



EUROMAG
INTERNATIONAL

Electromagnetic flowmeters



dg: www.oryana.com.ar

Wafer sensors MUT 1100

DS130-0-ENG 

Sensor MUT 1100

EUROMAG INTERNATIONAL MUT1100 are flangeless sensors that cover all diameters from ND 40 to ND 200. When light weight and compact dimensions are required, the choice of sensors cannot be other than MUT1100. These models are installed between two flanges surrounded by studs. For this reason they are also called “wafer sensors.”

1. Body and connections

MUT 1100 sensors have flow tube made in polypropylene; the coils housing is in carbon steel acrylic painted.

It is equipped with a junction box to connect the cables to the converter. The degree of protection is IP 67. It may be installed between flanges UNI 2223 from PN 16 to PN 40 or ANSI 150, 300 (see Table 4). The sensor and the flange are sealed by two O-rings supplied with the sensor. It can be operated with pressures up to 10 bar.

2. Internal lining

The sensor body is in polypropylene and thus, the temperature of the liquid to be measured has to be between 0°C y +60°C.

3. Electrodes and grounding

In the Standard version the MUT 1100 has three electrodes in AISI 316L and, on request they can be supplied in the materials shown in Table 2. It should be noted that if the sensor is installed in a plastic or lined pipe line, the liquid grounding does not require the use of grounding rings, because of the presence of the third electrode.

4. Coupling and connecting to sensor

MUT 1100 sensors can be coupled to all converters produced by EUROMAG shown in Table 3. In the separate version the sensor is connected to the converter by means of two cables whose length depends on the liquid conductivity, that length should not exceed 100 meters, as shown in figure 1. The minimum length is 5 meters.

5. Choice of diameter

In order to select the correct diameter use figure 3, the recommended full scale velocity, in normal applications, is around 2÷3 m/s. It should be noted that the full scale flowrate can be selected in the field through the converter keyboard. The maximum value that may be selected is the one corresponding to a velocity of 10 m/s.

6. Liquid temperature

The maximum temperature the liquid can reach is +60°C.

7. Calibration and maximum error

MUT 1100 sensors belong to the reference Group B1 (ISO 11631). Each sensor is calibrated by a hydraulic bench equipped with a reference weighting system SIT certified. The uncertainty of the measure is equal to 0, 2% of the read value, when the velocity of the liquid is more than 0, 2 m/s. The repeatability of the measure is in the order of 0, 1%.

8. Reference standards

EUROMAG magnetic meters are marked CE and are manufactured according to the following standards:

- * CEI EN 61010-1
- * UNI EN ISO 6817
- * EN 1434
- * EN 50081 - 1
- * EN 50082 - 1

Maximum length of cables according to the liquid conductivity.

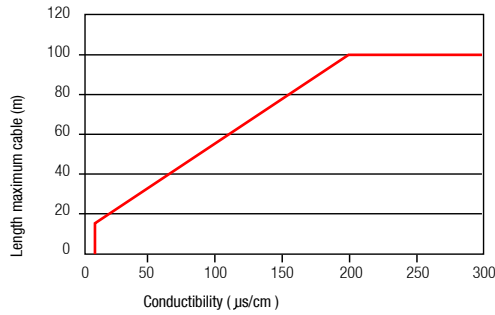


figure 1

Standard diameters

millimeters (mm)	40	50	65	80	100	125	150	200
inches (")	1.1/2"	2"	2.1/2"	3"	4"	5"	6"	8"

table 1

Available electrodes

* AISI 316 L (standard)	* Titanium
* Hastelloy B	* Hastelloy C

table 2

Converters coupling

MUT1100 versions	MC 106 A	MC 106 B	MC 106 C	MC 306	MC 308	MC 308 C	MC 108
	[1]	[1]	[3]	[1]	[1] [2]	[2]	[2]
SEPARATE	●	●	●	●	●	●	●
COMPACT	●		●	●	●	●	

[1] Case in abs [2] Case in aluminium [3] Case in stainless steel

table 3

Usable FLANGE, Diameter and Number of bolts and Tightening torque

DN	PN16	PN25	PN40	ANSI150			ANSI300			Length
				Db	Nb	T [Nm]	Db	Nb	T [Nm]	
40	M16 4 30	M16 4 35	M16 4 41	1/2"	4	23	3/4"	4	30	100 mm
50	M16 4 35	M16 4 40	M16 4 47	5/8"	4	33	5/8"	8	23	100 mm
65	M16 4 48	M16 8 38	M16 8 38	5/8"	4	47	3/4"	8	30	150 mm
80	M16 8 35	M16 8 40	M16 8 47	5/8"	4	60	3/4"	8	48	150 mm
100	M16 8 48	M20 8 98	M20 8 116	5/8"	8	47	3/4"	8	68	150 mm
125	M16 8 61	M22 8 105	M22 8 125	3/4"	8	67	3/4"	8	90	180 mm
150	M20 8 85	M22 8 110	M22 8 131	3/4"	8	81	3/4"	12	90	180 mm
200	M20 12 110	M22 12 125	M27 12 150	3/4"	8	108	7/8"	12	82	200 mm
250	M22 12 110	M27 12 135	M30 12 250	7/8"	12	95	1"	16	90	250 mm
300	M22 12 130	M27 16 230	M30 16 300	7/8"	12	108	1" 1/8	16	110	300 mm

The nuts and bolts are considered new and correctly greased.

table 4

General characteristics of MUT 1100 sensors.

Available diameters	40 mm 1.1/2"	50 mm 2"	65 mm 2.1/2"	80 mm 3"	100 mm 4"	125 mm 5"	150 mm 6"	200 mm 8"
Connections: coupling flange [1]	UNI2223			ANSI 150			ANSI 300	
Maximum pressure[1]	10 bar							
Liquid temperature	0°C , +60°C							
Degree of protection	IP67							
Converters compatibility [2]	MC 106 A	MC 106 B	MC 106 C	MC 306	MC 308	MC 308 C	MC 108	
Dimensions	See figure 2							
Parts in contact with the liquid	Flow tube: Polypropylene				O - Ring: Viton [3]			
Electrical connections	Cablegland PG 11 + Terminal box + sealing resin							

[1]See Table 4.

[2]See Table 3.

[3]Other materials on request

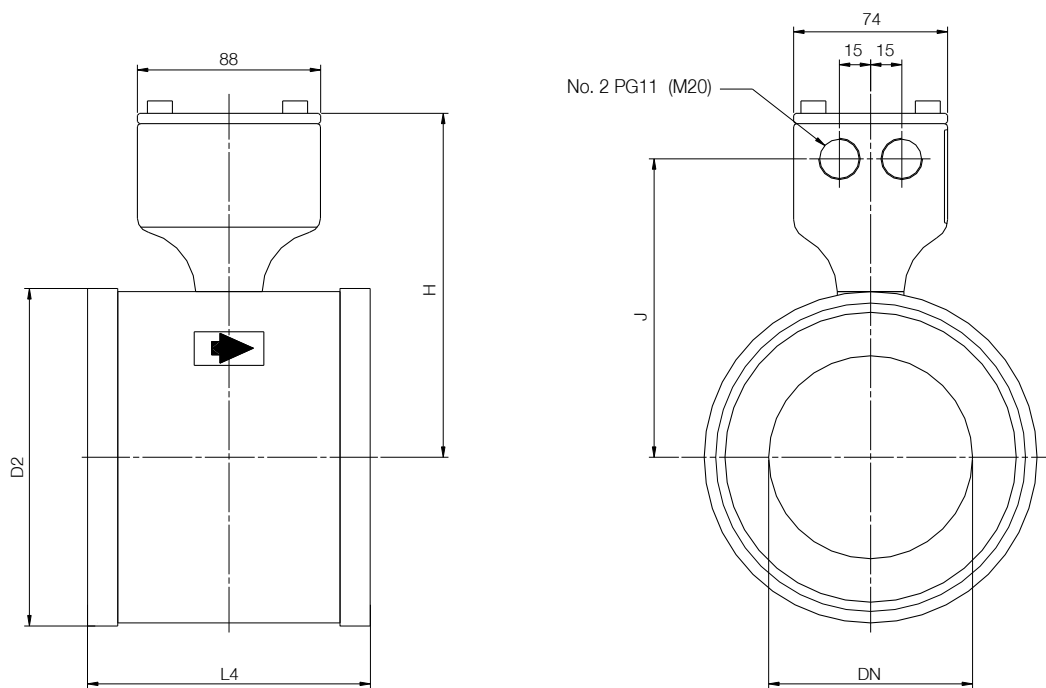
table 5

Weight of MUT1100 sensors in the separate version without packing.

DN	[mm]	40	50	65	80	100	125	150	200
DN	["]	1" 1/2	2"	2" 1/2	3"	4"	5"	6"	8"
WEIGHT	[kg]	1,5	1,8	2,5	3	4	5	6,5	10

table 7

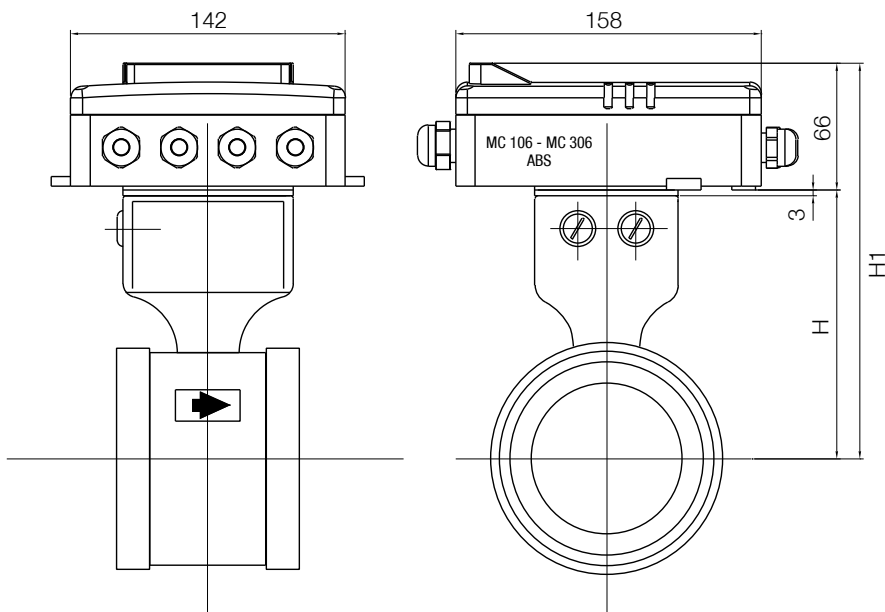
Fig. 2 - Overall dimensions



Maximum dimensions of MUT 1100.

DN		D2	L4	J	H
[mm]	["]				
40	1" 1/2	86	103	100	125
50	2"	102	109	107	132
65	2" 1/2	121	150	117	142
80	3"	133	150	124	149
100	4"	162	160	138	163
125	5"	188	180	150	175
150	6"	217	180	165	190
200	8"	270	200	189	214

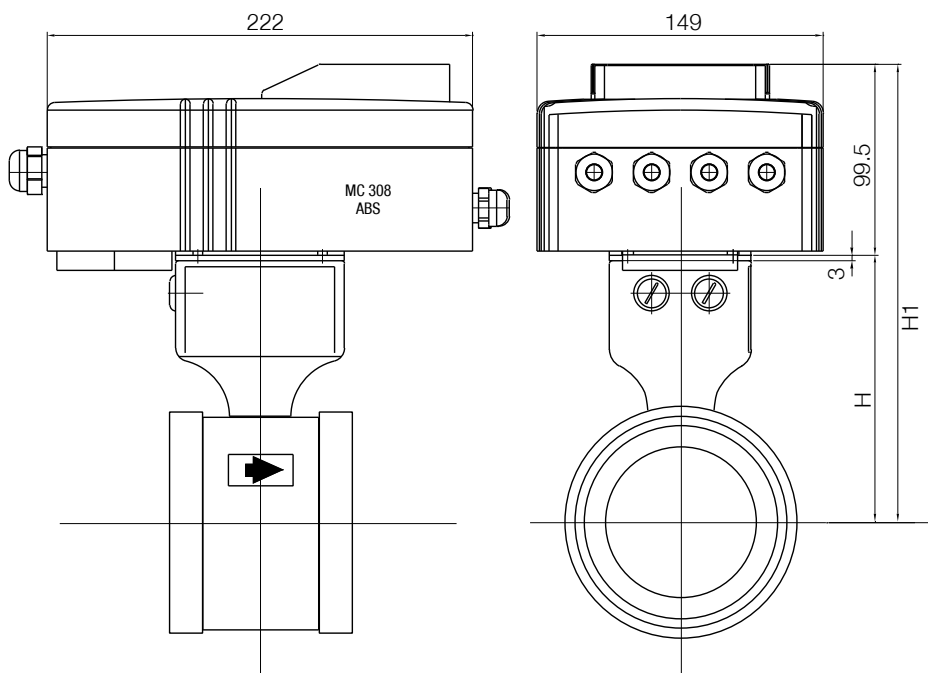
Fig. 3 - MUT 1100 Compact - Converter MC 106 / 306 ABS Horizontal



Ø DN	H	H1
[mm]	[mm]	[mm]
40	124	190
50	131	197
65	141	207
80	147.5	213.5
100	161.5	227.5
125	174	240
150	189	255
200	213	279

table 8

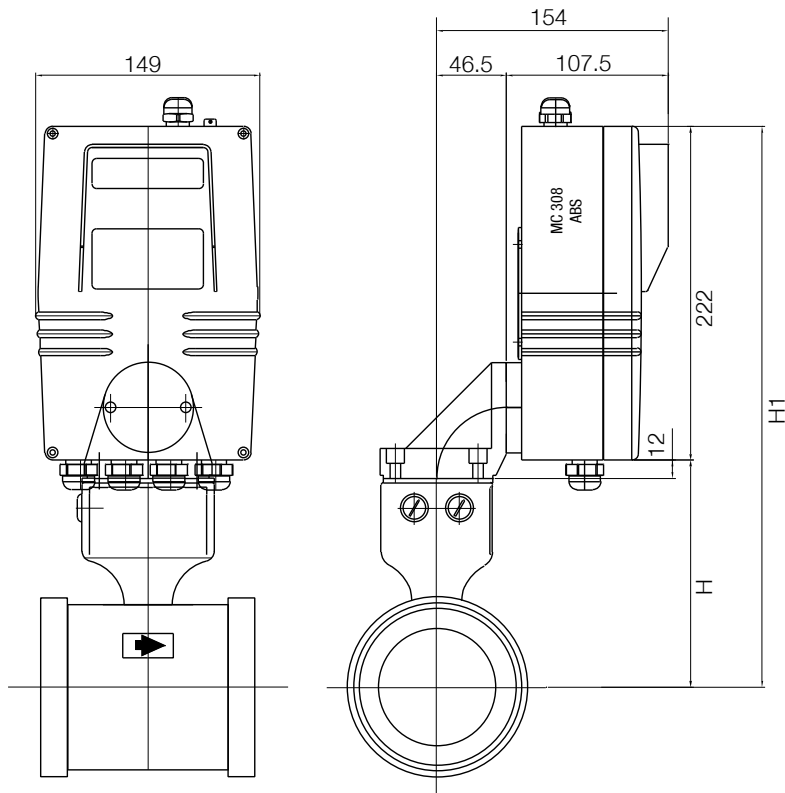
Fig. 4 - MUT 1100 Compact - Converter MC 308 ABS Horizontal



Ø DN	H	H1
[mm]	[mm]	[mm]
40	124	223.5
50	131	230.5
65	141	240.5
80	147.5	247
100	161.5	261
125	174	273.5
150	189	288.5
200	213	312.5

table 9

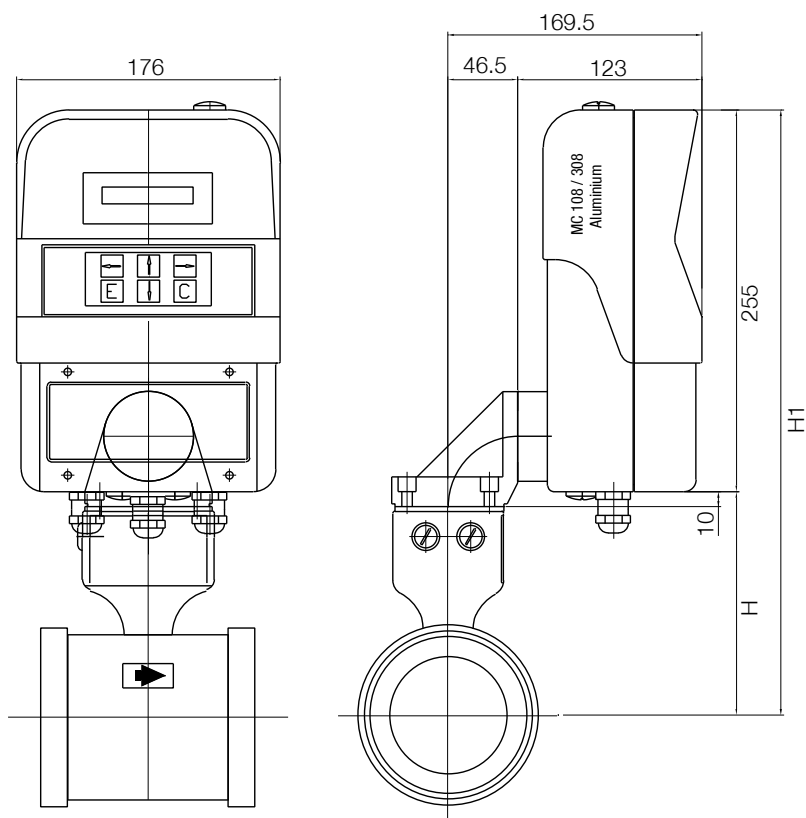
Fig. 5 - MUT 1100 Compact - Converter MC 308 ABS Vertical



Ø DN	H	H1
[mm]	[mm]	[mm]
40	136	358
50	146	365
65	153	375
80	159.5	381.5
100	173.5	395.5
125	186	408
150	201	423
200	225	447

table 10

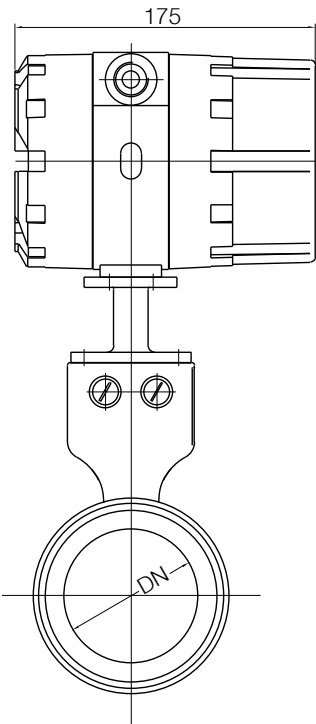
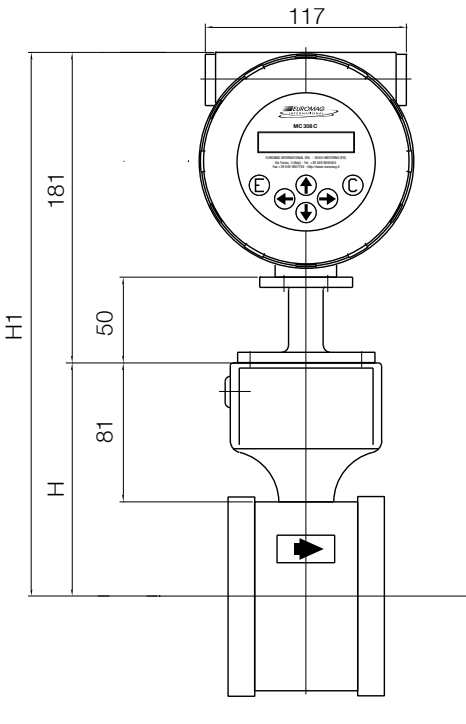
Fig. 5 - MUT 1100 Compact - Converter MC 308 ABS Vertical



Ø DN	H	H1
[mm]	[mm]	[mm]
40	134	389
50	141	396
65	151	406
80	157.5	412.5
100	171.5	426.5
125	184	439
150	199	454
200	223	478

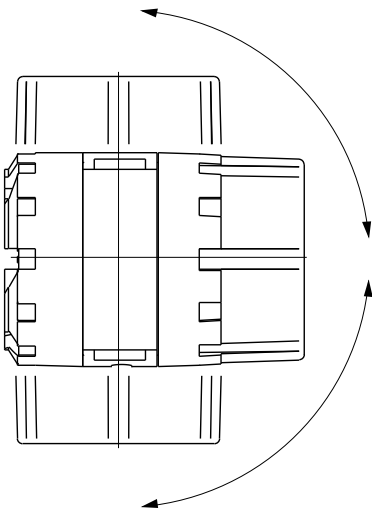
table 11

Fig. 7 - MUT 1100 Compact - Converter MC 308 C



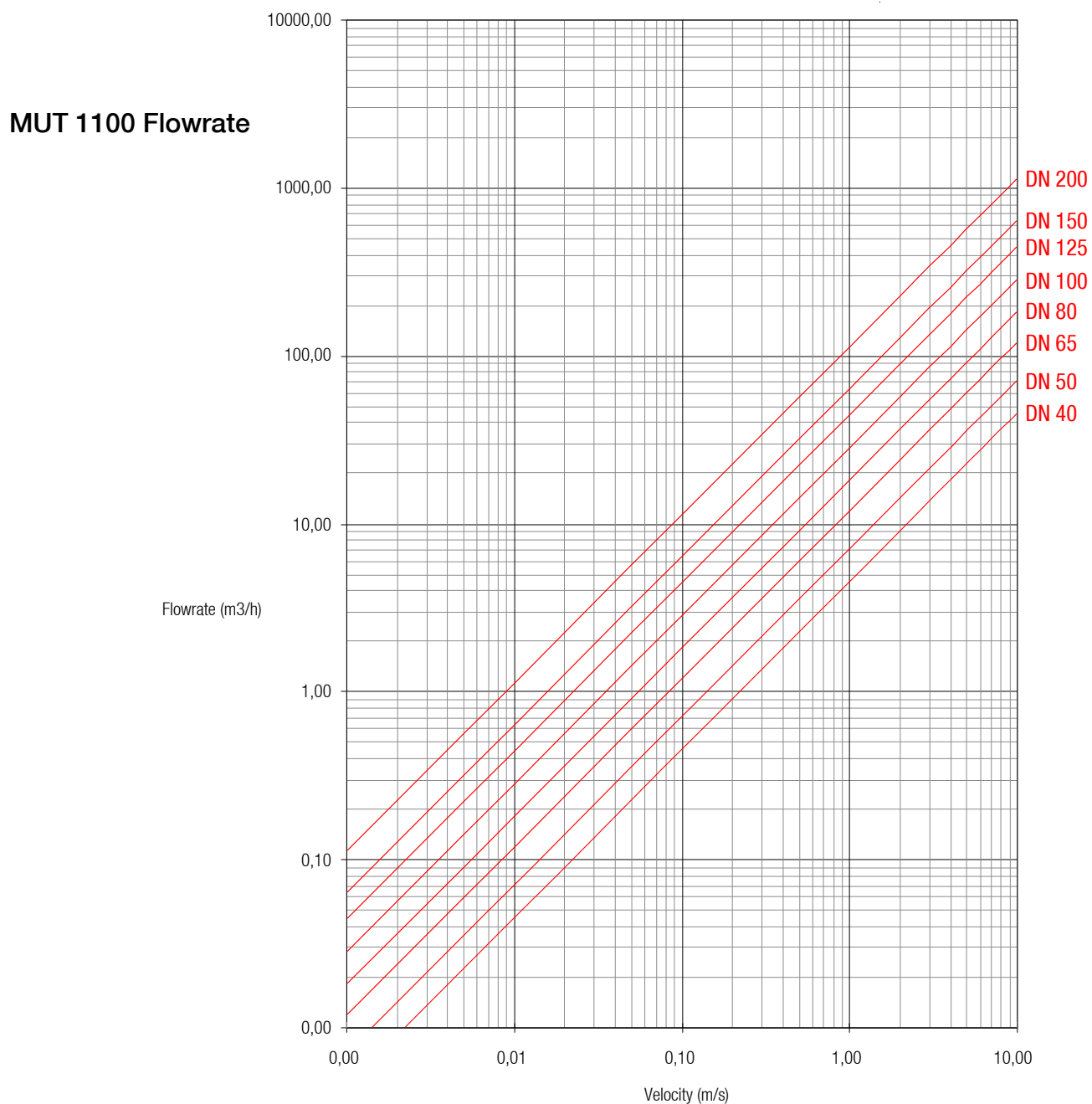
Ø DN	H	H1
[mm]	[mm]	[mm]
40	121	302
50	128	309
65	138	319
80	144.5	325.5
100	158.5	339.5
125	171	352
150	186	367
200	210	391

table 12



POSSIBLE ROTATION
SUPERIOR VIEW

Fig. 8 - Flowrate expressed in m3/h, available for all diameters of MUT1100 sensors.



The data shown in this catalogue are subject to modification without prior notice.