Woltex M

Woltex M is a horizontal Woltmann meter available as MID approved in sizes from DN 50 to 300mm. Recognized for its robustness the woltex M range is dedicated to all applications around water distribution where high reliability and accuracy is requested.

FEATURES AND BENEFITS

- Sensitivity class U0D0
- Hermetically sealed register (copper can/mineral glass envelope)
- Approved interchangeable mechanisms allow maintenance of on-site existing bodies, with preserved CE marking on the whole instrument according to the provisions of 2014/32/EU Directive.
- Pre-equipped through Cyble as a standard
- Excellent resistance to corrosion with 300 microns expoxy coating

Reliability of the Measurement

Woltex is ensuring accurate and reliable data collection in a large scope of flow-rates typical of water network applications.

Insensitivity to flow perturbation

The design of Woltex M range has been improved to achieve the sensitivity class U0D0, thanks to a new integrated stabilizer.

Endurance & Peak Flow Resistance

This extended range of measurement is the result of more than twenty years experience in Horizontal Woltmann design, from the first hydrodynamically balanced helix patent in 1985 still resulting in unmatched endurance capabilities to the use of high quality materials.

Ease of Installation, Read and Maintenance

Woltex M range is available in various lengths and connections to minimize installation costs. Interchangeable approved mechanisms allows easy maintenance without re-calibration. Ease of read in the toughest environments (ie: flooded pits) is secured by orientable hermetically sealed register (copper can/ mineral glass envelope).

Communication Device

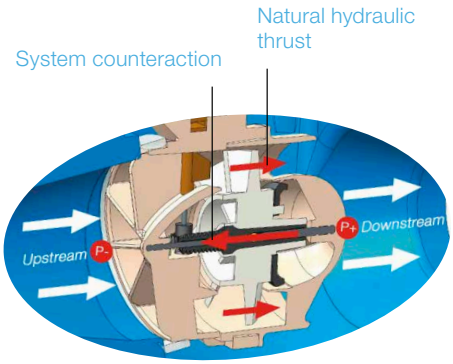
Pre-equipped for future communication through Cyble.

WORKING PRINCIPLE

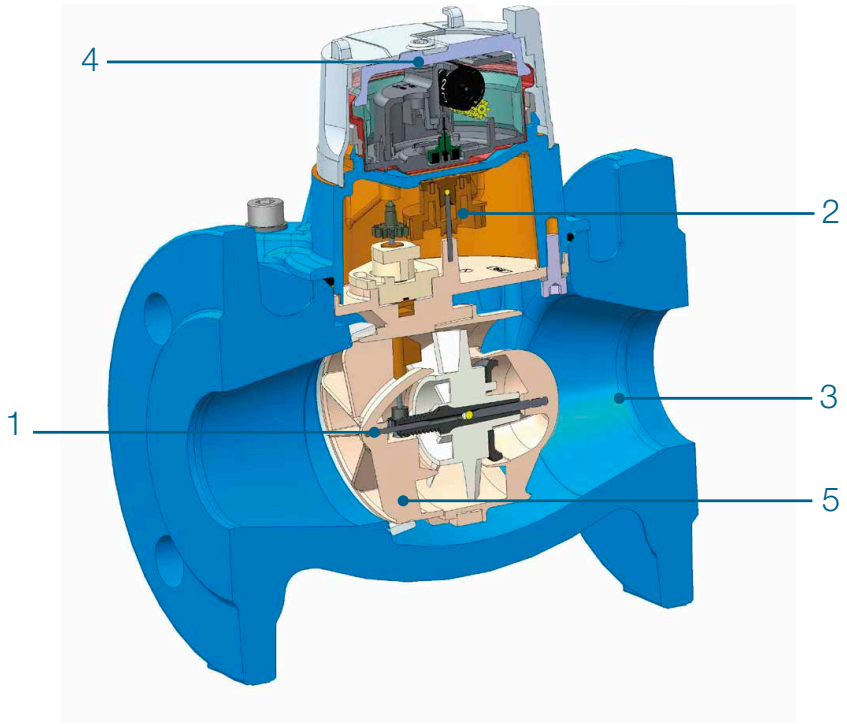
The water velocity is rotating the horizontal axis propeller. Special shape of its inlet and outlet bearing 1 is counteracting the natural hydraulic thrust applied on the propeller then preventing any downstream pivot wear.

The hydrodynamic balance proved its ability for more than 30 years. This results in a meter able to withstand sustained high flows without impacting low flow accuracy.

The propeller rotation is transmitted by a protected transmission and direct magnetic coupling 2 to the register. The cast iron body 3 is durably protected against the effects of corrosion by epoxy powder coating. The hermetically sealed copper can/mineral glass register 4 is safeguarding the read and integrity of the indicator in the toughest environments (flooded pits, mechanical tampering attempts, …). New stabilizer design 5 for DN 50/65/80 mm.



Hydrodynamic balance of helix



Woltex M totalizer from DN 50 to DN80

COMMUNICATION

Woltex M is supplied pre-equipped withCyble Target

Allows communication and remote reading through:

- Pulse output (Cyble Sensor)
- M-Bus protocol (Cyble M-Bus)
- Radio frequency wireless link (Cyble RF)

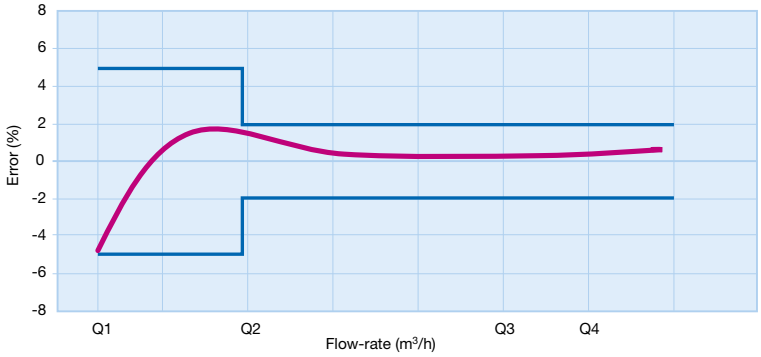
Compatible with Itron complete offer for Metering Point Management (Automated Remote Reading, Metering Point Analyser, Automated Meter Data Collection):

- Lpwan
- AnyQuest
- EverBlu
- WaterMind

These Cyble modules allow the Woltex M meter to be connected with various associated systems if and when desired.

They are particularly adapted to commercial and industrial applications where a need for frequent meter monitoring is expressed especially in hard-to-read locations.

Woltex M totalizer from DN100 to DN300



METROLOGICAL CHARACTERISTICS

Typical Performance

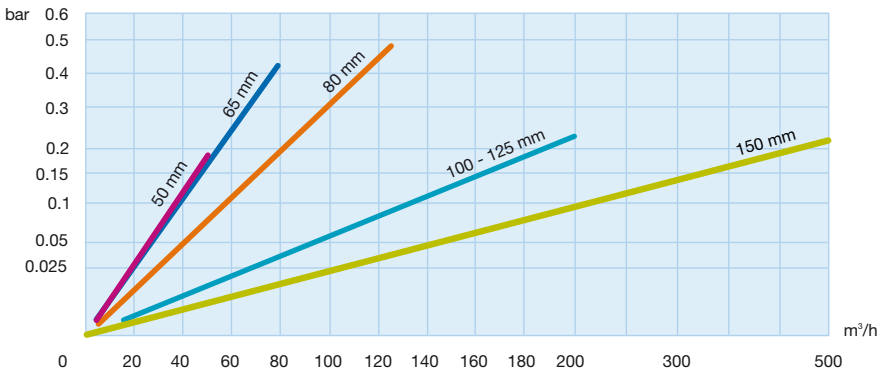
Nominal diameter (DN)	mm	50	65	80	100/125	150	200	250	300
	inches	2”	2” ½	3”	4”	6”	8”	10	12
Starting flowrate*	m³/h	0.19	0.22	0.25	0.38	0.4	1.6	3	10
Accuracy ± 2% from*	m³/h	0.4	1	1.2	1.5	1.6	3.5	5	15
Accuracy ± 5% from*	m³/h	0.35	0.5	0.75	0.9	1	2.5	3.5	12
Admissible peak flow (10’ max)	m³/h	90	160	250	300	700	1000	1500	2500
Max. admissible flowrate (continuous)	m³/h	50	79	125	200	500	788	1250	2000
Head loss at Q3	bar	0.09	0.27	0.31	0.15	0.14	0.12	0.12	0.2
Max. admissible temperature	°C	30							
Max. admissible pressure	bar	20							
Min. Verification scale interval	L	0.2	0.2	0.2	0.2	2	2	2	2
Indicating range m³	m³	999 999.99					9 999 999.9		
Sensitivity Class		U0D0					U0D0		
Cyble HF pulse weight	L	10	10	10	10	100	100	100	100

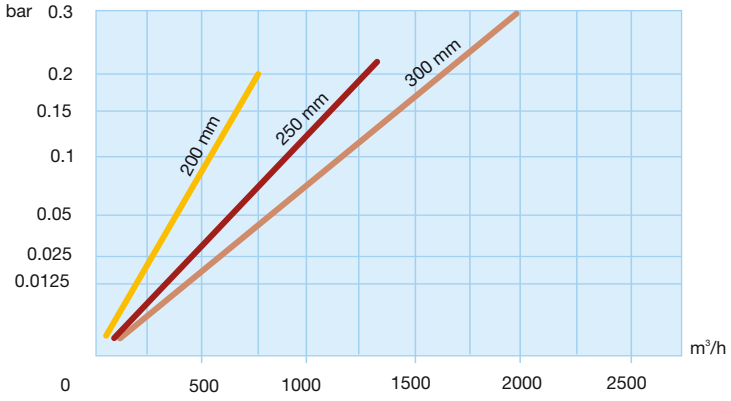
* Average values.

MID Approval Values

Nominal diameter (DN)	mm	50	65	80	100/125	150	200	250	300
	inches	2”	2” ½	3”	4”	6”	8	10	12
Q3 Permanent flow rate	m³/h	40	63	100	160	400	630	1000	1600
Q4 Overload flow rate	m³/h	50	79	125	200	500	787,5	1250	2000
Q2 Transitional flowrate	m³/h	0.64	1	1.60	1.60	4.00	25.20	40.00	32.00
Q1 Minimum flowrate	m³/h	0.4	0.63	1.00	1.00	2.50	15.75	25.00	20.00
Approval Ratio		100	100	100	160	160	40	40	80
Maximum admissible Pressure (MAP)	bar	20							
Pressure Loss Class at Q3	bar	0.16	0.4	0.4	0.4	0.16	0.25	0.25	0.25
Mid Approval number		LNE-23696							

HEAD LOSS





Woltex M DN80

Cyble RF fitted on Woltex M Inlet stabilizer for DN100 and DN150.

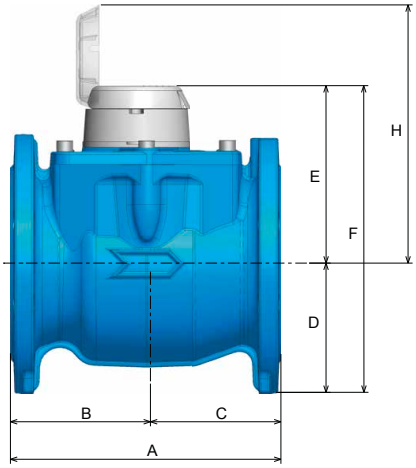
Dimensions

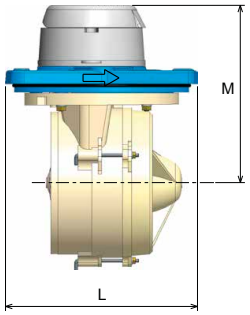
Nominal diameter (DN)	mm	50	65	80	100	125	150	200	250	300
	inches	2”	2” ½	3”	4”	5”	6”	8	10	12
End connection*				Flange PN 10/16				Flange PN 10 or PN 16		
> Meter										
A (lenght) ISO	mm	200	200	200	250	250	300	350	450	500
DIN	mm	200	200	225	250	-	300			
AS (Australia/UK)	mm	311	-	413	-	-	-			
B	mm	100	100	100	111	111	139	164	214	200
C	mm	100	100	100	139	139	161	186	236	300
D	mm	82.5	92.5	100	110	110	142.5	171	204	230
E	mm	142	142	142	169	169	194	220	195	342
F	mm	224	234	242	279	279	339	391	399	564
H	mm	222	222	222	309	309	395	420	395	729
Weight	Kg	11.4	12.6	14.1	19.5	19.5	34	55	75	175
> Mechanism										
L	mm	119	119	119	166	166	212	332	256	350
I (max. width)	mm	148	148	148	182	182	273	276	276	426
M	mm	142	142	142	169	241	194	195	195	342
Weight	Kg	3	3	3	5.4	5.4	7.8	8,5	8,5	54

* Other drillings are available, under request

INSTALLATION REQUIREMENTS

- Woltex M could be installed regardless of position.
- Installation of a strainer upstream of the meter is recommended to protect the hydraulics against raw particles (see Itron strainer leaflet).
- In case of particular installation conditions, we recommend the installation of a flow straightener directly upstream of the meter to cancel the effects of hydraulic perturbations on Horizontal Woltmann accuracy (see Itron installation leaflet).





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