

# Suction Diffuser

## SERIES 731-D

Victaulic Series 731-D Suction Diffuser provides optimum flow conditions at the inlet side of the pump. Each suction diffuser is provided with a removable strainer and a fine mesh sleeve which acts as a start-up strainer. Pipe support bosses are provided to aid in proper alignment. For convenience, bosses (tapped 1/2"/15mm NPT) on either side are provided for pressure measurement. A plug is also provided to allow for easy draining of the system. Victaulic Series 731-D is rated to the working pressure of the mating flange.

The Series 731-D is available with straight, single and double reduction flanged outlets. Flanges machined to match all global (ANSI, DIN, GB, PN, JIS, and Australian) flange standards within the diffuser pressure rating. Standard center to flanged face dimensions.

Oversize body provides improved flow patterns around and through the basket. The larger debris pocket keeps any debris out of the flow path below the basket. Integral flange provides a rigid secure connection to the pump inlet simplifying the pipe installation procedure.

Threaded and plugged upstream and downstream pressure/ temperature taps are standard on both sides of the body. Large threaded drain tap is provided suitable for a drain valve or other connection.



**WARNING**

**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.**

**JOB/OWNER**

System No. \_\_\_\_\_  
 Location \_\_\_\_\_

**CONTRACTOR**

Submitted By \_\_\_\_\_  
 Date \_\_\_\_\_

**ENGINEER**

Spec Sect \_\_\_\_\_ Para \_\_\_\_\_  
 Approved \_\_\_\_\_  
 Date \_\_\_\_\_

## Suction Diffuser

SERIES 731-D

### MATERIAL SPECIFICATIONS

**Housing (body, coupling, end cap):** Ductile iron conforming to ASTM A-395.

**Coupling Gasket:** (specify choice)\*

#### Standard

- **Grade "E" EPDM**

EPDM (Green color code). Temperature range -30°F to +230°F/-34°C to +110°C. Recommended for cold and hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

#### Optional

- **Grade "T" nitrile**

Nitrile (Orange color code). Temperature range -20°F to +180°F/-29°C to +82°C. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

\* Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

**Diffuser:** Stainless steel, Type 304, frame and perforated sheet with  $\frac{5}{32}$ "/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 A-449 and physical requirements of ASTM A-183.

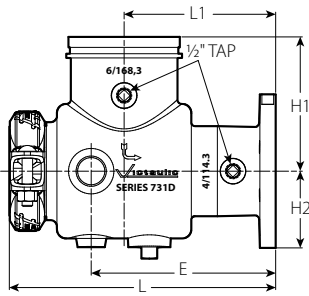
**Support:** Boss for support. See table below for size. (Support not supplied).

# Suction Diffuser

SERIES 731-D

## ANSI DIMENSIONS

Series 731-D with ANSI Class 150 Flange



3" - 12" / 80-300 MM SIZES

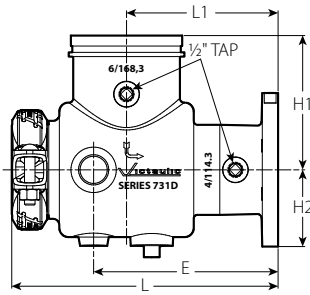
Size		Dimensions - Inches/mm							Approx. Wgt. Each	
System Side Grooved	Pump Side Flange ANSI Class 150	L	L <sub>1</sub>	H <sub>1</sub>	H <sub>2</sub>	Thread Size	E	Lbs.	kg	
3 80	2 50	11.00	6.30	5.51	3.30	1-11.5 NPT	7.48	20.1	9.1	
		279	160	140	83	190	9.1			
	2.5 65	11.00	6.30	5.51	3.70	1-11.5 NPT	7.48	26.0	11.8	
4 100	3 80	11.00	6.30	5.51	4.00	1-11.5 NPT	7.48	27.7	12.6	
		279	160	140	101	190	12.6			
	2.5 65	13.00	7.40	6.50	3.70	1-11.5 NPT	8.74	29.7	13.5	
5 125	3 80	13.00	7.40	6.50	4.00	1-11.5 NPT	8.74	31.6	15.0	
		330	187	165	101	222	15.0			
	4 100	13.00	7.40	6.50	4.60	1-11.5 NPT	8.74	34.6	15.7	
6 150	5 125	15.00	8.40	7.52	4.00	1.25-11.5 NPT	9.84	46.2	21.0	
		381	213	191	101	250	21.0			
	4 100	15.00	8.40	7.52	4.60	1.25-11.5 NPT	9.84	49.4	22.4	
8 200	6 150	15.00	8.40	7.52	5.10	1.25-11.5 NPT	9.84	52.3	23.7	
		381	213	191	130	250	23.7			
	5 125	16.00	9.00	8.00	4.60	1.25-11.5 NPT	10.98	64.0	29.0	
10 250	6 150	16.00	9.00	8.00	5.10	1.25-11.5 NPT	10.98	67.3	30.0	
		406	229	203	130	279	30.0			
	5 125	15.80	9.00	8.00	5.70	1.25-11.5 NPT	10.98	70.3	31.9	
12 300	8 200	15.80	9.00	8.00	5.70	1.25-11.5 NPT	10.98	70.3	31.9	
		406	229	203	144	279	31.9			
	6 150	19.00	10.20	9.02	5.10	1.25-11.5 NPT	12.52	98.5	44.7	
10 250	8 200	19.00	10.20	9.02	5.70	1.25-11.5 NPT	12.52	102.1	46.3	
		483	260	229	144	318	46.3			
	6 150	19.00	10.20	9.02	6.80	1.25-11.5 NPT	12.52	110.7	50.2	
12 300	8 200	19.00	10.20	9.02	6.80	1.25-11.5 NPT	12.52	110.7	50.2	
		483	260	229	172	318	50.2			
	10 250	23.00	12.40	11.00	5.70	1.25-11.5 NPT	15.55	150.6	68.3	
12 300	8 200	23.00	12.40	11.00	6.80	1.25-11.5 NPT	15.55	159.9	72.5	
		584	315	279	172	395	72.5			
	10 250	22.50	12.40	11.00	8.07	1.25-11.5 NPT	15.55	172.0	78.0	
12 300	8 200	22.50	12.40	11.00	8.07	1.25-11.5 NPT	15.55	172.0	78.0	
		584	315	279	205	395	78.0			
	10 250	27.00	15.43	13.19	6.75	1.25-11.5 NPT	18.58	245.4	111.3	
12 300	8 200	27.00	15.43	13.19	6.75	1.25-11.5 NPT	18.58	245.4	111.3	
		686	392	335	172	472	111.3			
	10 250	26.84	15.43	13.19	8.07	1.25-11.5 NPT	18.58	260.3	118.1	
12 300	8 200	26.84	15.43	13.19	8.07	1.25-11.5 NPT	18.58	260.3	118.1	
		686	392	335	205	472	118.1			
	10 250	26.84	15.43	13.19	9.50	1.25-11.5 NPT	18.58	273.2	123.9	
12 300	8 200	26.84	15.43	13.19	9.50	1.25-11.5 NPT	18.58	273.2	123.9	
		686	392	335	241	472	123.9			

# Suction Diffuser

## SERIES 731-D

### DIN DIMENSIONS

Series 731-D with PN10/PN16 Flange



DN80 - DN300MM SIZES

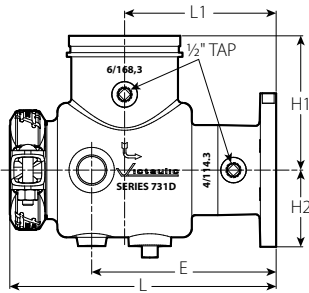
Size		Dimensions - mm/inches						Approx. Wgt. Each	
System Side Grooved	Pump Side Flange PN10/PN16	L	L <sub>1</sub>	H <sub>1</sub>	H <sub>2</sub>	Thread Size	E	kg Lbs.	
									Millimeters/Inches
76.1 mm × 50	2	279	160	140	83	1-11 ISO 7-1	190	9.1	
		11.00	6.30	5.50	3.30				7.50
80 × 3	50	279	160	140	83	1-11 ISO 7-1	190	9.1	
		11.00	6.30	5.50	3.30				7.50
	76.1 mm	279	160	140	93	1-11 ISO 7-1	190	12.6	
		11.00	6.30	5.50	3.70				7.50
80 × 3	3	279	160	140	101	1-11 ISO 7-1	190	12.6	
		11.00	6.30	5.50	4.00				7.50
100 × 4	76.1 mm	330	187	165	93	1-11 ISO 7-1	222	15.0	
		13.00	7.40	6.50	3.70				8.70
	80 × 3	330	187	165	101	1-11 ISO 7-1	222	15.0	
		13.00	7.40	6.50	4.00				8.70
100 × 4	100	330	187	165	116	1-11 ISO 7-1	222	15.7	
		13.00	7.40	6.50	4.60				8.70
	139.7 mm × 76.1 mm	80 × 3	381	213	191	93	1.25-11 ISO 7-1	250	16.8
			15.00	8.40	7.50	3.70			
80 × 3		381	213	191	101	1.25-11 ISO 7-1	250	19.1	
		15.00	8.40	7.50	4.00				9.80
100 × 4	100	381	213	191	116	1.25-11 ISO 7-1	250	20.0	
		15.00	8.40	7.50	4.60				9.80
	139.7 mm	381	213	191	130	1.25-11 ISO 7-1	250	22.2	
		15.00	8.40	7.50	5.10				9.80
125 × 5	80 × 3	381	213	191	101	1.25-11 ISO 7-1	250	21.0	
		15.00	8.40	7.50	4.00				9.80
	100 × 4	381	213	191	116	1.25-11 ISO 7-1	250	22.4	
		15.00	8.40	7.50	4.60				9.80
125 × 5	125	381	213	191	130	1.25-11 ISO 7-1	250	23.7	
		15.00	8.40	7.50	5.10				9.80
	150 × 6	100 × 4	406	229	203	116	1.25-11 ISO 7-1	279	29.0
			16.00	9.00	8.00	4.60			
139.7 mm		406	229	203	130	1.25-11 ISO 7-1	279	30.0	
		16.00	9.00	8.00	5.10				11.00
125 × 5	125	406	229	203	130	1.25-11 ISO 7-1	279	30.0	
		16.00	9.00	8.00	5.10				11.00
	150 × 6	406	229	203	144	1.25-11 ISO 7-1	279	31.9	
		16.00	9.00	8.00	5.70				11.00
200 × 8	139.7 mm	483	260	229	130	1.25-11 ISO 7-1	318	44.7	
		19.00	10.20	9.00	5.10				12.50
	125 × 5	483	260	229	130	1.25-11 ISO 7-1	318	44.7	
		19.00	10.20	9.00	5.10				12.50
150 × 6	150	483	260	229	144	1.25-11 ISO 7-1	318	46.3	
		19.00	10.20	9.00	5.70				12.50
	200 × 8	483	260	229	172	1.25-11 ISO 7-1	318	50.2	
		19.00	10.20	9.00	6.80				12.50
250 × 10	150 × 6	584	315	279	144	1.25-11 ISO 7-1	395	68.3	
		23.00	12.40	11.00	5.70				15.60
	200 × 8	584	315	279	172	1.25-11 ISO 7-1	395	72.5	
		23.00	12.40	11.00	6.80				15.60
250 × 10	250	584	315	279	205	1.25-11 ISO 7-1	395	78.0	
		23.00	12.40	11.00	8.10				15.60
	300 × 12	584	315	279	205	1.25-11 ISO 7-1	395	78.0	
		23.00	12.40	11.00	8.10				15.60
300 × 12	200 × 8	686	392	335	172	1.25-11 ISO 7-1	472	111.3	
		27.00	15.40	13.20	6.80				18.60
	250 × 10	686	392	335	205	1.25-11 ISO 7-1	472	118.1	
		27.00	15.40	13.20	8.10				18.60
300 × 12	686	392	335	241	1.25-11 ISO 7-1	472	123.9		
	27.00	15.40	13.20	9.50				18.60	273.2

# Suction Diffuser

## SERIES 731-D

### GB DIMENSIONS

Series 731-D with GB Flange



76,1 - 300 MM SIZES

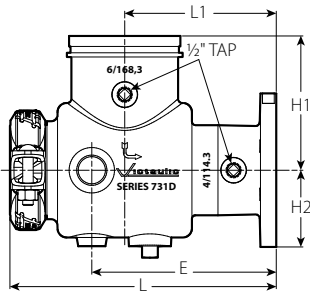
Size		Dimensions – mm/inches						Approx. Wgt. Each
System Side Grooved	Pump Side Flange GB	L	L1	H1	H2	Thread Size	E	kg/Lbs.
76.1 mm × 2	50	279	160	140	83	1-11 ISO 7-1	190	9.1
	2	11.00	6.3	5.50	3.30		7.50	20.1
80 × 3	50	279	160	140	83	1-11 ISO 7-1	190	9.1
	2	11.00	6.3	5.50	3.30		7.50	20.1
	76.1 mm	279	160	140	93	1-11 ISO 7-1	190	12.6
80 × 3	3	279	160	140	101	1-11 ISO 7-1	190	12.6
	3	11.00	6.3	5.50	4.00		7.50	27.7
	80	279	160	140	101	1-11 ISO 7-1	190	12.6
100 × 4	3	11.00	6.3	5.50	4.00		7.50	27.7
	76.1 mm	330	187	165	93	1-11 ISO 7-1	222	15.0
	3	13.00	7.4	6.50	3.70		8.70	31.6
	80	330	187	165	101	1-11 ISO 7-1	222	15.0
100 × 4	3	13.00	7.4	6.50	4.00		8.70	31.6
	100	330	187	165	116	1-11 ISO 7-1	222	15.7
	4	13.00	7.4	6.50	4.60		8.70	34.6
	100	330	187	165	116	1-11 ISO 7-1	222	15.7
139.7 mm × 3	76.1 mm	381	213	191	93	1.25-11 ISO 7-1	250	16.8
	3	15.00	8.4	7.50	3.70		9.80	37.0
	80	381	213	191	101	1.25-11 ISO 7-1	250	19.1
	3	15.00	8.4	7.50	4.00		9.80	42.0
139.7 mm × 4	100	381	213	191	116	1.25-11 ISO 7-1	250	20.0
	4	15.00	8.4	7.50	4.60		9.80	44.0
	139.7 mm	381	213	191	130	1.25-11 ISO 7-1	250	22.2
	4	15.00	8.4	7.50	5.10		9.80	49.0
150 × 6	4	406	229	203	116	1.25-11 ISO 7-1	279	29.0
	6	16.00	9.0	8.00	4.60		11.00	64.0
	139.7 mm	406	229	203	130	1.25-11 ISO 7-1	279	30.0
	6	16.00	9.0	8.00	5.10		11.00	67.3
	125	406	229	203	130	1.25-11 ISO 7-1	279	30.0
150 × 6	5	16.00	9.0	8.00	5.10		11.00	67.3
	150	406	229	203	144	1.25-11 ISO 7-1	279	31.9
	6	16.00	9.0	8.00	5.70		11.00	70.3
	150	406	229	203	144	1.25-11 ISO 7-1	279	31.9
200 × 8	6	16.00	9.0	8.00	5.70		11.00	70.3
	139.7 mm	483	260	229	130	1.25-11 ISO 7-1	318	44.7
	8	19.00	10.2	9.00	5.10		12.50	98.5
	125	483	260	229	130	1.25-11 ISO 7-1	318	44.7
200 × 8	5	19.00	10.2	9.00	5.10		12.50	98.5
	150	483	260	229	144	1.25-11 ISO 7-1	318	46.3
	6	19.00	10.2	9.00	5.70		12.50	102.1
	200	483	260	229	172	1.25-11 ISO 7-1	318	50.2
250 × 10	8	19.00	10.2	9.00	6.80		12.50	110.7
	150	584	315	279	144	1.25-11 ISO 7-1	395	68.3
	6	23.00	12.4	11.00	5.70		15.60	150.6
	200	584	315	279	172	1.25-11 ISO 7-1	395	72.5
250 × 10	8	23.00	12.4	11.00	6.80		15.60	159.9
	250	584	315	279	205	1.25-11 ISO 7-1	395	78.0
	10	23.00	12.4	11.00	8.10		15.60	172.0
	250	584	315	279	205	1.25-11 ISO 7-1	395	78.0
300 × 12	200	686	392	335	172	1.25-11 ISO 7-1	472	111.3
	8	27.00	15.4	13.20	6.80		18.60	245.4
	250	686	392	335	205	1.25-11 ISO 7-1	472	118.1
	10	27.00	15.4	13.20	8.10		18.60	260.3
300 × 12	300	686	392	335	241	1.25-11 ISO 7-1	472	123.9
	12	27.00	15.4	13.20	9.50		18.60	273.2

# Suction Diffuser

## SERIES 731-D

### JIS DIMENSIONS

Series 731-D with JIS 10K Flange



DN350A – DN600A MM SIZES

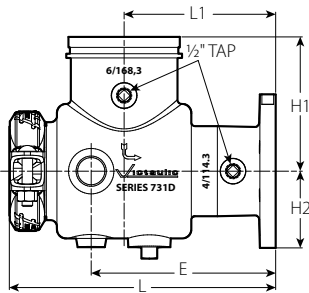
Size		Dimensions –						Approx. Wgt. Each
System Side Grooved	Pump Side Flange 10K	L	L <sub>1</sub>	H <sub>1</sub>	H <sub>2</sub>	Thread Size	E	kg Lbs.
76.1 mm	50A 2	279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
	80A 3	279 11.00	160 6.30	140 5.50	83 3.30	1-11 ISO 7-1	190 7.50	9.1 20.1
80A 3	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	330 13.00	187 7.40	165 6.50	116 4.60	1-11 ISO 7-1	222 8.70	15.0 34.6
100A 4	80A 3	330 13.00	187 7.40	165 6.50	101 4.00	1-11 ISO 7-1	222 8.70	15.0 34.6
	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	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
	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	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	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
150A 6	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	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
200A 8	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
	250A 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
250A 10	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	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
300A 12	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

# Suction Diffuser

SERIES 731-D

## AS DIMENSIONS

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



3" - 12" / 80-300 MM SIZES

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

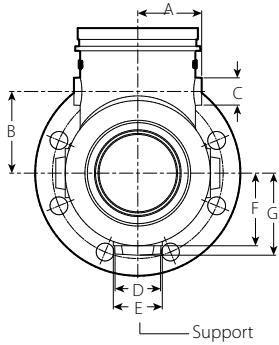
\* Available with No. 50 Concentric Reducer and the appropriate coupling for additional size needs. Contact Victaulic for details.

# Suction Diffuser

SERIES 731-D

## SUPPORT AND TAP BOSS LOCATION

Series 731-D Suction Diffuser



Inlet Size Inches mm	Boss Tap Two Places Inches/mm			Support Locations Three Places Inches/mm			
	A	B	C	D#	E#	F	G
3	1.88	3.25	1.00	1.30	1.80	2.10	2.30
80	47.8	82.6	25.4	33.0	45.7	53.3	58.4
4	2.70	3.25	1.00	1.30	1.80	2.70	2.90
100	68.6	82.6	25.4	33.0	45.7	68.6	73.7
5	3.02	4.25	1.50	1.80	2.70	3.35	3.83
125	76.7	108.0	38.1	45.7	68.6	85.1	58.4
6	3.52	4.50	1.50	1.80	2.70	4.00	4.52
150	89.4	114.3	38.1	45.7	68.6	101.6	114.8
8	4.45	5.00	1.50	1.80	2.70	5.18	5.70
200	113.0	127.0	38.1	45.7	68.6	131.6	144.8
10	5.50	6.50	1.50	1.80	2.70	6.45	6.97
250	139.7	165.1	38.1	45.7	68.6	163.8	177.0
12	6.48	8.00	1.50	1.80	2.70	7.65	8.17
300	164.6	203.2	38.1	45.7	68.6	194.3	207.5

# Listed as diameters.



# Suction Diffuser

SERIES 731-D

**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 † Inches		Size mm/Inches	Clearance "C" mm/ Inches	Rec. Support Leg Pipe Diameter † Inches	Size mm/Inches	Clearance "C" mm/ Inches	Rec. Support Leg Pipe Diameter † Inches							
3 80	2 50	6.00 152	1 ¼	76.1 mm	50	1 ¼	76.1 mm	50	1 ¼							
				1	2		152	6.00		152	6.00					
	2.5 65	6.00 152		80	3	50	2	152	6.00	80	3	50	2	152	6.00	
4 100	3 80	6.00 152	1 ¼	76.1 mm	152	1 ¼	76.1 mm	152	1 ¼							
				6.00 152	80		3	152		6.00	80	3	152	6.00		
	2.5 65	7.00 178		100	4	76.1 mm	178	1 ¼	100	4	76.1 mm	178	7.00 178	100	4	76.1 mm
5 125	3 80	8.00 203	2	100	3	2	100	3	2							
				4	100		3	178		7.00	100	3	178	7.00		
	4 100	8.00 203		139.7 mm	76.1 mm	203	8.00	139.7 mm	76.1 mm	203	8.00					
6 150	4 100	9.50 241	2	80	3	2	80	3	2							
				5	125		203	8.00		5	125	203	8.00			
	5 125	9.50 241		100	4	203	8.00	100	4	203	8.00					
8 200	5 125	12.00 305	2	139.7 mm	203	2	139.7 mm	203	2							
				80	3		203	8.00		80	3	203	8.00			
	6 150	12.00 305		125	5	8.00	125	5	8.00	125	5	8.00				
10 250	6 150	16.00 406	2	100	4	2	100	4	2							
				8	200		305	12.00 305		150	6	9.50	150	6	9.50	
	8 200	16.00 406		150	6	9.50	150	6	9.50	150	6	9.50				
12 300	8 200	18.00 457	2	200	8	2	200	8	2							
				10	250		457	18.00 457		10	250	457	18.00 457			
	12 300	18.00 457		200	8	18.00 457	200	8	18.00 457	200	8	18.00 457				
250 10	150 6	406 16.00	2	200	8	2	200	8	2							
				125	5		12.00	125		5	12.00					
	150 6	406 16.00		250	10	16.00	250	10	16.00	250	10	16.00				
300 12	200 8	457 18.00	2	200	8	2	200	8	2							
				250	10		18.00	250		10	18.00					
	300 12	457 18.00		300	12	457 18.00	300	12	457 18.00							

† Based on Schedule 40 pipe diameter.

table continued on p10

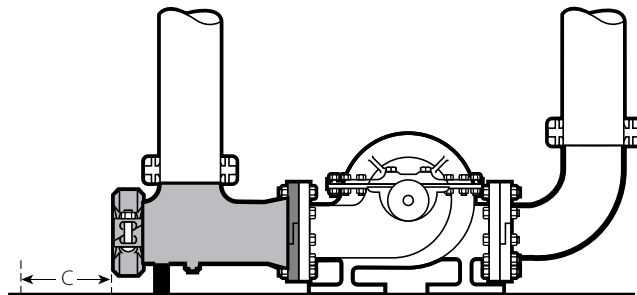
# Suction Diffuser

SERIES 731-D

## 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 † Inches	Size mm/Inches	Clearance "C" mm/Inches	Rec. Support Leg Pipe Diameter † Inches	
76.1 mm × 50A 2	152 6.00	1 ¼	76.1 mm × 50 2	152 6.00	1 ¼	
80A 3 × 50A 2	152 6.00	1 ¼	80 3 × 50 2	152 6.00	1 ¼	
	76.1 mm			152 6.00		
	80A 3			152 6.00		
100A 4 × 76.1 mm	178 7.00	1 ¼	100 4 × 76.1 mm	178 7.00	1 ¼	
	80A 3			178 7.00		
	100A 4			178 7.00		
139.7mm × 76.1 mm	203 8.00	2	125 5 × 80 3	203 8.00	2	
125A 5 × 76.1 mm	203 8.00	2	125 5 × 80 3	203 8.00	2	
	80A 3			203 8.00		
	100A 4			203 8.00		
	125A 5			203 8.00		
150A 6 × 100A 4	241 9.50	2	150 6 × 100 4	241 9.50	2	
	139.7 mm			241 9.50		
	125A 5			241 9.50		
	150A 6			241 9.50		
200A 8 × 139.7 mm	305 12.00	2	200 8 × 125 5	305 12.00	2	
	125A 5			305 12.00		
	150A 6			305 12.00		
	200A 8			305 12.00		
250A 10 × 150A 6	406 16.00	2	250 10 × 150 6	406 16.00	2	
	200A 8			406 16.00		
	250A 10			406 16.00		
300A 12 × 200A 8	457 18.00	2	300 12 × 200 8	457 18.00	2	
	250A 10			457 18.00		
	300A 12			457 18.00		

† Based on Schedule 40 pipe diameter.



# Suction Diffuser

## SERIES 731-D

### PERFORMANCE DATA

Formulas for C<sub>v</sub> 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<sub>v</sub> = Flow Coefficient

Formulas for K<sub>v</sub> Values:

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

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

**Where:**

Q = Flow ( $\frac{m^3}{hr.}$ )

ΔP = Pressure (bar)

K<sub>v</sub> = Flow Factor

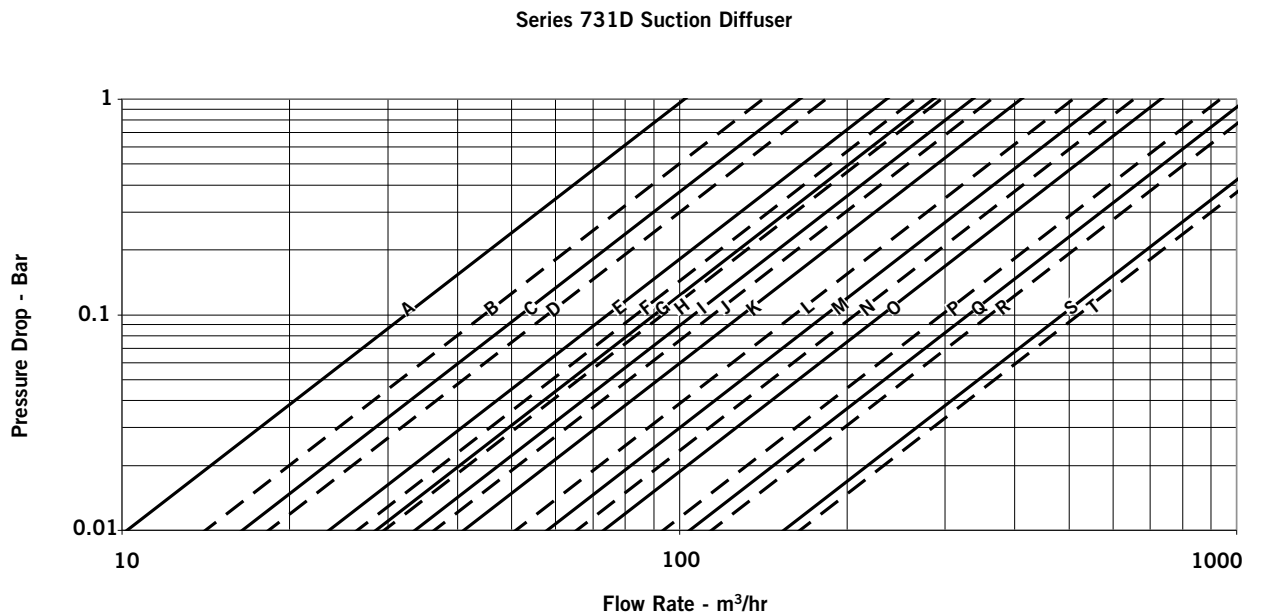
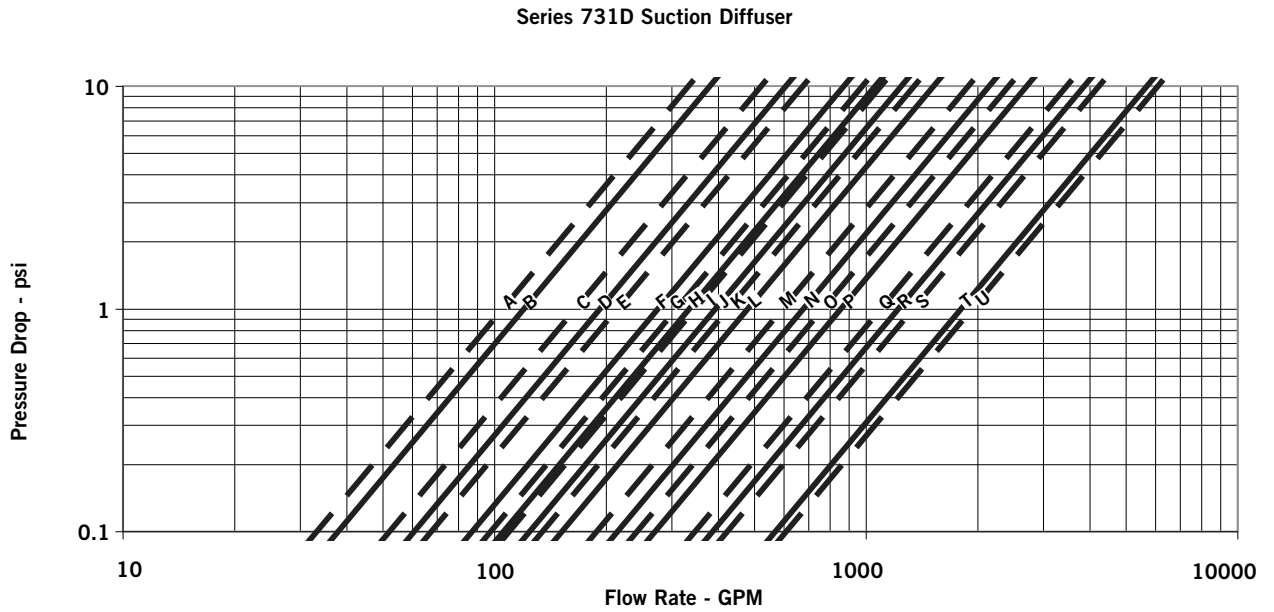
C<sub>v</sub> values for flow of water at +60°F/+16°C through a fully open valve.

Size		Flow Data	Cv/Kv Values	
Inches/mm				
76.1 mm	× 2/50	A	105 91	
3/80	× 2/50	A	105 91	
		76.1 mm	105 91	
	3/80	B	120 104	
4/100	× 76.1 mm	C	165 143	
		3/80	D	192 166
	4/100	E	214 185	
139.7 mm	× 76.1 mm	F	275 238	
		3/80	F	275 238
	4/100	G	309 267	
	139.7 mm	H	334 289	
5/125	× 3/80	F	275 238	
		4/100	G	309 267
	5/125	H	334 289	
6/150	× 4/100	I	393 340	
		139.7 mm	J	426 368
	5/125	J	426 368	
	6/150	K	481 416	
8/200	× 139.7 mm	L	678 586	
		5/125	L	678 586
		6/150	M	766 663
		8/200	N	856 740
10/250	× 6/150	O	1095 947	
		8/200	P	1223 1058
	10/250	Q	1337 1157	
12/300	× 8/200	R	1803 1560	
		10/250	R	1803 1560
	12/300	S	1926 1666	

# Suction Diffuser

SERIES 731-D

PERFORMANCE DATA



## Suction Diffuser

SERIES 731-D

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### INSTALLATION

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at [www.victaulic.com](http://www.victaulic.com).

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### WARRANTY

Refer to the Warranty section of the current Price List or contact Victaulic for details.

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### NOTE

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

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For complete contact information, visit [www.victaulic.com](http://www.victaulic.com)

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