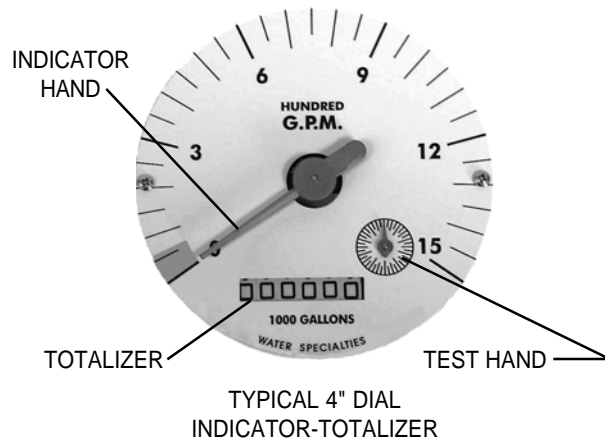
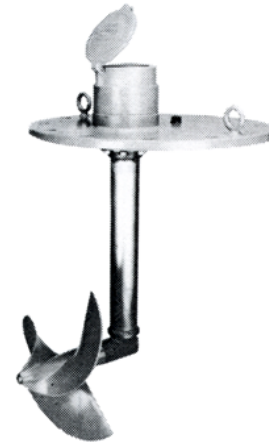




**MODEL ML24**  
 150 psi MANHOLE FLANGE METER  
 SEALED METER MECHANISM - MAGNETIC DRIVE  
 INDICATOR - TOTALIZER  
 SIZES 16" thru 120"



TYPICAL 4" DIAL  
 INDICATOR-TOTALIZER



DESCRIPTION

**MODEL ML24 MANHOLE FLANGE METERS** are manufactured to the highest standards. Materials used on all meters and flow ranges for the low velocity meter meet or exceed AWWA standard C704. The bolt-on design permits use in a wide range of applications with up to 150 psi working pressure. The meter head conforms to ANSI class 125 drilling. It is necessary, upon ordering, to furnish the I.D. dimension of the pipe the meter is to be mounted on for calibration purposes.

**INSTALLATION** is made to any standard manhole saddle. The meter can be installed in any of the following positions: horizontally, or inclined on suction or discharge lines. The meter must have a full flow of liquid for proper accuracy. Fully opened gate valves, fittings or other obstructions that tend to set up flow disturbances should be a minimum of ten pipe diameters upstream from the meter. Installations with less than ten pipe diameters of straight pipe require straightening vanes. Meters with straightening vanes require at least five pipe diameters upstream and two pipe diameters downstream of the meter.

**PROPELLER** is magnetically coupled with the drive mechanism through the sealed oil filled gearbox. This completely eliminates water entering the meter assembly, as well as the need for any packing gland. The propeller is a conical shaped three bladed propeller, injection molded of thermoplastic material resistant to normal water corrosion and deformity due to high flow velocities.

**BEARING** is a water lubricated ceramic sleeve and spindle bearing system with a ceramic/stainless steel spindle. Dual ceramic thrust bearings, standard on all meters, handle flows in both forward and reverse directions. The bearing design promotes extended periods of maintenance free propeller operation. Bearings within the sealed meter mechanism are shielded precision stainless steel bearings and are factory lubricated for the life of the meter.

**INDICATOR-TOTALIZER** is mechanically driven by the meter mechanism and features a full 4" diameter, 250 degree sweep dial with a six digit, straight reading type totalizer and sweep test hand. The indicator drive mechanism is temperature compensated so the indicator will be accurate at all points on the dial when operated between 32° and 140° F. The indicator dial can be furnished in GPM, CFS, MGD or any standard liquid measuring units with choice of standard totalizer measuring units. The bonnet, with padlock hasp, is o-ring sealed to the meter head.

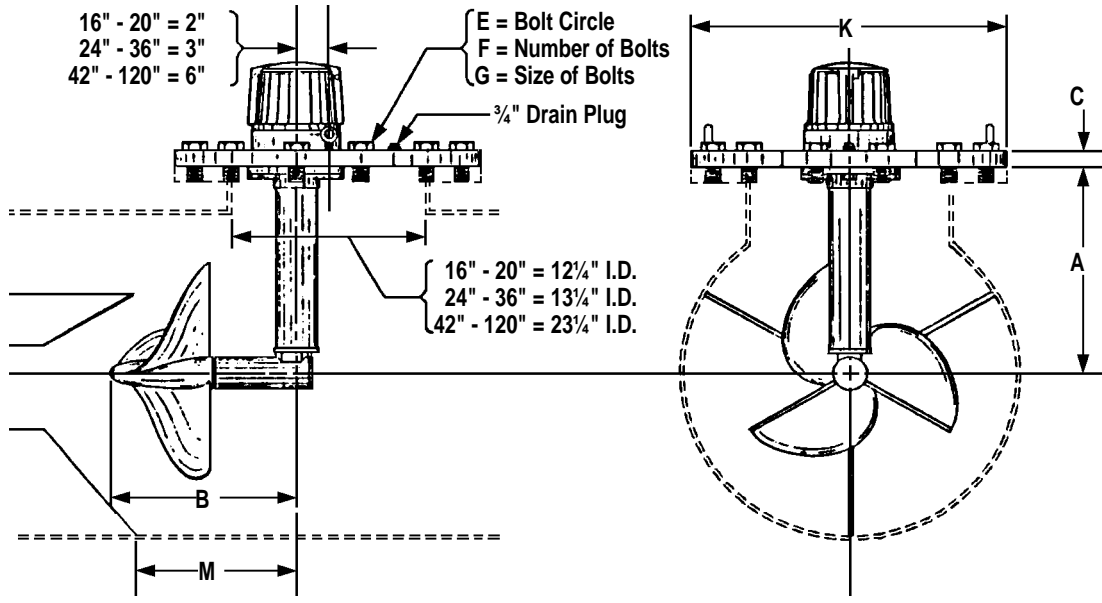
**CHANGE GEARS** may be easily exchanged in the field when changing the dial, or when recalibrating for different pipe sizes. It is not necessary to remove pressure from the line for these changes.

**O-RING SEALS** are used at the meter head and all points where seals are required, making the meter mechanism completely immune to any of the corrosive effects of atmospheric moisture or the liquids measured by the meter assembly.

SPECIFICATIONS

<b>ACCURACY</b>	Plus or minus 2% of actual flow within the range specified for each meter size.
<b>PRESSURE RANGE</b>	Up to 150 PSI maximum working pressure.
<b>TEMPERATURE RANGE</b>	140° F Maximum. Consult factory for special construction for higher temperatures.
<b>MINIMUM FLOWS</b>	As shown for each meter size and construction are required for accurate registration. See flow chart. NOTE: Minimum flow will be higher when auxiliary equipment is added.
<b>MAXIMUM FLOWS</b>	As shown for each meter size and construction are required for accurate registration. See flow chart.
<b>INTERMITTENT FLOWS</b>	As shown for each meter size are rated for 10% to 15% of the total time the meter is operating. Consult factory for High Velocity construction when intermittent flows are higher than shown on flow chart and/or when longer operating periods are required.
<b>MATERIALS</b>	Used in construction are chosen to minimize the corrosive effects of the liquids measured by the meter assembly. <b>MAGNETS</b> - permanent ceramic type <b>INTERIOR BEARINGS</b> - shielded stainless steel <b>PROPELLER BEARING</b> - ceramic sleeve type <b>PROPELLER SPINDLE</b> - ceramic sleeve on stainless steel <b>PROPELLER</b> - injection molded thermoplastic <b>GEARBOX</b> - cast bronze <b>SEPARATOR</b> - stainless steel <b>SHAFTS</b> - stainless steel <b>METER HEAD BOLTS</b> - plated steel <b>METER HEAD</b> - cast iron or fabricated steel, NSF approved, fusion epoxy coated.
<b>OPTIONAL EQUIPMENT</b>	A meter mounted Fwd. & Rev. Totalizer, Totalizer Extensions, and a wide range of controls and instruments for indicating, totalizing, and recording flow data for each meter. Special constructions and materials are available upon request.
<b>ORDERING INFO</b>	Must be specified by the customer and includes: Minimum & maximum flow ranges Temperature of meter environment Totalizer dial units Type of materials and construction Optional equipment desired Pipe I.D.

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METER & PIPE SIZE	*LOW VELOCITY CONSTRUCTION MIN. - MAX.	FLOW RANGES, GPM		DIMENSIONS								SHIPPING WEIGHT POUNDS
		STANDARD CONSTRUCTION MIN. - MAX. - INT.	HIGH VELOCITY CONSTRUCTION MIN. - MAX.	A <sub>1</sub>	B	C	E	F <sub>2</sub>	G	K <sub>3</sub>	M	
16	N/A	400-5000-6000	1200-7500	11½	11½	¾	17	12	7/8	19	10	150
18	N/A	700-6000-7500	1500-9000	12½	11½	¾	17	12	7/8	19	10	170
20	N/A	850-8000-9000	2000-12000	13½	11½	¾	17	12	7/8	19	10	180
24	N/A	1000-10000-13500	3000-15000	15½	11½	¾	18¾	12	1	21	13½	190
30	N/A	1800-15000-21000	4000-25000	18½	11½	¾	18¾	12	1	21	13½	190
36	N/A	2000-20000-30000	5000-35000	21½	11½	¾	18¾	12	1	21	13½	190
42	N/A	3000-30000-40000	6000-50000	25½	11½	1	29½	20	1¼	32	13½	365
48	N/A	5500-35000-50000	7000-60000	28½	11½	1	29½	20	1¼	32	13½	365
54	3200-45000	6500-45000-55000	8000-65000	31½	11½	1	29½	20	1¼	32	13½	365
60	4000-60000	7500-60000-80000	10000-90000	34½	18†	1	29½	20	1¼	32	22†	365
66	4750-75000	8500-75000-95000	12000-105000	37½	18†	1	29½	20	1¼	32	22†	365
72	5500-90000	9500-90000-115000	15000-125000	40½	18†	1	29½	20	1¼	32	22†	365
84	**	** -125000-115000	**	46½	18†	1	29½	20	1¼	32	22†	365
96	**	** -160000-200000	**	52½	18†	1	29½	20	1½	32	22†	365
108	**	** -200000-250000	**	58½	18†	1	29½	20	1½	32	22†	365
120	**	** -250000-300000	**	64½	18†	1	29½	20	1½	32	22†	365

Standard construction will be supplied for all main line meters unless special flow range, materials, or construction are required.

\* Low velocity (LV) construction has the same low and maximum flow rates as AWWA C704.

\*\* Consult factory for flow range or special construction.

† On High Velocity Meters "B" Dimension is 11½" and "M" dimension is 13½".



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