

TRANTECH TTGM OVAL GEAR FLOWMETER

Installation and Instructions

TTGM-P-25/40/50

TTGM-E-25/40/50

TTGM-M-25/40/50



TTGM aluminum oval gear flow meter has the ability to handle a wide range of fluid viscosities with exceptional accuracy repeatability and durability. Commonly used in the petroleum, chemical and food industry.

Main Features

- The TTGM oval gear positive displacement flow meter is suitable for liquids with high and varying viscosities.
- The body is suitable for use at high pressures and is available in aluminum as standard or optional stainless steel construction.
- The meter can be supplied with a mechanical totaliser, a LCD display-battery operator, or a pulse output.
- The TTGM operates on the oval rotor principle. Two oval rotors rotate on stainless steel shafts and sweep the measuring chamber. Each revolution of the rotors measures a precise volume of liquid through the meter. This volume is independent of the viscosity and density of your liquid.
- You can mount the flow meter either horizontally or vertically.
- An upstream filter is recommended to prevent particles damaging your flow meter.

Technical Specification

Model	TTGM-25	TTGM-40	TTGM-50	TTGM-25E/25P	TTGM-40E/40P	TTGM-50E/50P
Size	25MM	40MM	50MM	25MM	25MM	25MM
Min. Flow Rate	20L/Min	25L/Min	30L/Min	20L/min	25L/min	30L/min
Max. Flow Rate	200L/Min	250L/Min	300L/Min	120L/min	250L/min	300 L/min
Accuracy	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Repeatability	<0.03%	<0.03%	<0.03%	≤0.03%	≤0.03%	≤0.03%
Max. Viscosity	1000CPS	1000CPS	1000CPS	1000CPS	1000CPS	1000CPS
Max. Operating Pressure	3.4Mpa	1.8Mpa	1.8Mpa	0.3Mpa	0.3Mpa	0.3Mpa

Operation Manual of Electronic battery type TTGM-E Flowmeter

1. Start: Pressing the "SETUP" button.
2. Clear Data: Press "CLEAR" button, the current flow total data will be deleted.
3. Check total: Press "TOTAL" button, on the second row of the screen will display "total". The number under the "total" letter is grand total. The grand total can not be reset.
4. Clear the partial Total: Press "TOTAL " button 2 seconds, the total will flash, then press the "CLEAR" button to delete the partial total.

Parameter Setting

By Pressing the "SETUP" button 10 seconds while the flow meter is in standby, five-digit number will show on the screen, the last number flashes, Press "SETUP" button, the flashing number moves, Press "Clear " button means "+", Press "TOTAL" button means "-" The total decreases if the parameter increases, and vice versa. Wait 5 Seconds to end settings and return to standby. After resetting the parameters, the meter will use the new parameter for the next cycle.

The Flow Unit Setting

By pressing the "SETUP" button 10 seconds, while the flow meter is in standby, Five-digit number will show on the screen, the last number flash, then press the " SETUP" button 5 times, the display will show "UNIT", Press "CLEAR" or "TOTAL" to set the unit. "US-GA-L-KG". Press "SETUP" button 2 times or no operation for 5 seconds, to exit the setting.

Maintenance

When low battery, the battery sign will show on the LCD display. The battery can be used for ± 2 years, but we suggest user to change the battery once a year.

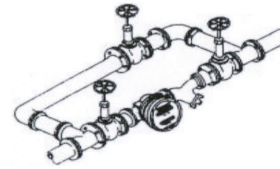
Install and use

1. There is no specific requirements on the front and back of the flow meter pipeline, it can be installed horizontally or vertically. During the installation, this flow meter axis of rotation should be parallel to the ground. Please stick to picture 4.

Picture 4



Picture 5



2. The direction of the flow meter installation should be the same as shown in the direction of the arrow with the liquid flow.
3. The flow meter should be installed on the discharge of the pump, if installed in the suction side, the pressure loss of the flow meter will lead to the increase of the pumps negative suction pressure, the flange of the pump suction side should be designed to prevent leakage, otherwise it can cause increased error for the flow meter.
4. A filter should be installed before the flow meter, to prevent greater than 0.2 mm particles blocking the flow meter.
5. The flow meter is preferably mounted in front of the one-way valve, only unidirectional flow of the liquid within the pipe, to prevent the reverse rotation of the counting gear.
6. The flow meter recommendations shown in Picture 5, the bypass valve can be installed in the vertical or the other direction of the pipeline, from the top down, from bottom to top, right to left, from left to right.
7. When using the flow meter, make sure the liquid fills the pipe, if the liquid to be measured mixes with air, it will cause measurement error, if the liquid is mixed with the gas, an oil and gas separator must be installed.
8. When the flow rate exceeds the specified maximum flow, the speed of the oval gear increases and wear on the gears increases, though flow is still measured at minimum flow, the error increases.

Pulse Output Specification

Model	Volume Per Revolution	Pulse	Voltage	Max Current
TTGMP-25	0.048L/R	4 Pulses/R	DC5-36V	15mA
TTGMP-40	0.123L/R			
TTGMP-50	0.280L/R			

Reed Pulse Output Wiring

Pulse 1 Black / Blue

Pulse 2 Red / Yellow

Pulse Output Wave

