

# WP- Dynamic

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



## Special Features

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- 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

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Measurement of high, relatively constant flow rates

## Pattern Approval

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22.16

Nominal Diameter DN 50 ... 150

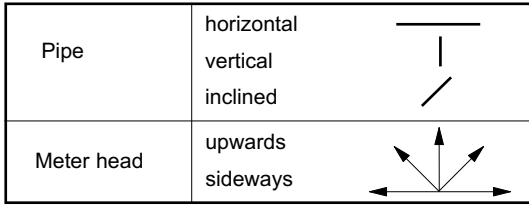
96.01

Marking:  
Metrological class B

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# Installation



## Installation Requirements

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

# Technical Data

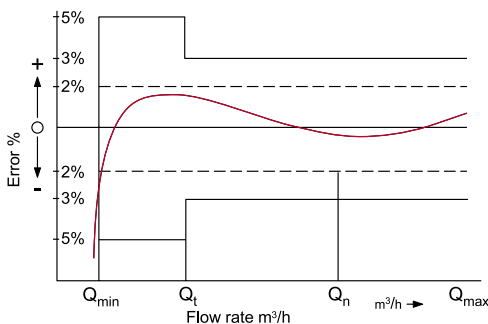
## Performance data WP-Dynamic QH 130 °C

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 live time 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

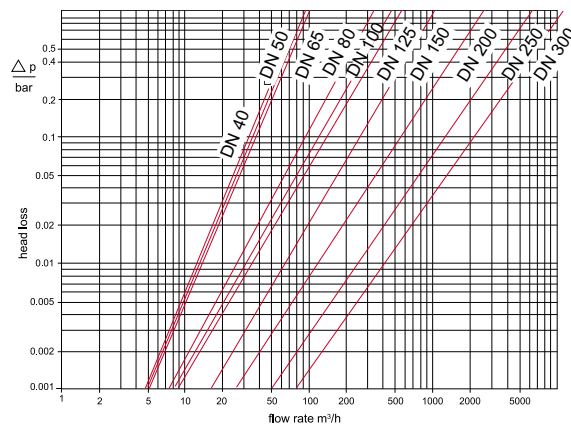
Nominal Diameter		DN	50	65	80	100	125	150	200	250	300
Size of meter (acc. to PTB-A22)		Q <sub>n</sub>	15	25	40	60	100	150	250	400	600
Q <sub>max</sub>	maximum peak flow short time	m <sup>3</sup> /h	30	50	80	120	200	300	500	800	1200
Q <sub>n</sub>	continuous flow (±3%)	m <sup>3</sup> /h	15	25	40	60	100	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



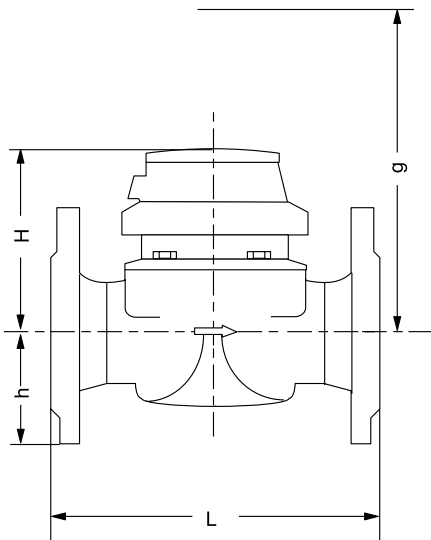
# WP-Dynamic for hot water

# 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

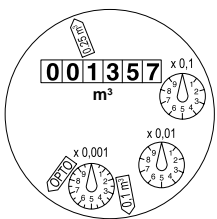
## Dimension Picture



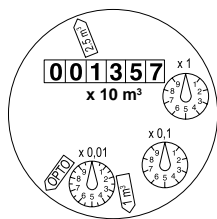
## Materials

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 m <sup>3</sup>	Max. reading m <sup>3</sup>
40 ... 125	0.0005	1 000 000
150 ... 300	0.005	10 000 000

## WP-Dynamic for hot water

## Pulse Values

Pulser		pulse value	
		DN 40 ... DN 125	DN 150 ... DN 300
RD 02		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