Clamp-on Type Ultrasonic Sludge Density Meter

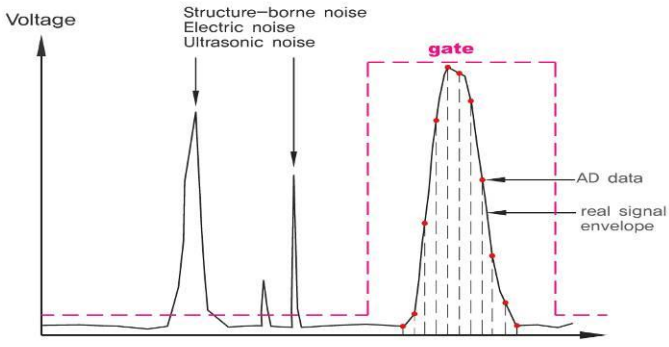
ENV200-C

The Clamp-on density measurement guarantees fit-and-forget and reliable measurement with almost no influence on measuring medium. Different from other density meters, this technology doesn't affected by pressure, corrosion, nor abrasion. As the clamp-on sensor can be mounted outside of pipe line even under flow-running condition, the user neither need to stop their process nor to consider additional by-pass line.

Measuring Algorithm

EEAM

Conventional ultrasonic attenuation density meter just determines density with amplitude of received signals. Unlike this, ENV200-C is able to measure changes of concentration in a more sophisticated manner by adopting the patented EEAM (envelope energy averaging method), which measures not only the amplitude of received signals but also observes the shape of signal. It takes all energy as envelope and then convert it into density.



Product Features

No maintenance

- No sensor cleaning is required for sludge adhesion on sensor surface.
- No sensor replacement is required for wear and tear by flowing

No additional cost

- No additional pipe line is required for sensor cleaning.
- No by-pass line is required for maintenance.

No limit on measuring medium

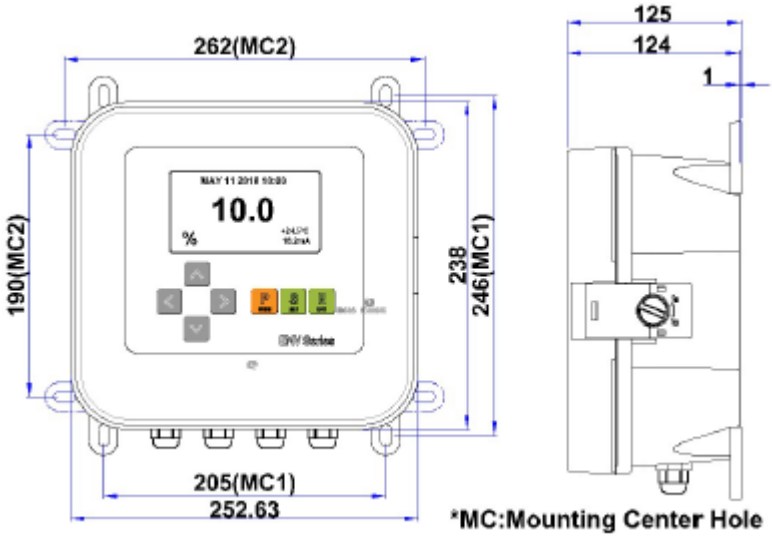
- Can apply to almost all types of sludge regardless of abrasion, adhesion and corrosion.
- Broad application
  * Desulfurization process at power plant
  * Corrosive liquids of chemical plant
  * Wastewater plant of ready-mixed concrete or mining sector

Applications

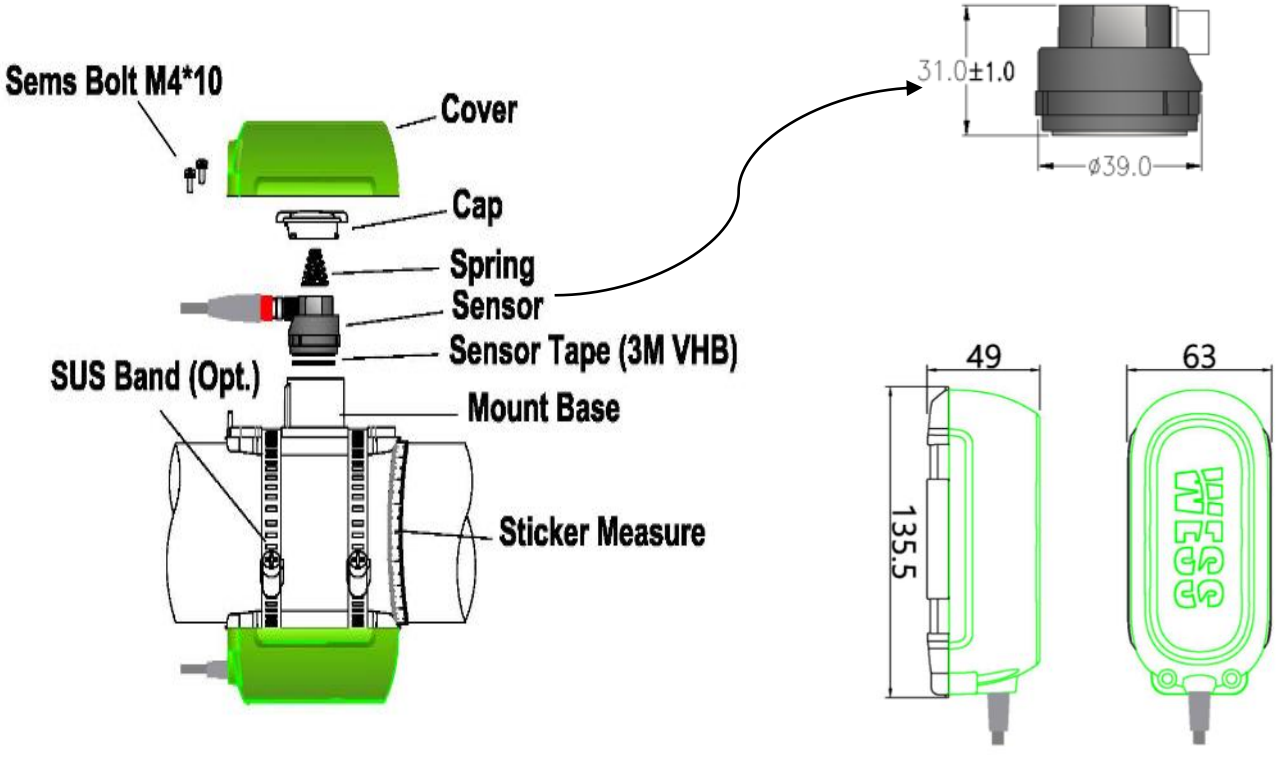
- Water / Wastewater Treatment
- Pulp and Paper
- Steel Plant
- Power Plant (coal)
- Mining and Petroleum
- Agriculture and Plantations

Product Dimensions

Controller – C2S



Sensor – S2C



Product Specification

Controller – C2S

Measuring Principle	Ultrasonic Attenuation and EEAM (Envelope Energy Average Method)
Measuring Ranges	0 ~ 90% (0 ~ 900,000 ppm)
	0 ~ 9999kg/㎥ (0 ~ 9.999g/㎤)
Resolution	0.1% or 0.01% (selectable)
	1kg/㎥ or 0. 001g/㎤
Display	Graphic LCD (Density, Time, Echo profile, mA, Etc.)
Accuracy	±1.5% of full scale
Operational Temp.	-20°C to +70°C (-4 to 158°F)
Outputs	Current output: 4 to 20mA, nom. Load 250Ω (Load range: 100 to 750Ω) Relay output: 1 SPDT (5A, 250VAC) Digital output: RS232 (Standard), RS485 (Option)
Power Supply	Standard: 100 ~ 240V AC, 50~ 60Hz, < 14W Option: 24V DC
Encl. Material	Body/Cover: ABS
Dimension	252(W) x 238(H) x 125(D) mm
Mounting	Center hole 205(W) x 246(H)(Φ 6 x 4ea
Weight	2 kg
IP Rating	IP67
Data Saving	Maximum 400 days Data logging & Trend
Screen	Numeric, Data trend, Echo profile, parameter

Product Specification

Sensor _ S2C

Sensor Type	Clamp-on
Applicable Pipe	Size: DN50 ~ DN300 / Material: SUS, PVC *No inner lined pipe
Operational Temp.	-10°C ~ +70°C (14 to 158°F)
Frequency	0.699 ~ 2.041MHz
Cable Length	10m (Standard)
IP Rating	IP68
Material	Body: Polycarbonate Acoustic window: MC Nylon
Dimensions	Incl. clamp pats_L63 x W135.5 x H49mm x 2pcs Sensor_Φ39mm x H31mm x 2pcs
Weight	Incl. clamp parts 144g x 2pcs / Sensor_36g * 2pcs

Ordering Codes

ENV200-C / Clamp-on Ultrasonic Sludge Density Meter

ENV200-C	CODE	Description
Controller	C2S	ENV200 Controller AC100~240V Unit : g/l, mg/l, % , ppm or kg/m^3, g/ m^3 (select)
Sensor	S2C	Clamp-on type sensor
Option	DC	DC 24V
	RS4	RS485 (Standard RS232)
	MOD	Modbus communication
	C_XX	Total sensor cable length (Unit: m), (Standard 10m)
Note	Ex) C2S1-S2C-DC : Controller and sensor, Power DC 24V	

Click for the ENV200-C Series Introduction Movie