Dual Body (DBC) Compound Meters

2”, 3”, 4”, 6”

4” DBC Shown

Read High. Read Low. And Read Between the Lines ... With Confidence

Master Meter Dual Body Compound Meters are built to exceed AWWA standards across broad flow ranges giving utilities the ability to capture maximum billable units at high and low flow rates — and anywhere in between. Our Dual Body Compounds pair a rugged Master Meter Turbine on the main line with our proven Multi-Jet on the low flow line. At crossover our meters record at least 97% of use — shattering the 90% required by the AWWA, while putting more revenue in your pocket.

Sustained Accuracy with a Go Anywhere Attitude

Built to last from tough materials, our DB Compound incorporates flow straighteners on the main line to optimize flow and promote smooth, precise operation that supports long service life with sustained accuracy. An integrated strainer on the low flow line Multi-Jet protects its core measuring elements ensuring years of maintenance-free operation under harsh conditions.

Our DB Compound meters are designed to fit within the space, or often less, than that of already installed compound meters. To further ease installation, our compound meters can be installed with the low flow line on either side of the main body.

Features & Benefits:

- Meets or Exceeds the Latest Revision of ANSI/AWWA C702 Standard
- Sustained, High Accuracy Across Broad Flow Range
- Superior Accuracy at Crossover
- Flexible Installation Options to Meet Space Challenges
- Service the Turbine, Multi-Jet and Differential Valve Without Removal From the Line
- Master Meter’s Extended Warranty Ensures Lasting Reliability
- With Optional 3G Integrated Register:
  - Provide Accurate Usage Detail for High Dollar, High-Volume Connections with Rich 4,000 Read Data Logging Capabilities (scalable / customer defined resolution)
  - Protect Your Utility’s Bottom Line:
    - Revenue Impact Alerts - Leak, Tamper, Theft (*Backflow*), and Zero Consumption (*Indicates Potentially Damaged Meter*)
    - Deploy District Metering Areas or Zones (DMA/DMZ) for Advanced Infrastructure Leak Management Programs

Register Options:

- Accu*Linx*™ 8-wheel Absolute Encoder (also available with integral DIALOG 3G)
- DIALOG 3G LCD Interpreter™
- DIALOG 2G® Pit & Indoor
- Electrical Output Register
- Direct Read

Read:

- Fixed*Linx*™ AMI Solution - Utilizes the 3G technology backbone with simultaneous Mobile AMR and Fixed Network AMI data collection capabilities.
- 3G Mobile™ Drive-By AMR
- Proximity/Wand Read - 2G
- Direct Read/Manual

Flexible Installation | Sustained Accuracy Across Broad Flow Range
Optimized Flow Dynamics for Long Service Life | AMR/AMI Migratable

MASTER METER

TECHNICAL SPECIFICATIONS:

AWWA Standard - Meets or exceeds all sections of AWWA C702, most recent revisions

Register Units - Registration available in U.S. gallons, cubic feet or cubic meters.

Design/Operation - The DB Compound Meter combines a Turbine on the main flow line and an appropriately-sized Multi-Jet meter on the bypass line for measurement of cold water not to exceed 120 F. A differential pressure valve controls the optimal percentage flow of water through the appropriate measuring device. Water flows through a bypass meter, and usage is recorded on its register. As flow reaches approximately one third the capacity of the bypass meter, the differential pressure change causes the crossover valve to open, and water flows through the main line and bypass meters. In its full open position, the valve allows flow through both chambers and registration is recorded on both meters. When flow is decreasing the process is reversed.

High Accuracy at Crossover - At crossover, when primary measurement of water flow shifts from one chamber to the other, the DB Compound accurately measures at least 97% of flow, well above the AWWA recommended 90%. Our DB Compound provides high accuracy because of our unique crossover valve which allows a percentage of water to flow through the bypass meter, even while the turbine chamber is under primary flow it continues to measure flow through the bypass chamber, even while the turbine chamber is under primary load.

Installation and Service Flexibility - Our DB Compound Meters fit within the space of most currently installed compound meters, making them ideal for meter replacement programs. The bypass meter can be fitted on either side of the main line to accommodate installations close to walls.

Shut-off valves on the bypass line are installed upstream and downstream of the meter on the 2", 3" and 4" sizes. Flow can be directed through the Turbine chamber while the Multi-Jet is replaced or repaired inline. The Turbine meter and differential pressure valve can be serviced without removal from the line. Both meters are sealed after factory calibration. Each meter includes adjusting ports for utility recalibration to help compensate for wear without parts replacement. Adjusting ports are sealed and provide visual indication of tamper attempts.

Broad Flow Range - The DB Compound Meter provides accurate measurement over a significantly broader flow range than specified in AWWA C-702, and beyond that of many other compound designs. Master Meter guarantees the accuracy of its meters in these broader flow ranges.

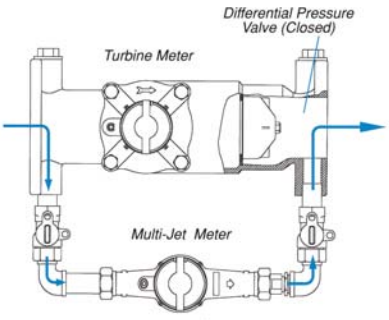
Long-Life Design - Our DB Compound Meters rely on proven wear resistant materials and measurement designs. The main cases housing both chambers are 81% copper composition. All piping and connections are bronze meeting AWWA Standard C-800. The bronze housing surrounds an engineered plastic poppet differential valve with stainless steel shaft and rubber valve seat. The Multi-Jet and Turbine chamber housings and impellers are constructed of advanced, non-hydrolyzing synthetic polymers.

A reliable, direct magnetic drive provides linkage between measurement elements and the registers. No intermediate gearing is required; no gearing is exposed to water.

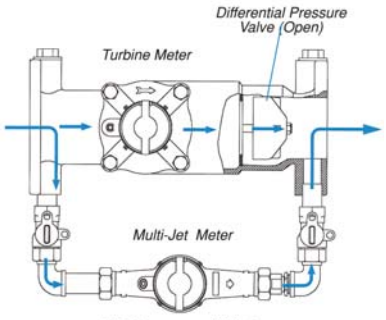
A flow straightener installed upstream of the Turbine chamber conditions flows for accurate measurement. The bypass Multi-jet incorporates a full 360° strainer. Debris passing through the strainer flows through the chamber without damage to the impeller, allowing survival and accurate measurement in installations in which other meter designs may fail.

A non-return valve is installed at the outlet of the Multi-Jet meter to prevent reverse flow. As with all meters 2" and above, a separate strainer is recommended to protect the measuring elements from inline debris.

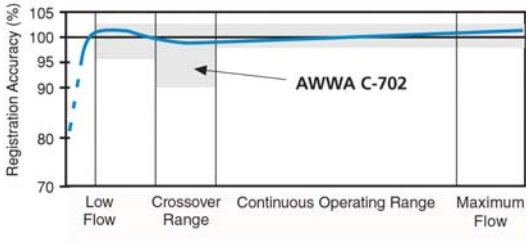
METER OPERATING CHARACTERISTIC/DIMENSION	2"	3"	4"	6"
Continuous Operating Range (gpm)	1 - 175	1 - 330	2 - 440	5 - 1200
Low Flow (gpm)	1/4	1/4	3/4	1-1/2
Maximum Flow - Intermittent (gpm)	285	480	750	1700
Changeover Range (gpm): *Completed*	4.5	5.3	13.0	25.0
Initiated @	8.5	8.5	17.0	36.0
Maximum Working Pressure (psi)	150	150	150	150
Maximum Head Loss at Qmax	10.5	10.3	10.2	10.0
Low Flow Meter Size	5/8"	5/8"	1"	1-1/2"
Accuracy: *Low Flow*	± 3%	± 3%	± 3%	± 3%
During Changeover	± 3%	± 3%	± 3%	± 3%
Normal Operating Range	± 1-1/2%	± 1-1/2%	± 1-1/2%	± 1-1/2%
Length	15-1/4"	17"	20"	24"
Width	11-1/4"	15-1/2"	18-1/4"	20"
Height	9-3/4"	8-3/4"	9-1/4"	13"
Height, bottom to center line	2-1/4"	4-1/4"	4-3/4"	5-1/2"
Weight (lbs)	39	66	90	142
Packed To Carton	1	1	1	1
Carton Weight (lbs)	41	68	93	



DB Compound Meter Operation At Low Flows



DB Compound Meter Operation At High Flows



Accuracy Curve
2", 3", 4" and 6" DB Compound Meters

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