

## TØV Flow Coefficient ( $C_v$ ) Table

### ASME Class 150/300

### Carbon & Stainless Steel

#### TØV Flow Coefficient ( $C_v$ ) Table: What is $C_v$ and Why is It Important?

Valve Flow Coefficient ( $C_v$ ) is used to calculate a valve's capacity for a liquid or gas to flow through it. Technically defined,  $C_v$  is the volume of water (in US gallons) at 60°F that will flow through a valve per minute with a pressure drop of 1 psi across the valve.

In more simple terms, the larger the opening in a valve, the greater the  $C_v$ . While opening,  $C_v$  increases until the valve is fully open and the highest possible  $C_v$  is reached. For modulating applications, valve size is recommended to be selected based on the necessary  $C_v$  falling between 30% and 75% open stem travel.

|     |    | Flow Coefficients at % Open |     |     |      |      |      |      |                    |
|-----|----|-----------------------------|-----|-----|------|------|------|------|--------------------|
|     |    | Flow Direction              | 15  | 30  | 45   | 60   | 75   | 90   | Max C <sub>v</sub> |
| 150 | 3  | Preferred                   | 5   | 22  | 49   | 72   | 85   | 90   | 90                 |
|     |    | Non-Preferred               | 13  | 38  | 70   | 83   | 87   | 85   | 87                 |
|     | 4  | Preferred                   | 6   | 30  | 75   | 117  | 154  | 166  | 166                |
|     |    | Non-Preferred               | 16  | 54  | 103  | 137  | 153  | 153  | 155                |
|     | 6  | Preferred                   | 35  | 143 | 278  | 426  | 583  | 628  | 628                |
|     |    | Non-Preferred               | 30  | 118 | 241  | 396  | 546  | 571  | 571                |
|     | 8  | Preferred                   | 79  | 290 | 581  | 915  | 1249 | 1364 | 1393               |
|     |    | Non-Preferred               | 70  | 255 | 514  | 844  | 1171 | 1231 | 1242               |
|     | 10 | Preferred                   | 111 | 497 | 981  | 1549 | 2134 | 2379 | 2395               |
|     |    | Non-Preferred               | 117 | 449 | 905  | 1472 | 2039 | 2198 | 2198               |
|     | 12 | Preferred                   | 140 | 676 | 1376 | 2265 | 3132 | 3438 | 3438               |
|     |    | Non-Preferred               | 139 | 640 | 1337 | 2190 | 2992 | 3223 | 3223               |
| 300 | 3  | Preferred                   | 14  | 45  | 64   | 75   | 84   | 81   | 84                 |
|     |    | Non-Preferred               | 16  | 46  | 69   | 78   | 82   | 76   | 82                 |
|     | 4  | Preferred                   | 25  | 81  | 123  | 156  | 190  | 181  | 191                |
|     |    | Non-Preferred               | 22  | 73  | 119  | 158  | 183  | 176  | 185                |
|     | 6  | Preferred                   | 26  | 139 | 269  | 415  | 561  | 570  | 590                |
|     |    | Non-Preferred               | 25  | 118 | 239  | 405  | 547  | 569  | 573                |
|     | 8  | Preferred                   | 65  | 276 | 557  | 824  | 1179 | 1266 | 1294               |
|     |    | Non-Preferred               | 64  | 241 | 509  | 801  | 1157 | 1210 | 1215               |
|     | 10 | Preferred                   | 107 | 369 | 795  | 1305 | 1965 | 2101 | 2195               |
|     |    | Non-Preferred               | 101 | 318 | 703  | 1220 | 1709 | 1824 | 1960               |
|     | 12 | Preferred                   | 135 | 572 | 1208 | 1949 | 2639 | 2987 | 2987               |
|     |    | Non-Preferred               | 145 | 557 | 1139 | 1826 | 2539 | 2684 | 2770               |

The information presented on this sheet is correct at the time of publication. Milwaukee Valve reserves the right to change design and/or materials without notice. For our Installation, Operations and Maintenance Manual (IOM) and the most current product information, go to [www.milwaukeevalve.com](http://www.milwaukeevalve.com).

⚠ State of California Prop 65 Warning: Cancer and Reproductive Harm. For more information visit [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

