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FM150

Transducer

Datasheet

Benefits

- No energy loss, thanks to a continous measuring tube without flow restrictions.
- flexible process connection, liner and tube diameter DN25 ... DN3000
- reliable and stable flow measurement over time

Typical Applications

- Water / Waste water
- Filtration
- Cleaning
- HVAC
- Data center
- Pump station

PN10 up to PN100
Measuring Range: - 20°C up to 110°C (-4°F up to 230°F) compact version, up to 150°C (302°F) remote version
Accuracy: +/-0.5% depends from selected sensor

Version 2026/02
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Contents

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Technical Features

General Features	
Nominal Diameters	DN 25 (1") ÷ DN 2000 (80")
Minimal Fluid Conductivity	5 µS/cm
Humidity	0÷100% (IP 67)
Precision	Consult data sheet transmitter
CE Certificaton	Yes
PED Certification	Yes
Standard Configurations	
Body Material	Painted carbon steel
Pressure Rating	16 bar (232 psi), 40 bar (580 psi) up to DN 50
Process Connection	Standard flanges EN1092-1, ASME
Version - Protection Class	Compact IP67 (IP68 on request)
Flange Material	Carbon steel
Coating Material	• Polypropylene - max. PN 16 (232 psi) • Ebonite • PTFE - max PN 40 (580 psi)
Gasket Material (ONLY for polypropylene coating)	FPM
Liquid Temperature	• Ebonite • 0°C ÷ 60°C (32° F ÷ 140° F) with PP coating • -5°C ÷ 80°C (23° F ÷ 176° F) with ebonite coating • -20°C ÷ 130°C (4° F ÷ 266° F) (100°C for PTFE liner compact version)
Vacuum Resistance	0.2 bar abs (2.9 psi abs) at 100°C (212°F), PP 60°C (140°F), Ebonite 80°C (176°F)
Electrode Material	• AISI 304 or 316 stainless steel (1.4404) • Hastelloy C276 • Platinum-Rhodium • Titanium • Tantalum
Flow Sensitivity Profile	U0D0 in accordance with ISO 4064 - OIMLR49 - MID
Optional Configurations (For more details, see 'How to Order' on last page)	
Body Material	AISI 304 or 316 stainless steel
Gasket Material (ONLY for polypropylene coating)	EPDM
Pressure Rating	Higher operating pressures are available upon request
Process Connections	Others on request
Flange Material	AISI 304-AISI316 stainless steel
Liquid Temperature	-20°C ÷ 180°C (4° F ÷ 356° F) with PTFE liner in separate version* * Contact the manufacturer for temperatures > 130 °C (366° F) * Sensors with operating temperatures greater than 110°C (230° F) are classified according to the PED directive (specific details in the table on the following page)
Coating Material	On request
Electrode Material	On request
Version - Protection Class	• Separate version (max 20m) – IP 68 • Separate version (max. 500 m), with preamplifier – IP 67 • Separate version (max. 500 m), with preamplifier – IP 68

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Notes for Sensors Subject to the PED Directive

Below are the explanatory tables regarding the products subject to the PED Directive 2014/68/EU for FM150

The tables, distinguished by water operating temperature (TAB A T<110°C TAB B T>=110 °C), indicate which PED categories are applicable to our products and which are currently available.

In the case of applicability, the PED category of the product falls is indicated in correspondence with the sensor diameter and the nominal pressure.

- Table DN/PN Correlation And PED Directive Applicability
- Only for FM130-FM150 and Maximum Pressure
- Only For PTFE-Coated Meters
- Only For FM150 Flanges Uni EN1092 Material P245GH or ASTM Material A105

DN	PN - Nominal Pressure			
	B	C	D	E
25	USE PN 40		USE PN 40	40
32				40
40				40
50	USE PN 16	16		40
65		16		40
80		16		40
100		16		40
125		16		40
150		16		40
200	10	16	25	40
250	10	16	25	40
300	10	16	25	40
350	10	16	25	40
400	10	16	25	40
450	10	16	25	40
500	10	16	25	40

Conditions To Be Met For T. >110°C (230°F)
Pressure > 1.5 bar (22 psi) absolute

CATI I
32>DN<=DN100+ PS*DN> 1000<=3500
CAT II
100>DN<=250 + PS*DN>3500<=5000
CATI III
DN> 250 + PS*DN>5000

Legend:

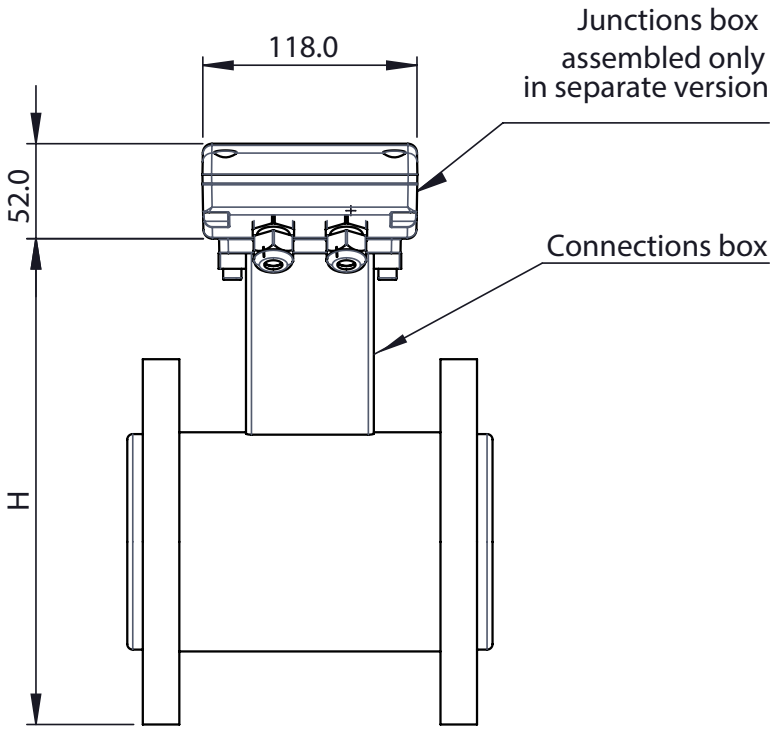
=	OUT OF PED
=	CAT. I
=	CAT. II
=	CAT. III
=	USE DIFF. PN

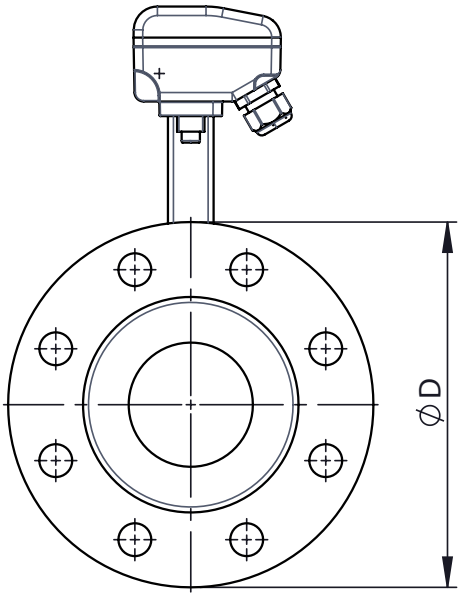
Table DN/PN Correlation and PED Directive Applicability.
Only water meters with < 110°C (230°F)

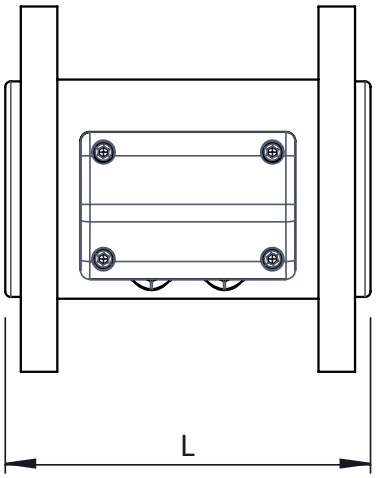
DN	PN - Nominal Pressure			
	B	C	D	E
25	USE PN 40		USE PN 40	40
32				40
40				40
50	USE PN 16			40
65				40
80				40
100				40
125				40
150				40
200	10		25	40
250	10	16	25	40
300	10	16	25	40
350	10	16	25	40
400	10	16	25	40
450	10	16	25	40
500	10	16	25	40
600	10	16	25	40
700	10	16	25	40
800	10	16	25	40
1000	10	16	25	40
1200	10	16	25	40
1300	10	16	25	40
1400	10	16	25	40
1500	10	16	25	40
1600	10	16	25	40
1700	10	16	25	40
1800	10	16	25	40
2000	10	16	25	40
2400	10	16	25	40

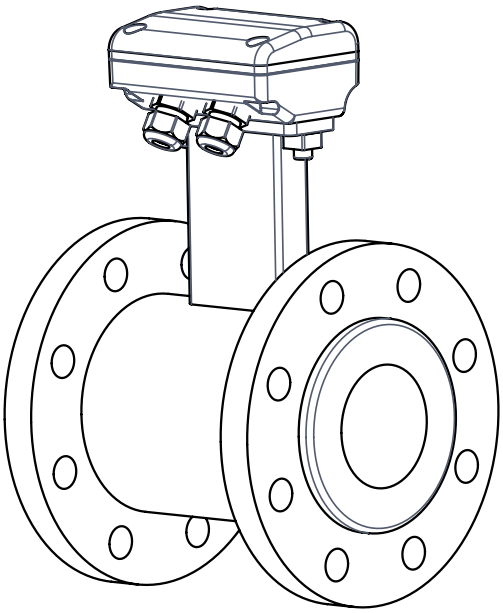
A declaration of conformity is provided for each product, identified by the serial number of the instrument.

Overall Dimensions









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FM150 PN 10/64 - ANSI 150/300 Overall Dimensions 1/2

Dimensions mm (inches)			PN						
			PN 10	PN 16	PN 25	PN 40	PN 64	ANSI 150	ANSI 300
DN	25 (1”)	L	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**
		H	185 (7.28)	185 (7.28)	185 (7.28)	185 (7.28)	198 (7.80)	181 (7.13)	190 (7.48)
		D	**115 (4.53)**	**115 (4.53)**	**115 (4.53)**	**115 (4.53)**	**140 (5.51)**	**108 (4.25)**	**124 (4.88)**
	32 (1”1/4)	L	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)
		H	**203 (8)**	**203 (8)**	**203 (8)**	**203 (8)**	**209 (8.23)**	**192 (7.56)**	**199 (7.83)**
		D	140 (5.51)	140 (5.51)	140 (5.51)	140 (5.51)	155 (6.10)	118 (4.65)	133 (5.24)
	40 (1”1/2)	L	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**
		H	213 (8.39)	213 (8.39)	213 (8.39)	213 (8.39)	220 (8.66)	207 (8.15)	221 (8.7)
		D	**150 (5.90)**	**150 (5.90)**	**150 (5.90)**	**150 (5.90)**	**170 (6.69)**	**127 (5)**	**156 (6.14)**
	50 (2”)	L	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)
		H	**228 (8.98)**	**228 (8.98)**	**228 (8.98)**	**228 (8.98)**	**233 (9.17)**	**222 (8.74)**	**228 (8.98)**
		D	165 (6.50)	165 (6.50)	165 (6.50)	165 (6.50)	180 (7.09)	152 (5.98)	165 (6.5)
	65 (2”1/2)	L	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**	**200 (7.87)**
		H	248 (9.76)	248 (9.76)	248 (9.76)	248 (9.76)	257 (10.12)	245 (9.65)	251 (9.88)
		D	**185 (7.28)**	**185 (7.28)**	**185 (7.28)**	**185 (7.28)**	**205 (8.07)**	**178 (7.01)**	**191 (7.52)**
	80 (3”)	L	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)
		H	**263 (10.35)**	**263 (10.35)**	**263 (10.35)**	**263 (10.35)**	**267 (10.51)**	**259 (10.2)**	**268 (10.55)**
		D	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	215 (8.46)	191 (7.52)	210 (8.27)
	100 (4”)	L	**250 (9.84)**	**250 (9.84)**	**250 (9.84)**	**250 (9.84)**	**250 (9.84)**	**250 (9.84)**	**250 (9.84)**
		H	283 (11.14)	283 (11.14)	294 (11.57)	294 (11.57)	297 (11.69)	288 (11.34)	300 (11.81)
		D	**220 (8.66)**	**220 (8.66)**	**235 (9.25)**	**235 (9.25)**	**250 (9.84)**	**229 (9.02)**	**254 (10)**
	125 (5”)	L	250 (9.84)	250 (9.84)	250 (9.84)	250 (9.84)	250 (9.84)	250 (9.84)	250 (9.84)
		H	**313 (12.32)**	**313 (12.32)**	**325 (12.80)**	**325 (12.80)**	**330 (13)**	**315 (12.4)**	**328 (12.91)**
		D	250 (9.84)	250 (9.84)	270 (10.63)	270 (10.63)	295 (11.61)	254 (10)	279 (10.98)
	150 (6”)	L	**300 (11.81)**	**300 (11.81)**	**300 (11.81)**	**300 (11.81)**	**300 (11.81)**	**300 (11.81)**	**300 (11.81)**
		H	344 (13.54)	344 (13.54)	355 (13.98)	355 (13.98)	377 (14.84)	341 (13.43)	360 (14.17)
		D	**285 (11.22)**	**285 (11.22)**	**300 (11.81)**	**300 (11.81)**	**345 (13.58)**	**279 (10.98)**	**318 (12.52)**
	200 (8”)	L	350 (13.78)	350 (13.78)	350 (13.78)	350 (13.78)	350 (13.78)	350 (13.78)	350 (13.78)
		H	**399 (15.71)**	**399 (15.71)**	**415 (16.34)**	**425 (16.73)**	**435 (17.13)**	**401 (15.79)**	**420 (16.54)**
		D	340 (13.39)	340 (13.39)	360 (14.17)	375 (14.76)	415 (16.34)	343 (13.5)	381 (15)
	250 (10)	L	**450 (17.72)**	**450 (17.72)**	**450 (17.72)**	**450 (17.72)**	**450 (17.72)**	**450 (17.72)**	**450 (17.72)**
		H	454 (17.87)	460 (18.11)	475 (18.7)	493 (19.41)	491 (19.33)	461 (18.15)	480 (18.9)
		D	**395 (15.55)**	**405 (15.94)**	**425 (16.73)**	**450 (17.72)**	**470 (18.5)**	**406 (15.98)**	**445 (17.52)**
	300 (12”)	L	500 (19.69)	500 (19.69)	500 (19.69)	500 (19.69)	500 (19.69)	500 (19.69)	500 (19.69)
		H	**504 (19.84)**	**515 (20.28)**	**535 (21.06)**	**558 (21.97)**	**545 (21.46)**	**527 (20.75)**	**546 (21.5)**
		D	445 (17.52)	460 (18.11)	485 (19.09)	515 (20.28)	530 (20.87)	483 (19.02)	521 (20.51)
	350 (14”)	L	**550 (21.65)**	**550 (21.65)**	**550 (21.65)**	**550 (21.65)**	**550 (21.65)**	**550 (21.65)**	**550 (21.65)**
		H	564 (22.2)	575 (22.64)	598 (23.54)	619 (24.37)	603 (23.74)	582 (22.91)	607 (23.9)
		D	**505 (19.88)**	**520 (20.47)**	**555 (21.85)**	**580 (22.83)**	**600 (23.62)**	**533 (20.98)**	**584 (22.99)**
	400 (16”)	L	600 (23.62)	600 (23.62)	600 (23.62)	600 (23.62)	600 (23.62)	600 (23.62)	600 (23.62)
		H	**620 (24.41)**	**630 (24.8)**	**659 (25.94)**	**695 (27.36)**	**670 (26.38)**	**639 (25.16)**	**664 (26.14)**
		D	565 (22.24)	580 (22.83)	62 (2.44)	660 (25.98)	670 (26.38)	597 (23.5)	648 (25.51)

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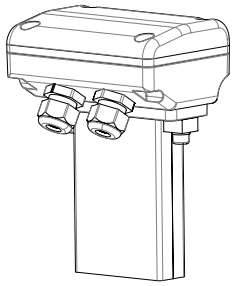
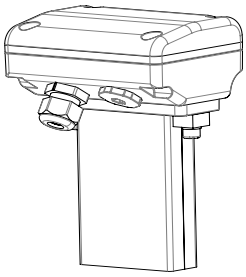
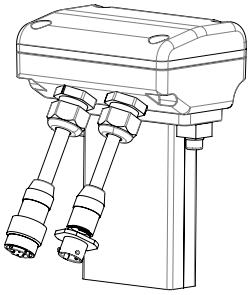
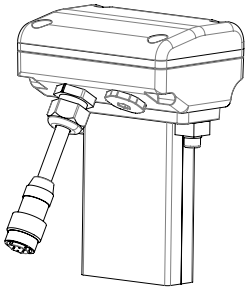
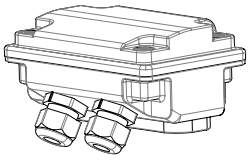
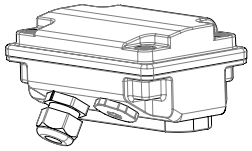
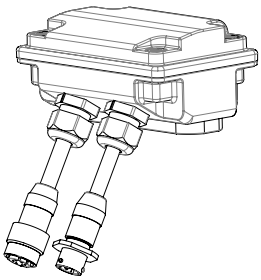
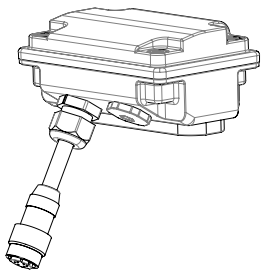
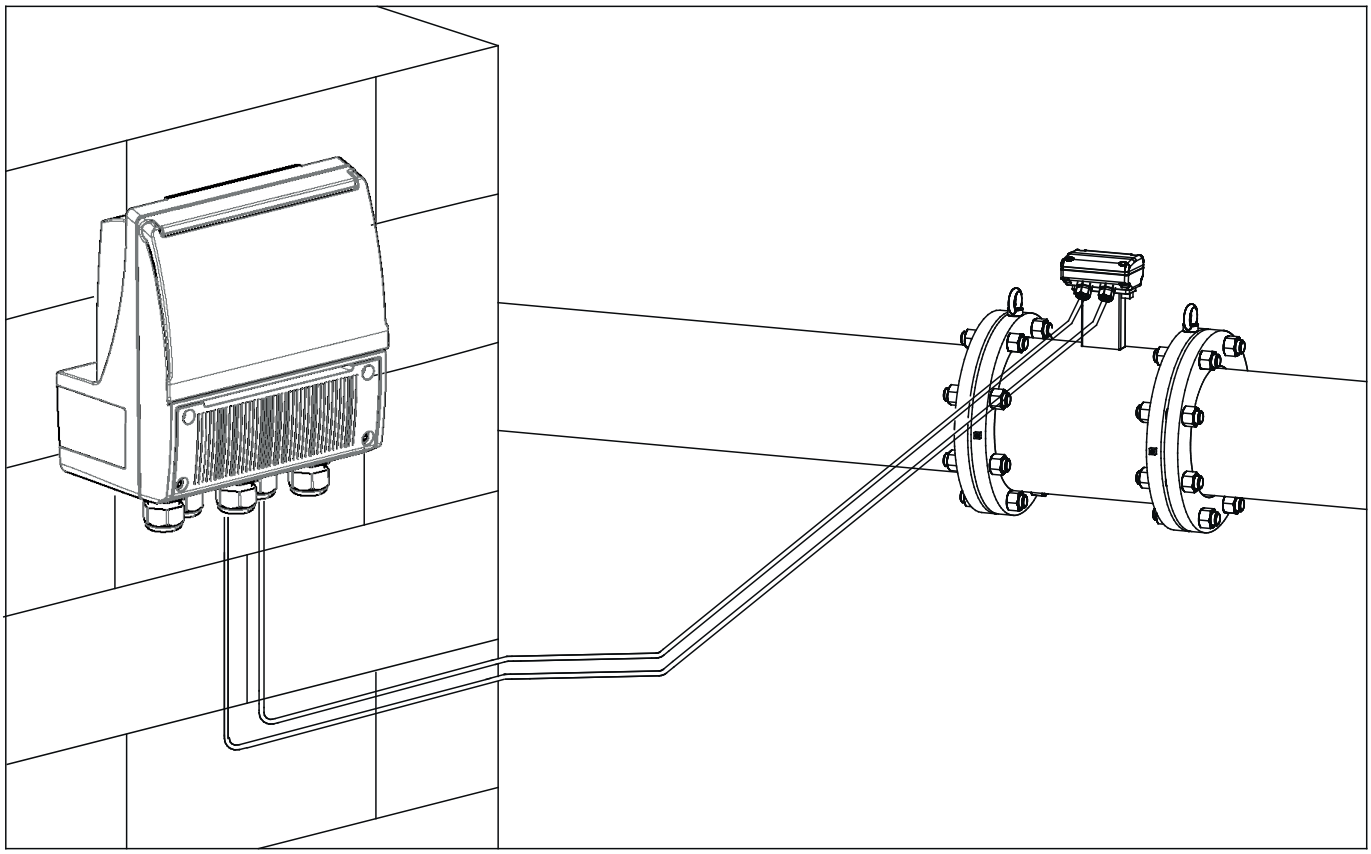
FM150 PN 10/64 - ANSI 150/300 Overall Dimensions 2/2

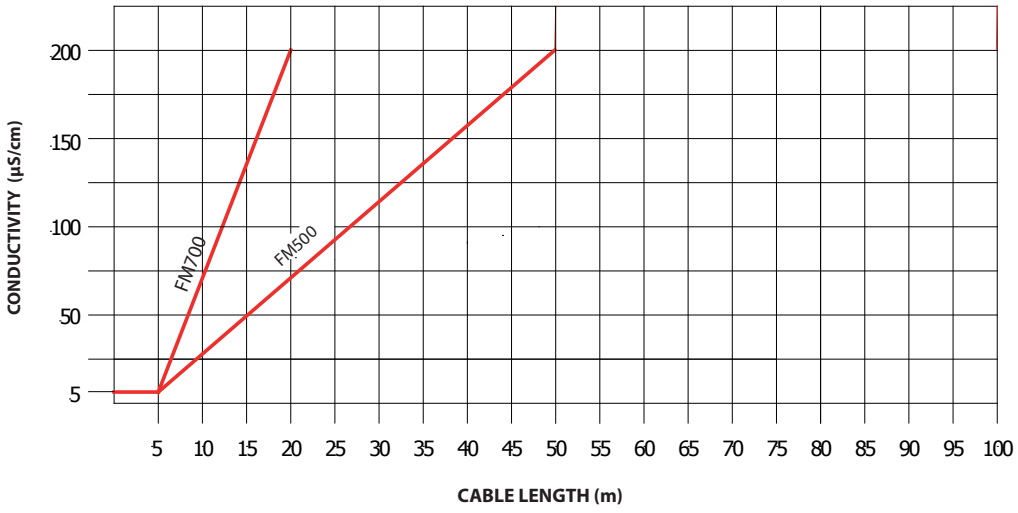
Dimensions mm (inches)			PN						
			PN 10	PN 16	PN 25	PN 40	PN 64	ANSI 150	ANSI 300
DN	450 (18”)	L	**600 (23.62)**	**600 (23.62)**	**600 (23.62)**	**600 (23.62)**		**600 (23.62)**	**600 (23.62)**
		H	670 (26.38)	690 (27.17)	709 (27.91)	720 (28.35)		688 (27.09)	726 (28.58)
		D	**615 (24.21)**	**640 (25.2)**	**670 (26.38)**	**685 (26.97)**		**635 (25)**	**711 (27.99)**
	500 (20”)	L	600 (23.62)	600 (23.62)	600 (23.62)	600 (23.62)		600 (23.62)	600 (23.62)
		H	**725 (28.54)**	**758 (29.84)**	**769 (30.28)**	**784 (30.87)**		**751 (29.57)**	**770 (30.31)**
		D	670 (26.38)	715 (28.15)	730 (28.74)	755 (29.72)		699 (27.52)	775 (30.51)
	600 (24”)	L	600 (23.62)	600 (23.62)	600 (23.62)	600 (23.62)		600 (23.62)	600 (23.62)
		H	830 (32.68)	879 (34.61)	880 (34.65)	911 (35.87)		866 (34.09)	916 (36.06)
		D	780 (30.71)	840 (33.07)	845 (33.27)	890 (35.04)		813 (32.01)	914 (35.98)
	650 (26”)	L						650 (25.59)	650 (25.59)
		H						921 (36.26)	1002 (39.45)
		D						870 (34.25)	972 (38.27)
	700 (28”)	L	700 (27.56)	700 (27.56)	700 (27.56)	700 (27.56)		700 (27.56)	
		H	925 (36.41)	949 (37.36)	989 (38.94)	1016 (40)		1016 (40)	
		D	895 (35.24)	910 (35.83)	960 (37.8)	995 (39.17)		927,1 (36,5)	
	750 (30”)	L						750 (29.53)	750 (29.53)
		H						1032 (40.63)	1121 (44.13)
		D						984 (38.74)	1092 (42.99)
	800 (32”)	L	800 (31.5)	800 (31.5)	800 (31.5)	800 (31.5)		800 (31.5)	
		H	1058 (41.65)	1060 (41.73)	1106 (43.54)	1149 (45.24)		1149 (45.24)	
		D	1015 (39.96)	1025 (40.35)	1085 (42.72)	1114 (43.86)		1060,5 (47,15)	
	850 (34”)	L						850 (33.46)	850 (33.46)
		H						1149 (45.24)	1230 (48.43)
		D						1111 (43.74)	1207 (47.52)
	900 (36”)	L	900 (35.43)	900 (35.43)	900 (35.43)	900 (35.43)		900 (35.43)	900 (35.43)
		H	1158 (45.59)	1160 (45.67)	1206 (47.48)	1259 (49.57)		1206 (47.48)	1292 (50.87)
		D	1115 (43.9)	1125 (44.29)	1185 (46.65)	1250 (49.21)		1168 (45.98)	1270 (50)
	1000 (40”)	L	1000 (39.37)	1000 (39.37)	1000 (39.37)	1000 (39.37)		1000 (39.37)	1000 (39.37)
		H	1269 (49.96)	1284 (50.55)	1329 (52.32)	1369 (53.9)		1381 (54.37)	1467 (57.76)
		D	1230 (48.43)	1255 (49.41)	1320 (51.97)	1360 (53.54)		1346 (52.99)	1448 (57.01)
	1050 (42”)	L						1050 (41.3)	
		H						1355.0 (54.00)	
		D						1346.2 (53.00)	
	1100 (44”)	L						1100 (43.3)	
		H						1428 (56.25)	
		D						1403.4 (55.25)	
	1200 (48”)	L						1200 (47.24)	
		H						1530 (60.50)	
		D						1511.3 (59.50)	
	1800 (72”)	L						1800 (72.00)	
		H						1381 (54.37)	
		D						2197 (86.50)	

	1	2	3	4
A Painted Aluminium				
B AISI 304				

PRICE LIST OPTIONS	JUNCTION BOX TYPE (surface finish)
A	Without junction box, converter connected on the connections box
B	A-1 A-2 only for ML110
G	A-4
F	A-3
N	A-2 with preamplifer
Q	A-4 with preamplifer
U	B-1 (raw) B-2 only for ML110 (raw)
S	B-4 (raw)
T	B-3 (raw)
P	B-2 with preamplifer (raw)
R	B-4 with preamplifer (raw)
K	B-1 (polished) B-2 only for ML110 (polished)
Y	B-4 (polished)
W	B-3 (polished)
V	B-2 with preamplifer (polished)
J	B-4 con preamplificatore (finitura lucidata)

Specifications for Separate Version



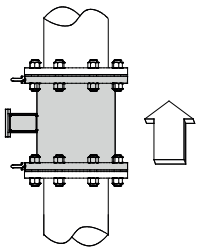


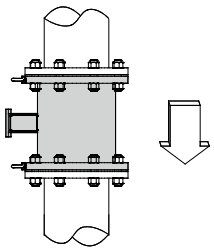
Notes:

- It is recommended to make cable connections away from, or protect them from, electromagnetic disturbances
- To ensure proper "empty tube" recognition operation, the minimum conductivity of the liquid is 20 µS/cm

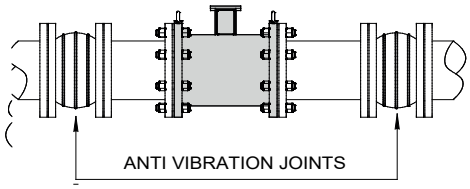
Installation Recommendations

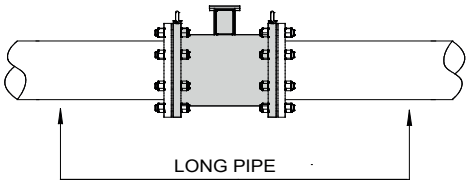
For vertical installations, upward flow is preferable.
For vertical installations with downward motion contact the factory



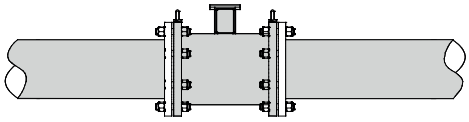


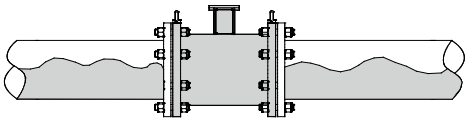
For installations on long sections of pipelines, insert anti-vibration joints



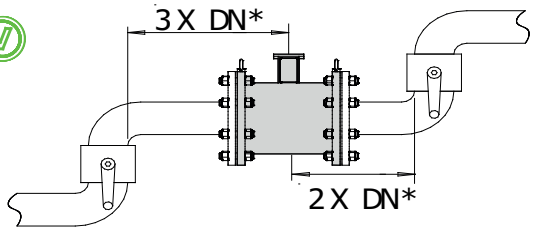


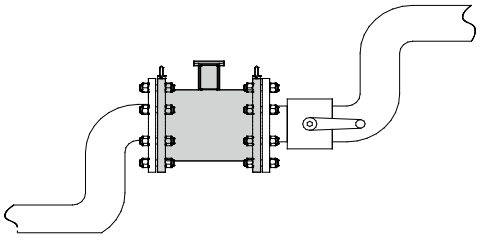
During the measurement phase, the pipe must be completely filled with liquid, or completely empty



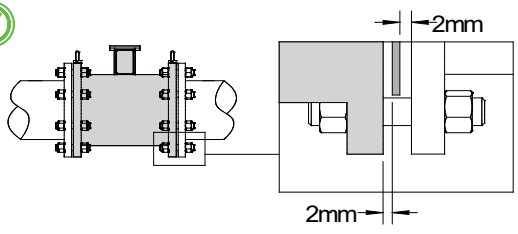


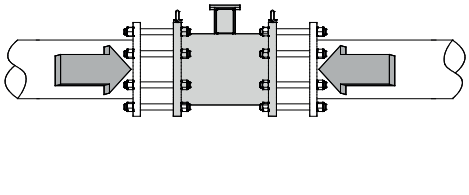
Install the sensor away from bends and plumbing accessories





Before tightening the fittings, bring the duct connection as close as possible to the sensor connection.



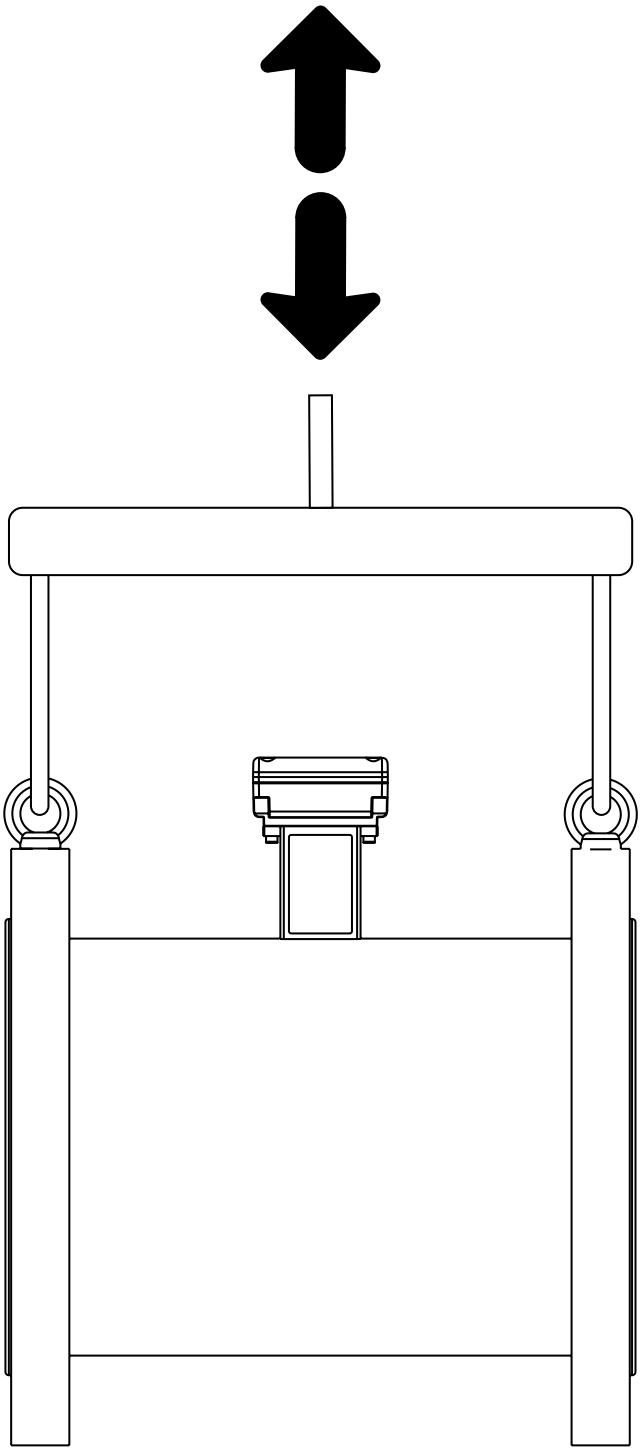


(*) Flow sensitivity profile: U0D0 according to ISO 4064 - OIMLR49 - MID

Lifting Method

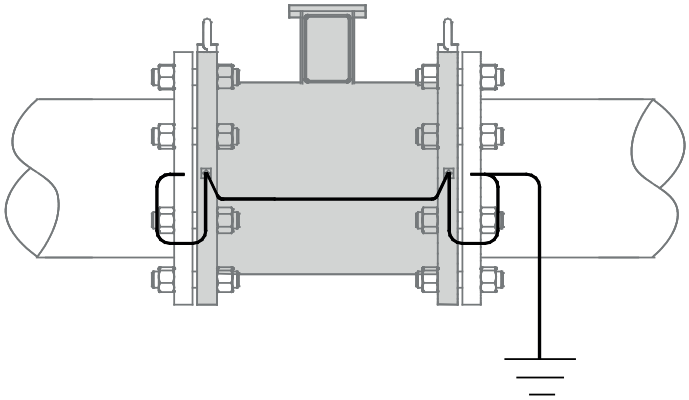
To facilitate installation operations, sensors weighing more than about 20Kg are equipped with special eyebolts. Lift the sensor according to the method shown above.

The eyebolts are sized to support the weight of the meter ONLY

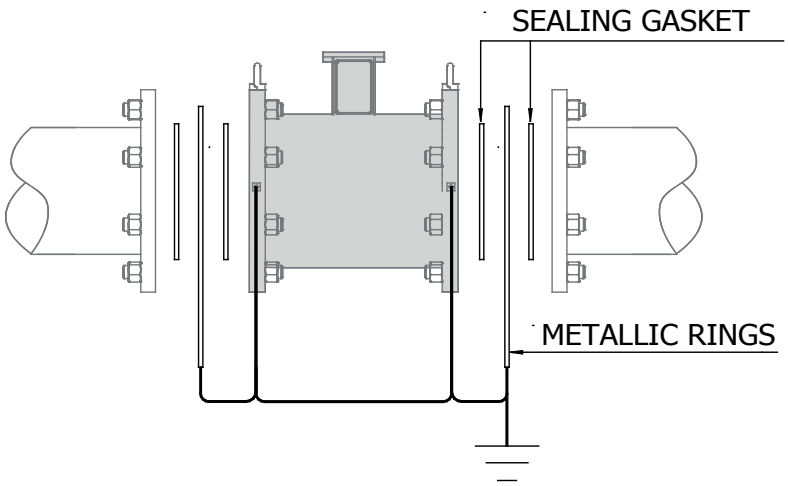


Grounding

Metal Tubing



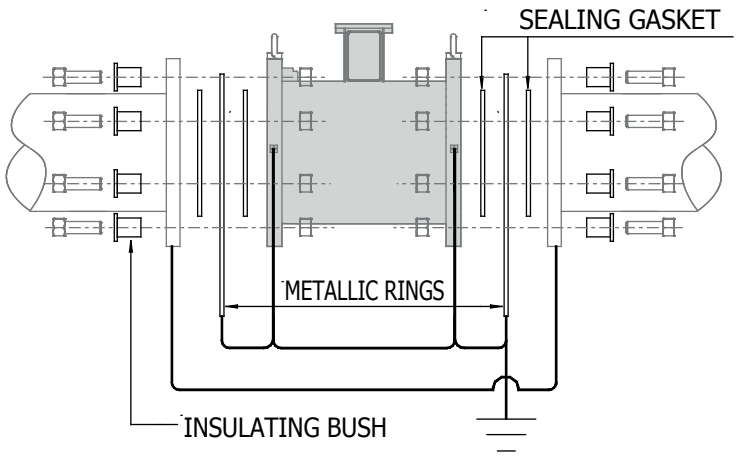
Insulating Pipe



If the sensor is to be installed in a pipe made of insulating material, it is necessary to:

Insert two rings for grounding the liquid between the flanges of the sensor and those of the pipe

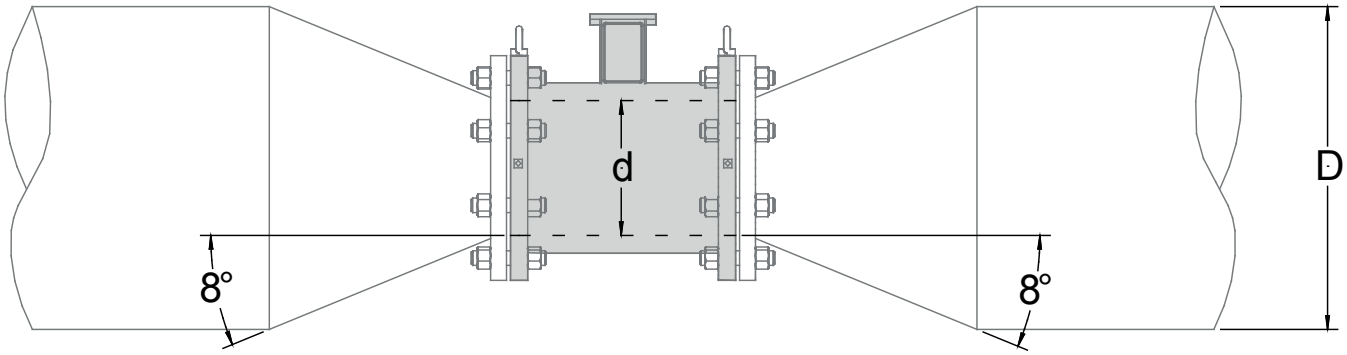
Cathodic Protection Tubing



If the sensor is to be installed in a pipe insulated with cathodic protection, the following must be installed during installation:

- Insulate nuts and locknuts with special insulating bushes
- Insert the metal discs between the flanges of the sensor and those of the pipe; the disks must be insulated by special insulating gaskets

Pressure Drop Calculation (Cone Angle 8°)



$$\Delta p = \left[0.10 + 0.20 \left(\left(\frac{d}{D} \right)^{-2} - 1 \right)^{2} \left(\frac{d}{D} \right)^{4} \right] \left(\rho \frac{u^2}{2} \right)$$

Where:

Δp	=	Pressure drop in [Pa]
ρ	=	Density of the fluid [kg/m³] Typical value ρ = 1000 [kg/m³]
d	=	Sensor of diameter [m]
D	=	Pipe diameter (greater than sensor diameter) [m]
u	=	Average velocity of the fluid inside the sensor [m/s]

Calculation examples Δp [mbar]								
d/D \ u	1 [m/s]	2 [m/s]	3 [m/s]	4 [m/s]	5 [m/s]	6 [m/s]	7 [m/s]	8 [m/s]
0.5	1.1	4.3	9.6	17	26.6	38.3	52.1	68
0.6	0.9	3.6	8.2	14.6	22.7	32.7	44.6	58.2
0.7	0.8	3	6.8	12.2	19	27.4	37.2	48.6
0.8	0.6	2.5	5.7	10.1	15.7	22.7	30.9	40.3
0.9	0.5	2.1	4.8	8.6	13.4	19.3	26.3	34.3

Note:

- ρ = 1000 [kg/m³] density of commonly used water (approximate value).
- The parameter "d" indicates the inner diameter of the sensor expressed in meters. The above equation results in a value in [Pa]. The results of the equation in the table are expressed in [mbar].

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OIML R49: FM500

The FM150 sensor diameters shown below, couple with FM500/FM150W/MV145 are certified in accordance with by OIML R49:2013

Class 1

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.10	0.064	250
32	1 ¼	25	0.16	0.10	
40	1 ½	40	0.26	0.16	
50	2	63	0.40	0.25	
65	2 ½	100	0.64	0.40	
80	3	160	1.0	0.64	
100	4	250	1.6	1.0	
125	5	400	2.6	1.6	
150	6	630	4.0	2.5	
200	8	1000	6.4	4.0	
250	10	1600	10	6.4	
300	12	2500	16	10	
350	14	2500	16	10	
400	16	4000	26	16	
450	18	4000	26	16	
500	20	6300	40	25	
600	24	10000	64	40	

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.26	0.16	100
32	1 ¼	25	0.4	0.25	
40	1 ½	40	0.64	0.4	
50	2	63	1.01	0.63	
65	2 ½	100	1.6	1	
80	3	160	2.6	1.6	
100	4	250	4	2.5	
125	5	400	6.4	4	
150	6	630	10.1	6.3	
200	8	1000	16	10	
250	10	1600	26	16	
300	12	2500	40	25	
350	14	2500	40	25	
400	16	4000	64	40	
450	18	4000	64	40	
500	20	6300	101	63	
600	24	10000	160	100	

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.32	0.2	80
32	1 ¼	25	0.5	0.31	
40	1 ½	40	0.8	0.5	
50	2	63	1.3	0.79	
65	2 ½	100	2	1.25	
80	3	160	3.2	2	
100	4	250	5	3.13	
125	5	400	8	5	
150	6	630	13	7.88	
200	8	1000	20	12.5	
250	10	1600	32	20	
300	12	2500	50	31.25	
350	14	2500	50	31.25	
400	16	4000	80	50	
450	18	4000	80	50	
500	20	6300	126	78.75	
600	24	10000	200	125	

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Class 2

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.064	0.040	400
32	1 ¼	25	0.10	0.063	
40	1 ½	40	0.16	0.10	
50	2	63	0.25	0.16	
65	2 ½	100	0.40	0.25	
80	3	160	0.64	0.40	
100	4	250	1.0	0.63	
125	5	400	1.6	1.0	
150	6	630	2.5	1.6	
200	8	1000	4.0	2.5	
250	10	1600	6.4	4.0	
300	12	2500	10	6.3	
350	14	2500	10	6.3	
400	16	4000	16	10	
450	18	4000	16	10	
500	20	6300	25	16	
600	24	10000	40	25	
650	26	10000	40	25	
700	28	10000	64	40	250
750	30	10000	64	40	
800	32	16000	160	100	160
900	36	16000	160	100	
1000	42	16000	256	160	100
1200	48	16000	320	200	80
1400	56	16000	320	200	
1600	64	16000	320	200	
1800	72	16000	640	400	40
2000	80	16000	640	400	

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.10	0.064	250
32	1 ¼	25	0.16	0.10	
40	1 ½	40	0.26	0.16	
50	2	63	0.40	0.25	
65	2 ½	100	0.64	0.40	
80	3	160	1.0	0.64	
100	4	250	1.6	1.0	
125	5	400	2.6	1.6	
150	6	630	4.0	2.5	
200	8	1000	6.4	4.0	
250	10	1600	10	6.4	
300	12	2500	16	10	
350	14	2500	16	10	
400	16	4000	26	16	
450	18	4000	26	16	
500	20	6300	40	25	
600	24	10000	64	40	
650	26	10000	64	40	
700	28	10000	64	40	
750	30	10000	64	40	
800	32	16000	160	100	160
900	36	16000	160	100	
1000	42	16000	256	160	100
1200	48	16000	320	200	80
1400	56	16000	320	200	
1600	64	16000	320	200	
1800	72	16000	640	400	40
2000	80	16000	640	400	

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Class 2

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.16	0.10	160
32	1 ¼	25	0.25	0.16	
40	1 ½	40	0.40	0.25	
50	2	63	0.63	0.40	
65	2 ½	100	1.0	0.63	
80	3	160	1.6	1.0	
100	4	250	2.5	1.6	
125	5	400	4.0	2.5	
150	6	630	6.3	4.0	
200	8	1000	10	6.3	
250	10	1600	16	10	
300	12	2500	25	16	
350	14	2500	25	16	
400	16	4000	40	25	
450	18	4000	40	25	
500	20	6300	63	40	
600	24	10000	100	63	
650	26	10000	100	63	
700	28	10000	100	63	
750	30	10000	160	100	
800	32	16000	160	100	
900	36	16000	160	100	
1000	42	16000	250	160	100
1200	48	16000	320	200	80
1400	56	16000	320	200	
1600	64	16000	320	200	
1800	72	16000	640	400	40
2000	80	16000	640	400	

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How to Order

Code Sample	Code/Description	
Nominal diameter / coating / liquid temperature / measuring range		
T100	P25	DN25 (1 “), PP coating, max. liquid temp. 60 °C measuring range 0 ... 0.72/0 ... 18 m3/h
	T25	DN25 (1") , PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 0.72/0 ... 18 m3/h
	T25HT	DN25 (1") , PFA coated, max. liquid temp. 180 °C measuring range 0 ... 0.72/0 ... 18 m3/h
	P32	DN32 (1 1/4"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 0.72/0 ... 29 m3 / h
	T32	DN32 (1 1/4"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 1.16 / 0 ... 29 m3 / h
	T32HT	DN32 (1 1/4"), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 1.16 / 0 ... 29 m3 / h
	P40	DN40 (1 1/2"), P.P. rev., max. liquid temp. 60 °C measuring range 0 ... 1.8 / 0 ... 45 m3 / h
	T40	DN40 (1 1/2"), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 1.8 / 0 ... 45 m3 / h
	T40HT	DN40 (1 1/2 “), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 1.8 / 0 ... 45 m3 / h
	P50	DN50 (2 “), PP coating, max. liquid temp. 60 °C measuring range 0 ... 2.88 / 0 ... 72 m3 / h
	T50	DN50 (2 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 2.88 / 0 ... 72 m3 / h
	T50HT	DN50 (2 “), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 2.88 / 0 ... 72 m3 / h
	P65	DN65 (2 1/2 “), PP coating, max. liquid temp. 60 °C measuring range 0 ... 4.8 / 0 ... 120 m3 / h
	T65	DN65 (2 1/2 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 4.8 / 0 ... 120 m3 / h
	T65HT	DN65 (2 1/2 “), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 4.8 / 0 ... 120 m3 / h
	P80	DN80 (3 “), PP coating, max. liquid temp. 60 °C measuring range 0 ... 7.2 / 0 ... 180 m3 / h
	T80	DN80 (3 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 7.2 / 0 ... 180 m3 / h
	T80HT	DN80 (3 “), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 7.2 / 0 ... 180 m3 / h
	P100	DN100 (4 “), PP coating, max. liquid temp. 60 °C measuring range 0 ... 11.2 / 0 ... 280 m3 / h
	T100	DN100 (4 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 11.2 / 0 ... 280 m3 / h
	T100HT	DN100 (4 “), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 11.2 / 0 ... 280 m3 / h
	P125	DN125 (5 “), PP coating, max. liquid temp. 60 °C measuring range 0 ... 18/0 ... 450 m3 / h
	T125	DN125 (5 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 18/0 ... 450 m3 / h
	T125HT	DN125 (5 “), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 18/0 ... 450 m3 / h
	P150	DN150 (6 “), PP coating, max. liquid temp. 60 °C measuring range 0 ... 25.6 / 0 ... 640 m3 / h
	T150	DN150 (6 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 25.6 / 0 ... 640 m3 / h
	T150HT	DN150 (6 “), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 25.6 / 0 ... 640 m3 / h
	E200	DN200 (8 “), ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 45.2 / 0 ... 1130 m3 / h
	T200	DN200 (8 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 45.2 / 0 ... 1130 m3 / h
	T200HT	DN200 (8 “), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 45.2 / 0 ... 1130 m3 / h
	E250	DN250 (10 “), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 70.8 / 0 ... 1770 m3 / h
	T250	DN250 (10 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 70.8 / 0 ... 1770 m3 / h
	T250HT	DN250 (10 “), PFA coated, max. liquid temp. 180 °C measuring range 0 ... 70.8 / 0 ... 1770 m3 / h
	E300	DN300 (12 “), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 100.8 / 0 ... 2520 m3 / h

	T300	DN300 (12"), rev. PTFE, liquid temp. max 110 °C measuring range 0 ... 100,8 / 0 ... 2520 m3/h
	T300HT	DN300 (12"), rev. PFA, liquid temp. max 180 °C measuring range 0 ... 100,8 / 0 ... 2520 m3/h
	E350	DN350 (14"), rev. made of ebonite, liquid temp. max 80 °C measuring range 0 ... 138/0 ... 3450 m3/h
	T350	DN350 (14"), rev. PTFE, liquid temp. max 110 °C measuring range 0 ... 138/0 ... 3450 m3/h DN350 (14")
	E400	DN400 (16 “), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 180/0 ... 4500 m3 / h
	T400	DN400 (16 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 180/0 ... 4500 m3 / h
	E450	DN450 (18 “), ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 228.8 / 0 ... 5720 m3 / h
	T450	DN450 (18 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 228.8 / 0 ... 5720 m3 / h
	E500	DN500 (20 “), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 284/0 ... 7100 m3 / h
	T500	DN500 (20 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 284/0 ... 7100 m3 / h
	E550	(22 “), ebonite coating, max. liquid temp. 80 °C measuring range 0… 348/0… 8712m3 / h
	E600	DN600 (24 “), ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 408/0 ... 10200 m3 / h
	T600	DN600 (24 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 408/0 ... 10200 m3 / h
	E650	(26 “), ebonite coating, max. liquid temp. 80 °C measuring range 0… 480/0 ... 12000 m3 / h
	T650	(26 “), PTFE coated, max. liquid temp. 110 °C measuring range 0… 480/0 ... 12000 m3 / h
	E700	DN700, ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 560/0 ... 14000 m3 / h
	T700	DN700, PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 560/0 ... 14000 m3 / h
	E750	(30 “), ebonite coating, max. liquid temp. 80 °C measuring range 0… 640/0 ... 16000 m3 / h
	T750	(30 “), PTFE coated, max. liquid temp. 110 °C measuring range 0… 640/0 ... 16000 m3 / h
	E800	DN800, ebonite coating, max. liquid temp. 80 °C measuring range 0 ... 720/0 ... 18000 m3 / h
	T800	DN800, PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 720/0 ... 18000 m3 / h
	E850	(34 “), ebonite coating, max. liquid temp. 80 °C measuring range 0… 820/0… 20500 m3 / h
	T850	(34 ”), ebonite coating, max. liquid temp. 80 °C measuring range 0… 820/0… 20500 m3 / h
	E900	DN900 (36 “), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 920/0 ... 23000 m3 / h
	T900	DN900 (36 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 920/0 ... 23000 m3/h
	E1000	DN1000 (40 “), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 1140/0 ... 28500 m3 / h
	T1000	DN1000 (40 “), PTFE coated, max. liquid temp. 110 °C measuring range 0 ... 1140/0 ... 28500 m3/h
	E1050	DN1050 (42 “), ebonite coated, max. liquid temp. 80 °C measuring range 0 ... 1270/0 ... 31752 m3/h
	E1200	DN1200 Ebonite coating, max. liquid temp. 80 °C Measuring range -1,600 - 40,000 m3 / h
	E1400	DN 1400 Ebonite coating, max. liquid temp. 80 ° C Measuring range -2,200 - 55,000 m3 / h
	E1600	DN 1600 Ebonite coating, max. liquid temp. 80 ° C Measuring range - 2,880 - 72,000 m3 / h
	E1800	DN1800 Ebonite casing, max. liquid temp. 80°C Measuring range - 3,640 - 91,000 m3/h
	E2000	DN2000 Ebonite cover, max. liquid temp. 80 °C Measuring range - 4,608 - 115,200 m3 / h
	E2200	DN2200 Ebonite cover, max. liquid temp. 80°C Measuring range - 5.575 - 139.392 m3/h
	E2400	DN2400 Ebonite cover, max. liquid temp. 80°C Measuring range - 6.635 - 165.888 m3/h
Gasket material (internal seal - PP coating only)		
A	A	Without O-Ring (ONLY FOR PTFE / EBONITE / RILSAN COATING)
	B	O-Ring : FKM
	C	O-Ring : EPDM
	Z	O-Ring: to be specified

Flange Type		
1	1	Flange EN1092 PN16 (standard for polypropylene lining)
	2	Flange EN1092 PN10
	3	Flange EN1092 PN25
	4	Flange EN1092 PN40 (standard with PTFE coating up to DN50)
	5	Flange EN1092 PN64
	6	Flange ANSI 150RF
	7	Flange ANSI 300RF
	8	Flange EN1092 PN6
	9	Flange JIS 10K
	0	Flanges: to be specified
Body and flange material		
A	A	Painted carbon steel body and flange
	B	Body and flange in stainless steel (AISI304)
	C	Body and flange in stainless steel (AISI316)
	D	Carbon Steel body and flange painted according to UNI / EN / ISO 12944-2-C4
	E	Carbon Steel body and flange painted according to UNI/EN/ISO 12944-2-C5
	F	Body and flange in painted Carbon Steel CARBOZINC 11 - INORGANIC ZINC
	Z	Body and flange material: other
Number and electrodes matter		
2	2	n. 3 (2 measurement + 1 for mass) electrodes in AISI316L (1.4404)
	4	n. 3 (2 sizes + 1 for mass) electrodes in Hastelloy C276
	5	n. 3 (2 sizes + 1 for mass) Titanium electrodes
	6	n. 3 (2 sizes + 1 for mass) Tantalum electrodes; not available with Polypropylene
	7	n. 3 (2 sizes + 1 for mass) Platinum electrodes; not available with Polypropylene (MAX DN = 50)
	0	Electrode material: to be specified
Sensor version / protection class		
A	A	Compact version, IP rating: IP67
	B	Separate version - JB material: Aluminum - IP68 - for C014 + C015/16 cable
	F	Separate version - JB material: Aluminum - IP68 - n.2 MIL connectors for C015/016-CC/CS + CB cables
	N	Separate version - JB material: Aluminum - IP67 - with Preamp for C014 + C015/16 cables
	L	Separate version - JB material: Aluminum - IP68 - with Preamp - n.2 MIL connectors for C015/016-CC/CS + CB cables
	U	Separate version - JB material: 304 RAW - IP68 for C014 + C015/16 cable
	T	Separate version - JB material: 304 RAW - IP68 - n.2 MIL connectors for C015/016-CC/CS + CB cables
	P	Separate version - JB material: 304 RAW - IP67 - with Preamp for C014 + C015/16 cables
	M	Separate version - JB material: 304 RAW - IP68 - with Preamp - n.2 MIL connectors for C015/016-CC/CS + CB cables
	K	Separate version - JB material: 304 polished - IP68 for C014 + C015/16 cable
	W	Separate version - JB material: 304 polished - IP68 - n.2 MIL connectors for Cable C015/016-CC/CS + CB
	V	Separate version - JB material: 304 polished - IP67 - with Preamp for C014 + C015/16 cables
	J	Separate version - JB material: 304 polished - IP68 - with Preamp - n.2 MIL connectors for cables C015/016-CC/CS + CB

ATTENTION! The choice of preamplifier excludes the use of the Empty Pipe and BIV functions.

Complete code sample for ordering → **FM150 -T100-A1A2A**