

**Non-full pipe Electromagnetic flowmeter:**

**GT-NFM**



**Greentech Korea Co., Ltd.**

Tel: 82.53.762.6668 Fax: 82.53.355.7295

E-mail: [gtcinfo@naver.com](mailto:gtcinfo@naver.com)

Add.: 121-3, Yutongdanji-ro 8-gil, Buk-gu, Daegu, Korea 41515

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**Application:** Waste water, Rainwater, Irrigation, Sewage etc.



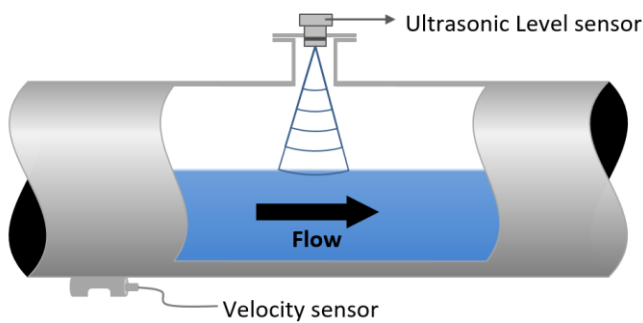
# 1. Description

The **Non-full pipe Electromagnetic flowmeter** is a kind of automatic flow measurement which uses the velocity area method to continuously measure the fluid flow in not filled pipelines (such as half pipe sewage pipeline and large flow pipeline without overflow weir). It can measure and display the data of instantaneous flow, velocity and cumulative flow.

It is especially suitable for the discharge of municipal rainwater, wastewater and sewage, and irrigation water pipeline.

The Electromagnetic flowmeter of not filled Tube fully, which is composed of a velocity sensor, a water level sensor and a flow indicator. It can continuously measure the flow rate and liquid level of the fluid in the pipeline.


As long as the user inputs the inner diameter of the circular pipe or the width of the square pipe, the non-full pipe flowmeter will automatically calculate the flow in the pipe, and automatically display the instantaneous flow and flow in the pipeline Speed, cumulative flow and other measurement parameters.



# 2. Consists of meter

- 1) Electromagnetic flow meter
- 2) Ultrasonic level meter
- 3) Pipe type velocity sensor
- 4) Remote signal converter: Surface mounting
- 5) Signal cable

### 3. Technical Specification

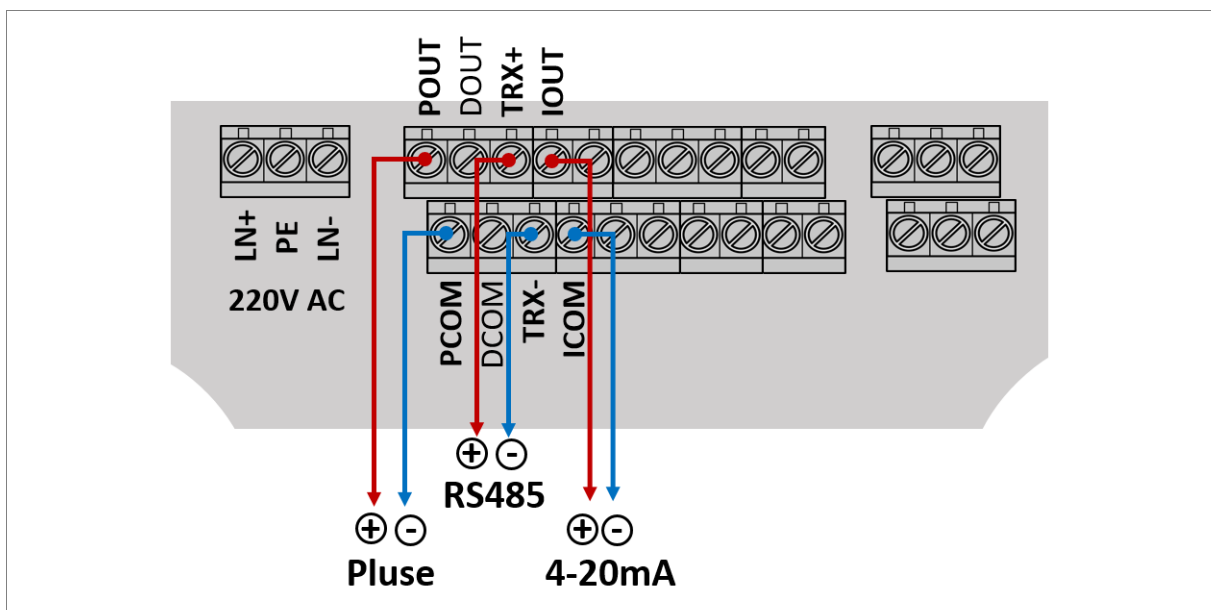
<ul style="list-style-type: none"> <li>Remote separate type</li> </ul>			
<b>Accuracy</b>		2.0~2.5% F.S. Velocity: 1.0%, Level: ±3mm	
<b>Repeatability</b>		±0.15% Better	
<b>Electrode Q'ty</b>		4pcs (Standard)	
<b>Min. Conductivity</b>		5 Micro Siemens	
<b>Measuring range</b>		0.5~10m/sec	
<b>Flow direction</b>		Bi direction	
<b>Diameter (mm)</b>		DN150~2,000mm	
<b>Medium Pressure</b>		0.6, 1.0, 1.6 MPa	
		Please consult with us if you order special pressure	
<b>Medium Temperature</b>		Rubber lining: 0~60°C	PTFE lining: 0~150°C
<b>Material</b>	<b>Body</b>	Steel painted	
	<b>Electrode</b>	SUS316L, Titanium, Tantalum, Hastelloy, Tungsten Carbide	
	<b>Measuring Tube</b>	SUS304	
	<b>Lining</b>	Chloroprene Rubber, PTFE	
	<b>Flange</b>	Standard material: Steel Standard norm.: JIS	Option: SUS304, SUS316, Others. Option: DIN, ANSI, Others
<b>Meter enclosure</b>		IP67	
<b>Ambient Temperature</b>		-20~60°C	
<b>Influence of Ambient Temperature</b>		< ±0.1% / 10°C or < ±0.25% / 10°C	
<b>Repetition</b>		≤ ±0.15%	
<b>Measurement Range of Velocity</b>		≤12m/s	
<b>• Converter</b>			
<b>Display</b>		LCD Display: Flow Rate, Total, Velocity, Level height.	
<b>Transmitting Output</b>		Power: 220VAC/ 50~60hz, DC 24V/ 200mA	
		Output: Standard output 4~20mA DC, RS485 Modbus. Option: RS232, Profibus-PA	
		Analog output error: ≤ ±0.02mA, load resistor: 0~550Ω	
<b>Measuring Damping time</b>		0~40 sec adjustable.	
<b>Damping time for 4-20mA</b>		0~250 sec adjustable	
<b>Mounting</b>		Surface	
<b>Signal cable enclosure</b>		Std 10m. IP65	
<b>Electric Connections</b>		M20x1.5, 1/2" NPT, PG 13.5	

**Remarks:** Meter body and Converter housing color may be changed without any prior notice.  
The signal converter design and construction may be changed by order specification

## 4. Flow range table

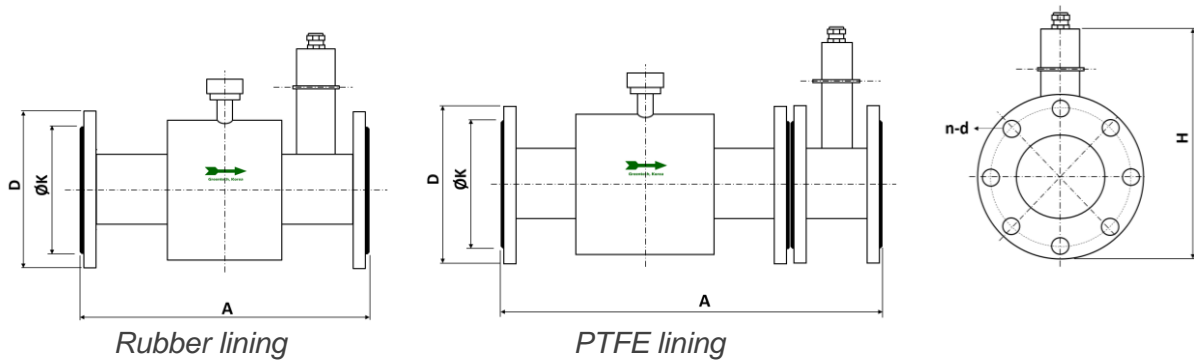
Caliber		Measuring flow range	Level measuring range
mm	inch		
150	6 "	10~100 m <sup>3</sup> /h	40~130mm
200	8 "	15~150 m <sup>3</sup> /h	40~180 mm
250	10 "	22~220 m <sup>3</sup> /h	40~230 mm
300	12 "	30~300 m <sup>3</sup> /h	50~280 mm
350	14 "	45~450 m <sup>3</sup> /h	50~330 mm
400	16 "	58~580 m <sup>3</sup> /h	55~380 mm
450	18 "	75~750 m <sup>3</sup> /h	60~420 mm
500	20 "	90~900 m <sup>3</sup> /h	65~480 mm
600	24 "	130~1,300 m <sup>3</sup> /h	70~580 mm
700	28 "	180~1,800 m <sup>3</sup> /h	75~680 mm
800	32 "	235~2,350 m <sup>3</sup> /h	80~780 mm
900	36 "	300~3,000 m <sup>3</sup> /h	85~880 mm
1,000	40 "	350~3,500 m <sup>3</sup> /h	90~980 mm
1,200	48 "	450~4,500 m <sup>3</sup> /h	110~1,180 mm
1,400	56 "	800~8,000 m <sup>3</sup> /h	110~1,300 mm

## 5. Terminal Diagram



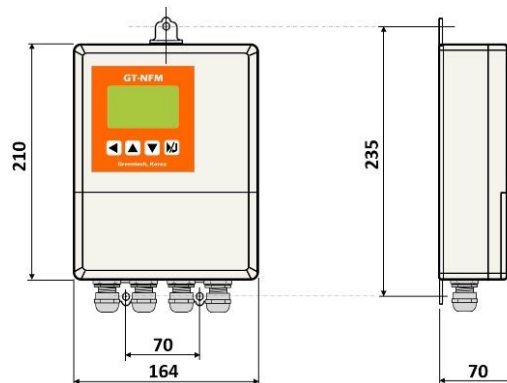
## 6. Dimensions of meter and converter

### 6-1. Meter



Meter size		A		ØD	ØK	H	N*d
mm	Inch	Rubber Lining	PTFE Lining				
150	6"	460	660	285	240	485	8*M20
200	8"	510	710	340	295	540	8*M20
250	10"	610	810	395	350	595	12*M20
300	12"	650	850	445	400	645	12*M20
350	14"	700	900	505	460	705	16*M20
400	16"	750	950	565	515	765	16*M24
450	18"	750	950	615	565	815	20*M24
500	20"	750	950	670	620	870	20*M24
600	24"	750	950	780	725	980	20*M27
700	28"	850	1050	895	840	1095	24*M27
800	30"	952	1152	1015	950	1215	24*M30
900	36"	1050	1250	1075	1020	1300	28*M30
1000	40"	1150	1350	1175	1120	1400	28*M33
1200	48"	1350	1550	1405	1340	1605	32*M36
1400	54"	1550	1800	1630	1560	1830	36*M39

### 6-2. Converter



## 7. Ordering Code

Meter model: GT-NFM			
Meter size	-XXX	DN150~2,000mm	
Normal pressure	06	0.6MPa	
	10	1.0MPa	
	16	1.6MPa	
Connection type & Material	F(CS )	Flange type- Carbon steel	
	F(04)	Flange type- SUS304.	
	F(16 )	Flange type- SUS316.	
	F(16L )	Flange type- SUS316L.	
	X	Others.	
Lining material	N	Neoprene	
	T	PTFE	
Electrodes material	L	SUS316L	
	HB	Hastelloy B	
	HC	Hastelloy C	
	TI	Titanium	
	TA	Tantalum	
	TU	Tungsten Carbide	
Signal converter		<ul style="list-style-type: none"> <li>● LCD display.</li> <li>● IP65</li> <li>● Surface mounting with signal cable:10m</li> </ul>	
Power supply	A	220VAC/ 50~60Hz	
	B	24VDC	
Output	Standard	S 4-20mADC/ Pulse/ RS485 MODBUS	
	Option	PA	RS485 PROFIBUS
		W	GSM, GPRS
Cable entry	M	M20 x 1/5 (SUS304)	
	N	NPT 1/2" (SUS304)	
	G	PG 13.5/ Plastic	
Signal cable	X	Please mark cable length.	

This specification may be altered by our updating without any prior notice.  
This meter colors may be changed on your request.