3/4"	430	80
	1500		1"		
MKD/4	2000	40	3/4"	430	100
	2500		1"		
	3500		1"		
MKD/5	4000	60	1"	430	100
	5000		1 1/4"		
	6000		1 1/2"		
MKC	5000	80	1"	540	100
	6000		1 1/4"		
	8000		1 1/2"		
MKB	10000	130	1 1/2"	540	120
	12500		2"		
	15000		2"		
MKA	20000	160	2"	540	140
	25000	160	2"		
	30000	250	2 1/2"		
	37000	250	3"		

Flowmeters_model V-VK

Direct reading flowmeters for medium and large flow rates



The flowmeters of the V-VK series are rectilinear flow measuring devices suitable for medium and large flows of liquids and gases. Immediate flow measurement is read with excellent accuracy on a scale printed on a calibrated truncated conical tube in polycarbonate or polysulfone (non-toxic and unbreakable). The float is made of stainless steel AISI 316.

Other features: easy installation, easy maintenance, high accuracy

Maximal thermal endurance for metal structure: 120 °C

Maximal thermal endurance for plastic structure: 70 °C

Maximal working pressure for metal structure: 16 bar

Maximal working pressure for plastic structure: 8 bar

Accuracy: +/- 5 %.

Material versions of the flowmeter body:

Polypropylene - thermal endurance up to 100 ° C and max. pressure 6 bar

Polysulfone - thermal endurance up to 160 ° C, suitable for aggressive liquids

Type	Water L/h	Air m³/h	Threaded connection			
			A	B	C	DN
V-3	320 420 600 800	10	380	53	46	3/4" 1"
V-3b	1200 1500	20	380	53	46	3/4" 1"
V-4	2000 2500 3500	40	380	64	46	1"
V-5b	4000 5000 6000	60	380	86	46	1 1/2"
V-K1	6000 8000	80	485	78	46	1 1/2"
V-K2	10000 12500 15000	130	490	98	53	2 1/2"
V-K3	20000 25000 30000 37000 45000	250	490	108	53	2 1/2"

Flowmeters / model BC

Direct reading flowmeters for medium flow rates



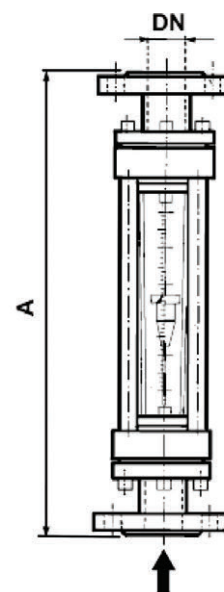
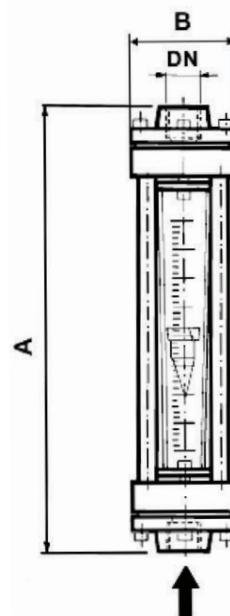
The "BC" series flowmeters are the flow rate measuring devices, suitable for the medium flow rates of liquid and liquid gases. Value of the current flow is read with the excellent accuracy on the graduated scale, printed on the calibrated conical body made by polycarbonate (makrolon) – maximal thermal endurance is 120 °C or polysulphone (non-toxic and unbreakable) - maximal thermal endurance is 160 °C. The connection can be either flanged or threaded.

Other characteristics: simple installation, easy maintenance.
 On requests, the flowmeter can be supplied with the indicator of the min./max. flow rate.

Maximal thermal endurance:
 polycarbonate: 120 °C, polysulphone: 160 °C.

Maximal test pressure: 10 bar.

Accuracy: +/-5 %.



Type	Water l/h	Air m³/h	B		Threaded connections			Flanged connections		
			AISI	PVC	metal A	PVC A	DN	AISI A	PVC A	DN
BC-3	320	6	79	90	372	420	1/2"	504	528	15
	420	8					3/4"			20
	600	10					1"			25
	800	10					1"			25
BC-3b	1200	20	79	90	372	420	3/4"	504	528	20
	1500						1"			25
BC-4	2000	40	89	100	380	428	3/4"	508	532	20
	2500						1"			25
	3500						1"			25
BC-5b	4000	60	112	120	380	428	1 1/4"	508	562	32
	5000						1 1/2"			40
	6000						1 1/2"			40

Flowmeters / model BC/K

Direct reading flowmeters for large flow rates



The "BC" series flowmeters are the flow rate measuring devices, suitable for the medium flow rates of liquid and liquid gases.

Value of the current flow is read with the excellent accuracy on the graduated scale, printed on the calibrated conical body made by polycarbonate (makrolon) – maximal thermal endurance is 120 °C or polysulphone (non-toxic and unbreakable) - maximal thermal endurance is 160 °C The connection can be either flanged or threaded.

Other characteristics: simple installation, easy maintenance.

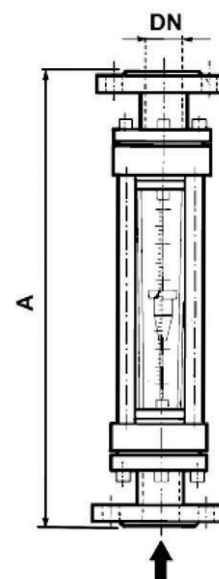
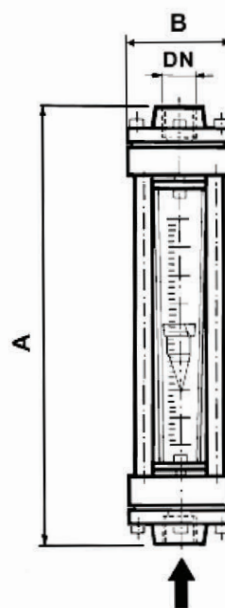
On requests, the flowmeter can be supplied with the indicator of the min./max. flow rate.

Maximal thermal endurance:

polycarbonate: 120 °C, polysulphone: 160 °C.

Maximal test pressure: 10 bar.

Accuracy: +/-5 %.



Typ	Water l/h	Air m³/h	B		Threaded connections			Flanged connections		
			AISI	PVC	metal A	PVC A	DN	AISI A	PVC A	DN
BC-K1	5000	80	112	120	485	533	1 ¼"	613	667	32
	6000						1 ¼"			32
	8000						1 ½"			40
BC-K2	10000	130	138	140	481	557	1 ½"	615	679	40
	12500						1 ½"			40
	15000						2"			50
BC-K3	20000	160	148	150	485	569	2"	625	679	50
	25000	160					2"			50
	30000	160					2 ½"			65
	37000	250					3"			80
	45000	250					3"			80

Flowmeters_model S-2007

Direct reading flowmeters for medium flow rates

The S-2007 flowmeter uses the Pitot tube principle for measurement. The body of the flowmeter is made of polymethacrylate PMMA with a maximum heat resistance of 70 ° C. The flowmeter is fixed to the pipe with two metal straps.

Maximal thermal endurance: 70 °C

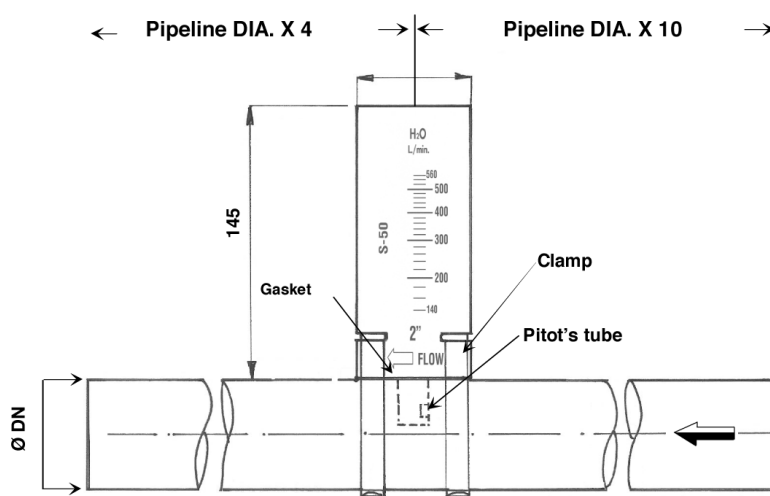
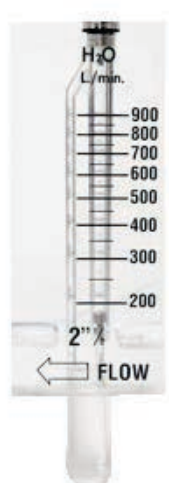
Maximal working pressure: 10 bar

Accuracy: +/- 10 %.

Notice:

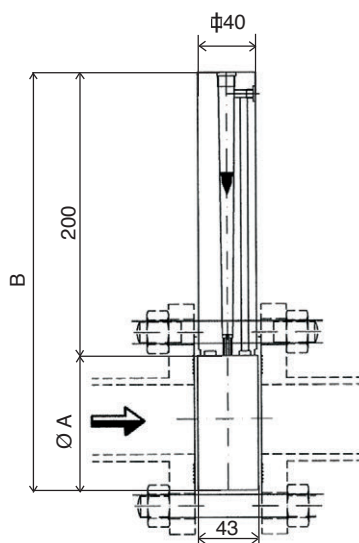
It is a need to set the flowmeter in the position which is essential for keeping the accuracy of the measurement. The pipe lying in front of the flowmeter should be flat in the length of 10x of the pipe dimension (10 x DN) and behind of the flowmeter should be flat in the length of 4x of the pipe dimension (4 x DN).

Type	Water L/min max.	DN	Ø
S-40	330	40	1 1/2"
S-50	560	50	2"
S-65	900	65	2 1/2"
S-80	1200	80	3"
S-100	2000	100	4"
S-125	3000	125	5"
S-150	4500	150	6"
S-200	7200	200	8"



Flowmeters_model OP

Diaphragm tee joint flowmeters



Notice:

It is a need to set the flowmeter in the position which is essential for keeping the accuracy of the measurement. The pipe lying in front of and behind of the flowmeter should be flat in the length of 10x of the pipe dimension (10 x DN).

The flowmeters OP are compact, lightweight with visual part of the measured range situated in the transparent part of the impact – resistant acrylic (PMMA), maximal thermal endurance is 70 °C. The flowmeters are suitable for checking and measuring of the large range in the small space. They permit the installation onto horizontal pipe only. The maintenance and cleaning of the acrylic flowmeter is very simple.

The flowmeters OP are suitable for the waste water plants, flameproof liquids, vintner's lines, heating plants, etc.

Maximal thermal endurance: 70 °C.

Maximal test pressure for metal version: 16 bar.

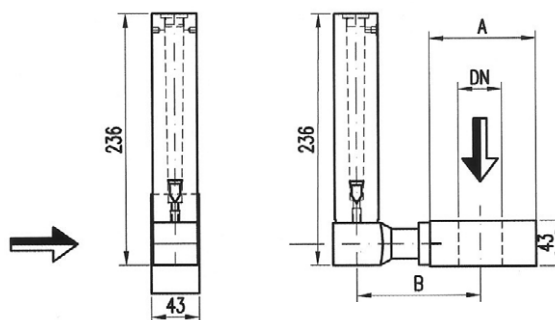
Maximal test pressure for plastic version: 8 bar.

Accuracy: +/-5 %.

Type	Max. potential range WATER m ³ /hod	UNI PN 10			ASA 150		
		DN	A	B	DN	A	B
OP-40	11-15 - 24 - 32	40	92	288	1 ½"	83	279
OP-50	25 - 35 - 54 - 70	50	107	304	2"	102	298
OP-65	40 - 54 - 80 - 110	65	127	323	2 ½"	121	317
OP-80	70 - 95 - 130 - 180	80	142	338	3"	134	331
OP-100	80 - 110 - 180 - 250	100	162	358	4"	172	368
OP-125	160 - 220 - 300 - 400	125	192	388	5"	194	390
OP-150	180 - 250 - 400 - 520	150	218	414	6"	220	416
OP-200	320 - 420 - 700 - 900	200	273	469	8"	277	473

Flowmeters_model PD

Diaphragm tee joint flowmeters



The flowmeters PD are compact, lightweight with visual part of the measured range situated in the transparent part of the impact – resistant acrylic (PMMA), maximal thermal endurance is 70 °C. The flowmeters are suitable for checking and measuring of the large range in the small space. The maintenance and cleaning of the acrylic flowmeter is very simple. Flowmeters can be installed on horizontal as well as vertical pipe. The flowmeters PD are suitable for the waste water plants, flameproof liquids, vintner's lines, heating plants, etc.

Maximal thermal endurance: 70 °C.

Maximal test pressure for metal version: 16 bar.

Maximal test pressure for plastic version: 8 bar.

Accuracy: +/-5 %.

Notice:

It is a need to set the flowmeter in the position which is essential for keeping the accuracy of the measurement. The pipe lying in front of and behind of the flowmeter should be flat in the length of 10x of the pipe dimension (10 x DN).

Type	Max. potential range WATER m ³ /h	UNI PN 10			ASA 150		
		DN	A	B	DN	A	B
PD-40	11 - 15 - 24 - 32	40	92	110	1 ½"	83	107
PD-50	25 - 35 - 54 - 70	50	107	120	2"	102	123
PD-65	40 - 54 - 80 - 110	65	127	130	2 ½"	121	127
PD-80	70 - 95 - 130 - 180	80	142	138	3"	134	134
PD-100	80 - 110 - 180 - 250	100	162	149	4"	172	154
PD-125	160 - 220 - 300 - 400	125	192	164	5"	194	165
PD-150	180 - 250 - 400 - 520	150	218	177	6"	220	178
PD-200	320 - 420 - 700 - 900	200	273	205	8"	277	207

Flowmeters_model T

Diaphragm tee joint flowmeters

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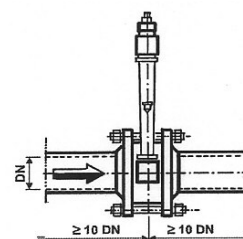
The "T" series diaphragm flowmeters are suitable for controlling of large flow rates. Flowmeter body is produced from polycarbonate (**maximal thermal endurance: 120 °C**) or polysulphone (**maximal thermal endurance 160 °C**). It can also be used for the measurement of chemically aggressive liquids by using the adequate materials. Flowmeter can be installed on vertical or horizontal pipe with ascending or descending, right or left flow. On request, the measuring device may be remotely connected, and may be prepared for a min./max. flow indicator. On request: PN25 and PN40.

Maximal test pressure: 16 bar.

Accuracy: +/-5 %.

Notice

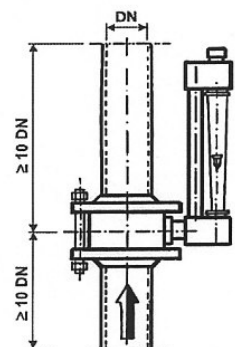
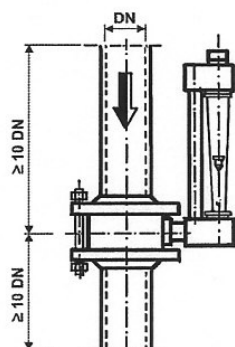
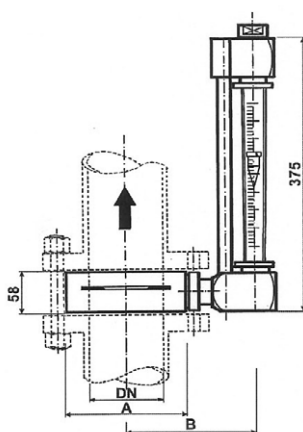
It is a need to set the flowmeter in the position which is essential for keeping the accuracy of the measurement. The pipe lying in front of and behind of the flowmeter should be flat in the length of 10x of the pipe dimension (10 x DN).



Flowmeters_model T

Diaphragm tee joint flowmeters

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Type	Water	UNI PN 10			ASA 150		
	m ³ /h	DN	A	B	DN	A	B
T-40	25	40	92	127	1 ½"	83	131
T-50	50	50	107	136	2"	102	138
T-65	80	65	127	147	2 ½"	121	148
T-80	130	80	142	156	3"	134	154
T-100	200	100	162	166	4"	172	173
T-125	300	125	192	180	5"	194	184
T-150	450	150	218	195	6"	220	197
T-200	800	200	270	223	8"	277	225
T-250	1000	250	328	281	10"	337	285
T-300	1000	300	378	308	12"	406	319

Model	Alternative versions - flow (m ³ /h)							
T-40	5	6	8	12	15	18	22	25
T-50	8	12	18	22	25	30	40	50
T-65	25	30	40	50	60	80		
T-80	30	40	50	60	80	100	130	
T-100	50	60	80	100	120	130	150	200
T-125	100	120	160	200	270	300		
T-150	100	120	150	200	270	300	350	450
T-200	220	420	640	800				
T-250	350	450	500	600	800	1000	1200	1500
T-300	500	600	800	1000	1200	1500		

Flowmeters_model G

Turbine flowmeters for medium and large flow rates

G 50 and G 60 flowmeters are suitable for measuring small and medium flows of liquids and gases. They can be mounted for horizontal or vertical flow. The PMMA flowmeter is designed with a 1/4", 3/8" threaded connection for the G 50 and 3/8", 1/2" for the G 60.

Principle: From the turbine of the flow meter, the signal is sent to the Hall sensor which is externally mounted on the flow meter without contact with the liquid. Then, the signal is converted to flow by PLC.

Type	Version	Water l/min	Threaded connection G	Length A (mm)
G 50	Pulse output	0,3 - 3 0,5 - 5 0,8 - 8 1 - 10	1/4" 3/8"	50
G 50-D	Display	0,3 - 3 0,5 - 5 0,8 - 8 1 - 10	1/4" 3/8"	138
G 60	Pulse output	2,5 - 25 3,5 - 35 4 - 40	3/8" 1/2"	60
G 60-D	Display	2,5 - 25 3,5 - 35 4 - 40	3/8" 1/2"	148

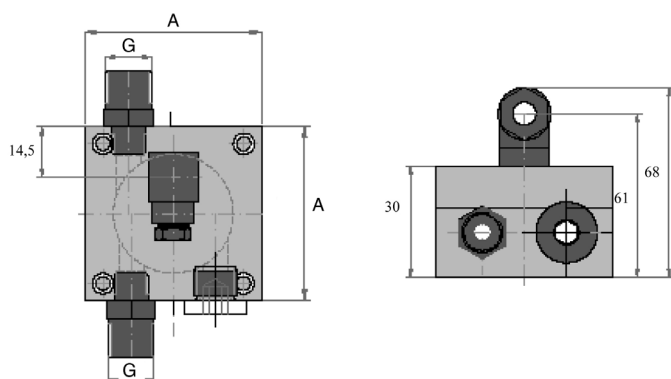
Maximal thermal endurance: 70 °C
Maximal working pressure: 10 bar
Accuracy: +/- 2/3

Versions: Pulse output, Display

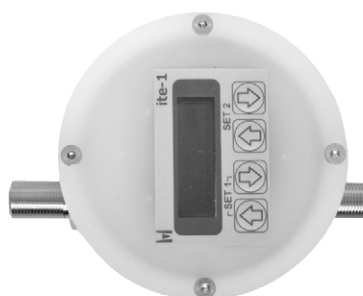
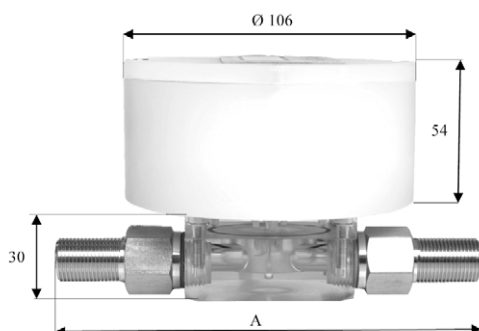
Notice

It is a need to set the flowmeter in the position which is essential for keeping the accuracy of the measurement. The pipe lying in front of and behind of the flowmeter should be flat in the length of 5x of the pipe dimension (5 x DN).

G 50 / G 60 Pulse output



G 50-D / G 60-D Display



Flowmeters_model D-EL

Direct reading flowmeters for medium and large flow rates

page 1 of 2

The D-EL flowmeter is used to measure medium and large fluid flows. The flow meter can be installed on horizontal or vertical pipes. It is produced in two versions, with a threaded connection and an intermediate flange connection. The D-EL flowmeter uses the Hall sensor principle for measurement. The body of the flowmeter is made of PVC and Moplene with a maximum heat resistance of 60 °C.

Maximal thermal endurance: 60 °C

Maximal working pressure: 16 bar

Accuracy: +/- 2/3 %.

Versions:

With display

- threaded connection
- wafer connection

With pulse output

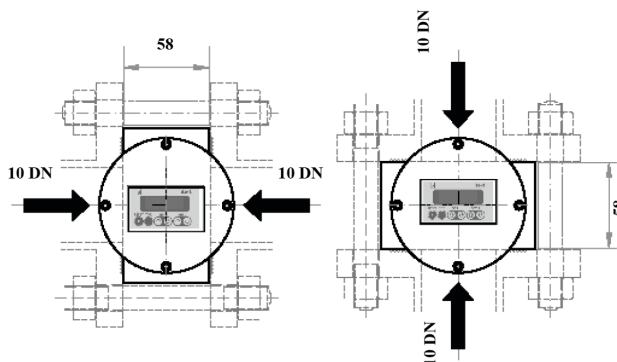
- threaded connection
- wafer connection

Notice:

It is a need to set the flowmeter in the position which is essential for keeping the accuracy of the measurement. The pipe lying in front of and behind of the flowmeter should be flat in the length of 10x of the pipe dimension (10 x DN).

Type	Range m³/h	Threaded female	Inserted Flanges DN
D-EL-15	0,5 - 5	1/2"	--
D-EL-20	0,8 - 8	3/4"	--
D-EL-25	1,5 - 15	1"	--
D-EL-32	2 - 20	1 1/4"	-
D-EL-40	3,5 - 35	1 1/2"	DN 40
D-EL-50	7 - 70	2"	DN 50
D-EL-65	10 - 110	--	DN 65
D-EL-80	18 - 180	--	DN 80
D-EL-100	25 - 250	--	DN 100

D-EL Display - Inter-flange connection

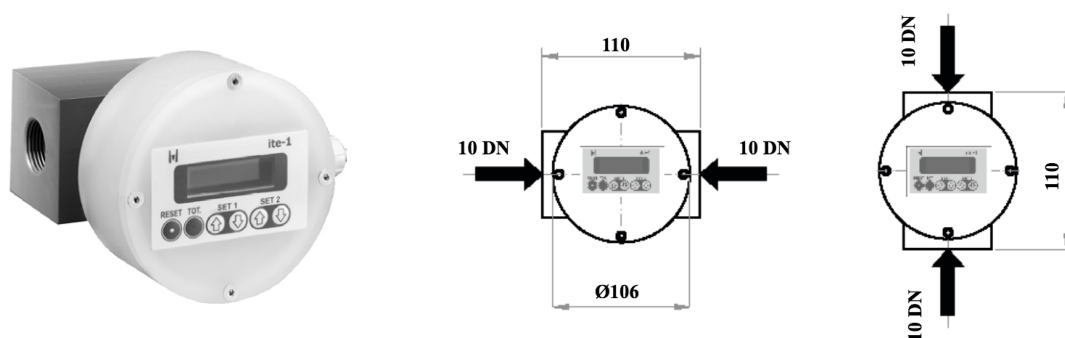


Flowmeters_model D-EL

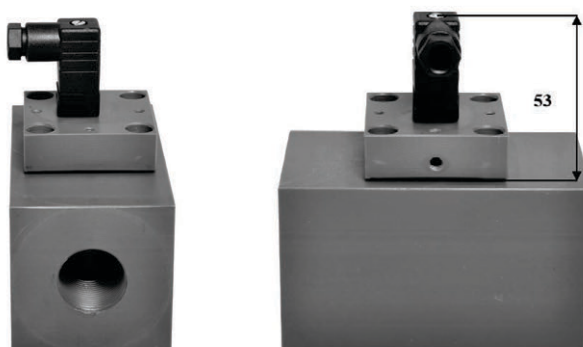
Direct reading flowmeters for medium and large flow rates

page 2 of 2

D-EL Display - Threaded



D-EL Pulse output - Threaded

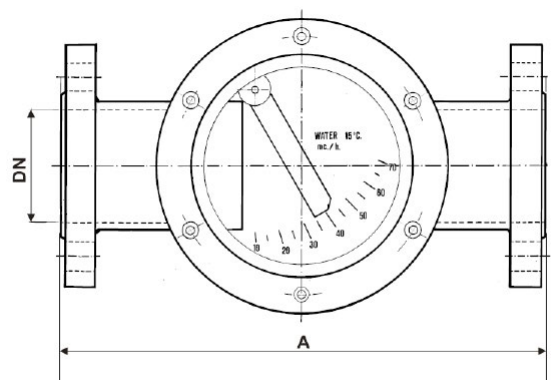
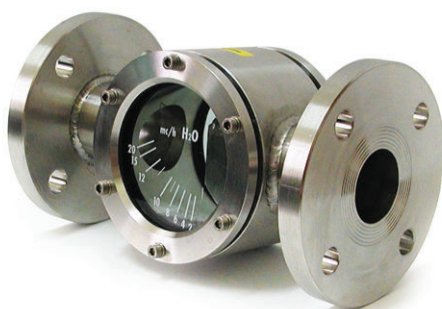


D-EL Pulse output - Inter-flange connection



Flowmeters_model W

Visual flow indicators with window and external return



Visual flow indicators with window and external return "W" are flow indicators for the visual control of liquids in industrial processes and for the external mechanical detection of very dirty liquids. They are produced in different materials, with a free-flow mobile blade pointer. The connections can be threaded axial or flanged. Maximal thermal endurance with sealing NBR is up to 100 °C, with teflon sealing up to 250 °C. Flowmeters can be mounted on the horizontal pipe only. On request, flowmeters can be produced for PN16, PN25, PN40.

Maximal thermal endurance: 250 °C.

Maximal working pressure: 10 bar, PN16, PN25, PN40.

Accuracy: +/-10 %.

Type	m ³ /h max.	A	Flanged DN	Threaded (")
W-40	12	260	40	1 1/2"
W-50	20	280	50	2"
W-65	40	300	65	2 1/2"
W-80	60	330	80	3"
W-100	100	400	100	4"
W-125	150	420	125	5"
W-150	200	420	150	6"
W-200	250	520	200	8"



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1.6.2022