MW-F

Flanged Water Meters

Features:

- Suitable for use with domestic water
- Pulsed output
- Low head loss

Technical Overview

The MW-F range of flanged meters incorporate unique "paddle wheels" which enable the meters to cover a very large measuring range with low head loss. The impellers that are mounted perpendicular to the flow. The impeller rotation speed increases with the water flow rate. The meters use a magnetic transmission system between the impeller and the totalising register to minimise drag and to enable the register to be total sealed from the water supply.

All meters are fitted with a pulsed output reed switch.

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Specification:

Meter:

Fluid temp. range:	
Cold	0 to 30°C (safety margin 50°C)
Hot	0 to 90°C (safety margin 120°C)
Body material	GG25 Grey cast iron, epoxy coated
Flanges	DIN2501 PN16
Counter	7-Roller type
Max. working pressure	16bar
Installation position	Meter horizontal / dial upwards (preferred) or vertically

Pulsed output specification:

Switch type	Reed switch proximity sensor
Contracts	Volt free
Pulse value (per litre)	1, 10 or 100
Max. load current	500mA
Max. switching voltage	180Vdc
Max. contact rating	10W
Connection type	Flying lead
Lead length	2 Meters
Conformity	
EN 14154	
MID:	
Annex B + Annex D	
Annex I	
MI-001	

Part Codes:

Cold water

MW-CF-50-B
50mm Flanged, 100LPP
MW-CF-65-B
65mm Flanged, 100LPP
MW-CF-80-B
80mm Flanged, 100LPP
MW-CF-80-C
80mm Flanged, 1000LPP
MW-CF-100-B
100mm Flanged, 100LPP
MW-CF-100-C
100mm Flanged, 1000LPP
MW-CF-125-C
125mm Flanged, 1000LPP
MW-CF-150-C
150mm Flanged, 1000LPP
MW-CF-200-C
200mm Flanged, 1000LPP

Hot water

MW-HF-50-B
50mm Flanged, 100LPP
MW-HF-65-B
65mm Flanged, 100LPP
MW-HF-80-B
80mm Flanged, 100LPP
MW-HF-80-C
80mm Flanged, 1000LPP
MW-HF-100-B
100mm Flanged, 100LPP
MW-HF-100-C
100mm Flanged, 1000LPP
MW-HF-125-C
125mm Flanged, 1000LPP
MW-HF-150-C
150mm Flanged, 1000LPP
MW-HF-200-C
200mm Flanged, 1000LPP

An Introduction to Flow Parts for Metering:

Sontay offer flow parts for two distinct applications.

Flow parts for water

Denoted as "water meters" - are used specifically for sanitary water only, i.e. water without additives or chemical treatment, and are designed for non-continuous flow, such as domestic cold and hot water supplies. The total daily flow should not exceed 3 hours, over a 6 year period. Volumetric flows higher than this can lead to increased wear in the bearings of the impellor, causing inaccuracies in reading. Note also that water meters have a narrow fluid temperature range, typically between 0°C to +90°C for hot water meters and 0°C to +30°C for cold water meters.

Flow parts for heating

Denoted as "flow sensors" - can be used with chemically treated water, and are designed for continuous or very high duty cycle flow conditions typically found in hot water heating systems. Flow sensors have a wider fluid temperature range than water meters, typically between 0°C to +120°C.

Note:

Because of these distinct differences, only flow parts designed specifically for heat metering should be used for heat metering applications. Although water meters can, in theory, be used for heat meter applications, Sontay cannot warranty water meters if used in this manner.

Definitions

- Qs, the upper limit of the flow-rate, is the highest flow-rate at which the heat meter shall function for short periods (< 1h / day; < 200 h / year), without the maximum permissible errors being exceeded.
- Qp, the permanent flow-rate, is the highest flow-rate at which the heat meter shall function continuously without the maximum permissible errors being exceeded.
- Qi, the lower limit of the flow-rate, is the lowest flow-rate above which the heat meter shall function without the maximum permissible errors being exceeded.

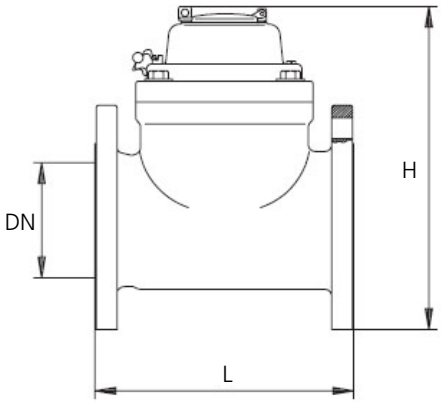
Installation:

Flanged meters can be installed horizontally and vertically, that is, in horizontal, vertical, and inclined pipelines.
The best measuring results can be obtained if the meter is installed in horizontal position with the counter "facing upwards".

Water meters should always be fitted with a minimum of 3x pipe diameter upstream.
For example, a 65mm water meter would have 195mm before the meter as straight pipe. This is to ensure accurate reading by reducing water turbulence. Ideally a straight pipe section of at least 2 x DN is required downstream.

It is recommended as good practice to fit a removable filter element (strainer) before a water meter to protect the mechanism. Only clean water should be used that does not exceed the temperature specification of the meter. This is 30°C for cold meters and 90°C for hot meters.

Dimensions & Performance Data:



	MW-xF-50	MW-xF-65	MW-xF-80	MW-xF-100	MW-xF-125	MW-xF-150	MW-xF-200
DN	50	65	80	100	125	150	200
L	200	200	225	250	250	300	350
H	200	208	255	275	290	305	375
Flange dia.	165	185	200	220	250	285	340
Bolt circle dia.	125	145	160	180	210	240	295
Number of bolts	4	4	8	8	8	8	12
Weight (kg)	11.2	13.2	16.7	19.3	23.2	32	47

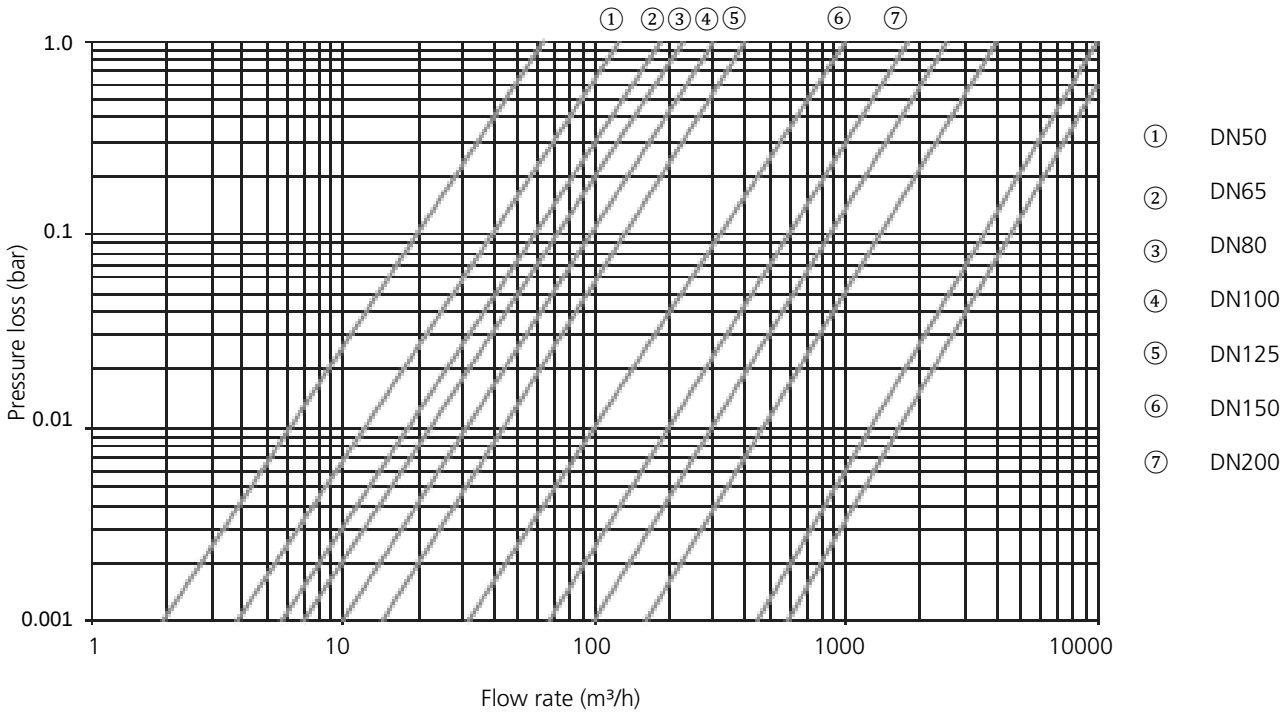
	MW-xF-50	MW-xF-65	MW-xF-80	MW-xF-100	MW-xF-125	MW-xF-150	MW-xF-200
Upper Limit (m³/h)	90	120	150	250	300	350	650
Permanent (m³/h)	15	25	40	60	100	150	250
Lower limit (m³/h)	0.35	0.45	0.8	1.5	3	3.5	6.5

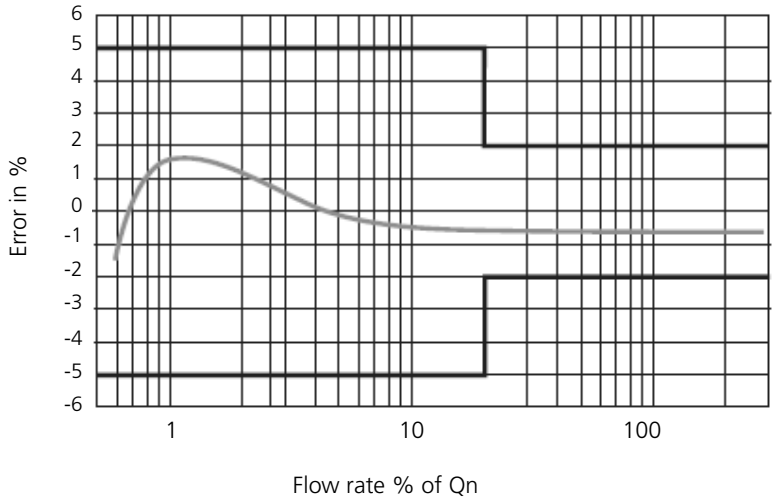
Upper limit (maximum) flow-rate - *Q s*
The highest flow-rate at which the water meter is required to operate in a satisfactory manner for a short period of time without deterioration.

Permanent (Nominal) flow-rate – *Qp*
Flow-rate at which the water meter is required to operate under normal conditions of use, e.g. under steady and/or intermittent flow conditions.

Lower limit (minimum) flow-rate – *Qi*
The lowest flow-rate at which the water meter is required for the meter to function

Head Loss Tables & Error Curves:





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