

Isoflo

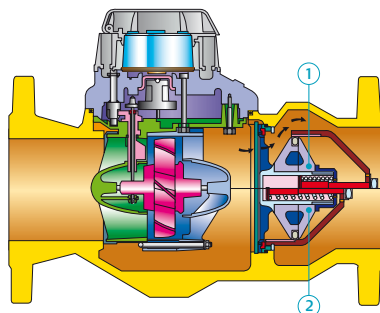
Dual-range Water Meter

Isoflo combines the performances of two complementary meters and benefits from the advantages of best in class Itron water meters. Increased turndown is achieved by a high capacity Woltex main meter combined to a high sensitivity Class C secondary meter.

A change-over spring valve diverts flow to the appropriate meter according to flow rates. Isoflo is dedicated to specific billing applications where very high flow rates come along with consumption at very low flows.

Working mode

At low flow rates, the change-over valve is closed **2**. Only the secondary meter is in operation. When the flow rate increases, pressure is exerted on the primary meter until the changeover valve opens **1**.



At this point, the primary meter starts to operate along with the secondary meter.

With both meters running, the overall consumption and flow rate are read by combining the primary and secondary indicators.

The changeover zone Z_c is defined according to ISO 7858/1 using the following formula:
 $Q_{min} (main) < Z_c < 1.2 \times Q_n (secondary)$.

Key features

Isoflo benefits from all the advantages of Itron meters.

Both primary and secondary meters have a robust copper can register and are pre-equipped for communication via Cyble systems (pulses, M-Bus and Radio Frequencies).

Easy reading is insured even in toughest conditions.

Key Advantages of Cyble Technology

- > No need for additional investment on the meter to implement remote reading
- > Itron standardized meter interface, irrespective of meter technology and widely spread on Itron water meters range
- > Reliability brought by electronic switch (no wear or bouncing)
- > Reverse flow management
- > Principle proven on the field with a 20 years experience
- > Pre-equipment being immune to magnetic tampering

Versions

Isoflo secondary meter can be chosen between single jet Flodis/Flostar M and volumetric Aquadis. Both are class C billing meters.

The secondary meter is standardly positioned on the right side of the meter.

Options

Secondary meter can be positioned on the left side on simple request.

- > Available in sizes ranging from DN 50 to 150
- > Design meets ISO 7858/1 requirements.
- > Standard Cyble pre-equipment provides remote reading capability on both primary and secondary meters.
- > Extra wide measuring capacity

> Isoflo with Flodis meter



Metrological Performances

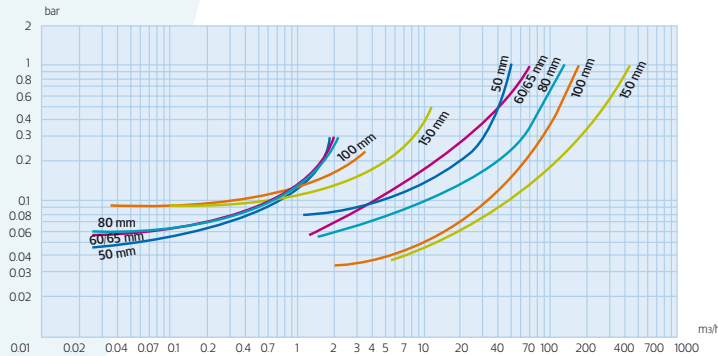
Nominal diameter (DN)	mm	50x20	60/65x20	80x20	100x25	150x40
Permanent flow-rate (Qn primary meter)	m ³ /h	25	25	60	60	150
Flow-rate at 1 bar pressure head loss	m ³ /h	50	70	130	175	440
Max. admissible peak flow-rate (few minutes)	m ³ /h	80	100	180	270	600
Pressure head loss at permanent flow-rate	bar	0.23	0.32	0.27	0.18	0.25
Starting flow-rate with Aquadis	L/h	2	2	2	6	18
Starting flow-rate with Flodis/Flostar M	L/h	6	6	6	10	22
Accuracy ±5% (EEC metrological values) from	L/h	25	25	25	35	100
Accuracy ±2% (EEC metrological values) from	L/h	37.5	37.5	37.5	52.5	150
Change over zone	- Increasing flow-rate	m ³ /h	3	3	3	4.2
	- Decreasing flow-rate	m ³ /h	0.75	0.75	0.75	1.8
Maximum Admissible Pressure	°C	50				
Maximum admissible pressure	bar	16				
Min. scale interval	- Primary meter	L	0.5			5
	- Secondary meter	L	0.05			0.5*
Indicating range	- Primary meter	m ³	999999.99			9999999.9
	- Secondary meter	m ³	99999.999			999999.99**
Cyble pulse weight (HF)	- Primary meter	L	10			100
	- Secondary meter	L	1			10***

* 0.05 - ** 99999.999 - *** 1 for Aquadis DN40 secondary meter.

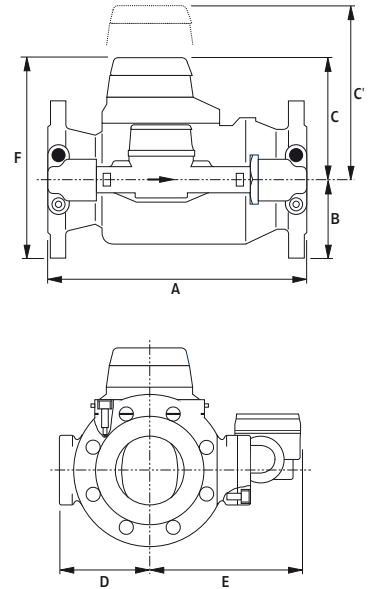
Dimensions

Nominal diameter (DN)	mm	50x20	60/65x20	80x20	100x25	150x40
A	mm	300	300	350	350	500
B	mm	83	93	100	110	144
C	mm	160	160	172	172	196
C'	mm	262	262	312	312	397
D	mm	87	95	110	128	164
E (right/left)	mm	199/176	209/186	216/193	220/185	295/295
F	mm	243	253	272	282	340
Weight approximate	kg	18	19	31	32	54
Flanges		ISO PN 10/16				

Head Loss



> Dimensions



Installation Requirements

- > Isoflo should be installed in horizontal position.
- > Static upstream pressure must not be less than 0.4 bar.
- > Installation of a filter protecting both meter mechanisms and the changeover valve is strongly recommended.
- > Elements generating pressure variations should be installed downstream of the meter.
- > Regular operation of the change over valve is necessary to protect it against clogging and therefore maintain metrological performances in time.

About Itron Inc.

Itron Inc. is a leading technology provider to the global energy and water industries. Our company is the world's leading provider of metering, data collection and utility software solutions, with nearly 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water. Our products include electricity, gas and water meters, data collection and communication systems, including automated meter reading (AMR) and advanced metering infrastructure (AMI); meter data management and related software applications; as well as project management, installation, and consulting services. To know more, start here: www.itron.com

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