



ORIFICE PLATES

Simple, Predictable and Reliable Differential Flow Measurement

SERIES 500 / 520 UNIVERSAL & PADDLE ORIFICE PLATES SERIES 560 / 590 RING TYPE JOINT PLATES & HOLDERS RESTRICTION ORIFICE UNIONS

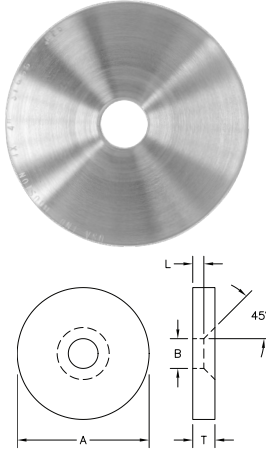


USA Industries manufactures all of our flow measurement components—including universal orifice plates, paddle plates, ring type joint (RTJ) plates, and restriction orifice unions—to meet or exceed the standards set by AGA, ISA, ANSI, ASME, and API.

We stock plates in 304 and 316 stainless steel, available in 1/8" and 1/4" thicknesses. Other materials and thicknesses are available upon request.

Plates are precision-bored to match customer-supplied sizing calculations. For added convenience, we also offer 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

USA Industries' Universal Orifice Plates are engineered for compatibility with all standard orifice fitting assemblies and RTJ plate holders. They can be used with both dual- and single-chambered orifice fittings, offering maximum versatility across various applications.

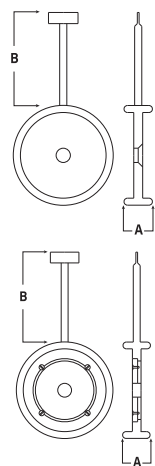
Seal rings for Series 500 Orifice Plates are sold separately.

Series 560 Plates & 590 Plate Holders

The RTJ-Type Orifice Plate features an integrated gasket for direct installation between RTJ flanges. With no moving parts, it is ideal for high-temperature and high-pressure applications.

Plate thickness is determined by line size and differential pressure requirements. Plates can be manufactured as a single solid piece or as a two-piece assembly, with the orifice plate secured to a carrier ring or gasket.

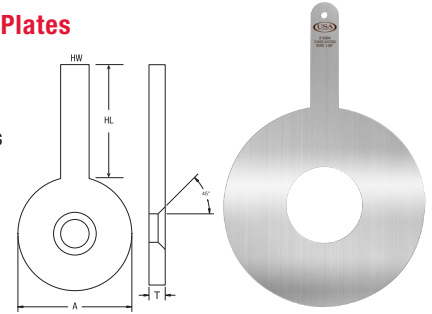
Series 560



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		R-12			R-12			R-13		
3/4	R-13			R-14			R-14			R-16		
1	R-16	1	4-1/4	R-16	1	4-1/4	R-16	1		R-18		
1-1/2	R-20			R-20			R-20			R-23	1-1/16	
2	R-23			R-24			R-24			R-26		6-1/2
2-1/2	R-26			R-27			R-27			R-28		
3	R-31			R-31		5-1/4	R-35	1-1/16	6-1/2	R-32	1-3/16	
3-1/2	R-34	1-1/16		-	1-1/16		-			-	-	
4	R-37			R-37			R-39			R-38	1-5/16	
5	R-41			R-41			R-44			R-42		7-1/2
6	R-45		6-1/4	R-45		6-1/4	R-46	1-3/16		R-47		
8	R-49		6-1/2	R-49		6-1/2	R-50	1-5/16		R-51	1-9/16	8-1/2
10	R-53			R-53			R-54	1-7/16	7-1/2	R-55	2	
12	R-57			R-57		1-3/16	R-58	1-11/16		R-60	2-1/8	9-1/2
14	R-61	1-3/16		R-62			R-63	1-7/8	8-1/2	-	-	
16	R-65		7-1/2	R-66	1-7/16	7-1/2	R-67		9-1/2	-	-	
18	R-69			R-70			R-71	2		-	-	
20	R-73	1-1/4		R-74	1-9/16		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	-	-	

Series 520 Paddle Orifice Plates

USA Industries' Paddle-Type Orifice Plates are specifically designed for use with Raised Face Orifice Flanges and Holding Blocks. Each plate is manufactured to meet or exceed the rigorous standards set by AGA, ISA, ANSI, ASME, and API, ensuring reliable performance and precision.



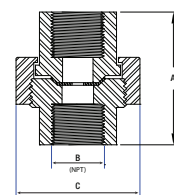
Line Size (in)	Flange Rating A							HL (in)	HW (in)	T (in)
	150#	300#	400#	600#	900#	1500#	2500#			
0.5	1.875	2.125	2.125	2.125	2.5	2.5	2.75	4	1	1/8
0.75	2.25	2.625	2.625	2.625	2.75	2.75	3			
1	2.625	2.875	2.875	2.875	3.125	3.125	3.375			
1.25	3	3.25	3.25	3.25	3.5	3.5	4.125			
1.5	3.375	3.75	3.75	3.75	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	6	1-1/2	1/4
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			
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	-			3/8
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	-	-	-			1/2
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	-	-	-			

Restriction Orifice Unions

Restriction Orifice Unions (RSUs) are stocked in carbon steel and stainless steel bodies, rated to 3,000 PSIG, and available in line sizes from 1/4" to 2" with female NPT or socket-weld connections. Non-standard sizes and materials can be produced quickly upon request.

Plates can be configured to suit your needs as:

- Recessed
- Pressed
- Pressed with a tab for easy size identification —no need to break the union



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