

WS- Dynamic

Turbine Water Meter
for hot water up to 130 °C
DN 50 ... DN 150



Special Features

Measuring range better than metrological class C
Hermetically sealed register (IP 68)
Interchangeable measuring element
High overload capability
Up to 3 pulsers (1 x OD, 2 x RD) may be fitted without breaking the approval seal
Register may be rotated through 360°
Powder coating ensures maximum corrosion protection
Not affected by external magnetic fields
Can be used as flow sensor for heat meters

Application

Measurement of low and medium flow rates with variable flow profile

Pattern Approval

22.16

97.03

Nominal Diameter DN 50 ... DN 150

Marking:

Metrological class C
Installation H

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 **SENSUS**
METERING SYSTEMS

Installation

Pipe	horizontal	
Meter head	upwards	

Installation Requirements

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

Technical Data

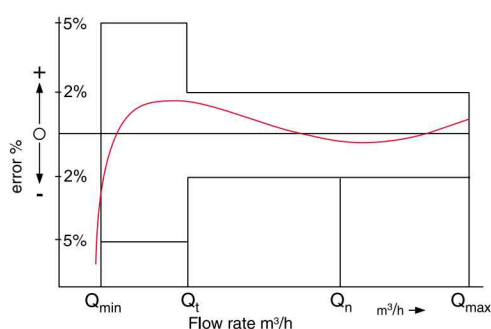
Performance data WS-Dynamic for hot water

Nominal Diameter	DN	50	65	80	100	150
Size of meter (acc. to PTB-A22)	Q_n	15	25	40	60	150
Maximum peak flow (few minutes) $\pm 2\%$	Q_{max}	30	60	85	125	300
Continuous flow $\pm 2\%$	Q_n	15	25	40	60	150
Transitional flow $\pm 2\%$	Q_t	1.5	2.5	2.5	4.0	12
Minimum flow $\pm 5\%$	Q_{min}	0.25	0.30	0.30	0.50	0.80
Starting flow	m^3/h	0.06	0.07	0.10	0.15	0.50

Performance data acc. to PTB-A22-specification class C

Nominal Diameter	DN	50	65	80	100	150
Size of meter (acc. to PTB-A22)	Q_n	15	25	40	60	150
Maximum peak flow (short time)	Q_{max}	30	50	80	120	300
Continuous flow	Q_n	15	25	40	60	150
Transitional flow $\pm 3\%$	Q_t	1.5	2.5	4.0	6.0	15.0
Minimum flow $\pm 5\%$	Q_{min}	1.2	2.0	3.2	4.8	12.0

Typical Accuracy Curve



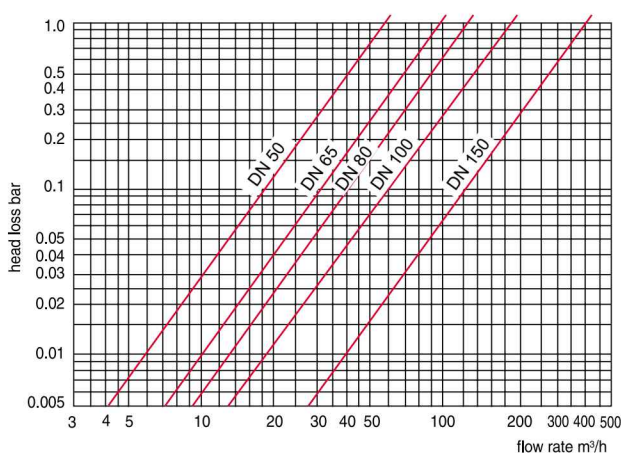
Q_{max} = maximum peak flow

Q_n = continuous flow $\pm 2\%$

Q_t = transitional flow $\pm 2\%$

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

Typical Head Loss Curve



WS-Dynamic for hot water

Dimensions and Weights

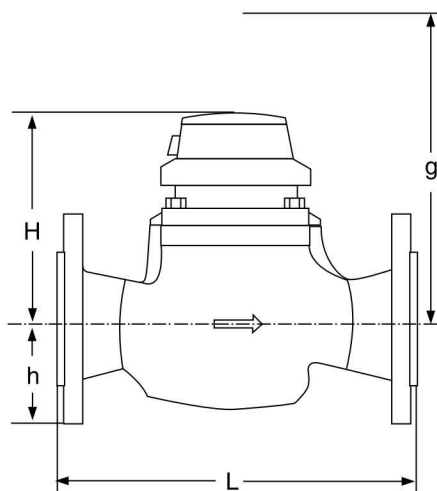
Pressure Rating PN 16

Nominal Diameter				DN	50	65	80	100	150
Size of meter (acc. to PTB-A22)				Q _n	15	25	40	60	150
Dimensions	overall length	L	mm	270	300	300	360	500	
	height	H	mm	151	161	161	191	301	
		h	mm	80	100	100	110	180	
		g	mm	281	301	301	341	581	
Weights	meter		kg	13.5	17.5	19.5	32.5	91.5	
	measuring element		kg	2.5	2.5	2.5	7.5	17.5	
	body		kg	11.0	15.0	17.0	25.0	74.0	

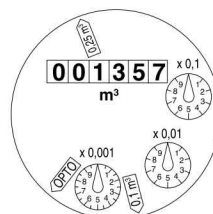
Pressure Rating PN 40

Nominal Diameter				DN	50	65	80	100	150
Size of meter (acc. to PTB-A22)				Q _n	15	25	40	60	150
Dimensions	overall length	L	mm	270	300	300	360	500	
	height	H	mm	171	171	171	211	311	
		h	mm	80	100	100	115	180	
		g	mm	291	311	311	381	581	
Weights	meter		kg	19.5	24.5	27.5	48.5	114.5	
	measuring element		kg	4.5	4.5	4.5	14.5	31.5	
	body		kg	15.0	20.0	23.0	36,0	83,0	

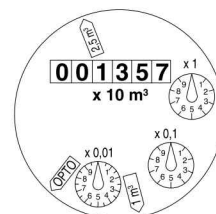
Dimension Picture



Dials



DN 50 ... DN 100



DN 150

Nominal Diameter DN	Resolution m ³	Max. reading m ³
50 ... 100	0.0005	1 000 000
150	0.005	10 000 000

Materials

Body	PN 16	cast iron
	PN 40	spheroidal cast iron
Measuring element		plastic
Rotor		plastic
We also use the following material		brass, stainless steel

Pulse Values

Pulser		pulse value	
		Dn 50 ... DN 100	DN 150
RD02 / RD022		0.25 and 0.1 m ³ alternatively 0.25 and 0.025 m ³	2.5 and 1 m ³ alternatively 2.5 and 0.25 m ³
OD 02		0.001 m ³	0.01 m ³
OD 04		0.01 m ³	0.1 m ³

Order Text

Quantity:
 Specification: WS-Dynamic
 Nominal Diameter: DN
 Size of meter: Q_n
 Metrological class: A
 Working temperature: 130 °C
 Working pressure: PN 16
 Overall length L: mm
 Pulse values: / m³
 Flange drilling: acc. to DIN 2501, PN 16
 Certification: with / without

Order Example

Quantity: 3
 Specification: WS-Dynamic
 Nominal Diameter: DN 50
 Size of meter: Q_n 15
 Metrological class: A
 Working temperature: 130 °C
 Working pressure: PN 16
 Overall length L: 270 mm
 Pulse values: 1 / 0.1 m³
 Flange drilling: acc. to DIN 2501, PN 16
 Certification: with