

# MTWD-M-CC

## Multi-jet dry dial meter for hot water with flood-proof (IP68) hermetically sealed glass/copper register

The current level of development of the MTWD-M-CC guarantees the most precise measurement results, minimum bearing load and a long service life.

The MTWD-M-CC is ideally suited to measuring tasks at temperatures up to 90°C. By using special materials, outstanding measurement readings can be combined with a high maximum temperature.

The meter is equipped with an 8-digit glass/copper register (IP68) and a modulator disc. This enables electronic, non-reactive scanning and is the basis for remote reading of meter data via radio with LoRaWAN® or wM-Bus. A combined M-Bus/pulse module is also possible.



### Performance characteristics at a glance

- Multi-jet dry dial meter with protected magnetic coupling
- For horizontal and vertical installation, also available in standpipe and downpipe design on request
- Equipped with glass/copper register (IP68) as standard
- Brass body according to UBA (Federal Environment Office) list
- Register rotatable 355°
- Operating pressure MAP 16
- Approved in accordance with MID

### Applications

- For the consumption measurement of hot and clean drinking water or service water up to 90°C

### AMR options

- As standard with communication interface for EDC modules (Electronic Data Capture):
  - EDC LPWAN radio module (868 MHz) for LoRaWAN®
  - EDC wireless M-Bus radio module (868 MHz),
  - EDC- combined M-Bus and pulse module

Technical data				Riser / Down			Riser	
Permanent flowrate	Q <sub>3</sub>	m <sup>3</sup> /h	2.5	4	4	6.3	6.3	10
Comparable to nominal flowrate (EEC)	Q <sub>n</sub>	m <sup>3</sup> /h	1.5	2.5	2.5	3.5	3.5	6
Attainable measuring range	Q <sub>3</sub> /Q <sub>1</sub>	R	80H	80H/40V	R80H	80H/40V	R80H	80H/40V
Standard measuring range <sup>1</sup>	Q <sub>3</sub> /Q <sub>1</sub>	R	80H	80H/40V	R80H	80H/40V	R80H	80H/40V
Comparable to metrological class (EEC)	Class	-	B-H	B-H/A-V	B-H	B-H/A-V	B-H	B-H/A-V
Overload flowrate <sup>2</sup>	Q <sub>4</sub>	m <sup>3</sup> /h	3.13	5	5	7.88	7.88	12.5
Transitional flowrate <sup>2</sup>	Q <sub>2</sub>	l/h	50H	80H/160V	80	126H/252V	126	200H/400V
Minimum flowrate <sup>2</sup>	Q <sub>1</sub>	l/h	31H	50H/100V	50	79H/158V	79	125H/250V
Start-up flow rate	-	l/h	<10	<10	<10	<18	<18	<18
Display range	min.	l	0.02	0.02	0.02	0.02	0.02	0.02
	max.	m <sup>3</sup>	R8 99,999.999	R8 99,999.999	99,999.999	R8 99,999.999	99,999.999	R8 99,999.999
Temperature range	-	°C	0.1°C - 90°C	0.1°C - 90°C	0.1 - 90	0.1°C - 90°C	0.1 - 90	0.1°C - 90°C
Operating pressure	MAP	bar	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16
Pulse value	-	l/pulse	1	1	1	1	1	1
Pressure loss class at Q <sub>3</sub>	Δp	bar	Δ0.63	Δ0.63	Δ0.63	Δ0.63	Δ0.63	Δ0.63
Mechanical environmental condition	-	-	M2	M2	M2	M2	M2	M2
Climatic condition <sup>3</sup>	-	°C	5°C - 55°C	5°C - 55°C	5 - 55	5°C - 55°C	5 - 55	5°C - 55°C
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0

**Dimensions and weights:**

Nominal diameter	DN	mm	15	20	20	25	25	25
		inch	½"	¾"	¾"	1"	1"	1"
Overall length without connectors <sup>1</sup>	L2	mm	165/170	190	105	260	150	260
Overall length with connectors approx.	L1	mm	245/250	286	201	378	268	378
Thread meter G x B	D1	inch	¾"	1"	1"	1 ¼"	1 ¼"	1 ¼"
Thread connector R x	D2	inch	½"	¾"	¾"	1"	1"	1"
Width approx.	B	mm	95	95	95	95	95	95
Height approx.	H1	mm	120	120	140	120	160	120
	H2	mm	35	25	---	35	---	40
Weight approx.	-	kg	1.3	1.6	1.7	2.1	2.1	2.1

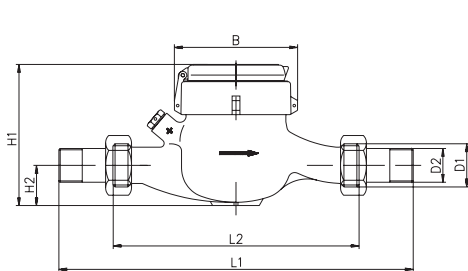
<sup>1</sup> Other measuring ranges (R) and overall lengths on request

<sup>2</sup> The data refers to the standard measuring range

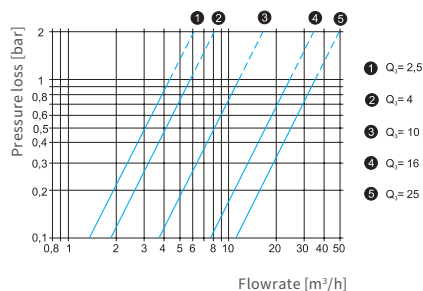
<sup>3</sup> Condensation possible

<sup>4</sup> Only available as factory tested version

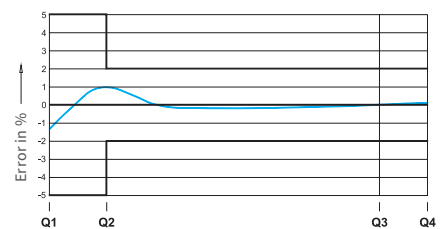
Attention: not all versions are available in all markets



Dimensions



Typical pressure loss curve



Q<sub>1</sub> = Minimum flowrate      Q<sub>3</sub> = Permanent flowrate  
 Q<sub>2</sub> = Transitional flowrate      Q<sub>4</sub> = Overload flowrate

Typical error curve

# MTWD-M-CC

Technical data			Riser		Riser		
Permanent flowrate	$Q_3$	m <sup>3</sup> /h	10	10	16	16	25 <sup>4</sup>
Comparable to nominal flowrate (EEC)	$Q_n$	m <sup>3</sup> /h	6	6	10	10	16
Attainable measuring range	$Q_3/Q_1$	R	80H/40V	R80H	80H/40V	R80H	80H/40V
Standard measuring range <sup>1</sup>	$Q_3/Q_1$	R	80H/40V	R80H	80H/40V	R80H	80H/40V
Comparable to metrological class (EEC)	Class	-	B-H/A-V	B-H	B-H/A-V	B-H	B-H/A-V
Overload flowrate <sup>2</sup>	$Q_4$	m <sup>3</sup> /h	12.5	12.5	20	20	31.3
Transitional flowrate <sup>2</sup>	$Q_2$	l/h	200H/400V	200	320H/640V	320	501H/1000V
Minimum flowrate <sup>2</sup>	$Q_1$	l/h	125H/250V	125	200H/400V	200	313H/625V
Start-up flow rate	-	l/h	<18	<18	<40	<40	<45
Display range	min.	l	0.02	0.02	0.02	0.02	0.02
	max.	m <sup>3</sup>	R8 99,999.999	99,999.999	R8 99,999.999	99,999.999	R8 99,999.999
Temperature range	-	°C	0.1°C - 90°C	0.1 - 90	0.1°C - 90°C	0.1 - 90	0.1°C - 90°C
Operating pressure	MAP	bar	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16
Pulse value	-	l/pulse	1	1	1	1	1
Pressure loss class at $Q_3$	$\Delta p$	bar	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$	$\Delta 0.63$
Mechanical environmental condition	-	-	M2	M2	M2	M2	M2
Climatic condition <sup>3</sup>	-	°C	5°C - 55°C	5 - 55	5°C - 55°C	5 - 55	5°C - 55°C
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0

## Dimensions and weights:

Nominal diameter	DN	mm	32	25	40	40	50
		inch	1 ¼"	1"	1 ½"	1 ½"	2"
Overall length without connectors <sup>1</sup>	L2	mm	260	150	300	150/200	300
Overall length with connectors approx.	L1	mm	384	268	428	278/328	444
Thread meter G x B	D1	inch	1 ½"	1 ¼"	2"	2"	2 ½"
Thread connector R x	D2	inch	1 ¼"	1"	1 ½"	1 ½"	2"
Width approx.	B	mm	95	95	110	110	110
Height approx.	H1	mm	120	160	145	165	150
	H2	mm	40	---	50	---	60
Weight approx.	-	kg	2.2	2.1	3.6	4.0/4.9	4

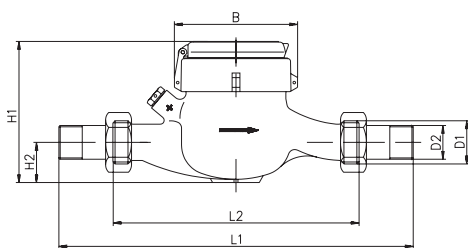
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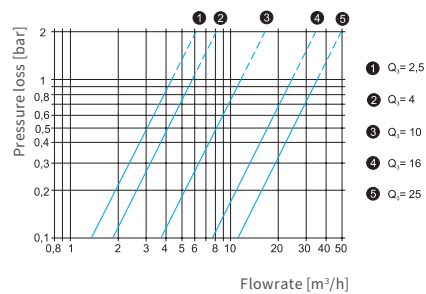
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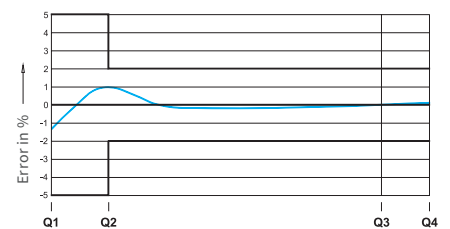
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Dimensions



Typical pressure loss curve



$Q_1$  = Minimum flowrate       $Q_3$  = Permanent flowrate  
 $Q_2$  = Transitional flowrate       $Q_4$  = Overload flowrate

Typical error curve

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