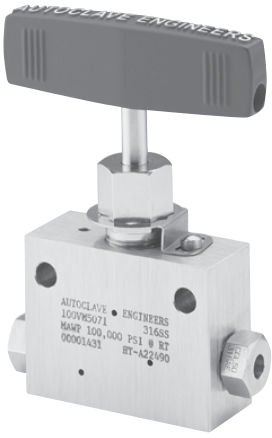
# Needle Valves - 100VM & 150V Series

## Pressures to 150,000 psi (10350 bar)

| Tube Outside Diameter Size Inches | Connection Type | Orifice Size Inches (mm) | Rated $C_V$* | Pressure Rating psi (bar) @ Room Temperature** |
|---|---|---|---|---|
| Series 100VM | | | | |
| 1/4, 5/16, 3/8 | F312C150 | 0.062 (1.57) | .09 | 100,000 (6895) |
| Series 150V | | | | |
| 5/16 | F312C150 | 0.062 (1.57) | .06 | 150,000 (10342) |

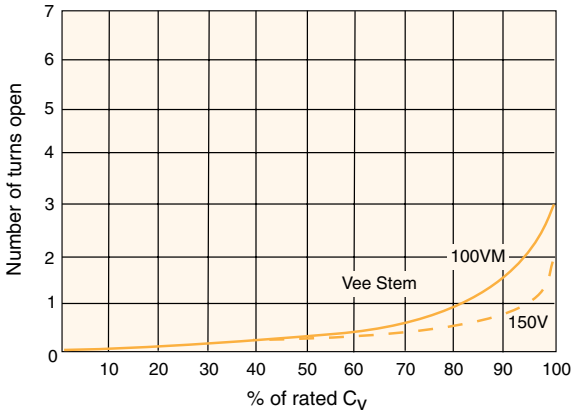
*Notes:*
** $C_V$ values shown are for 2-way straight valve pattern. For 2-way angle patterns, increase $C_V$ value 50%.*

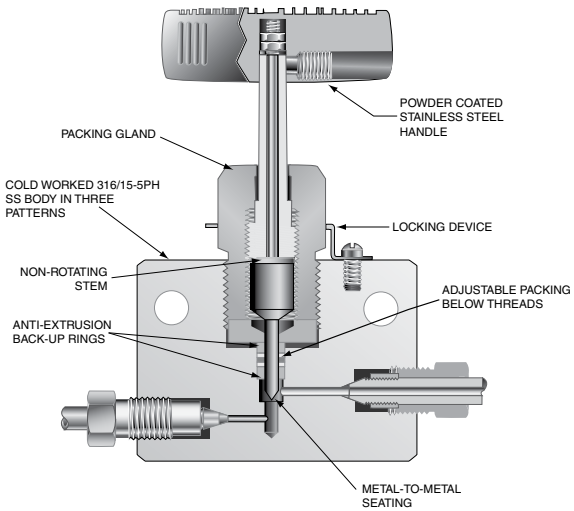
*** For complete temperature ratings see pressure/temperature rating guide in Technical Information section.*



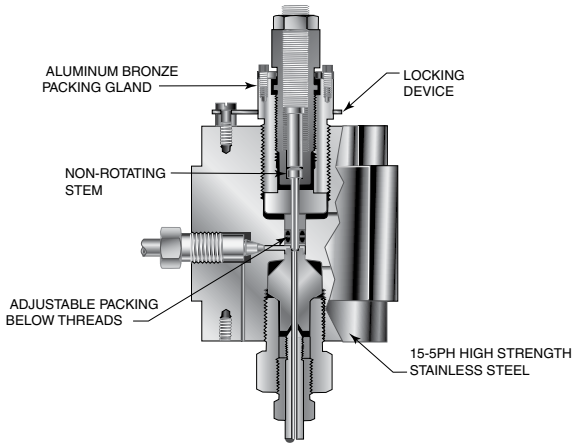


**Generalized Flow Coefficient Curves ($C_V$)**




**100VM Series**




Notes: Torque wrench required to operate valves.

**150V Series**

To ensure proper fit use Autoclave tubing

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## Ordering Procedure

For complete information on available stem types, optional connections and additional valve options, see Needle Valve Options section or contact your Sales Representative. The 100V Series valves are furnished complete with connection components, unless otherwise specified.

Typical catalog number: **100VM5071**

| 100VM | 5 | 07 | 1 | — | XX |
|---|---|---|---|---|---|
| **Valve Series** | **Outside Diameter Tube Size** | **Stem Type** | **Body Pattern** | | **Options** |
| 100VM<br>150V | ***4**-1/4"<br>**5**-5/16"<br>***6**-3/8" | **07** - non-rotating Vee stem (on off service)<br>**08** - non-rotating regulating stem (tapered tip for regulating shutoff | **1** - two-way straight<br>**2** - two-way angle<br>**3** - three-way, two on pressure | | For extreme temperature and other options, see Valve Options. |

* Note: 1/4" and 3/8" for 100VM only.

## Valve Options

**Extreme Temperatures**
Standard Parker Autoclave Engineers valves with PTFE packing may be operated to 450°F (232°C), and to 230°F (110°C) with nylon-leather packing.
**K** - anti-vibration collet and gland assembly.

For other packing options consult the factory.

## Valve Maintenance

Repair Kits: add "R" to the front of valve catalog number for proper repair kit. (Example: **R100VM15071**)

Valve Bodies: Valve bodies are available. Order using the eight (8) digit part number found in the valve drawing or contact your Sales Representative for information.

Consult your Parker Autoclave Engineers representative for pricing on repair kits and valve bodies. Refer to the Tools, Installation, Operation and Maintenance section for proper maintenance procedures.

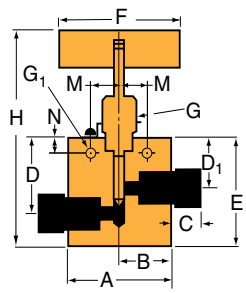
| Catalog Number | Stem Type | Outside Diameter Tube | Orifice Diameter | Dimensions - inches (mm) | | | | | | | | | | | | | Block Thickness | Valve Pattern |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | A | B | C | D | $D_1$ | E | F | G | $G_1$ | H* | M | N | | | |
| **2-Way Straight** | | | | | | | | | | | | | | | | | | |
| 100VM4071<br>100VM5071<br>100VM6071 | VEE | 1/4" (6.35)<br>5/16" (7.93)<br>3/8" (9.53) | 0.062<br>(1.57) | 3.00<br>(76.20) | 1.50<br>(38.10) | 0.52<br>(13.21) | 1.75<br>(44.45) | 1.44<br>(36.58) | 2.25<br>(57.15) | 4.00<br>(101.60) | 1.12<br>(28.45) | 0.34<br>(8.64) | 5.32<br>(135.13) | 1.12<br>(28.45) | 0.50<br>(12.70) | 1.38<br>(35.05) | | See Figure 1 |
| **2-Way Angle** | | | | | | | | | | | | | | | | | | |
| 100VM4072<br>100VM5072<br>100VM6072 | VEE | 1/4" (6.35)<br>5/16" (7.93)<br>3/8" (9.53) | 0.062<br>(1.57) | 2.25<br>(57.15) | 1.50<br>(38.10) | 0.52<br>(13.21) | 1.44<br>(36.58) | | 3.00<br>(76.20) | 4.00<br>(101.60) | 1.12<br>(28.45) | 0.34<br>(8.64) | 6.05<br>(153.67) | 0.94<br>(23.88) | 0.50<br>(12.70) | 1.38<br>(35.05) | | See Figure 2 |

*G - Packing gland mounting hole drill size*
*$G_1$ - Bracket mounting hole size*
*Panel mounting drill size: 0.22" all valves.*

** H Dimension is with stem in closed position.*
*All dimensions for reference only and subject to change.*

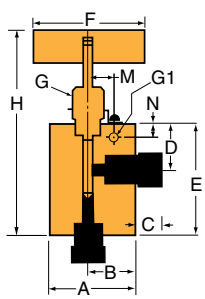
**For prompt service, Parker Autoclave Engineers stock select products. Consult factory.**

**Figure 1**




**2-Way Straight**

**Figure 2**




**2-Way Angle**



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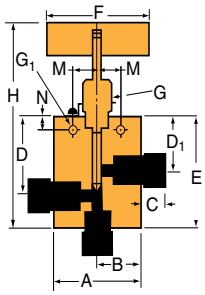
| Catalog Number | Stem Type | Outside Diameter Tube | Orifice Diameter | Dimensions - inches (mm) | | | | | | | | | | | | Block Thick-ness | Valve Pattern |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | A | B | C | D | $D_1$ | E | F | G | $G_1$ | H* | M | N | | |
| **3-Way / 2 On Pressure** | | | | | | | | | | | | | | | | | |
| 100VM4073<br>100VM5073<br>100VM6073 | VEE | 1/4" (6.35)<br>5/16" (7.93)<br>3/8" (9.53) | 0.062<br>(1.57) | 3.00<br>(76.20) | 1.50<br>(38.10) | 0.52<br>(13.21) | 1.75<br>(44.45) | 1.44<br>(36.58) | 3.25<br>(82.55) | 4.00<br>(101.60) | 1.12<br>(28.45) | 0.34<br>(8.64) | 6.31<br>(160.27) | 1.12<br>(28.45) | 0.50<br>(12.70) | 1.38<br>(35.05) | See Figure 3 |
| **2-Way Angle/Replaceable Seat** | | | | | | | | | | | | | | | | | |
| 100VM4872<br>100VM5872<br>100VM6872 | VEE | 1/4" (6.35)<br>5/16" (7.93)<br>3/8" (9.53) | 0.062<br>(1.57) | 2.25<br>(57.15) | 1.50<br>(38.10) | 0.52<br>(13.21) | | 1.44<br>(36.58) | 3.00<br>(76.20) | 4.00<br>(101.60) | 1.12<br>(28.45) | 0.34<br>(8.64) | 7.57<br>(192.30) | 0.94<br>(23.88) | 0.50<br>(12.70) | 1.38<br>(35.05) | See Figure 4 |
| **2-Way Angle / Replaceable Seat** | | | | | | | | | | | | | | | | | |
| 150V5072 | VEE | 5/16<br>(7.93) | 0.062<br>(1.57) | 3.75<br>(95.25) | 1.88<br>(47.63) | .052<br>(13.21) | 2.25<br>(57.15) | 2.63<br>(66.80) | 4.00<br>(101.60) | | 1.650<br>(41.91) | | 7.12<br>(180.85) | 1.25†<br>(31.75) | | | See Figure 5 |

*G - Packing gland mounting hole drill size*
*$G_1$ - Bracket mounting hole size*
*Panel mounting drill size: 0.22" all valves.*
*See mounting note below for 150V series.*

** H Dimension is with stem in closed position.*
*All dimensions for reference only and subject to change.*

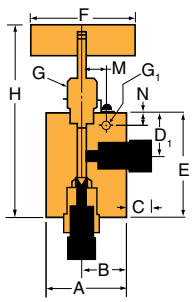
**For prompt service, Parker Autoclave Engineers stock select products. Consult factory.**

**Figure 3**



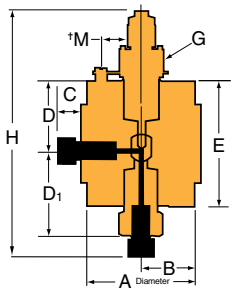

**3-Way / 2 on Pressure**

**Figure 4**




**2-Way Angle / Replaceable Seat**

**Figure 5**




**2-Way Angle / Replaceable Seat**

*† (2) 1/4"-20 mounting holes 180° apart and (1) locking device screw 90° apart*

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