

# WBD

## Well water meter

The WBD are used to record high flow rates in drinking water distribution, which transition from a vertical pipe to a horizontal pipe. The WBD can be mounted directly on the well head instead of a 90 ° elbow according to DIN 28537 / 28637.

The meter is equipped with a 6-roller dry dial register (IP68) and a modulator disc. This enables electronic, reaction-free scanning and is the basis for remote reading of the meter data via radio with LoRaWAN® or wM-Bus. A combined M-Bus/pulse module is also possible. A mechanical pulser can also be connected in parallel.



### Performance characteristics at a glance

- Woltman vertical type
- Nominal sizes DN50 to DN150
- For installation at the junction of a vertical pipeline with a horizontal pipeline
- All materials, which are used in the drinking water section, comply with the required standards, guidelines and the current German drinking water approval (other country-specific drinking water approvals on request)
- Highest precision and reliability even in case of low flow rates
- Low starting flow and high overload security
- Wide measuring range, low pressure loss
- Hydraulic bearing relief
- Long-term measuring stability
- No straight inlet or outlet needed (U0/D0) according to OIML R49 and DIN EN ISO 4064
- Prepared for remote reading
- Register rotatable 355 °
- Operating pressure MAP 16
- Approved in accordance with MID

### Applications

- For the consumption measurement of cold and clean drinking water or service water up to 50 °C
- For measuring high flow rates

### AMR options

- Can be combined with stationary GSM system
- Can be retrofitted with a mechanical pulser
- Retrofittable with EDC module (Electronic Data Capture):
  - EDC LPWAN radio module (868 MHz) for LoRaWAN®
  - EDC wireless M-Bus radio module (868 MHz)
  - EDC combined M-Bus and pulse module

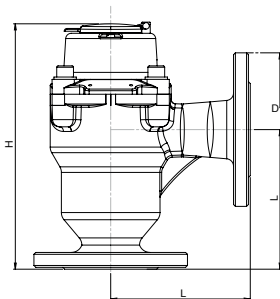
Technical data						
Nominal diameter	DN	mm	50	80	100	150
Permanent Flowrate	$Q_3$	$m^3/h$	25	63	100	250
Attainable measuring range	$Q_3/Q_1$	R	R63H	100H	100H	100H
Standard measuring range	$Q_3/Q_1$	R	R63H	R63H	R63H	R63H
Overload Flowrate	$Q_4$	$m^3/h$	31,25	78,75	125	312,5
Transitional flowrate <sup>1</sup>	$Q_2$	$m^3/h$	0,64	1,60	2,54	6,35
Minimum flowrate <sup>1</sup>	$Q_1$	$m^3/h$	0,40	1,00	1,59	3,97
Start-up flow rate	-	$m^3/h$	0,05	0,1	0,11	0,15
Display range	min	l	0,5	0,5	0,5	5
	max	$m^3$	999.999	999.999	999.999	999.999 x10
Temperature range	-	°C	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50
Operating pressure	MAP	bar	0,3 - 16	0,3 - 16	0,3 - 16	0,3 - 16
Pulse value modulator disc	-	l/pulse	10	10	10	100
Pulse value for reed-switch	-	l/pulse	100	100	100	1000
Pressure loss class at $Q_3$	$\Delta p$	bar	0,1	0,25	0,25	0,25
Mechanical environmental condition	-	-	M1	M1	M1	M1
Climatic ambient conditions <sup>2</sup>	-	°C	5 - 55	5 - 55	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0

Dimensions and weights:						
Nominal diameter	DN	mm	50	80	100	150
Leg length (DIN 28537)	L	mm	150	180	200	250
Overall height (DIN 28537)	H	mm	267	323	343	418
Leg length (DIN 28637)	L	mm	-	165	180	220
Overall height (DIN 28637)	H	mm	-	308	323	413
Flange diameter <sup>3</sup>	D	mm	165	200	220	285
Bolt circle diameter	-	mm	125	160	180	240
Number of bolts	-	pcs.	4	8	8	8
Screw size	-	mm	M16	M16	M16	M20
Bolt diameter	-	mm	19	19	19	23
Weight approx.	-	kg	10,6	16,2 / 15,7	19,9 / 18,9	46,6 / 45,9

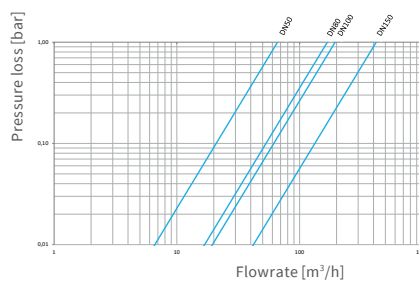
<sup>1</sup> The data refers to the standard measuring range

<sup>2</sup> Condensation possible

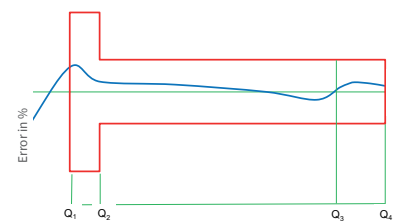
<sup>3</sup> Flanges according to DIN EN 1092-2



Dimensions



Pressure loss curve



Typical error curve

$Q_1$  = Minimum flowrate  
 $Q_2$  = Transitional flowrate  
 $Q_3$  = Permanent flowrate  
 $Q_4$  = Overload flowrate

**ZENNER International GmbH & Co. KG**

Heinrich-Barth-Straße 29 | 66115 Saarbrücken | Germany

Phone +49 681 99 676-30  
 Fax +49 681 99 676-3100

E-mail info@zenner.com  
 Internet www.zenner.com