

MAGFLO MAG 5100 W

Benefits

- DN15 to DN2000 (½" to 78")
- Connection flanges ANSI and AWWA
- Ebonite Hard Rubber liner for all water applications
- EPDM liner with drinking water approvals
- Hastelloy Integrated grounding and measuring electrodes
- Increased low flow accuracy for water leak detection, due to coned liner design [7ME6520 DN 15 to 300 (½" to 12")]
- Drinking water approvals
- Suitable for direct burial and constant flooding
- Build-in length according to ISO 13359, sizes up to DN400 (16")
- Easy commissioning, SENSORPROM unit automatically uploads calibration values and settings
- Designed so that patented in-situ verification can be conducted
- Using SENSORPROM fingerprint

Application

- The main applications of the MAGFLO electromagnetic flow sensors can be found in the following fields:
- Water abstraction
- Water treatment
- Water distribution network (leak detection management)
- Custody transfer water meters
- Irrigation
- Waste water treatment
- Filtration plant (e.g. reverse osmosis and ultra filtration)
- Industrial Water applications

Mode of operation

The flow measuring principle is based on Faradays Law of Electromagnetic Induction where the sensor converts the flow into an electrical voltage proportional to the velocity of the flow.



Function

- Highly resistant to a wide range of chemicals
- Meets EEC directives: PED 2014/68/EU pressure directive for EN1092-1 flanges
- Simple onsite s/b or factory upgrade to IP68/NEMA 6P of standard sensor

Integration

The complete flow meter consists of a flow sensor and an associated transmitter MAGFLO MAG 5000 or MAG 6000

Technical Specifications

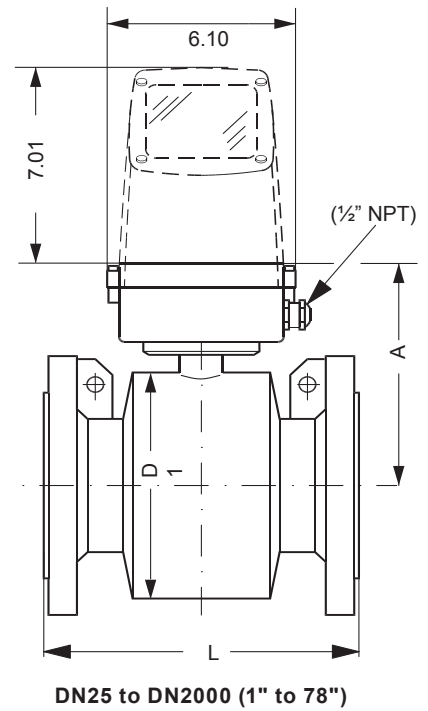
Ebonite Liner

Design	Full bore sensor
Nominal size	For all sizes DN25 to DN2000 (1" to 78")
Measuring principle	Electromagnetic induction
Excitation frequency	DN25 to DN65 (1" to 2½"): 12.5 Hz/15Hz DN80 to DN150 (3" to 6"): 6.25 Hz/7.5 Hz DN200 to DN1200 (8" to 48"): 3.125 Hz/3.75 Hz DN1400 to DN2000 (54" to 78"): 1.5625 Hz/1.875 Hz
Process connection	
Flanges	
- ANSI B 16.5	Class 150: DN25 to DN600 (1" to 24") Raised face
- AWWA C-207	Class D: DN700 to DN2000 (28" to 78") Flat face
Rated operation conditions	
Ambient temperature	
- Sensor	-40 to +70 °C (-40 to +158 °F)
- With Compact transmitter MAG 5000/6000	-20 to +60 °C (-4 to +140 °F)
Operating pressure	DN25 to DN50 (1" to 2")/0.01 to 40 bar (0.15 to 580 psi) DN65 to DN1200 (2½" to 48")/0.01 to 16 bar (0.15 to 232 psi) DN1400 to DN2000 (54" to 78")/0.01 to 10 bar (0.015 to 145 psi)
Enclosure rating	
- Standard	IP67 to EN 60529/NEMA 4x/6 (1 mH ₂ O for 30 minutes)
- Option	IP68 to EN 60529/NEMA 6P (10 mH ₂ O continuously)
Pressure Drop	Insignificant
Medium conditions	Temperature of medium -10 to +70 °C (14 to +158 °F)
EMC	2014/30/EU
Design	
Weight	See dimensional drawings
Material	
- Housing and flanges	Carbon Steel ASTM A 105, with corrosion-resistant coating
- Terminal box	Standard Fibre glass reinforced polyamide
- Measuring pipe	AISI 304 (1.4301)
- • Liner	Ebonite Hard Rubber (hydro carbon resistant)
- Electrodes	Hastelloy C276
- Grounding electrodes standard	Hastelloy C276
Certificates and Approvals	
Custody Transfer (only together with MAG 5000/6000 CT)	
Approvals	UL General Safety, FM Class 1, Div 2, Groups A,B,C,D , FM Class 1, Zone 2, Groups IIC
Approvals	NSF/ANSI Standard 61 (Includes Annex G) (Cold Water, US)

Dimensions/weights (approximate) in inches (mm) and lbs (kg)

Ebonite Liner

Nominal Size		A		L		Weight	
inch	(mm)	inch	(mm)	inch	(mm)	lbs	(kg)
1	25	7.4	(188)	7.9	(201)	11	(5.0)
1½	40	7.8	(198)	7.9	(201)	15	(6.8)
2	50	8.1	(206)	7.9	(201)	20	(9.1)
2½	65	8.3	(211)	7.9	(201)	24	(10.9)
3	80	8.7	(221)	7.9	(201)	28	(12.7)
4	100	9.5	(241)	9.8	(249)	41	(18.6)
5	125	10.0	(254)	9.8	(249)	52	(23.6)
6	150	10.9	(277)	11.8	(300)	64	(29.0)
8	200	12.0	(305)	13.8	(351)	124	(56.2)
10	250	13.1	(333)	17.7	(450)	174	(78.9)
12	300	14.1	(358)	19.7	(500)	243	(110)
14	350	14.3	(363)	21.7	(551)	307	(139)
16	400	15.2	(386)	23.6	(599)	351	(159)
18	450	16.5	(419)	23.6	(599)	400	(181)
20	500	17.4	(442)	23.6	(599)	495	(225)
24	600	19.4	(493)	23.6	(599)	704	(319)
28	700	21.4	(544)	27.6	(701)	602	(273)
30	750	22.5	(571)	29.5	(749)	725	(329)
32	800	23.9	(607)	31.5	(800)	804	(365)
36	900	25.7	(653)	35.4	(899)	1089	(494)
40	1000	27.7	(704)	39.4	(899)	1282	(582)
42	1050	27.7	(704)	39.4	(899)	1512	(699)
44	1100	29.7	(754)	43.3	(1100)	1680	(762)
48	1200	31.9	(810)	47.2	(1199)	1896	(861)



Technical Specifications

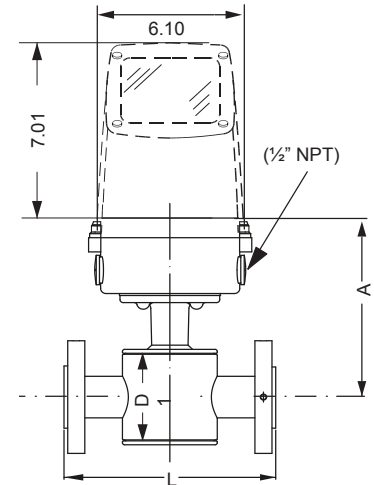
EPDM Liner

Design	Coned sensor (octagon liner)	Coned sensor	Full bore sensor
Nominal size	DN15 to DN40 (½" to 1½")	DN50 to DN300 (2" to 12")	For all sizes DN350 to DN1200 (14" to 48")
Measuring principle	Electromagnetic Induction		
Excitation frequency	DN15 to DN65 (½" to 2½"): 12.5 Hz/15Hz DN200 to DN300 (8" to 12"): 3.125 Hz/3.75 Hz DN80 to DN150 (3" to 6"): 6.25 Hz/7.5 Hz DN350 to DN1200 (14" to 48"): 1.5625 Hz/1.875 Hz		
Process connection			
Flanges			
- ANSI B 16.5	Class 150: DN15 to DN300 (½" to 12") Flat face DN350 to 600 (14" to 24") Raised face		
- AWWA C-207	Class D: DN700 to 1200 (28" to 48") Flat face		
Rated operation conditions			
Ambient temperature			
- Sensor	-40 to +70 °C (-40 to +158 °F)		
- With Compact transmitter MAG 5000/6000	-20 to +60 °C (-4 to +140 °F)		
Operating pressure	DN15 to DN40 (½" to 1½")/0.01 to 40 bar (0.15 to 580 psi) DN50 to DN300 (2" to 12")/0.03 to 20 bar (0.44 to 290 psi) DN350 to DN1200 (14" to 48")/0.01 to 16 bar (0.015 to 232 psi)		
Enclosure rating			
- Standard	IP67 to EN 60529/NEMA 4x/6 (1 mH ₂ O for 30 minutes)		
- Option	IP68 to EN 60529/NEMA 6P (10 mH ₂ O continuously)		
Pressure Drop	DN15 to DN25 (½" to 1"): Max 20 mbar (0.29 psi) at 1 m/s (3 ft/s) DN40 to DN300 (2" to 12"): Max 25 mbar (0.36 psi) at 3 m/s (10 ft/s) DN350 to DN1200 (14" to 48") Insignificant		
Medium conditions	Temperature of medium -10 to +70 °C (14 to +158 °F)		
EMC	2014/30/EU		
Design			
Weight	See dimensional drawings		
Material			
- Housing and flanges	Carbon Steel ASTM A 105, with corrosion-resistant coating		
- Terminal box	Standard Fibre glass reinforced polyamide		
- Measuring pipe	AISI 304 (1.4301)		
- Liner	Ebonite Hard Rubber (hydro carbon resistant)		
- Electrodes	Hastelloy C276		
- Grounding electrodes standard	Hastelloy C276		
Certificates and Approvals			
Custody Transfer (only together with MAG 5000/6000 CT)			
Approvals	UL General Safety, FM Class 1, Div 2, Groups A,B,C,D , FM Class 1, Zone 2, Groups IIC		
Approvals	NSF/ANSI Standard 61 (Includes Annex G) (Cold Water, US)		

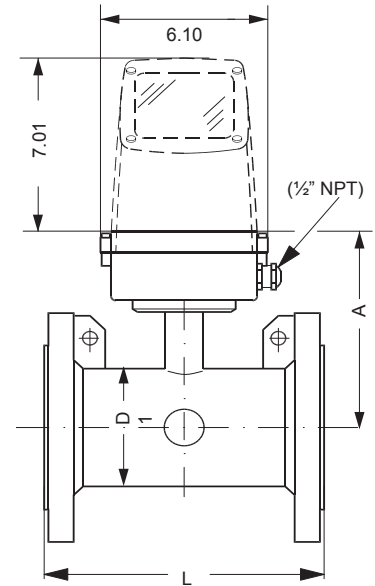
Dimensions/weights (approximate) in inches (mm) and lbs (kg)

EPDM Liner

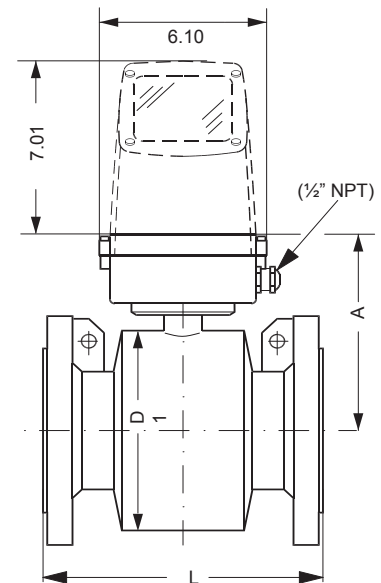
Nominal Size		A		L		Weight	
				Class 150/AWWA		Class 150/AWWA	
inch	(mm)	inch	(mm)	inch	(mm)	lbs	(kg)
½	15	7.0	(179)	7.9	(201)	11	(5.0)
1	25	7.4	(188)	7.9	(201)	11	(5.0)
1½	40	8.0	(198)	7.9	(201)	15	(6.8)
2	50	8.1	(206)	7.9	(201)	20	(9.1)
2½	65	8.3	(211)	7.9	(201)	24	(10.9)
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48	1200	31.9	(810)	47.2	(1199)	1896	(861)



DN15 to DN40 (½" to 1½")



DN50 to DN300 (2" to 12")



DN350 to DN1200 (14" to 48")

Model Code MAG 5100 W

Description

Sensor MAG 5100 W - Hard Rubber Liner (ebonite)

Liner: Ebonite

Electrodes: Hastelloy C

Enclosure: NEMA 4X, NEMA 6*

(3-ft. submersible up to 72 hours)

Flange Material: Carbon Steel

Sizes 1" to 24": ANSI 16.5B, Class 150

Sizes 28" to 48": AWWA C-207, Class D

Max Temp: 158 °F (70 °C)

**NEMA 6P when applying submersible kit part #EC004659*

Code numbers in Bold Type indicate items ordinarily in stock.

Consult factory for confirmation.

Size		Code no.	Flange
inch	(mm)		
1"	25	7ME6580-2DJ14-2AA2	150# ANSI
1 ½"	40	7ME6580-2RJ14-2AA2	150# ANSI
2"	50	7ME6580-2YJ14-2AA2	150# ANSI
2 ½"	65	7ME6580-2FJ14-2AA2	150# ANSI
3"	80	7ME6580-3MJ14-2AA2	150# ANSI
4"	100	7ME6580-3TJ14-2AA2	150# ANSI
5"	125	7ME6580-4BJ14-2AA2	150# ANSI
6"	150	7ME6580-4HJ14-2AA2	150# ANSI
8"	200	7ME6580-4PJ14-2AA2	150# ANSI
10"	250	7ME6580-4VJ14-2AA2	150# ANSI
12"	300	7ME6580-5DJ14-2AA2	150# ANSI
14"	350	7ME6580-5KJ14-2AA2	150# ANSI
16"	400	7ME6580-5RJ14-2AA2	150# ANSI
18"	450	7ME6580-5YJ14-2AA2	150# ANSI
20"	500	7ME6580-6FJ14-2AA2	150# ANSI
24"	600	7ME6580-6PJ14-2AA2	150# ANSI
28"	700	7ME6580-6YL14-2AA2	AWWA
30"	750	7ME6580-7DL14-2AA2	AWWA
32"	800	7ME6580-7HL14-2AA2	AWWA
36"	900	7ME6580-7ML14-2AA2	AWWA
40"	1000	7ME6580-7RL14-2AA2	AWWA
42"	1050	7ME6580-7UL14-2AA2	AWWA
44"	1100	7ME6580-7VL14-2AA2	AWWA
48"	1200	7ME6580-8BL14-2AA2	AWWA

Model Code MAG 5100 W

Description

Sensor MAG 5100 W

Liner: EPDM

Electrodes: Hastelloy C

Enclosure: NEMA 4X, NEMA 6*

(3 ft (0.91 m). submersible up to 72 hours)

Flange Material: Carbon Steel

Sizes ½" to 24": ANSI 16.5B, Class 150

Sizes 28" to 48": AWWA C-207, Class D

Max Temp: 158 °F (70 °C)

**NEMA 6P when applying submersible kit part #EC004659*

Code numbers in Bold Type indicate items ordinarily in stock.

Consult factory for confirmation.

Size		Code no.	Flange
inch	(mm)		
½"	15	7ME6520-1VJ12-2AA2	150# ANSI
1"	25	7ME6520-2DJ12-2AA2	150# ANSI
1 ½"	40	7ME6520-2RJ12-2AA2	150# ANSI
2"	50	7ME6520-2YJ12-2AA2	150# ANSI
2 ½"	65	7ME6520-3FJ12-2AA2	150# ANSI
3"	80	7ME6520-3MJ12-2AA2	150# ANSI
4"	100	7ME6520-3TJ12-2AA2	150# ANSI
5"	125	7ME6520-4BJ12-2AA2	150# ANSI
6"	150	7ME6520-4HJ12-2AA2	150# ANSI
8"	200	7ME6520-4PJ12-2AA2	150# ANSI
10"	250	7ME6520-4VJ12-2AA2	150# ANSI
12"	300	7ME6520-5DJ12-2AA2	150# ANSI
14"	350	7ME6520-5KJ12-2AA2	150# ANSI
16"	400	7ME6520-5RJ12-2AA2	150# ANSI
18"	450	7ME6520-5YJ12-2AA2	150# ANSI
20"	500	7ME6520-6FJ12-2AA2	150# ANSI
24"	600	7ME6520-6PJ12-2AA2	150# ANSI
28"	700	7ME6520-6YL12-2AA2	AWWA
30"	750	7ME6520-7DL12-2AA2	AWWA
32"	800	7ME6520-7HL12-2AA2	AWWA
36"	900	7ME6520-7ML12-2AA2	AWWA
40"	1000	7ME6520-7RL12-2AA2	AWWA
42"	1050	7ME6520-7UL12-2AA2	AWWA
44"	1100	7ME6520-7VL12-2AA2	AWWA
48"	1200	7ME6520-8BL12-2AA2	AWWA