

# WP- Dynamic

Turbine Water Meter  
for hot water up to 130 °C  
DN 40 ... DN 300



## Special Features

Patented hydrodynamically balanced rotor  
Patented symmetrical calibration adjustment  
Hermetically sealed register (IP 68)  
Register may be rotated through 360°  
High overload capability  
Pattern approved removable measuring element  
Up to 3 pulsers (1 x OD, 2 x RD) may be fitted without breaking the approval seal  
Powder coating ensures maximum corrosion protection

**Hot water meters Pressure rate PN 40 please see special leaflet**

## Application

Measurement of high, relatively constant flow rates

## Pattern Approval

22.16

Nominal Diameter DN 50 ... 150

96.01

Marking:  
Metrological class B

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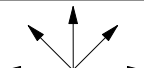
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## Installation

Pipe	horizontal vertical inclined	
Meter head	upwards sideways	

### Installation Requirements

- Unrestricted straight pipe in front of the meter 3 x DN
- No abrupt restrictions directly behind the meter

## Technical Data

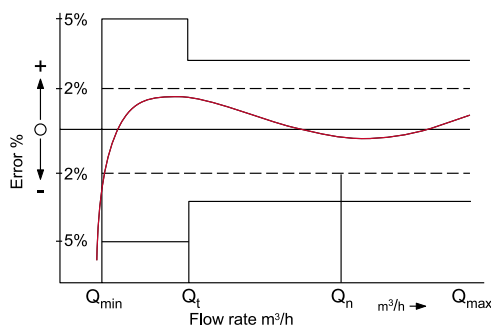
### Performance data WP-Dynamic QH 130 °C

Nominal Diameter		DN	40	50	65	80	100	125	150	200	250	300
Size of meter (acc. to PTB-A22)		Q <sub>n</sub>	10	15	25	40	60	100	150	250	400	600
Q <sub>max</sub>	maximum peak flow once lifetime 24 h Q <sub>max</sub> or 5 min. 1.2 x Q <sub>max</sub>	m <sup>3</sup> /h	20	30	60	90	140	200	300	500	1000	1200
Q <sub>n</sub>	continuous flow (±2%)	m <sup>3</sup> /h	10	15	25	45	70	100	150	250	500	600
Q <sub>t</sub>	transitional flow (±2%)	m <sup>3</sup> /h	1.8	1.8	2.0	3.2	4.8	8.0	12	20	45	50
Q <sub>min</sub>	minimum flow (±5%)	m <sup>3</sup> /h	0.6	0.6	1.0	1.4	2.0	3.5	4.5	8	20	25
	starting flow	m <sup>3</sup> /h	0.25	0.25	0.3	0.35	0.6	1.1	1.7	2.0	10	15

### Performance data table according to PTB-A22 specification class B

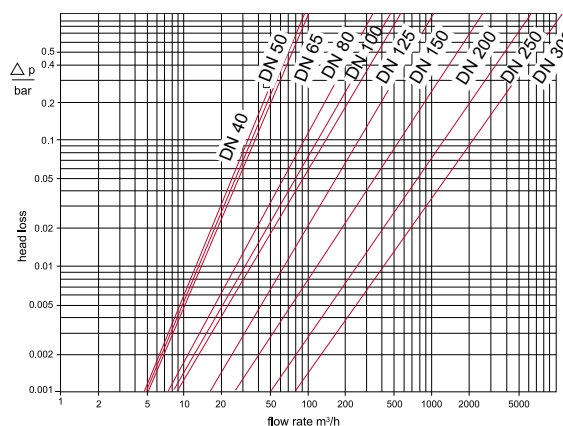
Nominal Diameter		DN	50	65	80	100	125	150	200	250	300
Size of meter (acc. to PTB-A22)		Q <sub>n</sub>	15	25	40	60	100	150	250	400	600
Q <sub>max</sub>	maximum peak flow short time	m <sup>3</sup> /h	30	50	80	120	200	300	500	800	1200
Q <sub>n</sub>	continuous flow (±3%)	m <sup>3</sup> /h	15	25	40	60	100	150	250	400	600
Q <sub>t</sub>	transitional flow (±3%)	m <sup>3</sup> /h	2.25	3.75	6.0	9.0	15.0	22.5	37.5	60	90
Q <sub>min</sub>	minimum flow (±5%)	m <sup>3</sup> /h	0.6	1.0	1.6	2.4	4.0	6.0	10.0	16.0	24.0

## Typical Accuracy Curve



Q<sub>max</sub> = maximum peak flow  
 Q<sub>n</sub> = continuous flow ±2%  
 Q<sub>t</sub> = transitional flow ±2%  
 Q<sub>min</sub> = minimum flow ±5%

## Typical Head Loss Curve



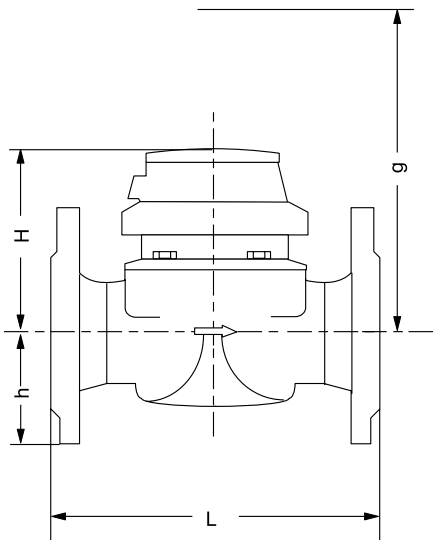
## WP-Dynamic for hot water

# Dimensions and Weights

Nominal Diameter			DN	40	50	65	80	80	100	125	150	200	250	300
Size of meter (acc. to PTB-A22)			Q <sub>n</sub>	10	15	25	40	40	60	100	150	250	400	600
Dimensions	overall length	L *)	mm	220	200	200	200	225	250	250	300	350	450	500
	height	H	mm	120	120	120	150	150	150	160	177	206	231	256
		h	mm	69	73	85	95	95	105	118	135	162	194	226
		g	mm	200	200	200	270	270	270	280	356	441	466	491
Weights	meter		kg	7.4	7.7	10.0	13.6	14.0	18.0	20.5	35.5	50.5	72.3	99.3
	measuring element		kg	1.4	1.4	1.4	3.0	3.0	3.0	3.0	5.5	7.5	7.5	7.5
	body		kg	6.0	6.3	8.6	10.6	11.0	15.0	17.5	30.0	43.0	71.3	91.8

\*) Other overall lengths on request

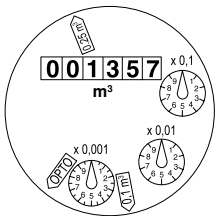
## Dimension Picture



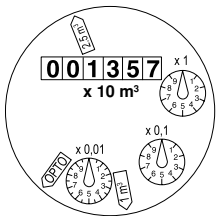
## Materials

Body	cast iron
Measuring element	plastic
Rotor	plastic
We also use the following materials	brass stainless steel

## Dials





DN 40 ... DN 125



DN 150 ... DN 300

Nominal Diameter DN	Smallest reading m³	Max. reading m³
40 ... 125	0.0005	1 000 000
150 ... 300	0.005	10 000 000

## Pulse Values

Pulser		pulse value	
		DN 40 ... DN 125	DN 150 ... DN 300
RD02 / RD022		0.1 and 0.25 m <sup>3</sup> alternatively 0.025 and 0.25 m <sup>3</sup>	1 and 2.5 m <sup>3</sup> alternatively 0.25 and 2.5 m <sup>3</sup>
OD 02		0.001 m <sup>3</sup>	0.01 m <sup>3</sup>
OD 04		0.01 m <sup>3</sup>	0.1 m <sup>3</sup>

## Order Text

Quantity: .....  
 Specification: WP-Dynamic  
 Nominal Diameter: DN .....  
 Size of meter: Qn .....  
 Working temperature: 130 °C  
 Working pressure: PN 16  
 Metrological class: A / B  
 Overall length L: ..... mm  
 Pulse values: ..... / ..... m<sup>3</sup>  
 Flange drilling: acc. to DIN 2501, PN 16  
 Certification: with / without

## Order Example

Quantity: 3  
 Specification: WP-Dynamic  
 Nominal Diameter: DN 50  
 Size of meter: Qn 15  
 Working temperature: 130 °C  
 Working pressure: PN 16  
 Metrological class: B  
 Overall length L: 200 mm  
 Pulse values: 0.25 / 0.1 m<sup>3</sup>  
 Flange drilling: acc. to DIN 2501, PN 16  
 Certification: with