

# Toggle Needle Valve

NV6 Series



- ❖ Maximum working pressure up to 300 psig (20.6 bar)
- ❖ Working temperature from -20°F to 200°F (-28°C to 93°C)
- ❖ One-piece forged body
- ❖ Straight and angle patterns
- ❖ Opens and closes quickly

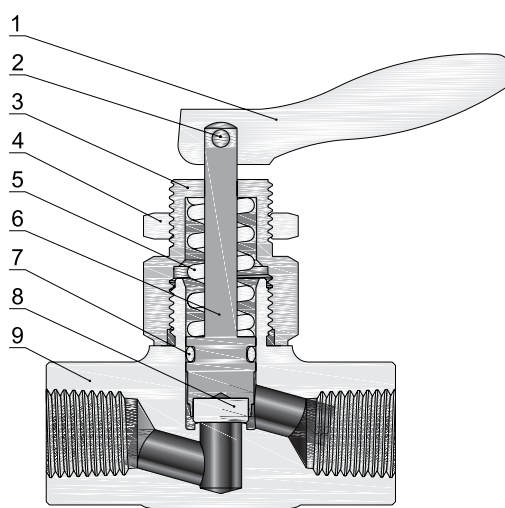
## Features

- ❖ Maximum working pressure up to 300 psig (20.6 bar)
- ❖ Working temperature from -20°F to 200°F (-28°C to 93°C)
- ❖ One-piece forged body
- ❖ Straight, angle and cross flow patterns
- ❖ Opens and closes quickly
- ❖ Soft-seat shutoff
- ❖ O-ring stem seal needs no adjustment

## Pressure vs. Temperature

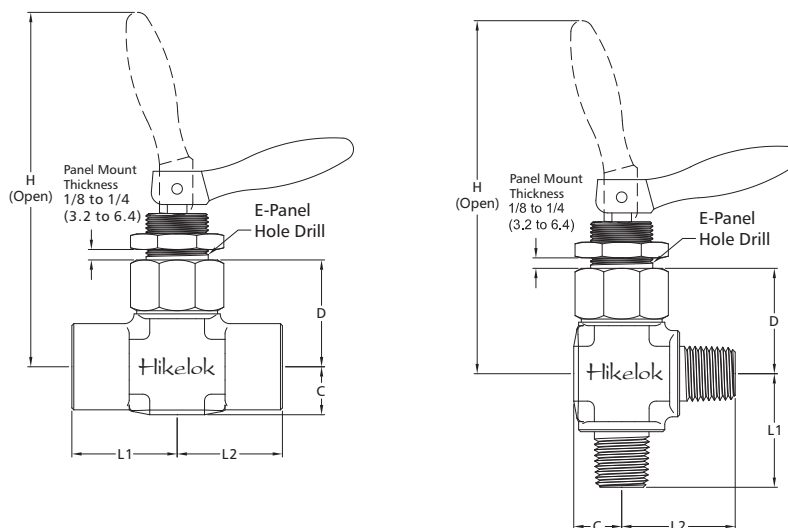
| Orifice<br>in. (mm) | Temperature<br>°F (°C)    | Working Pressure<br>psig (bar) |
|---------------------|---------------------------|--------------------------------|
| 0.080 (2.0)         | -20 to 200<br>(-28 to 93) | 300 psig                       |
| 0.125 (3.2)         |                           | 200 psig                       |
| 0.250 (6.4)         |                           |                                |

## Standard Materials of Construction



| Item | Component | Material Grade/ASTM Specification |               |                |
|------|-----------|-----------------------------------|---------------|----------------|
|      |           | 316 S.S.                          | 304 S.S.      | Brass          |
| 1    | Handle    | Stainless steel                   |               |                |
| 2    | Pin       | Stainless steel                   |               |                |
| 3    | Bonnet    | 316 S.S./A276                     | 304 S.S./A276 | Brass 360/B16  |
| 4    | Nut       | 316 S.S./B783                     |               | Brass 360/B16  |
| 5    | Spring    | PTFE-plated S17700/A313           |               |                |
| 6    | Stem      | 316 S.S./A276                     | 304 S.S./A276 |                |
| 7    | O-ring    | Fluorocarbon FKM                  |               |                |
| 8    | Stem Tip  | PTFE/D1710                        |               |                |
| 9    | Body      | 316 S.S./A276                     | 304 S.S./A276 | Brass 377/B283 |

## Dimensions



| Basic Ordering Number | Connection Type and Size | Orifice in. (mm) | Cv   | Dimension, in. (mm) |                |               |                |                |                |
|-----------------------|--------------------------|------------------|------|---------------------|----------------|---------------|----------------|----------------|----------------|
|                       |                          |                  |      | L1                  | L2             | C             | D              | E              | H              |
| NV6-NPT2-02-          | 1/8 Male NPT             | 0.08<br>(2.0)    | 0.11 | 0.75<br>(19.0)      | 0.75<br>(19.0) | 0.31<br>(7.9) | 0.92<br>(23.4) | 0.53<br>(13.5) | 2.87<br>(72.9) |
| NV6-NPT2-F2-02-       | 1/8 Male NPT             |                  |      | 0.75<br>(19.0)      | 0.98<br>(25.0) |               |                |                |                |
| NV6-F2-02-            | 1/8" Hikelok             |                  |      | 0.98<br>(25.0)      | 0.98<br>(25.0) |               |                |                |                |
| NV6-M3-02-            | 3 mm Hikelok             |                  |      |                     |                |               |                |                |                |
| NV6-FNPT2-03-         | 1/8 Female NPT           | 0.125<br>(3.2)   | 0.20 | 0.81<br>(20.6)      | 0.81<br>(20.6) | 0.39<br>(9.9) | 0.92<br>(23.4) | 0.53<br>(13.5) | 2.87<br>(72.9) |
| NV6-NPT2-03-          | 1/8 Male NPT             |                  |      | 0.86<br>(21.8)      | 0.86<br>(21.8) |               |                |                |                |
| NV6-NPT4-03-          | 1/4 Male NPT             |                  |      | 25.0<br>(0.98)      | 25.0<br>(0.98) |               |                |                |                |
| NV6-NPT4-F4-03-       | 1/4 Male NPT             |                  |      | 25.0<br>(0.98)      |                |               |                |                |                |
| NV6-F4-03-            | 1/4" Hikelok             |                  |      | 1.13<br>(28.7)      | 1.13<br>(28.7) |               |                |                |                |
| NV6-M6-03-            | 6 mm Hikelok             |                  |      |                     |                |               |                |                |                |
| NV6-M8-03-            | 8 mm Hikelok             | 0.25<br>(6.4)    | 0.70 |                     |                | 0.5<br>(12.7) | 1.06<br>(26.9) | 0.66<br>(16.8) | 3.56<br>(90.4) |
| NV6-FNPT4-06-         | 1/4 Female NPT           |                  |      | 1.06<br>(26.9)      | 1.06<br>(26.9) |               |                |                |                |
| NV6-FNPT6-06-         | 3/8 Female NPT           |                  |      | 1.12<br>(28.4)      | 1.12<br>(28.4) |               |                |                |                |
| NV6-NPT6-06-          | 3/8 Male NPT             |                  |      | 1.29<br>(32.8)      | 1.29<br>(32.8) |               |                |                |                |
| NV6-F6-06-            | 3/8" Hikelok             |                  |      | 1.4<br>(35.6)       | 1.4<br>(35.6)  |               |                |                |                |
| NV6-F8-06-            | 1/2" Hikelok             |                  |      | 1.36<br>(34.5)      | 1.36<br>(34.5) |               |                |                |                |
| NV6-M10-06-           | 10 mm Hikelok            |                  |      | 1.46<br>(37.1)      | 1.46<br>(37.1) |               |                |                |                |
| NV6-M12-06-           | 12 mm Hikelok            |                  |      | 1.50<br>(38.1)      | 1.50<br>(38.1) |               |                |                |                |
| NV6-MS20-06-          | M20 x 1.5 Male ISO       |                  |      |                     |                |               |                |                |                |
| NV6-MS22-06-          | M22 x 1.5 Male ISO       |                  |      |                     |                |               |                |                |                |

## How to Order

**NV6** — **NPT4** — **F4** — **03** — **Z** — **A** — **316**

| Series     | Inlet Type                       | Inlet Size                 | Outlet Type                                                       | Outlet Size | Orifice Size                 | O-Ring Material             | Flow Pattern    | Body Material         |
|------------|----------------------------------|----------------------------|-------------------------------------------------------------------|-------------|------------------------------|-----------------------------|-----------------|-----------------------|
| <b>NV6</b> | <b>FNPT</b> Female NPT           | <b>2</b> 1/8 in.           | Same as inlet type and inlet size                                 |             | <b>02</b> 0.080 in. (2.0 mm) | Fluorocarbon FKM            | <b>Straight</b> | <b>316</b> 316 S.S.   |
|            | <b>NPT</b> Male NPT              | <b>4</b> 1/4 in.           |                                                                   |             |                              |                             |                 |                       |
|            | <b>FBT</b> Female BSPT           | <b>6</b> 3/8 in. or 6 mm   | If outlet and inlet are the same, eliminate the outlet designator |             | <b>03</b> 0.125 in. (3.2 mm) | <b>B</b> Buna N             | <b>A</b> Angle  | <b>316L</b> 316L S.S. |
|            | <b>MBT</b> Male BSPT             | <b>8</b> 1/2 in. or 8 mm   |                                                                   |             | <b>06</b> 0.25 in. (6.4 mm)  | <b>E</b> Ethylene Propylene |                 | <b>304</b> 304 S.S.   |
|            | <b>FMS</b> Female ISO            | <b>10</b> 10 mm            |                                                                   |             |                              | <b>N</b> Neoprene           |                 | <b>304L</b> 304L S.S. |
|            | <b>MS</b> Male ISO               | <b>12</b> 3/4 in. or 12 mm |                                                                   |             |                              | <b>Z</b> Kalrez             |                 |                       |
|            | <b>FBP</b> Female BSPP           |                            |                                                                   |             |                              |                             |                 |                       |
|            | <b>MBP</b> Male BSPP             |                            |                                                                   |             |                              |                             |                 |                       |
|            | <b>F</b> Fractional Tube Fitting |                            |                                                                   |             |                              |                             |                 |                       |
|            | <b>M</b> Metric Tube Fitting     |                            |                                                                   |             |                              |                             |                 |                       |