

**SERIES 100  
METERS AND  
ACCESSORIES**

**PROPELLER METER  
TUBES AND SADDLES**

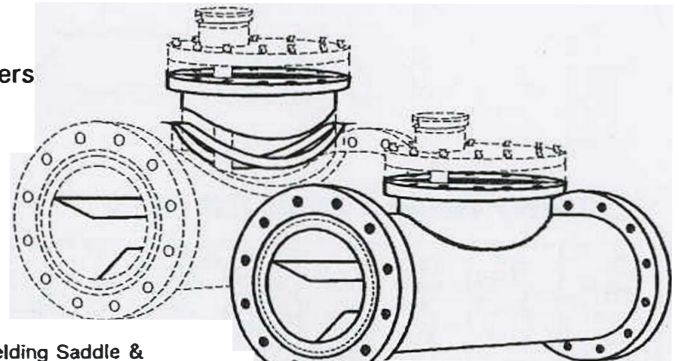
**PDS-110**  
Issue Date: February 1996  
Supersedes: August 1995

**DESCRIPTION**

Sparling MainLine™ direct or magnetic drive propeller meters may be furnished with a flanged tube or with a saddle for field welding onto the customers pipe.

**Tubes**

Small tubes through 3" are provided in heavy duty cast iron. Larger tubes are epoxy polyamide lined and coated fabricated steel. Meters 6" and larger are equipped with three integrally mounted straightening vanes. Flanges are 150# or 250# AWWA as required.



Welding Saddle & Optional Straightening Vanes

Tube Assembly Straightening Vanes Standard on 6"-72" tubes

**Saddles**

Saddles for meterheads from 6" - 14" are provided in heavy duty cast steel with the Sparling standard bolt pattern. Saddles for meterheads from 16" - 72" are fabricated

**SPECIFICATIONS**

**Materials of Construction**

**Tubes**

Tube .....	Cast Iron (2-3") Fabricated Steel (4" +)
Flanges .....	150 or 250# AWWA as required
Bolt Pattern (meterhead) .....	Sparling standard bolt pattern (2" - 14") AWWA flange compliant (16" - 36")
Straightening Vanes .....	2" to 4" not included 6" to 36" integrally welded in tube

**Saddles**

Saddle .....	Cast Steel (6" - 14") Fabricated Steel (16" - 72")
Bolt Pattern .....	Sparling standard bolt pattern (6" - 14") AWWA flange compliant (16" - 72")

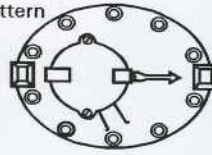
**Straightening Vanes** ..... Fabricated Carbon Steel

**Sparling Instruments, Inc.**

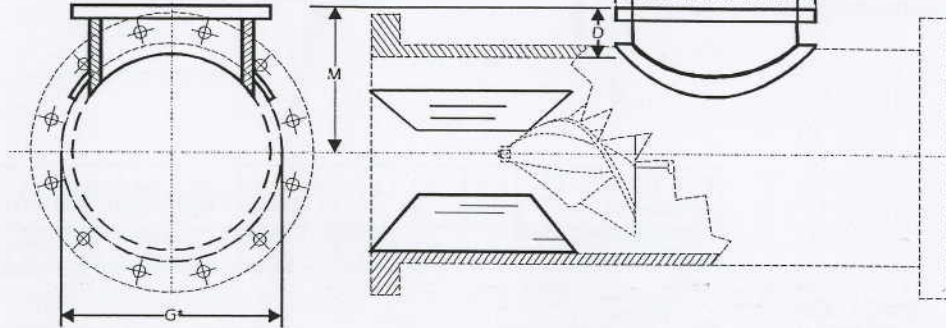
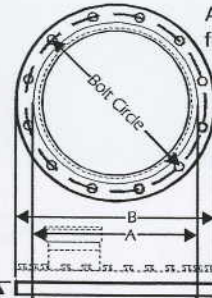
4097 N. Temple City Blvd. • El Monte, CA 91731-1089 USA  
Phone (626) 444-0571 • Fax (626) 444-2314

## Basic Welding Saddle

Sparling Bolt Pattern  
2" - 14"



AWWA compliant  
flange 16" - 72"



## 150 MWP Welding Saddles

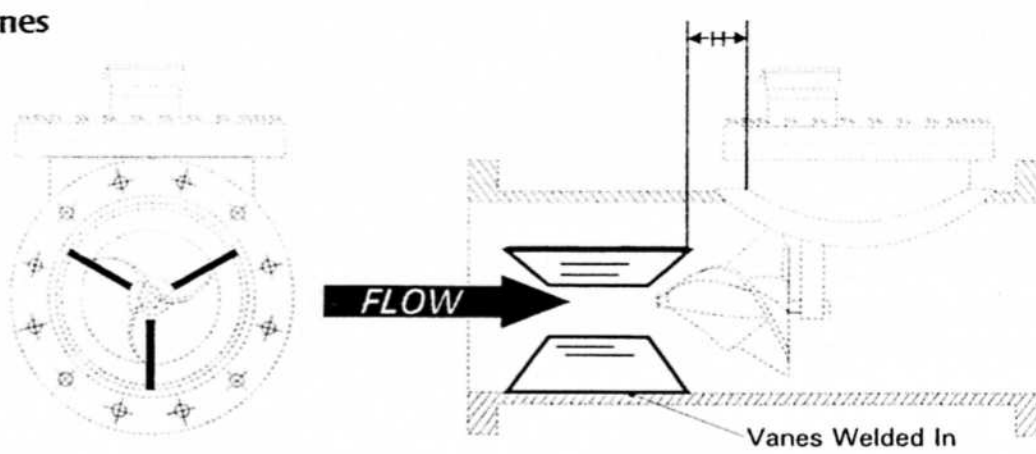
Size	Wt. (LBS.) Fabr. Steel	A	B	D	G*	M	S	Bolt Circle	Bolt Size	# of Bolts
6	20	7-5/8	9-1/4	N/A	6-5/8	4-1/4	9-1/4	N/A	7/16	10
8	30	8-1/4	11-3/4	N/A	8-5/8	5-5/16	11-3/4	N/A	7/16	10
10	35	8-1/4	11-3/4	N/A	10-3/4	6-5/16	11-3/4	N/A	7/16	10
12	55	8-1/4	11-3/4	N/A	12-3/4	7-5/16	11-3/4	N/A	7/16	10
14	70	8-1/4	11-3/4	N/A	14	8	11-3/4	N/A	7/16	10
16	145	16	23-1/2	4	16	12-1/4	N/A	21-1/4	1	16
18	150	16	23-1/2	4	18	13-1/2	26	21-1/4	1	16
20	155	16	23-1/2	4	20	14-1/2	26	21-1/4	1	16
24	165	16	23-1/2	4-1/2	24	16-1/4	26	21-1/4	1	16
30	185	16	23-1/2	4-1/2	30	19-1/4	26	21-1/4	1	16
36	275	24	32	5	36	23	36-1/2	29-1/2	1-1/4	20
42	295	24	32	5	42	26	36-1/2	29-1/2	1-1/4	20
48	550	30	38-3/4	5-1/2	48	49-1/2	46-3/4	36	1-1/4	28
54	560	30	38-3/4	5-1/2	54	32-1/2	46-3/4	36	1-1/4	28
60	580	30	38-3/4	5-1/2	60	35-1/2	46-3/4	36	1-1/4	28
66	600	30	38-3/4	5-1/2	66	38-1/2	46-3/4	36	1-1/4	28
72	625	30	38-3/4	5-1/2	72	41	46-3/4	36	1-1/4	28

## 250 MWP Welding Saddles

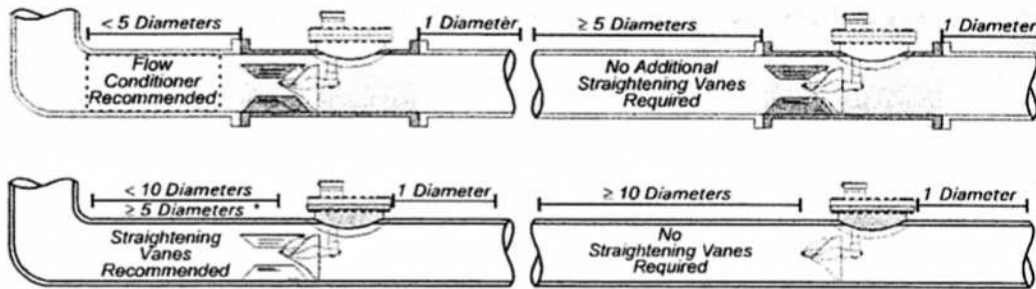
Size	Wt. (LBS.) Fabr. Steel	A	B	D	G*	M	S	Bolt Circle	Bolt Size	# of Bolts
6	20	7-5/8	9-1/4	N/A	6-5/8	4-1/4	9-1/4	N/A	7/16	10
8	30	8-1/4	11-3/4	N/A	8-5/8	5-5/16	11-3/4	N/A	7/16	10
10	30	8-1/4	11-3/4	N/A	10-3/4	6-5/16	11-3/4	N/A	7/16	10
12	30	8-1/4	11-3/4	N/A	12-3/4	7-5/16	11-3/4	N/A	7/16	10
14	30	8-1/4	11-3/4	N/A	14	8	11-3/4	N/A	7/16	10
16	260	16	25-1/2	5	16	12-1/4	N/A	22-1/2	1-1/4	20
18	265	16	25-1/2	5	18	13-1/2	26	22-1/2	1-1/4	20
20	270	16	25-1/2	5	20	14-1/2	26	22-1/2	1-1/4	20
24	275	16	25-1/2	5	24	16-1/4	26	22-1/2	1-1/4	20
30	480	16	25-1/2	5	30	19-1/4	26	22-1/2	1-1/4	20
36	485	24	36	6	36	24	36-1/2	32	1-1/2	24
42	505	24	36	6	42	27	36-1/2	32	1-1/2	24
48	710	30	43	7	48	31	46-3/4	39-1/4	1-3/4	28
54	720	30	43	7	54	34	46-3/4	39-1/4	1-3/4	28
60	730	30	43	7	60	37	46-3/4	39-1/4	1-3/4	28
66	740	30	43	7	66	40	46-3/4	39-1/4	1-3/4	28
72	750	30	43	7	72	43	46-3/4	39-1/4	1-3/4	28

\* Dimension "G" as shown refers to the O.D. of standard steel pipe, but will be altered to conform to pipe specified by the customer

# Straightening Vanes



Pipe Dia. (inches)	6	8	10	12	14	16	18	20	24	30	36	42	48	54	60	66	72
H	4	4	4	4	4	8	8	8	8	8	12	12	15	15	15	15	15



\* < 5 Diameters Flow Conditioner recommended in addition to Straightening Vanes

## How to Order

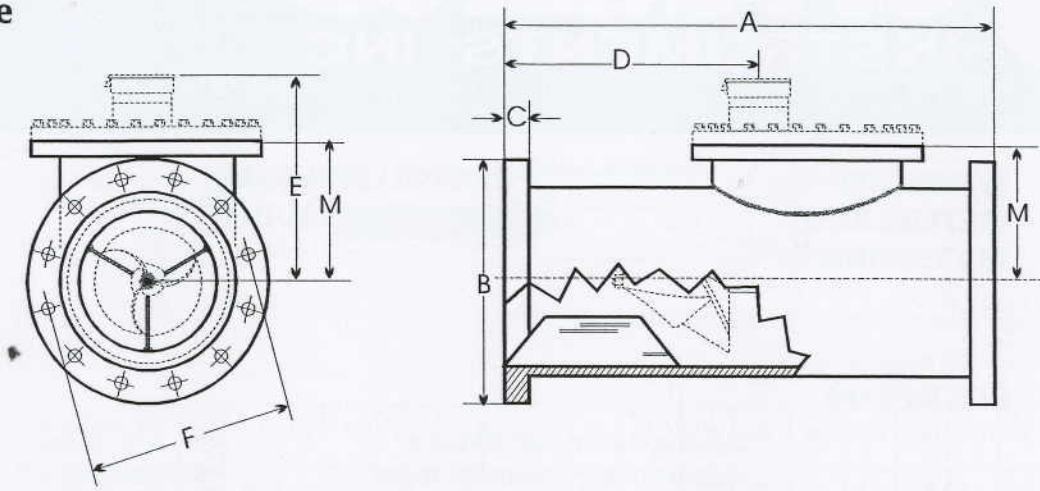
MT1	Basic Meter Tube
	Table 1 - Size O2=2", O3=3", O4=4", O6=6" etc. thru 36"
	Table 2 - End Connections 1 125 AWWA 2 250 AWWA 4 Plain End (6 thru 36" Standard Material Only)
	Table 3 - Flow Direction 1 Forward Flow
	Table 4 - Tube Coating 1 Standard Coating

MT1 \_ \_ \_ \_

MS1	Basic Welding Saddle (Specify pipe I.D. & O.D.)
	Table 1 - Size Standard Cast Steel Saddles 06-00=6", 08-00=8", etc. thru 14" Standard Fabricated Saddles 16-00=16", 18-00=18", etc. thru 72"
	Table 2 - Pressure Rating 1 150 PSI 2 250 PSI
	Table 3 - "M" Dimension 0 Standard "M" Dimension
	Table 4 - Accessories 0 None 1 Welding Vanes 2 Bolting Vanes

MS1 \_-00 \_ \_ \_ \_

## Basic Meter Tube



## 150 MWP Flanged Tubes, Flat Faced

Size	Wt. (LBS.)		A	B	C	D	E	F	M	Bolt Size	# of Bolts
	Fabr. Steel	Cast Iron									
2	-	20	13-1/4	6	5/8	6-1/8	6-1/2	4-3/4	1-3/4	5/8	4
3	-	25	12-3/4	7-1/2	3/4	5-7/16	7-7/16	6	2-3/4	5/8	4
4	40	-	18	9	1	10-3/16	8-1/8	7-1/2	3-7/16	5/8	8
6	95	-	22	11	11/16	12	9-1/4	9-1/2	4-1/4	3/4	8
8	155	-	24	13-1/2	11/16	14-1/2	10-5/16	11-3/4	5-5/16	3/4	8
10	260	-	26	16	11/16	15-1/2	11-5/16	14-1/4	6-5/16	7/8	12
12	310	-	28	19	13/16	17-1/4	12-5/16	17	7-5/16	7/8	12
14	325	-	32	21	15/16	21-1/4	12-5/16	18-3/4	8	1	12
16	410	-	46	23-1/2	1	25-7/16	17-3/4	21-1/4	12-1/4	1	16
18	480	-	48	25	1-1/16	26-15/16	18-3/4	22-3/4	13-1/2	1-1/8	16
20	540	-	50	27-1/2	1-1/8	28-7/16	19-3/4	25	14-1/2	1-1/8	20
24	695	-	54	32	1-1/4	31-15/16	21-3/4	29-1/2	16-1/4	1-1/4	20
30	860	-	60	38-3/4	1-3/8	36-15/16	24-3/4	36	19-1/4	1-1/4	28
36	1180	-	80	46	1-5/8	49-11/16	28-7/8	42-3/4	23	1-1/2	32

## 250 MWP Flanged Tubes, Raised Faced

Size	Wt. (LBS.)		A	B	C	D	E	F	M	Bolt Size	# of Bolts
	Fabr. Steel	Cast Iron									
2	-	35	13-1/4	6-1/2	7/8	6-1/8	6-1/2	5	1-3/4	5/8	8
3	-	40	12-3/4	8-1/4	1-1/8	5-7/16	7-7/16	6-5/8	2-3/4	3/4	8
4	60	-	20-5/8	10	1-1/4	12-13/16	8-1/4	7-7/8	3-7/16	3/4	8
6	130	-	22	12-1/2	1-7/16	12	9-1/4	10-5/8	4-1/4	3/4	12
8	285	-	24	15	1-5/8	14-1/2	10-5/16	13	5-5/16	7/8	12
10	290	-	26	17-1/2	1-7/8	15-1/2	11-5/16	15-1/4	6-5/16	1	16
12	360	-	28	20-1/2	2	17-1/4	12-5/16	17-3/4	7-5/16	1-1/8	16
14	420	-	32	23	2-1/8	21-1/4	12-15/16	20-1/4	8	1-1/8	20
16	530	-	46	25-1/2	2-1/4	25-7/16	18-9/16	22-1/2	12-1/4	1-1/4	20
18	600	-	48	28	2-3/8	26-15/16	19-9/16	24-3/4	13-1/2	1-1/4	24
20	680	-	50	30-1/2	2-1/2	28-7/16	20-9/16	27	14-1/2	1-1/4	24
24	825	-	54	36	2-3/4	31-15/16	22-9/16	32	16-1/4	1-1/2	24
30	990	-	60	43	3	36-15/16	25-9/16	39-1/4	19-1/4	1-3/4	28
36	1480	-	80	50	3-3/8	49-11/16	29-3/4	46	23	2	32