30111-05 Rev. 4.0/02-13



MODEL MLI1 150 psi METER HEAD ASSEMBLY SEALED METER MECHANISM - MAGNETIC DRIVE **INDICATOR - TOTALIZER** SIZES 3" thru 72"



INDICATOR-TOTALIZER



SPECIFICATIONS

## DESCRIPTION

- MODEL MLI1 METER HEAD ASSEMBLIES are manufactured to the highest standards. Materials used on all meters and flow ranges for the low velocity meter meet or exceed AWWA standard C704-02. The bolt-on design permits use in a wide range of applications with up to 150 psi working pressure. It is necessary, upon ordering, to furnish the meter size, model number and serial number of the meter it is replacing.
- **INSTALLATION** is made by bolting the meter head assembly to the existing saddle or meter tube. The meter can be installed horizontally, vertically, 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 and two pipe diameters downstream 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 in propeller 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.

ACCURACY PRESSURE RANGE TEMPERATURE RANGE MINIMUM FLOWS	Plus or minus 2% of actual flow within the range specified for each meter size. Up to 150 PSI maximum working pressure. 140° F Maximum. Consult factory for special construction for higher temperatures. 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
MAXIMUM FLOWS	As shown for each meter size and construction are
INTERMITTENT FLOWS	rated for continuous operation. See flow chart. 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.
MATERIALS	Used in construction are chosen to minimize the corrosive effects of the liquids measured by the meter assembly. MAGNETS - permanent ceramic type INTERIOR BEARINGS - shielded stainless steel PROPELLER BEARING - ceramic sleeve type PROPELLER SPINDLE - ceramic sleeve/stainless steel PROPELLER - injection molded thermoplastic GEARBOX - stainless steel SEPARATOR - stainless steel SHAFTS - stainless steel METER HEAD BOLTS - stainless steel METER HEAD - cast iron or fabricated steel, NSF
OPTIONAL EQUIPMENT	approved, fusion epoxy coated. Totalizer Extensions and a wide range of con- trols and instruments for indicating, totalizing and recording flow data for each meter. Special constructions and materials are available upon request.
ORDERING INFO	Must be specified by the customer and includes: Meter size Model number Serial number of the meter it is replacing I.D./O.D. of pipe



	FLOW RANGES, GPM		DIMENSIONS							EST. SHIPPING
SIZE	MIN MAX INT.	MIN MAX.	A	D	E	F	G	н	К	POUNDS
3	45-250-350	N/A	3	3¼	7¾	8	1/2	3¼	9	35
4	55-500-700	200-700	4	4 <sup>3</sup> /8	7¾	8	1/2	3¼	9	35
6	120-1200-1500	300-1500	6	5 <sup>3</sup> /8	7¾	8	1/2	4¼	9	35
8	150-1500-2000	400-2500	8 <sup>1</sup> /8	6½	7¾	8	1/2	5¼	9	35
10	180-2000-3000	500-3500	10¼	8¼	9¾	8	1/2	6½	11	45
12	200-3000-3500	800-5000	12¼	8¼	9¾	8	1/2	7½	11	50
14	300-4000-4500	1000-6000	13½	10	12¼	8	1/2	8½	13½	55
16	400-5000-6000	1200-7500	15¼	10	12¼	8	1/2	9½	13½	55
18	700-6000-7500	1500-9000	17¼	10	12¼	8	1/2	10½	13½	55
20	850-8000-9000	2000-12000	19¼	10	12¼	8	1/2	11½	13½	55
24	1000-10000-13500	3000-15000	23¼	13 <sup>3</sup> /8	18¾	12	1	15½	21	190
30	1800-15000-21000	4000-25000	29	13 <sup>3</sup> /8	18¾	12	1	18½	21	190
36	2000-20000-30000	5000-35000	35	13 <sup>3</sup> /8	18¾	12	1¼	21½	21	190
42	3000-30000-40000	6000-50000	41	23 <sup>3</sup> /8	29½	20	1¼	25	32	365
48	5500-35000-50000	7000-60000	47	23 <sup>3</sup> /8	29½	20	1¼	28	32	365
54	6500-45000-55000	8000-65000	53	23 <sup>3</sup> /8	29½	20	1¼	31	32	365
60	7500-60000-80000	10000-90000	59	23 <sup>3</sup> /8	29½	20	1¼	34	32	365
66	8500-75000-95000	12000-105000	65	23 <sup>3</sup> /8	291⁄2	20	1¼	37	32	365
72	9500-90000-115000	15000-125000	71	23 <sup>3</sup> /8	29½	20	1¼	40	32	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.



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