MeiTwin

with MID approval

Compound Water Meter

for cold water up to 50 °C

DN 50, DN 65, DN 80, DN 100

Main characteristics

The main meter and the by-pass meter are arranged one behind the other in the direction of flow.

There is no longer any need for the differentiation between the “by-pass meter on the right” and “by-pass meter on the left”.

No straight upstream or downstream pipe necessary due to integrated flow straightener (U0D0).

Removable metrological unit consisting of the main meter, the change-over valve and the by-pass meter (“3 in 1” concept).

A multirange metrological unit allows an easy economical replacement after the validity period of the calibration has expired.

Main meter with hydrodynamic balanced rotor.

Spring-loaded change-over valve with low headloss and extended lifetime.

By-pass meter specified as a piston meter cartridge 612MTW-HRI with plug-in non-return valve, register copper/glass, protection class IP68.

Minimum flowrate: 6 l/hour for piston type by-pass meter.

Available in body lengths specified as per DIN 19625 and ISO 4064.

Applications

Measurement of high flow rates with extremely wide spread flow profile

Measurement of very small flow rates for leakage detection

Ideal for fire service pipes

MeiTwin with 612MTW-ER56

MeiTwin with 612MTW

SENSUS

a xylem brand

www.sensus.com

Pattern Approval

Marking CE M-XX* 0102
SK 11-MI001-SMU020

*Year of production

Installation

Pipe	horizontal vertical
Meter Head	upwards sideways

The meter does not require any upstream or downstream straight length

Technical data

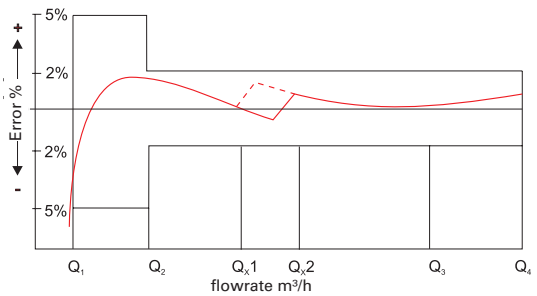
Performance Table acc. to Manufacturers Values

Size	DN	[mm]	50	65	80	100
Maximum Working Pressure	PN	[bar]	16			
Maximum Peak Flow	Q_s	[m³/h]	90	120	200	280
Continuous Flow	$Q_{3'}$	[m³/h]	50	70	120	180
Changeover Flowrate at Increasing Flow	Q_{x2}	[m³/h]	2.0 - 2.6			
Changeover Flowrate at Decreasing Flow	Q_{x1}	[m³/h]	1.1 - 1.7			
Transitional Flowrate	Q_2	[m³/h]	0.012			
Minimum Flowrate	$Q_{1'}$	[m³/h]	0.006			

Performance Table acc. to MID Pattern Approval

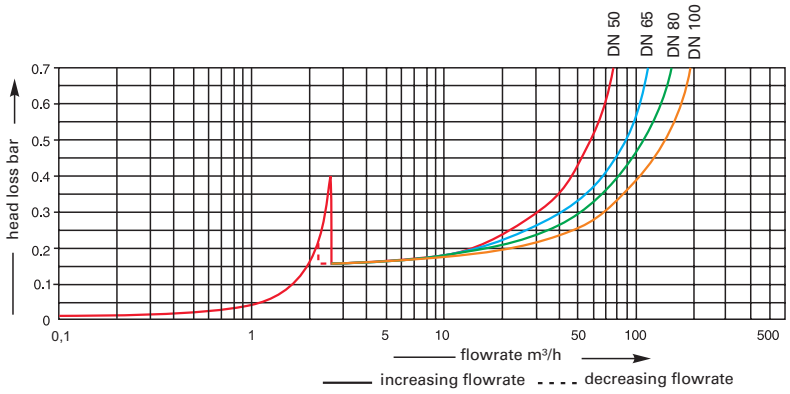
Size	DN	[mm]	50	65	80	100
Maximum Working Pressure	PN	[bar]	16			
Maximum Peak Flow	Q_4	[m³/h]	31.25	50	78.75	125
Continuous Flow	Q_3	[m³/h]	25	40	63	100
Changeover Flowrate at Increasing Flow	Q_{x2}	[m³/h]	2.0 - 2.6			
Changeover Flowrate at Decreasing Flow	Q_{x1}	[m³/h]	1.1 - 1.7			
Transitional Flowrate	Q_2	[m³/h]	0.025			
Minimum Flowrate	Q_1	[m³/h]	0.016			
Ratio	Q_3/Q_1		1600	2500	4000	6300

Typical Accuracy Curve

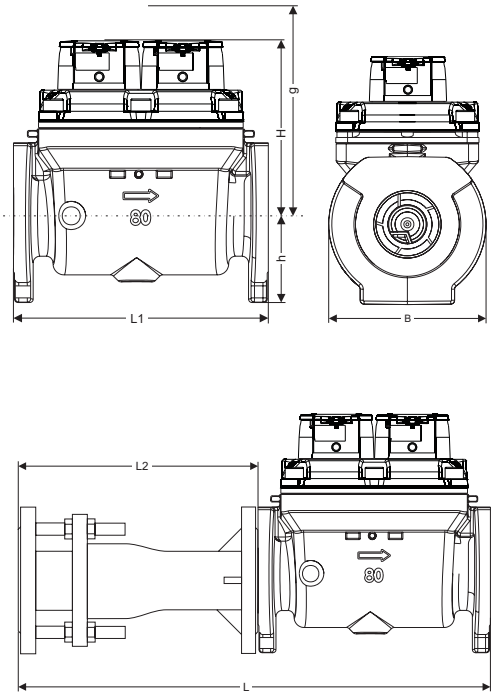


Q_1 minimum flow ±5%
Q_2 transitional flow ±2%
Q_3 continuous flow ±2%
Q_4 maximum peak flow ±2%

Typical Head Loss Curve



Dimension Picture



Dimensions and Weights

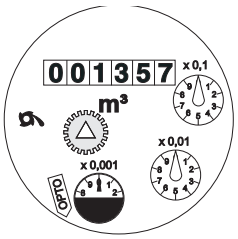
Nominal Diameter		mm	50	65	80	100
Overall length	L1	mm	270		300	360
	L1	mm	300	300	350	350
Height	H	mm	250			
	h	mm	80	92.5	100	100
Dismantling height	g	mm	505			
Length	L2	mm	330±40		400±60	440±60
	L*	mm	600±40		700±60	800±60
Width		mm	185	185	210	220
Weight	meter	kg	23.0	24.6	26.1	31.0
	measuring unit	kg	7			
	spool piece	kg	10.5		16.5	20.5

* for MeiTwin with body length according DIN 19625

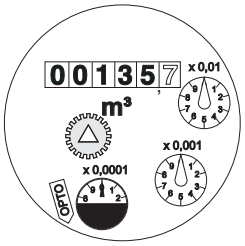
Materials

Body	main meter	cast iron
	by-pass meter	brass
Measuring element	both meters	plastic
Rotor	both meters	plastic
Spring loaded valve		pastic and stainless steel

Dials



Main meter



By-pass meter
(type 612MTW-HRI)

By-pass Meters

Standard By-pass meter

Piston meter cartridge dry dial type 612MTW-HRI Q_3 4

By-pass meter
(type 612MTW-HRI)

By-pass meter
(type 612MTW-ER56)

By-pass meter
(type 612MTW)

Options

Optional by-pass meter:

- 612MTW-ER56, piston type meter with Encoder register, protection class IP68
- 612MTW, piston type meter with plastic register casing, protection class IP65

Main and by-pass meters fitted with pulse and data interface HRI-Mei and/or pulsers type OD (with by-pass meter 612MTW-HRI)

Main and by-pass meters equipped with Encoder register ER56 for direct meter reading via data protocol (M-Bus, Sensus, IEC 1107)

Spool piece for extension of meter casing as per DIN 19625

Port for ¼" pressure sensor

Pulse values

Main meter (standard register)	HRI-Mei	0.01 m^3, 0.1 m^3 and 1 m^3
	OD 01	0.001 m^3
	OD 03	0.01 m^3
Main meter (Encoder register)	HRI	0.1 m^3 or 1 m^3
By-pass meter (type 612MTW-HRI) (Standard)	HRI-Mei	0.001 m^3; 0.01 m^3 and 0.1 m^3
	OD 01	0.0001 m^3
	OD 03	0.001 m^3
By-pass meter (type 612 MTW-ER56)	HRI	0.001 m^3; 0.01 m^3; 0.1 m^3 or 1m^3
By-pass meter (type 612 MTW)	HRI	0.001 m^3; 0.01 m^3; 0.1 m^3 or 1 m^3

Available design

Size	**DN**	**50**	**65**	**80**	**100**
Nominal size	Q_3	25	40	63	100
		Overall length as per DIN 19625			
Overall length	mm	270		300	360
		Overall length as per ISO 4064			
Overall length	mm	300	300	350	350

Accessories

Spool pieces for extension of meter casing as per DIN 19625					
Size	DN	50	65	80	100
Overall length	mm	330±40		400±60	440+60

Order example

MeiTwin, DN 50, T30/16	Type Size Temperature Pressure
Drilled to EN 1092 PN 16	Flange drilling
Type 612MTW-HRI by-pass meter Q_3 4	By-pass meter
Overall length 270 mm	Overall length
With MID conformity	Type of approval
With spool piece	Fittings
DN 50	Nominal width

sensus
a xylem brand

UK & Ireland Enquiries
Sensus UK Systems Ltd, 3 Lindenwood Crockford Lane, Chineham Business Park
Basingstoke RG24 8QY UK
T: +44 (0) 1256 372800 F: +44 (0) 1256 707203 Email: info.gb@xyleminc.com **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@xyleminc.com **www.sensus.com**

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WPV-MS 150

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

Main characteristics

Meter with pattern approval acc. to 2014/32/EU (MID) annex MI001

No straight upstream or downstream pipe due to integrated flow straightener (U0D0)

Spring-loaded change-over valve with low headloss and extended lifetime

By-pass meter specified as a piston meter RK-MS HRI, register copper/glass, protection class IP68

Powder coating ensures maximum corrosion protection

Meter can be submerged, protection class IP68

Installation position horizontal

Register prepared for HRI-Mei and Opto OD pick-up

Used materials resistant up to 50 °C medium temperature

Pattern Approval

Marking	CE M-XX* 0102
	DE-14-MI001-PTB002
	* Year of production

Temperature class T30

Applications

Measurement of high flow rates with extremely wide spread flow profile

Measurement of smallest flow rates for leakage detection

Ideal for fire service pipes

Options

Main and by-pass meters fitted with pulse and data interface HRI-Mei and/or pulsers type OD (with by-pass meter RK-MS HRI)

Overall length acc. to DIN with spool piece

Main meter and By-pass meter can be equipped with Encoder ER56 register

Installation

Pipe	horizontal ———
Meter head	upwards ↑

Installation requirements
The meter does not require any upstream or downstream straight length.
The common rules of good engeneering practice must be followed.

Pulse Values

Standard register

Main meter	HRI-Mei	0.1 m³, 1 m³ or 10 m³
	OD 01	0.01 m³
	OD 03	0.1 m³
By-pass meter	HRI-Mei	0.01 m³, 0.1 m³ or 1 m³
	OD 01	0.001 m³
	OD 03	0.01 m³

Encoder register

Main meter	HRI	1 m³ or 10 m³
By-pass meter	HRI	0.1 m³ or 1 m³

Technical Data

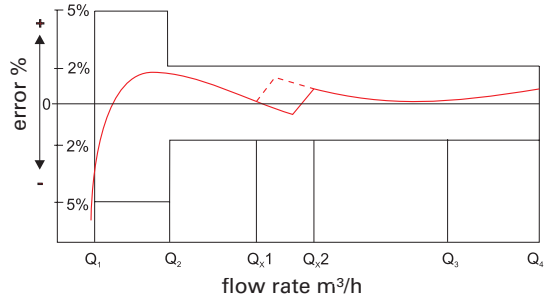
Performance table acc. to manufacturers data

Nominal Diameter	**DN**		**150**
Working pressure	PN	bar	16
Maximum peak flow	Q_S	m³/h	600
Continuous flow	$Q_{3'}$	m³/h	400
By-pass meter	DN	mm	40
Transitional flow	Q_2	m³/h	0.15
Minimum flow	Q_1	m³/h	0.035

Performance table acc. to MID pattern approval

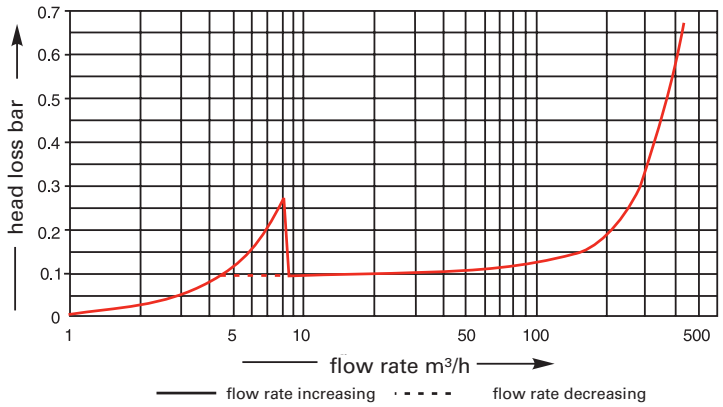
Nominal Diameter	**DN**		**150**
Maximum peak flow	Q_4	m³/h	315
Continuous flow	Q_3	m³/h	250
Change-over flow (increasing)	Q_{x2}	m³/h	8.3
Change-over flow (decreasing)	Q_{x1}	m³/h	4.7
Transitional flow	Q_2	m³/h	0.16
Minimum flow	Q_1	m³/h	0.1

Typical Accuracy Curve

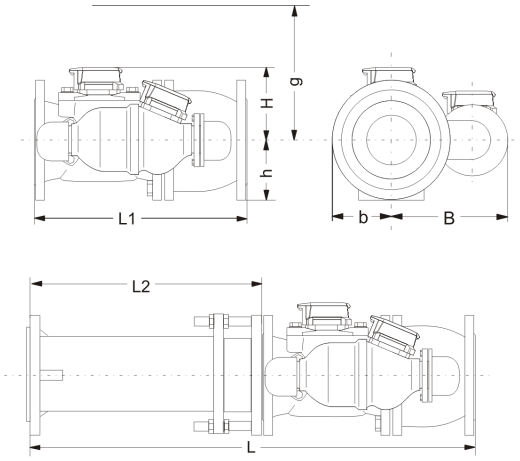


Q_4 = maximum peak flow ±2%
Q_3 = continuous flow ±2%
Q_2 = transitional flow ±2%
Q_1 = minimum flow ±5%

Typical Head Loss Curve



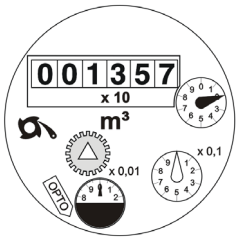
Dimension Pictures



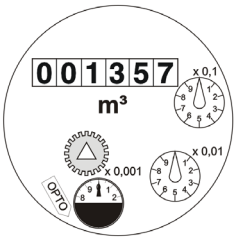
Dimensions and Weights

Nominal Diameter		DN	150
Overall length	L1	mm	500
By-pass meter	Q_3		16
Height	H	mm	177
	h	mm	135
Dismantling height	g	mm	356
Length	L2	mm	500±40
	L	mm	1000±40
Width	B	ca. mm	275
	b	ca. mm	145
Weight	meter	kg	60
	spool piece	kg	32

Dials



Main meter



By-pass meter

Materials

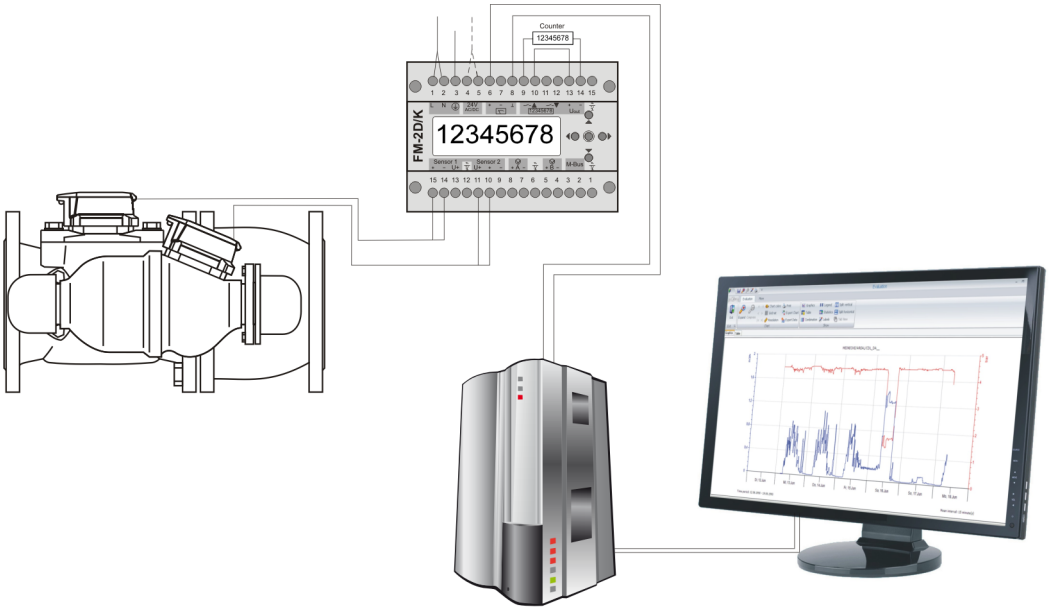
Body	Main meter	cast iron
	By-pass meter	brass
Measuring element (both meters)		plastic
Rotor (both meters)		plastic
Spring loaded valve		plastic and stainless steel

By-pass Meters

Rotary Piston Meter
RK-MS Q_3 16

Standard By-pass Meter:	
Rotary piston meter with mechanical register	Type: RK-MS HRI Q_3 16
Options:	
Rotary Piston Meter with Encoder register	Type: RK-MS ER56 Q_3 16

Application example for automatic meter reading



Order Example

type
diameter nominal
working temperature
working pressure

WPV-MS DN 150 50/16

according to EN 1092 PN 16 — flange drilling
with spool piece — **accessories**
DN 150 — size