

# MADECO Oval Gear Flowmeter User Manual



**Note: Before installation, please read this part carefully, and make sure you really understand the meaning.**

1. Before connecting to the pipeline, be sure to connect the circuit to test 2. 3. whether the signal matches properly (the gear can be rotated by hand or by blowing the flowmeter through the mouth to check the pulse signal).
2. See the wiring diagram of the circuit (see Figure 1).
3. Before the flowmeter is connected to the pipeline, it is necessary to ensure that the pipeline is clean. It is better to wash the pipeline first. It is recommended to install a filter of 200 mesh or more in front of the flow meter.

**Note: Before installation, please read this part carefully, and make sure you really understand the meaning.**

4. When connecting the flowmeter with a connector or adaptor, be careful that the ptfе tape or threaded glue should not be over-headed, otherwise it may cause the ptfе tape into the flowmeter to get the flowmeter clogged(see figure 2)

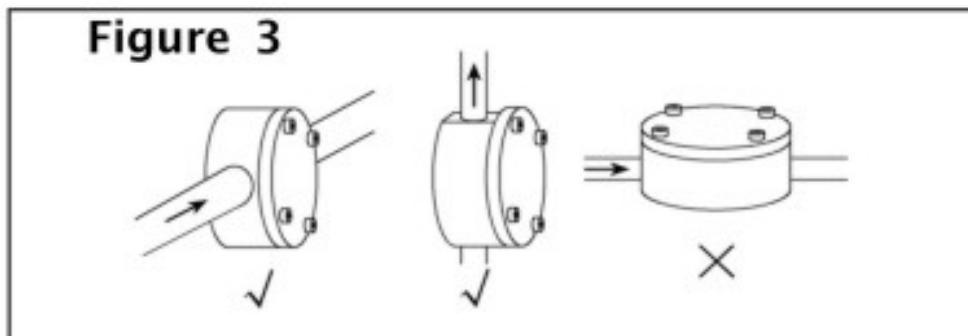
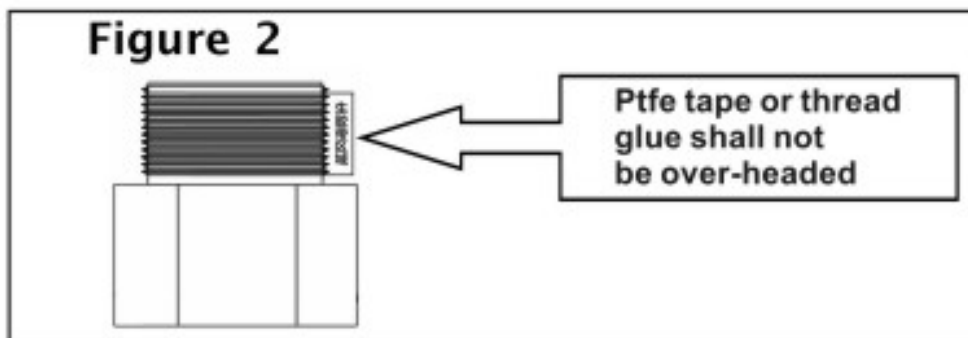
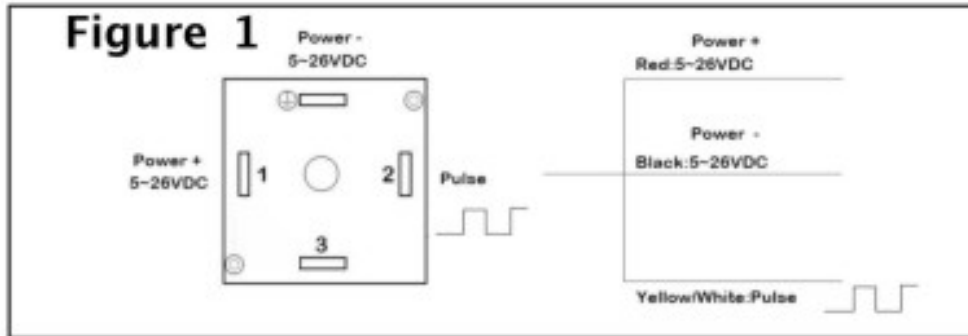
5. Installation direction requirements

(see Figure 3)

6. Flowmeter SN:.....

7. K factor:..... ml/pulse

8. Quality inspector:.....

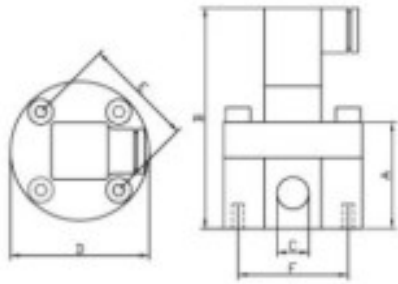


Note: Installation instructions (the cover must be vertical)

## Installation

- A.** Pipeline cleaning requirements: Thoroughly clean the pipe before installation and install a filter in front of the flowmeter (recommended 200 mesh or more) to prevent debris from entering the flowmeter. During the installation process, be sure to avoid dirt and impurities from entering the flow inlet end. Pay attention to the joint raw material belt. (Figure 2)
- B.** Installation direction requirements: Please keep the axle of gear parallel with ground. It means to keep the cap of flow meter vertical to the ground. For the measurement of ultra-small flow, the best installation is down-in, up-and-out. Shown as below.  
(Figure 3)
- C.** Requirements for liquid flow direction: The arrow pointing on the flowmeter shell should be in accordance with the direction of liquid flow in the installed pipeline.
- D.** For continuous flow piping, a bypass valve should be installed for regular cleaning. Please prevent no debris flow into the flow meter when checking other instruments that are installed.
- E.** Installation requirements for special liquids (easy to crystallize and solidify liquids) It is recommended that the pipe sections before and after the flowmeter be long enough and take corresponding measures to avoid liquid crystallization of the pipe section where the flowmeter is located. If the liquids are easy to crystallize, please take measures to avoid liquid crystallization in the section where the flowmeter is located.
- F.** When starting or stopping, the valve should be opened slowly to prevent sudden impact.
- G.** Back flow should be prevented in order to prevent false pulse.

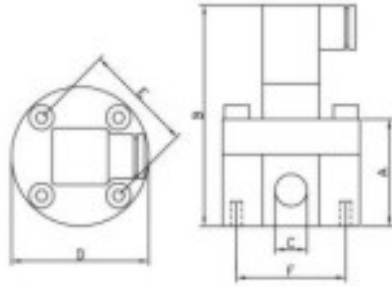
**Product Dimension Chart(mm)  
MDGM2 series aluminium**



A- body thickness  
 B-Total height of shape  
 C-inlet and outlet  
 D-outer diameter  
 E-assembly screw + thread hole center distance  
 F-mounting screw = thread hole center distance

| Item | M1    | M2    | M3/M4 | M5    | M6    | M7      |
|------|-------|-------|-------|-------|-------|---------|
| A    | 30    | 30    | 30    | 40    | 44    | 58      |
| B    | 62    | 62    | 62    | 75    | 79    | 93      |
| C    | G1/8  | G1/8  | G1/8  | G1/4  | G1/2  | G1      |
| D    | 39    | 39    | 49    | 64    | 84    | 99      |
| E    | M4*31 | M4*31 | M4*42 | M5*54 | M5*70 | M6*90   |
| F    | M4*31 | M4*31 | M4*42 | M5*54 | M5*72 | M6*63.6 |

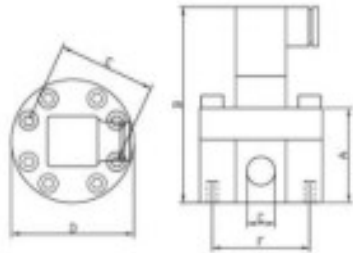
## MDGM2 series Stainless steel



A- body thickness  
 B-Total height of shape  
 C-inlet and outlet  
 D-outer diameter  
 E-assembly screw + thread hole center distance  
 F-mounting screw = thread hole center distance

| Item | M1    | M2    | M3    | M4    | M5    | M6    | M7     |
|------|-------|-------|-------|-------|-------|-------|--------|
| A    | 38    | 35    | 37.5  | 40    | 46.5  | 56    | 72     |
| B    | 70    | 68    | 69    | 72    | 81    | 91    | 107    |
| C    | G1/8  | G1/8  | G1/8  | G1/4  | G1/4  | G1/2  | G1     |
| D    | 39    | 39    | 49    | 49    | 64    | 89    | 113.5  |
| E    | M4*31 | M4*31 | M4*42 | M5*42 | M5*54 | M6*80 | M6*103 |
| F    | M4*31 | M4*31 | M4*42 | M5*42 | M5*54 | M6*50 | M6*60  |

### G series High pressure stainless steel (G-SS-HP)



A- body thickness  
 B-Total height of shape  
 C-inlet and outlet  
 D-outer diameter  
 E-assembly screw + thread hole center distance  
 F-mounting screw = thread hole center distance

| Item | M1    | M2    | M3    | M4     | M5    | M6    | M7/8   | M7/8   |
|------|-------|-------|-------|--------|-------|-------|--------|--------|
| A    | 34    | 34    | 44    | 65     | 70    | 80    | 73     | 91     |
| B    | 69    | 69    | 83    | 100    | 105   | 115   | 108    | 126    |
| C    | G1/8  | G1/8  | G1/4  | G1/4   | G3/8  | G1/2  | G1/2   | G3/4   |
| D    | 64    | 64    | 64    | 89     | 89    | 89    | 99     | 99     |
| E    | M6*49 | M6*49 | M6*49 | M10*75 | M5*54 | M6*80 | M6*103 | M6*103 |
| F    | M5*49 | M5*49 | M5*49 | M10*75 | M5*54 | M6*50 | M6*60  | M6*60  |

**Flow range**
**MDGM2-series parameters list**

| Item<br>MDGM2 | K<br>Coefficient | Flow range                 | Connection<br>size | Shell<br>material | Gear<br>material<br>(optional) |
|---------------|------------------|----------------------------|--------------------|-------------------|--------------------------------|
| M1            | 0.055mL/P        | 1-200ml/min                | G1/8               | SS/AL             | PPS                            |
| M2            | 0.065mL/P        | 3-300ml/min                | G1/8               | SS/AL             | 316L                           |
| M2/M3         | 0.11mL/P         | 3-300ml/min<br>1-400ml/min | G1/8               | SS/AL             | PPS/316L                       |
| M3            | 0.25mL/P         | 2-800ml/min<br>5-800ml/min | G1/8               | AL                | PPS/316L                       |
| M4            | 0.5mL/P          | 0.5-100L/H                 | G1/4<br>G1/8       | AL                | PPS                            |
| M4            | 0.5mL/P          | 0.5-100L/H                 | G1/4               | SS                | PPS/316L                       |
| M5            | 2.5mL/P          | 6-600L/H                   | G1/4               | AL                | AL/PPS/316L                    |
| M5            | 2.5mL/P          | 6-600L/H                   | G1/4               | SS                | PPS/316L                       |
| M6            | 8.5mL/P          | 0.3-30L/min                | G1/2               | AL                | AL/PPS                         |
| M6            | 13.5mL/P         | 0.3-30L/min                | G1/2               | SS                | PPS/316L                       |
| M7            | 21.6mL/P         | 0.5-100L/min               | G1                 | AL                | AL/PPS                         |
| M7            | 33.5mL/P         | 0.5-100L/min               | G1                 | SS                | PP/316L                        |



**Note:** Special requirements such as high temperature, high pressure, high frequency, bidirectional measurement, special materials can be customized.

**Power supply:** 5-26VDC

**Accuracy:** 0.5%, 0.2%

**Temperature:** (- 40 - 80) degrees (High Temperature Customization, pls Consult Engineer)

**Pressure:** 32BAR (High Voltage Customization, pls Consult Engineer)

**Signal:** square wave pulse, split display and output: current, RS485, RS232 Modbus



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