

# OPERATOR'S MANUAL

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

63514X

63515X

RELEASED: 7-8-81  
REVISED: 2-4-00  
(REV. F)

## METER ASSEMBLY



**READ THIS MANUAL CAREFULLY BEFORE INSTALLING,  
OPERATING OR SERVICING THIS EQUIPMENT.**

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.

### METER DATA

Models	See "Model Description Chart"
Flow (Maximum)*	4 gpm (15 liters/min.)
Flow (Minimum)*	0.4 gpm (1.5 liters/min.)
Operating Pressure (Max.)	1000 psi (70 bar)
Operating Temperature (Max.)	150°F (70°C)
Accuracy	±0.62%
Weight	3.3 lbs. (1.5 kg.)
Inlet and Outlet Connections	1/2" NPTF
Diameter	3.93 in. (99.8 mm)
Overall Height (635141)	4.75 in. (120.7 mm)
(635142 & 635148)	3.78 in. (96.0 mm)
(635143, 635151, 635153 & 535154)	5.00 in. (127.0 mm)

\* Tested with Mobil DTE-25 motor oil. Minimum-maximum flow rates will vary with fluid viscosity.

### GENERAL DESCRIPTION

The Aro model utilizes an oscillating piston for measurement of SAE 5 through 50 motor oils and SAE 80 through 240 gear oils. Used primarily as an inventory control device in lubricant dispensing systems, they are unsurpassed for accuracy, ruggedness, and light weight. This is truly a universal meter, adaptable to a variety of applications. It is available with or without a totalizing register. The outlet port can be rotated in 90 degree increments to meet your requirements.

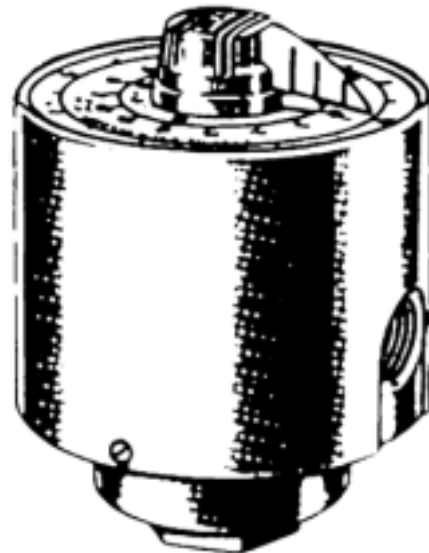
### OPERATION

After all entrapped air and / or foreign particles are removed from the supply line, clean oil continuously passes through the metering chamber by entering the inlet port, displacing the piston, and exiting the outlet port. Each oscillation of the piston equates to a given amount of fluid. Controlled clearance between the piston and chamber wall insure minimum leakage. As the piston oscillates, its' center hub rotates the output shaft through a gear train. A pointer knob affixed to the output shaft rotates around a graduated dial, indicating the amount dispensed. After delivery, the knob is then reset to zero by turning it counter-clockwise.

### SERVICE

If meter fails to operate, we suggest it be returned to Aro for service.

**NOTE: Always reset knob to zero by turning counter-clockwise. IF TURNED CLOCKWISE, SEVERE INTERNAL DAMAGE WILL OCCUR!**



### MODEL DESCRIPTION CHART

6351 XX - X

#### DIAL CAPACITY (TOTALIZER)

- 41 - 8 Pints (Pints)
- 42 - 8 U.S. Pints (No Totalizer)
- 43 - 4-16 Quarts (Quarts)
- 48 - 4 Liters (No Totalizer)
- 51 - 4-16 Quarts (No Totalizer)
- 53 - 1-10 Liters (Liters)
- 54 - 4-16 Quarts (Gallons)

#### OUTLET PORT POSITION

- Outlet in line with Zero Setting
- B - Outlet 180° from Zero Setting

**ARO**

INGERSOLL-RAND COMPANY  
P.O. BOX 151 • ONE ARO CENTER • BRYAN, OHIO 43506-0151

☎ (419) 636-4242 • FAX (419) 633-1674 ©2000 • PRINTED IN U.S.A.

**INGERSOLL-RAND**  
**FLUID PRODUCTS**

## PARTS LIST

ITEM	DESCRIPTION (Size in Inches)	QTY	PART NO.	ITEM	DESCRIPTION (Size in Inches)	QTY	PART NO.
1	Shroud, High (635141, 43, 51, 53 & 54)	(1)	75654	11	Setscrew, Worm (635141, 43, 51, 53 & 54)	(1)	76882
	Shroud, Low (635142 & 635148)	(1)	75655	12	Spacer (635141, 43, 51, 53 & 54)	(1)	71264
2	Screw, Shroud (#4 - 40 x 3/8")	(2)		13	Frame, Totalizer (635151)	(1)	5551
3	Knob Assembly, Reset (635141, 42 & 48)	(1)	77673	14	Totalizer Assembly (635141)	(1)	71265
	Knob Assembly, Reset (635143, 51, 53 & 54)	(1)	5563		Totalizer Assembly (635143)	(1)	5521
4	Pointer, Inner Circle (635143, 51, 53 & 54)	(1)	5568		Totalizer Assembly (635153 & 635154)	(1)	66719
5	Dial (Pint) (Totalizer) (635141)	(1)	71084	15	Nut, Packing Gland (All Models)	(1)	71069
	Dial (Pint) (Non-Totalizer) (635142)	(1)	5560	16	"O" Ring, Nitrile (All Models)	(1)	
	Dial (Quarts) (Totalizer) (635143)	(1)	71068	17	Washer, Nitrile (All Models)	(1)	
	Dial (Litres) (Non-Totalizer) (635148)	(1)	5588	18	Packing Gland Kit, Nitrile (All Models)	(1)	71064
	Dial (Quarts) (Non-Totalizer) (635151)	(1)	5569	19	Spindle, UDP (635141)	(1)	61043
	Dial (Litres) (Totalizer) (635153)	(1)	79302		Spindle Assembly (635142)	(1)	61036
	Dial (Gallons) (Totalizer) (635154)	(1)	71094		Spindle, UDP (635143, 51 & 54)	(1)	61037
6	Cam, ICP (635141)	(1)	71262		Spindle Assembly (635148)	(1)	61041
	Cam, ICP (635143, 51 & 54)	(1)	5562		Spindle, UDP (635153)	(1)	66721
	Cam, ICP (635153)	(1)	79297	20	Train Gear Assembly (635153)	(1)	66970
7	Spring, Clutch Roller (635141, 43, 51, 53 & 54)	(1)	5519	21	Chamber Assembly (635141, 42, 43, 51, 54)	(1)	5580
8	Clutch Roller (635141, 43, 51, 53, 54)	(1)	5594		Chamber Assembly (635148)	(1)	5590
	Gear, ICP (635141, 43, 51 & 54)	(1)	5564		Chamber Assembly (635153)	(1)	66720
9	Gear, ICP (635153)	(1)	79298	22	Screen (All Models)	(1)	73835
				23	"O" Ring, Nitrile (1/8" x 1-7/8" o.d.) (All Models)	(1)	Y325-223
10	Worm, UDP (635141)	(1)	71083	24	Housing Cap, NPT (All Models)	(1)	5536
	Worm, UDP (635143)	(1)	71071	25	Housing (All Models)	(1)	
	Worm, UDP (635151 & 635154)	(1)	72245				
	Worm, UDP (635153)	(1)	79299				

## OUTLET PORT POSITIONS

The outlet port in a meter can be set at any one of four positions, namely, 3, 6, 9, or 12 o'clock. To change positions in the field, simply remove the (1) shroud, the (3) reset knob, and the (5) dial. Rotate the (5) dial until the outlet port is in the desired position, and reassemble the parts in reverse sequence.

# PARTS LIST

