

# WS- Dynamic

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



## Special Features

Hermetically sealed register (IP 68)  
Measuring range better than metrological class B  
Approved interchangeable measuring element  
Register may be rotated through 360°  
Powder coating ensures maximum corrosion protection  
Not affected by external magnetic fields

## Available Options

Up to 3 pulsers (1 x OD, 2 x RD) may be fitted without breaking the approval seal

May be equipped with 3 different electronic registers



HYBRID



ELECTRONIC



ENCODER

## Application

Measurement of medium flowrates with variable flow profile  
Use in narrow installation sites without straight inlet pipe

## Pattern Approval

D 80

Nominal Diameter DN 50 ... DN 150



6.132.02

Marking:  
Metrological class B  
Installation H · 30 °C

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 **SENSUS**  
METERING SYSTEMS

# Installation

Pipe	horizontal	
Meter head	upwards	

## Installation requirements

No requirements for inlet and outlet pipe  
(for approved meters according 75/33 EEC:  
3xDN inlet pipe in front of the meter)

# Technical Data

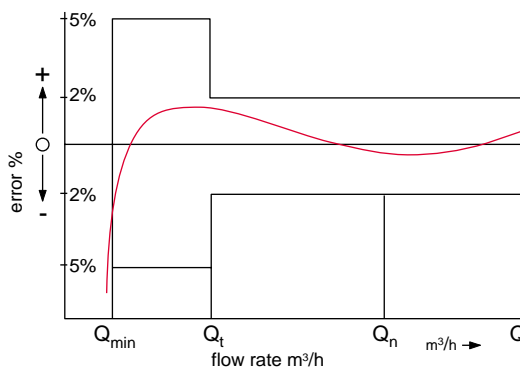
## Performance data WS-Dynamic

Nominal Diameter	DN	50	65	80	100	150	
Size of meter (acc. to EEC)	$Q_n$	15	25	40	60	150	
Maximum peak flow (few minutes)	$Q_{max}$	$m^3/h$	35	70	110	180	350
Continuous flow	$Q_n$	$m^3/h$	20	40	55	90	250
Transitional flow $\pm 2\%$	$Q_t$	$m^3/h$	1.0	2.5	2.5	3.0	5.0
Minimum flow $\pm 5\%$	$Q_{min}$	$m^3/h$	0.15	0.20	0.20	0.30	0.80
Starting flow	$m^3/h$	0.05	0.07	0.10	0.11	0.50	

## Performance data acc. to EEC-specification class B

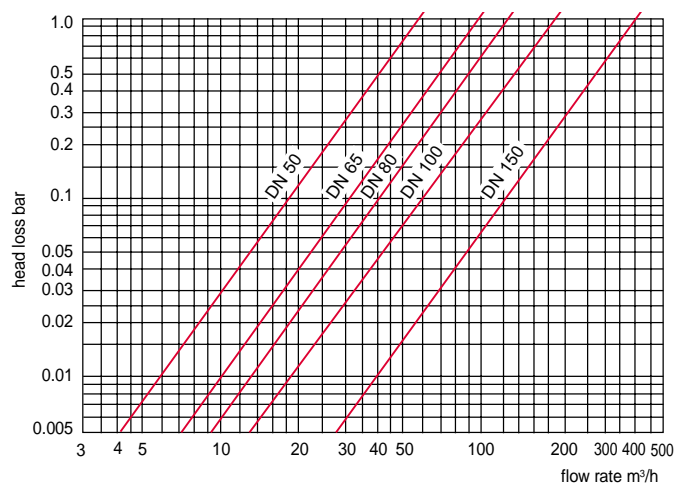
Nominal Diameter	DN	50	65	80	100	150	
Size of meter (acc. to EEC)	$Q_n$	15	25	40	60	150	
Maximum peak flow (short time)	$Q_{max}$	$m^3/h$	30	50	80	120	300
Transitional flow $\pm 2\%$	$Q_n$	$m^3/h$	3.0	5.0	8.0	12.0	30
Minimum flow $\pm 5\%$	$Q_{min}$	$m^3/h$	0.45	0.75	1.20	1.80	4.5

## 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



# Dimensions and Weights

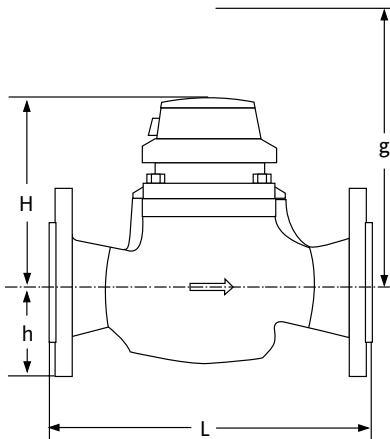
## Pressure Rating PN 16

Nominal Diameter		DN	50	65	80	100	150	
Size of meter (acc. to EEC)		Q <sub>n</sub>	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	12.5	16.5	18.5	31.5	89.5	
	measuring element	kg	1.5	1.5	1.5	6.5	15.5	
	body	kg	11.0	15.0	17.0	25.0	74.0	

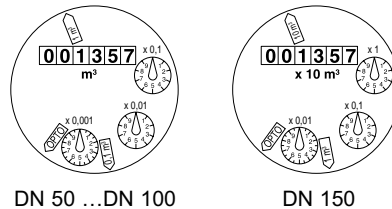
## Pressure Rating PN 40

Nominal Diameter		DN	50	65	80	100	150	
Size of meter (acc. to EEC)		Q <sub>n</sub>	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	12.5	31.5	
	body	kg	15.0	20.0	23.0	36	83	

## Dimension Picture



## Dials





Nominal Diameter DN	Smallest reading m <sup>3</sup>	Max. reading m <sup>3</sup>
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
RD 01		0.1 and 1 m <sup>3</sup> alternatively 0.01 and 1 m <sup>3</sup>	1 and 10 m <sup>3</sup> alternatively 0.1 and 10 m <sup>3</sup>
OD 01		0.001 m <sup>3</sup>	0.01 m <sup>3</sup>
OD 03		0.01 m <sup>3</sup>	0.1 m <sup>3</sup>

### Order Text

Quantity: .....

Specification: WS-Dynamic

Nominal Diameter: DN .....

Size of meter : Qn .....

Metrological class: A / B

Working temperature: 50 °C

Working pressure: PN 16

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: WS-Dynamic

Nominal Diameter: DN 50

Size of meter: Qn 15

Metrological class: B

Working temperature: 50 °C

Working pressure: PN 16

Overall length L: 270 mm

Pulse values: 1 / 0.1 m<sup>3</sup>

Flange drilling: acc. to DIN 2501, PN 16

Certification: with