

# WP-Dynamic

Flow Sensor  
for hot water up to 130 °C  
DN 40 ... DN 300



## Main characteristics

Patented hydrodynamically balanced rotor  
Patented symmetrical calibration adjustment  
Hermetically sealed register (IP 68)  
Register may be rotated through 360°  
High overload capability  
Removable measuring element  
Up to 3 pulsers (1 x OD, 2 x RD) may be fitted without breaking the approval seal  
Powder coating ensures maximum corrosion protection

Flow Sensor Pressure rate PN 40 please see separate leaflet

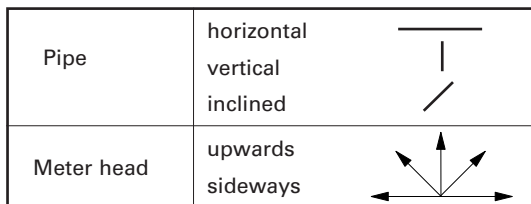
## Application

Measurement of high, relatively constant flow rates

## Pattern Approval

22.16	Nominal Diameter DN 50 ... 150
96.01	Marking: Metrological class B

# Installation



## Installation Requirements

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

# Technical Data

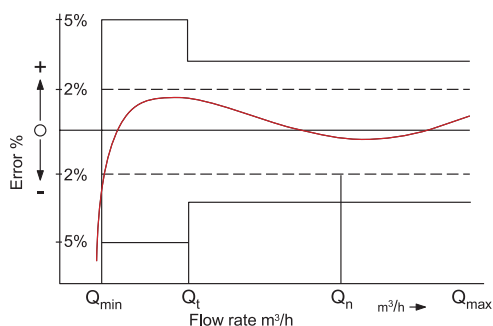
## Performance data WP-Dynamic 130 °C

Nominal Diameter		DN	40	50	65	80	100	125	150	200	250	300
Size of meter (acc. to PTB-A22)		Q <sub>n</sub>	10	15	25	40	60	100	150	250	400	600
Q <sub>max</sub>	maximum peak flow once lifetime 24 h Q <sub>max</sub> or 5 min. 1.2 x Q <sub>max</sub>	m <sup>3</sup> /h	20	30	60	90	140	200	300	500	1000	1200
Q <sub>n</sub>	continuous flow (±2%)	m <sup>3</sup> /h	10	15	25	45	70	100	150	250	500	600
Q <sub>t</sub>	transitional flow (±2%)	m <sup>3</sup> /h	1.8	1.8	2.0	3.2	4.8	8.0	12	20	45	50
Q <sub>min</sub>	minimum flow (±5%)	m <sup>3</sup> /h	0.6	0.6	1.0	1.4	2.0	3.5	4.5	8	20	25
	starting flow	m <sup>3</sup> /h	0.25	0.25	0.3	0.35	0.6	1.1	1.7	2.0	10	15

## Performance data table according to PTB-A22 specification class B

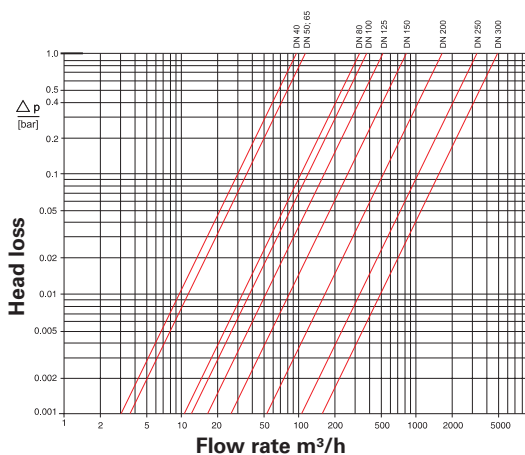
Nominal Diameter		DN	50	65	80	100	125	150	200	250	300
Size of meter (acc. to PTB-A22)		Q <sub>n</sub>	15	25	40	60	100	150	250	400	600
Q <sub>max</sub>	maximum peak flow short time	m <sup>3</sup> /h	30	50	80	120	200	300	500	800	1200
Q <sub>n</sub>	continuous flow (±3%)	m <sup>3</sup> /h	15	25	40	60	100	150	250	400	600
Q <sub>t</sub>	transitional flow (±3%)	m <sup>3</sup> /h	2.25	3.75	6.0	9.0	15.0	22.5	37.5	60	90
Q <sub>min</sub>	minimum flow (±5%)	m <sup>3</sup> /h	0.6	1.0	1.6	2.4	4.0	6.0	10.0	16.0	24.0

## Typical Accuracy Curve



- Q<sub>max</sub> = maximum peak flow
- Q<sub>n</sub> = continuous flow ±2%
- Q<sub>t</sub> = transitional flow ±2%
- Q<sub>min</sub> = minimum flow ±5%

## Typical Head Loss Curve

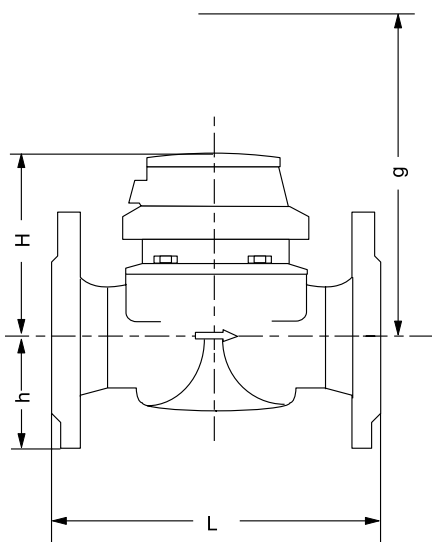


## Dimensions and Weights

Nominal Diameter			DN	40	50	65	80	80	100	125	150	200	250	300
Size of meter (acc. to PTB-A22)			Q <sub>n</sub>	10	15	25	40	40	60	100	150	250	400	600
Dimensions	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	95	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	71.3	91.8

\*) Other overall lengths on request

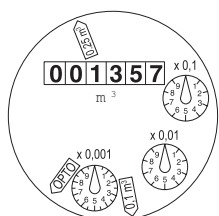
## Dimension Picture



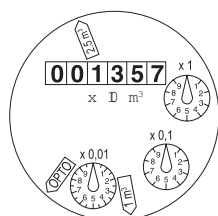
## Materials

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

## Dials





DN 40 ... DN 125



DN 150 ... DN 300

Nominal Diameter DN	Smallest reading m <sup>3</sup>	Max. reading m <sup>3</sup>
40 ... 125	0.0005	1 000 000
150 ... 300	0.005	10 000 000

## Pulse Values

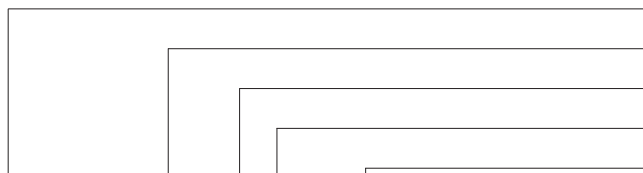
Pulser		Pulse value	
		DN 40 ... DN 125	DN 150 ... DN 300
RD02 / RD022		0.25 and 0.1 m <sup>3</sup> or 0.25 and 0.025 m <sup>3</sup>	1 and 2.5 m <sup>3</sup> or 2.5 and 0.25 m <sup>3</sup>
OD 02		0.001 m <sup>3</sup>	0.01 m <sup>3</sup>
OD 04		0.01 m <sup>3</sup>	0.1 m <sup>3</sup>

## Available Design

Nominal Diameter	DN	40	50	65	80	80	100
Size (acc. to PTB-A22)	Qn	10	15	25	40	40	60
Overall Length	mm	220	200	200	200	225	250
Order No.	PN 16	82 85 94	82 85 96	82 85 98	82 86 00	82 86 02	82 86 04

Nominal Diameter	DN	125	150	200	250	300
Size (acc. to PTB-A22)	Qn	100	150	250	400	600
Overall Length	mm	250	300	350	450	500
Order No.	PN 16	82 86 06	82 86 08	82 87 18	82 87 20	82 87 44

## Order Example

	Type
WP-Dynamic, DN 50, 130/16, L= 200 mm, 0,25/0.1 m <sup>3</sup>	Nominal Diameter
drilled acc. to EN 1092 PN 16	Temperature
82 85 96	Pressure rate
	Overall length
	Pulse values
	Flange drilling
	Order No.



**qualityaustria** Certified according to ISO 9001  
Succeed with Quality Quality Management System Quality Austria Reg.no. 3496/0

### UK & Ireland Enquiries

Sensus UK Systems Ltd, International House, Southampton International Business Park,  
George Curl Way, Southampton SO18 2RZ UK  
T: +44 (0) 1794 526100 F: +44 (0) 1794 526101 Email: info.gb@sensus.com [www.sensus.com](http://www.sensus.com)

### International Enquiries

Sensus GmbH Hannover, Meineckestraße 10, D-30880 Laatzen Germany  
T: +49 (0) 5102 74-0 F: +49 (0) 5102 74-3341 Email: info.int@sensus.com [www.sensus.com](http://www.sensus.com)

