

# In-Line Electronic Lubricant Meter

307965Y

EN

**For use with petroleum-based lubricants only. For professional use only.**

## Model 244075

Measures in gallons, quarts and pints\*

\*Meter is factory set in quarts.

## Model 244076

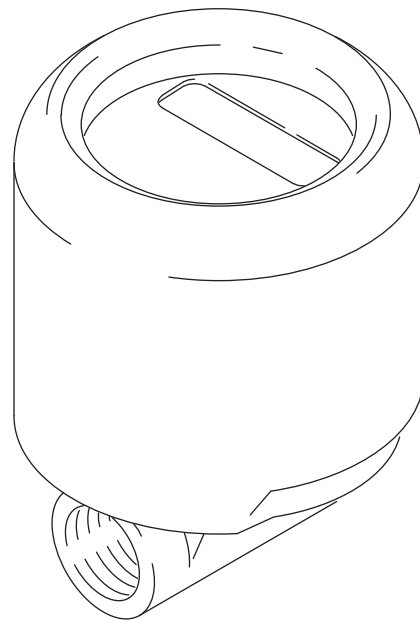
Measures in liters

*1500 psi (10.3 MPa, 103 bar) Maximum Working Pressure*









### **Important Safety Instructions**

Read all warnings and instructions in this manual. Save these instructions.



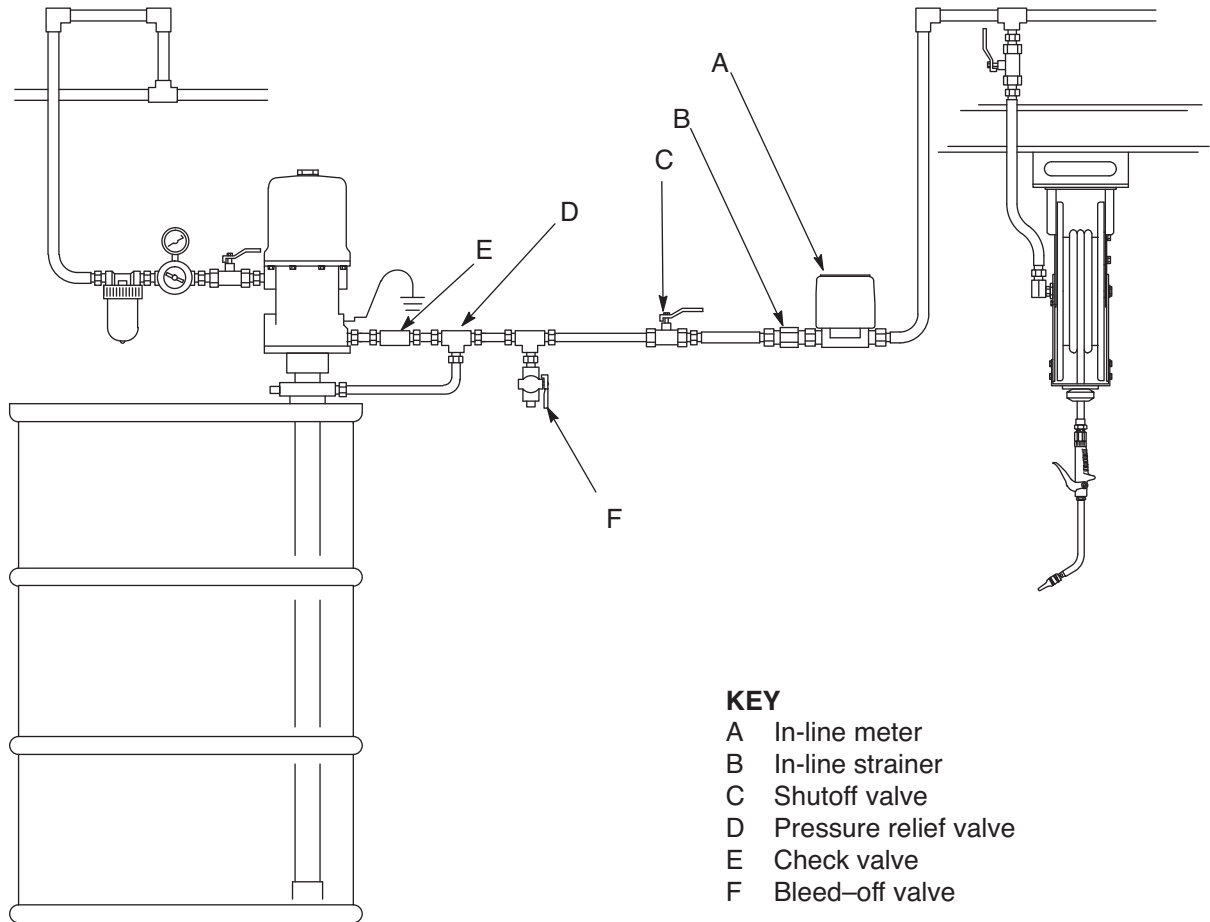
# Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

|  <h2 style="margin: 0;">WARNING</h2>   |  |
|---|--|
| <br>  | <p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> <li>• Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> <li>• Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer’s warnings. For complete information about your material, request MSDS from distributor or retailer.</li> <li>• Do not leave the work area while equipment is energized or under pressure.</li> <li>• Turn off all equipment and follow the <b>Pressure Relief Procedure</b> when equipment is not in use.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer’s replacement parts only.</li> <li>• Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.</li> <li>• Make sure all equipment is rated and approved for the environment in which you are using it.</li> <li>• Use equipment only for its intended purpose. Call your distributor for information.</li> <li>• Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not kink or over bend hoses or use hoses to pull equipment.</li> <li>• Keep children and animals away from work area.</li> <li>• Comply with all applicable safety regulations.</li> </ul> |
| <br><br> | <p><b>SKIN INJECTION HAZARD</b></p> <p>High-pressure fluid from dispensing device, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. <b>Get immediate surgical treatment.</b></p> <ul style="list-style-type: none"> <li>• Do not point dispensing device at anyone or at any part of the body.</li> <li>• Do not put your hand over the fluid outlet.</li> <li>• Do not stop or deflect leaks with your hand, body, glove, or rag.</li> <li>• Follow the <b>Pressure Relief Procedure</b> when you stop dispensing and before cleaning, checking, or servicing equipment.</li> <li>• Tighten all fluid connections before operating the equipment.</li> <li>• Check hoses and couplings daily. Replace worn or damaged parts immediately.</li> </ul>  |
|   | <p><b>CALIFORNIA PROPOSITION 65</b></p> <p>This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.</p>   |

# Installation

These meters must be installed in-line as part of a dispense system as shown in Fig. The typical installation shown is only a guide for selecting and installing an in-line meter. It is not an actual system design. Contact your Graco representative for assistance in designing a system to suit your needs.



- KEY**
- A In-line meter
  - B In-line strainer
  - C Shutoff valve
  - D Pressure relief valve
  - E Check valve
  - F Bleed-off valve

**FIG. 1**

**Key:**

- A In-line meter
- B In-line strainer
- C Shutoff valve
- D Pressure relief valve
- E Check valve
- F Bleed-off valve

# Operation

## To Activate the Digital Display

Press the **RESET** key pad to clear the meter before starting a new dispense cycle. This is the best way to activate the meter, because it also clears the quantity of the last dispense cycle.

The digital display can also be activated by pressing the **TOTAL** key pad or by running fluid through the meter. (FIG. 2)



FIG. 2

**NOTE:** The digital display of the meter goes blank after approximately two minutes of non-use.

## Function of TOTAL

When the digital display is blank, press and release the **TOTAL** key pad to display the quantity of the last dispense cycle. (FIG. 3)



Example of Total for Last Dispense Cycle

FIG. 3

To see the accumulated total of fluid dispensed through the meter, press and hold the **TOTAL** key pad. The accumulated total is shown in gallons for the gallon/quart/pint meter, and in liters for the liter meter. The meter can accumulate a running total of up to 19,999 gallons (or liters) dispensed before returning to zero. (FIG. 4)



Example of Accumulated Total

FIG. 4

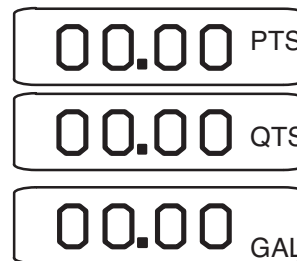
## Function of RESET

Press the **RESET** key pad to clear the quantity of the last dispense cycle and return the digital display to all zeros. (FIG. 2)

## To Change the Measurement Units

*(Gallon/Quart/Pint meter only)*

*The meter is factory set to dispense in quarts. To change the measurement units, press and hold the **RESET** key pad until the measurement unit on the right side of the digital display is flashing. Then press the **TOTAL** key pad until the desired measurement unit is shown. Release both key pads. (FIG. 5)*



Example of measurement units

FIG. 5

## To Verify the Accuracy of an Electronic Meter

1. Use a clean, calibrated container. If using a single container, be sure to clean it after each dispense.
2. Have pump air pressure at the lowest possible setting for dispensing fluid.
3. Put the tip of the nozzle at the bottom of the calibrated container.
4. If the tip of the dispense valve does not reach the bottom of the calibrated container, use a length of plastic tubing over the tip of the nozzle to ensure liquid enters the container from the bottom.
5. Trigger the gun slowly so the fluid immediately covers the tip of the dispense valve.
6. Allow product to sit for 20 minutes, then compare the actual, physical measurement in the calibrated container to the measure displayed on the meter.

**NOTE:** The procedure above will determine if the meter is accurately dispensing the product and minimize testing errors. Some variance may occur depending on the viscosity of the fluid. If this procedure determines that the meter is not accurate replace the meter or the electronics as necessary.

## For Maximum Dispensing Accuracy

*(gallon/quart/pint meter only)*

*Set the meter to dispense in pints or quarts when dispensing 1 gallon or less.*

*Always press the **RESET** key pad to clear the meter before a new dispense cycle.*

# Troubleshooting

**NOTE:** Before you check or repair the meter, be sure all other valves, controls, and the pump are operating properly.

## Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |
| <p>This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.</p> |  |  |  |  |  |  |

1. Turn off the power supply to the pump.
2. Trigger the valve into a waste container to relieve pressure.
3. Open any bleed-type master air valves and fluid drain valves in the system.
4. Leave the drain valve open until you have completed repairs and are ready to pressurize the system.

| Problem                            | Cause                                      | Solution  |
|------------------------------------|--|---|
| Digital display does not activate. | Electronic control is malfunctioning.      | Replace the electronic control.   |
|                                    |  | For gallons/quarts/pins:<br>Order Part No. 235878   |
|                                    |  | For Liters: Order Part No. 235901   |
| There is no fluid flow.            | Strainer, if used is clogged.              | Remove and clean strainer.  |
| Digital display is dim.            | Battery in electronic control is worn out. | Replace electronic control within approximately one week of when you notice dimness.<br><br>See part numbers above. |

# Repair



1. Relieve the pressure. See Pressure Relief Procedure, page 6.
2. Attach the disposable grounding wrist strap to your wrist. Connect the adhesive-backed copper foil at the other end to any convenient electrical ground, such as the grounding screw or metal case of a grounded electrical outlet.
3. Lift the bottom edge of the black cover (1) away from the meter (2), and pull the cover off. Remove and discard the screws (6). Lift off the electronic control (3). Remove and discard the large o-ring (4).
4. Install a new electronic control (3). Install the large o-ring (4) over the lip on the top of the metering unit (2). Align the notch on the side of the electronic control (3) with the notch on the side of the metering unit (2). Install new screws (6). Tighten the screws (6) to 3 in-lbs to 5 in-lbs (0.34 N.m to 0.57 N.m) oppositely and evenly until a complete seal is obtained as shown in the DETAIL in FIG. 6.
5. Install the cover so the rolled-in edges are parallel with the inlet fluid passage of the metering unit.

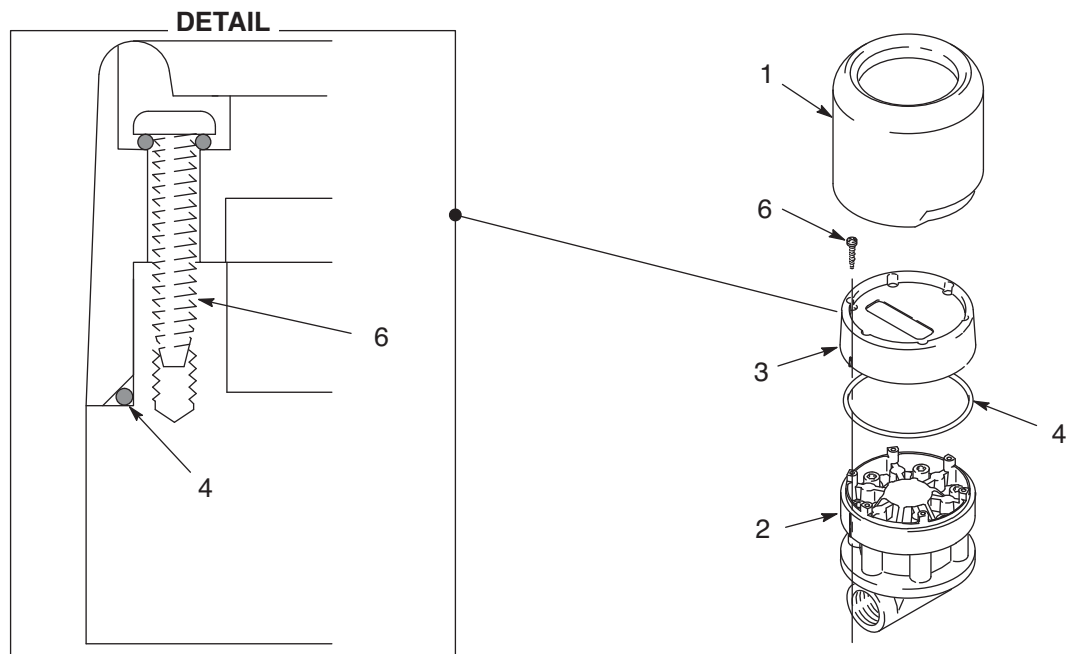
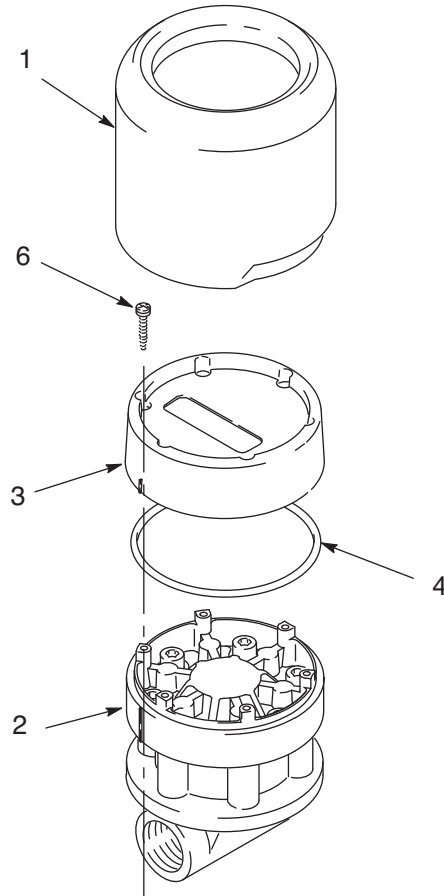


FIG. 6

# Parts



## Model 224075, Gallon/Quart/Pint

*\*Replacement screws and o-rings included with item 3.*

| Ref. | Part   | Description                      | Qty |
|------|--------|----------------------------------|-----|
| 1    | 191782 | COVER                            | 1   |
| 2    |        | METERING UNIT, gallon/quart/pint | 1   |
| 3*   | 235878 | ELECTRONIC CONTROL               | 1   |
| 4    | 109137 | O-RING                           | 1   |
| 6    | 112093 | SCREW                            | 6   |

## Model 244076, Liter

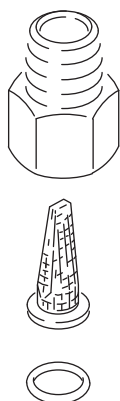
| Ref. | Part   | Description          | Qty |
|------|--------|----------------------|-----|
| 1    | 191782 | COVER                | 1   |
| 2    |        | METERING UNIT, liter | 1   |
| 3*   | 235901 | ELECTRONIC CONTROL   | 1   |
| 4    | 109137 | O-RING               | 1   |
| 6    | 112093 | SCREW                | 6   |



## Accessories

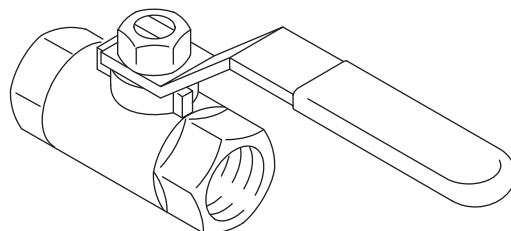
### Strainer 223179

Install between the shutoff valve and the meter.  
Removes particles from the lubricant. 40 mesh. 1/2 in.  
npt (m x f)



### Shutoff Valve 108458

Install upstream from the meter. Shuts off fluid supply  
from the pump. 1/2-14 npt(f) both ends.



## Technical Data

| In-Line Electronic Lubricant Meter   |   |                   |
|--------------------------------------|---|-------------------|
|                                      | US  | Metric            |
| Maximum fluid working pressure       | 1500 psi  | 10.3 MPa, 103 bar |
| Flow Range*                          | 0.12 to 12 gpm  | 0.456 to 45.6 lpm |
| Weight                               | 1.9 lb  | 0.95 kg           |
| Units of measurement                 | Factory-set in quarts. Display shows quantity in 0.01 increments up to 199.99 gallons, quarts, pints, or liters. Totalizes in gallons or liters up to 19,999 units. |                   |
| Inlet and outlet                     | 1/2 npt, non-directional flow   |                   |
| Operating temperature range          | -4°F to 130°F   | -2°C to 55°C      |
| Storage temperature range            | -40°F to 140°F  | -40°C to 60°C     |
| Battery Specifications               |   |                   |
| Rated discharge current              | 100 microamps   |                   |
| Rated capacity                       | 1.0 amp hour  |                   |
| Maximum continuous discharge current | 1.0 milliamp  |                   |
| Wetted Parts                         | Aluminum, carbon steel, nitrile rubber, nickel, bronze, stainless steel #304, cast ALNICO 8   |                   |

# Graco Electronic Dispense Valve Warranty and Disclaimers

Graco warrants all equipment manufactured by it and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. As purchaser's sole remedy for breach of this warrant, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment proven defective, with the exception of defects in the electronic meter control, including the battery, which will be repaired or replaced for twenty-four months from the date of sale. This warranty applied only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for, any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility with Graco equipment of structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claim. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor and transportation.

Disclaimers and Limitations. The terms of this warranty constitute purchaser's sole and exclusive remedy and are in lieu of any other warranties (express or implied), including warranty of merchantability or warranty of fitness for a particular purpose, and of any non-contractual liabilities, including product liabilities, based on negligence or strict liability. Every form of liability for direct, special or consequential damages or loss is expressly excluded and denied. In no case shall Graco's liability exceed the amount of the purchase price. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Equipment not covered by Graco Warranty. Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose, with respect to accessories, equipment, materials, or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motor, switches, hose, etc.) are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

## FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

## Graco Information

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

**TO PLACE AN ORDER**, contact your Graco distributor or call to identify the nearest distributor.

**Phone:** 612-623-6928 or **Toll Free:** 1-800-533-9655, **Fax:** 612-378-3590.

*All written and visual data contained in this document reflects the latest product information available at the time of publication.  
Graco reserves the right to make changes at any time without notice.*

*For patent information, see [www.graco.com/patents](http://www.graco.com/patents).*

Original instructions. This manual contains English. MM 307965

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