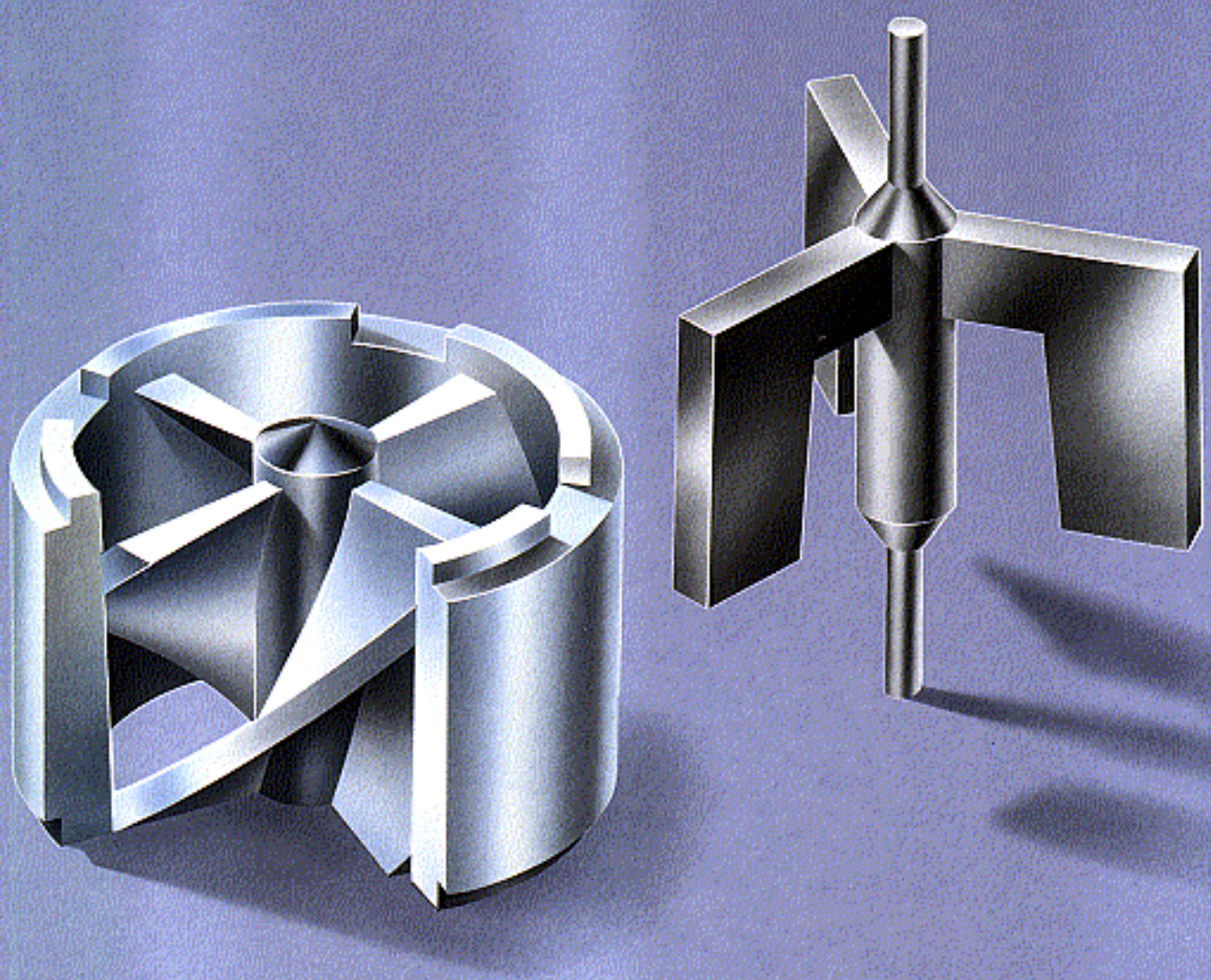
BELI TECHNICS

IR-Opflow Precision Flowmeters

A masterpiece in plastic



Very accurate Extremely reliable Chemical resistant CE

A masterpiece: The *IR-Opflow* Flowmeter

At Beli Technics we have succeeded in developing, entirely independently, a high quality liquid flow meter with unparalleled accuracy, the *IR-Opflow* Flowmeter.
This patented sensor is an excellent example of the expertise of Beli Technics.
The *IR-Opflow* Flowmeter is completely resistant to most aggressive chemicals, is extremely reliable and measures both very small amounts over long periods and large amounts over short periods with extreme precision.
In fact, these characteristics are confirmed in detail by independent, in-depth German and American research.

IR-Opflow sensors are applied throughout the world in a wide variety of industries, technical centres and medical laboratories and under a broad range of conditions.
Beli Technics exports 70% of its products to clients in all European countries, the United States, Japan and other Asian countries.

This sensor is an outstanding example of the technical standing of Beli Technics and of the quality we guarantee our clients.

All end products are assembled in house and are subject to thorough testing by our own quality department.

Together, this final inspection and our worldwide after-sales service form part of the integrated quality assurance within the company. We are able to offer our clients all of our products "Ready for Use".

Custom-made flow sensors

Beli Technics is able to produce *IR-Opflow* Sensors customised to the client's specifications on request. The supply of these sensors depends on a number of technical and financial factors. Naturally, the price depends on the choice of raw materials, technical specifications and the size of the series.

Specifications of the *IR-Opflow*

Table 1

Type	Measurement range (l/min)	K-factor < 5 cSt (pulses/l)	Output (Hz)
1	0.1 - 2.0	36000	60 - 1200
2	0.3 - 9.0	8000	40 - 1200
3	0.5 - 15.0	3200	26.66 - 800
4	1.0 - 30.0	1200	20 - 600
5	2.5 - 75.0	450	18.75 - 562
6	4.0 - 120.0	225	15 - 450

Technical specifications

Accuracy: *IR-Opflow* 10 series: ± 1% of meas. value;
IR-Opflow 30 series: ± 3% of meas. value;
Repeatability: ± 0,1% of measured value.
Linearity: ± 1% or ± 3% of measured value (depending on series selected).
Measurement range: See table 1.
Temperature range: -40° to + 85° Celcius.
Maximum pressure: 10 bar.
Viscosity: Max. 15 cSt (depending on the measurement range).
Process connection: BSP, NPT or flexible hose fitting, see tables 2 and 3.
Materials: All wet parts are manufactured from PVDF.

Electrical specifications:

Power supply: 5 - 12 VDC, 6 - 33 mA.
Pulse output: Open collector.
Max. load: 500 Ω.
Frequency: 15 - 1200 Hz, see table 1.
Signal generation: Optoelectronic (infrared).
Signal cable: 1 metre, other lengths on request.

Linearity curve - applicable to all versions

Pressure loss curve - applicable to all versions

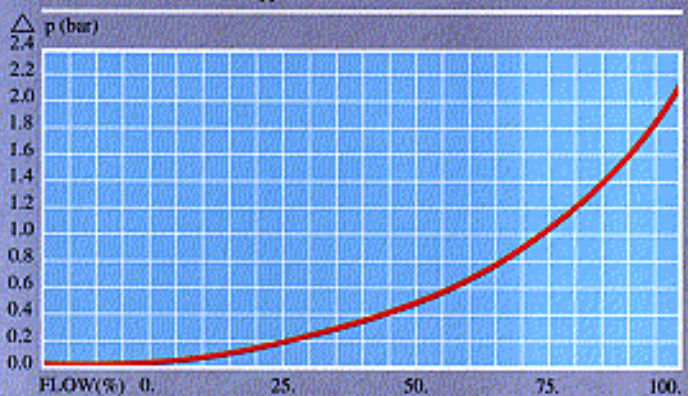
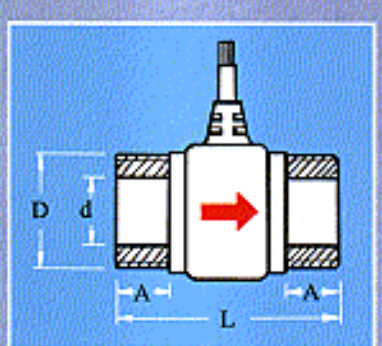


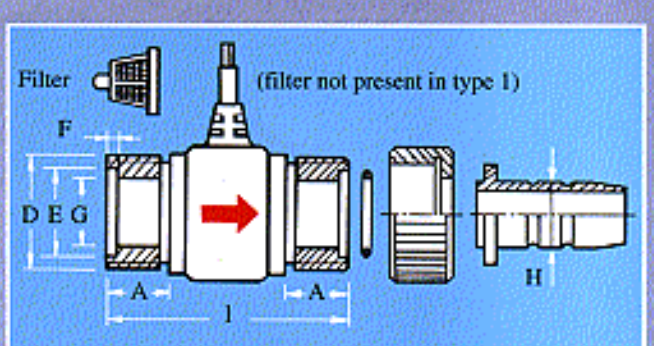
Table 2

B.S.P. or N.P.T.		Dimensions (mm)		
Type	A	D	d	L
1	9.5	1/4"	6.5	39
2	12.7	1/2"	13	47
3	12.7	1/2"	13	47
4	18.5	3/4"	17	63
5	24.5	1 1/4"	29	80
6	24.5	1 1/4"	29	80

Table 3

With flexible hose fittings								Dimensions (mm)
Type	A	D	E	F	G	H	l	Tot. L
1	9.0	M12 x 1.5	8.7	1.5	6.5	6.9	39	96
2	12.0	M20 x 2	16.0	1.8	12.0	9.0	43	112
3	12.0	M20 x 2	16.0	1.8	12.0	12.0	43	116
4	16.0	M27 x 2	21.0	2.3	16.0	16.0	57	136
5	16.5	BSP 1" pl.	29.4	1.6	24.5	19.5	80	182
6	16.5	BSP 1" pl.	29.4	1.6	24.5	24.5	80	183





Order information

IR-Opflow XX. X. X. X. X.

Accuracy

10 = ± 1% of measured value
30 = ± 3% of measured value

Output signal

0 = Square wave pulse
5 = Sinusoidal pulse

Type

1 = 0.1 - 2.0 l/m
2 = 0.3 - 9.0 l/m
3 = 0.5 - 15.0 l/m
4 = 1.0 - 30.0 l/m
5 = 2.5 - 75.0 l/m
6 = 4.0 - 120.0 l/m

Silicon treatment of electronic components

0 = No
5 = Yes

Process connection

S = Standard Housing
H = Flexible Hose Fit
B = BSP
N = NPT

Examples:

IR-Opflow 10.0.2.0.H =

IR-Opflow type 2 with flexible hose fittings, an accuracy of ± 1% and a square wave pulse.

IR-Opflow 30.5.1.0.B =

IR-Opflow type 1 with BSP, an accuracy of ± 3% and a sinusoidal pulse output

BELI TECHNIC

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