

**SERIES 100
METERS AND
ACCESSORIES**

**WATERWORKS INTAKE METERS
Model FM142 - Direct Drive
10" THRU 72"**

PDS-142-5
Issue Date: Feb. 1995
Supersedes: April 1994

DESCRIPTION

A Waterworks Intake Meter is an economical and easily installed meter for large volume flow measurement at the discharge end of a closed conduit, inverted siphon, and reservoirs. Existing structures often provide an excellent mounting for the meter.

FEATURES

Accuracy — $\pm 2\%$ of actual volumetric flow over the specified range. Each meter is individually flow calibrated in Sparling's certified hydraulic laboratory. This laboratory is traceable to the National Institute of Science and Technology (NIST). Certified test records are provided.

Total Flow is shown on a 6-digit straight-reading clock which registers in units or multiple units of Gallons, Cubic Feet or other standard units.

Flow Rate is easily obtained by timing the register clock test hand.

Minimum Flows as noted are required before accurate registration can be obtained.

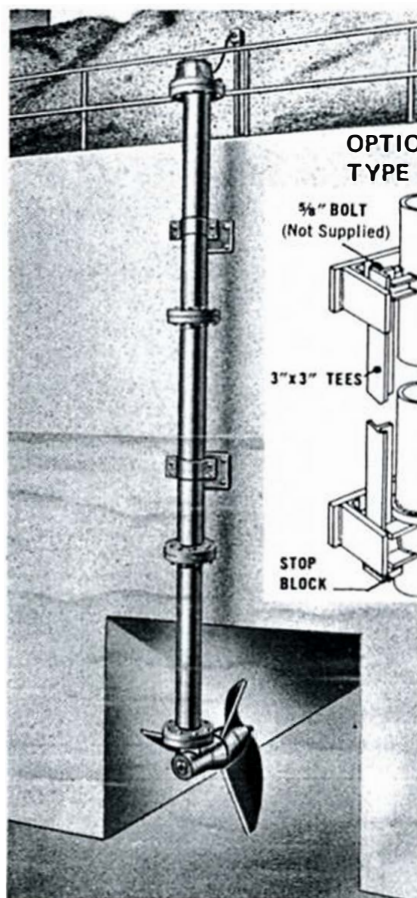
Maximum Flows as noted may be safely increased to 150% of rated capacity for intermittent use.

MATERIALS

All materials used are resistant to normal water corrosion but are not guaranteed against chemical or electrolytic attack. Plastic propellers may be stored in air temperatures up to 175° or used in water up to 100°F without damage.

Propeller Design Minimizes Maintenance — The propeller is made of a tough, durable, abrasion-resistant material. The conical shape and the ability of the material to flex under stress allows the propeller to shed debris such as clumps of algae or rags without damage.

Rugged Construction Guarantees Long Life — The wetted drop pipe and propeller shaft and bearing housing are hefty brass (10" to 30") or steel (36" to 72") castings that are designed to last for many years of service.



**OPTIONAL REVOLVING
TYPE BRACKET MOUNTING**

3/4" BOLT (Not Supplied)
3"x3" TEES
STOP BLOCK
STOP COLLAR
REVOLVING COLLAR

Ideal when highflow conditions exist.
Raising the meter approximately 6" permits the column to be rotated 180° and easily withdrawn.
Brackets: All Steel Integral Welded Construction Hot Dip Galvanized

INSTALLATION

The meter propeller, fully submerged and facing the center of the flow at the discharge end of a pipe, closed conduit, or inverted siphon, is suspended from a pipe column attached to a wall or simple support structure. Concrete pipe or a simple culvert structure is a satisfactory meter tube. Gate valves or other obstructions should be at least ten pipe diameters upstream from the meter. Straightening vanes may be furnished as a separate item to insure straight flow conditions and accurate measurement.

Sparling Instruments, Inc.

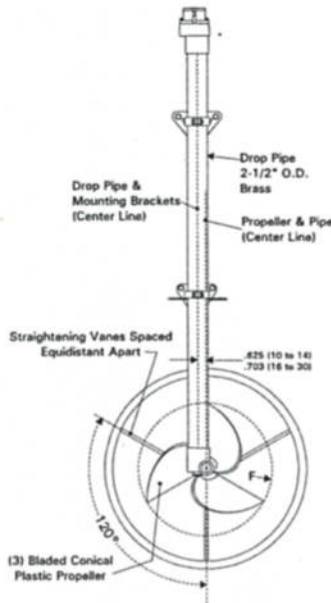
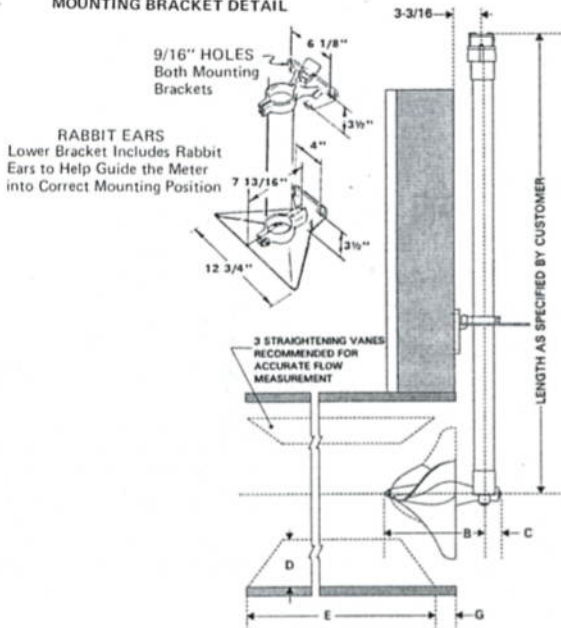
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Phone (626) 444-0571 • Fax (626) 444-2314

Meter & Pipe Size
Appx. Gr. Ship. Wt. (lbs)
(for 5-foot drop pipe)

	10" THRU 30"								36" THRU 72"						
	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"	54"	60"	66"	72"
B	90	90	90	105	105	105	105	115	350	350	580	580	580	580	580
C	9-1/2	9-1/2	9-1/2	12	12	12	12	12	18-1/8	18-1/8	20	20	20	20	20
D	2-1/8	2-1/8	2-1/8	2-5/8	2-5/8	2-5/8	2-5/8	2-5/8	4-3/8	4-3/8	4-1/2	4-1/2	4-1/2	4-1/2	4-1/2
E	3-3/8	4	4-3/4	5-1/2	6	7	8	10	12	14	16	18	20	22	24
F	16-1/2	16-1/2	28	28	30	33	36	45	54	60	72	80	90	96	108
G	8	10	11	13	16	16	16	16	25-1/4	25-1/4	38-3/8	38-3/8	38-3/8	38-3/8	38-3/8
	4	3	2	5	3	2	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

10" THRU 30"

MOUNTING BRACKET DETAIL



SIZE INCHES	FLOW RANGES (U.S. GPM)	
	STD. RANGE	HIGH RANGE
10	160 to 1,600	360 to 2,900
12	200 to 2,000	400 to 3,600
14	260 to 2,600	520 to 4,700
16	300 to 3,800	600 to 6,800
18	400 to 4,600	800 to 8,300
20	550 to 5,600	1,100 to 10,000
24	800 to 8,500	1,600 to 15,000
30	1,200 to 12,000	2,400 to 21,000
36	1,500 to 16,000	3,000 to 29,000
42	2,100 to 22,000	4,200 to 40,000
48	2,700 to 28,000	5,400 to 50,000
54	3,400 to 35,000	6,800 to 63,000
60	4,200 to 42,000	8,400 to 75,000
66	5,000 to 50,000	10,000 to 90,000
72	6,000 to 60,000	12,000 to 100,000

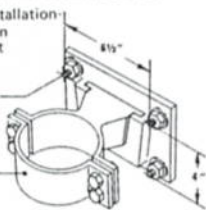
36" THRU 72"

STANDARD SCABBARD MOUNTING BRACKET

For Headwall Installation - Mounting Position Adjustable to suit Installation

1/2" Bolt (Not Supplied)
1-1/2" Projection

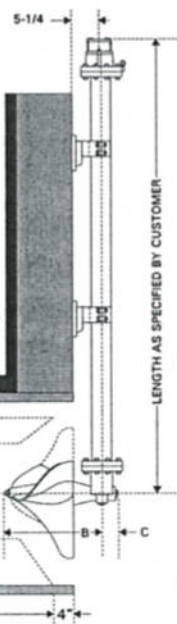
Cast Iron



3 STRAIGHTENING VANES RECOMMENDED FOR ACCURATE FLOW MEASUREMENT

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Mild Steel



Straightening Vanes Spaced Equidistant Apart

(3) Bladed Conical Plastic Propeller

Gear Box Cast Iron

Table 1 - Base Model Number

FM142 - Direct Drive Open Flow Meterhead

Table 2 - Size

-- 10=10"; 18=18"; 48=48" etc.

Table 3 - Mounting

6 - Standard Wall Brackets

Table 4 - Construction

1 Standard

Table 5 - Flow Range

1 Standard

2 High (Rubber Bearings Used)

Table 6 - Readout

0 - None - Totalizers, Indicators & Transmitters must be listed and priced separately. See Price Sheet 190-1

Table 7 - Accessories

0 None
1 Welding Vanes
2 Bolting Vanes
5 Additional Drop Pipe
6 1 & 5 Above
7 2 & 5 Above

FM142-- 6 - 1 - 0 -