



# Specifications

## MP-070 Meter

Liquid Controls MP Series Bi-Rotor Positive Displacement (PD) Meters offer the ultimate in measurement accuracy for custody transfer of petroleum and aviation fuels.

### Superior performance features

**Low pressure drop** – the straight-through path and floating rotor design creates a very low pressure drop at maximum flow.

**Sustained accuracy** – no metal-to-metal contact inside the measuring chamber means minimal wear and deterioration in accuracy over time, fewer recalibrations and a longer service life.

**Wide viscosity range** – LC meters can accurately meter products up to 1000 cP (please consult factory for higher viscosity).

**Compact design** – no upstream or downstream pipe lengths are necessary.

**Double case construction** – the measuring unit is removable, as a single subassembly, from the outer flanged.

**Low piping vibration** – the bi-rotor design produces very low piping vibrations permitting to reach higher flowrates.

### 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

-2.2° F to 356° F (-29° C to 180° C)

Note: with POD installed directly on the meter, temperature range is reduced to: -2.2° F to 185°F (-29° C to 85 °C)

### Industries served

LC MP-Series meters are well-suited for use in industries requiring precise flow measurement and reliable, extended service life:

- Refined petroleum products
- Crude oil
- LPG
- Power plant
- Petrochemicals

### Construction Class 1, 8, 14

#### External housing:

Carbon steel ASTM A216 WCB

#### External cover:

Carbon steel ASTM A216 WCB

#### Housing:

Cast iron (1, 14)  
316 stainless steel (8)

#### Bearing plate:

Cast iron (1, 14)  
316 stainless steel (8)

#### Sleeve bearing:

Carbon/420 stainless steel (1, 14)  
Carbon/316 stainless steel (8)

#### Rotors:

Cast iron (1, 14)  
316 stainless steel (8)

#### Gear:

420 stainless steel (1, 14)  
316 stainless steel (8)

#### Internal hardware:

Stainless steel

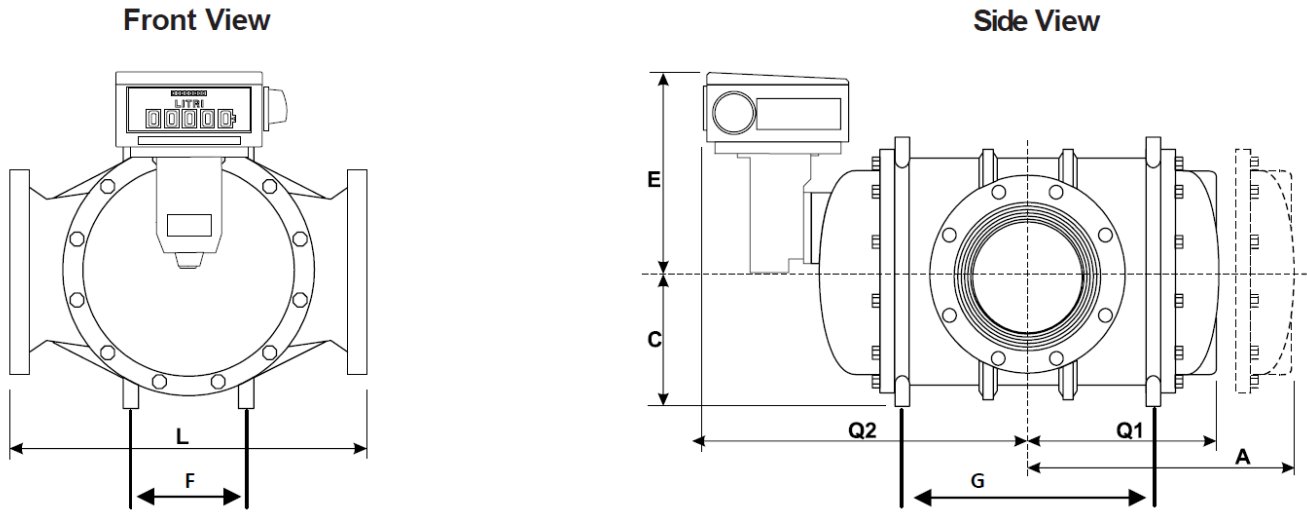
#### Seal material:

Teflon

#### Packing gland:

Stainless steel/teflon

## Dimensions: flow meters with mechanical registration

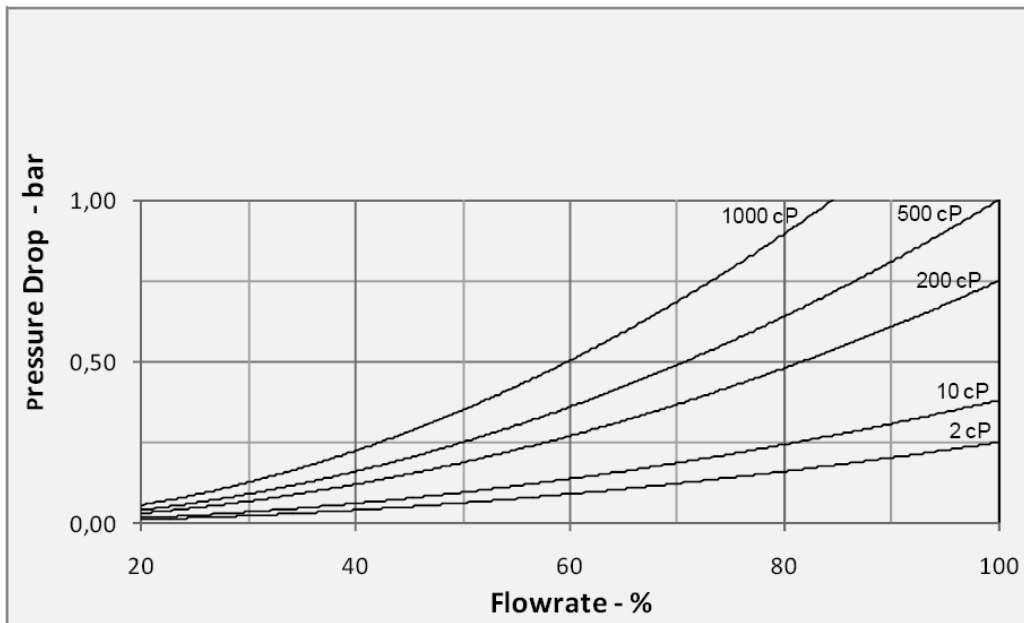


Model	Flow rate	Flange size	Net weight	Max working pressure	Dimensions		
						A	C
MP070	Intermittent (1): 3082 GPM (700 m <sup>3</sup> /h)  Nominal (2): 2466 GPM (560 m <sup>3</sup> /h)	10" ANSI 150	882 lbs (400 kg)	19 bar @ -29°C to 38°C	in mm	31.5 800	9.6 245
				18 bar @ -29°C to 85°C	in mm	31.5 800	9.6 245
				14 bar @ -29°C to 180°C	in mm	31.5 800	9.6 245
		10" ANSI 300	1213 lbs (550 kg)	49 bar @ -29°C to 38°C	in mm	31.5 800	9.6 245
				47 bar @ -29°C to 85°C	in mm	31.5 800	9.6 245
				44 bar @ -29°C to 180°C	in mm	31.5 800	9.6 245

Dimensions							
	E	Q1	Q2	L	F	G	
in	12.7	15.6	25.7	25.6	9.84	20.5	
mm	322	395	652	650	250	521	
in	12.7	15.6	25.7	25.6	9.84	20.5	
mm	322	395	652	650	250	521	
in	12.7	15.6	25.7	25.6	9.84	20.5	
mm	322	395	652	650	250	521	
in	12.7	15.9	25.7	26.4	9.84	20.5	
mm	322	404	652	670	250	521	
in	12.7	15.9	25.7	26.4	9.84	20.5	
mm	322	404	652	670	250	521	
in	12.7	15.9	25.7	26.4	9.84	20.5	
mm	322	404	652	670	250	521	

Note (1): Maximum intermittent flow rate (batch use) means 8/24 hours of operation per day.

Note (2): Maximum nominal flow rate (continuous use) means 24/24 hours of operation per day.



## Construction and application classes

LC MP series PD meters are suitable for metering a broad range of products as listed below. The appropriate meter class can be used to specify a desired meter by using the table below.

Class	Description
1	Refined petroleum products
8	Acid pH liquids includes: nitric, phosphoric, glacial acetic acids, citric juices, vinegar
14	Crude oil

**Ordering Information MP070**

Company Name: \_\_\_\_\_

Contact: \_\_\_\_\_

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

Flowrates: 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)

Class:  1  8  14

Direction of flow:  L to R  R to L

Unit of Measure:  Decaliter  m<sup>3</sup>/h  US Gal  US barrel

Flange size: 10"

Flange type:  ANSI150  ANSI300

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