

# Victaulic® Strainer Vibration Isolation Pump Drop

## Series 382/382G



### 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 382:** 3 - 12"/DN80 - DN300 - Class 150 flange

**Series 382G:** 4 - 8"/DN100 - DN200: Original Groove System (OGS)

#### Application

- This Strainer Vibration Isolation Pump Drop connects the water flow intake to the pump in the mechanical room.
- Provides noise reduction, expansion, contraction and deflection.

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

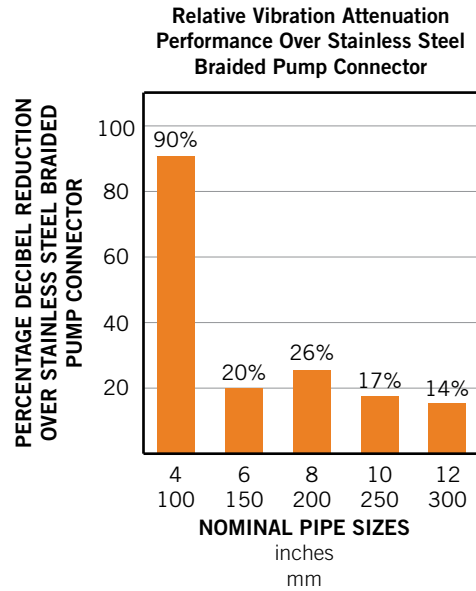
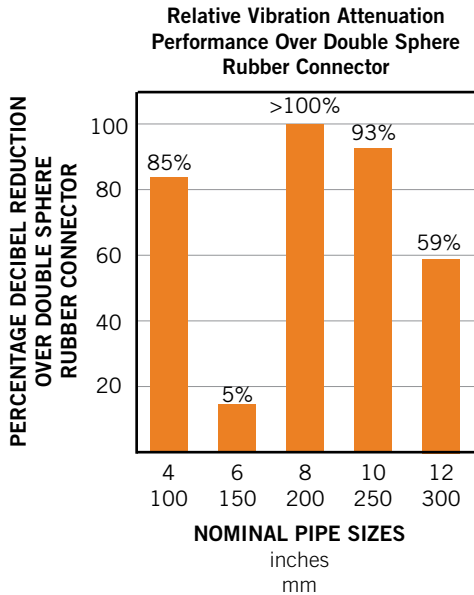
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Approved		Date	

## 1.0 PRODUCT DESCRIPTION (Continued)

### Vibration Attenuation Performance

- The following charts show the relative **vibration attenuation characteristics** of the Series 382/382G Strainer 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 382/382G exceeds the vibration attenuation characteristics of the other products tested, for typical HVAC pump speeds.



- Additionally, the Series 382/382G 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

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- 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 Fe/Zn5, finish Type III (imperial) or Type II (metric).

**Ductile iron butterfly valve:** Body, end face, and seal retainer conforming to ASTM A536, Grade 65-45-12 with body black alkylid enamel coating.

**Disc:** Ductile iron conforming to ASTM A536 Grade 65-45-12, with electroless nickel coating conforming to ASTM B733.

**Seat:** EPDM.

**Stems:** 416 stainless steel conforming to ASTM A582.

**Bearings:** Fiberglass or 316 stainless steel with TFE lining.

**Stem Seals:** Furnished in same materials as seat.

**Stem Retaining Ring:** Carbon steel.

**Lever Handle:** Sizes 3 – 6"/DN80 – DN150: 10 Position (with Lever Lock) - Zinc plated carbon steel handle with zinc plated carbon steel latch plate and zinc plated carbon steel fasteners - infinitely variable, padlockable and includes memory stop. Optionally available with tamper-resistant hardware.

**Gear Operator:** Sizes 8 – 12"/DN200 – DN300 - Provided with handwheel.

**Ductile iron wye strainer:** Body, coupling and end cap conforming to ASTM A536 Grade 65-45-12, with orange enamel coating.

**Basket:** Type 304 stainless steel, perforated metal.

- Size 3"/DN80: 0.062"/1.6 mm diameter perforations on 0.09"/2.3 mm centers, 41% open area.
- Sizes 4 – 12"/DN100 – DN300: 0.125"/3.2 mm diameter perforations on 0.19"/4.8 mm centers, 40% open area.

**Gasket Grade:** 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).

**Couplings:** Strainer is supplied with a Victaulic rigid coupling for cleaning access.

**Blow Down Port:** NPT tap is provided in the cap for a discharge valve connection allowing solids to be “blown down” while the system is in service. Strainer supplied with cap plugged.

**Blow Down Drain Valve:** DZR brass. This option is available upon request and is only offered on sizes 3"/DN80, 4"/DN100 and 6"/DN150.

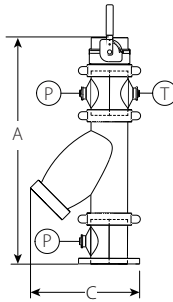
**Other:** Special requirements can often be met. Contact Victaulic with specific requirements for recommendations, availability and delivery.

**Thermometer Connection:** ¾" female NPT connection.

**Pressure Gauge Connection:** ¾" NPT outlet

## 4.0 DIMENSIONS

### Series 382/382G<sup>†</sup> Vertical Strainer 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 <sup>1</sup> kg
3 DN80	x 2 DN50	3.500 88.9	2.375 60.3	38.688 982.7	12.5 317.5	68.8 31.2
			2.875 73.0	38.688 982.7	12.5 317.5	70.7 32.1
	3 DN80	3.500 88.9	3.500 88.9	36.063 916.0	12.5 317.5	66.3 30.1
			4 DN100	4.500 114.3	42.750 1085.9	15.0 381.0
4 DN100	x 2 1/2 DN80	4.500 114.3	2.875 73.0	42.750 1085.9	15.0 381.0	82.6 37.5
			3.500 88.9	42.750 1085.9	15.0 381.0	87.2 39.6
	4 <sup>†</sup> DN100	4.500 114.3	4.500 114.3	39.625 1006.5	15.0 381.0	78.6 35.7
			5 DN125	5.563 141.3	43.250 1098.6	17.8 452.1
5	x 3 DN80	5.563 141.3	3.500 88.9	43.250 1098.6	17.8 452.1	126.2 57.2
			4.500 114.3	42.750 1085.9	17.8 452.1	127.1 57.6
	5 DN125	5.563 141.3	5.563 141.3	39.125 993.8	17.8 452.1	118.9 54.0
			6 DN150	6.625 168.3	45.250 1149.4	19.9 505.5
6 DN150	x 4 <sup>†</sup> DN100	6.625 168.3	4.500 114.3	45.250 1149.4	19.9 505.5	167.6 76.0
			5.563 141.3	45.250 1149.4	19.9 505.5	167.6 76.0
	6 <sup>†</sup> DN150	6.625 168.3	6.625 168.3	41.125 1044.6	19.9 505.5	155.7 70.6
			8 DN200	8.625 219.1	51.500 1308.1	25.1 637.5
8 DN200	x 5 DN150	8.625 219.1	5.563 141.3	51.500 1308.1	25.1 637.5	270.8 122.8
			6.625 168.3	51.500 1308.1	25.1 637.5	270.8 122.8
	6 <sup>†</sup> DN150	8.625 219.1	8.625 219.1	46.313 1176.4	25.1 637.5	255.1 115.7
			10 DN250	10.750 273.0	55.938 1420.8	30.6 777.2
10 DN250	x 6 <sup>†</sup> DN150	10.750 273.0	6.625 168.3	55.938 1420.8	30.6 777.2	492.7 223.5
			8.625 219.1	55.938 1420.8	30.6 777.2	501.4 227.4
	8 <sup>†</sup> DN200	10.750 273.0	10.750 273.0	49.750 1263.7	30.6 777.2	463.5 210.2
			12 DN300	12.750 323.9	60.063 1525.6	34.4 873.8
12 DN300	x 8 <sup>†</sup> DN200	12.750 323.9	8.625 219.1	60.063 1525.6	34.4 873.8	629.3 285.4
			10.750 273.0	60.063 1525.6	34.4 873.8	623.9 283.0
	10 DN250	12.750 323.9	12.750 323.9	52.875 1343.0	34.4 873.8	579.3 262.8
			12 DN300	12.750 323.9	52.875 1343.0	34.4 873.8

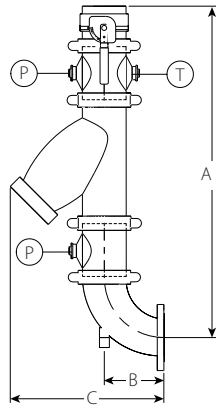
<sup>1</sup> Estimated weight using standard weight pipe.

**NOTE**

- Only the sizes marked with a "†" are available as either a Series 382, which uses a Class 150 flange end connection, or a Series 382G, which uses an OGS grooved end connection. All other sizes listed above are only available as a Series 382.

## 4.1 DIMENSIONS

### Series 382/382G<sup>†</sup> Horizontal Strainer 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 <sup>1</sup> kg		
3 DN80	2 DN50	3.500 88.9	2.375 60.3	41.4375 1052.5	9.563 228.6	18.625 473.1	82.3 37.3
		2½	2.875 73.0	41.6875 1058.9	9.563 228.6	18.625 473	85.0 38.6
	3 DN80		3.500 88.9	3.500 1052.5	42.000 1052.5	5.875 149.2	14.960 380.0
		4 DN100	2½	4.500 114.3	2.875 73.0	46.3125 1176.3	11.750 298.5
3 DN80	3.500 88.9			46.6250 1184.3	11.750 298.5	22.813 579.5	107.4 48.7
	4 <sup>†</sup> DN100		4.500 114.3	47.2500 1200.2	7.500 190.5	18.563 471.5	102.1 46.3
5			2½	5.563 141.3	2.875 73.0	46.8750 1190.6	20.500 520.7
	3 DN80	3.500 88.9		47.1875 1198.6	20.500 520.7	33.500 850.9	160.6 72.8
		4 <sup>†</sup> DN100	4.500 114.3	47.6875 1211.3	14.500 368.3	27.500 698.5	163.6 74.2
	5		5.563 141.3	48.5000 1231.9	9.250 235.0	22.250 698.5	142.2 64.5
6 DN150	4 <sup>†</sup> DN100	6.625 168.3	4.500 114.3	50.250 1276.4	9.000 228.6	23.400 594.4	185.6 84.2
		5	5.563 141.3	50.250 1276.4	9.000 228.6	23.400 594.4	190.6 86.5
	6 <sup>†</sup> DN150		6.625 168.3	52.000 1320.8	10.750 273.1	25.200 640.0	192.9 87.5
		8 DN200	5	8.625 DN200	5.563 141.3	59.0625 1500.2	26.563 674.7
6 <sup>†</sup> DN150	6.625 168.3			57.000 1447.8	10.500 266.7	28.900 734.1	301.0 136.5
	8 <sup>†</sup> DN200		8.625 219.1	60.750 1543.1	14.250 362.0	32.600 828.0	362.5 164.4

\* Dimension to connection of pump.

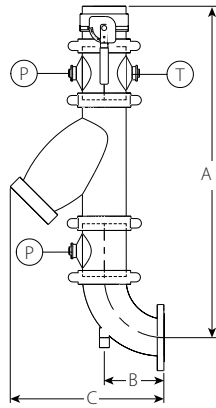
<sup>1</sup> Estimated weight using standard weight pipe.

#### NOTE

- Only the sizes marked with a "†" are available as either a Series 382, which uses a Class 150 flange end connection, or a Series 382G, which uses an OGS grooved end connection. All other sizes listed above are only available as a Series 382.

## 4.1 DIMENSIONS (Continued)

### Series 382/382G Horizontal Strainer 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 <sup>1</sup> kg			
10 DN250	x 6 <sup>†</sup> DN150	10.750 273.0	x 6.625 168.3	65.000 1651.0	28.125 714.4	50.125 1273.2	640.1 290.3	
			x 8.625 219.1	61.9375 1573.2	12.000 304.8	34.000 863.6	550.8 249.8	
		x 10 DN250	10.750 273.0	8.625 219.1	65.000 1651.0	15.000 381.0	37.000 939.8	594.0 269.4
		x 12 DN300	12.750 323.9	8.625 219.1	69.0625 1754.2	32.125 816.0	56.870 1444.5	815.0 369.7
12 DN300	x 8 <sup>†</sup> DN200	12.750 323.9	x 8.625 219.1	70.1250 1781.2	32.125 816.0	56.870 1444.6	826.1 374.7	
				71.063 1805	18.000 457.2	42.750 1085.8	763.5 346.3	
		x 10 DN250	10.750 273.0	8.625 219.1	65.000 1651.0	15.000 381.0	37.000 939.8	594.0 269.4

\* Dimension to connection of pump.

<sup>1</sup> Estimated weight using standard weight pipe.

#### NOTE

- Only the sizes marked with a "†" are available as either a Series 382, which uses a Class 150 flange end connection, or a Series 382G, which uses an OGS grooved end connection. All other sizes listed above are only available as a Series 382.

## 5.0 COMPONENT PERFORMANCE

### Butterfly Valve Flow Characteristics

C<sub>v</sub>/K<sub>v</sub> values for flow of water at +60°F/+16°C with various disc positions are shown in the table below.

Formulas for C<sub>v</sub>/K<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

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

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

**Where:**

Q = Flow (m<sup>3</sup>/hr)

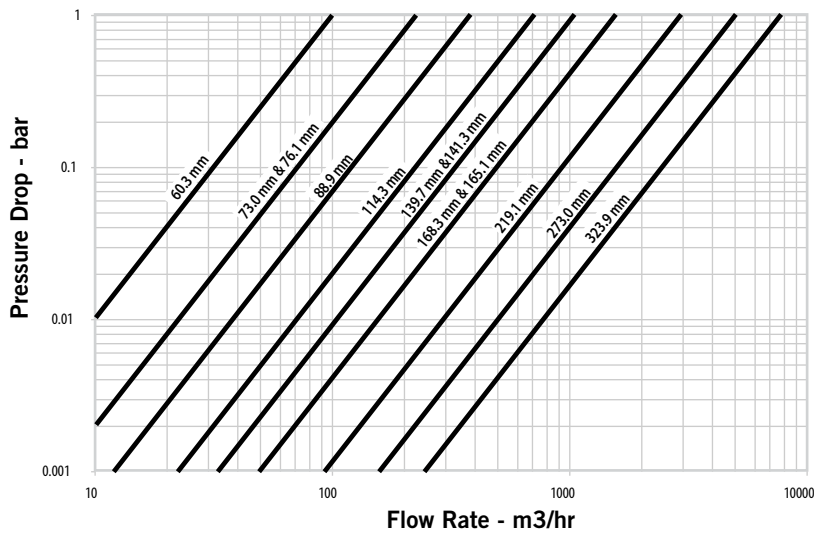
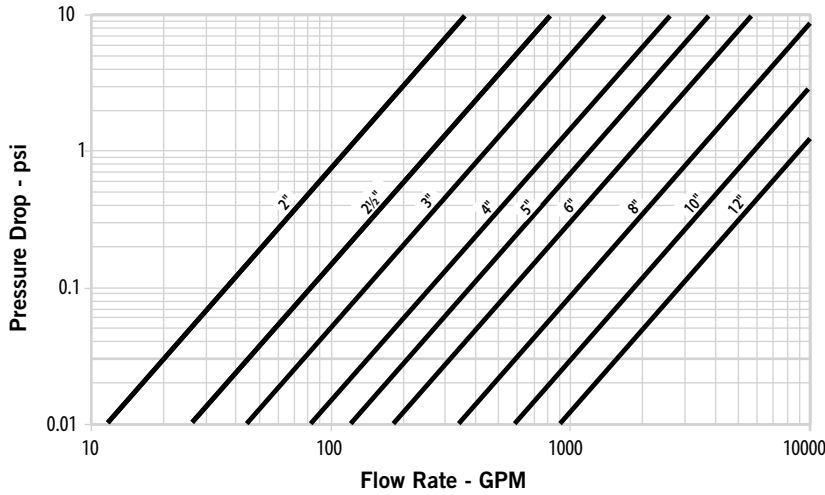
ΔP = Pressure Drop (Bar)







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

Size		(Full Open) C <sub>v</sub> K <sub>v</sub>
Nominal inches DN	Actual Outside Diameter inches mm	
3 DN80	3.500 88.90	440 379
4 DN100	4.500 114.30	820 707
5 DN125	5.563 141.30	1200 1034
6 DN150	6.625 168.30	1800 1552
8 DN200	8.625 219.10	3400 2931
10 DN250	10.750 273.00	5800 5000
12 DN300	12.750 323.90	9000 7758

5.0 COMPONENT PERFORMANCE (Continued)

Butterfly Valve Flow Characteristics



Size		Flow Coefficients					
		Disc Position (Degrees Open)					
Nominal	Actual Outside Diameter	90 	70 	60 	50 	40 	30 
inches	inches	C <sub>v</sub>	C <sub>v</sub>	C <sub>v</sub>	C <sub>v</sub>	C <sub>v</sub>	C <sub>v</sub>
mm	mm	K <sub>v</sub>	K <sub>v</sub>	K <sub>v</sub>	K <sub>v</sub>	K <sub>v</sub>	K <sub>v</sub>
3	3.500	440	230	140	90	50	26
DN80	88.9	379	198	121	78	43	22
4	4.500	820	430	250	160	100	50
DN100	114.3	707	371	216	138	86	43
5	5.563	1200	620	370	240	140	70
DN125	141.3	1034	534	319	207	121	60
6	6.625	1800	940	560	360	220	110
DN150	168.3	1552	8190	483	310	190	95
8	8.625	3400	1770	1050	670	410	200
DN200	219.1	2931	1526	905	578	353	172
10	10.750	5800	3020	1800	1150	700	350
DN250	273.0	5000	2603	1552	991	603	302
12	12.750	9000	4680	2790	1780	1080	540
DN300	323.9	7758	4034	2405	1534	931	465



## 5.1 COMPONENT PERFORMANCE

### Strainer Flow Characteristics

C<sub>v</sub>/K<sub>v</sub> values for flow of water at 60°F/16°C are shown in tables below.

Formulas for C<sub>v</sub>/K<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

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

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

**Where:**

Q = Flow (m<sup>3</sup>/hr)

ΔP = Pressure Drop (Bar)

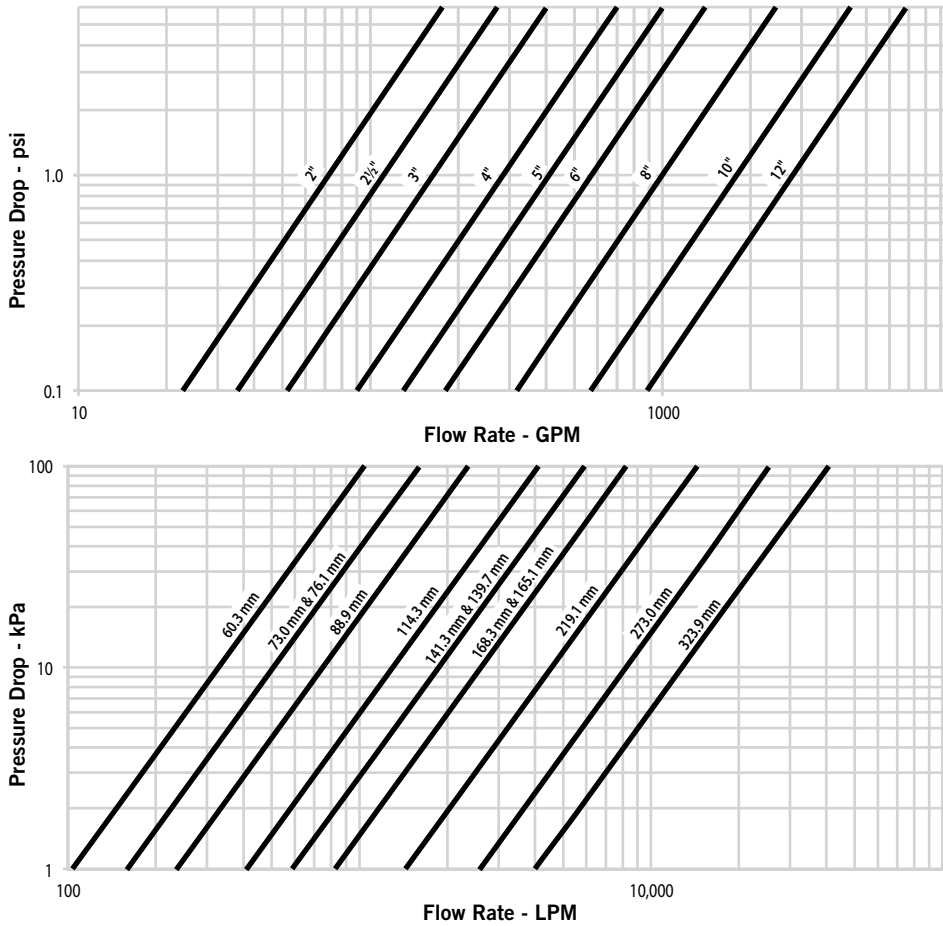
K<sub>v</sub> = Flow Coefficient

Size		C <sub>v</sub> K <sub>v</sub>
Nominal inches DN	Actual Outside Diameter inches mm	
3 DN80	3.500 88.9	164 142
4 DN100	4.500 114.3	285 247
5 DN125	5.563 141.3	410 355
6 DN150	6.625 168.3	597 516
8 DN200	8.625 219.1	1000 862
10 DN250	10.750 273.0	1800 1557
12 DN300	12.750 323.9	2800 2422

## 5.1 COMPONENT PERFORMANCE (Continued)







### Strainer Flow Characteristics

Flow characteristics are based on standard, clean baskets. Flow may vary from these figures. The charts below express the flow of water at 65°F/18°C through strainer.



## 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.

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](#)
- [09.03: Victaulic Wye-Type Vic-Strainer Series 732](#)
- [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](#)

### 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](http://www.victaulic.com).

### Warranty

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

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