## Composite Flexible Coupling

Patent Pending

### 1.0 PRODUCT DESCRIPTION

## Available Sizes

- 1 ½ - 4"/DN40 - DN100


## Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760mm Hg) up to 150psi/1034kPa/10 Bar.


## Operating Temperature

- $+33^{\circ} \mathrm{F} /+1^{\circ} \mathrm{C}$ to $+130^{\circ} \mathrm{F} /+54^{\circ} \mathrm{C}$.


## Function

- Designed for use in corrosive applications.
- Utilizes patented Installation-Ready ${ }^{\text {TM }}$ technology.
- Provides a flexible pipe joint which allows for expansion, contraction and deflection.


### 2.0 CERTIFICATION/LISTINGS

Not applicable - contact Victaulic with any questions.

### 3.0 SPECIFICATIONS - MATERIAL

Housing: Injection molded engineered composite.

## Gasket:

$\square$ Grade "E" EPDM ${ }^{1}$
(Double green stripe color code). UL classified in accordance with ANSI/NSF 61 for cold $+86^{\circ} \mathrm{F} /+30^{\circ} \mathrm{C}$ potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.
1 Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service guidelines and for a listing of services which are not compatible.

Bolts/Nuts: ASTM F-593 Group 2 (316 stainless steel) track bolts with special anti-galling coating and ASTM F-594 (316 stainless steel) flange nuts.

## 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 |  |

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### 4.0 DIMENSIONS

## Style 171



Style 171 Pre-Assembled (Installation-Ready Condition)


Style 171 Joint Assembled

| Size |  | Pipe End Separation |  | Bolt/Nut |  | Dimensions |  |  |  |  |  | Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal inches DN | Actual Outside Diameter inches mm | (1) <br> Min <br> inches <br> mm | (2) <br> Max <br> inches <br> mm | Qty. | Size <br> inches | Pre-assembled (Installation-Ready ${ }^{\text {TM }}$ condition) |  |  | Joint Assembled |  |  | ```Approximate (Each) lb kg``` |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 11 / 2 \\ & 40 \end{aligned}$ | $\begin{gathered} 1.900 \\ 48.3 \end{gathered}$ | 0.00 | $\begin{gathered} 0.06 \\ 1.6 \end{gathered}$ | 3/8 | $16 \times 21 / 4$ | $\begin{gathered} 3.73 \\ 95 \end{gathered}$ | $\begin{aligned} & 5.24 \\ & 132 \end{aligned}$ | $\begin{gathered} 1.91 \\ 48 \end{gathered}$ | $\begin{gathered} 3.31 \\ 84 \end{gathered}$ | $\begin{aligned} & 5.24 \\ & 133 \end{aligned}$ | $\begin{gathered} 1.91 \\ 48 \end{gathered}$ | $\begin{aligned} & 0.79 \\ & 0.36 \end{aligned}$ |
| $\begin{gathered} 2 \\ 50 \end{gathered}$ | $\begin{gathered} 2.375 \\ 60.3 \end{gathered}$ | 0.00 | $\begin{gathered} 0.06 \\ 1.6 \end{gathered}$ | $3 / 8$ | $16 \times 2^{1 ⁄ 2}$ | $\begin{aligned} & 4.28 \\ & 109 \end{aligned}$ | $\begin{gathered} 5.84 \\ 148 \end{gathered}$ | $\begin{gathered} 1.93 \\ 49 \end{gathered}$ | $\begin{gathered} 3.86 \\ 98 \end{gathered}$ | $\begin{aligned} & 6.09 \\ & 155 \end{aligned}$ | $\begin{gathered} 1.93 \\ 49 \end{gathered}$ | $\begin{aligned} & 0.93 \\ & 0.42 \end{aligned}$ |
| $\begin{aligned} & 2^{1 / 2} \\ & 65 \end{aligned}$ | $\begin{gathered} 2.875 \\ 73.0 \end{gathered}$ | 0.00 | $\begin{gathered} 0.06 \\ 1.6 \end{gathered}$ | 3/8 | $16 \times 21 / 2$ | $\begin{aligned} & 4.87 \\ & 124 \end{aligned}$ | $\begin{aligned} & 6.25 \\ & 159 \end{aligned}$ | $\begin{gathered} 1.92 \\ 49 \end{gathered}$ | $\begin{aligned} & 4.37 \\ & 111 \end{aligned}$ | $\begin{aligned} & 6.50 \\ & 165 \end{aligned}$ | $\begin{gathered} 1.92 \\ 49 \end{gathered}$ | $\begin{aligned} & 1.04 \\ & 0.47 \end{aligned}$ |
| $\begin{gathered} 3 \\ 80 \end{gathered}$ | $\begin{gathered} 3.500 \\ 88.9 \end{gathered}$ | 0.00 | $\begin{gathered} 0.06 \\ 1.6 \end{gathered}$ | $1 / 2$ | $13 \times 23 / 4$ | $\begin{gathered} 5.68 \\ 144 \end{gathered}$ | $\begin{aligned} & 7.46 \\ & 189 \end{aligned}$ | $\begin{gathered} 2.01 \\ 51 \end{gathered}$ | $\begin{array}{r} 5.09 \\ 129 \end{array}$ | $\begin{aligned} & 7.58 \\ & 193 \end{aligned}$ | $\begin{gathered} 2.01 \\ 51 \end{gathered}$ | $\begin{aligned} & 1.55 \\ & 0.70 \end{aligned}$ |
| $\begin{gathered} 4 \\ 100 \end{gathered}$ | $\begin{aligned} & 4.500 \\ & 114.3 \end{aligned}$ | 0.00 | $\begin{gathered} 0.13 \\ 3.2 \end{gathered}$ | 1/2 | $13 \times 3$ | $\begin{aligned} & 6.86 \\ & 174 \end{aligned}$ | $\begin{aligned} & 8.74 \\ & 222 \end{aligned}$ | $\begin{gathered} 2.13 \\ 54 \end{gathered}$ | $\begin{aligned} & 6.08 \\ & 154 \end{aligned}$ | $\begin{aligned} & 8.78 \\ & 7>3 \end{aligned}$ | $\begin{gathered} 2.13 \\ 54 \end{gathered}$ | $\begin{aligned} & 1.64 \\ & 0.74 \end{aligned}$ |

(2 \& 3) Maximum pipe end separation to be used for determining overall piping system movement for roll (2) or cut (3) groove pipe. For design and installation purposes, the minimum and maximum pipe end separations shall be reduced to the values as indicated in the table below. These design and installation considerations include thermal growth, settlement, installation misalignment and offsets. See illustrations below.


Minimum Pipe Separation (1) Roll and Cut Groove


Maximum Pipe Separation (2) Roll and Cut Groove

## Design and Installation

The amount of linear movement and angular deflection to be used for design and installation consideration for each coupling is illustrated below.

| Size Range | Design and Installation Values |  |  |
| :---: | :---: | :---: | :---: |
|  | Roll Groove and Cut Grooved Pipe |  |  |
|  | Linear Movement ${ }^{2}$ |  |  |
| inches DN | inches mm | Per <br> Cplg. <br> Deg. | Pipe In/Ft $\mathrm{mm} / \mathrm{m}$. |
| $\begin{aligned} & 11 / 2 \\ & 40 \end{aligned}$ | $\begin{gathered} 0.06 \\ 1.6 \end{gathered}$ | $1.81^{\circ}$ | $\begin{gathered} 0.38 \\ 32 \end{gathered}$ |
| $\begin{gathered} 2 \\ 50 \end{gathered}$ | $\begin{gathered} 0.06 \\ 1.6 \end{gathered}$ | $1.52^{\circ}$ | $\begin{gathered} 0.32 \\ 26 \end{gathered}$ |
| $\begin{aligned} & 21 / 2 \\ & 65 \end{aligned}$ | $\begin{gathered} 0.06 \\ 1.6 \end{gathered}$ | $1.25^{\circ}$ | $\begin{gathered} 0.26 \\ 22 \end{gathered}$ |
| $\begin{gathered} 3 \\ 80 \end{gathered}$ | $\begin{gathered} 0.06 \\ 1.6 \end{gathered}$ | $1.03^{\circ}$ | $\begin{gathered} 0.22 \\ 18 \end{gathered}$ |
| $\begin{gathered} 4 \\ 100 \end{gathered}$ | $\begin{gathered} 0.13 \\ 3.2 \end{gathered}$ | $1.60{ }^{\circ}$ | $\begin{gathered} 0.34 \\ 28 \end{gathered}$ |

2 Victaulic recommends for design and installation purposes, these values should be reduced by $50 \%$ for $11 / 2-3$ " $/ 40-80 \mathrm{~mm}$ sizes; $25 \%$ for 4 " $/ 100 \mathrm{~mm}$ and larger sizes.
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### 5.0 PERFORMANCE

## ANSI Standard

| Size |  | Schedules 40 - PVC |  |  | Sch. 10 - Carbon Steel |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal inches DN | Actual Outside Diameter inches mm | Wall <br> Thickness <br> inches mm | Maximum Joint Working Pressure psi kPa | Maximum Permissable End Load Lbs N | Wall <br> Thickness <br> inches <br> mm | Maximum Joint Working Pressure psi kPa | Maximum Permissable End Load Lbs N |
| $\begin{gathered} 1 \\ 25 \end{gathered}$ | $\begin{gathered} 1.315 \\ 33.4 \end{gathered}$ | $\begin{aligned} & 0.133 \\ & 3.378 \end{aligned}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{aligned} & 204 \\ & 906 \end{aligned}$ | $\begin{aligned} & 0.109 \\ & 2.769 \end{aligned}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{aligned} & 204 \\ & 906 \end{aligned}$ |
| $\begin{aligned} & 11 / 2 \\ & 40 \end{aligned}$ | $\begin{gathered} 1.9 \\ 48.3 \end{gathered}$ | $\begin{aligned} & 0.145 \\ & 3.683 \end{aligned}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{gathered} 425 \\ 1892 \end{gathered}$ | $\begin{aligned} & 0.109 \\ & 2.769 \\ & \hline \end{aligned}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{gathered} 425 \\ 1892 \end{gathered}$ |
| $\begin{gathered} 2 \\ 50 \end{gathered}$ | $\begin{gathered} 2.375 \\ 60.3 \\ \hline \end{gathered}$ | $\begin{aligned} & 0.154 \\ & 3.912 \end{aligned}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{gathered} 665 \\ 2956 \end{gathered}$ | $\begin{aligned} & 0.109 \\ & 2.769 \end{aligned}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{gathered} 665 \\ 2956 \end{gathered}$ |
| $\begin{gathered} 21 / 2 \\ 65 \\ \hline \end{gathered}$ | $\begin{gathered} 2.875 \\ 73 \end{gathered}$ | $\begin{gathered} 0.203 \\ 5.2 \end{gathered}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{gathered} 974 \\ 4332 \end{gathered}$ | $\begin{gathered} 0.12 \\ 3.048 \end{gathered}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{gathered} 974 \\ 4332 \end{gathered}$ |
| $\begin{gathered} 3 \\ 80 \end{gathered}$ | $\begin{gathered} \hline 3.5 \\ 88.9 \end{gathered}$ | $\begin{aligned} & 0.216 \\ & 5.486 \end{aligned}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{aligned} & 1443 \\ & 6420 \end{aligned}$ | $\begin{gathered} 0.12 \\ 3.048 \end{gathered}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{aligned} & 1443 \\ & 6420 \end{aligned}$ |
| $\begin{gathered} 4 \\ 100 \end{gathered}$ | $\begin{gathered} 4.5 \\ 114.3 \end{gathered}$ | $\begin{gathered} 0.237 \\ 6.02 \end{gathered}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{gathered} 2386 \\ 10612 \end{gathered}$ | $\begin{gathered} 0.12 \\ 3.048 \end{gathered}$ | $\begin{gathered} 150 \\ 1034 \end{gathered}$ | $\begin{gathered} 2386 \\ 10612 \end{gathered}$ |

## WARNING

- Depressurize and drain the piping system before attempting to install, remove or adjust any Victaulic piping products.


### 6.0 NOTIFICATIONS

Not applicable - contact Victaulic with any questions.

## 7.0 <br> REFERENCE MATERIALS

05.01: Seal Selection Guide
29.01: Terms and Conditions

## I-100: Field Installation Handbook

I-ENDCAP: Victaulic End Caps Installation Instructions

## User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of 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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