



SOUTHERN FLOW MEASUREMENT COMPANY, INC.

Address reply to:

Lafayette, Louisiana
March 31, 1969

Continental VCM Plant
P. O. Box 605
Westlake, Louisiana 70669

Attn: Mr. John D. Minott

Re: Measurement of Chlorine

Dear Sir,

The attempt to adapt your chlorine charts to our system of volume determination has not met with much success. The problem in utilizing the Integrator are threefold; (1) static pressure and differential recordings are not on the same chart, (2) Differential ranges of 0-34.01 inches and 0-84.76 inches are non-standard and (3) the Taylor charts are not adaptable to the Integrator due to its non-conformity to the square root cams.

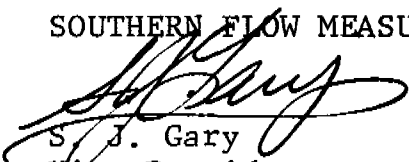
The first two problems can be overcome but would take more time to accomplish than as it is now taking. The third obstacle is proving most difficult and it appears we would not be able to utilize the Integrator at all.

In view of these obstacles we must respectfully decline from submitting a bid for performing this service for you. It appears that we can not achieve any greater accuracy than you are now maintaining and further that no economical saving could be realized.

We appreciate your interest and sincerely regret that we can not be of service in this instance.

Yours truly,

SOUTHERN FLOW MEASUREMENT CO., INC.



S. J. Gary
Vice-President

SJG:df

LAFAYETTE, LOUISIANA 132 Demanade Blvd. - Box 51475, O.C.S. (70501) - Phone (318) 234-4595

BELLE CHASSE, LOUISIANA Delmandre-Belle Chasse Highway - Box 419 (70037) - Phone (504) 362-6244

HOUSTON, TEXAS 6001 Gulf Freeway - Box 12158 (77017) - Phone (713) 928-5641

CCR 000038696


ROBINSON

ORIFICEMASTER

Semi-Orifice Fitting

150 to 2500 lb. ASA.

Accurate Flow Measurement at Low Cost...

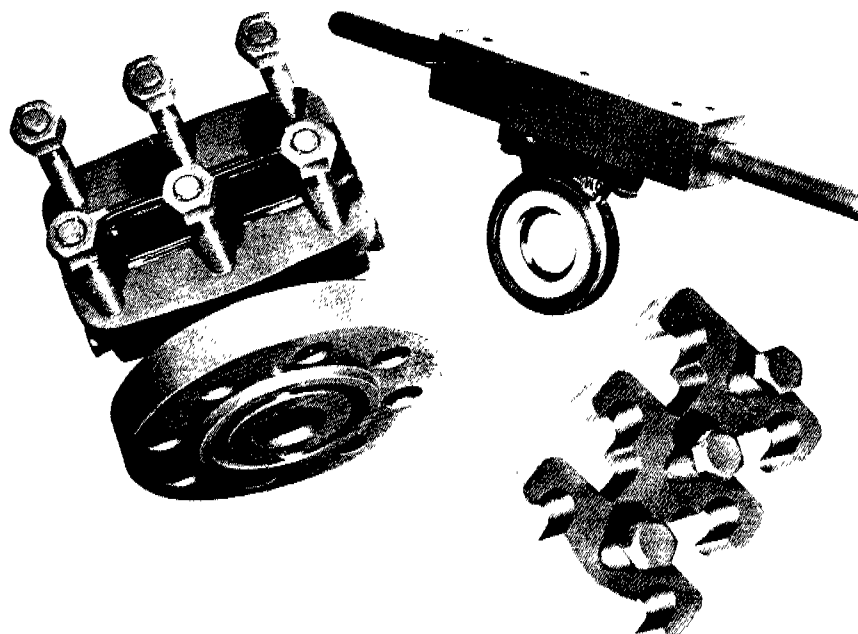
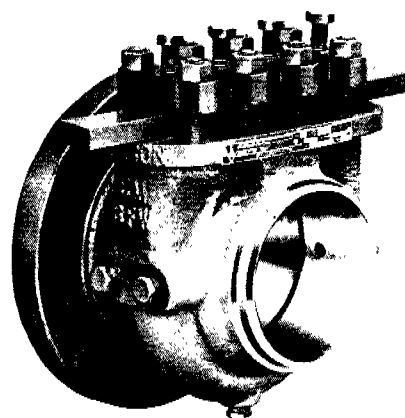
SAVES ON INITIAL COST
SAVES ON SERVICE COSTS
SAVES ON PLATE COSTS

The Orificemaster is designed to meet the need for a low cost orifice fitting that is easily serviced without special tools or skills. It successfully meets these criteria in that in many cases the initial cost of the Orificemaster is less than that of an orifice flange union of equal size and pressure rating. Contributing to the low initial cost of the Orificemaster is the fact that the orifice plate is furnished with the unit at no additional cost.

Service of the Orificemaster is exceedingly simple compared to orifice flange unions. After relieving pressure from the line the cover plate is removed by loosening two to four set screws (depending upon size) and lifting off the cover plate clamp. The carrier which is bolted to the cover plate is lifted out of the fitting with the cover plate. Reversing the procedure places the carrier and the orifice plate in the line with the orifice plate accurately centered for precise metering. A dowel pin mounted in the cover plate and matching a drilled hole in the body prevents the carrier from being installed backwards and is added assurance of accurate centering.

Compare this procedure with the removal of eight to ten flange bolts, jacking apart of the flanges and the associated problems of gasket replacement. It is easy to see how the Orificemaster can bring great savings in service labor. Since, on most installations, the carrier is removed through the top of the fitting there is no spillage or loss of process liquids.

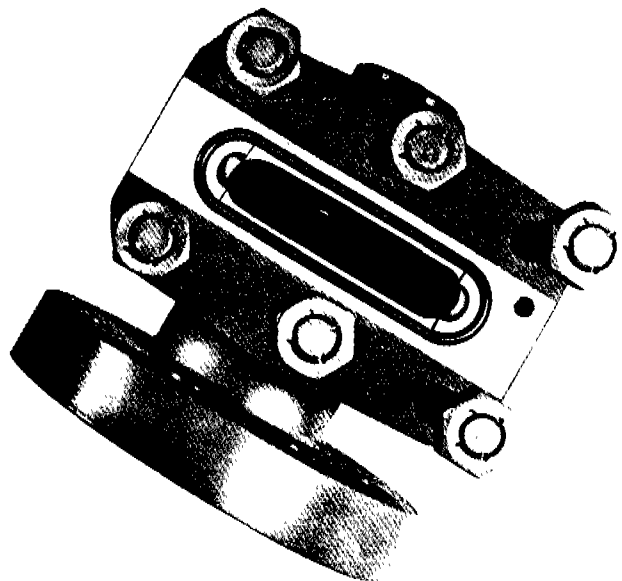
Further economies are realized on orifice plate replacement. The Orificemaster uses a circular orifice plate which costs one-half to two-thirds as much as the paddle type used with orifice flange unions. This is the same type of plate used with Robinson Type E, Type H, Type I and many other makes of orifice fittings. Consequently, standardization and its associated benefits is encouraged and made practical.



CCR 000038697 }

ROBINSON

Construction

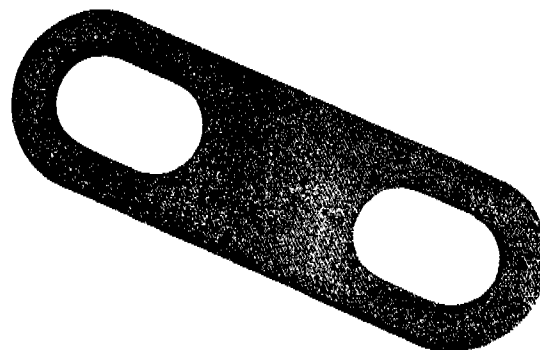


1500 lb. and 2500 lb. units have the "O" ring cover seal in the body.

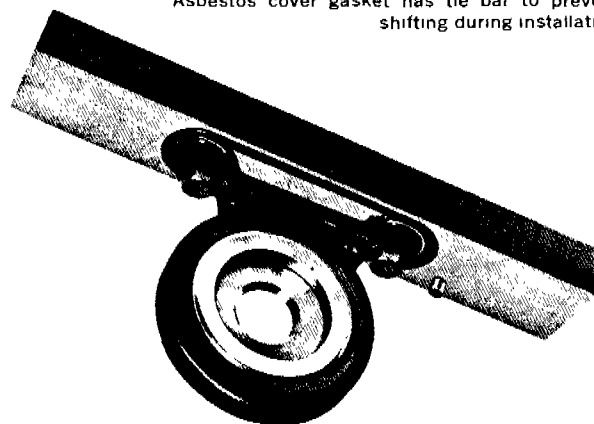
The body of the Robinson Orificemaster is normally constructed of cast steel or cast stainless steel for pressure ratings from 150 to 2500 lb. ASA. They may, however, be constructed of any castable alloy upon request.

Castings are made under controlled conditions which assure the highest quality and can be subjected to radiographic magnetic particle and fluorescent penetration testing. The interior of the body is machined to microscopic tolerances so that consistently accurate pressure differential readings are obtained regardless of rate of flow.

The orifice plate carrier is bolted to the cover plate to form an integral unit. The cover plate is locked firmly into place with set screws which are threaded through the clamp. When the set screws are tightened the clamp is raised until it butts against a series of nuts mounted on studs in the fitting body. Pressure is then applied to the cover plate sealing it in position.



Asbestos cover gasket has tie bar to prevent shifting during installation.



"O" ring seal on 900 lb. unit is mounted on the cover plate.

The nuts which hold the cover clamp are adjusted at the factory and staked to prevent movement to assure even pressure and level clamping of the cover.

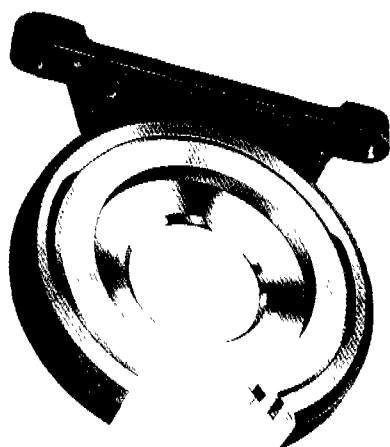
SEALS—Orificemaster for pressures up to 900 lbs. ASA are normally furnished with a flat asbestos gasket on the cover plate. The gasket is designed with a tie-bar through the center to assure proper positioning and prevent shifting during installation. Fittings for 900 lbs., 1500 lbs. and 2500 lbs. ASA are equipped with a Hycar rubber "O" ring seal.

The Hycar rubber "O" ring seal is optional on fittings for pressures lower than 900 lbs. and the asbestos gasket may be furnished with the 900 lbs. fitting if so desired.

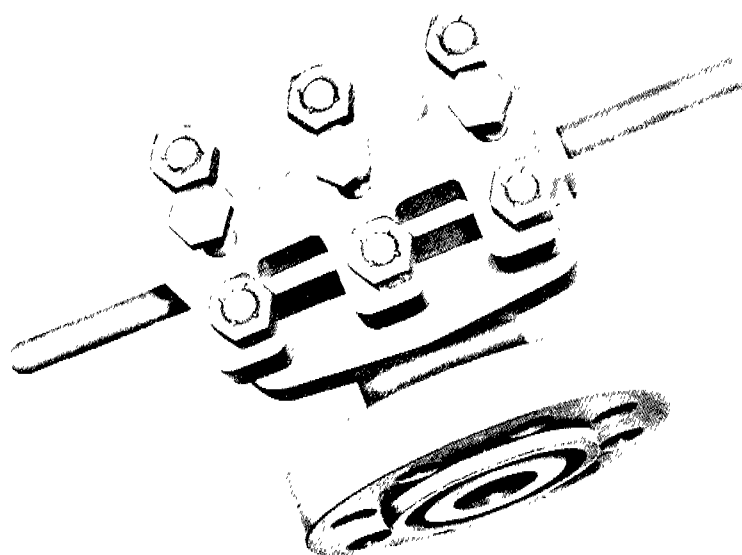
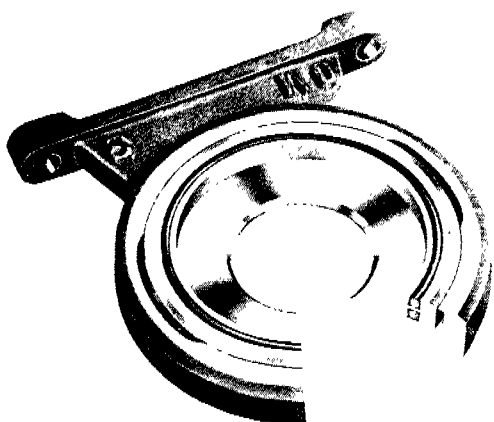
CARRIER SEALS — The Orificemaster plate carrier is constructed of ductile iron. It is available, however in stainless steel, Monel, Hastelloy or any castable alloy.

CCR 000038698

DESIGN FEATURES



Single seal (above) and double seal (below) have Hycar rubber "O" rings mounted in dove-tailed grooves



Top view of unit shows factory adjusted cover nuts staked to prevent movement

The carrier has a machined recess into which the orifice plate fits . . . flush with adjacent face of the carrier. A metal seal ring which locks into place on the carrier with a quarter turn, provides an effective but rigid seal between the carrier and the orifice plate. Because the orifice plate is locked-in with a metal seal ring there is no chance for movement or distortion under pressure to affect the accuracy of flow measurement.

For temperatures up to 300°F and pressures to 1000 psi. ASA a Hycar rubber "O" ring seal is used. The "O" ring fits into a dove-tail groove in the metal seal ring, and when the seal ring is in position it holds the orifice plate in the carrier and seals the joint between the orifice plate and carrier.

The standard seal on 900 lbs. ASA and up Orificemaster is braided square asbestos impregnated with teflon which fits in the groove in the seal ring backed up with a

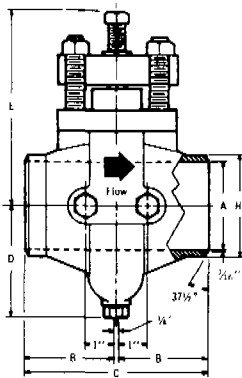
marcel spring. This seal is for temperatures up to 500°F.

For high temperature applications an all metal seal consisting of a spiral wound, stainless steel coil spring is used.

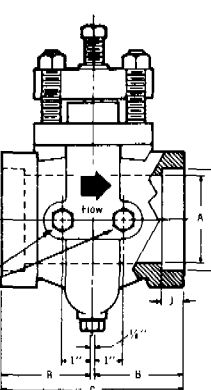
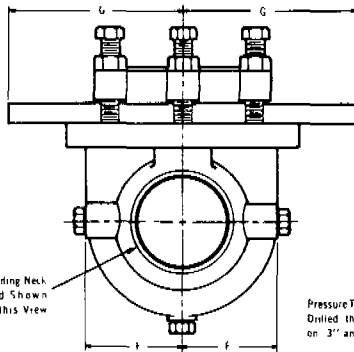
Where required a double seal may be furnished. This puts a seal not only on the joint between orifice plate and carrier but between the carrier and the body of the fitting. There is no extra charge for this combination.

—The Robinson Catalog No. 500 Orifice Plate furnished with the Orificemaster is machined from stretcher-leveled stainless steel sheet. It is normally furnished in Type 304 stainless steel, but is available in 316SS, Monel, Brass or Hastelloy "B" or "C" from stock, or in any machineable alloy. Manufacturing and machining are in accordance with A. G. A. recommendations unless customer specifies otherwise. The plate may be furnished blank or bored to your specification.

ORIFICEMASTER DIMENSIONS



WELDING NECK ENDS



STANDARD A S A B 16 5 FLANGE FACING

WELDING NECK, SOCKET WELD AND THREADED ENDS

Size	A			B			C		D		E		F			G		H	I	J	WT. APPROX.			
	600#	900# 1500#	2500#	600# 900#	1500# 2500#	600# 900#	1500# 2500#	600# 900#	1500# 2500#	600# 900#	1500# 2500#	600# 900#	1500# 2500#	600# 900#	1500# 2500#	600# 900#	1500# 2500#				600#	900#	1500#	2500#
2	2.067	1 939	1.689	2 ¹¹ / ₁₆	3 ³ / ₁₆	5 ¹ / ₂	6 ¹ / ₂	3 ¹ / ₂	4	5 ¹ / ₂	5 ¹ / ₁₆	2 ¹ / ₄	3	3 ¹ / ₄	5 ⁹ / ₁₆	6	2 ³ / ₈	2 ¹ / ₃₂	1 ¹ / ₁₆	25	27	85	90	
3	3 068	2 900	2 300	3 ³ / ₈	3 ¹ / ₁₆	6 ³ / ₈	8	4 ¹ / ₃₂	4 ³ / ₄	6 ¹ / ₁₆	6 ¹ / ₁₆	3 ³ / ₄	3 ¹ / ₃₂	4 ⁵ / ₁₆	6	6 ³ / ₄	3 ¹ / ₂	3 ¹ / ₃₂	1 ³ / ₁₆	36	40	118	125	
4	4 026	3 826	3.152	3 ¹ / ₁₆	4 ¹ / ₁₆	6 ¹ / ₄	9	4 ¹ / ₃₂	5 ¹ / ₈	6 ² / ₃₂	7 ¹ / ₈	3 ² / ₃₂	4 ³ / ₃₂	5	6 ³ / ₈	7 ¹ / ₁₆	4 ³ / ₈	4 ¹ / ₃₂	1 ⁹ / ₁₆	42	47	138	145	
6	6.065	5.761 5.501*	4.897	3 ³ / ₄	5	7 ³ / ₈	10 ³ / ₈	5 ¹ / ₁₆	6 ³ / ₈	8 ³ / ₃₂	8 ³ / ₁₆	4 ¹ / ₁₆	5 ³ / ₁₆	6 ³ / ₈	8 ³ / ₁₆	8 ³ / ₈	6 ³ / ₄	6 ² / ₃₂	1 ¹ / ₁₆	65	76	210	240	

FLANGEWELD, STANDARD, R. F. FLANGE FACINGS (A.S.A. B 16.5)

Size	A			B		P						C					
	150# 300# 600#	900# 1500#	2500	150# 300# 600# 900#	1500# 2500#	150#	300#	600#	900#	1500#	2500#	150#	300#	600#	900#	1500#	2500#
2	2 067	1 939	1 689	2 1 ¹ / ₁₆	3 3 ¹ / ₁₆	3 1 ¹ / ₁₆	4 1 ¹ / ₁₆	4 7 ¹ / ₁₆	4 1 ¹ / ₁₆	5 7 ¹ / ₁₆	5 1 ¹ / ₁₆	6 3 ¹ / ₄	6 3 ¹ / ₈	7 1 ¹ / ₄	7 3 ¹ / ₄	8 3 ¹ / ₄	9 1 ¹ / ₄
3	3 068	2 900	2 300	3 1 ¹ / ₈	3 1 ¹ / ₁₆	4 1 ¹ / ₄	4 7 ¹ / ₁₆	4 1 ¹ / ₁₆	5 1 ¹ / ₁₆	6 3 ¹ / ₁₆	6 1 ¹ / ₁₆	7 1 ¹ / ₂	7 1 ¹ / ₁₆	8 1 ¹ / ₁₆	8 1 ¹ / ₁₆	10 1 ¹ / ₄	11
4	4 026	3 826	3 152	3 1 ¹ / ₁₆	4 7 ¹ / ₁₆	4 1 ¹ / ₄	4 9 ¹ / ₁₆	5 1 ¹ / ₁₆	5 1 ¹ / ₁₆	6 1 ¹ / ₁₆	7 1 ¹ / ₁₆	7 7 ¹ / ₁₆	7 3 ¹ / ₄	8 1 ¹ / ₄	8 1 ¹ / ₈	11 1 ¹ / ₈	12 1 ¹ / ₄
6	6 065	5 761 5 501*	4 897	3 3 ¹ / ₄	5	4 1 ¹ / ₂	5 1 ¹ / ₄	5 1 ¹ / ₁₆	6 1 ¹ / ₄	8 1 ¹ / ₁₆	9 1 ¹ / ₁₆	8 1 ¹ / ₁₆	9 1 ¹ / ₈	9 1 ¹ / ₁₆	10 1 ¹ / ₈	13 1 ¹ / ₂	14 1 ¹ / ₂

Size	D		E		F		G		H		WT. APPROX.					
	150 ¹ / ₃₀₀ 300 ¹ / ₆₀₀ 600 ¹ / ₉₀₀	1500 ¹ / ₂₅₀₀	150 ¹ / ₃₀₀ 300 ¹ / ₆₀₀ 600 ¹ / ₉₀₀	1500 ¹ / ₂₅₀₀	150 ¹ / ₃₀₀ 300 ¹ / ₆₀₀ 600 ¹ / ₉₀₀	1500 ¹ / ₂₅₀₀	150 ¹ / ₃₀₀ 300 ¹ / ₆₀₀ 600 ¹ / ₉₀₀	1500 ¹ / ₂₅₀₀	150 ¹ / ₃₀₀ 300 ¹ / ₆₀₀ 600 ¹ / ₉₀₀	1500 ¹ / ₂₅₀₀	150 ¹ / ₃₀₀	300 ¹ / ₆₀₀	600 ¹ / ₉₀₀	900 ¹ / ₁₅₀₀	1500 ¹ / ₂₅₀₀	2500 ¹ / ₄₀₀₀
2	3½	4	5½	5¾ ₁₆	3	3¼	5¾ ₁₆	6	2¾	2¾	37	35	36	52	110	128
3	4½ ₃₂	4¾	6¾ ₁₆	6¾ ₁₆	3½ ₁₂	4¾ ₆	6	6¼	3½	3½	47	53	55	71	166	208
4	4½ ₃₂	5½	6¾ ₃₂	7½	4¾ ₃₂	5	6¾	7½ ₁₆	4½	4¾	57	70	80	100	211	272
6	5½ ₁₆	6¾	8¾ ₃₂	8¾ ₁₆	5¾ ₁₆	6¾	8¾ ₁₆	8¾	6¾	6¾	85	112	156	184	374	560

NOTE: The Orificemaster is also available with ring joint flange facing in 600 lb., 900 lb., and 2500 lb. sizes

*1500

Distributed by:

CCR 000038700

ORIFICE FITTING COMPANY

P. O. Box 3065 • Houston, Texas 77001

One of the White Consolidated Industries

