

## 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 (1/2" 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 up-loads 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



# MAGFLO MAG 5100 W

## Ebonite Liner

### Technical Specifications

<b>Design</b>		<b>Full Bore Sensor</b>
Nominal size	For all sizes DN25 to DN2000 (1" to 78")	
<b>Measuring Principle</b>		<b>Electromagnetic Induction</b>
Excitation frequency	DN25 to DN65 (1" to 2.52"): 12.5 Hz/15Hz    DN200 to DN1200 (8" to 48"): 3.125 Hz/3.75 Hz DN80 to DN150 (3" to 6"): 6.25 Hz/7.5 Hz    DN1400 to DN2000 (54" to 78"): 1.5625 Hz/1.875 Hz	
<b>Process Connection</b>		
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	
<b>Rated Operation Conditions</b>		
Ambient temperature • Sensor • With Compact transmitter MAG 5000/6000	-40 to +70°C (-40 to +158°F) -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 (2.5" 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 • Option	IP67 to EN 60529 / NEMA 4x/6 (1 mH <sub>2</sub> O for 30 minutes) IP68 to EN 60529 / NEMA 6P (10 mH <sub>2</sub> O continuously)	
Pressure Drop	Insignificant	
Medium conditions	Temperature of medium -10 to +70°C (-14 to +158°F)	
EMC	2014/30/EU	
<b>Design</b>		
Weight	See dimensional drawings	
Material • Housing and flanges • Terminal box • Measuring pipe • Liner • Electrodes • Grounding electrodes standard	Carbon Steel ASTM A 105, with corrosion-resistant coating Standard Fibre glass reinforced polyamide AISI 304 (1.4301) Ebonite Hard Rubber (hydro carbon resistant) Hastelloy C276 Hastelloy C276	
<b>Certificates and Approvals</b>		
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)	

Flow Measurement

# MAGFLO MAG 5100 W

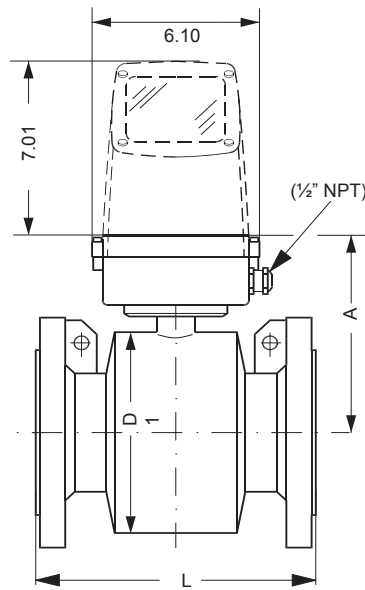
## EPDM Liner

### Technical Specifications

Design	Coned Sensor (octagon liner)	Coned Sensor	Full Bore Sensor
Nominal size	DN15 to DN40 (1/2" to 1.5")	DN50 to DN300 (2" to 12")	For all sizes DN350 to DN1200 (14" to 48")
<b>Measuring Principle</b>	<b>Electromagnetic Induction</b>		
Excitation frequency	DN15 to DN65 (1/2" to 2.5"): 12.5 Hz/15Hz DN80 to DN150 (3" to 6"): 6.25 Hz/7.5 Hz	DN200 to DN300 (8" to 12"): 3.125 Hz/3.75 Hz DN350 to DN1200 (14" to 48"): 1.5625 Hz/1.875 Hz	
<b>Process Connection</b>			
Flanges			
• ANSI B 16.5	Class 150: DN15 to DN300 (1/2" 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		
<b>Rated Operation Conditions</b>			
Ambient temperature • Sensor • With Compact transmitter MAG 5000/6000	-40 to +70°C (-40 to +158°F) -20 to +60°C (-4 to +140°F)		
Operating pressure	DN15 to DN40 (1/2" to 1.5") / 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 • Option	IP67 to EN 60529 / NEMA 4x/6 (1 mH <sub>2</sub> O for 30 minutes) IP68 to EN 60529 / NEMA 6P (10 mH <sub>2</sub> O continuously)		
Pressure Drop	DN15 to DN25 (1/2" 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		
<b>Design</b>			
Weight	See dimensional drawings		
Material • Housing and flanges • Terminal box • Measuring pipe • Liner • Electrodes • Grounding electrodes standard	Carbon Steel ASTM A 105, with corrosion-resistant coating Standard Fibre glass reinforced polyamide AISI 304 (1.4301) Ebonite Hard Rubber (hydro carbon resistant) Hastelloy C276 Hastelloy C276		
<b>Certificates and Approvals</b>			
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)		

# MAGFLO MAG 5100 W

## Ebonite Liner

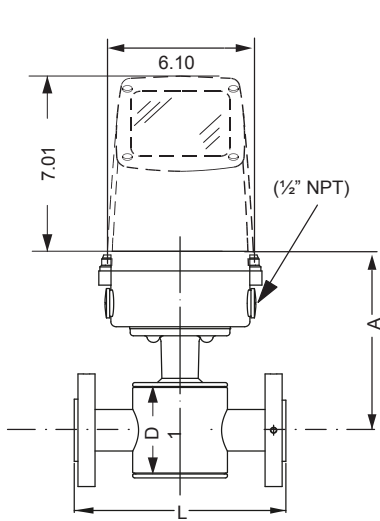


DN25 to DN2000 (1" to 78")

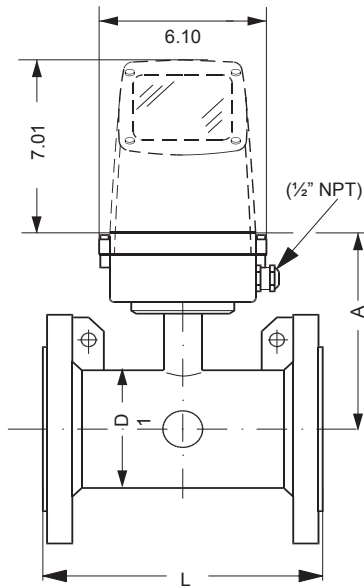
Nominal Size		A	L	Weight
[mm]	[inch]	[inch]	Class 150 / AWWA [inch]	Class 150 / AWWA [lbs]
25	1	7.4	7.9	11
40	1½	7.8	7.9	15
50	2	8.1	7.9	20
65	2½	8.3	7.9	24
80	3	8.7	7.9	28
100	4	9.5	9.8	41
125	5	10.0	9.8	52
150	6	10.9	11.8	64
200	8	12.0	13.8	124
250	10	13.1	17.7	174
300	12	14.1	19.7	243
350	14	14.3	21.7	307
400	16	15.2	23.6	351
450	18	16.5	23.6	400
500	20	17.4	23.6	495
600	24	19.4	23.6	704
700	28	21.4	27.6	602
750	30	22.5	29.5	725
800	32	23.9	31.5	804
900	36	25.7	35.4	1089
1000	40	27.7	39.4	1282
	42	27.7	39.4	1512
	44	29.7	43.3	1680
1200	48	31.9	47.2	1896

# MAGFLO MAG 5100 W

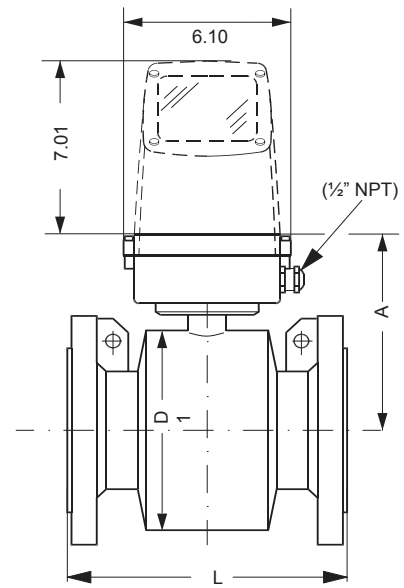
## EPDM Liner



DN15 to DN40 (½" to 1½")



DN50 to DN300 (2" to 12")



DN350 to DN1200 (14" to 48")

Nominal Size		A	L	Weight
[mm]	[inch]	[inch]	Class 150 / AWWA [inch]	Class 150 / AWWA [lbs]
15	½	7.0	7.9	11
25	1	7.4	7.9	11
40	1½	8.0	7.9	15
50	2	8.1	7.9	20
65	2½	8.3	7.9	24
80	3	8.7	7.9	28
100	4	9.5	9.8	41
125	5	10.0	9.8	52
150	6	10.9	11.8	64
200	8	12.0	13.8	124
250	10	13.1	17.7	174
300	12	14.1	19.7	243
350	14	14.3	21.7	307
400	16	15.2	23.6	351
450	18	16.5	23.6	400
500	20	17.4	23.6	495
600	24	19.4	23.6	704
700	28	21.4	27.6	602
750	30	22.5	29.5	725
800	32	23.9	31.5	804
900	36	25.7	35.4	1089
1000	40	27.7	39.4	1282
	42	27.7	39.4	1512
	44	29.7	43.3	1680
1200	48	31.9	47.2	1896

# MAGFLO MAG 5100 W

## Model Code **MAG 5100 W**

DESCRIPTION	SIZE (IN.)	CODE No	FLANGE
Sensor MAG 5100 W - Hard Rubber Liner (ebonite)			
<b>Liner: Ebonite</b>	1"	7ME6580-2DJ14-2AA2	150# ANSI
Electrodes: Hastelloy C	1 ½"	7ME6580-2RJ14-2AA2	150# ANSI
Enclosure: NEMA 4X, NEMA 6*	2"	7ME6580-2YJ14-2AA2	150# ANSI
(3-ft. submersible up to 72 hours)	2 ½"	7ME6580-2FJ14-2AA2	150# ANSI
Flange Material: Carbon Steel	3"	7ME6580-3MJ14-2AA2	150# ANSI
Sizes 1" to 24": ANSI 16.5B, Class 150	4"	7ME6580-3TJ14-2AA2	150# ANSI
Sizes 28" to 48": AWWA C-207, Class D	5"	7ME6580-4BJ14-2AA2	150# ANSI
Max Temp: 158°F (70°C)	6"	7ME6580-4HJ14-2AA2	150# ANSI
	8"	7ME6580-4PJ14-2AA2	150# ANSI
<i>*NEMA 6P when applying submersible kit part #EC004659</i>	10"	7ME6580-4VJ14-2AA2	150# ANSI
	12"	7ME6580-5DJ14-2AA2	150# ANSI
Code numbers in Bold Type indicate items ordinarily in stock. Consult factory for confirmation.	14"	7ME6580-5KJ14-2AA2	150# ANSI
	16"	7ME6580-5RJ14-2AA2	150# ANSI
	18"	7ME6580-5YJ14-2AA2	150# ANSI
	20"	7ME6580-6FJ14-2AA2	150# ANSI
	24"	7ME6580-6PJ14-2AA2	150# ANSI
	28"	7ME6580-6YL14-2AA2	AWWA
	30"	7ME6580-7DL14-2AA2	AWWA
	32"	7ME6580-7HL14-2AA2	AWWA
	36"	7ME6580-7ML14-2AA2	AWWA
	40"	7ME6580-7RL14-2AA2	AWWA
	42"	7ME6580-7UL14-2AA2	AWWA
	44"	7ME6580-7VL14-2AA2	AWWA
	48"	7ME6580-8BL14-2AA2	AWWA

# MAGFLO MAG 5100 W

## Model Code **MAG 5100 W**

DESCRIPTION	SIZE (IN.)	CODE No	FLANGE
Sensor MAG 5100 W	1/2"	7ME6520-1VJ12-2AA2	150# ANSI
<b>Liner: EPDM</b>	1"	7ME6520-2DJ12-2AA2	150# ANSI
Electrodes: Hastelloy C	1 1/2"	7ME6520-2RJ12-2AA2	150# ANSI
Enclosure: NEMA 4X, NEMA 6*	2"	7ME6520-2YJ12-2AA2	150# ANSI
(3-ft. submersible up to 72 hours)	2 1/2"	7ME6520-3FJ12-2AA2	150# ANSI
Flange Material: Carbon Steel	3"	7ME6520-3MJ12-2AA2	150# ANSI
Sizes 1/2" to 24": ANSI 16.5B, Class 150	4"	7ME6520-3TJ12-2AA2	150# ANSI
Sizes 28" to 48": AWWA C-207, Class D	5"	7ME6520-4BJ12-2AA2	150# ANSI
Max Temp: 158°F (70°C)	6"	7ME6520-4HJ12-2AA2	150# ANSI
	8"	7ME6520-4PJ12-2AA2	150# ANSI
<i>*NEMA 6P when applying submersible kit part #EC004659</i>	10"	7ME6520-4VJ12-2AA2	150# ANSI
	12"	7ME6520-5DJ12-2AA2	150# ANSI
Code numbers in Bold Type indicate items ordinarily in stock.	14"	7ME6520-5KJ12-2AA2	150# ANSI
Consult factory for confirmation.	16"	7ME6520-5RJ12-2AA2	150# ANSI
	18"	7ME6520-5YJ12-2AA2	150# ANSI
	20"	7ME6520-6FJ12-2AA2	150# ANSI
	24"	7ME6520-6PJ12-2AA2	150# ANSI
	28"	7ME6520-6YL12-2AA2	AWWA
	30"	7ME6520-7DL12-2AA2	AWWA
	32"	7ME6520-7HL12-2AA2	AWWA
	36"	7ME6520-7ML12-2AA2	AWWA
	40"	7ME6520-7RL12-2AA2	AWWA
	42"	7ME6520-7UL12-2AA2	AWWA
	44"	7ME6520-7VL12-2AA2	AWWA
	48"	7ME6520-8BL12-2AA2	AWWA