



Preset Module Oval Gear Flow Meter

Please read and retain this instruction manual to assist you in the operation and maintenance of this product.

This manual contains connection and operating instructions for the OGM-DPS model

Models with a Liquid Crystal Display have an additional LCD instruction manual supplied. If you need further assistance, contact your local representative or distributor for advice.

This Flow Meter has incorporated the oval rotor principal into its design. This is proven to be a reliable and highly accurate method of measuring flow. Exceptional repeatability and high accuracy over a wide range of fluid viscosities and flow rates are features of the oval rotor design.

With a low pressure drop and high pressure rating oval rotor flow meters are suitable for both gravity and (in-line) pump applications.

Regulation Use

The oval gear meter is a precise positive displacement flow meter incorporating a pair of oval geared rotors. These meters are capable of measuring the flow of a broad range of clean liquids.

Aluminum meters are suitable for fuels, fuel oils, & lubricating liquids. It is important to ensure that the medium to be measured is compatible with the materials used in the instrument.

The flow meter is available as a measurement transducer with pulse output or with other forms of evaluation electronics. Details of how to operate the electronics are included in a separate instruction manual.

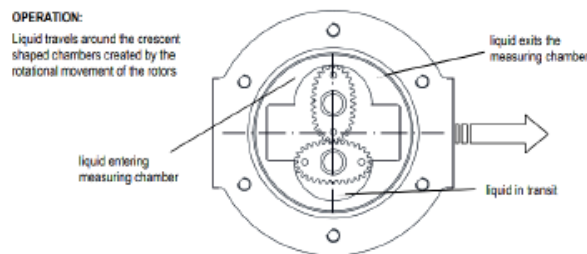
These flow meters **OGM-DPS** can be installed within hazardous areas when ordered with optional Exd approval, or by using the reed switch pulse output in Intrinsically Safe loops or installing Intrinsically Safe certified Instruments.

Any use of the oval gear flow meter model: **OGM-DPS** which exceeds the manufacturer's specification, may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

Operation Principle –OGM

Oval gear flow meters are categorized as positive displacement flow technology. When liquid flows through this type of positive displacement flow meter, two oval geared rotors measure a constant volume per rotation within a precisely machined measuring chamber. With each rotation, a constant volume of liquid is measured. The rotation of the oval gears is sensed via magnets embedded within the rotors. These magnets transmit a high resolution pulse output. The output signal can be processed externally via a remote display controller or PLC or via a variety of output/display options available as accessories attached to the flow meters.

The positive displacement flow technology allows for precise flow measurement of most clean liquids regardless of the media conductivity. Other liquid properties also have a minimal effect on the performance of this type of meter. Flow profile conditioning is not required as with alternative flow technology options making oval gear installations simple to install in tight spaces and at an economical price.



What is OGM-DPS ?

OGM-DPS is an electronic system, integrated with wide range of pump system for refilling station, for controlling fluid dispensers.

The system provides

- To set the desired dispenser volume or value.
- Able to record first 100 dispensed record in memory
- For User, User-friendly dispensing operation.
- Economic Control Module to reduce over dispense volume

Operating Instruction

- 1) Press **L/P** to select **L = Liter**, **P = Price**
- 2) Key-in the **Volume** or **Value** (Press **CLEAR** for change the clear the digit)
- 3) Press **START** to start the pump for dispensing the fluid
- 4) Operation will be **STOP**, when the dispense reach the desired value on the LCD screen

For Non Preset Dispensing

- 1) Press **START**, Pump will operate and Press **STOP** to end the Operation
- 2) Round-Up Function, During the operation
 - A. press **7** for **Liter** Rounding up
 - B. Press **0** for **Price** Rounding Up

Operating Principle of Digital preset module

OGM-DPS Digital preset module is the main power supply for the pump system. The computer board of the module will receive the pulses from the Oval Gear Rotor to calculate the volume flow through the meter.

OGM-DPS computer board will calculate to show Price and Liter on the LCD Screen.

When reach the preset value or volume, OGM-DPS will stop the pump.



Calibration & Price Setting

Field Calibration /By Dispensing

CALIBRATION by dispensing calibrates the flow meter by dispensing fuel or fluid into a GRADUATED Container of know capacity.

This is the quickest and easiest way of calibrating the flow meter and requires no calculations

Calibration by dispensing can be suspended and restarted at will, and is considered complete when the fuel level can be seen in the container's graduated section.

Calibration Instruction

Liter

- 1) Press **STOP**, then press **L/P** for 5 seconds with the **L** sign on the left screen till the Right Conner of LCD screen Blank
- 2) Key-in Passcode: **78787878** then press **L/P** to log in the Calibration Mode
- 3) LCD screen will show U-XXXX, Key in the Value to calibrate the flow volume
(** The higher value is to reduce the flow count ; The lower value is to increase the flow count)
- 4) Press **STOP** to end the Calibration.



To Set Price value

- 1) Press **STOP**, then press **L/P** for 5 seconds with the **P** sign on the left screen till the Right Conner of LCD screen Blank
- 2) Key-in Passcode: **11223344** then press **L/P** to log in the Calibration Mode
- 3) LCD screen will show B-X.XX, Press **CLEAR** then Key in the value as the **PRICE**.
- 4) Press **STOP** to end the Calibration



WARNING

To calibrate the flow meter properly, you should use an accurately graduated container with a capacity of no less than 10 liters

In particular, you should :

- *Remove all air from the pump, hoses, tube and flow meter by pumping until the flow is full and regular.*
- *Stop the flow by switching off the nozzle but not the pump.*
- *Do not reduce flow when nearing the container's graduated section.*

The correct procedure is to start and stop dispensing at the constant rate until reaching the desired limit, if possible with no interruptions.

WARNING

A single dispensing is enough to calibrate the flow meter properly

After calibrating the flow meter, always check the result to make sure the instrument's accuracy has is within acceptable limits.