

# Magnetic Water Meter

## Model MUT2200EL

The BERMAD EL MagMeter is a robust state of the art meter for the Ag irrigation industry. This meter technology can detect flows as low as 0.03 gpm with 0.2% accuracy. Providing unparalleled accuracy and reliability at all flow ranges. BERMAD EL meters are the industry leader for water measurement and accumulation reporting.

BERMAD EL MagMeters available in diameter range of 1½" - 80".



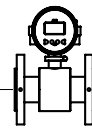
### Features and Benefits

- **High Accuracy at wide flow range –**  
Each sensor is calibrated on a hydraulic bench equipped with a reference weighting system
- **Open flow path –**  
Allows for use upstream of filtration, in canals and effluent Water
- **DC compact electronics –**  
Low power consumption ideal for use in locations without power supply
- **Rugged and Efficient Construction –**  
Accurate measurement of corrosive fluids, manure and wastewater
- **Combined Sensors –**  
Flow and pressure transducer Combined in one unit for optimizing monitoring capabilities

### Typical Applications

- Compliant with water usage reporting regulation
- Remote or local monitoring of flows and water usage
- Leak and plugging detection in irrigation systems
- Accumulations of filtration flush water





Magnetic Flow Meter



Continuous Acting Air Relief



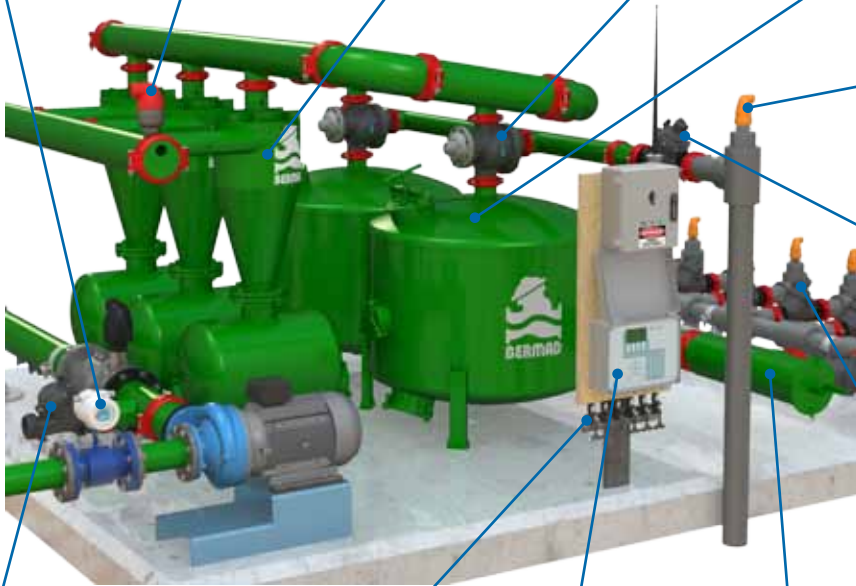
Hydrocyclone Sand/Silt Separator



Back Flush Valves



Filtration - Screen and Media



Kinetic Air Relief



Rate of Flow Control



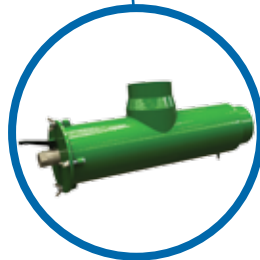
Pressure Relief



Solenoid



Cloud Monitoring, Analyzing and Control

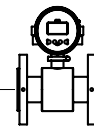


Backup Filtration



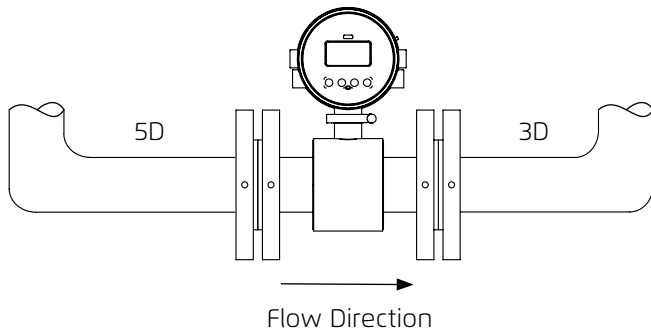
Zone Control





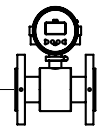
### Technical Specifications

- **Flow tube material:** **AISI 304**, AISI 316
- **Flange material:** **Coated Carbon steel**, AISI 304, AISI 316
- **Electrodes material:** **Hastelloy C**, Hastelloy B, Titanium, Tantalum , Platinum
- **Internal lining and liquid temperature:**
  - PTFE -40°F / +280°F - Standard 1½"-4"
  - Ebonite -40°F / +176°F - Standard 6" and larger
- **Available Sizes:** 1½", 2", 3", 4", 6", 10", 12", 14", 16", 18", 20", 24", 28", 32", 36", 40", 48", 52", 56", 60", 64", 68", 72", 80"
- **Flange Standard:** **ANSI 150**, ANSI 300, ANSI 600, ANSI 900
- **Isolation Rating:** NEMA 6P
- **Compatible Converters:** **MC406**, MC608 A/B/R/P/I
- **Electrical Connections:** Cable glands M20 x 1.5, terminal blocks and sealing resin
- **Calibration:** ISO 11631 Group B1
  - Measurement error 0.2% +/- 2 mm/s When installed as described below.
  - Repeatability 0.1%
- **Recommended Installation for maximum accuracy:**

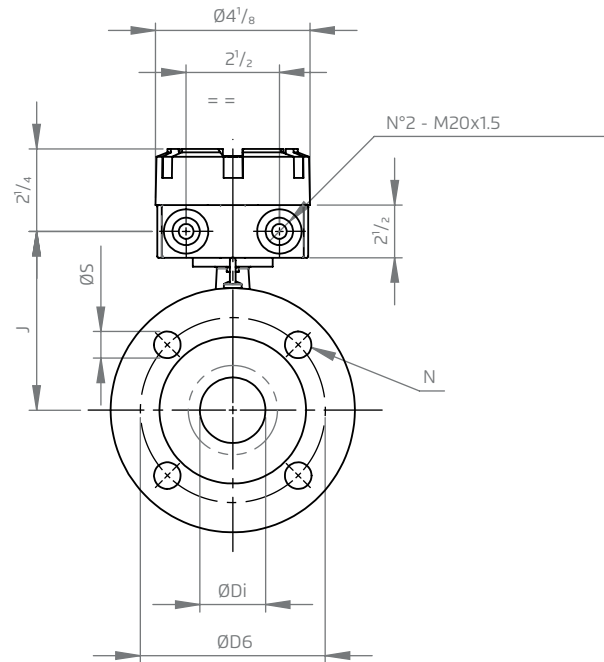
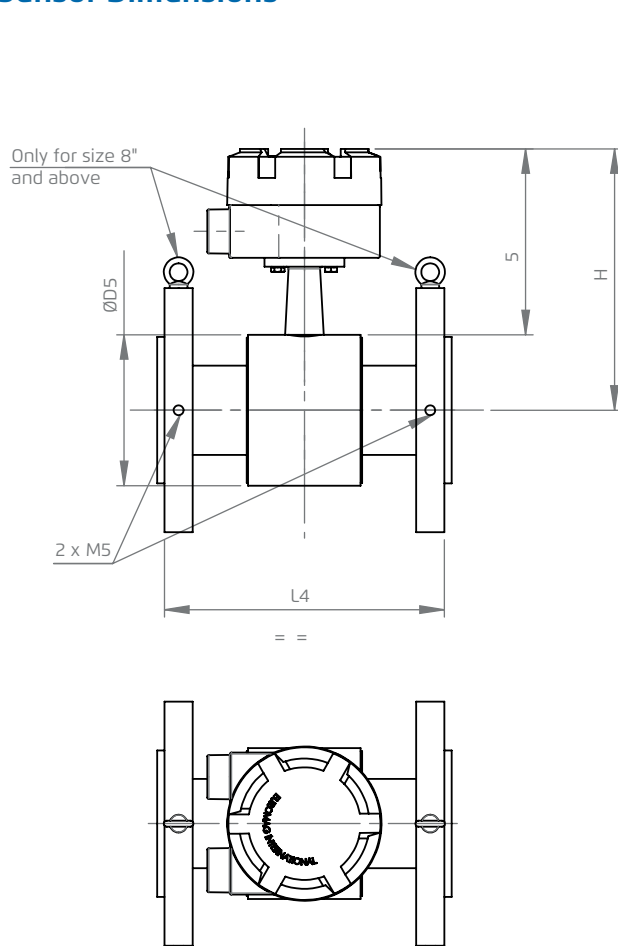


### Flow rates chart OIML Class 2

Sensor diameter	Flow rate [gpm]				Ratio Q3/Q1
	Min. Q1	Trans. Q2	Perm. Q3	Overl. Q4	
1½"	0.56	0.90	70.00	88.00	125
2"	0.88	1.41	110.00	138.00	125
3"	2.22	3.55	277.00	347.00	125
4"	3.52	5.64	440.00	550.00	125
5"	5.64	9.00	705.00	880.00	125
6"	8.81	14.00	1,100.00	1,376.00	125
8"	14.00	22.00	1,761.00	2,202.00	125
10"	22.00	35.00	2,774.00	3,467.00	125
12"	35.00	56.00	4,403.00	5,504.00	125
14"	56.00	90.00	7,045.00	8,806.00	125
16"	56.00	90.00	7,045.00	8,806.00	125
18"	88.00	141.00	11,007.00	13,760.00	125
20"	88.00	141.00	11,007.00	13,760.00	125
24"	141.00	225.00	17,612.00	22,015.00	125



### Sensor Dimensions

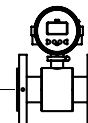


#### ANSI Class #150

Size	D5	L4	J	Di	D6	N	S	H
Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
1½	3½	7¾	4½	1½	3¾	¼	¾	6¾
2	4	7¾	4¾	1¾	4¾	¼	¾	7
3	5	7¾	5¼	3	6	¼	¾	7½
4	6¼	9¾	6	3¾	7½	¼	¾	¼
6	8¼	11¾	7	5¾	9½	¼	¾	9
8	10¼	13¾	8	7¾	11¾	¼	¾	10
10	12½	17¾	9	9¾	14¼	½	1	11¼
12	14 <sup>5</sup> / <sub>8</sub>	19¾	10	12¼	17	½	1	12¼
14	16	21¾	10¾	13¼	18¾	½	1¼	13
16	18	23 <sup>5</sup> / <sub>8</sub>	1¼	15¼	21¼	¾	1¼	14
18	20 <sup>3</sup> / <sub>8</sub>	17¾	13	17¼	22¾	¾	1¼	15¼
20	22½	19¾	14	19¼	25	¾	1¼	16¼
24	27	23 <sup>5</sup> / <sub>8</sub>	16¼	23¼	29½	¾	1¼	18 <sup>3</sup> / <sub>8</sub>

#### ANSI Class #300

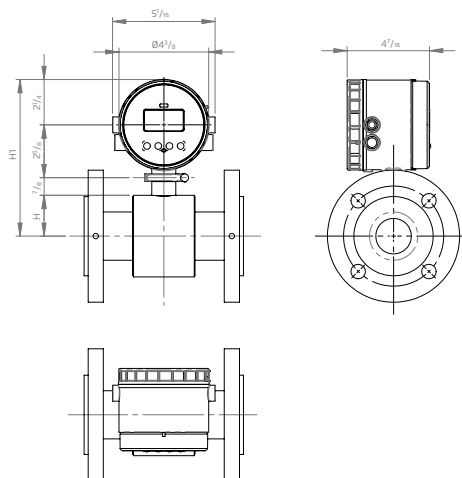
Size	D5	L4	J	Di	D6	N	S	H
Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
1½	3½	7¾	4½	1½	4½	¼	¾	6¾
2	4	7¾	4¾	1¾	5	¼	¾	7
3	5	7¾	5¼	3	6¾	¼	¾	7½
4	6¼	9¾	6	4¼	7¾	¼	¾	8¼
6	8¼	11¾	7	6	10¾	½	¾	9
8	10¼	13¾	8	7¾	13	½	1	10
10	12½	17¾	9	9¾	15¼	¾	1¼	11¼
12	14 <sup>5</sup> / <sub>8</sub>	19¾	10	11¾	17¾	¾	1¼	12¼
14	16	21¾	10¾	13	20¼	¾	1¼	13
16	18	23 <sup>5</sup> / <sub>8</sub>	11¾	14 <sup>7</sup> / <sub>8</sub>	22½	¾	13/8	13 <sup>7</sup> / <sub>8</sub>
18	20 <sup>3</sup> / <sub>8</sub>	17¾	13	16¾	24¾	1	1¼	15¼
20	22½	19¾	14	18¾	27	1	1¼	16¼
24	27	23 <sup>5</sup> / <sub>8</sub>	16¼	2½	32	1	15/8	18 <sup>3</sup> / <sub>8</sub>



### MC406 Dimensions

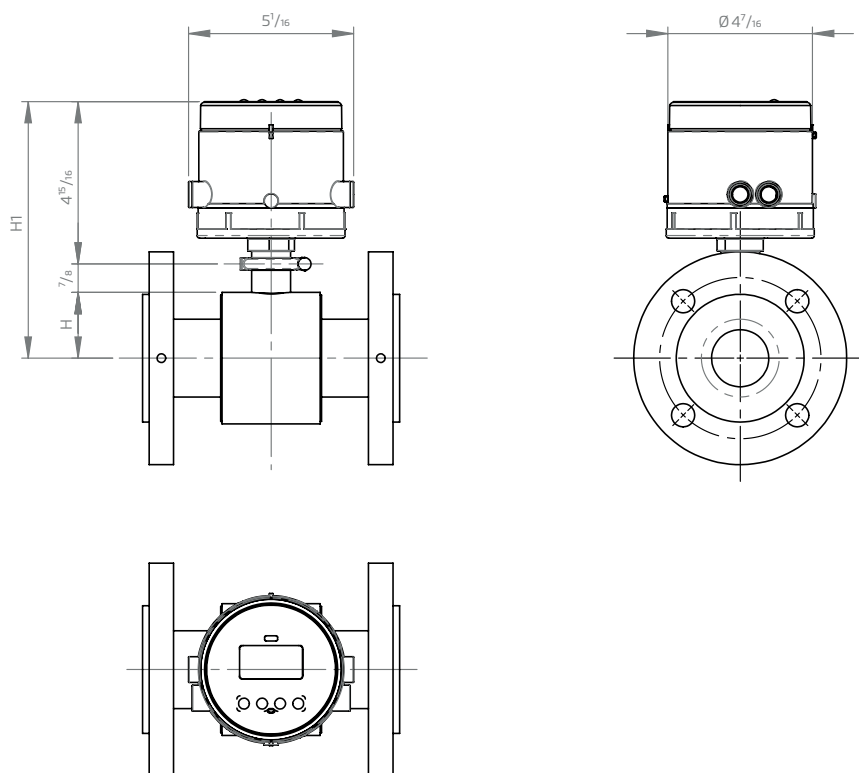
#### Horizontal:

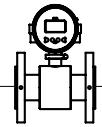
Size	H	H1
Inch	Inch	Inch
1 1/2	1 3/4	7 7/16
2	2	7 11/16
3	2 1/2	8 3/16
4	3 3/16	8 7/8
6	4 1/8	9 13/16
8	5 3/16	10 13/16
10	6 5/16	11 5/16
12	7 5/16	13
14	7 15/16	13 11/16
16	9	14 5/8
18	10 1/4	15 7/8
20	11 1/4	16 5/16
24	13 7/16	19 3/16



#### Vertical:

Size	H	H1
Inch	Inch	Inch
1 1/2	1 3/4	7 1/2
2	2	7 7/8
3	2 1/2	8 3/8
4	3 1/4	9
6	4 1/8	10
8	5 1/8	11
10	6 1/4	12 1/8
12	7 3/8	13 1/8
14	8	13 5/16
16	9	14 5/16
18	10 1/4	16 1/8
20	11 1/4	17
24	13 1/2	19 1/4



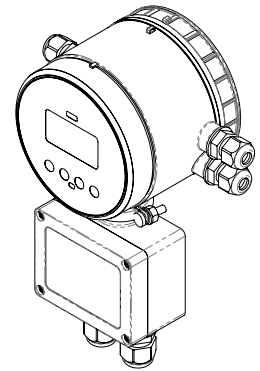


### Optional Adders

#### Remote Converter

MC406 and MC608 converters can be wall mounted using the remote installation kit

- Cable distance: 90' for battery operated MC406, or MC608  
300' for 120V AC powered MC608 converter



#### Integrated Pressure Transducer

The MUT2200EL has a built in pressure port that allows the integration of analog pressure transducer in the meter.

The pressure transducer can be connected with the water meter to BERMAD's automation system, providing flow and pressure feedback.

