



WPD / WPHD Bulk water meter

- WPD (DN 50 - 150), WPHD (DN 200 - 300)
- Replacable metrological unit (according to european MID)
- Prepared for remote meter reading

Product characteristics

- Replacable metrological unit (according to european MID)
- Flood-proof (IP68) hermetically sealed glass/copper register
- Low starting flow, high overload security
- Wide measuring range, small 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 14154
- Materials and coating approved in accordance with KTW / W 270
- Optional WS overall length for DN 50, DN 65, DN 80 and DN 100 available
- Optional ISO length for DN 50, DN 80 and DN 100 available
- Approved in accordance with MID and OIML

WPD / WPHD

Woltman meter with parallel turbine shaft

The ZENNER Bulk water meter WPD / WPHD is specially constructed for the measuring of high flow rates with a mainly constant flow rate profile. Due to the robust design, WPD / WPHD can cover a wide measuring range and provide accurate measuring results over a long period. So it covers almost all measuring tasks in the drinking water supply and distribution.

The housing of the WPD / WPHD was flow-optimized. The measuring insert was newly constructed as a replacable metrological unit according to european MID. In combination with an up-to-date bearing of the impeller a good linearity and long-term stability of the error curve can be achieved. The robust copper-glass-register is non-diffusive and protected against condensation. It also works reliably under the hardest conditions (e.g. in flooded pits or shafts).

Applications

- For the mesuring of high flow rates
- For horizontal or vertical installation
- For cold water up to 50° C

AMR options

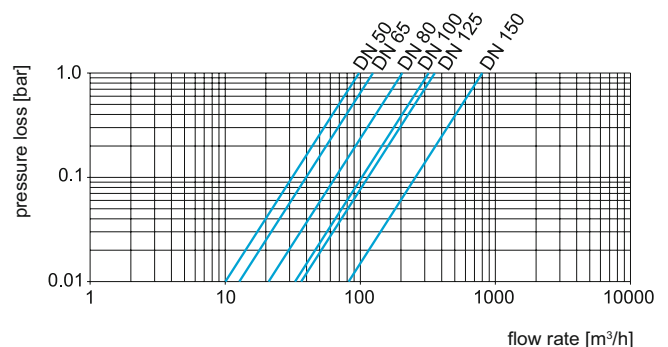
- Retrofittable with up to two reed-sensors
- Retrofittable with stationary GSM system
- Serially equipped with communication interface for:
 - Electronic pulser
 - Wired M-bus
 - Radio via Wireless M-Bus according to OMS (Open Metering System)
 - Radio via LPWAN (LoRaWAN™, SIGFOX)





Technical Data WPD (DN 50 – DN 150)										
Nominal diameter	DN	mm	50	50	65	80	80	100	125	150
Permanent flow	Q ₃	m ³ /h	25	40	40	63	63	100	100	250
Attainable measuring range	Q ₃ /Q ₁	R	R125H	R200H	R200H	R200H	R200H	R315H	R315H	R315H
Standard measuring range (*)	Q ₃ /Q ₁	R	R100H/63V	R100H/63V	R100H/63V	R100H/63V	R100H/63V	R100H/63V	R100H/63V	R100H/63V
Overload flow (**)	Q ₄	m ³ /h	31,25	50	50	78,75	78,75	125	125	312,5
Minimum flow (**)	Q ₁	m ³ /h	0,25/0,4	0,4/0,63	0,4/0,64	0,63/1,01	0,63/1,02	1,0/1,59	1,0/1,60	2,5/3,97
Transitional flow (**)	Q ₂	m ³ /h	0,4/0,63	0,64/1,02	0,64/1,03	1,01/1,61	1,01/1,62	1,6/2,54	1,6/2,55	4,0/6,35
Pressure loss at Q ₃	Δp	MPa	0,01	0,019	0,012	0,01	0,01	0,011	0,012	0,026
Start-up flow rate	-	l/h	65	65	65	110	110	150	150	350
Display range	min	l	0,5	0,5	0,5	0,5	0,5	0,5	0,5	5
	max	m ³	999.999	999.999	999.999	999.999	999.999	999.999	999.999	9.999.999
Temperature range	-	°C	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50
Operating pressure, max.	MAP	bar	16	16	16	16	10	16	16	16
Pulse value Reed	-	l/Imp.	100/1000	100/1000	100/1000	100/1000	100/1000	100/1000	100/1000	1000/10.000
Pulse value modulator disc	-	l/Imp.	10	10	10	10	10	10	10	100
Pressure loss at Q ₃	Δp	bar	0,1	0,19	0,12	0,1	0,1	0,11	0,12	0,26
Mechanical environmental condition	-	-	M2	M2	M2	M2	M2	M2	M2	M2
Climatic condition (****)	-	°C	5 - 55	5 - 55	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	U0/D0	U0/D0
Weight and dimensions:										
Nominal diameter	DN	mm	50	50	65	80	80	100	125	150
Overall length (*)	L	mm	200	200	200	200/225	225	250	250	300
Height	H1	mm	135	135	135	143	143	152	152	183
Height	H2	mm	75	75	85	95	95	105	115	135
Total height approx. (****)	H1+H2	mm	210	210	220	238	238	257	267	318
Installation height of the measuring unit	H3	mm	230	230	230	256	256	266	266	373
Flange diameter	D	mm	165	165	185	200	200	220	210	285
Bolt circle diameter	D1	mm	125	125	145	160	160	180	250	240
Number of bolts	-	pcs.	4	4	4	8	4	8	8	8
Screw size	-	mm	M16	M16	M16	M16	M16	M16	M16	M20
Bolt diameter	-	mm	19	19	19	19	19	19	19	23
Weight approx.	-	kg	10,5	10,5	11,8	13,4	13,4	16,9	20,1	31,5

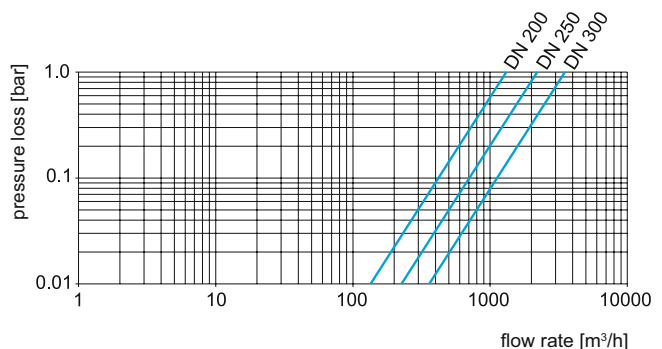
(*) Other measuring ranges (R) on request
 (***) Values refer to standard measuring range
 (****) Total height WPDE/WPHDE + 24mm
 (*****) Condensation possible





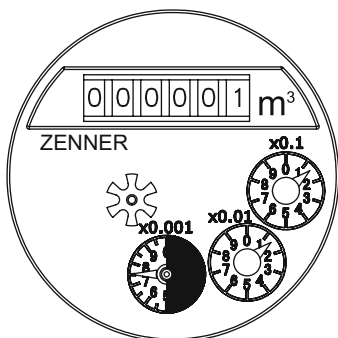
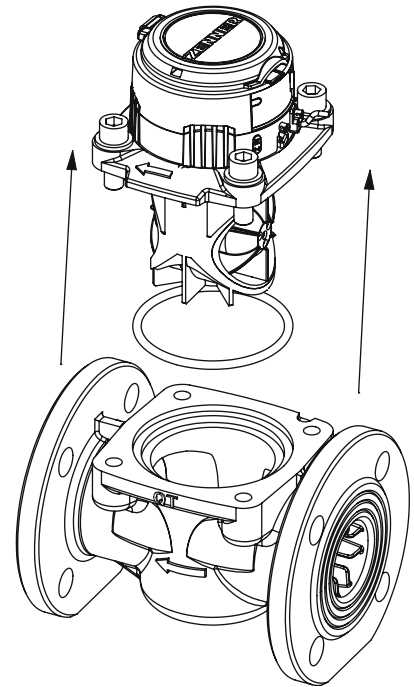
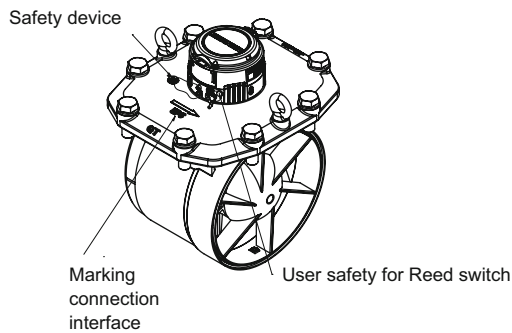
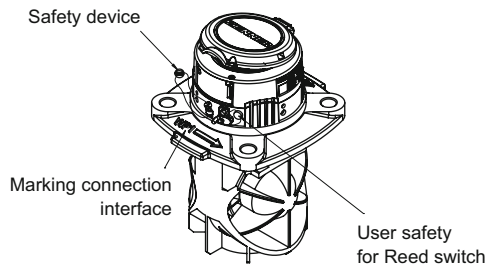
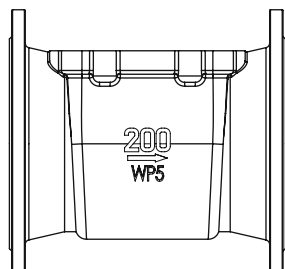
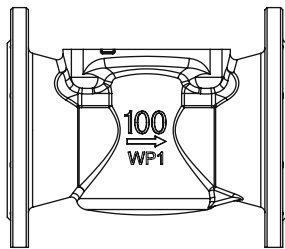
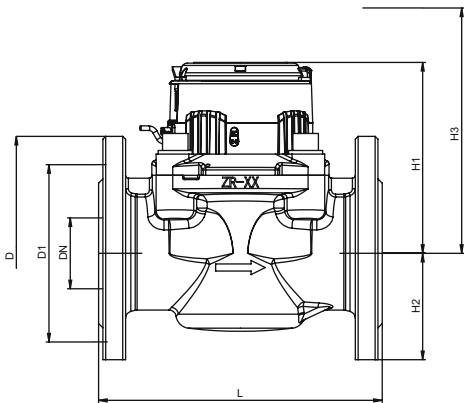
Technical Data WPHD (DN 200 - DN 300)								
Nominal diameter	DN	mm	200	200	250	250	300	300
Permanent flow	Q ₃	m ³ /h	400	400	630	630	1000	1000
Attainable measuring range	Q ₃ /Q ₁	R	R160H	R160H	R160H	R160H	R160H	R160H
Standard measuring range (*)	Q ₃ /Q ₁	R	R100H/63V	R100H/63V	R100H/63V	R100H/63V	R100H/63V	R100H/63V
Overload flow (**)	Q ₄	m ³ /h	500	500	787	787	1250	1250
Minimum flow (**)	Q ₁	m ³ /h	4,0/6,35	4,0/6,36	6,3/10,0	6,3/10,1	10,0/15,87	10,0/15,88
Transitional flow (**)	Q ₂	m ³ /h	6,4/10,16	6,4/10,17	10,08/16,0	10,08/16,1	16,0/25,4	16,0/25,5
Pressure loss at Q ₃	Δp	MPa	0,009	0,009	0,008	0,008	0,008	0,008
Start-up flow rate	-	l/h	2000	2000	2000	2000	2000	2000
Display range	min	l	5	5	5	5	5	5
	max	m ³	9.999.999	9.999.999	9.999.999	9.999.999	9.999.999	9.999.999
Temperature range	-	°C	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50
Operating pressure, max.	MAP	bar	16	10	16	10	16	10
Pulse value Reed	-	l/Imp.	1000/10.000	1000/10.000	1000/10.000	1000/10.000	1000/10.000	1000/10.000
Pulse value modulator disc	-	l/Imp.	100	100	100	100	100	100
Pressure loss at Q ₃	Δp	bar	0,09	0,09	0,08	0,08	0,08	0,08
Mechanical environmental condition	-	-	M2	M2	M2	M2	M2	M2
Climatic condition (****)	-	°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
Weight and dimensions:								
Nominal diameter	DN	mm	200	200	250	250	300	300
Overall length (*)	L	mm	350	350	450	450	500	500
Height	H1	mm	215	215	267	267	250	250
Height	H2	mm	160	160	193	193	220	220
Total height approx. (****)	H1+H2	mm	375	375	460	460	470	470
Installation height of the measuring unit	H3	mm	460	460	460	460	470	470
Flange diameter	D	mm	340	340	405	395	460	445
Bolt circle diameter	D1	mm	295	295	355	350	410	400
Number of bolts	-	pcs.	12	8	12	12	12	12
Screw size	-	mm	M20	M20	M24	M20	M24	M20
Bolt diameter	-	mm	23	23	28	23	28	23
Weight approx.	-	kg	49	49	68	68	105	105

(*) Other measuring ranges (R) on request
 (**) Values refer to standard measuring range
 (***) Total height WPHD/WPHDE + 24mm
 (****) Condensation possible

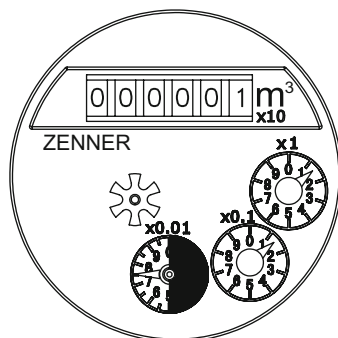




MÄTARKONTROLL



DN 50 - 125
(WSD DN 50 - 200)



DN 150 - 300

