



# Orifice Plates & Restriction Unions

USA Industries is a Leading Manufacturer & Supplier of Superior Piping Products

USA Industries manufactures all of our flow measurement universal orifice plates, paddle plates, ring type joint (RTJ) plates and restriction orifice unions to meet or exceed standards set by A.G.A., I.S.A., A.N.S.I., A.S.M.E. and A.P.I. recommendations. Stocked plates include 304 & 316 stainless steel in 1/8" and 1/4" thicknesses; however, other materials and/or thicknesses are available upon request.



## ORIFICE PLATE MODELS:

1. Series 500 - Universal Plates
2. Series 520 - Paddle Type Plates
3. Series 560 - Ring Type Joint (RTJ) Plate
4. Series 590 - RTJ Plate Holder
5. Restriction Orifice Unions

## STOCKED:

- 304 & 316 Stainless Steels
- 1/8" and 1/4" Thicknesses

## OFFERINGS:

- Largest Stocked Inventory
- Onsite Pick-up or Delivery
- Purchase Directly from OEM
- Manufactured in the U.S.A.
- 24/7, 365 Days A Year Availability



USA Industries will typically bore the plates to the customer's supplied sizing calculations; however, we have a team of professional mechanical engineers on staff that will provide bore sizing calculation services for an additional fee.



**USAIndustries.com**  
**info@USAIndustries.com**  
**(866) 254-1902**

## Restriction Orifice Unions

Line Size (in.)	A OAL (in.)	B NPT or SW (in.)	C Hex Size (in.)
1/4	1-3/4	1/4	1-3/8
3/8	1-7/8	3/8	1-5/8
1/2	2	1/2	1-3/4
3/4	2-1/4	3/4	2-3/16
1	2-9/16	1	2-9/16
1-1/4	2-7/8	1-1/4	3-1/6
1-1/2	3-1/8	1-1/2	3-7/16
2	3-1/2	2	4



USA Industries will typically bore the plates to the customer's supplied sizing calculations; however, we have a team of professional mechanical engineers on staff that will provide bore sizing calculation services for an additional fee.

## Series 500 Orifice Plates & Seals

Nominal Pipe Size (in)	A (in)	L (in)	T (in)
1	1.312	1.02	1/8
1-1/2	2	0.03	1/8
2	2.437	0.03	1/8
2-1/2	2.812	0.03	1/8
3	3.437	0.03	1/8
4	4.406	0.06	1/8
5	6	0.06	1/8
6	6.437	0.06	1/8
8	8.437	0.125	1/4
10	10.687	0.125	1/4
12	12.593	.25	1/4
14	14	.25	1/4
16	16	.25	3/8
18	18	.25	3/8
20	20	0.375	3/8
24	24	0.375	3/8

## Series 520 Paddle Orifice Plates

Line Size (in)	Flange Rating A							HL (in)	HW (in)	T (in)
	150#	300#	400#	600#	900#	1500#	2500#			
0.5	1.875	2.125	2.125	2.125	2.5	2.5	2.75	4	1	1/8
0.75	2.25	2.625	2.625	2.625	2.75	2.75	3			
1	2.625	2.875	2.875	2.875	3.125	3.125	3.375			
1.25	3	3.25	3.25	3.25	3.5	3.5	4.125			
1.5	3.375	3.75	3.75	3.75	3.875	3.875	4.625			
2	4.125	4.375	4.375	4.375	5.625	5.625	5.75			
2.5	4.875	5.125	5.125	5.125	6.5	6.5	6.625			
3	5.375	5.875	5.875	5.875	6.625	6.875	7.75			
4	6.875	7.125	7	7.625	8.125	8.25	9.25			
5	7.75	8.5	8.375	9.5	9.75	10	11			
6	8.75	9.875	9.75	10.5	11.375	11.125	12.125			
8	11	12.125	12	12.625	14.125	13.875	15.25			
10	13.375	14.25	14.125	15.75	17.125	17.125	18.75	6	1-1/2	1/4
12	16.125	16.625	16.5	18	19.625	20.5	21.625			
14	17.75	19.125	19	19.375	20.5	22.75	-			
16	20.25	21.25	21.125	22.25	22.625	25.25	-			
18	21.5	23.375	23.25	24	25	27.625	-			
20	23.75	25.625	25.375	26.75	27.375	29.625	-			
22	26	27.75	27.5	28.875	-	-	-			
24	28.125	30.735	30.125	31	32.875	35.5	-			
30	34.625	37.375	37.25	38.125	-	-	-			
36	41.125	43.875	43.875	44.375	-	-	-			

## Series 560 Plates & 590 Plate Holders

Line Size (in.)	FLANGE RATING												
	300# - 600#			900#			1500#			2500#			
RING SIZE	A	B	RING SIZE	A	B	RING SIZE	A	B	RING SIZE	A	B		
1/2	R-11	29/32	4-1/4	R-12	1	4-1/4	R-12	1	6-1/2	R-13	1	6-1/2	
3/4	R-13	1		R-14			R-14						
1	R-16			R-16			R-16						
1-1/2	R-20			R-20			R-20						
2	R-23	1-1/16	R-24	1-1/16	5-1/4	R-24	1-1/16	6-1/2	R-24	1-1/16	6-1/2		
2-1/2	R-26		R-27			R-27							
3	R-31	1-1/16	R-31	1-1/16	5-1/4	R-35	1-1/16	6-1/2	R-32	1-3/16	6-1/2		
3-1/2	R-34		-			-							
4	R-37		R-37			R-39							
5	R-41	1-1/16	R-41	1-1/16	6-1/4	R-44	1-3/16	6-1/2	R-42	1-7/16	7-1/2		
6	R-45		6-1/4			R-45			R-46				
8	R-49	6-1/2	R-49	6-1/2	6-1/2	R-50	1-5/16	7-1/2	R-51	1-9/16	8-1/2		
10	R-53	1-3/16	R-53	1-3/16	7-1/2	R-54	1-7/16	7-1/2	R-55	2	8-1/2		
12	R-57		R-57			R-58	1-11/16	R-60	2-1/8	9-1/2	R-60	2-1/8	9-1/2
14	R-61		R-62			R-63	1-7/8	-	-	-	-	-	-
16	R-65		R-66			R-67	-	-	-	-	-	-	-
18	R-69	1-1/4	R-70	1-9/16	9-1/2	R-71	2	9-1/2	-	-	-		
20	R-73		R-74			R-75	2-1/8	10-1/2	-	-	-	-	
24	R-77		1-7/16			R-78	1-7/8	9-1/2	R-79	2-5/16	11-1/2	-	-