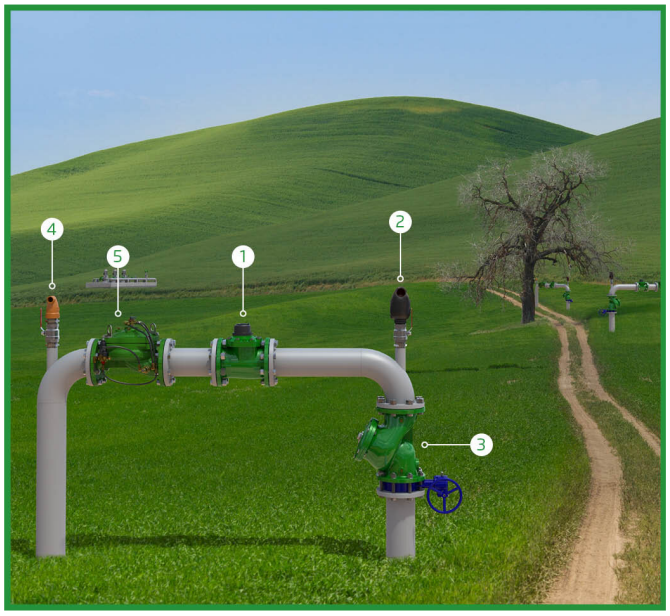
PADDLE WHEEL WATER METER

with Magnetic Drive & Magnetic register For Irrigation & Wastewater

Model Turbo-IR-M

The TURBO-IR-M uses a multi-blade plastic paddle mounted at the top of the water passage, where disturbance from solids suspended in the water is minimal, providing:
Accurate metering in water containing solid debris
Low head loss
Magnetic drive



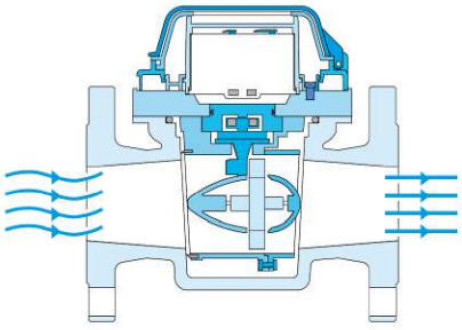
[1] BERMAD Water Meter Model Turbo-IR
[2] Combination Air Valve Model C30
[3] Strainer Model 70-F
[4] Kinetic Air Valve Model K10
[5] Flow Control & Pressure Reducing Valve Model IR-472-RVXZ

Features & Benefits

- Magnetic drive
- "Reed switch" sensor allow one or two pulse outputs option
- Easy maintenance

Operation:

The TURBO-IR uses a multi-blade plastic paddle mounted at the top of the water passage, where disturbance from solids suspended in the water is minimal, permitting accuracy of metering in water containing up to 30% solid debris. Ideal for irrigation and waste water applications.



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Technical Data

Pressure Rating: 250 psi

Operating Temperature: Water up to 122°F

End Connections - Flanged: ANSI Class 150

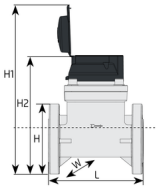
Materials

Body & Cover: Ductile Iron

Coating: Polyester Green

Technical Specifications

For other end connection types,
Please refer to BERMAD full engineering page.

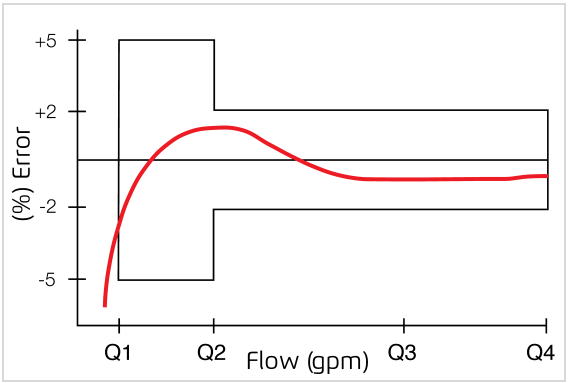


Size (DN)	Pattern	End Connection	Weight (Lb)	L (In)	H (In)	H1 (In)	H2 (In)	W	CV
2" ; DN50	Straight flow	Flanged	23.1	7⅞	6⅞	13⅞	11⅛	4⅞	133
2½" ; DN65	Straight flow	Flanged	26	7⅞	7¼	14⅜	11½	5½	222
3" ; DN80	Straight flow	Flanged	34.2	8⅞	7⅞	15	12⅛	6⅜	253
4" ; DN100	Straight flow	Flanged	38.6	9⅞	8⅜	15⅜	12½	7⅛	464
5" ; DN125	Straight flow	Flanged	43	9⅞	9⅝	16	13⅛	7⅞	675
6" ; DN150	Straight flow	Flanged	67.2	11⅞	12⅜	17⅛	14¼	9⅜	1223
8" ; DN200	Straight flow	Flanged	93.7	13⅞	14⅝	19⅜	16½	11⅝	2109
10" ; DN250	Straight flow	Flanged	132.2	17¾	17¾	21⅜	18½	13⅞	2741
12" ; DN300	Straight flow	Flanged	181.8	19¾	19⅞	23½	20¾	15¾	4640

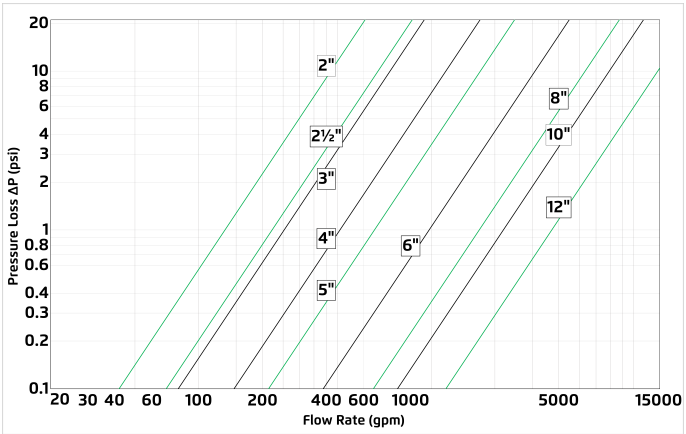
Flow Properties

Size (DN) Q @ (gpm)	Accuracy	DN50 2"	DN65 2½"	DN80 3"	DN100 4"	DN125 5"	DN150 6"	DN200 8"	DN250 10"	DN300 12"
Q1 Minimum Flow	±5%	12.3	17.6	26.4	44	61.6	88	158.5	211.3	281.8
Q2 Transitional Flow	±2%	46.2	66	99	165.1	231.1	330.2	594.4	792.5	1056.7
Q3 Permanent Flow	±2%	154.1	220.1	330.2	550.4	770.5	1100.7	1981.3	2641.7	3522.3
Q4 Maximum Flow (Short Time)	±2%	308.2	440	660.4	1100.7	1541	2201.4	3962.6	5283.4	7044.6
Max. reading, gal		999,999					9,999,999		99,999,999	
Min. reading, gal		2.6							264	

Accuracy Curve



Flow Chart



Differential Pressure & Flow Calculation

$$\Delta P = \left(\frac{Q}{Cv}\right)^2$$

Cv = gpm @ ΔP of 1 psi
Q = gpm
ΔP = psi

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Magnetic Register

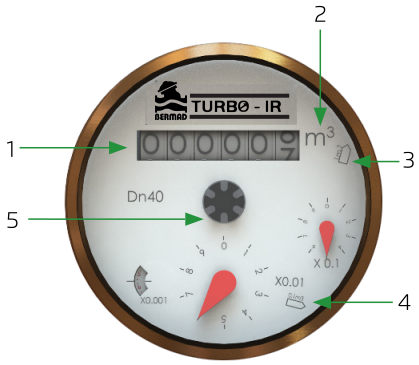
Turbo-IR-M Register

Output Type
Dry contact output

Output Cable Characteristic	
Wire	**Function**
Red	Pulse Out
Black	GND/COMMON

Output Characteristic	
Cable Length - supplied	4.9 ft
Maximum Cable Length	164 ft
Maximum Applied Voltage	24 AC/DC Max
Switch Current	0.01 A max

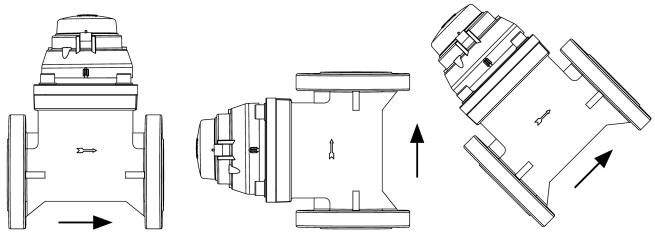
Display

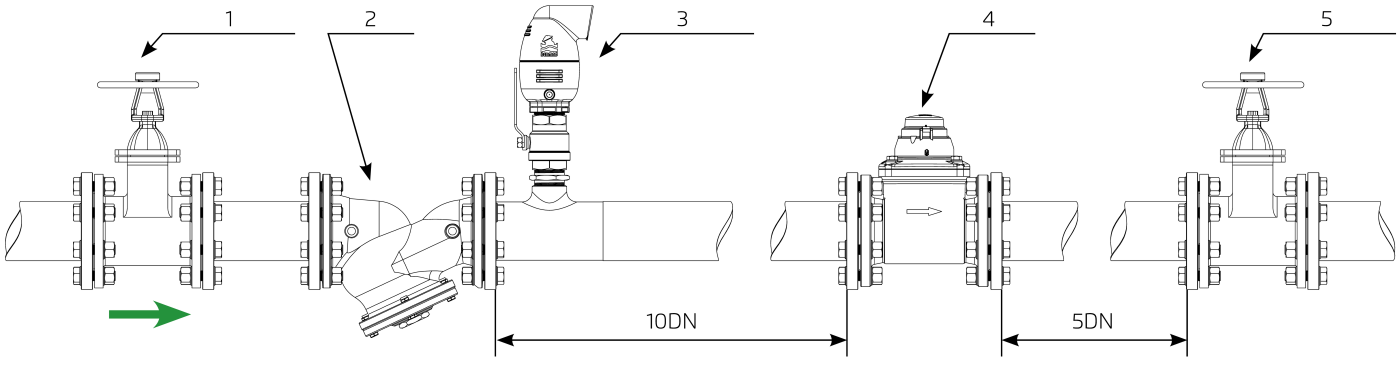


Num	Description
1	Volume
2	Volume units
3	Pulse output #1
4	Pulse output #2
5	Flow indicator

Installation Recommendations

- The water meter can be installed in any orientation without interfering with metrological performance.
- The arrow on water meter body must be in the same direction with the flow.
- To avoid turbulence that may interfere with accurate measurement, it is recommended to have a length of straight pipe equal to 5 diameters upstream from the water meter.
- Prior to installation, flush the line to remove debris.
- The Turbo-IR must be filled with water to operate.





[1] Isolation Valve

[2] Strainer

[3] Air Valve

[10DN] Unrestricted pipe, minimum 10XDN

[4] Turbo-IR

[5DN] Unrestricted pipe, minimum 5XDN

[5] Isolation Valve