Solenvis
experts in energy metering

Itron
Knowledge to Shape Your Future

Flostar

Commercial and Industrial (C&I) Meter

Introduction

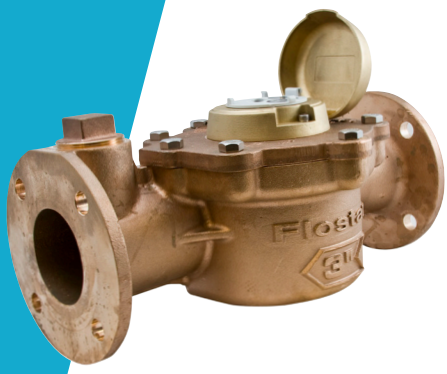
The Flostar commercial and industrial (C&I) water meter provides superior low-flow accuracy in any environment, yet it can still endure significant peak flows due to its rugged construction. Engineered for reliability and built upon almost 20 years of industry-leading design, Itron's Flostar meter has become the most popular single jet C&I water meter in the world.

Flostar features & benefits

With the Flostar meter, precisely measuring consumption—at the wide range of flow rates typical of C&I customers—is possible. Designed from the ground up for reliability, the Flostar is a sound meter investment that typically requires little in terms of long-term maintenance. Certified under American Water Works Association (AWWA) C712 and NSF-61 approved, the Flostar C&I meter meets or exceeds stringent industry requirements for the utmost in deployment confidence.

With Flostar C&I meters, you can:

> Realize revenue cycle enhancements with low-flow accuracy, low start-up torque and a wide measuring range.
> Reduce costs to implement AMR systems with the available Cyble module that works with other Itron water AMR products.
> Receive greater long-term reliability—few moving parts reduce the wear from water borne grit and particulates that can impact meter performance.
> Enable conservation efforts and programs by more accurately measuring water usage for your C&I customers.
> Easily install meters in a wide range of industry-standard lay and turbine lengths.
> Improve the efficiency of manual reading with a durable, easy-to-read register with impact resistant glass lens.
> Quickly repair meters in the field when necessary—a top loading design provides easy access to all components.
> Deploy products with that are compliant with industry regulations, including NSF-61 and American Water Works Association (AWWA) C712.
> Install the right meter for your C&I applications with meter sizes ranging from 1 1/2 inches through 6 inches.



> ***Meter performance***

- *High accuracy at low flows*
- *Long-term reliability*
- *Ease of installation*
- *Meets AWWA standards*

> *Flostar 3”*

> *Cyble AMR module*

Operating principle

Flostar’s tapered inlet straightens the flow profile, creating a single jet of water that is projected into the measuring chamber where it strikes the blades of the impeller. The design of the inlet and measuring chamber alleviates the need for a straight pipe, calibration vane or a by-pass adjustment. As the impeller turns, a magnetic coupling on top of the shaft rotates the register gears. This direct magnetic coupling between the impeller and the register provides reliable measurement in any potable water environment. The register is protected from all outside elements by its hermetically-sealed, copper can and glass construction. Magnetic tampering is prevented by the placement of an anti-fraud ring in the register.

Cyble

Cyble technology enables Flostar C&I meters to be read with AMR module technologies like the 60 Series and the Water SaveSource endpoint. There are two Cyble module choices: the Cyble Coder and the Cyble Sensor. The Cyble Coder can be configured for a two or three wire application and the Cyble Sensor is a pulse output device, both suited for various remote reading applications. A Cyble module can be installed in the field without having to upgrade the register.

Made in the US.

Dimemsions

	Units	1 1/2 Std/TL	2” Std/TL*	3” Std/TL	4” Std/TL	6” Std/TL
A - Length	inch mm	13/10 330/254	15 1/4/10 387/254	17/12 432/305	20/14 508/356	24/18 610/457
B - Overall Height	inch mm	7 180	7 1/2 191	9 230	10 1/2 264	12 305
C - Centerline to left side	inch mm	4 1/4 106	4 1/4 106	6 1/2 165	7 1/4 186	9 226
D - Centerline to right side	inch mm	2 3/4 69	3 1/2 86	3 3/4 95	4 1/2 114	5 1/2 140
Weight	lb kg	25/23 1.4	27/24 1.7	62/54 28.1/24.5	94/87 42.6/39.5	156/140 70.8/63.5

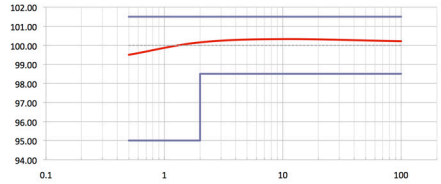
Flostar technical characteristics

	Units	1 1/2”	2	3”	4”	6
Normal flow range	gpm	1.5-100	2-160	2.5-320	3-500	4-1000
	m3/h	0.34-23	0.45-36	0.57-73	0.68-110	0.91-220
Low flow rate – Qmin	gpm	1/2	1/2	1/2	3/4	1 1/4
	L/h	114	114	114	170	284
Register capacity	USG	100 000 000			1 000 000 000	
	Cu Ft	10 000 000			100 000 000	
	m3		1 000 000 000			10 000 000 000
Sweep hand registration	USG	1	1	10	10	10
	Cu Ft	0.1	0.1	1	1	1
	m3	0.01	0.01	0.01	0.01	0.1
Maximum working pressure	psi	200	200	200	200	200
	bar	13.8	13.8	13.8	13.8	13.8
Maximum working temperature	o F	122	122	122	122	122
	o C	50	50	50	50	50
Flange size (ANSI 150)		1 1/2” oval	2” oval	3” round	4” round	6” round

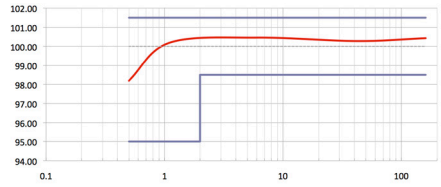
Flostar residential meter flow curves

Accuracy

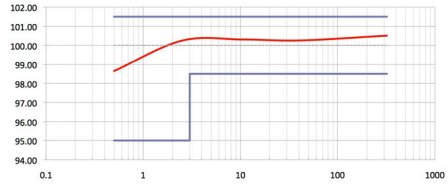
1 1/2” Flostar



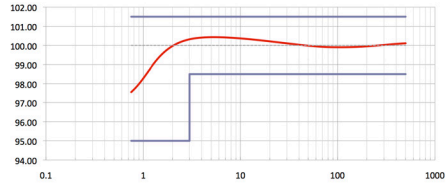
2” Flostar



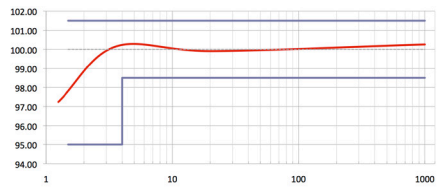
3” Flostar



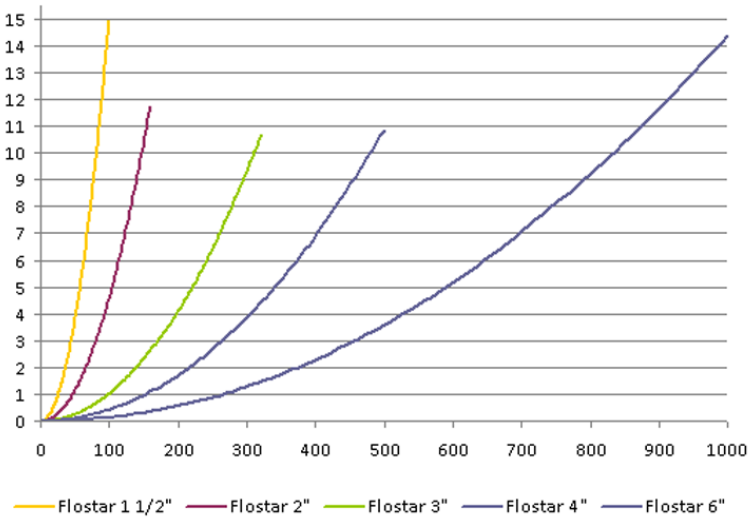
4” Flostar



6” Flostar



Pressure loss



Cyble Coder specifications

Cyble Coder

- Industry standard ASCII protocol (Cyble Coder)
- Can operate in either 2 wire or 3 wire mode
- Compatible with all major touch pad readers and RF systems
- Pulse Output (Cyble Sensor) optionally available
- Solid state electronics immune to vibration and radio-magnetic interference
- Guaranteed match of the register read with Cyble Coder
- Patented technology field proven with over ten years experience
- NEMA 4X rated either unlicensed or licensed

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 intelligent 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, water and heat 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.