

HYDRUS BULK

ULTRASONIC WATER METER - USA

DIEHL
Metering



APPLICATION

HYDRUS BULK is a static, ultrasonic water meter designed for accurate measurement of both cold and hot water. It's unique design ensures no measurement of air, is insensitive to sedimentation, and allows for long-term stability, even under the most difficult conditions.

FEATURES

- ▶ Sizes 2" - 8"
- ▶ Extreme low-flow accuracy and long term measurement stability
- ▶ Meets or exceeds C715 AWWA/ANSI Standards for type I and type II meters
- ▶ Complies with NSF/ANSI Standards 61, Annex F/G as well as FCC part 15 B
- ▶ Battery lifetime of up to 20 years and maintenance-free operation over the entire installation period
- ▶ Cast iron, epoxy coated body
- ▶ IP68
- ▶ Installation in any position, no calming sections required
- ▶ Diehl extended encoder protocol that includes temperature, alarms and error messages, etc.
- ▶ 42 days of hourly data storage

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GENERAL TECHNICAL DATA

HYDRUS BULK	
Potable water temperature	°F 33 ... 122
Ambient operating temperature	°F 14 ... 131
Ambient storage temperature	°F 14 ... 158 (90° F max. for one hour)
Maximum operating pressure	psi 300
Power supply	3.6 VDC lithium battery
Battery lifetime	20 years
Encoder interface	9 digit programmable resolution industry standard encoder protocol, ASCII output for compatibility with all AMR/AMI systems, Diehl extended protocol is available
Data storage	Alarms and consumption values (42 days of hourly data)
Protection class	IP68

TECHNICAL DATA DISPLAY

HYDRUS BULK	
Display indication	LCD, 9-digit, additional symbols/display counter/unit
Units	Flow and volume (GPM, gal, ft ³ , m ³)
Values displayed	Display test - total volume - firmware version / checksum - current flow - errors / alarms (Additional values based on configuration)
Alarms	Hardware flow - leak detection - backflow - air in pipe - low battery - undersized meter - no consumption - high temperature - freezing risk

APPROVAL

HYDRUS BULK	
NSF	Complies with NSF/ANSI Standard 61, Annex F/G
AWWA	Meets or exceeds applicable sections of the AWWA/ANSI C715 Standards
FCC	Complies with FCC part 15 B

MATERIAL

HYDRUS BULK	
Body	Cast iron, epoxy coated
Register housing	Engineered polymer
Transducers	Composite

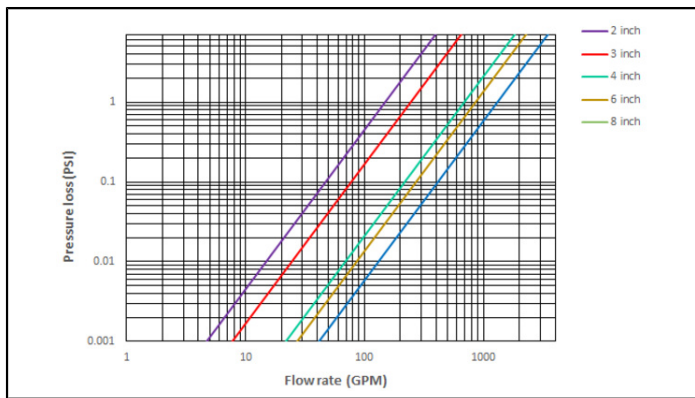
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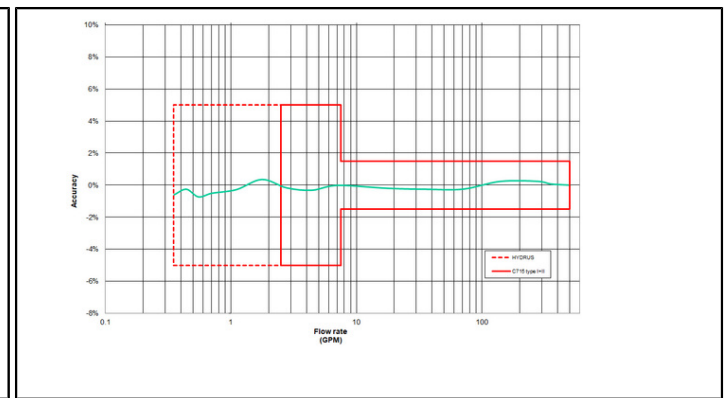
TECHNICAL DATA

Size		2"	3"	4"	6"	8"
Lay length	inch	10"	7.87	9.84	11.81	13.78
Operating flow range	gpm	2.5 - 250	7.5 - 500	10 - 1000	20 - 1900	40 - 2800
Low flow range	gpm	0.2 - 2.5	0.35 - 7.5	0.65 - 10	1.37 - 20	2.75 - 40
Starting flow	gpm	0.141	0.317	0.484	0.660	0.969
Operating range accuracy	%	±1.5	±1.5	±1.5	±1.5	±1.5
Low flow range accuracy	%	±5	±5	±5	±5	±5
Pressure loss	psi	2.8@250 gpm	4.2@500 gpm	2.1@1000 gpm	4.8@1900 gpm	4.5@2800 gpm

PRESSURE LOSS GRAPH / ACCURACY CURVE



Pressure loss graph

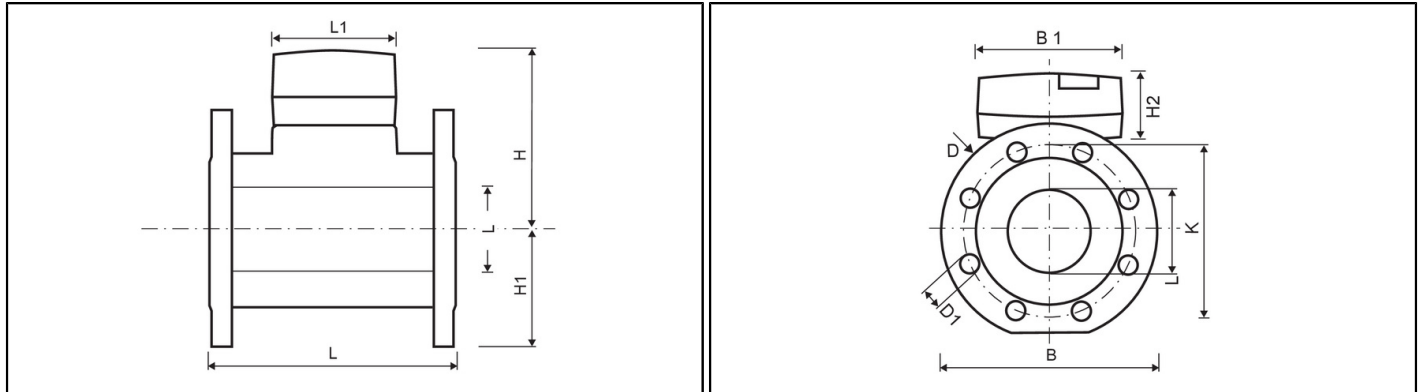


Accuracy curve (3")

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DIMENSIONS



Size		2"	3"	4"	6"	8"
Lay length	inch	10"	7.87	9.84	11.81	13.78
Height	H inch	2.7	3.5	4.3	5.3	6.3
Height	H1 inch	5.6	6.5	7	7.3	8.4
Register length	L1 inch	3.9	3.9	3.9	3.9	3.9
Register width	B1 inch	5.5	5.5	5.5	5.5	5.5
Register height	H2 inch	2.4	2.4	2.4	2.4	2.4
Flange diameter	D inch	5.75	7.5	9	11	13.5
Hole circle diameter	K inch	4.75	6	7.5	9.5	11.75
Number of screw holes	pcs	4	4	8	8	8
Screw hole diameter	D1 inch	3/4	3/4	3/4	7/8	7/8
Net weight	lbs.	22	28	38	75	110