



WP-Dynamic

**Turbine Water Meter for cold water up to
50 °C / PN 16 DN 40 ... DN 300**

Main Features

- Hermetically sealed register (IP 68)
- Patented hydrodynamically balanced rotor
- Patented symmetrical calibration adjustment
- Register may be rotated through 360°
- High overload capability
- Pattern approved removable measuring element
- Powder coating affords max. corrosion protection
- Not affected by external magnetic fields

APPLICATIONS

Measurement of high, relatively constant flow rates, e.g. behind pumps



Available options

Up to 3 pulsers (1 x OD, 2 x RD) may be fitted without breaking the approval seal
¼" connection port for pressure sensors

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Installation

Pipe	horizontal vertical inclined	
Meter head	upwards sideways	

Installation Requirements

Unrestricted straight pipe upstream of the meter 3 x DN

No abrupt restrictions downstream the meter

Performance Data

Performance data WP-Dynamic 50 °C

Nominal Diameter			DN	40	50	65	80	100	125	150	200	250	300
Q_{max}	maximum peak flow once in life time 24 h Q_{max} or 5 min. $1.2 \times Q_{max}$	(±2%)	m ³ /h	60	90	120	200	300	350	600	1200	1600	2000
Q_n	continuous flow	(±2%)	m ³ /h	40	50	70	120	230	250	450	800	1250	1400
Q_t	transitional flow	(±2%)	m ³ /h	0.8	0.7	0.8	0.8	1.8	2.0	4.0	6.0	11.0	15.0
Q_{min}	minimum flow	(±5%)	m ³ /h	0.30	0.30	0.40	0.50	0.80	1.00	1.8	4.0	6.0	12.0
	starting flow		m ³ /h	0.15	0.15	0.20	0.25	0.25	0.5	1.0	1.5	3.0	8.0

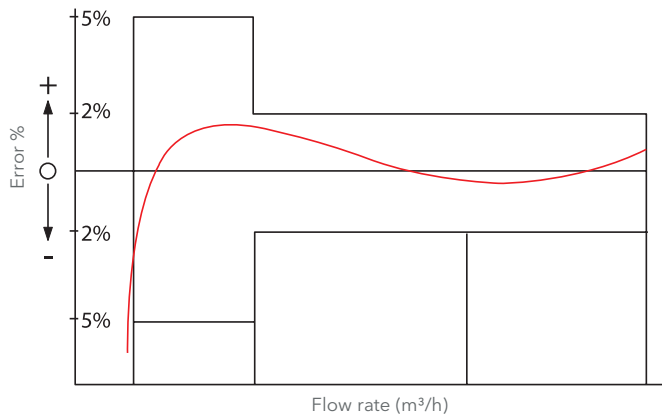
Performance data acc. to OIML R-49 resp. ISO 4064:2014 specification

Nominal Diameter			DN	40	50	65	80	100	125	150	200	250	300
Size of meter (acc. to EEC)			Qn	10	15	25	40	60	100	150	250	400	600
Q_4	maximum peak flow short time		m ³ /h	31.25	50	78.75	125	200	312.5	500	787.5	1250	2000
Q_3	continuous flow		m ³ /h	25	40	63	100	160	250	400	630	1000	1600
Q_2	transitional flow		m ³ /h	0.63	0.64	1.01	1.6	2.6	4	6.4	10.1	16	40.6
Q_1	minimum flow		m ³ /h	0.4	0.4	0.63	1	1.6	2.5	4	6.3	10	25.4
	Ratio			63	100	100	100	100	100	100	100	100	63

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Typical Accuracy Curve



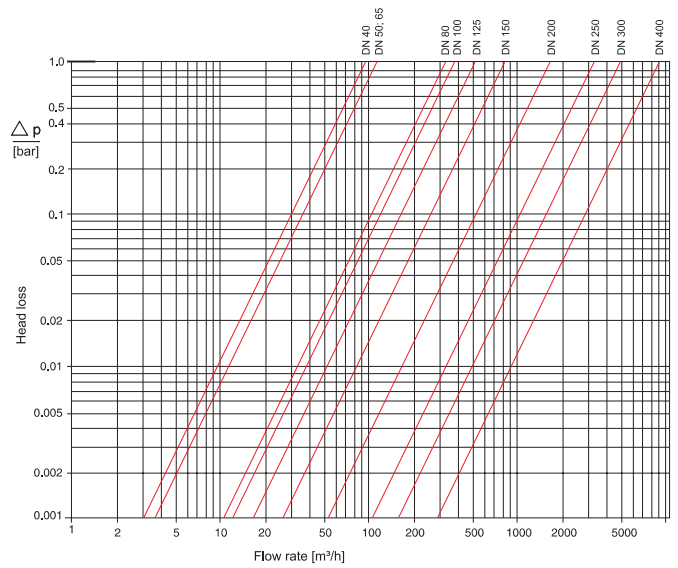
Q_4 = maximum peak flow

Q_3 = continuous flow

Q_2 = transitional flow $\pm 2\%$

Q_1 = minimum flow $\pm 5\%$

Typical Head Loss Curve

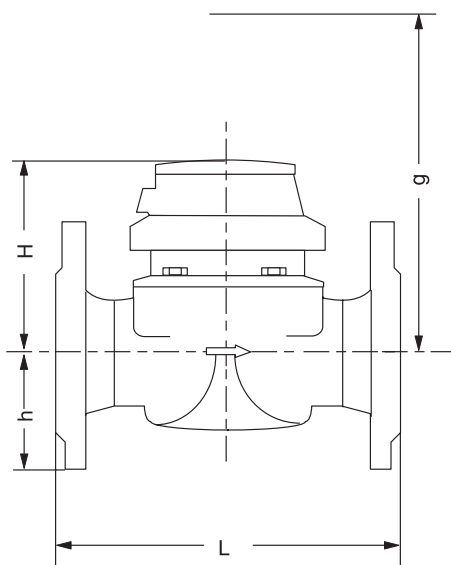


Dimensions and Weights

Nominal Diameter		DN	40	50	65	80	80	100	125	150	200	250	300	
Dimension	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	96	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	63.8	91.8

*) Other overall lengths on request

Dimensional Diagram



Materials

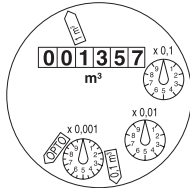
Body	PN16	cast iron
Measuring element		plastic
Rotor		plastic
We also use the following materials		brass, stainless, steel

WP-Dynamic

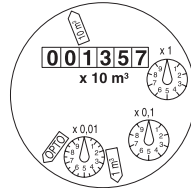
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Dials

Diameter Nominal DN	Smallest Reading m ³	Max. Reading m ³
50 ... 125	0.0005	1 000 000
150 ... 300	0.005	10 000 000





DN 40 ... DN 125



DN 150 ... DN 300

Pulse Values

Pulser		pulse value	
		DN 40 ... DN 125	DN 150 ... 300
RD 01		0.1 and 1 m ³ alternatively 0.01 and 1 m ³	1 and 10 m ³ alternatively 0.1 and 10 m ³
OD 01		0.001 m ³	0.01 m ³
OD 03		0.01 m ³	0.1 m ³

Available Variants

Diameter Nominal	DN	40	50	65	80	80	100
Overall length *)	mm	220	200	200	200	225	250
Order no.	PN16	828593	828595	828597	828599	828601	828603

Diameter Nominal	DN	125	150	200	250	300
Overall length *)	mm	250	300	350	450	500
Order no.	PN16	828605	828607	828717	828719	828743

*) Other overall lengths on request

Order Example

WP-Dynamic, DN 50, 50/16, L = 200 mm, 1/0.1 m³
 drilled according to EN 1092 PN 16
 828595

type
 diameter nominal
 working temperature
 pressure rate
 overall length
 pulse values
 flange drilling
 order no.



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