

30VM Series: Pressures to 30,000 psi (2068 bar)

Larger Orifice and Higher Cv than 60VM valves

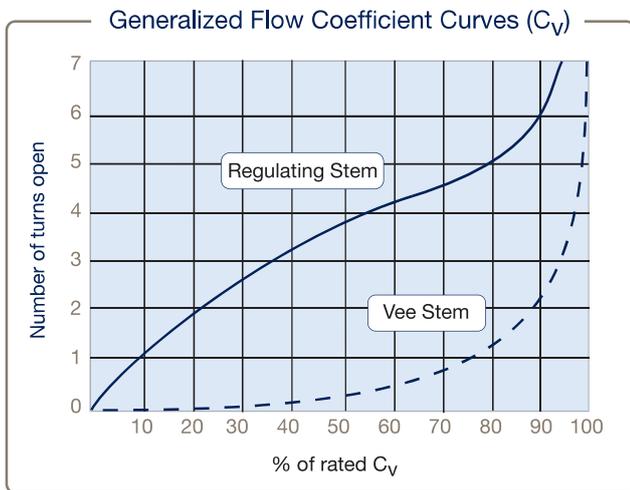


| Tube Outside Diameter Size (inches) | Connection Type | Orifice Size Inches (mm) | Rated C_v^* | Pressure Rating psi (bar) @Room Temperature** |
|-------------------------------------|-----------------|--------------------------|---------------|---|
| 1/4 | F250C | 0.094 (2.39) | 0.12 | 30,000 (2068) |
| 3/8 | F375C | 0.125 (3.18) | 0.23 | 30,000 (2068) |
| 9/16 | F562C | 0.125 (3.18) | 0.33 | 30,000 (2068) |

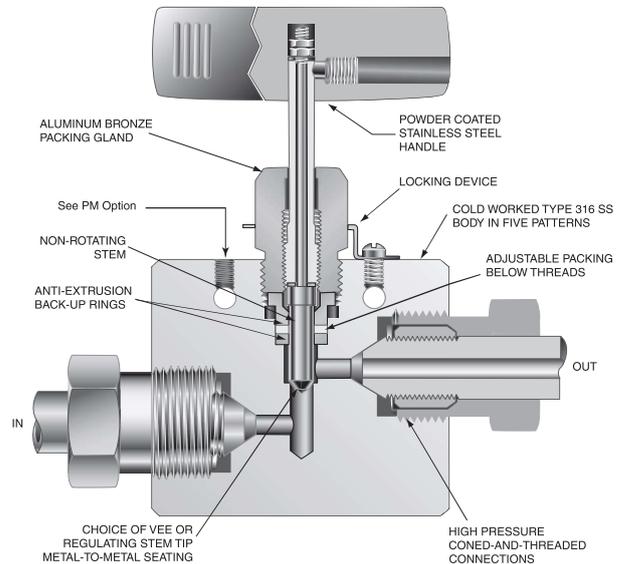
Notes

* C_v values shown are for 2-way straight valve pattern. For 2-way angle patterns, increase CV value 50%. (Based on water). Formula for converting C_v to volumetric flow can be found in Technical Information section.

** Maximum Allowable Working Pressures decrease as temperatures increase - see pressure/temperature rating guide in Technical Information section.



30VM Series Flow Curve for Vee and Regulating Stem Valves



To ensure proper fit use Parker Autoclave tubing

Valve Packing Options:

Standard Parker Autoclave Engineers valves with PTFE packing may be operated from 0°F (-17.8°C) to 450°F (232°C). High and Cryogenic temperature packing and/or extended stuffing box are available for service from -423°F (-252°C) to 1200°F (650°C) by adding the following suffixes to catalog order number:

- B** Cryogenic trim materials and PTFE packing required when below 0°F (-18°C) to -100°F (-73°C)
- LT** Extended stuffing box valve with PTFE packing and Cryogenic trim materials to -423°F (-252°C)
- TG** Standard valve with PTFE-Glass packing -100°F (-73°C) to 600°F (316°C) (See also -B option above when below 0°F (-18°C))
- GY** Standard valve with Graphite Yarn packing 32°F (0°C) to 800°F (427°C). Used when selecting HT option.
- HT** Extended stuffing box valve with Graphite Yarn packing to 1200°F (650°C)

(See "Technical Brochure" for Pressure/Temperature effect on temperatures above ambient.)

Ordering Guide:

For complete information on available stem types, optional connections and additional valve options, see pages 26-27 or contact your Sales Representative. 30VM Series valves are furnished complete with connection components, unless otherwise specified. See High Pressure Fittings and Tubing brochure for compatible products.

Building a Part Number: Example: 30VM4071

| | | | | | |
|------------------------------|--------------|----------------------------|----------------|--------------|-----------|
| Example Part Number: | 30VM | 4 | 07 | 1 | XX |
| Ordering Parameters/Options: | Valve Series | Outside Diameter Tube Size | Stem/Seat Type | Body Pattern | Options |
| Table Reference: (see below) | A | B | C | D | E |

| A - Valve Series | |
|------------------|----------------------------|
| 30VM | High Pressure Needle Valve |

| B - Outside Diameter Tube Size | |
|--------------------------------|-------|
| 4 | 1/4" |
| 6 | 3/8" |
| 9 | 9/16" |

| C - Stem/Seat Type | |
|--------------------|---|
| 07 | Non-Rotating Vee Stem (on-off service) |
| 08 | Non-Rotating Regulating Stem (tapered tip for regulating and shutoff) |
| 87 | Vee Stem with Replaceable Seat (angle valve only) |
| 88 | Regulating Stem with Replaceable Seat (angle valve only) |

Notes: Valve Manuals can be found on our website at www.Autoclave.com. Connection, Running and Seating Torques can be found in the product manual or in our Tools and Installation Catalog Section. Valves that have not been cycled for a substantial period of time may require higher initial actuation torque.

*Replaceable seat option is sold with two (2) seat surfaces 180° apart.

| D - Body Pattern | |
|------------------|------------------------------------|
| 1 | Two-Way Straight |
| 2 | Two-Way Angle |
| 3 | Three-Way, Two on Pressure |
| 4 | Three-Way, One on Pressure |
| 5 | Three-Way, Two Stem Manifold Valve |

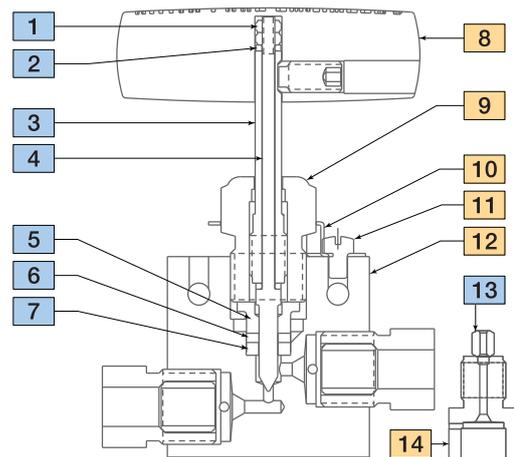
| E - Options | |
|-------------|---|
| K | Antivibration Gland (replaces standard gland) |
| B | All 316 SS Materials required when below 0°F (-18°C) (included in LT) |
| LT | Low Temperature Extension (to -423°F) (includes PTFE packing) |
| TG | PTFE Glass (25%) Packing (to 600°F) |
| GY | Graphite Yarn Packing (to 800°F) |
| HT | High Temperature Extension (to 1200°F) (includes GY packing) |
| SOG | NACE MR0175 Material, Hardness Verification/Certificate |
| HYG | Hydrogen/Helium Upgrade/Seat Testing |

Pneumatic Actuator Options - see Actuator brochure for Suffix Codes
Other materials available upon request. See Technical Brochure for list of common options.
See "Technical Brochure" for Pressure/Temperature effect on temperatures above ambient.

Material of Construction:

| Item # | Description | Material |
|--------|-----------------------------|---------------|
| 1 | Hex Nut | 300 Series SS |
| 2 | Thrust Washer | 17-4 PH |
| 3 | Stem Sleeve | 316 SS |
| 4 | Vee Stem, (3/8" 30VM shown) | 316 SS |
| 5 | Packing Washer | AMPCO 45 |
| 6 | Packing | PTFE |
| 7 | Bottom Washer | 316 SS |
| 8 | Handle | 316 SS |
| 9 | Packing Gland | AMPCO 45 |
| 10 | Locking Device | 302SS |
| 11 | Screw #10 | 18-8 SS |
| 12 | Valve Body | 316 SS |
| 13 | Replaceable Seat | 17-4PH |
| 14 | Seat Retainer | 316 SS |

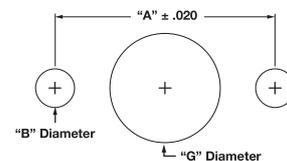
Typical spare parts found in Repair Kits



Panel Hole Sizes:

| Valve Size | Inches | | | |
|------------|--------|-----|------------|------|
| | A | B | Screw Size | G |
| 4 and 6 | 1.38 | .22 | #10-24 | 1.00 |
| 9 | 1.38 | .22 | #10-24 | 1.00 |

Use suffix **-PM** for extra mounting hardware



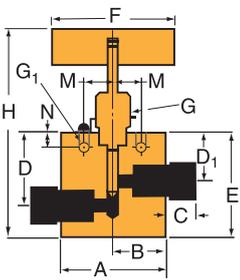
Needle Valve Panel Mount

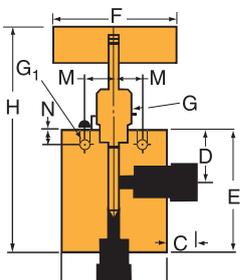
Basic Repair Kits for 316 SS Material:

| Stem Type | | Basic Repair Kit for 316 SS Material | |
|--|-----|--------------------------------------|--|
| | | Outside Diameter Tube: | |
| | | 1/4", 3/8", 9/16" | |
| 2 Way Straight, 2 Way Angle 3 Way 2 On-Pressure, 3 Way 1 On-Pressure | VEE | R30VM7 | |
| | REG | R30VM8 | |
| 2 Way, Replaceable Seat and Stem | VEE | R30VM872 | |
| | REG | R30VM882 | |
| 3 Way, 2 Stem Manifold | VEE | R30VM075 | |
| | REG | R30VM085 | |

When ordering for valves bought with additional suffix options, please include those exact suffix codes when ordering repair kit. (Example: the stem for a manual valve is manufactured differently for a pneumatically actuated valve and the repair kit must include the exact actuator suffix codes).
Valve Manuals can be found on our website at www.Autoclave.com,
Connection, Running and Seating Torques can be found in the product manual or in our Tools and Installation Catalog Section.

30VM Series Dimensions:

| 2 Way Straight | | | | | | |
|---|------------|----------------------|----------------------|----------------------|------------------|-----------------|
| | | Catalog Number | | | | |
| Stem Type | VEE REG | 30VM4071 30VM4081 | 30VM6071 30VM6081 | 30VM9071 30VM9081 | | |
| Outside Diameter Tube | | 1/4 (6.35) | 3/8 (9.53) | 9/16 (14.29) | | |
| Orifice Diameter | | 0.94 (2.39) | 0.125 (3.18) | 0.125 (3.18) | | |
| Dimensions: inches (mm) | | A | B | C | | |
|  | | 2.00 (50.80) | 2.00 (50.80) | 2.62 (66.55) | | |
| | | B | 1.00 (25.40) | 1.00 (25.40) | 1.31 (33.27) | |
| | | C | 0.50 (12.70) | 0.53 (13.46) | 0.81 (20.57) | |
| | | D | 1.50 (38.10) | 1.50 (38.10) | 1.56 (39.62) | |
| | | D1 | 1.12 (28.45) | 1.12 (28.45) | 1.12 (28.45) | |
| | | E | 2.00 (50.80) | 2.00 (50.80) | 2.44 (61.98) | |
| | | F | 3.00 (76.20) | 3.00 (76.20) | 3.00 (76.20) | |
| | | G | 1.00 (25.40) | 1.00 (25.40) | 1.00 (25.40) | |
| | | G1 | 0.22 (5.59) | 0.22 (5.59) | 0.28 (7.11) | |
| | | H* | 4.62 (117.35) | 4.68 (118.87) | 5.06 (128.52) | |
| | | M | 0.69 (17.53) | 0.69 (17.53) | 0.69 (17.53) | |
| | | N | 0.38 (9.65) | 0.38 (9.65) | 0.38 (9.65) | |
| | | Block Thickness | | 1.00 (25.40) | 1.00 (25.40) | 1.50 (38.10) |

| 2 Way Angle | | | | | | |
|--|------------|----------------------|----------------------|----------------------|------------------|-----------------|
| | | Catalog Number | | | | |
| Stem Type | VEE REG | 30VM4072 30VM4082 | 30VM6072 30VM6082 | 30VM9072 30VM9082 | | |
| Outside Diameter Tube | | 1/4 (6.35) | 3/8 (9.53) | 9/16 (14.29) | | |
| Orifice Diameter | | 0.94 (2.39) | 0.125 (3.18) | 0.125 (3.18) | | |
| Dimensions: inches (mm) | | A | B | C | | |
|  | | 2.00 (50.80) | 2.00 (50.80) | 2.62 (66.55) | | |
| | | B | 1.00 (25.40) | 1.00 (25.40) | 1.31 (33.27) | |
| | | C | 0.50 (12.70) | 0.53 (13.46) | 0.81 (20.57) | |
| | | D | 1.12 (28.45) | 1.12 (28.45) | 1.12 (28.45) | |
| | | D1 | - | - | - | |
| | | E | 2.00 (50.80) | 2.12 (53.85) | 2.44 (61.98) | |
| | | F | 3.00 (76.20) | 3.00 (76.20) | 3.00 (76.20) | |
| | | G | 1.00 (25.40) | 1.00 (25.40) | 1.00 (25.40) | |
| | | G1 | 0.22 (5.59) | 0.22 (5.59) | 0.28 (7.11) | |
| | | H* | 4.62 (117.35) | 4.74 (120.40) | 5.06 (128.52) | |
| | | M | 0.69 (17.53) | 0.69 (17.53) | 0.69 (17.53) | |
| | | N | 0.38 (9.65) | 0.38 (9.65) | 0.38 (9.65) | |
| | | Block Thickness | | 1.00 (25.40) | 1.00 (25.40) | 1.50 (38.10) |

G - Packing Gland mounting hole drill size • G1 - Bracket mounting hole size • H* - Dimension is with stem in closed position
All dimensions for reference only and subject to change • For prompt service, Parker Autoclave stocks select products. Consult factory.

30VM Series Dimensions:

| 3 Way, 2 On Pressure | | | | | |
|-------------------------|---------|----------------------|----------------------|----------------------|------------------|
| | | Catalog Number | | | |
| Stem Type | VEE REG | 30VM4073 30VM4083 | 30VM6073 30VM6083 | 30VM9073 30VM9083 | |
| Outside Diameter Tube | | 1/4 (6.35) | 3/8 (9.53) | 9/16 (14.29) | |
| Orifice Diameter | | 0.94 (2.39) | 0.125 (3.18) | 0.125 (3.18) | |
| Dimensions: inches (mm) | | A | B | C | |
| | | 2.00 (50.80) | 2.00 (50.80) | 2.62 (66.55) | |
| | | B | 1.00 (25.40) | 1.00 (25.40) | 1.31 (33.27) |
| | | C | 0.50 (12.70) | 0.53 (13.46) | 0.81 (20.57) |
| | | D | 1.50 (38.10) | 1.50 (38.10) | 1.56 (39.62) |
| | | D1 | 1.12 (28.45) | 1.12 (28.45) | 1.12 (28.45) |
| | | E | 2.12 (53.85) | 2.50 (63.50) | 2.88 (73.15) |
| | | F | 3.00 (76.20) | 3.00 (76.20) | 3.00 (76.20) |
| | | G | 1.00 (25.40) | 1.00 (25.40) | 1.00 (25.40) |
| | | G1 | 0.22 (5.59) | 0.22 (5.59) | 0.28 (7.11) |
| | | H* | 4.74 (120.40) | 5.12 (130.05) | 5.49 (139.45) |
| | | M | 0.69 (17.53) | 0.69 (17.53) | 0.69 (17.53) |
| | | N | 0.38 (9.65) | 0.38 (9.65) | 0.38 (9.65) |
| | | Block Thickness | | 1.00 (25.40) | 1.00 (25.40) |

| 3 Way, 1 On Pressure | | | | | |
|-------------------------|---------|----------------------|----------------------|----------------------|------------------|
| | | Catalog Number | | | |
| Stem Type | VEE REG | 30VM4074 30VM4084 | 30VM6074 30VM6084 | 30VM9074 30VM9084 | |
| Outside Diameter Tube | | 1/4 (6.35) | 3/8 (9.53) | 9/16 (14.29) | |
| Orifice Diameter | | 0.94 (2.39) | 0.125 (3.18) | 0.125 (3.18) | |
| Dimensions: inches (mm) | | A | B | C | |
| | | 2.00 (50.80) | 2.00 (50.80) | 2.62 (66.55) | |
| | | B | 1.00 (25.40) | 1.00 (25.40) | 1.31 (33.27) |
| | | C | 0.50 (12.70) | 0.53 (13.46) | 0.81 (20.57) |
| | | D | 1.12 (28.45) | 1.12 (28.45) | 1.12 (28.45) |
| | | D1 | - | - | - |
| | | E | 2.00 (50.80) | 2.12 (53.85) | 2.44 (61.98) |
| | | F | 3.00 (76.20) | 3.00 (76.20) | 3.00 (76.20) |
| | | G | 1.00 (25.40) | 1.00 (25.40) | 1.00 (25.40) |
| | | G1 | 0.22 (5.59) | 0.22 (5.59) | 0.28 (7.11) |
| | | H* | 4.62 (117.35) | 4.74 (120.40) | 5.12 (130.05) |
| | | M | 0.69 (17.53) | 0.69 (17.53) | 0.69 (17.53) |
| | | N | 0.38 (9.65) | 0.38 (9.65) | 0.38 (9.65) |
| | | Block Thickness | | 1.00 (25.40) | 1.00 (25.40) |

| 2 Way Angle Replaceable Seat | | | | | |
|------------------------------|---------|----------------------|----------------------|----------------------|------------------|
| | | Catalog Number | | | |
| Stem Type | VEE REG | 30VM4872 30VM4882 | 30VM6872 30VM6882 | 30VM9872 30VM9882 | |
| Outside Diameter Tube | | 1/4 (6.35) | 3/8 (9.53) | 9/16 (14.29) | |
| Orifice Diameter | | 0.94 (2.39) | 0.125 (3.18) | 0.125 (3.18) | |
| Dimensions: inches (mm) | | A | B | C | |
| | | 2.00 (50.80) | 2.00 (50.80) | 2.62 (66.55) | |
| | | B | 1.00 (25.40) | 1.00 (25.40) | 1.31 (33.27) |
| | | C | 0.50 (12.70) | 0.53 (13.46) | 0.81 (20.57) |
| | | D | 1.12 (28.45) | 1.12 (28.45) | 1.12 (28.45) |
| | | D1 | 2.06 (52.32) | 2.31 (58.67) | 2.62 (66.55) |
| | | E | 2.38 (60.45) | 2.38 (60.45) | 2.44 (61.98) |
| | | F | 3.00 (76.20) | 3.00 (76.20) | 3.00 (76.20) |
| | | G | 1.00 (25.40) | 1.00 (25.40) | 1.00 (25.40) |
| | | G1 | 0.22 (5.59) | 0.22 (5.59) | 0.28 (7.11) |
| | | H* | 5.80 (147.32) | 6.05 (153.67) | 6.45 (163.83) |
| | | M | 0.69 (17.53) | 0.69 (17.53) | 0.69 (17.53) |
| | | N | 0.38 (9.65) | 0.38 (9.65) | 0.38 (9.65) |
| | | Block Thickness | | 1.00 (25.40) | 1.00 (25.40) |

| 3 Way, 2 Stem Manifold | | | | | |
|-------------------------|---------|----------------------|----------------------|----------------------|------------------|
| | | Catalog Number | | | |
| Stem Type | VEE REG | 30VM4075 30VM4085 | 30VM6075 30VM6085 | 30VM9075 30VM9085 | |
| Outside Diameter Tube | | 1/4 (6.35) | 3/8 (9.53) | 9/16 (14.29) | |
| Orifice Diameter | | 0.94 (2.39) | 0.125 (3.18) | 0.125 (3.18) | |
| Dimensions: inches (mm) | | A | B | C | |
| | | 2.00 (50.80) | 2.00 (50.80) | 2.62 (66.55) | |
| | | B | 1.00 (25.40) | 1.00 (25.40) | 1.31 (33.27) |
| | | C | 0.50 (12.70) | 0.53 (13.46) | 0.81 (20.57) |
| | | D | 1.53 (38.86) | 1.62 (41.15) | 1.88 (47.75) |
| | | D1 | 1.12 (28.45) | 1.12 (28.45) | 1.12 (28.45) |
| | | E | 3.06 (77.72) | 3.25 (82.55) | 3.75 (95.25) |
| | | F | 3.00 (76.20) | 3.00 (76.20) | 3.00 (76.20) |
| | | G | 1.00 (25.40) | 1.00 (25.40) | 1.00 (25.40) |
| | | G1 | 0.22 (5.59) | 0.22 (5.59) | 0.28 (7.11) |
| | | H* | 5.68 (144.27) | 5.87 (149.10) | 6.37 (161.80) |
| | | M | 0.69 (17.53) | 0.69 (17.53) | 0.69 (17.53) |
| | | N | 0.38 (9.65) | 0.38 (9.65) | 0.38 (9.65) |
| | | Block Thickness | | 1.00 (25.40) | 1.00 (25.40) |

G - Packing Gland mounting hole drill size • G1 - Bracket mounting hole size • H* - Dimension is with stem in closed position
 All dimensions for reference only and subject to change • For prompt service, Parker Autoclave stocks select products. Consult factory.

40VM Series: Pressures to 40,000 psi (2760 bar)

For use with 9/16" High Pressure Tubing w/ .250" ID

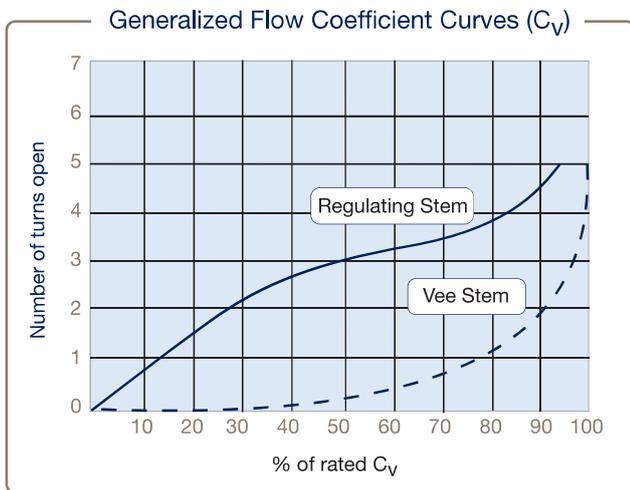


| Tube Outside Diameter Size (inches) | Connection Type | Orifice Size Inches (mm) | Rated C_v^* | Pressure Rating psi (bar) @Room Temperature** |
|-------------------------------------|-----------------|--------------------------|---------------|---|
| 9/16 | F562C40 | 0.109 (2.77) | 0.28 | 40,000 (2760) |

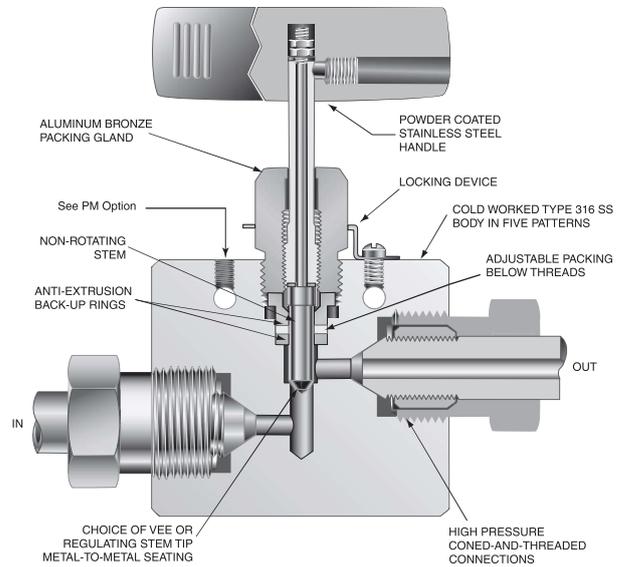
Notes

* C_v values shown are for 2-way straight valve pattern. For 2-way angle patterns, increase C_v value 50%. (Based on water). Formula for converting C_v to volumetric flow can be found in Technical Information section.

** Maximum Allowable Working Pressures decrease as temperatures increase - see pressure/temperature rating guide in Technical Information section.



40VM Series Flow Curve for Vee and Regulating Stem Valves



To ensure proper fit use Parker Autoclave tubing

Valve Packing Options:

Standard Parker Autoclave Engineers valves with nylon/leather/nylon packing may be operated from 40°F (4.4°C) to 230°F (110°C). Extended temperature packing is available for service from -423°F (-252°C) to 1200°F (650°C) by adding the following suffixes to catalog order number:

- B** Cryogenic trim materials and PTFE packing required when below 0°F (-18°C) to -100°F (-73°C)
- LT** Extended stuffing box valve with PTFE packing and Cryogenic trim materials to -423°F (-252°C)
- *TG** Standard valve with PTFE-Glass packing -100°F (-73°C) to 600°F (316°C) (See also -B option above when below 0°F (-18°C))
- GY** Standard valve with Graphite Yarn packing 32°F (0°C) to 800°F (427°C). Used when selecting HT option.
- HT** Extended stuffing box valve with Graphite Yarn packing to 1200°F (650°C)

Note: *40VM and 60VM TG packing options supplied with PEEK/PTFE Glass/PEEK

(See "Technical Brochure" for Pressure/Temperature effect on temperatures above ambient.)