M-7 Class 18 Flowmeter

Diesel Exhaust Fluid (DEF) Metering

Features & Benefits

- Wide flow range (5 to 100 GPM)
- U.S. Weights & Measures approved (NIST)
- No metal-to-metal contact inside the measuring chamber
- Constructed with DEF-compatible 316 Stainless Steel and advanced polymer materials
- Low pressure drop
- Installs in multiple positions
- Sustained accuracy
- Low lifetime cost of ownership
- Low maintenance
- Flexible mounting configurations

General Information

Liquid Controls' (LC) M-7 Class 18 flowmeters are specifically engineered to meter DEF. Their patent pending design features rotors made out of an advanced polymer that is chemically resistant to DEF's caustic properties and machined to meter DEF's distinct physical properties with high accuracy. The new design allows the M-7 Class 18 to meet U.S. Weights & Measures accuracy approvals (NIST Handbook 44) across an impressive flow range, and it is approved at a minimum of 5 GPM up to a maximum of 100 GPM (a 20:1 turndown ratio).

M-7 Class 18 flowmeters apply the same time-proven principles of the original tri-rotor positive displacement flowmeter, designed by Liquid Controls in 1954. There is no contact between the internal components inside the measuring chamber of an LC tri-rotor flowmeter, resulting in minimal wear, sustained accuracy, and low operating costs.

The M-7 Class 18 flowmeter can be mounted in a variety of different configurations, and it is built to meter DEF with high accuracy in stationary applications, such as bulk plants and terminals, and in high vibration mobile applications, such as delivery trucks.

Accuracy/Performance

Linearity

OVER 5:1 RANGE

Mechanical Registration
Capable of ±0.125% or better from max. nom. flowrate

Electronic Registration
Capable of ±0.13% or better from max. nom. flowrate

OVER 10:1 RANGE

Mechanical Registration
Capable of ±0.22% or better from max. nom. flowrate

Electronic Registration
Capable of ±0.1% or better from max. nom. flowrate

OVER 20:1 RANGE

Mechanical Registration
Capable of ±0.22% or better from max. nom. flowrate

Electronic Registration
Capable of ±0.1% or better from max. nom. flowrate

Repeatability
Capable of 0.02% or better at any flow rate over entire range

Temperature Range
12 to 100 °F (-11 to 37 °C)
DEF freezes at 12 °F; recommended DEF storage is below 86 °F

Flow Range
5 to 100 GPM

Maximum Working Pressure
150 PSI (10.5 bar)

Regulatory
NIST United States Weights & Measures

M-7 Class 18 Flowmeter

Standard Materials

Housing & Bearing Plates
316 Stainless Steel *Class 18*

Gears
420 Stainless Steel

Bearings
DEF-compatible engineered polymer*

Rotors
DEF-compatible engineered polymer*

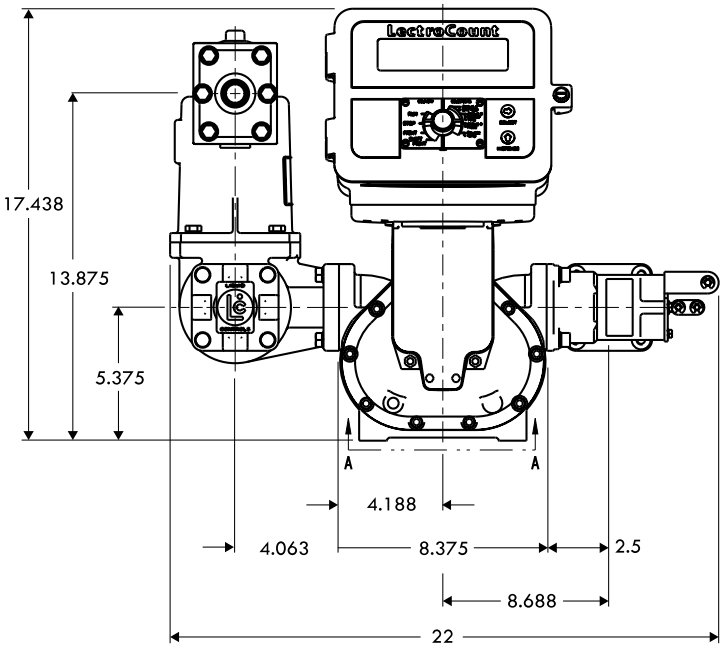
Seals
EPDM

Packing Gland
Stainless Steel/EPDM

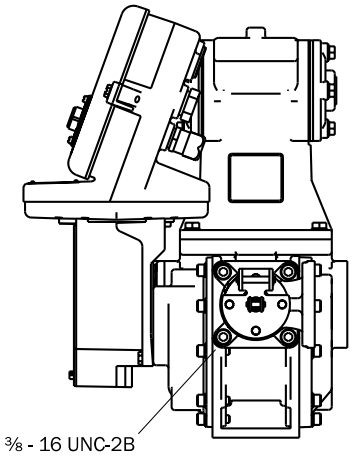
**patent pending*

Dimensions

FRONT VIEW

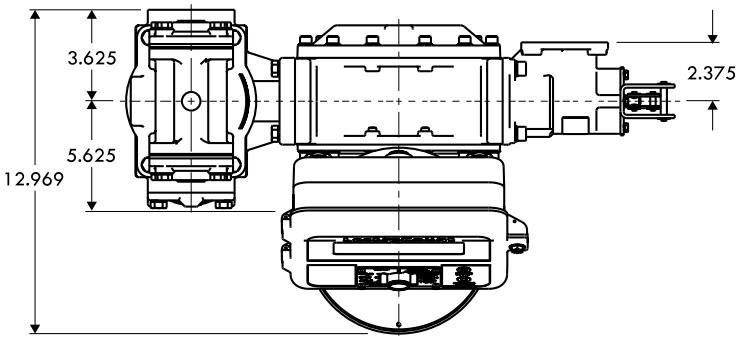


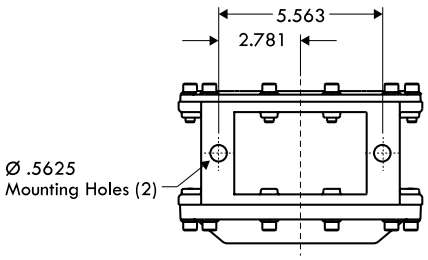
SIDE VIEW



Consult the factory when certified engineering drawings are required. Dimensions shown are not suitable for construction or modifications

TOP VIEW





MOUNTING PLATE

Pub. 500911 (3/15) MS100-07-18

Liquid Controls
105 Albrecht Dr.
Lake Bluff, IL 60044