

Victaulic® Discharge CBV Vibration Isolation Pump Drop Series 383/383G



1.0 PRODUCT DESCRIPTION

Available Sizes

- 3 – 12"/DN80 - DN300
- Offered in full or reduced port size (see Section 4.0 for details).

Maximum Working Pressure

- Rated to the working pressure of the flange connection up to a maximum of 300 psi/2068 kPa/21 bar

Temperature Range

- –30°F to +230°F/–34°C to +110°C

End Preparation (specify choice)

Series 383: 3 - 12"/DN80 - DN300 - Class 150 flange

Series 383G: 4 – 8"/DN100 – DN200: Original Groove System (OGS)

Application

- This Discharge CBV Vibration Isolation Pump Drop connects a pump to the interconnecting pipe/discharge header in the mechanical room.
- Provides noise reduction, expansion, contraction and deflection.
- Provides reverse flow protection and balancing functionality.

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

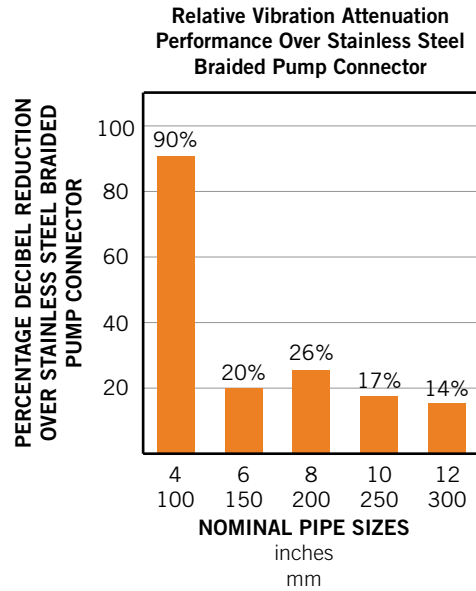
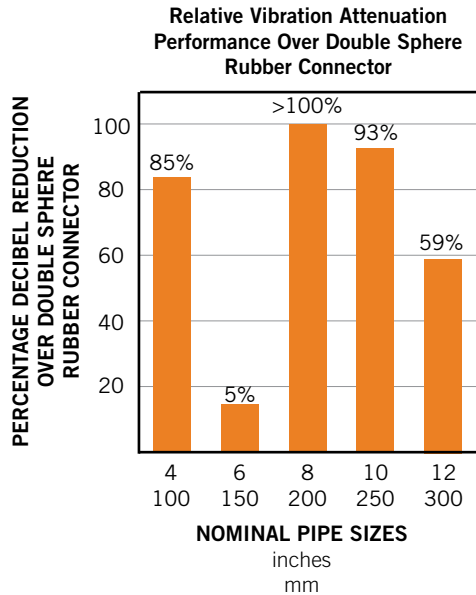
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1.0 PRODUCT DESCRIPTION (Continued)

Vibration Attenuation Performance

- The following charts show the relative **vibration attenuation characteristics** of the Series 383/383G Vibration Isolation Pump Drop compared to double sphere rubber connectors and stainless steel braided pump connectors, respectively, for typical HVAC pump speeds.
- For all sizes shown, the vibration attenuation provided by the Series 383/383G exceeds the vibration attenuation characteristics of the other products tested, for typical HVAC pump speeds.



- Additionally, the Series 383/383G provides **linear movement and angular deflection capabilities**, along with the ability to **accommodate piping misalignment**, which should reduce stresses at pump or equipment connections.
- The use of either cut grooved or roll grooved pipe offers the same vibration attenuation characteristics.

NOTE

- For more information, please refer to [publication 26.04](#): Victaulic Couplings Vibration Attenuation Characteristics.

2.0 CERTIFICATION/LISTINGS

Product designed and manufactured under the Victaulic Quality Management System, as certified by LPCB in accordance with ISO-9001:2008.

3.0 SPECIFICATIONS – MATERIAL

- Standard weight carbon steel conforming to ASTM A53 Grade B.
- Victaulic Original Groove System (OGS).
- Standard coating: Orange enamel.
- Gaskets are EPDM.
- Bolts/Nuts: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449. Carbon steel heavy hex nuts meeting the mechanical property requirements of ASTM A563 Grade B. Track bolts and heavy hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (metric).

Ductile iron Y-pattern globe style balancing valve: Body conforming to ASTM A536, Grade 60-40-18 (BS Grade 400/15).

Bonnet: 3 – 6"/DN80 – DN150: AMETAL®; 8 – 12"/DN200 – DN300: Ductile iron.

Stems: AMETAL®.

Restriction Cone: AMETAL®.

Seat: Ductile iron.

Seat Seal: EPDM.

Probe Seal: EPDM.

Handwheel: 3 – 6"/DN80 – DN150: Red polyamide plastic; 8 – 12"/DN200 – DN300: Aluminium.

Ductile iron check valve conforming to ASTM A536, Grade 65-45-12.

Disc Coating/O-Ring: EPDM

Body Seat: Size 3"/DN80: Machined surfaces electroless nickel plated. Sizes 4 – 12"/DN100 – DN300: Threaded electroless nickel plated seat.

Discs: Size 3"/DN80: Stainless steel disc seats against the o-ring seal, which is mounted on the electroless nickel plated end face. Sizes 4 – 12"/DN100 – DN300: Elastomer encapsulated disc and electroless nickel plated seat.

Shaft: Size 3"/DN80: Brass. Sizes 4 – 12"/DN100 – DN300: Type 316 stainless steel.

Spring: Type 302/304 stainless steel.

Shaft Plug: Size 3"/DN80 only: Type 416 stainless steel.

Pipe Plug: Sizes 4 – 12"/DN100 - DN300 only: Zinc plated carbon steel to ASTM B633.

Flow Measuring Kit: (Sizes 4 – 12"/DN100 – DN300 only):

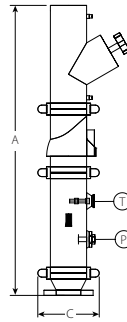
- Extension nipples
- Bronze access valves
- Quick disconnect for meter connection (Per ISO 7241-1 Series B)
- Easy-read flow chart and instructions

Thermometer Connection: ¾" female NPT connection.

Pressure Gauge Connection: ¾" NPT outlet

4.0 DIMENSIONS

Series 383/383G* Vertical Discharge CBV Vibration Isolation Pump Drop



Vertical Pump Installation

Size		Actual Outside Diameter		Dimensions		Weight
Nominal inches DN		inches	mm	A inches mm	C inches mm	Approximate (Each) lb ¹ kg
3 DN80	x 2 DN50	3.500 88.9	2.375 60.3	37.00 940	6.80 172.7	53.3 24.2
	2½		2.875 73.0	37.00 940	6.80 172.7	55.2 25.0
	3		3.500	34.25	6.80	50.8
	DN80		88.9	870	172.7	23.0
4 DN100	x 2 DN50	4.500 114.3	2.375 60.3	39.13 994	7.90 200.7	77.2 35.0
	2½		2.875 73.0	39.13 994	7.90 200.7	80.4 36.5
	3		3.500	39.13	7.90	81.4
	DN80		88.9	994	200.7	36.9
	4" DN100		4.500 114.3	35.88 911	7.90 200.7	76.8 34.8
5	x 2½	5.563 141.3	2.875 73.0	46.00 1168	9.50 241.3	115.0 52.2
	3		3.500	46.00	9.50	116.7
	DN80		88.9	1168	241.3	52.9
	4"		4.500	45.50	9.50	117.6
	DN100		114.3	1156	241.3	53.3
6 DN150	x 2½	6.625 168.3	2.875 73.0	53.13 1349	10.90 276.9	191.9 87.0
	3		3.500	53.13	10.90	160.4
	DN80		88.9	1349	276.9	72.8
	4"		4.500	53.13	10.90	161.5
	DN100		114.3	1349	276.9	73.3
	5		5.563 141.3	53.13 1349	10.90 276.9	162.6 73.8
8 DN200	x 4" DN100	8.625 219.1	4.500 114.3	67.63 1718	14.80 375.9	291.2 132.1
	5		5.563 141.3	67.63 1718	14.80 375.9	292.8 132.8
	6"		6.625	67.63	14.80	294.4
	DN150		168.3	1718	375.9	133.5
	8" DN200		8.625 219.1	62.38 1584	14.80 375.9	278.7 126.4

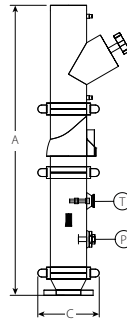
¹ Estimated weight using standard weight pipe.

NOTE

- Only the sizes marked with an asterisk ** are available as either a Series 383, which uses a Class 150 flange end connection, or a Series 383G, which uses an OGS grooved end connection. All other sizes listed above are only available as a Series 380.

4.0 DIMENSIONS (Continued)

Series 383/383G Vertical Discharge CBV Vibration Isolation Pump Drop



Vertical Pump Installation

Size		Actual Outside Diameter		Dimensions		Weight
Nominal inches DN		inches mm		A inches mm	C inches mm	Approximate (Each) lb ¹ kg
10 DN250	6* DN150	10.750 273.0	6.625 168.3	82.13 2086	17.10 434.3	530.9 240.8
	8* DN200		8.625 219.1	82.13 2086	17.10 434.3	539.6 244.8
	10 DN250		10.750 273.0	76.00 1930	17.10 434.3	497.4 225.6
	12 DN300		12.750 323.9	89.13 2264	19.30 490.2	724.6 328.7
12 DN300	8* DN200	12.750 323.9	8.625 219.1	96.38 2448	19.30 490.2	719.2 326.2
	10 DN250		10.750 273.0	96.38 2448	19.30 490.2	671.7 304.7
	12 DN300		12.750 323.9	89.13 2264	19.30 490.2	671.7 304.7

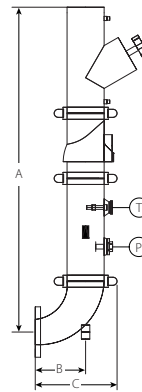
¹ Estimated weight using standard weight pipe.

NOTE

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4.1 DIMENSIONS

Series 383/383G Horizontal Discharge CBV Vibration Isolation Pump Drop



Horizontal Pump Installation

Size		Dimensions			Weight			
Nominal inches DN	Actual Outside Diameter inches mm	A inches mm	B inches mm	C inches mm	Approximate (Each) lb ¹ kg			
3 DN80	x 2 DN50	3.500	2.375	38.63	7.00	10.38	60.9	
		88.9	60.3	981	178	264	27.6	
			2.875	38.63	7.00	10.38	62.8	
			73.0	981	178	264	28.5	
	2½							
	3	3.500	38.75	4.25	10.38	57.8		
	DN80	88.9	984	108	264	26.2		
4 DN100	x 2 DN50	4.500	2.375	41.00	8.25	12.38	89.4	
		114.3	60.3	1041	210	314	40.6	
			2.875	41.00	8.25	12.38	91.4	
			73.0	1041	210	314	41.5	
			2½					
	3	3.500	41.00	8.25	12.38	92.4		
	DN80	88.9	1041	210	314	41.9		
	4"	4.500	41.13	5.00	12.38	81.4		
	DN100	114.3	1045	127	314	36.9		
5	x 2½	5.563	2.875	47.38	9.75	14.50	131.8	
		141.3	73.0	1203	248	368	59.8	
			3.500	47.38	9.75	14.50	133.5	
			88.9	1203	248	368	60.6	
			3	4.500	47.38	9.25	14.00	134.5
	DN80	114.3	1203	235	356	61.0		
	4"	4.500	47.38	9.25	14.00	134.5		
	DN100	114.3	1203	235	356	61.0		
	5	5.563	47.50	5.50	11.38	124.3		
	DN100	141.3	1207	140	289	56.4		
6 DN150	x 2½	6.625	2.875	55.50	10.75	16.25	217.3	
		168.3	73.0	1410	273	413	98.6	
			3.500	55.50	10.75	16.25	199.5	
			88.9	1410	273	413	90.5	
			3	4.500	58.13	9.00	14.50	180.6
			DN80	114.3	1476	229	368	81.9
			4"	5.563	58.13	9.00	14.50	185.6
	DN100	141.3	1476	229	368	84.2		
	5	6.625	55.63	6.50	12.25	174.9		
	DN150	168.3	1413	165	311	79.3		
8 DN200	x 4" DN100	8.625	4.500	70.25	13.13	19.88	330.8	
		219.1	114.3	1784	333	505	150.0	
			5.563	70.25	13.13	19.88	333.2	
			141.3	1784	333	505	151.1	
			5	6.625	73.13	10.50	17.25	324.6
			DN150	168.3	1857	267	438	147.2
	8"	8.625	70.38	7.75	15.25	314.5		
	DN200	219.1	1788	197	387	142.7		

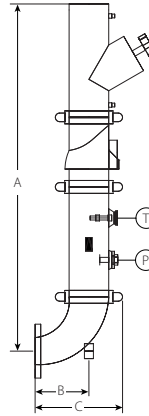
¹ Estimated weight using standard weight pipe.

NOTE

- Only the sizes marked with an asterisk *** are available as either a Series 383, which uses a Class 150 flange end connection, or a Series 383G, which uses an OGS grooved end connection. All other sizes listed above are only available as a Series 380.

4.1 DIMENSIONS (Continued)

Series 383/383G Horizontal Discharge CBV Vibration Isolation Pump Drop



Horizontal Pump Installation

Size		Dimensions			Weight		
Nominal inches DN	Actual Outside Diameter inches mm	A inches mm	B inches mm	C inches mm	Approximate (Each) lb ¹ kg		
10 DN250	6" DN150	10.750	6.625	85.25	15.13	23.75	616.8
		273.0	168.3	2165	384	603	279.8
	8" DN200	8.625	88.13	12.00	20.63	588.4	
		219.1	2238	305	524	266.9	
10 DN250	10.750	85.13	9.00	17.25	587.5		
	273.0	2162	229	438	266.5		
12 DN300	8" DN200	12.750	8.625	99.50	17.13	26.88	836.8
		323.9	219.1	2527	435	683	379.6
	10 DN250	10.750	99.50	17.13	26.88	831.4	
		273.0	2527	435	683	377.1	
12 DN300	12.750	99.38	10.00	19.63	777.8		
	323.9	2524	254	498	352.8		

¹ Estimated weight using standard weight pipe.

NOTE

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5.0 COMPONENT PERFORMANCE

Balancing Valve Flow Characteristics

Size		Min Flow GPM LPM	Nominal Range of Flow GPM LPM	Max Flow GPM LPM
Nominal inches DN	Actual Outside Diameter inches mm			
3 DN80	3.500 88.9	1.5 5.7	31.0 – 130.0 117.0 – 493.0	410.0 1551.9
4 DN100	4.500 114.3	1.9 7.2	68.0 – 200.0 257.0 – 757.0	650.0 2460.3
5	5.563 141.3	4.2 15.9	90.0 – 320.0 341.0 – 1211.0	1020.0 3860.7
6 DN150	6.625 168.3	5.0 18.9	182.0 – 450.0 689.0 – 1703.0	1430.0 5214.6
8 DN200	8.625 219.1	30.0 113.6	367.0 – 820.0 1389.0 – 3104.0	2600.0 9841.0
10 DN250	10.750 273.0	70.0 265.0	540.0 – 1300.0 2044.0 – 4921.0	4040.0 15291.4
12 DN300	12.750 323.9	115.0 435.3	960.0 – 1500.0 3634.0 – 5678.0	4950.0 18735.8

NOTE

- For more information, please refer to [publication 08.16](#): Victaulic Balancing Valves: TA Series 786/787/788/789 and Series 78K.

5.1 COMPONENT PERFORMANCE

Check Valve Flow Characteristics

Cv/Kv values for flow of water at +60°F/+16°C at full open are shown in the table below.

Formulas for Cv/Kv 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

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

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

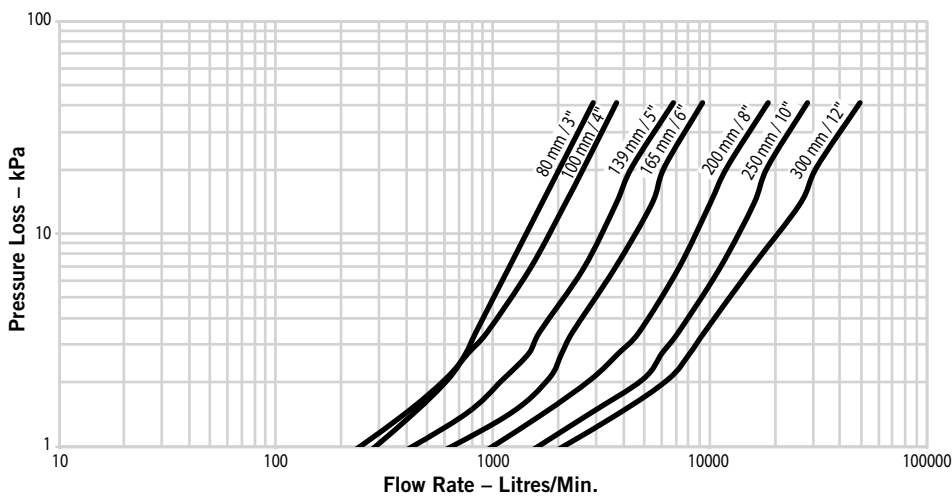
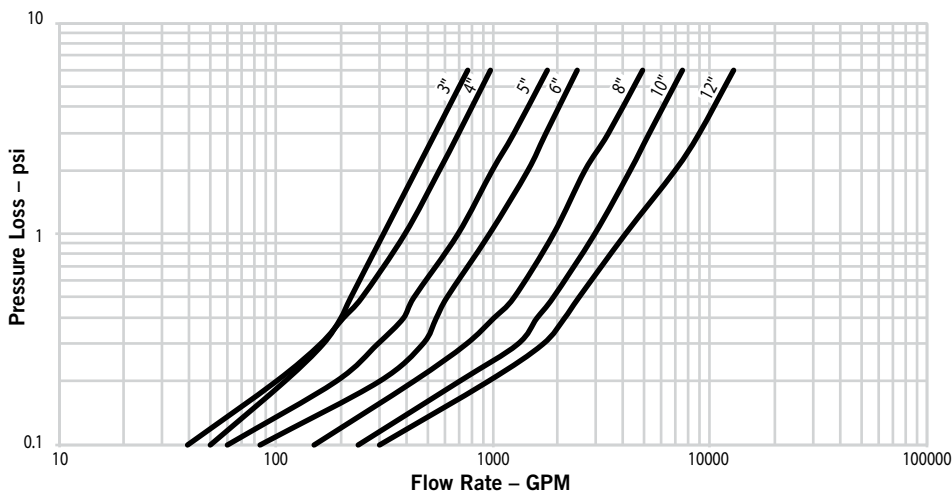
Where:

Q = Flow (m³/hr)

ΔP = Pressure Drop (Bar)

K_v = Flow Coefficient

Size			Size		
Nominal	Actual Outside Diameter	(Full Open)	Nominal	Actual Outside Diameter	(Full Open)
inches DN	inches mm	C_v K_v	inches DN	inches mm	C_v K_v
3 DN80	3.500 88.9	315 273	8 DN200	8.625 219.1	1800 1557
4 DN100	4.500 114.3	390 337	10 DN250	10.750 273.0	3000 2595
5 DN125	5.563 141.3	700 606	12 DN300	12.750 323.9	4200 3633
6 DN150	6.625 168.3	1000 865			



6.0 NOTIFICATIONS

WARNING



- Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Wear safety glasses, hardhat, and foot protection.
- A Victaulic flexible coupling (not included) must also be installed in the piping above the Series 383/383G Discharge CBV Isolation Pump Drop when using a vertical configuration with no reduction in pipe size.

Failure to follow these instructions could result in death or serious personal injury and property damage.

7.0 REFERENCE MATERIALS

[05.01: Victaulic Seal Selection Guide](#)

[06.15: Victaulic Pressure Ratings and End Loads for Victaulic Couplings on Steel Pipe](#)

[08.16: Victaulic Balancing Valves TA Series 786/787/788/789 and Series 78K](#)

[26.01: Victaulic Design Data](#)

[26.04: Victaulic Vibration Couplings Vibration Attenuation Characteristics](#)

[29.01: Victaulic Terms and Conditions/Warranty](#)

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

[I-177N: Victaulic Installation Instructions for QuickVic™ Flexible Coupling - Style 177N](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, and the applicable building codes and related regulations as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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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.

Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

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

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