

# BATTERY-POWERED ELECTROMAGNETIC FLOW METER





New High-tech  
Enterprise



CE



ATEX



ISO

## APPLICATIONS

- Applied to conductive liquid
- Widely used in industries such as petroleum, chemical engineering, iron and steel, food, power, paper making, water treatment, petrochemical, medicine etc.

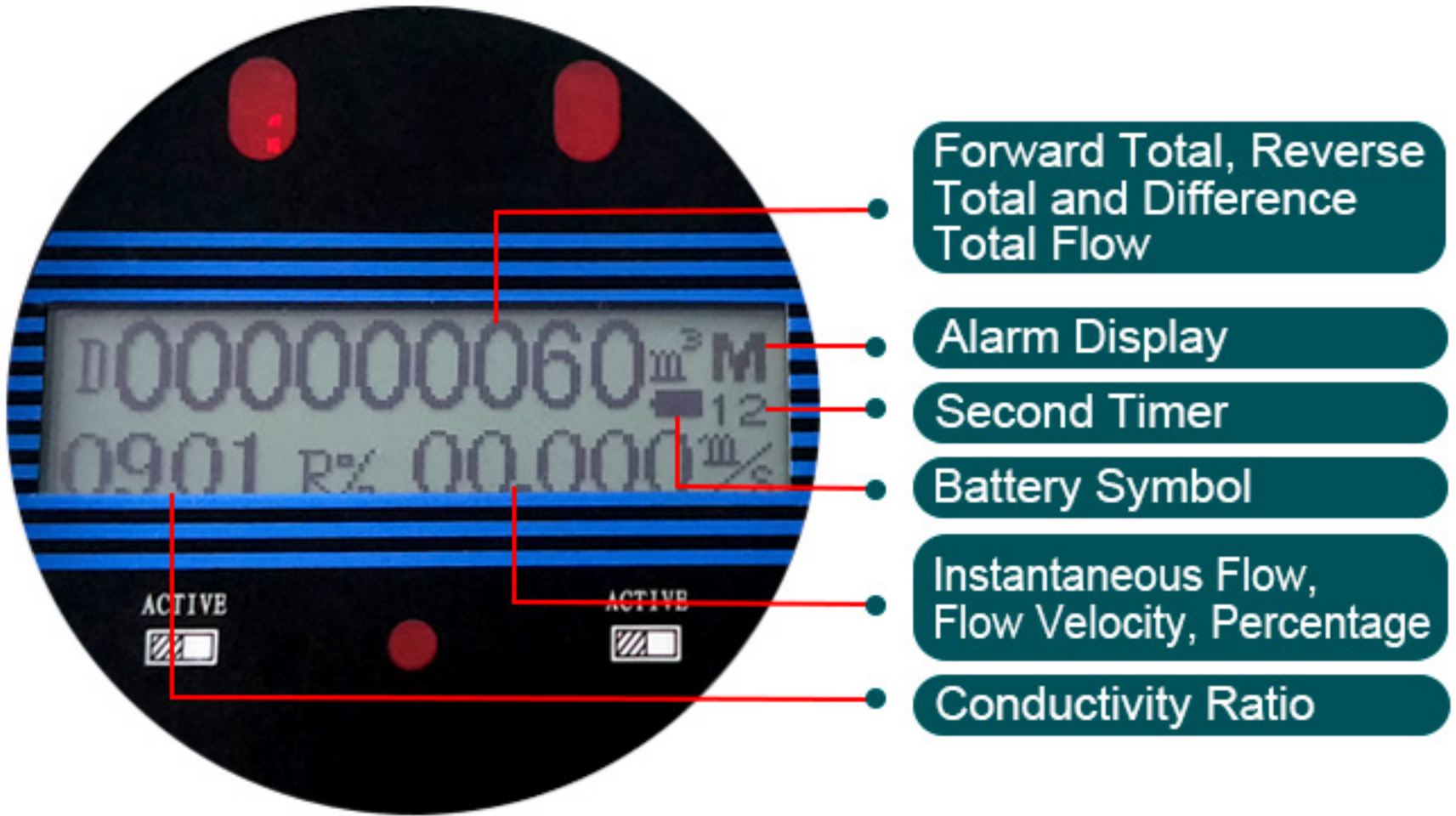


# PRODUCT FEATURES

## 01. LCD Display

LCD backlight makes it easy to read day and night

### ● Multiple Flow Units Selectable



## 02. Intelligent Converter, Digital PCB

Digital Signal Processing, Stable Measurement, High Accuracy, Strong Anti-interference Capability

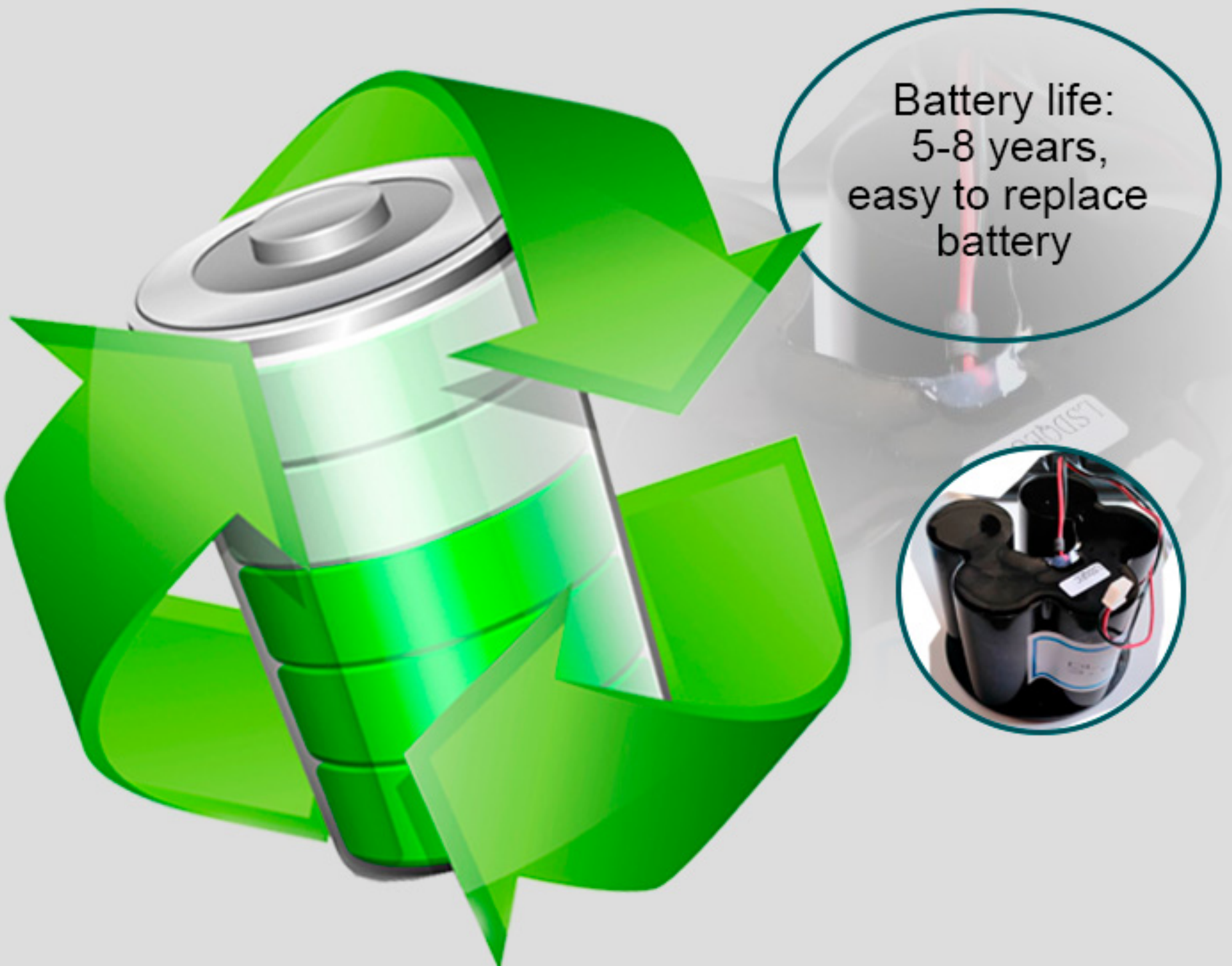


- Automatic alarm functions for self-diagnosis.
- 10 years forward total flow (record per month), 10 years reverse flow( record per month), 10 years total heat (record per month), 24 lines heat meter mode error record
- SS304 housing, IP68 Protection

## **03.** Bi-directional measurement Easy to install



## **04.** Micro-power consumption, embedded 3.6V Lithium battery Work normally in remote area, no electricity area



## 05. Remote-controller Operation



## 05. Optional Functions



**NO.1**

GPRS/GSM, wireless communication

**NO.2**

RS485 output ( connect external DC24V power supply or 3.6V battery)

**NO.3**

4-20mA output (external DC24V power supply)

**NO.4**

Temperature & Pressure

**NO.5**

External DC24V Power Supply

# 06. Solar Power Supply



Solar Panel

GPRS Antenna

Intelligent Cloud Platform

Battery Powered (with DC12-24V) EMF Converter

Data Measurement & Control Remote Transmission Terminal (GPRS)

Colloid Storage Battery

Lightning Protection Solar Charge Controller

# VARIOUS CONNECTIONS IN DIFFERENT WORKING CONDITIONS



Insertion  
Battery  
Powered



Remote Battery Powered

## MORE PRODUCTS



# CALIBRATION



**Coriolis Mass Flowmeter Standard Meter**  
**DN15-50 Gravimetric & Standard Meter Liquid Flow Meter Calibration Device**

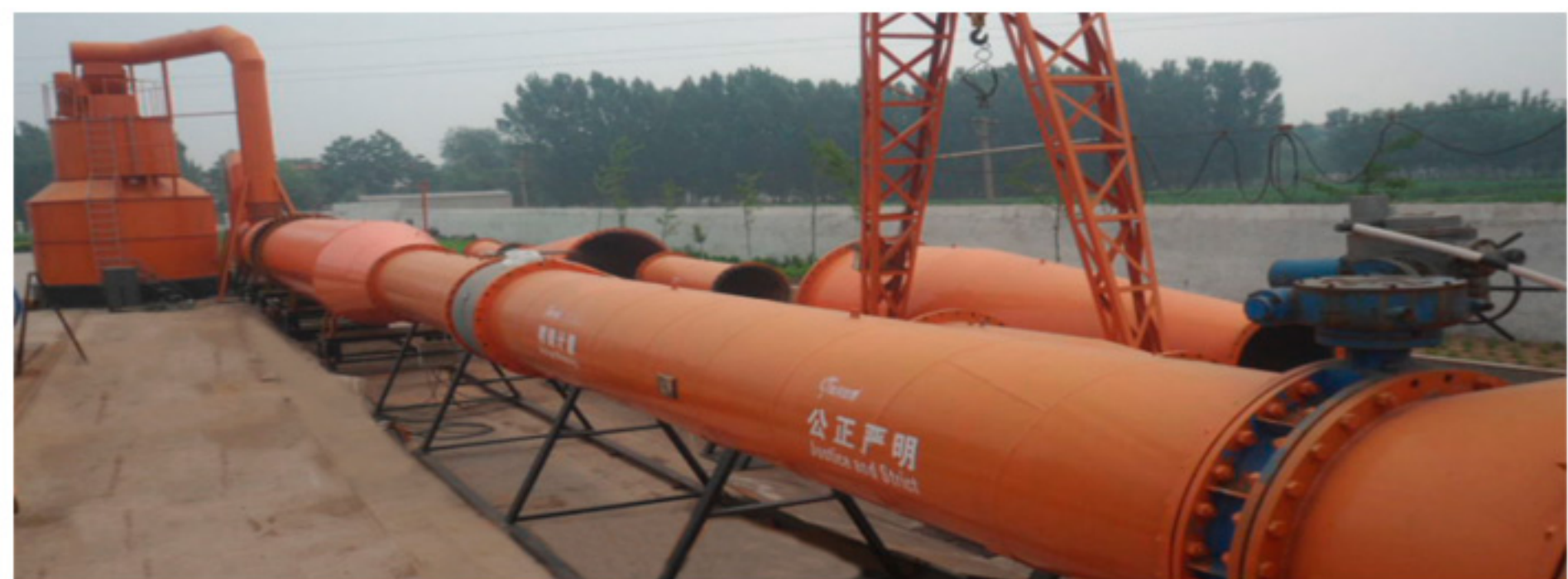


**Coriolis Mass Flowmeter Standard Meter**

**DN65-DN300 Gravimetric & Standard Meter Liquid Flow Meter Calibration Device**



**DN350-DN700 & DN65-DN300**  
**0.1 % Weighing and volumetric device to ensure accurate calibration**



**DN800 ~DN3000 Liquid Flow Meter Calibration Device**



# PRODUCT PARAMETER

## Main Performances Parameters

Size	DN100mm-DN2000mm
Nominal Pressure	0.6-1.6Mpa(2.5Mpa/4.0Mpa/6.4Mpa...Max 42Mpa)
Accuracy	±0.5%(Standard) ±0.3% or ±0.2%(Optional)
Liner	PTFE, Neoprene, Hard Rubber, EPDM, FEP, Polyurethane, PFA
Electrode	SUS316L, Hastelloy B, Hastelloy C, Titanium, Tantalum, Platinum-iridium
Structure Type	Integral type, remote type, submersible type, ex-proof type
Medium Temperature	-20~+60degC(Integral type)
	Remote type(Neoprene, Hard Rubber, Polyurethane, EPDM) -10~+80degC
	Remote type(PTFE/PFA/FEP) -10~+160degC
Ambient Temperature	-20~+60degC
Ambient Humidity	5~100%RH(relative humidity)
Measuring Range	Max 15m/s
Conductivity	>5us/cm
Protection Class	IP65(Standard); IP68(Optional for remote type)
Process Connection	Flange(Standard), Wafer, Thread, Tri-clamp etc(Optional)
Output Signal	4-20mA/Pulse(Optional)
Communication	RS485(Optional), HART(Optional), GPRS/GSM(Optional)
Power Supply	Battery powered 3.6V
	Battery powered 3.6V + DC24V (Optional)
Power Consumption	0.5W(Standard), 1.5W(With DC24V)
Alarm	Upper Limit Alarm / Lower Limit Alarm
Self-diagnosis	Empty Pipe Alarm, Exciting Alarm
Explosion Proof	ATEX

## Main Performances Of The Electrode Materials

Electrode material	Applications
SUS316L	Applicable in water, sewage and low corrosive mediums. Widely used in industries of petrol, chemistry, carbamide,etc
Hastelloy B	Having strong resistance to hydrochloric acid of any consistence which is below boiling point. Resistable against vitriol, phosphate, hydrofluoricacid, organic acid etc which are oxidable acid, alkali and non-oxidable salt.
Hastelloy C	Be resistant to oxidable acid such as nitric acid, mixed acid as well as oxidable salt such as Fe <sup>+++</sup> , Cu <sup>++</sup> and sea water.
Titanium	Applicable in seawater, and kinds of chloride, hypochlorite salt, oxidable acid (including fuming nitric acid), organic acid, alkali etc. Not resistant to a pure reducing acid(such as sulphuric acid, hydrochloric acid corrosion. But if acid contains antioxidant(such as Fe <sup>+++</sup> , Cu <sup>++</sup> ) is greatly reduce corrosion.
Tantalum	Having strong resistance to corrosive mediums that is similar with glass. Almost is applicable to all chemical mediums. Except for hydrofluoric acid,oleum and alkali.
Platinum-iridium	Almost be applicable in all chemical mediums except for ammonium salt.

# Velocity & Flow Range Table

Size	Flow Range & Velocity Table							
(mm)	0.1m/s	0.2m/s	0.5m/s	1m/s	4m/s	10m/s	12m/s	15m/s
10	0.028	0.057	0.141	0.283	1.130	2.826	3.391	4.239
15	0.064	0.127	0.318	0.636	2.543	6.359	7.630	9.538
20	0.113	0.226	0.565	1.130	4.522	11.304	13.56	16.956
25	0.177	0.353	0.883	1.766	7.065	17.663	21.2	26.494
32	0.289	0.579	1.447	2.894	11.575	28.938	34.73	43.407
40	0.452	0.904	2.261	4.522	18.086	45.216	54.26	67.824
50	0.707	1.413	3.533	7.065	28.260	70.650	84.78	105.98
65	1.19	2.39	5.97	11.94	47.76	119.40	143.3	179.10
80	1.81	3.62	9.04	18.09	72.35	180.86	217.0	271.30
100	2.83	5.65	14.13	28.26	113.04	282.60	339.1	423.90
125	4.42	8.83	22.08	44.16	176.63	441.56	529.9	662.34
150	6.36	12.72	31.79	63.59	254.34	635.85	763.0	953.78
200	11.3	22.61	56.52	113.04	452.16	1130.40	1356	1696
250	17.66	35.33	88.31	176.53	706.50	1766.25	2120	2649
300	25.43	50.87	127.2	254.34	1017	2543.40	3052	3815
350	34.62	69.24	173.1	346.19	1385	3461.85	4154	5193
400	45	90	226.1	452	1809	4522	5426	6782
450	57	114	286.1	572	2289	5723	6867	8584
500	71	141	353.3	707	2826	7065	8478	10598
600	102	203	508.7	1017	4069	10174	12208	15260
700	138	277	692.4	1385	5539	13847	16617	20771
800	181	362	904.3	1809	7235	18086	21704	27130
900	229	458	1145	2289	9156	22891	27469	34336
1000	283	565	1413	2826	11304	28260	33912	42390
1200	407	814	2035	4069	16278	40694	48833	61042
1400	554	1108	2769	5539	22156	55390	66468	83084
1600	723	1447	3617	7235	28938	72346	86815	108518
1800	916	1831	4578	9156	36625	91562	109875	137344
2000	1130	2261	5652	11304	45216	113040	135648	169560

Remark: Suggest flow velocity range 0.5m/s - 15m/s

# Model Select

QTLD		XXX	X	X	X	X	X	X	X	X	X
Caliber (mm)	DN10-DN2000 Reference Code,										
Nominal Pressure	0.6Mpa		1								
	1.0Mpa		2								
	1.6Mpa		3								
	2.5Mpa		4								
	4.0Mpa		5								
	Others		6								
Connection	Flange		1								
	Wafer		2								
	Tri-clamp(Sanitary)		3								
	Thread		4								
	Others		5								
Liner Material	PTFE			1							
	Neoprene			2							
	Hard Rubber			3							
	PFA			4							
	FEP			5							
	Polyurethane			6							
	Others			7							
Electrode Material	SUS316L				1						
	Hastelloy B				2						
	Hastelloy C				3						
	Titanium				4						
	Tantalum				5						
	Platinum-iridium				6						
	Others				7						
Structure Type	Compact/Integral					1					
	Remote					2					
Power Supply	DC24V + 3.6V Lithium Battery							A			
	3.6V Lithium Battery							B			
Output Signal	4-20mA/Pulse,RS485								A		
	4-20mA,HART								B		
	Pulse								C		
	4-20mA								D		
	RS485								E		
	Others								F		
Ex-proof	Without Ex-proof									0	
	With Ex-proof									1	
Process Connection	DIN PN10										1
	DIN PN16										2
	DIN PN25										3
	DIN PN40										4
	ANSI 150#										A
	ANSI 300#										B
	ANSI 600#										C
	JIS 10K										D
	JIS 20K										E
	JIS 40K										F
	Others										G

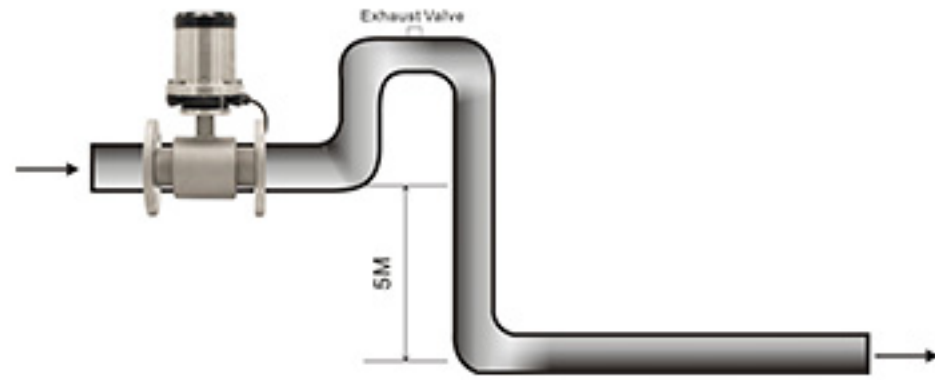
Optional Selection	
X	
1	Grounding Ring
2	Matched Flange
3	Entrance Protection Flange
4	Scraper Type Electrode
5	Others

Table 13	Caliber Code Table
Caliber	Code
10	100
15	150
20	200
25	250
32	320
40	400
50	500
65	650
80	800
100	101
125	125
150	151
200	201
250	251
300	301
350	351
400	401
450	451
500	501
600	601
700	701
800	801
900	901
1000	102
1100	112
1200	122
1400	142
1500	152
1600	162
1800	182
2000	202

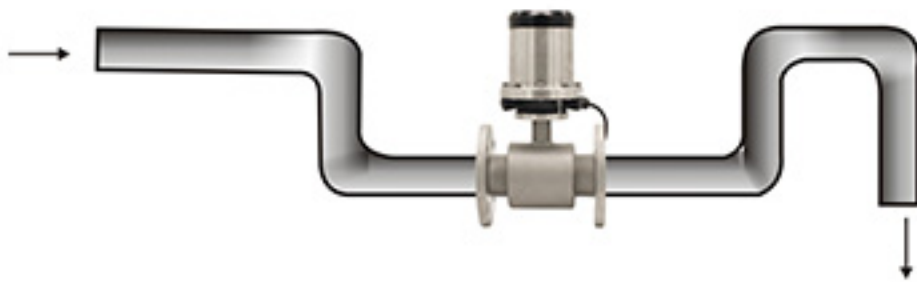
# Installation



Install at the lowest point and vertical upward direction  
Don't install at the highest point or vertical downward direction



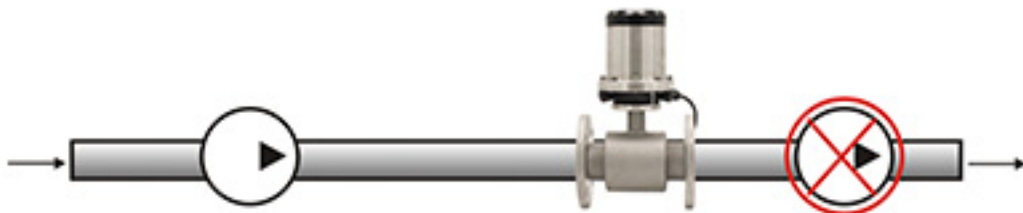
When drop is more than 5m, install at the downstream of exhaust valve



Install at the lowest point when used in open drain pipe



Need 10D of upstream and 5D of downstream



Don't install it at the entrance of pump, install it at the exit of pump



Install at the rising direction

# CERTIFICATE



**QTL-D Series Electromagnetic Flow Meter ATEX**



**QTL-D Series Electromagnetic Flow Meter CE**



**More than 100 patents**

# Trade Show

