

Victaulic Suction Diffuser Series 731-D



1.0 PRODUCT DESCRIPTION

Available Sizes

- 3 x 2" to 12 x 12"/DN80 x DN50 to DN300 x DN300

Pressure Class

- Rated to the working pressure of the mating flange up to a maximum of 365 psi/2517 kPa/25 bar.

Application

- Provides optimum flow conditions at the inlet side of the pump.
- Removable basket and fine mesh sleeve act as start-up strainer.
- Pressure port in the cap measures pressure downstream of the diffuser.
- Plug in the cap allows for easy draining of the system

2.0 CERTIFICATION/LISTINGS

Not applicable – contact Victaulic with any questions.

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

3.0 SPECIFICATIONS – MATERIAL

Housing (Body, Coupling, End Cap): Ductile iron conforming to ASTM A395.

Housing Coating: (specify choice)

- ☐ **Standard:** Orange enamel.
- ☐ **Optional:** Hot dipped galvanized.

Coupling Gasket: (specify choice)

☐ **Victaulic EPDM**

(Green color code). Temperature range –30°F to +230°F/–34°C to +110°C. UL Classified in accordance with ANSI/ NSF 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372. NOT RECOMMENDED FOR PETROLEUM SERVICES.

☐ **Victaulic Nitrile**

(Orange color code). Temperature range +10°F to +150°F/–12°C to +65°C. Not compatible for hot water services over +150°F/+66°C or for hot dry air over +140°F/60°C. NOT RECOMMENDED FOR HOT WATER SERVICES.

Diffuser: Type 304 stainless steel, frame and perforated sheet with 5/32"/4 mm diameter holes.

Start-Up Pre-Filter: 20 mesh stainless steel, Type 304.

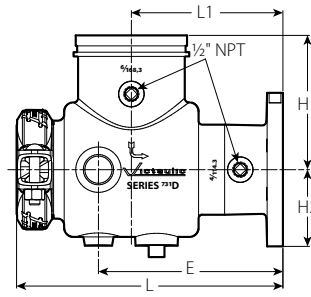
Bolts/Nuts: Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A449 and physical requirements of ASTM A183.

Support: Boss for support. See table below for size. (Support not supplied.)

4.0 DIMENSIONS

ANSI Dimensions

Series 731-D with ANSI Class 50 Flange



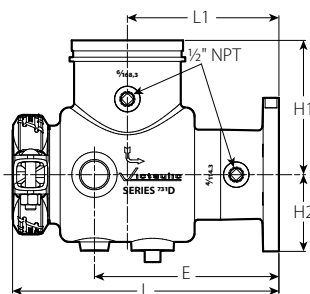
3 – 12"/80 – 300 mm

Size		Dimensions							Approx. Weight (Each) lb kg
System Side Grooved	Pump Side x Flange ANSI Class 150	Nominal Size inches mm	L inches mm	L1 inches mm	H1 inches mm	H2 inches mm	Thread Size	E inches mm	
3 80	x	2 50	11.00 279	6.30 160	5.51 140	3.30 83	1-11.5 NPT	7.48 190	20.1 9.1
		2.5 65	11.00 279	6.30 160	5.51 140	3.70 93	1-11.5 NPT	7.48 190	26.0 11.8
		3 80	11.00 279	6.30 160	5.51 140	4.00 101	1-11.5 NPT	7.48 190	27.7 12.6
4 100	x	2.5 65	13.00 330	7.40 187	6.50 165	3.70 93	1-11.5 NPT	8.74 222	29.7 13.5
		3 80	13.00 330	7.40 187	6.50 165	4.00 101	1-11.5 NPT	8.74 222	31.6 15.0
		4 100	13.00 330	7.40 187	6.50 165	4.60 116	1-11.5 NPT	8.74 222	34.6 15.7
		5 125	15.00 381	8.40 213	7.52 191	5.10 130	1.25-11.5 NPT	9.84 250	52.3 23.7
5 125	x	3 80	15.00 381	8.40 213	7.52 191	4.00 101	1.25-11.5 NPT	9.84 250	46.2 21.0
		4 100	15.00 381	8.40 213	7.52 191	4.60 116	1.25-11.5 NPT	9.84 250	49.4 22.4
		5 125	15.00 381	8.40 213	7.52 191	5.10 130	1.25-11.5 NPT	9.84 250	52.3 23.7
		6 150	16.00 406	9.00 229	8.00 203	5.70 144	1.25-11.5 NPT	10.98 279	70.3 31.9
6 150	x	4 100	16.00 406	9.00 229	8.00 203	4.60 116	1.25-11.5 NPT	10.98 279	64.0 29.0
		5 125	16.00 406	9.00 229	8.00 203	5.10 130	1.25-11.5 NPT	10.98 279	67.3 30.0
		6 150	16.00 406	9.00 229	8.00 203	5.70 144	1.25-11.5 NPT	10.98 279	70.3 31.9
		8 200	19.00 483	10.20 260	9.02 229	6.80 172	1.25-11.5 NPT	12.52 318	98.5 44.7
8 200	x	5 125	19.00 483	10.20 260	9.02 229	5.10 130	1.25-11.5 NPT	12.52 318	98.5 44.7
		6 150	19.00 483	10.20 260	9.02 229	5.70 144	1.25-11.5 NPT	12.52 318	102.1 46.3
		8 200	19.00 483	10.20 260	9.02 229	6.80 172	1.25-11.5 NPT	12.52 318	110.7 50.2
		10 250	23.00 584	12.40 315	11.00 279	8.07 205	1.25-11.5 NPT	15.55 395	150.6 68.3
10 250	x	6 150	23.00 584	12.40 315	11.00 279	5.70 144	1.25-11.5 NPT	15.55 395	150.6 68.3
		8 200	22.50 584	12.40 315	11.00 279	6.80 172	1.25-11.5 NPT	15.55 395	159.9 72.5
		10 250	22.50 584	12.40 315	11.00 279	8.07 205	1.25-11.5 NPT	15.55 395	172.0 78.0
		12 300	26.84 686	15.43 392	13.19 335	9.50 241	1.25-11.5 NPT	18.58 472	273.2 123.9
12 300	x	8 200	27.00 686	15.43 392	13.19 335	6.75 172	1.25-11.5 NPT	18.58 472	245.4 111.3
		10 250	26.84 686	15.43 392	13.19 335	8.07 205	1.25-11.5 NPT	18.58 472	260.3 118.1
		12 300	26.84 686	15.43 392	13.19 335	9.50 241	1.25-11.5 NPT	18.58 472	273.2 123.9
		12 300	26.84 686	15.43 392	13.19 335	9.50 241	1.25-11.5 NPT	18.58 472	273.2 123.9

4.1 DIMENSIONS

DIN Dimensions

Series 731-D with PN10/PN16 Flange



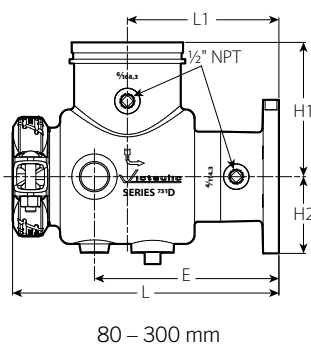
80 – 300 mm

Size			Dimensions						Approx. Weight (Each)
System Side Grooved	Pump Side x Flange ANSI Class 150	Nominal Size mm inches	L mm inches	L1 mm inches	H1 mm inches	H2 mm inches	Thread Size	E mm inches	
76.1 mm 3	x	50 2	279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
		80 3	279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
	x	76.1 mm	279 11.00	160 6.30	140 5.50	93 3.70	1-11 ISO 7-1	190 7.50	12.6 27.7
		80 3	279 11.00	160 6.30	140 5.50	101 4.00	1-11 ISO 7-1	190 7.50	12.6 27.7
100 4	x	76.1 mm	330 13.00	187 7.40	165 6.50	93 3.70	1-11 ISO 7-1	222 8.70	15.0 31.6
		80 3	330 13.00	187 7.40	165 6.50	101 4.00	1-11 ISO 7-1	222 8.70	15.0 31.6
	x	100 4	330 13.00	187 7.40	165 6.50	116 4.60	1-11 ISO 7-1	222 8.70	15.7 34.6
		139.7 mm	381 15.00	213 8.40	191 7.50	130 5.10	1.25-11 ISO 7-1	250 9.80	22.2 49.0
125 5	x	80 3	381 15.00	213 8.40	191 7.50	101 4.00	1.25-11 ISO 7-1	250 9.80	21.0 46.2
		100 4	381 15.00	213 8.40	191 7.50	116 4.60	1.25-11 ISO 7-1	250 9.80	22.4 49.4
	x	125 5	381 15.00	213 8.40	191 7.50	130 5.10	1.25-11 ISO 7-1	250 9.80	23.7 52.3
		150 6	406 16.00	229 9.00	203 8.00	144 5.70	1.25-11 ISO 7-1	279 11.00	31.9 70.3
150 6	x	100 4	406 16.00	229 9.00	203 8.00	130 5.10	1.25-11 ISO 7-1	279 11.00	29.0 64.0
		139.7 mm	406 16.00	229 9.00	203 8.00	144 5.70	1.25-11 ISO 7-1	279 11.00	30.0 67.3
	x	125 5	406 16.00	229 9.00	203 8.00	130 5.10	1.25-11 ISO 7-1	279 11.00	30.0 67.3
		150 6	406 16.00	229 9.00	203 8.00	144 5.70	1.25-11 ISO 7-1	279 11.00	31.9 70.3
200 8	x	139.7 mm	483 19.00	260 10.20	229 9.00	172 6.80	1.25-11 ISO 7-1	318 12.50	44.7 98.5
		125 5	483 19.00	260 10.20	229 9.00	130 5.10	1.25-11 ISO 7-1	318 12.50	44.7 98.5
	x	150 6	483 19.00	260 10.20	229 9.00	144 5.70	1.25-11 ISO 7-1	318 12.50	46.3 102.1
		200 8	483 19.00	260 10.20	229 9.00	172 6.80	1.25-11 ISO 7-1	318 12.50	50.2 110.7

4.1 DIMENSIONS (Continued)

DIN Dimensions

Series 731-D with PN10/PN16 Flange

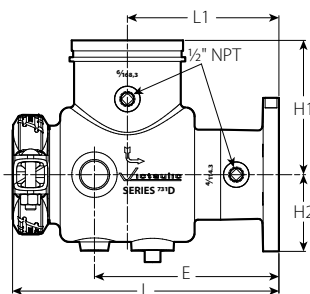


Size		Dimensions							Approx. Weight (Each) kg lb
System Side Grooved	Pump Side x Flange ANSI Class 150								
Nominal Size		L	L ₁	H ₁	H ₂	Thread Size	E		
mm inches		mm inches	mm inches	mm inches	mm inches		mm inches		
250 10	x	150 6	584 23.00	315 12.40	279 11.00	144 5.70	1.25-11 ISO 7-1	395 15.60	68.3 150.6
		200 8	584 23.00	315 12.40	279 11.00	172 6.80	1.25-11 ISO 7-1	395 15.60	72.5 159.9
		250 10	584 23.00	315 12.40	279 11.00	205 8.10	1.25-11 ISO 7-1	395 15.60	78.0 172.0
300 12	x	200 8	686 27.00	392 15.40	335 13.20	172 6.80	1.25-11 ISO 7-1	472 18.60	111.3 245.4
		250 10	686 27.00	392 15.40	335 13.20	205 8.10	1.25-11 ISO 7-1	472 18.60	118.1 260.3
		300 12	686 27.00	392 15.40	335 13.20	241 9.50	1.25-11 ISO 7-1	472 18.60	123.9 273.2

4.2 DIMENSIONS

GB Dimensions

Series 731-D with GB Flange



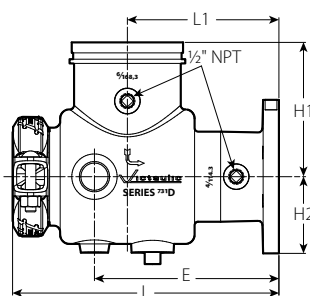
76.1 – 300 mm

Size		Dimensions							Approx. Weight (Each)
System Side Grooved	Pump Side x Flange ANSI Class 150	Nominal Size mm inches	L mm inches	L1 mm inches	H1 mm inches	H2 mm inches	Thread Size	E mm inches	
76.1 mm 3	x	50 2	279 11.00	160 6.3	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
		80 3	279 11.00	160 6.3	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
	x	76.1 mm	279 11.00	160 6.3	140 5.50	93 3.70	1-11 ISO 7-1	190 7.50	12.6 27.7
		80 3	279 11.00	160 6.3	140 5.50	101 4.00	1-11 ISO 7-1	190 7.50	12.6 27.7
100 4	x	76.1 mm	330 13.00	187 7.4	165 6.50	93 3.70	1-11 ISO 7-1	222 8.70	15.0 31.6
		80 3	330 13.00	187 7.4	165 6.50	101 4.00	1-11 ISO 7-1	222 8.70	15.0 31.6
	x	100 4	330 13.00	187 7.4	165 6.50	116 4.60	1-11 ISO 7-1	222 8.70	15.7 34.6
		139.7 mm	381 15.00	213 8.4	191 7.50	93 3.70	1.25-11 ISO 7-1	250 9.80	16.8 37.0
139.7 mm 5	x	80 3	381 15.00	213 8.4	191 7.50	101 4.00	1.25-11 ISO 7-1	250 9.80	19.1 42.0
		100 4	381 15.00	213 8.4	191 7.50	116 4.60	1.25-11 ISO 7-1	250 9.80	20.0 44.0
	x	139.7 mm	381 15.00	213 8.4	191 7.50	130 5.10	1.25-11 ISO 7-1	250 9.80	22.2 49.0
		150 6	406 16.00	229 9.0	203 8.00	116 4.60	1.25-11 ISO 7-1	279 11.00	29.0 64.0
150 6	x	139.7 mm	406 16.00	229 9.0	203 8.00	130 5.10	1.25-11 ISO 7-1	279 11.00	30.0 67.3
		125 5	406 16.00	229 9.0	203 8.00	130 5.10	1.25-11 ISO 7-1	279 11.00	30.0 67.3
	x	150 6	406 16.00	229 9.0	203 8.00	144 5.70	1.25-11 ISO 7-1	279 11.00	31.9 70.3
		200 8	483 19.00	260 10.2	229 9.00	130 5.10	1.25-11 ISO 7-1	318 12.50	44.7 98.5
200 8	x	125 5	483 19.00	260 10.2	229 9.00	130 5.10	1.25-11 ISO 7-1	318 12.50	44.7 98.5
		150 6	483 19.00	260 10.2	229 9.00	144 5.70	1.25-11 ISO 7-1	318 12.50	46.3 102.1
	x	200 8	483 19.00	260 10.2	229 9.00	172 6.80	1.25-11 ISO 7-1	318 12.50	50.2 110.7
		250 10	508 20.00	280 11.0	254 10.0	172 6.80	1.25-11 ISO 7-1	318 12.50	50.2 110.7

4.2 DIMENSIONS (Continued)

GB Dimensions

Series 731-D with GB Flange



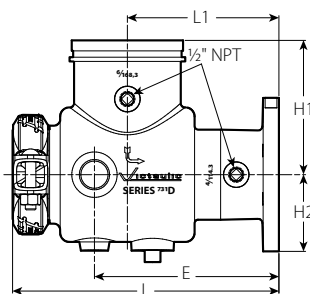
76.1 – 300 mm

Size		Dimensions							Approx. Weight (Each) kg lb
System Side Grooved	Pump Side x Flange ANSI Class 150	Nominal Size mm inches	L mm inches	L1 mm inches	H1 mm inches	H2 mm inches	Thread Size	E mm inches	
250 10	x	150 6	584 23.00	315 12.4	279 11.00	144 5.70	1.25-11 ISO 7-1	395 15.60	68.3 150.6
		200 8	584 23.00	315 12.4	279 11.00	172 6.80	1.25-11 ISO 7-1	395 15.60	72.5 159.9
		250 10	584 23.00	315 12.4	279 11.00	205 8.10	1.25-11 ISO 7-1	395 15.60	78.0 172.0
300 12	x	200 8	686 27.00	392 15.4	335 13.20	172 6.80	1.25-11 ISO 7-1	472 18.60	111.3 245.4
		250 10	686 27.00	392 15.4	335 13.20	205 8.10	1.25-11 ISO 7-1	472 18.60	118.1 260.3
		300 12	686 27.00	392 15.4	335 13.20	241 9.50	1.25-11 ISO 7-1	472 18.60	123.9 273.2

4.3 DIMENSIONS

JIS Dimensions

Series 731-D with JIS 10K Flange



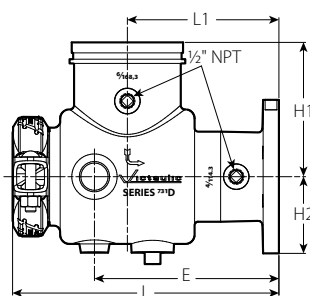
350A – 600A mm

Size			Dimensions						Approx. Weight (Each)
System Side Grooved	Pump Side x Flange ANSI Class 150	Nominal Size mm inches	L mm inches	L1 mm inches	H1 mm inches	H2 mm inches	Thread Size	E mm inches	
76.1 mm	x 50A 2		279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
80A 3	x 50A 2		279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
	76.1 mm		279 11.00	160 6.30	140 5.50	93 3.70	1-11 ISO 7-1	190 7.50	12.6 27.7
	80A 3		279 11.00	160 6.30	140 5.50	101 4.00	1-11 ISO 7-1	190 7.50	12.6 27.7
100A 4	x 76.1 mm		330 13.00	187 7.40	165 6.50	93 3.70	1-11 ISO 7-1	222 8.70	15.0 31.6
	80A 3		330 13.00	187 7.40	165 6.50	101 4.00	1-11 ISO 7-1	222 8.70	15.0 31.6
	100A 4		330 13.00	187 7.40	165 6.50	116 4.60	1-11 ISO 7-1	222 8.70	15.7 34.6
139.7 mm	x 76.1 mm		381 15.00	213 8.40	191 7.50	93 3.70	1.25-11 ISO 7-1	250 9.80	16.8 37.0
125A 5	x 76.1 mm		381 15.00	213 8.40	191 7.50	93 3.70	1.25-11 ISO 7-1	250 9.80	16.8 37.0
	80A 3		381 15.00	213 8.40	191 7.50	101 4.00	1.25-11 ISO 7-1	250 9.80	21.0 46.2
	100A 4		381 15.00	213 8.40	191 7.50	116 4.60	1.25-11 ISO 7-1	250 9.80	22.2 49.0
	125A 5		381 15.00	213 8.40	191 7.50	130 5.10	1.25-11 ISO 7-1	250 9.80	23.7 52.3
150A 6	x 100A 4		406 16.00	229 9.00	203 8.00	116 4.60	1.25-11 ISO 7-1	279 11.00	29.0 64.0
	139.7 mm		406 16.00	229 9.00	203 8.00	130 5.10	1.25-11 ISO 7-1	279 11.00	30.0 67.3
	125A 5		406 16.00	229 9.00	203 8.00	130 5.10	1.25-11 ISO 7-1	279 11.00	30.0 67.3
	150A 6		406 16.00	229 9.00	203 8.00	144 5.70	1.25-11 ISO 7-1	279 11.00	31.9 70.3
200A 8	x 139.7 mm		483 19.00	260 10.20	229 9.00	130 5.10	1.25-11 ISO 7-1	318 12.50	44.7 98.5
	125A 5		483 19.00	260 10.20	229 9.00	130 5.10	1.25-11 ISO 7-1	318 12.50	44.7 98.5
	150A 6		483 19.00	260 10.20	229 9.00	144 5.70	1.25-11 ISO 7-1	318 12.50	46.3 102.1
	200A 8		483 19.00	260 10.20	229 9.00	172 6.80	1.25-11 ISO 7-1	318 12.50	50.2 110.7

4.3 DIMENSIONS (Continued)

JIS Dimensions

Series 731-D with JIS 10K Flange



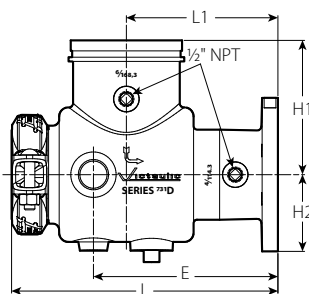
350A – 600A mm

Size		Dimensions							Approx. Weight (Each) kg lb
System Side Grooved	Pump Side x Flange ANSI Class 150								
Nominal Size		L	L1	H1	H2	Thread Size	E		
mm inches		mm inches	mm inches	mm inches	mm inches		mm inches		
250A 10	x	150A 6	584 23.00	315 12.40	279 11.00	144 5.70	1.25-11 ISO 7-1	395 15.60	68.3 150.6
		200A 8	584 23.00	315 12.40	279 11.00	172 6.80	1.25-11 ISO 7-1	395 15.60	72.5 159.9
		250A 10	584 23.00	315 12.40	279 11.00	205 8.10	1.25-11 ISO 7-1	395 15.60	78.0 172.0
300A 12	x	200A 8	686 27.00	392 15.40	335 13.20	172 6.80	1.25-11 ISO 7-1	472 18.60	111.3 245.4
		250A 10	686 27.00	392 15.40	335 13.20	205 8.10	1.25-11 ISO 7-1	472 18.60	118.1 260.3
		300A 12	686 27.00	392 15.40	335 13.20	241 9.50	1.25-11 ISO 7-1	472 18.60	123.9 273.2

4.4 DIMENSIONS

AS Dimensions

Series 731-D with
Australian Standard Flange Table "E"



3 – 12"/80 – 300 mm

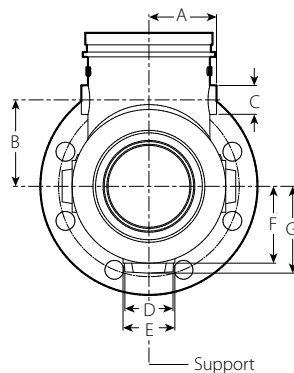
Size		Dimensions							Approx. Weight (Each)
System Side Grooved	Pump Side x Flange ANSI Class 150	Nominal Size mm inches	L mm inches	L1 mm inches	H1 mm inches	H2 mm inches	Thread Size	E mm inches	
76.1 mm 3	x	50 2	279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
	x	50 2	279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
80 3	x	76.1 mm	279 11.00	160 6.30	140 5.50	93 3.70	1-11 ISO 7-1	190 7.50	12.6 27.7
		80 3	279 11.00	160 6.30	140 5.50	101 4.00	1-11 ISO 7-1	190 7.50	12.6 27.7
		100 4	330 13.00	187 7.40	165 6.50	93 3.70	1-11 ISO 7-1	222 8.70	15.0 31.6
		80 3	330 13.00	187 7.40	165 6.50	101 4.00	1-11 ISO 7-1	222 8.70	15.0 31.6
100 4	x	76.1 mm	330 13.00	187 7.40	165 6.50	93 3.70	1-11 ISO 7-1	222 8.70	15.0 31.6
		80 3	330 13.00	187 7.40	165 6.50	101 4.00	1-11 ISO 7-1	222 8.70	15.0 31.6
		100 4	330 13.00	187 7.40	165 6.50	116 4.60	1-11 ISO 7-1	222 8.70	15.7 34.6
		125 5	381 15.00	213 8.40	191 7.50	130 5.10	1.25-11 ISO 7-1	250 9.80	20.0 44.0
125 5	x	80 ¹ 3	381 15.00	213 8.40	191 7.50	101 4.00	1.25-11 ISO 7-1	250 9.80	20.0 44.0
		100 4	381 15.00	213 8.40	191 7.50	116 4.60	1.25-11 ISO 7-1	250 9.80	22.2 49.0
		125 5	381 15.00	213 8.40	191 7.50	130 5.10	1.25-11 ISO 7-1	250 9.80	23.7 52.3
		150 6	406 16.00	229 9.00	203 8.00	144 5.70	1.25-11 ISO 7-1	279 11.00	29.0 64.0
150 6	x	100 ¹ 4	406 16.00	229 9.00	203 8.00	116 4.60	1.25-11 ISO 7-1	279 11.00	29.0 64.0
		125 5	406 16.00	229 9.00	203 8.00	130 5.10	1.25-11 ISO 7-1	279 11.00	30.0 67.3
		150 6	406 16.00	229 9.00	203 8.00	144 5.70	1.25-11 ISO 7-1	279 11.00	31.9 70.3
		200 8	483 19.00	260 10.20	229 9.00	172 6.80	1.25-11 ISO 7-1	318 12.50	50.2 110.7
200 8	x	125 ¹ 5	483 19.00	260 10.20	229 9.00	130 5.10	1.25-11 ISO 7-1	318 12.50	44.7 98.5
		150 6	483 19.00	260 10.20	229 9.00	144 5.70	1.25-11 ISO 7-1	318 12.50	46.3 102.1
		200 8	483 19.00	260 10.20	229 9.00	172 6.80	1.25-11 ISO 7-1	318 12.50	50.2 110.7
		250 10	584 23.00	315 12.40	279 11.00	205 8.10	1.25-11 ISO 7-1	395 15.60	68.3 150.6
250 10	x	150 ¹ 6	584 23.00	315 12.40	279 11.00	144 5.70	1.25-11 ISO 7-1	395 15.60	68.3 150.6
		200 8	584 23.00	315 12.40	279 11.00	172 6.80	1.25-11 ISO 7-1	395 15.60	72.5 159.9
		250 10	584 23.00	315 12.40	279 11.00	205 8.10	1.25-11 ISO 7-1	395 15.60	78.0 172.0
		300 12	686 27.00	392 15.40	335 13.20	241 9.50	1.25-11 ISO 7-1	472 18.60	111.3 245.4
300 12	x	200 ¹ 8	686 27.00	392 15.40	335 13.20	172 6.80	1.25-11 ISO 7-1	472 18.60	111.3 245.4
		250 10	686 27.00	392 15.40	335 13.20	205 8.10	1.25-11 ISO 7-1	472 18.60	118.1 260.3
		300 12	686 27.00	392 15.40	335 13.20	241 9.50	1.25-11 ISO 7-1	472 18.60	123.9 273.2

¹ Available with No. 50 Concentric Reducer and the appropriate coupling for additional size needs. Contact Victaulic for details.

4.5 DIMENSIONS

Support and tap boss location

Series 731-D Suction Diffuser



Inlet Size inches mm	Boss Tap Two Places			Support Locations Three Places			
	A inches mm	B inches mm	C inches mm	D ² inches mm	E ² inches mm	F inches mm	G inches mm
3 80	1.88 47.8	3.25 82.6	1.00 25.4	1.30 33.0	1.80 45.7	2.10 53.3	2.30 58.4
4 100	2.70 68.6	3.25 82.6	1.00 25.4	1.30 33.0	1.80 45.7	2.70 68.6	2.90 73.7
5 125	3.02 76.7	4.25 108.0	1.50 38.1	1.80 45.7	2.70 68.6	3.35 85.1	3.83 97.8
6 150	3.52 89.4	5.50 114.3	1.50 38.1	1.80 45.7	2.70 68.6	4.00 101.6	4.52 114.8
8 200	4.45 113.0	5.00 127.0	1.50 38.1	1.80 45.7	2.70 68.6	5.18 131.6	5.70 144.8
10 250	5.50 139.7	6.50 165.1	1.50 38.1	1.80 45.7	2.70 68.6	6.45 163.8	6.97 177.0
12 300	6.48 164.6	8.00 203.2	1.50 38.1	1.80 45.7	2.70 68.6	7.65 194.3	8.17 207.5

² Listed as diameters.

4.6 DIMENSIONS

Assembly Clearance

The recommended access requirements and support leg pipe diameters are listed in the following table. The recommended support leg in pipe diameters is based on Schedule 40 pipe. Reference the illustration on the next page.

Recommended Minimum Clearance Required to Remove Diffuser Basket										
ANSI				DIN			GB			
Size inches mm		Clearance "C" inches mm	Rec. Support Leg Pipe Diameter ³ inches	Size mm inches	Clearance "C" mm inches	Rec. Support Leg Pipe Diameter ³ inches	Size mm inches	Clearance "C" mm inches	Rec. Support Leg Pipe Diameter ³ inches	
3 80	x	2 50	1 1/4	76.1 mm	x	50 2	76.1 mm	x	50 2	1 1/4
		2.5 65		80 3	x	50 2	80 3	x	50 2	1 1/4
		3 80		76.1 mm			76.1 mm			
				80 3			80 3			
4 100	x	2.5 65	1 1/4	100 4	x	76.1 mm	100 4	x	76.1 mm	1 1/4
		3 80		80 3			80 3			
		4 100		80 3			80 3			
5 125	x	3 80	2	100 4	x	76.1 mm	100 4	x	76.1 mm	2
		4 100		100 4			100 4			
		5 125		139.7 mm	x	76.1 mm	139.7 mm	x	76.1 mm	
6 150	x	4 100	2	80 3			80 3			2
		5 125		100 4			100 4			
		6 150		139.7 mm			139.7 mm			
8 200	x	5 125	2	125 5	x	80 3	125 5	x	80 3	2
		6 150		100 4			100 4			
		8 200		125 5			125 5			
10 250	x	6 150	2	150 6	x	100 4	150 6	x	100 4	2
		8 200		139.7 mm			139.7 mm			
		10 250		125 5			125 5			
12 300	x	8 200	2	200 8	x	139.7 mm	200 8	x	139.7 mm	2
		10 250		125 5			125 5			
		12 300		150 6			150 6			
				200 8			200 8			
				250 10	x	150 6	250 10	x	150 6	2
				200 8			200 8			
				250 10			250 10			
				300 12	x	200 8	300 12	x	200 8	2
				250 10			250 10			
				300 12			300 12			

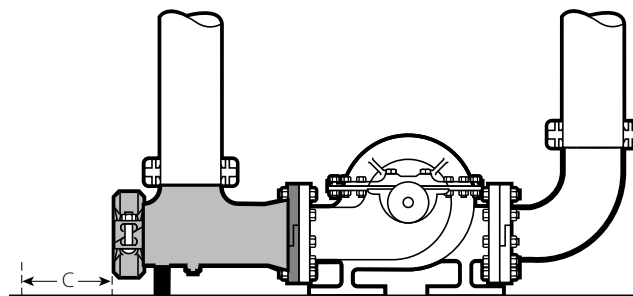
³ Based on Schedule 40 pipe diameter.

4.6 DIMENSIONS (Continued)

Assembly Clearance

Recommended Minimum Clearance Required to Remove Diffuser Basket								
JIS				AS Table "E"				
Size mm inches		Clearance "C" mm inches	Rec. Support Leg Pipe Diameter ³ inches	Size mm inches		Clearance "C" mm inches	Rec. Support Leg Pipe Diameter ³ inches	
76.1 mm	x 50A 2	152 6.00	1¼	76.1 mm	x 50 2	152 6.00	1¼	
80A 3	x 50A 2	152 6.00	1¼	80 3	x 50 2	152 6.00	1¼	
	76.1 mm	152 6.00			76.1 mm	152 6.00		
	80A 3	152 6.00			80 3	152 6.00		
100A 4	x 76.1 mm	178 7.00	1¼	100 4	x 76.1 mm	178 7.00	1¼	
	80A 3	178 7.00			80 3	178 7.00		
	100A 4	178 7.00			100 4	178 7.00		
139.7 mm	x 76.1 mm	203 8.00	2	125 5	x 80 3	203 8.00	2	
125A 5	x 76.1 mm	203 8.00	2			100 4		203 8.00
	80A 3	203 8.00				125 5		203 8.00
	100A 4	203 8.00		150 6	x 100 4	241 9.50	2	
	125A 5	203 8.00			125 5	241 9.50		
150A 6	x 100A 4	241 9.50	2	200 8	x 150 6	241 9.50	2	
	139.7 mm	241 9.50				125 5		305 12.00
	125A 5	241 9.50				150 6		305 12.00
	150A 6	241 9.50				200 8		305 12.00
200A 8	x 139.7 mm	305 12.00	2	250 10	x 150 6	406 16.00	2	
	125A 5	305 12.00				200 8		406 16.00
	150A 6	305 12.00				250 10		406 16.00
	200A 8	305 12.00		300 12	x 200 8	457 18.00	2	
250A 10	x 150A 6	406 16.00	250A 10			457 18.00		
	200A 8	406 16.00	300A 12			457 18.00		
	250A 10	406 16.00						
300A 12	x 200A 8	457 18.00	2					
	250A 10	457 18.00						
	300A 12	457 18.00						

³ Based on Schedule 40 pipe diameter.



5.0 PERFORMANCE

Flow Characteristics

Formulas for C_v Values:

$$\Delta P = \frac{Q^2}{C_v^2}$$

$$Q = C_v \times \sqrt{\Delta P}$$

Where:

Q = Flow (GPM)

ΔP = Pressure Drop (psi)

C_v = Flow Coefficient

Formulas for K_v Values:

$$\Delta P = \frac{Q^2}{K_v^2}$$

$$Q = K_v \times \sqrt{\Delta P}$$

Where:

Q = Flow (m³/hr)

ΔP = Pressure Drop (Bar)

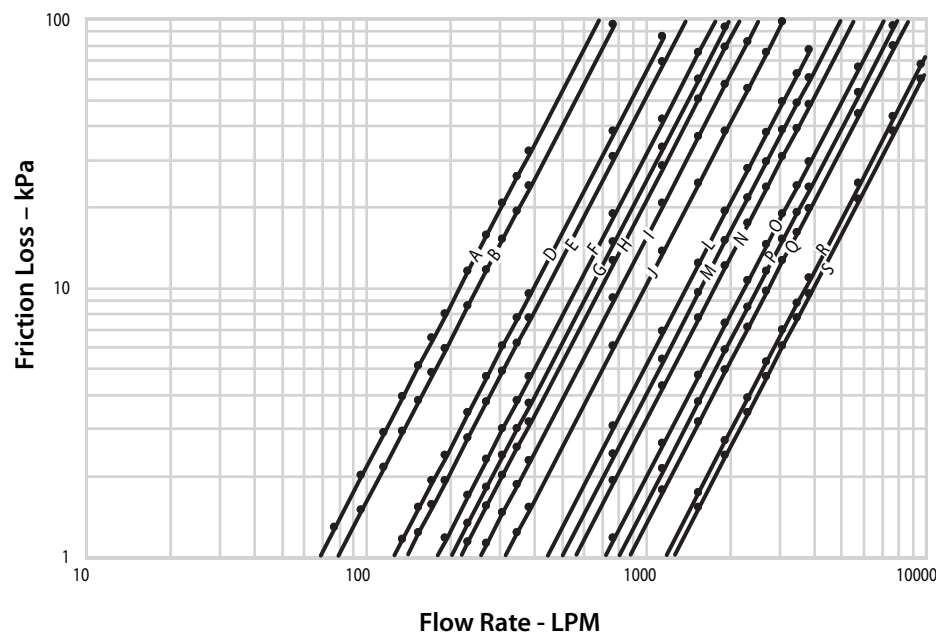
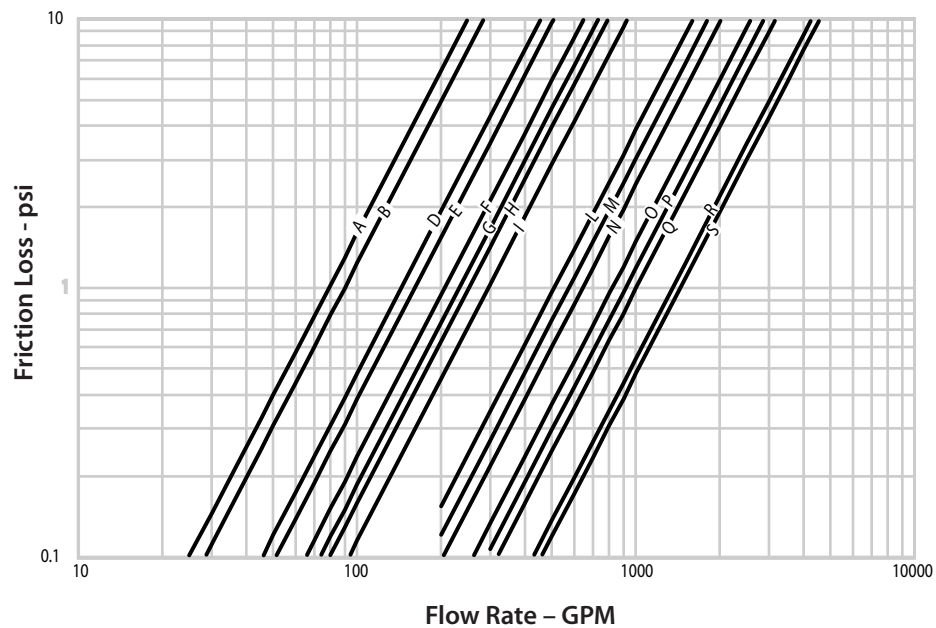
K_v = Flow Coefficient

C_v values for flow of water at +60°F/+16°C through a fully open valve.

Size Actual Outside Diameter inches mm			Flow Data	C_v K_v
3.000 76.1	x	2.375 60.3	A	79 68
3.500 88.9	x	2.375 60.3	A	79 68
		3.000 76.1	A	79 68
		3.500 88.9	B	90 79
4.500 114.3	x	3.000 76.1	D	144 125
		3.500 88.9	D	144 125
		4.500 114.3	E	161 139
5.500 139.7	x	3.000 76.1	F	206 178
		3.500 88.9	F	206 178
		4.500 114.3	G	232 200
		5.500 139.7	H	251 217
5.563 141.3	x	3.500 88.9	F	206 178
		4.500 114.3	G	232 200
		5.563 141.3	H	251 217
6.625 168.3	x	4.500 114.3	I	295 255
		5.500 139.7	J	361 312
		5.563 141.3	J	361 312
		6.625 168.3	J	361 312
8.625 219.1	x	5.500 139.7	L	509 440
		5.563 141.3	L	509 440
		6.625 168.3	M	575 497
		8.625 219.1	N	642 555
10.750 273.0	x	6.625 168.3	O	821 710
		8.625 219.1	P	917 793
		10.750 273.0	Q	1003 867
12.750 323.9	x	8.625 219.1	R	1352 1170
		10.750 273.0	R	1352 1170
		12.750 323.9	S	1445 1249

5.0 PERFORMANCE (Continued)

Flow Characteristics



6.0 NOTIFICATIONS

WARNING

- Always depressurize and drain system before disassembly. Failure to do so could result in serious personal injury, property damage, joint leakage or joint separation.

7.0 REFERENCE MATERIALS

[05.01: Victaulic Seal Selection Guide](#)

[24.01: Victaulic Pipe Preparation Tools](#)

[I-100: Victaulic Field Installation Handbook](#)

User Responsibility for Product Selection and Suitability

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