

# WPD / WPHD T90

## Woltman meter with a parallel to flow direction arranged turbine

The bulk water meter WPD/WPHD T90 is suitable for a medium temperature of up to max. 90 °C. It can be used to record high flow rates in drinking water distribution and in industry, with low pressure loss and a mostly constant flow profile.

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. Factory tested according to MID specifications. 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).



### Performance characteristics at a glance

- Woltman parallel type
- Nominal sizes DN50 to DN250
- Highest precision and reliability even in case of low flow rates
- Flood-proof (IP68) hermetically sealed glass/copper register
- Low starting flow and high overload security
- Wide measuring range, low pressure loss
- Hydraulic bearing relieve
- Long-term measuring stability
- Swirl-reducing inlet
- No straight inlet or outlet needed (U0/D0) according to OIML R49 and DIN EN ISO 4064
- Factory tested according to MID specifications.

### Applications

- For the consumption measurement of hot and unpolluted drinking water or service water up to 90 °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

# WPD T90

Technical data								
Nominal diameter	DN	mm	50	65	80	100	125	150
Permanent Flowrate	$Q_3$	$m^3/h$	40	63	100	160	160	250
Attainable measuring range	$Q_3/Q_1$	R	R100H/63H	R160H/63Hv	R160H/63H	R160H/63H	R160H/63H	R160H/63H
Standard measuring range <sup>1</sup>	$Q_3/Q_1$	R	R100H/63H	R100H/63H	R100H/63H	R100H/63H	R100H/63H	R100H/63H
Overload Flowrate	$Q_4$	$m^3/h$	50	78.75	125	200	200	312.5
Minimum flowrate <sup>2</sup>	$Q_1$	$m^3/h$	0,4/0,64	0,63/1,0	1,0/1,59	1,6/2,54	1,6/2,54	2,5/3,97
Transitional Flowrate <sup>2</sup>	$Q_2$	$m^3/h$	0,64/1,01	1,0/1,6	1,6/2,54	2,56/4,06	2,56/4,06	4,0/6,35
Start-up flow rate	-	$m^3/h$	0.065	0.065	0.11	0.15	0.15	0.35
Display range	min	l	0.5	0.5	0.5	0.5	0.5	5
	max	$m^3$	999,999	999,999	999,999	999,999	999,999	9,999,999
Temperature range	-	$^{\circ}C$	0,1 - 90	0,1 - 90	0,1 - 90	0,1 - 90	0,1 - 90	0,1 - 90
Operating pressure	MAP	bar	0,3 - 16	0,3 - 16	0,3 - 16	0,3 - 16	0,3 - 16	0,3 - 16
Pulse value Reed	-	l/pulse	100	100	100	100	100	1000
Pulse value modulator disc	-	l/pulse	10	10	10	10	10	100
Pressure loss class at $Q_3$	$\Delta p$	bar	0.25	0.40	0.40	0.40	0.40	0.40
Mechanical environmental condition	-	-	M1	M1	M1	M1	M1	M1
Climatic ambient conditions <sup>4</sup>	-	$^{\circ}C$	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0

<sup>1</sup> Other measuring ranges (R) and overall lengths on request

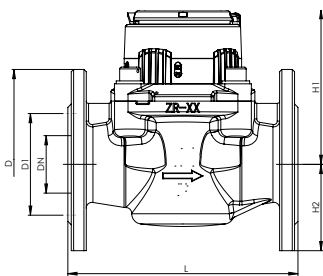
<sup>2</sup> The data refer to the standard measuring range

<sup>3</sup> Total height WPDE/WPHDE + 20 mm

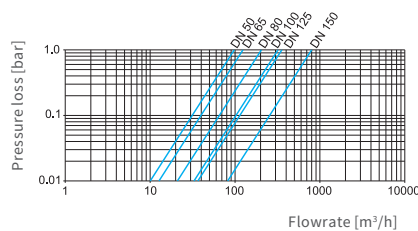
<sup>4</sup> Condensation possible

Flange according to ISO 7005-2. Other flanges on request

Attention: not all versions are available in all markets



Dimensions



Pressure loss curve

# WPHD T90

Technical data				
Nominal diameter	DN	mm	200	250
Permanent Flowrate	Q <sub>3</sub>	m <sup>3</sup> /h	400	630
Attainable measuring range	Q <sub>3</sub> /Q <sub>1</sub>	R	R125H/63H	R125H/63H
Standard measuring range <sup>1</sup>	Q <sub>3</sub> /Q <sub>1</sub>	R	R100H/63H	R100H/63H
Overload Flowrate	Q <sub>4</sub>	m <sup>3</sup> /h	500	787
Minimum flowrate <sup>2</sup>	Q <sub>1</sub>	m <sup>3</sup> /h	4,0/6,35	6,3/10,0
Transitional Flowrate <sup>2</sup>	Q <sub>2</sub>	m <sup>3</sup> /h	6,4/10,16	10,08/16,0
Start-up flow rate	-	m <sup>3</sup> /h	2	2
Display range	min	l	5	5
	max	m <sup>3</sup>	999.999 x10	999.999 x10
Temperature range	-	°C	0,1 - 90	0,1 - 90
Operating pressure	MAP	bar	0,3 - 16	0,3 - 16
Pulse value Reed	-	l/pulse	1000	1000
Pulse value modulator disc	-	l/pulse	100	100
Pressure loss class at Q <sub>3</sub>	Δp	bar	0.10	0.10
Mechanical environmental condition	-		M1	M1
Climatic ambient conditions <sup>4</sup>	-	°C	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0

<sup>1</sup> Other measuring ranges (R) and overall lengths on request

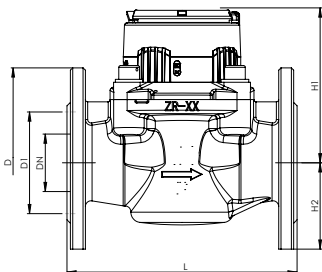
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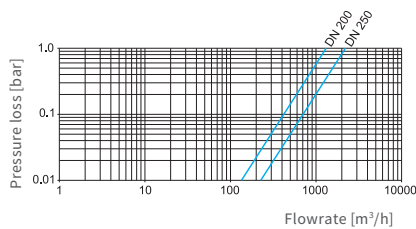
<sup>4</sup> Condensation possible

Flange according to ISO 7005-2. Other flanges on request

Attention: not all versions are available in all markets



Dimensions



Pressure loss curve

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