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 mesuring 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
- Suitable for water glycol heat carriers (without conformity assessment)

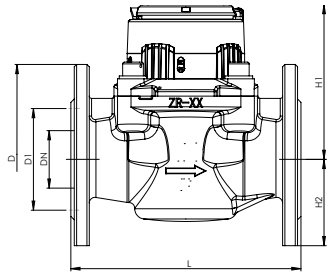
AMR options

- 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

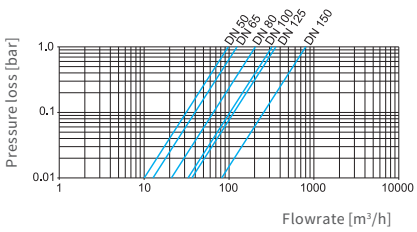
WPD T90

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	R160H/63H	R160H/63H	R160H/63H	R160H/63H	R160H/63H	R160H/63H
Standard measuring range [1]	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 [2]	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 [2]	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	-	°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	Δp	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 [4]	-	°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
Dimensions and weights:								
Nominal diameter	DN	mm	**50**	**65**	**80**	**100**	**125**	**150**
Overall length [1]	L	mm	200	200	225	250	250	300
Height	H1	mm	135	135	143	152	152	183
Height	H2	mm	75	85	95	105	115	135
Total height approx. [3]	H1+H2	mm	210	220	238	257	267	318
Installation height of the measuring unit	H3	mm	230	230	256	266	266	373
Flange diameter	D	mm	165	185	200	235	270	300
Bolt circle diameter	D1	mm	125	145	160	190	220	250
Number of bolts	-	pcs.	4	8	8	8	8	8
Screw size	-	mm	M16	M16	M16	M20	M24	M24
Bolt hole diameter	-	mm	19	19	19	23	28	28
Weight approx.	-	kg	9.1	11.8	13.4	16.9	20.1	31.5

[1] Other measuring ranges (R) and overall lengths on request
[2] The data refer to the standard measuring range
[3] Total height WPDE/WPHDE + 20 mm
[4] Condensation possible
Flange according to ISO 7005-2. Other flanges on request
Attention: not all versions are available in all markets



Dimensions

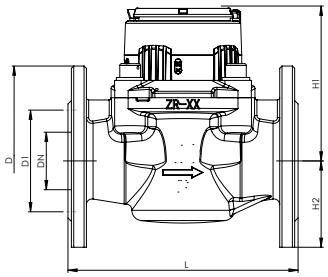


Pressure loss curve

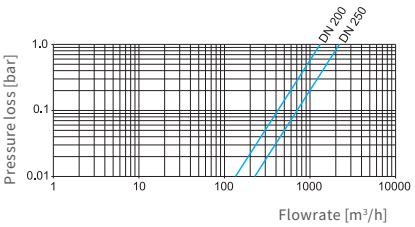
WPHD T90

Technical data				
Nominal diameter	DN	mm	**200**	**250**
Permanent Flowrate	Q_3	m^3/h	400	630
Attainable measuring range	Q_3/Q_1	R	R125H/63H	R125H/63H
Standard measuring range [1]	Q_3/Q_1	R	R100H/63H	R100H/63H
Overload Flowrate	Q_4	m^3/h	500	787
Minimum flowrate [2]	Q_1	m^3/h	4,0/6,35	6,3/10,0
Transitional Flowrate [2]	Q_2	m^3/h	6,4/10,16	10,08/16,0
Start-up flow rate	-	m^3/h	2	2
Display range	min	l	5	5
	max	m^3	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_3	Δp	bar	0.10	0.10
Mechanical environmental condition	-	-	M1	M1
Climatic ambient conditions [4]	-	°C	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0
Dimensions and weights:				
Nominal diameter	DN	mm	**200**	**250**
Overall length [1]	L	mm	350	450
Height	H1	mm	215	267
Height	H2	mm	160	193
Total height approx. [3]	H1+H2	mm	375	460
Installation height of the measuring unit	H3	mm	460	460
Flange diameter	D	mm	340	405
Bolt circle diameter	D1	mm	295	355
Number of bolts	-	pcs.	12	12
Screw size	-	mm	M20	M24
Bolt hole diameter	-	mm	23	28
Weight approx.	-	kg	49	68

[1] Other measuring ranges (R) and overall lengths on request
[2] The data refer to the standard measuring range
[3] Total height WPDE/WPHDE + 20 mm
[4] 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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