



# Specifications

## M-7 Meters



Liquid Controls M and MA Series rotary motion positive displacement (PD) meters offer the ultimate in measurement accuracy for custody transfer of petroleum products, aviation fuels, LPG, and a broad range of industrial liquids.

### Superior performance features

**Low pressure drop** - will operate on gravity flow or pump pressure.

**Sustained accuracy** - no metal-to-metal contact inside the measuring chamber means minimal wear and deterioration in accuracy over time, fewer recalibrations, and longer service life. Meters conform to NIST and International Weights and Measures accuracy requirements.

**Wide viscosity range** - LC meters can accurately meter products from less than 30 SSU (less than 1 centipoise) to 1,500,000 SSU (325,000 centipoise).

**Maximum adaptability** - choice of stock or custom elbows/fittings provides unequaled mounting flexibility to meet widely varying installation requirements.

#### Accuracy/Performance\*

##### Repeatability

Mechanical registration: capable of 0.05% of reading over entire range

Electronic registration: capable of 0.03% of reading over entire range

##### Linearity

###### Over 5:1 range

Mech. registration: capable of  $\pm 0.125\%$  or better from max. nom. flow rate

Elect. registration: capable of  $\pm 0.10\%$  or better from max. nom. flow rate

###### Over 10:1 range

Mech. registration: capable of  $\pm 0.22\%$  or better from max. nom. flow rate

Elect. registration: capable of  $\pm 0.10\%$  or better from max. nom. flow rate

###### Over 40:1 range

Mech. registration: capable of  $\pm 0.5\%$  or better from max. nom. flow rate

Elect. registration: capable of  $\pm 0.15\%$  or better from max. nom. flow rate

##### Temperature range

-40° F to 160° F (-40° C to 71° C)

\*Stated accuracy obtainable when all variables remain constant. Reading/measurements reflect a minimum of one minute of flow at selected rate(s). All accuracy statements based on metering safety solvent (aliphatic hydrocarbon), approximate viscosity 1 CPS. On higher viscosity products, the average deviation in accuracy will be less.

#### Industries served

LC M and MA series meters are well suited for use in industries requiring precise flow measurement and reliable, extended service life:

- Refined petroleum products
- Aviation fuels
- LPG
- Agricultural chemicals
- Paints and coatings
- Foods and beverages
- Petrochemicals
- Pharmaceuticals
- Cosmetics
- Printing Inks
- Textiles

#### Construction

##### Meter housing and rotors

Cast aluminum (other metalurgies available including brass, cast-iron and stainless steel)

##### Internal components

Aluminum, Ni-Resist, stainless steel

##### Seal materials

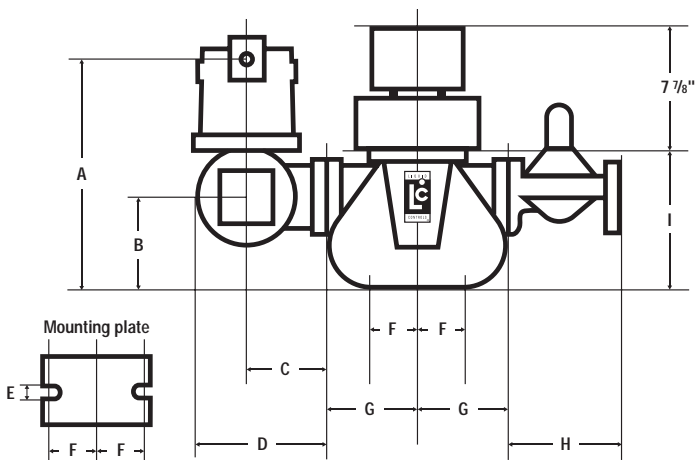
UL recognized component: Buna-N, Viton<sup>®1</sup>, Teflon<sup>®1</sup>

##### Bearings

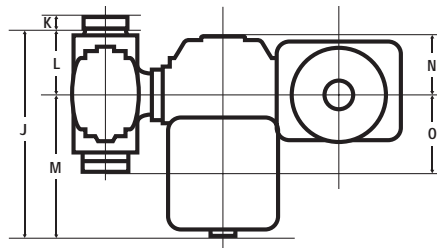
Carbon, Teflon, Ni-Resist

<sup>1</sup>Viton and Teflon are registered trademarks of DuPont Corporation.

**Front View**



**Top View**



**Dimensions: flow meters with electronic registration**

Note: Dimensions shown are not for construction use.  
Consult factory when certified engineering prints are required.

| Model | Flange size  | Max. nom. Flow rate    | Working pressure      | Dimensions |      |     |     |     |      |     |     |     |     |      |     |     |      |     |     | Net Wt             |
|-------|--------------|------------------------|-----------------------|------------|------|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|------|-----|-----|--------------------|
|       |              |                        |                       |            | A    | B   | C   | D   | E    | F   | G   | H   | I   | J    | K   | L   | M    | N   | O   |                    |
| M-7   | 1 1/2" or 2" | 132 GPM<br>(500 L/min) | 150 PSI<br>(10.5 BAR) | in         | 14.3 | 5.4 | 4.1 | 6.8 | 0.56 | 2.8 | 4.2 | 8.3 | 9.5 | 14.9 | 0.9 | 4.7 | 10.2 | 4.2 | 5.6 | 19 lbs<br>(8.6 kg) |
|       |              |                        |                       | mm         | 362  | 137 | 105 | 171 | 14   | 71  | 106 | 213 | 241 | 378  | 24  | 119 | 259  | 106 | 141 |                    |

**Ordering Information**

Model : \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Description : \_\_\_\_\_

Flow rates: Max. \_\_\_\_\_ Normal \_\_\_\_\_ Min. \_\_\_\_\_

Operating temperatures: Max. \_\_\_\_\_ Normal \_\_\_\_\_ Min. \_\_\_\_\_

Maximum non-shock operating pressure: \_\_\_\_\_

Maximum viscosity: \_\_\_\_\_ @ \_\_\_\_\_ (Temp°/F or C)

Specific gravity: \_\_\_\_\_ @ \_\_\_\_\_ (Temp°/F or C)

Construction class: (1, 2, etc.) \_\_\_\_\_

Seal material:  Standard Buna/Viton  All Viton  All Teflon

Direction of flow:  L to R  R to L

Read out:  Gallons  Liters  Pounds  Other \_\_\_\_\_

Mechanical counter and printer:  Zero/Face up  Zero/Face down  Accumulative

Strainer basket :  40M  80M  100M  Other \_\_\_\_\_

Flange size: \_\_\_\_\_

Flange type:  NPT  BSPT  Slip weld  ANSI  DIN  Other \_\_\_\_\_

Options: \_\_\_\_\_

**Class**

**Description**

**Bearing**

**Material**

|    |  |                        |
|----|--|------------------------|
| 1  | Refined petroleum products   | Ni-Resist <sup>1</sup> |
| 2  | Aviation and jet fuel  | Ni-Resist <sup>1</sup> |
| 3  | Variety of products includes:<br>liquid sugars, sweeteners, syrups,<br>vegetable oils                    | Ni-Resist <sup>1</sup> |
| 4  | Treated waters and solvents where<br>no red metals are allowed   | Carbon                 |
| 7  | Chlorinated solvents   | Carbon                 |
| 8  | Acid pH liquids includes:<br>nitric, phosphoric, glacial acetic acids,<br>citric juices, vinegar         | Carbon <sup>2</sup>    |
| 14 | Crude oil  | Ni-Resist              |
| 15 | Oil - or water-bases latex products,<br>polyester resins, adhesives,<br>herbicides, nitrogen fertilizers | Teflon                 |
| 16 | General solvents   | Carbon                 |
| 20 | Batch process water meter service  | Carbon                 |
| 27 | Alkaline pH liquids; latex<br>products, adhesives,<br>liquid fertilizers                                 | Teflon <sup>2</sup>    |
| 37 | Sodium hydroxide solutions, high<br>sulfur crude oil, alkaline pH liquids                                | Ni-Resist              |

<sup>1</sup> Carbon bearings are standard on some meter sizes of this class. Consult factory.

<sup>2</sup> Teflon bearings optional on some meter sizes. Consult factory.



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