



Industrial / Irrigational
Water Meters

WOLTMAN WATER METER (Turbine)

The AYSU W-XX-E Series features vertical Woltman type water meters with a dry dial mechanism, designed specifically for industrial water distribution networks, agricultural irrigation systems, and commercial facilities. With its robust cast iron body and precise measurement capabilities, it delivers reliable performance even under demanding operating conditions.

Features & Benefits

- **Vertical Woltman Turbine:** The vertical turbine design, operating perpendicular to the flow direction, ensures measurement stability and precision across both low and high flow rates .
- **Dry Dial Mechanism:** The counter mechanism is hermetically sealed and completely isolated from the water. This prevents fogging, condensation, or sediment build-up on the dial, ensuring clear readability for years .
- **Magnetic Transmission:** The rotation of the turbine is transmitted to the register via a magnetic coupling, ensuring complete sealing and eliminating the need for a direct mechanical link through the casing .
- **Wide Size Range:** Available in nominal diameters from DN50 to DN200, making it suitable for a wide variety of installation requirements .
- **Easy-to-Read Register:** The display features 7 numbered rollers (drums) and 2 rotary pointers for easy reading of volume in cubic meters and sub-units .
- **Remote Reading Ready:** The meter can be optionally equipped with a Reed Switch (Pulse Emitter) for integration into remote reading and building automation systems .
- **Durable Materials:** The body is manufactured from high-strength cast iron (HT250/QT400), while internal components are made from corrosion-resistant engineering plastics (ABS, POM, PP) and brass .



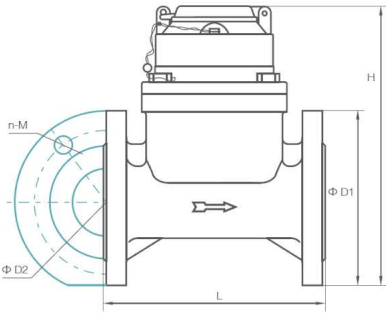


W-xx-E

Data Sheet

	W-50-E	W-65-E	W-80-E	W-100-E	W-125-E	W-150-E	W-200-E
Diameter - mm	DN50	DN65	DN80	DN100	DN125	DN150	DN200
Overload flowrate Q_4	$\leq 31,25$	≤ 50	$\leq 78,75$	≤ 125	≤ 200	$\leq 312,5$	≥ 500
Permanent flowrate Q_3	≤ 25	≤ 40	≤ 63	≤ 100	≤ 160	≤ 250	≥ 400
Transitional flowrate Q_2	$\geq 0,49$	$\geq 0,8$	$\geq 1,25$	$\geq 2,0$	$\geq 3,2$	$\geq 5,00$	$\geq 8,0$
Minimum flowrate Q_1	$\geq 0,312$	$\geq 0,5$	$\geq 0,787$	$\geq 1,25$	$\geq 2,0$	$\geq 3,125$	$\geq 5,00$
Measuring range (R) Q_3/Q_1	≤ 80						
Accuracy Class	2						
Temperature class T	T30 / T50						
Water pressure class Bar	MAP 16						
Horizontal length mm	200	200	225	250	250	300	350
Pressure loss class Bar	ΔP 63						
Flow profile sensivity class	U10 D5						
Orientation	H (Horizontal)						

Dimensions



Size	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300
L	200	200	225	250	250	300	350	450	500
H	253	268	284	295	310	339	382	438	488
D1	165	185	200	220	250	285	340	395-405	445-460
D2	125	145	160	180	210	240	295	350-355	400-410
nxM	4xM16	4xM16	8xM16	8xM16	8xM16	8xM20	8-12xM20	12xM20-24	12xM20-24

IRRIGATION TYPE WOLTMAN WATER METER (Single jet)

AYSU WT-XX-ET Series are high-precision industrial water meters designed for the accurate measurement of water consumption in commercial, industrial, and agricultural applications¹. Engineered with a robust cast iron body and an interchangeable measuring unit, they ensure long-term reliability and easy maintenance in demanding environments.

Key Features

- **Dry Dial & Magnetic Transmission:** The meter mechanism is vacuum-sealed and isolated from the water (Dry Dial). The rotation of the turbine is transmitted to the register via a magnetic coupling, ensuring the dial remains fog-free and readable over time.
- **Wide Application Range:** Available in sizes from DN50 to DN300, meeting the needs of various industrial projects with flow rates ranging from 25 m³/h up to 1600 m³/h.
- **Easy Maintenance (Interchangeable Mechanism):** The measuring mechanism can be removed and replaced without dismantling the entire meter from the pipeline, thanks to the flanged cover design.
- **Remote Reading Ready:** In addition to the standard mechanical display, the meters can be optionally equipped with a Pulse Output Module (Reed Switch) for integration into remote reading and building automation systems.
- **Robust Construction:** The housing is manufactured from durable cast iron or steel and protected against corrosion, suitable for operating pressures up to 16 bar.

Approvals & Compliance

This product is certified under the EU Directive 2014/32/ EU (MID), Annex III (Water Meters). It bears the CE marking and supplementary metrology marking (M), ensuring it meets all legal requirements for commercial billing and trade across the European market and recognized territories.

full composite material



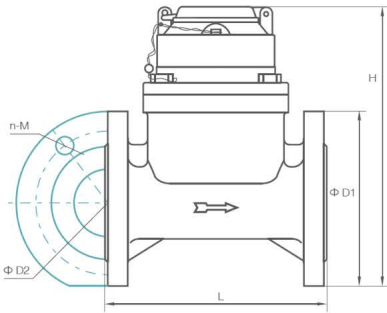


WT-xx-ET

Data Sheet

	WT-50-ET	WT-65-ET	WT-80-ET	WT-100-ET	WT-125-ET	WT-150-ET	WT-200-ET	WT-250-ET	WT-300-ET
Diameter - mm	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
Overload flowrate Q_4	$\leq 31,25$	≤ 50	$\leq 78,75$	≤ 125	≤ 200	$\leq 312,5$	≥ 500	$\geq 787,5$	≥ 1250
Permanent flowrate Q_3	≤ 25	≤ 40	≤ 63	≤ 100	≤ 160	≤ 250	≥ 400	≥ 630	≥ 1000
Transitional flowrate Q_2	$\geq 1,000$	$\geq 1,6$	$\geq 2,52$	$\geq 4,0$	$\geq 6,4$	$\geq 10,00$	$\geq 16,0$	$\geq 25,0$	$\geq 40,0$
Minimum flowrate Q_1	$\geq 0,625$	$\geq 1,00$	$\geq 1,575$	$\geq 2,5$	$\geq 4,0$	$\geq 6,25$	$\geq 10,00$	$\geq 15,75$	$\geq 25,00$
Measuring range (R) Q_3/Q_1	≤ 40								
Accuracy Class	2								
Temperature class T	T30 / T50								
Water pressure class Bar	MAP 16								
Horizontal length mm	200	200	225	250	250	300	350	450	500
Pressure loss class Bar	ΔP 63								
Flow profile sensitivity class	U10 D5								
Orientation	H (Horizontal)								

Dimensions



Size	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300
L	200	200	225	250	250	300	350	450	500
H	253	268	284	295	310	339	382	438	488
D1	165	185	200	220	250	285	340	395-405	445-460
D2	125	145	160	180	210	240	295	350-355	400-410
nxM	4xM16	4xM16	8xM16	8xM16	8xM16	8xM20	8-12xM20	12xM20-24	12xM20-24

Which Type of Woltman Water Meter Should You Choose?

Advantages of the WT-XX-ET Series (Horizontal Axis)

- **Interchangeable Mechanism (Kit):** The primary advantage of this series is its "interchangeable" measuring unit. This feature allows for repairs or calibration by simply removing and replacing the internal mechanism without the need to dismantle the entire meter body from the pipeline .
- **Larger Diameter Options:** For large-scale pipelines requiring DN250 and DN300 sizes, this series is the exclusive option (as the W-XX-E series caps at DN200) .
- **Simple and Robust Structure:** The horizontal turbine design is generally highly durable and reliable under conditions of continuous, high-volume flow.

Advantages of the W-XX-E Series (Vertical Axis)

- **Higher Sensitivity (R80):** The vertical turbine structure (Vertical Woltman) allows the impeller to start rotating at lower flow rates due to the optimal angle of water impact. According to the technical data, a DN50 meter in the WT-XX-ET series begins measuring at 625 liters/hour (\$Q_1\$), whereas the W-XX-E series begins at 312 liters/hour . This makes the W-XX-E series significantly superior in detecting leaks and low-flow seepage.
- **Wide Measuring Range:** By capturing lower flow rates effectively, this series offers a broader dynamic measurement range.

Selection Guide: Which Model Should You Choose?

Scenario A: Choose the W-XX-E Series (Vertical Turbine) If:

- **Water Consumption is Variable:** In facilities with fluctuating demand—where usage ranges from very low to very high (e.g., hotels, hospitals, or networks with low night-time consumption)—this series is essential to ensure low flow rates are not missed.
- **Precise Billing is Required:** Recording low flows (drips, leaks, etc.) is crucial for preventing revenue loss (Non-Revenue Water). The R80 sensitivity class ensures maximum revenue recovery.
- **Agricultural Irrigation:** As start-up and shut-down flow rates in irrigation systems can vary, the vertical turbine responds more effectively to these fluctuations.

Scenario B: Choose the WT-XX-ET Series (Horizontal Turbine) If:

- **Maintenance Ease is a Priority:** In tight spaces or critical lines where removing the meter body is difficult or costly, the "Interchangeable Unit" feature offers significant operational convenience by allowing for quick internal kit replacement.
- **Very Large Pipelines (DN250 - DN300):** If your pipeline diameter exceeds 200 mm, this series is the only option available based on the provided technical documents .
- **Constant and High Flow Profiles:** For applications with consistent high-volume flow (e.g., pump outlets or main transmission lines), the R40 sensitivity class is sufficient, and the durability of the horizontal turbine design is an advantage.

