

# WP-QF

Turbine Water Meter  
for cold water up to 40 °C  
for hot water up to 130 °C  
PN25/40, DN 50 ... DN 300



For cold water up to 40 °C

For hot water up to 130 °C

## Special Features

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Sealed register water proof (IP 67)  
Sealed register may be rotated through 360°  
Up to 3 pulsers can be fitted without breaking the meter seal  
Maximum corrosion protection by powder coating  
Not affected by external magnetic fields  
Interchangeable measuring element  
Performance data better than class B

## Application

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Measuring of cold water up to 40 °C (overloadable up to 50 °C) in water supply pipelines with pressure up to 25/40 bar

## Special Features

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Sealed register may be rotated through 360°  
Up to 3 pulsers can be fitted without breaking the meter seal  
Maximum corrosion protection by powder coating  
Not affected by external magnetic fields  
Interchangeable measuring element

## Application

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Flow sensor for heat meters  
Measuring of hot water up to 130 °C (overloadable up to 150 °C) in heating systems with pressure up to 25/40 bar

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The logo for Sensus Metering Systems. It features a stylized blue and yellow circular icon to the left of the company name. The word "SENSUS" is in a large, bold, blue sans-serif font, and "METERING SYSTEMS" is in a smaller, blue sans-serif font below it.

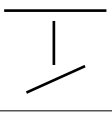
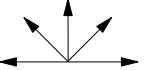
# Pattern Approval Sign

**D 79**  
 Cold Water Meter  
 Nominal Diameter  
 DN 50 ... 100  
**6.132.02**  
 Marking:  
 Metrological class B  
 30 °C

**D 80**  
 Cold Water Meter  
 Nominal Diameter  
 DN 150 ... 300  
**6.132.01**  
 Marking:  
 Metrological class B  
 30 °C

**22.16**  
**81.20**  
 Hot Water Meter  
 Nominal Diameter  
 DN 50 ... 200  
 Marking:  
 Metrological class A

## 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

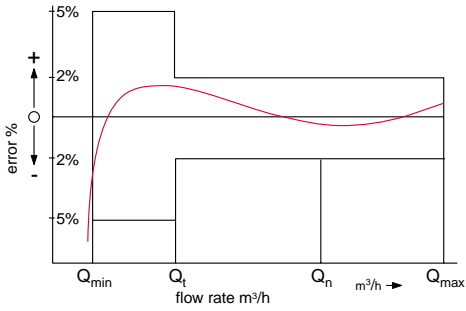
## Performance Table 40 °C

Nominal Diameter	DN	50	80	100	150	200	250	300	
Size of meter (acc. to EEC)	Q <sub>n</sub>	15	40	60	150	250	400	600	
Q <sub>max</sub>	Maximum peak flow (few minutes)	m <sup>3</sup> /h	80	200	250	600	800	1200	2000
Q <sub>n</sub>	continuous flow ± 2%	m <sup>3</sup> /h	40	120	180	400	550	750	1000
Q <sub>t</sub>	transitional flow ± 2%	m <sup>3</sup> /h	1.0	1.0	2.5	4.0	6.0	12	15
Q <sub>min</sub>	minimum flow ± 5%	m <sup>3</sup> /h	0.5	0.6	1.2	2.75	4.0	6.0	12
	starting flow	m <sup>3</sup> /h	0.2	0.25	0.3	1.7	1.8	3.0	9.0

## Performance Table 130 °C

Nominal Diameter	DN	50	80	100	150	200	250	300	
Size of meter (acc. to EEC)	Q <sub>n</sub>	15	40	60	150	250	400	600	
Q <sub>max</sub>	Maximum peak flow (few minutes)	m <sup>3</sup> /h	30	90	140	300	500	1000	1200
Q <sub>n</sub>	continuous flow ± 3%	m <sup>3</sup> /h	15	45	70	150	250	500	600
Q <sub>t</sub>	transitional flow ± 3%	m <sup>3</sup> /h	1.8	3.2	4.8	12	20	45	50
Q <sub>min</sub>	minimum flow ± 5%	m <sup>3</sup> /h	1.0	1.4	2.0	4.5	8	25	30
	starting flow	m <sup>3</sup> /h	0.25	0.35	0.6	1.7	2.0	10	15

## Typical Accuracy Curve



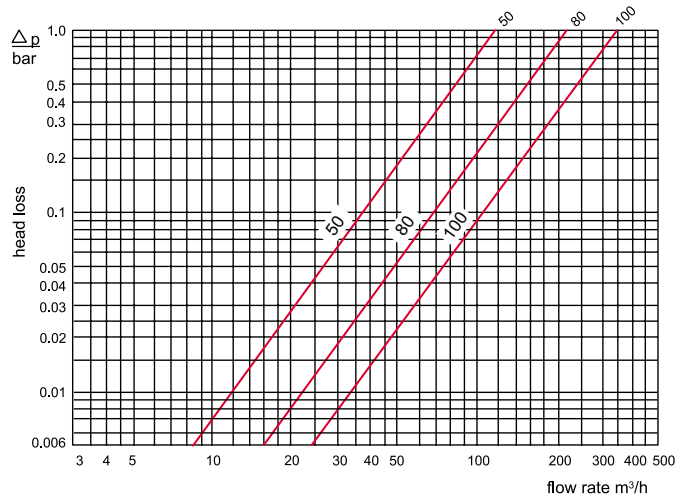
$Q_{max}$  = maximum peak flow

$Q_n$  = continuous flow

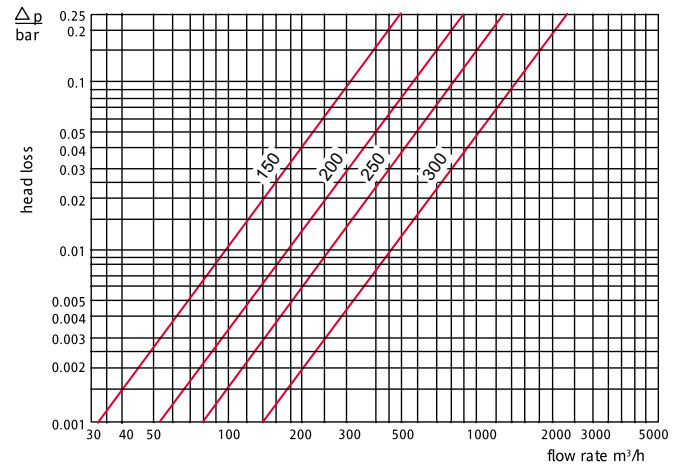
$Q_t$  = transitional flow  $\pm 2\%$

$Q_{min}$  = minimum flow  $\pm 5\%$

## Typical Head Loss Curve

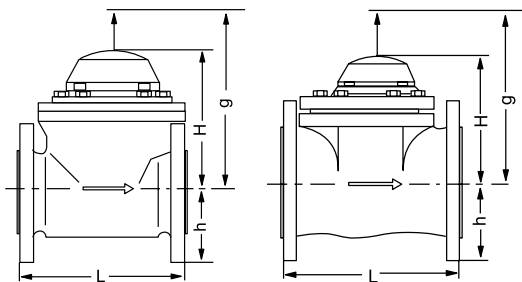


DN 50 ... 125



DN 150 ... 300

## Dimension Pictures



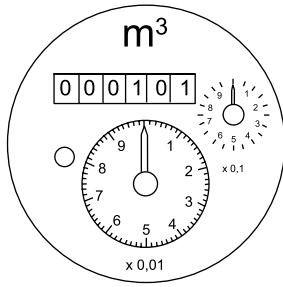
DN 50 ... DN 100

DN 150 ... DN 300

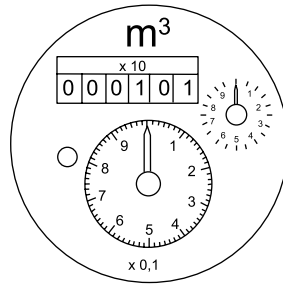
## Dimensions and Weights

Nominal Diameter	DN	50	80	100	150	200	250	300	
Size of meter (EEC)	$Q_n$	15	40	60	150	250	400	600	
Working pressure	PN	bar	40	40	40	40	40	25	25
Overall length	L	mm	200	225	250	300	350	450	500
Height	H	mm	175	175	175	233	233	321	321
	h	mm	82	100	110	135	162	194	219
	g	mm	360	360	360	470	470	680	680
Weight	meter	kg	15	18	24	43	57	118	154
	meas. unit	kg	3	3	3	9	9	22	22
	body	kg	12	15	21	34	48	96	132

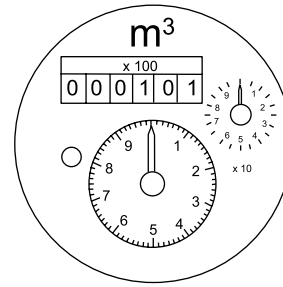
# Dials



DN 50 ... DN 100



DN 150 ... DN 250



DN 300

# Pulse Values

Nominal Diameter	DN		50 ... 125 1 pulse = ...	150 ... 250 1 pulse = ....	300 1 pulse = ...
Cold water meter	Standard	R 01	1 m <sup>3</sup> 0.1 m <sup>3</sup>	10 m <sup>3</sup> 1 m <sup>3</sup>	100 m <sup>3</sup> 10 m <sup>3</sup>
Hot water meter	Standard	R 02	0.25 m <sup>3</sup> 0.1 m <sup>3</sup>	2.5 m <sup>3</sup> 1 m <sup>3</sup>	25 m <sup>3</sup> 10 m <sup>3</sup>
	with special register	R 02	0.25 m <sup>3</sup> 0.025 m <sup>3</sup>	2.5 m <sup>3</sup> 0.25 m <sup>3</sup>	25 m <sup>3</sup> 2.5 m <sup>3</sup>
Cold water meter		OP 01 OP 03	0.001 m <sup>3</sup> 0.01 m <sup>3</sup>	0.01 m <sup>3</sup> 0.1 m <sup>3</sup>	0.1 m <sup>3</sup> 1.0 m <sup>3</sup>
Hot water meter		OP 02 OP 04	0.001 m <sup>3</sup> 0.01 m <sup>3</sup>	0.01 m <sup>3</sup> 0.1 m <sup>3</sup>	0.1 m <sup>3</sup> 1.0 m <sup>3</sup>

# Order Text

Quantity: .....  
 Specification: WP-QF  
 Nominal Diameter: DN .....  
 Size of meter: Q<sub>n</sub> .....  
 Working temperature: 40 °C / 130 °C  
 Working pressure: PN 25 / 40  
 Metrological class: A / B  
 Overall length L: ..... mm  
 Pulse values: ..... / ..... m<sup>3</sup>  
 Flange drilling: acc. to DIN 2501, PN ....  
 Certification: with / without

# Order Example

Quantity: 2  
 Specification: WP-QF  
 Nominal Diameter: DN 50  
 Size of meter: Q<sub>n</sub> 15  
 Working temperature: 40 °C  
 Working pressure: PN 25  
 Metrological class: B  
 Overall length L: 200 mm  
 Pulse values: 0.1 / 1 m<sup>3</sup>  
 Flange drilling: acc. to DIN 2501, PN 25  
 Certification: with