

# Victaulic® Installation-Ready™ Rubber-Lined Butterfly Valve

## Series 124



17.44



Series 124

### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 2 – 8"/DN50 – DN200

#### Pipe Material

- Designed for use on stainless steel or carbon steel pipe which features ends with the Victaulic Original Groove System (OGS) groove profile (see section 7.0 for Reference Materials)

#### End Preparation

- Victaulic Original Groove System (OGS)

#### Maximum Working Pressure

- 232 psi/1600 kPa/16 bar
- Full working pressure for bi-directional service

#### Operating Temperature

- –30° to +180°F/–34°C to +82°C

#### Application

- Installation-Ready™ rubber-lined butterfly valve typically for use in commercial and industrial water applications
  - HVAC (Hot and cold water)
  - Process water

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      |  |



## 1.0 PRODUCT DESCRIPTION (CONTINUED)

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### Actuation Options

- Standard ISO 5211 mounting flange
  - 10-position lever lock handle
  - Gear operator
  - Accommodates 2"/50 mm of insulation
- 

## 2.0 CERTIFICATION/LISTINGS

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Compliant with Closure/Seat Leakage Rate A per EN 12266-1, EN 1074-1, EN 1074-2 and ISO 5208

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

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## 3.0 SPECIFICATIONS – MATERIAL

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**Housing:** Ductile iron conforming to ASTM A536 Grade 65-45-12.

### Housing Coating: (specify choice)

Standard: Orange enamel.

Optional: Hot dipped galvanized.

**Body:** Ductile iron conforming to ASTM A536 Grade 65-45-12.

### Body Coating: (specify choice)

Standard: Black enamel.

Optional: Hot dipped galvanized.

### Seat: Victaulic EPDM

EPDM (Light green stripe color code). Temperature range –30° to +180°F/–34°C to +82°C. NOT RECOMMENDED FOR PETROLEUM SERVICES OR STEAM SERVICES.

### NOTE

- Low temperature use is dependent upon system operating characteristics. Contact Victaulic for additional information on low temperature applications.

**Bolts/Nuts:** Carbon steel oval neck track bolts meeting the mechanical property requirements of ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563M Class 9 (metric – hex nuts). Track bolts and heavy hex nuts are zinc electroplated per ASTM B633 FE/ZN5, finish Type II (metric).

### 3.0 SPECIFICATIONS – MATERIAL (CONTINUED)

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**Disc:** 316 stainless steel conforming to ASTM A351 Grade CF8M.

**Shaft:** AISI 416 stainless steel.

**10-Position Lever Lock Handle:**

Ductile iron conforming to ASTM A536, Grade 65-45-12. Zinc-plated carbon steel handle with zinc-plated carbon steel latch plate and zinc-plated carbon steel fasteners, padlockable.

**Handle Coating: (specify choice)**

Standard: Black enamel.

Optional: Hot dipped galvanized.

**Gear Operator (with options below):**

Handwheel.

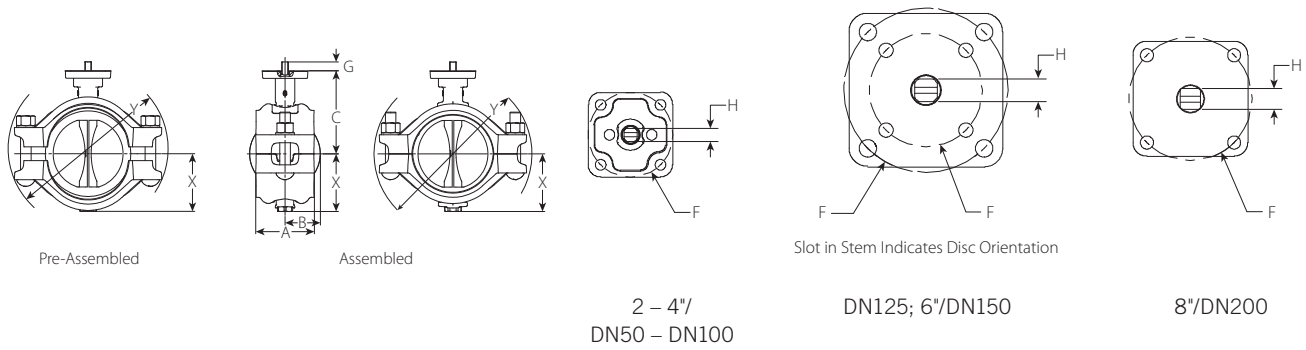
Handwheel with chainwheel.

**NOTES**

- A padlockable valve refers to those valves which can be padlocked to lockout equipment for preventing inadvertent valve operation. When used in conjunction with an appropriate lockout/tagout system, multiple padlocks may be used. The valve may be padlocked either fully open or fully closed.
- A chainwheel may not be used in conjunction with a gear operator shaft extension.

## 4.0 DIMENSIONS

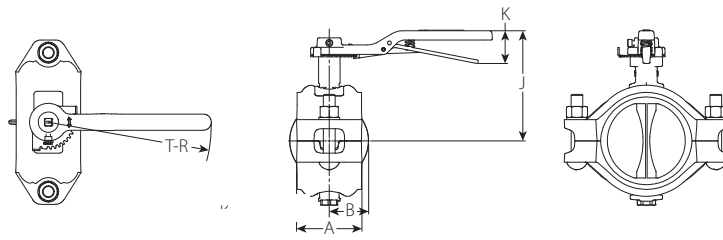
### Series 124 Installation-Ready™ Butterfly Valve – Bare Valve



| Size                    |   | Pipe End Separation       | Bolt/Nut |                          | Dimensions                                    |                   |                   |                   |                   |                   |                   |                                  |                   |                        | Weight                     |
|-------------------------|---|---------------------------|----------|--------------------------|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------------------------|-------------------|------------------------|----------------------------|
| Nominal<br>inches<br>DN | Actual Outside Diameter<br>inches<br>mm | Allowable<br>inches<br>mm | Qty.     | Coupling Bolt Size<br>mm | Pre-Assembled (Installation-Ready™ Condition) |                   | Joint Assembled   |                   | A<br>inches<br>mm | B<br>inches<br>mm | C<br>inches<br>mm | F<br>ISO 5211 Flange Designation | G<br>inches<br>mm | H (sq)<br>inches<br>mm | Approx. (Each)<br>lb<br>kg |
|                         |   |                           |          |                          | X<br>inches<br>mm                             | Y<br>inches<br>mm | X<br>inches<br>mm | Y<br>inches<br>mm |                   |                   |                   |                                  |                   |                        |                            |
| 2<br>DN50               | 2.375<br>60.3                           | 1.92<br>49                | 2        | M12 x 76                 | 2.38<br>60                                    | 6.58<br>167       | 2.38<br>60        | 6.48<br>165       | 3.95<br>100       | -                 | 4.55<br>116       | F07                              | 0.64<br>16        | 0.35<br>9              | 7.4<br>3.4                 |
| DN65                    | 3.000<br>76.1                           | 1.92<br>49                | 2        | M12 x 76                 | 2.38<br>60                                    | 7.29<br>185       | 2.38<br>60        | 7.18<br>182       | 3.95<br>100       | -                 | 4.81<br>122       | F07                              | 0.64<br>16        | 0.35<br>9              | 9.8<br>4.4                 |
| 3<br>DN80               | 3.500<br>88.9                           | 2.41<br>61                | 2        | M16 x 83                 | 3.06<br>78                                    | 9.07<br>230       | 3.06<br>78        | 8.91<br>226       | 4.36<br>111       | 2.18<br>55        | 5.17<br>131       | F07                              | 0.64<br>16        | 0.43<br>11             | 12.9<br>5.9                |
| 4<br>DN100              | 4.500<br>114.3                          | 2.41<br>61                | 2        | M16 x 83                 | 3.54<br>90                                    | 10.23<br>260      | 3.54<br>90        | 10.1<br>257       | 4.4<br>112        | 2.20<br>56        | 5.67<br>144       | F07                              | 0.64<br>16        | 0.43<br>11             | 16.6<br>7.5                |
| DN125                   | 5.500<br>139.7                          | 2.80<br>71                | 2        | M20 x 108                | 4.27<br>109                                   | 12.26<br>311      | 4.27<br>109       | 12.44<br>316      | 4.80<br>122       | 2.46<br>63        | 6.37<br>162       | F07<br>F10                       | 0.79<br>20        | 0.55<br>14             | 26.6<br>12.1               |
| 6<br>DN150              | 6.625<br>168.3                          | 2.82<br>72                | 2        | M20 x 127                | 4.74<br>120                                   | 13.17<br>335      | 4.74<br>120       | 12.99<br>330      | 4.83<br>123       | 2.90<br>74        | 6.83<br>174       | F07<br>F10                       | 0.79<br>20        | 0.55<br>14             | 30.7<br>13.9               |
| 8<br>DN200              | 8.625<br>219.1                          | 3.36<br>85                | 2        | M22 x 140                | 6.23<br>158                                   | 15.51<br>394      | 6.23<br>158       | 15.44<br>392      | 5.83<br>148       | 3.76<br>96        | 7.93<br>201       | F10                              | 0.83<br>21        | 0.67<br>17             | 54.1<br>24.6               |

## 4.1 DIMENSIONS

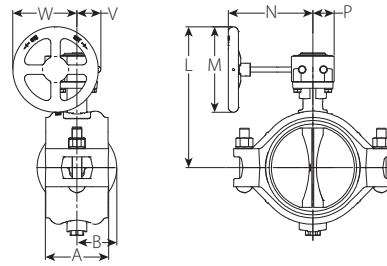
### Series 124 Installation-Ready™ Butterfly Valve – With Handle



| Size                    |   | Pipe End Separation       | Bolt/Nut |                                | Dimensions  |                   |                    |                   |                   |                   |                     |                   |                   | Weight                        |
|-------------------------|---|---------------------------|----------|--------------------------------|---|-------------------|--------------------|-------------------|-------------------|-------------------|---------------------|-------------------|-------------------|-------------------------------|
| Nominal<br>inches<br>DN | Actual<br>Outside<br>Diameter<br>inches<br>mm | Allowable<br>inches<br>mm | Qty.     | Coupling<br>Bolt<br>Size<br>mm | Pre-Assembled<br>(Installation-Ready™<br>Condition) |                   | Joint<br>Assembled |                   | A<br>inches<br>mm | B<br>inches<br>mm | T-R<br>inches<br>mm | J<br>inches<br>mm | K<br>inches<br>mm | Approx.<br>(Each)<br>lb<br>kg |
|                         |   |                           |          |                                | X<br>inches<br>mm                                   | Y<br>inches<br>mm | X<br>inches<br>mm  | Y<br>inches<br>mm |                   |                   |                     |                   |                   |                               |
| 2<br>DN50               | 2.375<br>60.3                                 | 1.92<br>49                | 2        | M12 x 76                       | 2.38<br>60  | 6.58<br>167       | 2.38<br>60         | 6.48<br>165       | 3.95<br>100       | -                 | 7.00<br>178         | 6.00<br>152       | 1.93<br>49        | 8.1<br>3.7                    |
| DN65                    | 3.000<br>76.1                                 | 1.92<br>49                | 2        | M12 x 76                       | 2.38<br>60  | 7.29<br>185       | 2.38<br>60         | 7.18<br>182       | 3.95<br>100       | -                 | 7.00<br>178         | 6.00<br>152       | 1.93<br>49        | 10.5<br>4.8                   |
| 3<br>DN80               | 3.500<br>88.9                                 | 2.41<br>61                | 2        | M16 x 83                       | 3.06<br>78  | 9.07<br>230       | 3.06<br>78         | 8.91<br>226       | 4.36<br>111       | 2.18<br>55        | 9.00<br>229         | 6.37<br>162       | 2.22<br>56        | 14.3<br>6.5                   |
| 4<br>DN100              | 4.500<br>114.3                                | 2.41<br>61                | 2        | M16 x 83                       | 3.54<br>90  | 10.23<br>260      | 3.54<br>90         | 10.10<br>257      | 4.4<br>112        | 2.2<br>56         | 9.00<br>229         | 6.87<br>174       | 2.22<br>56        | 18.0<br>8.2                   |
| DN125                   | 5.500<br>139.7                                | 2.80<br>71                | 2        | M20 x 108                      | 4.27<br>109   | 12.26<br>311      | 4.27<br>109        | 12.44<br>316      | 4.80<br>122       | 2.46<br>63        | 12.00<br>305        | 7.72<br>196       | 2.42<br>61        | 28.1<br>12.8                  |
| 6<br>DN150              | 6.625<br>168.3                                | 2.82<br>72                | 2        | M20 x 127                      | 4.74<br>120   | 13.17<br>335      | 4.74<br>120        | 12.99<br>330      | 4.83<br>123       | 2.90<br>74        | 12.00<br>305        | 8.18<br>208       | 2.42<br>61        | 32.2<br>14.6                  |
| 8<br>DN200              | 8.625<br>219.1                                | 3.37<br>86                | 2        | M22 x 140                      | 6.23<br>158   | 15.51<br>394      | 6.23<br>158        | 15.44<br>392      | 5.83<br>148       | 3.76<br>96        | 14.00<br>356        | 9.53<br>242       | 2.72<br>69        | 55.9<br>25.4                  |

## 4.2 DIMENSIONS

### Series 124 Installation-Ready™ Butterfly Valve – With Gear Operator



| Size                    |   | Pipe End Separation       | Bolt/Nut |                          | Dimensions                                    |              |                 |              |              |              |              |              |              |              |              |              | Weight                     |
|-------------------------|---|---------------------------|----------|--------------------------|---|--------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------------|
| Nominal<br>inches<br>DN | Actual Outside Diameter<br>inches<br>mm | Allowable<br>inches<br>mm | Qty.     | Coupling Bolt Size<br>mm | Pre-Assembled (Installation-Ready™ Condition) |              | Joint Assembled |              | A            | B            | L            | M            | N            | P            | V            | W            | Approx. (Each)<br>lb<br>kg |
|                         |   |                           |          |                          | X   | Y            | X               | Y            |              |              |              |              |              |              |              |              |                            |
|                         |   |                           |          |                          | inches<br>mm                                  | inches<br>mm | inches<br>mm    | inches<br>mm | inches<br>mm | inches<br>mm | inches<br>mm | inches<br>mm | inches<br>mm | inches<br>mm | inches<br>mm | inches<br>mm |                            |
| 2<br>DN50               | 2.375<br>60.3                           | 1.92<br>49                | 2        | M12 x 76                 | 2.38<br>60                                    | 6.58<br>167  | 2.38<br>60      | 6.48<br>165  | 3.95<br>100  | -            | 7.52<br>191  | 3.94<br>100  | 5.16<br>131  | 1.65<br>42   | 1.89<br>48   | 3.66<br>93   | 9.9<br>4.5                 |
| DN65                    | 3.000<br>76.1                           | 1.92<br>49                | 2        | M12 x 76                 | 2.38<br>60                                    | 7.29<br>185  | 2.38<br>60      | 7.18<br>182  | 3.95<br>100  | -            | 7.80<br>198  | 3.94<br>100  | 5.16<br>131  | 1.65<br>42   | 1.89<br>48   | 3.66<br>93   | 12.3<br>5.6                |
| 3<br>DN80               | 3.500<br>88.9                           | 2.41<br>61                | 2        | M16 x 83                 | 3.06<br>78                                    | 9.07<br>230  | 3.06<br>78      | 8.91<br>226  | 4.36<br>111  | 2.18<br>55   | 8.20<br>208  | 3.94<br>100  | 5.16<br>131  | 1.65<br>42   | 1.89<br>48   | 3.27<br>83   | 15.2<br>6.9                |
| 4<br>DN100              | 4.500<br>114.3                          | 2.41<br>61                | 2        | M16 x 83                 | 3.54<br>90                                    | 10.23<br>260 | 3.54<br>90      | 10.1<br>257  | 4.4<br>112   | 2.2<br>56    | 8.70<br>221  | 3.94<br>100  | 5.16<br>131  | 1.65<br>42   | 1.89<br>48   | 3.27<br>83   | 18.9<br>8.6                |
| DN125                   | 5.500<br>139.7                          | 2.80<br>71                | 2        | M20 x 108                | 4.27<br>109                                   | 12.26<br>311 | 4.27<br>109     | 12.44<br>316 | 4.80<br>122  | 2.46<br>63   | 10.63<br>270 | 5.00<br>127  | 6.89<br>175  | 2.20<br>56   | 2.24<br>57   | 4.49<br>114  | 29.9<br>13.6               |
| 6<br>DN150              | 6.625<br>168.3                          | 2.82<br>72                | 2        | M20 x 127                | 4.74<br>120                                   | 13.17<br>335 | 4.74<br>120     | 12.99<br>330 | 4.83<br>123  | 2.90<br>74   | 11.09<br>282 | 5.00<br>125  | 6.89<br>175  | 2.20<br>56   | 2.24<br>57   | 4.49<br>114  | 34.0<br>15.4               |
| 8<br>DN200              | 8.625<br>219.1                          | 3.37<br>86                | 2        | M22 x 140                | 6.23<br>158                                   | 15.51<br>394 | 6.23<br>158     | 15.44<br>392 | 5.83<br>148  | 3.76<br>96   | 12.98<br>330 | 6.50<br>165  | 7.17<br>182  | 2.20<br>56   | 2.24<br>57   | 5.20<br>132  | 61.1<br>27.7               |

### 4.3 DIMENSIONS

#### Accessories

##### Chainwheels

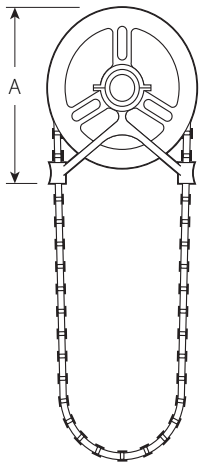
Chainwheels are mounted to the gear operator handwheels. Sprocket rim and guide arms are made of cast aluminum. Chain is galvanized steel weldless lock link chain.

##### HOW TO ORDER:

Specify type valve and operator by valve numbering system shown on page 10.

Always specify length of chain required.

For insulation and locking device, contact Victaulic for details. Handwheel input shaft extensions are not for use with chainwheels.



Chainwheel and Guide with Safety Cable Kit

| Size                    |   | Sprocket Size | Chain Trade Size | Chainwheel Size (Diameter) | Dimensions        | Weight                         |
|-------------------------|---|---------------|------------------|----------------------------|-------------------|--------------------------------|
| Nominal<br>inches<br>DN | Actual Outside Diameter<br>inches<br>mm |               |                  |                            | A<br>inches<br>mm | Approximate (Each)<br>lb<br>kg |
| 2 – 4<br>DN50 – DN100   | 2.375 – 4.500<br>60.3 – 114.3           | 0             | 2                | 4.00<br>102                | 4.63<br>118       | 2.00<br>0.9                    |
| DN125 – DN150           | 5.500 – 6.625<br>139.7 – 168.3          | 1             | 1/0              | 5.75<br>146                | 6.38<br>162       | 4.00<br>1.8                    |
| 8<br>DN200              | 8.625<br>219.1                          | 1½            | 1/0              | 7.50<br>190                | 7.75<br>197       | 5.00<br>2.3                    |

## 5.0 PERFORMANCE

### Series 124 Installation-Ready™ 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<br>C <sub>v</sub><br>K <sub>v</sub> |
|------------------------------|---|---|
| Nominal Size<br>inches<br>DN | Actual Outside Diameter<br>inches<br>mm |   |
| 2<br>DN50                    | 2.375<br>60.3                           | 149<br>128                                    |
| DN65                         | 3.000<br>76.1                           | 273<br>235                                    |
| 3<br>DN80                    | 3.500<br>88.9                           | 298<br>256                                    |
| 4<br>DN100                   | 4.500<br>114.3                          | 653<br>562                                    |
| DN125                        | 5.500<br>139.7                          | 858<br>738                                    |
| 6<br>DN150                   | 6.625<br>168.3                          | 1667<br>1434                                  |
| 8<br>DN200                   | 8.625<br>219.1                          | 2695<br>2318                                  |

#### Flow Coefficients

| Size                         |   | Flow Coefficients   |   |   |   |   |   |
|------------------------------|---|---|---|---|---|---|---|
| Nominal Size<br>inches<br>DN | Actual Outside Diameter<br>inches<br>mm | Degrees From Closed   |   |   |   |   |   |
|                              |   | 90  | 70  | 60  | 50  | 40  | 30  |
|                              |   | <br>C <sub>v</sub><br>K <sub>v</sub> | <br>C <sub>v</sub><br>K <sub>v</sub> | <br>C <sub>v</sub><br>K <sub>v</sub> | <br>C <sub>v</sub><br>K <sub>v</sub> | <br>C <sub>v</sub><br>K <sub>v</sub> | <br>C <sub>v</sub><br>K <sub>v</sub> |
| 2<br>DN50                    | 2.375<br>60.3                           | 149<br>128  | 114<br>98   | 74<br>64  | 42<br>36  | 24<br>21  | 11<br>10  |
| DN65                         | 3.000<br>76.1                           | 273<br>235  | 216<br>186  | 138<br>118  | 76<br>65  | 43<br>37  | 22<br>19  |
| 3<br>DN80                    | 3.500<br>88.9                           | 298<br>256  | 183<br>158  | 112<br>97   | 64<br>55  | 36<br>31  | 23<br>20  |
| 4<br>DN100                   | 4.500<br>114.3                          | 653<br>562  | 383<br>329  | 238<br>204  | 134<br>116  | 69<br>59  | 32<br>28  |
| DN125                        | 5.500<br>139.7                          | 858<br>738  | 585<br>503  | 366<br>314  | 216<br>186  | 117<br>101  | 53<br>45  |
| 6<br>DN150                   | 6.625<br>168.3                          | 1667<br>1434  | 1122<br>965   | 659<br>567  | 406<br>350  | 235<br>202  | 111<br>95   |
| 8<br>DN200                   | 8.625<br>219.1                          | 2695<br>2318  | 2007<br>1726  | 1349<br>1160  | 854<br>734  | 517<br>444  | 269<br>231  |



## 5.1 PERFORMANCE

### Series 124 Installation-Ready™ Butterfly Valve

#### Torque Requirements

| Size                    |   | Torque - Inch Pounds/Newton Meters |       |        |        |        |
|-------------------------|---|------------------------------------|-------|--------|--------|--------|
| Nominal<br>inches<br>DN | Actual<br>Outside<br>Diameter<br>inches<br>mm | Differential Pressure – psi/bar    |       |        |        |        |
|                         |   | 50/3                               | 100/7 | 150/10 | 200/14 | 232/16 |
| 2                       | 2.375   | 52                                 | 64    | 75     | 87     | 94     |
| DN50                    | 60.3  | 6                                  | 7     | 8      | 10     | 11     |
| DN65                    | 3.000   | 86                                 | 100   | 114    | 128    | 137    |
|                         | 76.1  | 10                                 | 11    | 13     | 14     | 15     |
| 3                       | 3.500   | 137                                | 176   | 204    | 237    | 251    |
|                         | DN80  | 88.9                               | 15    | 20     | 23     | 27     |
| 4                       | 4.500   | 190                                | 229   | 269    | 309    | 334    |
|                         | DN100   | 114.3                              | 21    | 26     | 30     | 35     |
| DN125                   | 5.500   | 409                                | 544   | 680    | 815    | 901    |
|                         | 139.7   | 46                                 | 62    | 77     | 92     | 102    |
| 6                       | 6.625   | 542                                | 663   | 782    | 904    | 982    |
|                         | DN150   | 168.3                              | 61    | 75     | 88     | 102    |
| 8                       | 8.625   | 862                                | 982   | 1103   | 1224   | 1307   |
|                         | DN200   | 219.1                              | 97    | 111    | 125    | 138    |

#### Source:

These torque values were derived from test data with valves in water at ambient temperatures with EPDM seals. For other material and service conditions, apply a suitable service factor.

#### Torque Factors:

All torque values are for normal conditions (i.e., the valve is operated at least once a quarter, disc corrosion is expected to be minor, the media is clean and nonabrasive, and the chemical effects upon the elastomer are minor).

#### Typical Fluid Torque Factors Commonly Used in the Industry:

Water: 1.0; Lubricated service: 0.8.

#### Material Torque Factors:

EPDM = 1.0

#### Cycling Factor:

Valve torque will typically increase and actuator output decrease as the valve is cycled. A factor of 1.5 should be applied for when total valve cycles are expected to exceed 5,000.

#### Actuation Factor:

A factor should be added to account for potential drift in the output of the actuator due to actuator performance, misalignment or external inputs (i.e., air or power supply). For this, a factor of up to 1.25 may be used.

#### Combining Torque Factors:

When multiple torque factors apply, they are combined by multiplying them. Example: For an EPDM seal and a 5,000-cycle factor, the combined factor would be  $1.0 \times (1.5) = 1.5$ .

#### NOTES

- Under certain high flow conditions, the hydrodynamic torque can exceed the seating torque. Large butterfly valves are not recommended for use in a free discharge condition, such as filling an empty line with fluid or draining a system at the full-rated pressure.
- Contact Victaulic for other services.

## 5.2 PERFORMANCE

### Series 124 Installation-Ready™ Butterfly Valve

#### Numbering System

V - 040 - 124 P E - 0

| Type | Actual OD in/mm | Size Code | Series | Body           | Seat     | Operator                           |
|------|-----------------|-----------|--------|----------------|----------|------------------------------------|
| V    | 2.375/60.3      | 020       | 124    | P - Painted    | E - EPDM | 0 - Bare                           |
|      | 3.000/76.1      | 761       |        | G - Galvanized |          | 2 - 10-Position lever lock handle  |
|      | 3.500/88.9      | 030       |        |                |          | 3 - Gear operator with hand wheel  |
|      | 4.500/114.3     | 040       |        |                |          | 6 - Gear operator with chain wheel |
|      | 5.500/139.7     | 139       |        |                |          |                                    |
|      | 6.625/168.3     | 060       |        |                |          |                                    |
|      | 8.625/219.1     | 080       |        |                |          |                                    |

## 5.3 PERFORMANCE

### Series 124 Installation-Ready™ Butterfly Valve

#### Important Installation Considerations

Always refer to the I-120 Installation and Gear Operator Conversion Manual for complete installation instructions.

When using the Series 124 Installation-Ready™ Butterfly Valve for throttling service, Victaulic recommends positioning the disc no less than 30 degrees open. For best results, the disc should be between 30 and 70 degrees open; this is dependent on the flow requirements/characteristics for the piping system. High pipeline velocities and/or throttling with the disc less than 30 degrees open may result in noise, vibration, cavitation, erosion, and/or loss of control. Contact Victaulic regarding throttling services.

Victaulic recommends limiting the flow velocities for water service to 13.5 feet/second (4 meters/second). Contact Victaulic before installing this valve when higher flow velocities are necessary or specified.






Victaulic recommends good piping practices and installing the valve five pipe diameters downstream of sources of irregular flow, such as pumps, elbows and control valves. If not practical due to space constraints, the system should be designed to locate and orient the valve to minimize the impact of dynamic torque and valve life.



Do not install butterfly valves into the system with the disc in the fully open position. Exposed disc may be damaged and prevent proper function of the valve.

## 6.0 NOTIFICATIONS

**⚠ WARNING**

- Read and understand all instructions before attempting to install any Victaulic piping products.
- Always 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.
- **DO NOT USE AN INSTALLATION-READY™ BUTTERFLY VALVE IN DEAD-END SERVICE OR FOR A SYSTEM LEAK TEST IN A DEAD-END SERVICE.**
- **ALWAYS VERIFY THAT MATING COMPONENTS WITH THE CORRECT GROOVE PROFILE ARE BEING USED WITH THE VALVE.**
- **DO NOT LOOSEN OR TIGHTEN HARDWARE WHEN THE VALVE IS PRESSURIZED.**
- The system designer is responsible for verifying suitability of mating component materials with the intended fluid media.
- The effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on mating component materials shall be evaluated to confirm system life will be acceptable for the intended service.

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

## 7.0 REFERENCE MATERIALS

[24.01: Victaulic Pipe Preparation Tools](#)

[I-120: Victaulic Installation and Operator Conversion Instructions](#)

### 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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