

WP- Dynamic

Turbine Water Meter
for cold water up to 50 °C / PN 16
DN 40 ... DN 400



Special Features

- Hermetically sealed register (IP 68)
- Patented hydrodynamically balanced rotor (\leq DN 300)
- Patented symmetrical calibration adjustment (\leq DN 300)
- 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

Application

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

Options

- Up to 3 pulsers (1 x OD, 2 x RD) may be fitted without breaking the approval seal
- 1/4" connection port for pressure sensors
- May be equipped with 3 different electronic registers



HYBRID



ELECTRONIC



ENCODER

Cold water meters pressure rate PN 40 please see special leaflet

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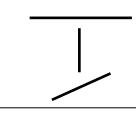
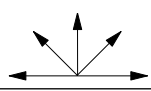
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Pattern Approval Sign

D95	Nominal Diameter DN 40 ... DN 300
6.132.36	Marking: Metrological class B 30 °C
D80	Nominal Diameter DN 400
6.132.01	Marking: Metrological class B 30 °C

Installation

Pipe	horizontal vertical inclined	
Meter head	upwards sideways	

Installation Requirements

Unrestricted straight pipe in front of the meter 3 x DN (DN400 5 x DN)
No abrupt restrictions directly behind the meter

Performance Table

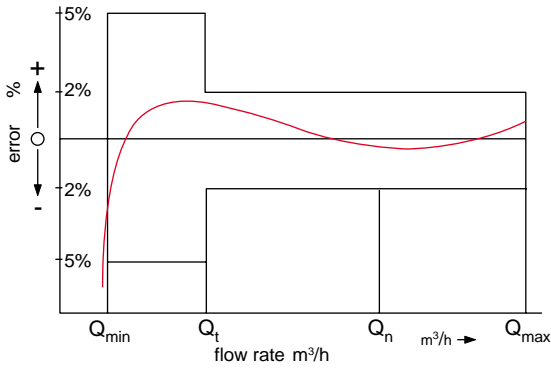
Performance data WP-Dynamic 50 °C

Nominal Diameter	DN	40	50	65	80	100	125	150	200	250	300	400	
Size of meter (acc. to EEC)	Q_n	10	15	25	40	60	100	150	250	400	600	1000	
Q_{max}	maximum peak flow once in life time 24 h Q_{max} or 5 min. 1,2 x Q_{max} ($\pm 2\%$)	m^3/h	60	90	120	200	300	350	600	1200	1600	2000	3000
Q_n	continuous flow ($\pm 2\%$)	m^3/h	40	50	70	120	230	250	450	800	1250	1400	2000
Q_t	transitional flow ($\pm 2\%$)	m^3/h	0.8	0.7	0.8	0.8	1.8	2.0	4.0	6.0	11.0	15.0	50
Q_{min}	minimum flow ($\pm 5\%$)	m^3/h	0.30	0.30	0.40	0.50	0.80	1.00	1.8	4.0	6.0	12.0	25
	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	15

Performance data according to EEC-specification 30 °C class B

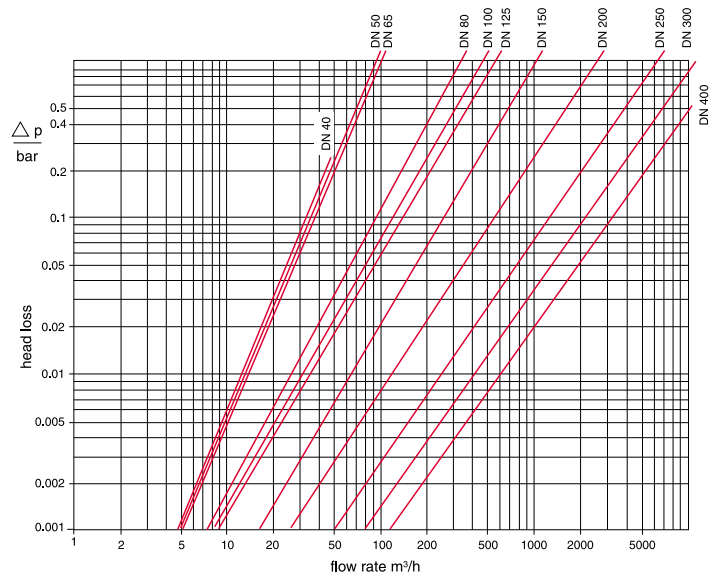
Nominal Diameter	DN	40	50	65	80	100	125	150	200	250	300	400	
Size of meter (acc. to EEC)	Q_n	10	15	25	40	60	100	150	250	400	600	1000	
Q_{max}	maximum peak flow short time	m^3/h	30	30	50	80	120	200	300	500	800	1200	2000
Q_n	continuous flow	m^3/h	15	15	25	40	60	100	150	250	400	600	1000
Q_t	transitional flow	m^3/h	3.0	3.0	5.0	8.0	12.0	20.0	30	50	80	120	200
Q_{min}	minimum flow	m^3/h	0.45	0.45	0.75	1.20	1.80	3.00	4.5	7.5	12.0	18.0	30

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

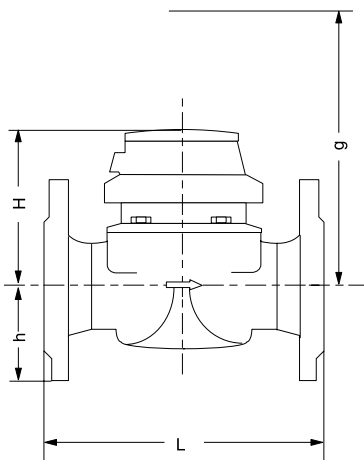


Dimensions and Weights

Nominal Diameter		DN	40	50	65	80	80	100	125	150	200	250	300	400	
Size of meter (acc. to EEC)		Q_n	10	15	25	40	40	60	100	150	250	400	600	1000	
Dimensions	overall length	L *)	mm	220	200	200	200	225	250	250	300	350	450	500	500
	height	H	mm	120	120	120	150	150	150	160	177	206	231	256	380
		h	mm	69	73	85	95	95	105	118	135	162	194	226	295
		g	mm	200	200	200	270	270	270	280	356	441	466	491	785
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	187	
	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	25	
	body	kg	6.0	6.3	8.6	10.6	11.0	15.0	17.5	30.0	43.0	63.8	91.8	162	

*) Other overall lengths on request

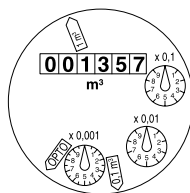
Dimension Picture



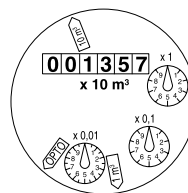
Materials

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

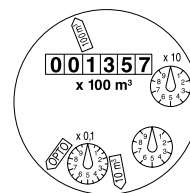
Dials



DN 40 ... DN 125





DN 150 ... DN 300



DN 400

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
400	0.05	100 000 000

Pulse Values

Pulser		DN 40 ... DN 125	pulse value DN 150 ... DN 300	DN 400
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	10 and 100 m ³
OD 01		0.001 m ³	0.01 m ³	0.1 m ³
OD 03		0.01 m ³	0.1 m ³	1 m ³