

MRM Rotary Displacement Gas Meter

Key features

- Meter sizes G 10 to G 1000
- Flow rates from 0.5 to 1600 m³/h
- Nominal sizes from DN 25 to DN 200
- Pressure class PN 10/16 and ANSI Class 150*
- Measuring range standard 1:50 (G 25 1:40), optional up to 1:200
- Meter housing made of anodized high strength Aluminum
- Index head by default made of synthetic material, optional made of Aluminum
- Rotating counter (355 °)
- No inlet or outlet section required
- Horizontal and vertical mounting position
- Approvals according to MID (2004/22/EC), OIML, PED (PED 97/23/EC), ATEX



Technical specifications

Gas temperature:	-25 °C to +55 °C
Ambient temperature:	-25 °C to +55 °C
Storage temperature:	-25 °C to +55 °C
Operating pressure:	20 barg maximum*
Protection class:	IP 67
Materials:	
• Meter housing:	Aluminum Alloy
• Pistons:	Aluminum Alloy
• Synchronization wheels:	Stainless steel
• Meter index head:	Synthetic material (standard), optional Aluminum
PED-Approval:	Hpi / 222-103-Q-01
ATEX-Approval:	Ex-Zone 1
MID – Approval:	T10658
OIML – Recommendation:	The gas meter of the type MRM meets the requirements of OIML R137-1 & 2: 2012 „gas meters“, confirmed by NMI
Reproducibility:	< 0.1 %
Overload:	Short term up to 1.25 Q _{max}
Pressure change rate:	< 0.35 bar/s
Counter:	Eight-digit mechanical roller counter
Meter index head:	Standard plastic, made of aluminum as option
Pulse output:	1 LF-pulser (Reed contact) and 1 anti-tampering contact Option: 2 LF-pulsers (Reed contacts) and 1 HF-pulser
Connections:	
• Pressure:	2 connections (1 inlet and 1 outlet) with ¼" NPT – thread
• Temperature:	2 x thermowell (1 inlet and 1 outlet) with G ¼" – thread (option)

* 16 barg max. with MID-Certificate

* Exception is DN 100

Error limits and typical error curve

According to EN 12480 maximum permissible error limits:

$$Q_{min} \leq Q < Q_t: \pm 2.0 \%$$

$$Q_t \leq Q \leq Q_{max}: \pm 1.0 \%$$

G-Typ	Qt
G 10, G 16	0,1 Q _{max}
G 25 bis G 1000	0,05 Q _{max}

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Performance data

DN [mm]	G-Type	Q _{max} [m ³ /h]	Q _{min} [m ³ /h]								V [dm ³]	NF [Imp/m ³]	HF [Imp/m ³]
			1:20	1:40	1:50	1:65	1:80	1:100	1:160	1:200			
25	10	16	0,8	0,4	-	-	-	-	-	-	0,177	10	28220
50	16	25	1,2	0,6	0,5	-	-	-	-	-	0,210	10	23800
50	25	40	2,0	1,0	0,8	0,6	0,5	-	-	-	0,283	10	17660
50	40	65	3,2	1,6	1,3	1,0	0,8	0,65	-	-	0,566	10	8830
50	65	100	5,0	2,5	2,0	1,5	1,3	1,0	0,6	0,5	0,708	10	7060
80	100	160	8,0	4,0	3,2	2,5	2,0	1,6	1,0	0,8	1,05	1	4760
80	160	250	12,5	6,3	5,0	3,9	3,1	2,5	1,6	-	2,78	1	1800
100	160	250	12,5	6,3	5,0	3,9	3,1	2,5	1,6	-	2,78	1	1800
100	250	400	20,0	10,0	8,0	6,1	5,0	4,0	2,5	2,0	4,2	1	1200
100	400	650	32,5	16,3	13,0	10,0	8,1	6,5	4,1	3,2	5,66	1	880
150	400	650	32,5	16,3	13,0	10,0	8,1	6,5	-	-	10,5	1	470
150	650	1000	50,0	25,0	20,0	15,4	12,5	10,0	-	-	15,7	1	318
200	1000	1600	80,0	40,0	32,0	24,6	20,0	16,0	-	-	19,7	1	250

Pressure loss

DN [mm]	G-Type	Pressure loss [mbar]	
		at Q _{max} and ρ = 1 bar abs.	
		Air (ρ = 1,2 kg/m ³)	Natural gas (ρ = 0,83 kg/m ³)
25	10	0,5	0,4
50	16	0,7	0,5
50	25	1,3	0,9
50	40	1,3	0,9
50	65	1,6	1,1
80	100	1,9	1,3
80	160	3,2	2,1
100	160	3,2	2,1
100	250	5,5	3,6
100	400	6,5	4,3
150	400	3,5	2,3
150	650	4,9	3,2
200	1000	5,5	3,6

Dimensions, weights and connections

G-Type	DN [mm]	Housing dimensions				Weight [kg]
		C [mm]	A [mm]	H [mm]	B [mm]	
10	25	295	195	122	130	4,8
16	50	320	200	148	171	6,5
25	50	360	220	148	171	8,0
40	50	365	220	176	171	10,0
65	50	395	235	176	171	11,5
100	80	470	270	176	171	15,0
160-3	80	495	285	240	241	27,5
160	100	495	285	240	241	28,0
250	100	620	350	240	241	38,5
400	100	746	415	240	241	48,5
400	150	675	377	462	450	102
650	150	812	445	462	450	125
1000	200	918	498	462	600	145

Connections

DN [mm]	Flanges with threaded holes	
	DIN EN 1092-1 PN 16	ANSI B 16.5 Class 150
25	4 x M12	4 x 1/2"
50	4 x M16	4 x 5/8"
80	8 x M16	4 x 5/8"
100	8 x M16	-
150	8 x M20	8 x 3/4"
200	12 x M20	8 x 3/4"