

## GENERAL DESCRIPTION

The Badger® Universal model utilizes an oscillating piston for measurement of SAE 5 through 50 motor oils, SAE 80 through 240 gear oils, and antifreeze fluid (ethylene glycol). Used primarily as a inventory control device in lubricant dispensing systems, they are accurate, rugged, and light weight. This is truly a universal meter, adaptable to a variety of applications. It is available with or without a totalizing register. When equipped with a switch, it can be used as a pulsing device for a remote totalizer or command module. 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 clearances between the piston and chamber wall insure minimum leakage. As the piston oscillates, the 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.



**MODEL UL**  
Universal Low  
No Totalizer



**MODEL UH**  
Universal High  
With Totalizer



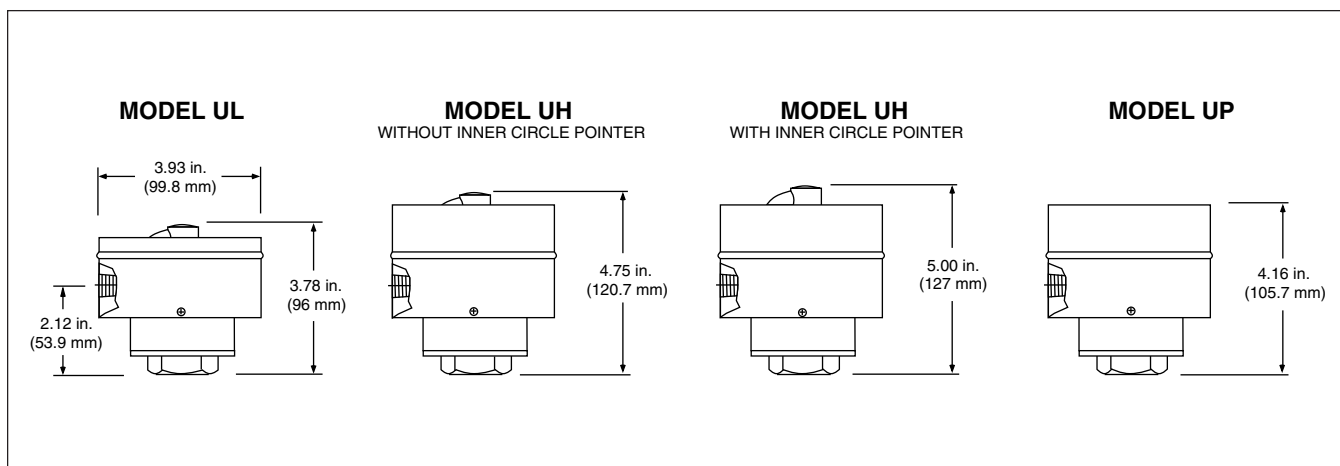
**MODEL UP**  
Universal Pulse  
With Switch Assembly

DIAL CAPACITY
8 U.S. Pints
4 Liters

DIAL CAPACITY	TOTALIZER
8 Pints	Pints
4-16 Quarts	Quarts
4-16 Quarts	Gallons
1-10 Liters	Liters
4-10 Liters	Liters

UNIT PER SHAFT REVOLUTION
1 U.S. Pint
1 U.S. Quart
1 Liter
1 U.S. Gallon





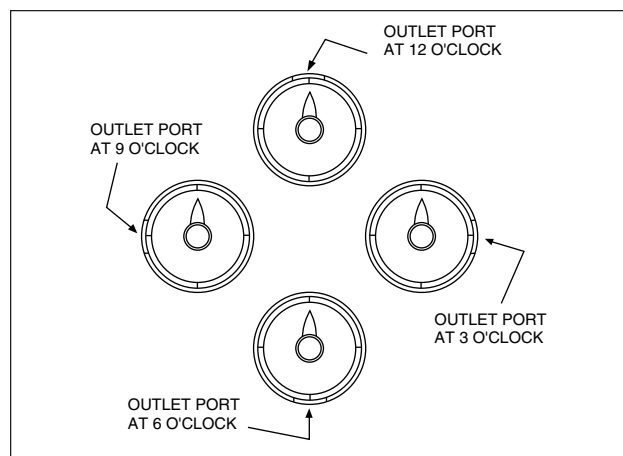
### OUTLET PORT POSITIONS (In Relation to Dial)

The outlet port in a universal type meter can be set at any one of four positions, namely, 3, 6, 9, or 12 o'clock. The four positions are illustrated on the right, all in relation to the cipher on the dial. All meters, unless otherwise specified at the time ordered, will be set at the 6 o'clock position.

To change positions in the field, simply remove the shroud, the reset knob, and the dial. Rotate the dial until the outlet port is in the desired position, and reassemble the parts in reverse sequence.

### ⚠ CAUTION

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



### TECHNICAL SPECIFICATIONS

	ENGLISH	METRIC
FLOW (Maximum)*	4 gpm	15 liters/min.
FLOW (Minimum)*	0.4 gpm	1.5 liters/min.
OPERATING PRESSURE (Maximum)	1000 psi	70 bar
OPERATING TEMPERATURE (Maximum)	150° F	70° C
ACCURACY	± 0.65%	± 0.65%
WEIGHT	3.3 lbs.	1.5 kg.
INLET AND OUTLET CONNECTIONS	1/2" NPTF	1/2" BSPP

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



Please see our website at  
**[www.badgermeter.com](http://www.badgermeter.com)**  
for specific regions and contacts.

Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists.



**BadgerMeter, Inc.**

P.O. Box 245036, Milwaukee, WI 53224-9536  
Telephone: (414) 355-0400 / (800) 456-5023  
Fax: (414) 355-7499 / (866) 613-9305  
[www.badgermeter.com](http://www.badgermeter.com)