



**WARNING:** Installation, usage and maintenance of this product must be in compliance with all RegO® instructions as well as requirements and provisions of NFPA#54, NFPA#58, DOT and all applicable federal, state, provincial and local standards, codes, rules, regulations and laws.

Inspection and maintenance on a periodic basis is essential. Installation and maintenance should be performed only by qualified personnel.

Be sure all instructions are read and understood before installation and operation.

**CAUTION:** Contact or inhalation of liquid propane, ammonia and their vapors can cause serious injury or death! NH<sub>3</sub> and LP-Gas must be released outdoors in air currents that will insure dispersion to prevent exposure to people and livestock. LP-Gas must be kept far enough from any open flame or other source of ignition to prevent fire or explosion! LP-Gas is heavier than air and will not disperse or evaporate rapidly if released in still air.

#### Foreword

The Rotogage® is a rotary dip tube designed to provide a determination of the contents of LP-Gas or Anhydrous Ammonia containers. It is available for both 1" NPT (F) standard couplings on large mobile or stationary containers, and 3/4" NPT (F) standard couplings on smaller mobile or stationary containers.

The Rotogage® may be fitted in the side or end of containers having ellipsoidal or hemispherical ends. A dip tube, which is provided, is cut to length to provide the correct clearance from the inside of the container. See diagram below.

An adjustable gland is provided to seal the rotating stem and the lever which indicates the level of the liquid. It is positioned onto the stem by means of a key in keyways both in the lever and stem. The vent screw assembly may be easily replaced.

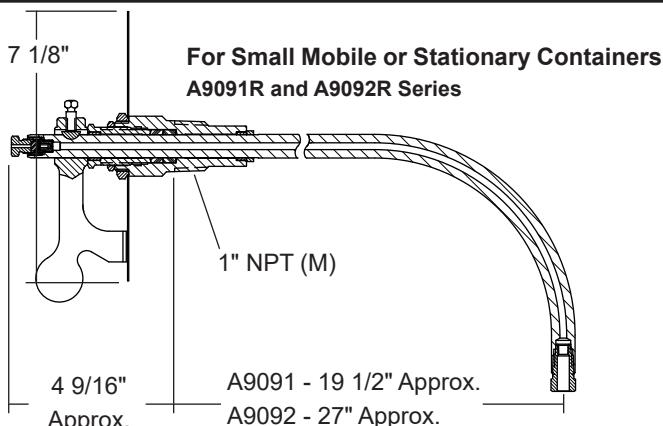
The dial is held in position by means of a nut. This allows cor-

## A9091, A9092, A9093, A9094 & A9095 Series Rotogage® Installation and Operation

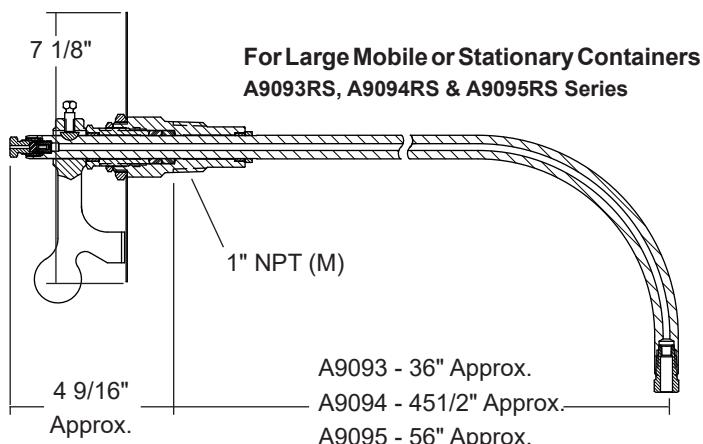
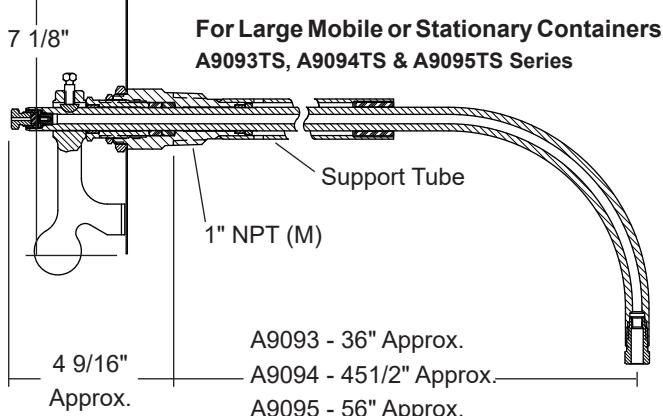


rect alignment during installation to insure accurate readings.

*NOTE: Local, provincial, state and/or country codes, ordinances, and regulations sometimes do not permit the filling of containers with Rotogages® -- requiring the use of a fixed level gauge instead. Always consult these requirements.*



$$\text{Dip Tube Length} = \left( \frac{\text{Container I.D.}}{2} \right) - 5 \frac{3}{4}''$$



## Accuracy

The accuracy of the Rotogage® depends on the level of the container and the accuracy of the installation.

## Dial Markings

The perimeter of the dial is marked in percentages indicating the level of liquid in the container. Other markings permit compensation for both specific gravity and temperature of the liquid -- allowing the container to be filled to the maximum permitted level without the risk of overfilling.

## Operation

To operate the Rotogage®:

1. Rotate the lever to read 100%.
2. Open the vent valve to vent vapor.
3. Rotate the dip tube slowly in either direction -- moving from the top of the container down towards the liquid space. Stop rotation when the discharge changes from vapor to liquid.

This change indicates when the liquid level is reached. Vapor is virtually invisible whereas liquid has the appearance of a fine mist.

4. Read the position of the lever against the adjacent dial. This indicates the percentage of product in the container.

**NOTE:** When using the Rotogage® for the first time it is good practice to take a second reading by rotating the lever in the opposite direction. The reading should be the same. If it is not the same, the dial is positioned incorrectly.

## Installation

Install using a suitable pipe joint compound for use in LP-Gas or NH<sub>3</sub>. Apply to the male NPT threads of the Rotogage®. Engagement should be 1-1/2 to 2 wrench turns beyond hand tight.

## Maintenance

The Rotogage® should be checked regularly to verify a leak tight seal. Inspection should take place when other valves on container are inspected -- at least once a year.

If leaking at the gland is found, a small tightening of the gland nut will normally be sufficient to stop the leak.

The gland screw should be tightened sufficiently to prevent the Rotogage® from rotating under its own weight but not enough to make it difficult to operate.

### NOTICE

LP-Gas is extremely flammable and explosive. Failure to install parts exactly as described in the instructions could result in a product that will not perform satisfactorily. Even if parts are correctly installed, the product might fail to perform satisfactorily, if other parts are worn, corroded or dirty. Improper repair can cause leaks and malfunction, which could result in bodily injury and property damage. Any such use or installation of parts must ONLY be done by experienced and trained personnel using accepted governmental and industrial safety procedures.

Most RegO® products are listed with Underwriters Laboratories as manufactured. If repaired, the continued validity of the UL listing is contingent upon proper inspection to determine what needs repairing, proper repair using RegO® parts and procedures, and proper testing for leakage and performance following repairs and installation.

RegO® assumes no responsibility or liability for performance of products repaired in the field. It must be clearly understood that the person or organization repairing the product assumes total responsibility for performance of the product.

### LIMITED 10 YEAR WARRANTY

RegO® warrants to the original purchasers the products and repair kits manufactured by it to be free from defects in materials and workmanship under normal use and service for a period of 10 years from the date of manufacture. If within thirty days after buyer's discovery of what buyer believes is a defect, buyer notifies in writing and ships the product to RegO® at 100 RegO Drive, Elon, N.C. 27244, RegO®, at its option, and within forty-five days of receipt, will repair, replace F.O.B. point of manufacture, or refund the purchase price of that part or product found by RegO® to be defective. Failure of buyer to give such written notice and ship the product within thirty days shall be deemed an absolute and unconditional waiver of any and all claims of buyer arising out of such defect.

This warranty does not extend to any product or part that is not installed and used continuously after installation in accordance with RegO®'s printed instructions, all applicable state and local regulations, and all applicable national standards, such as those promulgated by NFPA, DOT and ANSI. This warranty does not extend to any product or part that has been damaged by accident, misuse, abuse, failure to maintain, or neglect, nor does it extend to any product or part which has been modified, altered, disassembled, or repaired in the field. This warranty does not cover any cosmetic issues, such as scratches, dents, marring, fading of colors or discoloration.

Except as expressly set forth above, and subject to the limitation of liability below, RegO® MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, with respect to its products and parts, whether used alone or in combination with others. RegO® disclaims all warranties not stated herein.

### LIMITATION OF LIABILITY

RegO® total liability for any and all losses and damages arising out of any cause whatsoever shall in no event exceed the purchase price of the products or parts in respect of which such cause arises, whether such causes be based on theories of contract, negligence, strict liability, tort or otherwise.

RegO® shall not be liable for incidental, consequential or punitive damages or other losses. RegO® shall not be liable for, and buyer assumes any liability for all personal injury and property damage connected with the handling, transportation, possession, further manufacture, other use or resale of products, whether used alone or in combination with any other products or materials. From time to time buyers might call to ask RegO® for technical advice base upon limited facts disclosed to RegO®. If RegO® furnishes technical advice to buyer, whether or not a buyer's request, with respect to application, further manufacture or other use of the products and parts, RegO® shall not be liable for such technical advice or any such advice provided to buyer by any third party and buyer assumes all risks of such advice and the results thereof.

NOTE: Some states do not allow the exclusion or limitation of incidental, consequential or punitive damages, so the above limitation or exclusion may not apply to you. The warranty gives you specific legal rights, and you may have other rights that vary from state to state. The portions of the limited warranty and limitation of liability shall be considered severable and all portions which are not disallowed by applicable law shall remain in full force and effect.

### WARNING

All RegO® products are mechanical devices that will eventually become inoperative due to wear, corrosion and aging of components made of materials such as rubber,etc. The environment and conditions of use will determine the safe service life of these products. Periodic inspection and maintenance are essential to avoid serious injury and property damage.

Many RegO® products are manufactured components which are incorporated by others on or in other products or systems used for storage, transport, transfer and otherwise for use of toxic, flammable and dangerous liquids and gases. Such substances must be handled by experienced and trained personnel only, using accepted governmental or industrial safety procedures.

### NOTICE TO USERS OF PRODUCTS

The Limited Warranty stated above is a factory warranty to the first purchasers of RegO® products. Since most users have purchased these products from RegO® distributors, the user must within thirty (30) days after the user's discovery of what user believes is a defect, notify in writing and return the product to the distributor from whom he purchased the product/part. The distributor may or may not at the distributor's option choose to submit the product/parts to RegO®, pursuant to this Limited Warranty. Failure by buyer to give such written notice within thirty (30) days shall be deemed an absolute and unconditional waiver of buyer's claim for such defects. Acceptance of any alleged defective product/parts by RegO®'s distributor for replacement or repairs under the terms of RegO®'s Limited Warranty in no way determines RegO®'s obligations under this Limited Warranty. Because of a policy of continuous product improvement, RegO® reserves the right to change designs, materials or specifications without notice.



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