

MAXIMATOR®

Medium Pressure Valves

Pressures to 21,000 psi (1,500 bar)



Ordering Information

Typical catalog number: **21V4M071**

| 21V | 4M | 07 | 1 | OPTIONS |
|--------------|--|---|---|--|
| Valve Series | O.D. Tube Size | Stem Type | Body Pattern | Extreme temperature option, see below. |
| 21V | 4M – 1/4" 6M – 3/8" 9M – 9/16" 12M – 3/4" 16M – 1" | 07 – VEE stem 08 – REGULATING stem (tapered tip for regulating and shutoff) 87 – VEE stem with replaceable seat 88 – REGULATING stem with replaceable seat | 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 | |

Special Designs for Extreme Temperatures

Standard valves are supplied with Teflon/Carbon packing and may be operated to 450°F (230°C). High temperature packing and/or extended stuffing box are available for service from -423°F to 1200°F (-217°C to 650°C) by adding the following suffixes to catalog order number.

- **TG** standard valve with teflon glass packing to 600°F (315°C).
- **GY** standard valve with graphite braided yarn packing to 800°F (425°C).
- **HT** extended stuffing box valve with graphite braided yarn packing to 1200°F (650°C).
- **B** standard valve with cryogenic trim materials and Teflon packing to -100°F (-73°C).
- **LT** extended stuffing box valve with teflon packing and cryogenic trim materials to -423°F (-217°C).

Repair Kits

Consult your **MAXIMATOR** representative for repair kits and valve bodies. Refer to the Tools and Installation section for proper maintenance procedures.

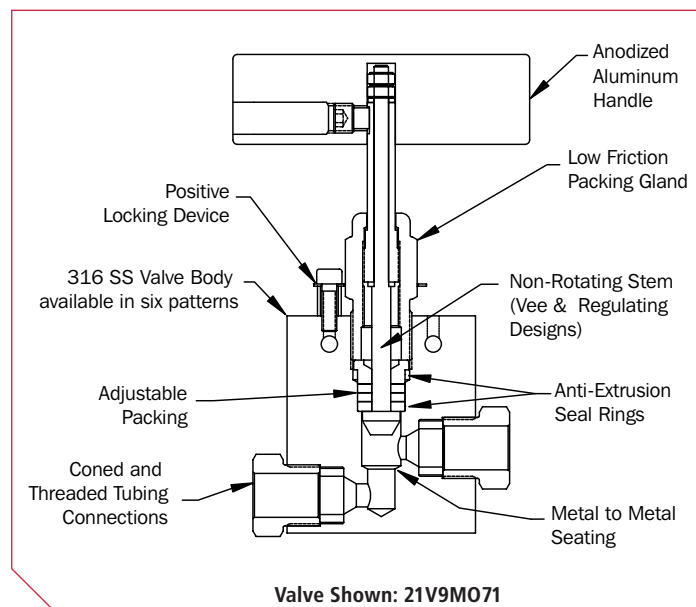
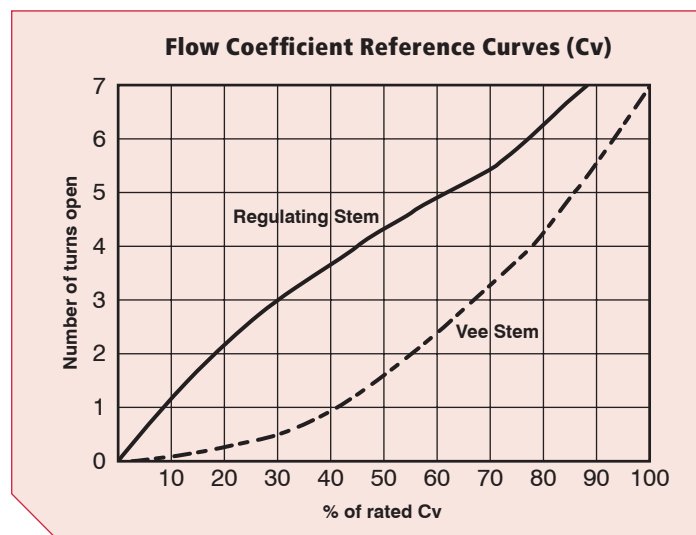
MAXIMATOR medium pressure valves with metal to metal seats have a high level of safety and reliability under adverse operating conditions. These valves may be used both with gases and liquids.

Traceability is ensured through extensively documented data (batch number, maximum pressure, material number, type designation). All medium pressure valves include glands and collars.

| O.D. Size in. (mm) | Connection Type | Orifice Size in. (mm) | Rated Cv* | Pressure/Temp. Rating psi @ R.T. (bar)** |
|--------------------|-----------------|-----------------------|-----------|--|
| 1/4 (6.35) | 4MF | 0.125 (3.2) | 0.31 | 21,000 (1,500) |
| 3/8 (9.53) | 6MF | 0.219 (5.6) | 0.75 | 21,000 (1,500) |
| 9/16 (14.29) | 9MF | 0.312 (7.9) | 1.30 | 21,000 (1,500) |
| 3/4 (19.05) | 12MF | 0.438 (11.1) | 2.50 | 21,000 (1,500) |
| 1 (25.4) | 16MF | 0.562 (14.3) | 4.40 | 21,000 (1,500) |

* Cv values shown are for 2-way straight pattern vee stem valves. For 2-way angle patterns, increase the Cv value by 50%.

** See page 2 in the Technical Section for Pressure/Temperature Rating Chart.



Valve Shown: 21V9M071

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Adapters and Couplings
Medium Pressure
to 21,000 psi (1,500 bar)

Accessories
High Pressure
to 65,000 psi (4,500 bar)

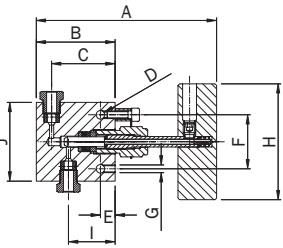
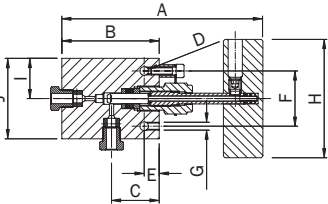
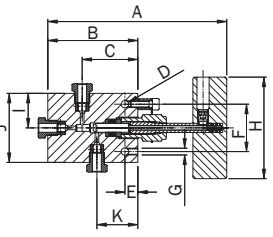
Tools and Installation
Ultra High Pressure
to 152,000 psi (10,500 bar)

Technical Information
Valve Actuators

Ball Valves
to 21,000 psi (1,500 bar)

MAXIMATOR®

Medium Pressure Valves Pressures to 21,000 psi (1,500 bar)

| Valve Pattern | Catalog Number | Stem Type | O.D. Tube in. | Orifice in. (mm) | Dimensions in. (mm) | | | | | | | | | | Valve Panel Hole | Block Thickness |
|---|----------------|-----------|---------------|------------------|---------------------|---------|--------|--------|--------|--------|-------|--------|--------|--------|------------------|-----------------|
| | | | | | A | B | C | D | E | F | H | I | J | K | | |
| 2-Way Straight | | | | | | | | | | | | | | | | |
|  | 21V4M071 | Vee | 1/4 | 0.125 | 4.61 | 2.01 | 1.62 | 0.22 | 0.37 | 1.24 | 2.95 | 1.19 | 2.01 | | 0.75 | 0.79 |
| | 21V4M081 | Reg | | (3.2) | (117) | (51) | (41.1) | (5.6) | (9.5) | (31.5) | (75) | (30.2) | (51) | | (19.1) | (20.1) |
| | 21V6M071 | Vee | 3/8 | 0.219 | 4.61 | 2.01 | 1.62 | 0.22 | 0.37 | 1.24 | 2.95 | 1.19 | 2.01 | | 0.75 | 0.79 |
| | 21V6M081 | Reg | | (5.6) | (117) | (51) | (41.1) | (5.6) | (9.5) | (31.5) | (75) | (30.2) | (51) | | (19.1) | (20.1) |
| | 21V9M071 | Vee | 9/16 | 0.312 | 6.35 | 2.88 | 2.38 | 0.22 | 0.37 | 1.38 | 3.94 | 1.75 | 2.50 | | 1.00 | 1.02 |
| | 21V9M081 | Reg | | (7.9) | (161.3) | (73.2) | (60.5) | (5.6) | (9.5) | (35) | (100) | (44.5) | (63.5) | | (25.4) | (25.9) |
| | 21V12M071 | Vee | 3/4 | 0.438 | 7.05 | 3.74 | 3.00 | 0.43 | 0.63 | 1.76 | 10.31 | 2.25 | 3.00 | | 1.25 | 1.38 |
| | 21V12M081 | Reg | | (11.1) | (179) | (95) | (76) | (11) | (16) | (44.7) | (262) | (57.2) | (76) | | (31.8) | (35) |
| | 21V16M071 | Vee | 1 | 0.562 | 8.98 | 4.65 | 3.75 | 0.53 | 1.13 | 2.50 | 10.31 | 2.81 | 4.13 | | 1.62 | 1.77 |
| | 21V16M081 | Reg | | (14.3) | (228) | (118) | (95.3) | (13.5) | (28.7) | (63.5) | (262) | (71.4) | (105) | | (41.1) | (45) |
| 2-Way Angle | | | | | | | | | | | | | | | | |
|  | 21V4M072 | Vee | 1/4 | 0.125 | 5.00 | 2.43 | 1.19 | 0.22 | 0.37 | 1.24 | 2.95 | 1.00 | 2.01 | | 0.75 | 0.79 |
| | 21V4M082 | Reg | | (3.2) | (127) | (61.7) | (30.2) | (5.6) | (9.5) | (31.5) | (75) | (25.4) | (51) | | (19.1) | (20.1) |
| | 21V6M072 | Vee | 3/8 | 0.219 | 5.00 | 2.43 | 1.19 | 0.22 | 0.37 | 1.24 | 2.95 | 1.00 | 2.01 | | 0.75 | 0.79 |
| | 21V6M082 | Reg | | (5.6) | (127) | (61.7) | (30.2) | (5.6) | (9.5) | (31.5) | (75) | (25.4) | (51) | | (19.1) | (20.1) |
| | 21V9M072 | Vee | 9/16 | 0.312 | 6.85 | 3.38 | 1.75 | 0.22 | 0.37 | 1.38 | 3.94 | 1.25 | 2.50 | | 1.00 | 1.02 |
| | 21V9M082 | Reg | | (7.9) | (174) | (85.9) | (44.5) | (5.6) | (9.5) | (35) | (100) | (31.8) | (63.5) | | (25.4) | (25.9) |
| | 21V12M072 | Vee | 3/4 | 0.438 | 7.56 | 4.25 | 2.25 | 0.43 | 0.63 | 1.76 | 10.31 | 1.50 | 3.00 | | 1.25 | 1.38 |
| | 21V12M082 | Reg | | (11.1) | (192) | (108) | (57.2) | (11) | (16) | (44.7) | (262) | (38) | (76) | | (31.8) | (35) |
| | 21V16M072 | Vee | 1 | 0.562 | 9.45 | 5.12 | 2.81 | 0.53 | 1.13 | 2.50 | 10.31 | 2.07 | 4.13 | | 1.62 | 1.77 |
| | 21V16M082 | Reg | | (14.3) | (240) | (130) | (71.4) | (13.5) | (28.7) | (63.5) | (262) | (52.5) | (105) | | (41.1) | (45) |
| 3-Way / 2 on Pressure | | | | | | | | | | | | | | | | |
|  | 21V4M073 | Vee | 1/4 | 0.125 | 5.20 | 2.62 | 1.62 | 0.22 | 0.37 | 1.24 | 2.95 | 1.00 | 2.01 | 1.19 | 0.75 | 0.79 |
| | 21V4M083 | Reg | | (3.2) | (132) | (66.5) | (41.1) | (5.6) | (9.5) | (31.5) | (75) | (25.4) | (51) | (30.2) | (19.1) | (20.1) |
| | 21V6M073 | Vee | 3/8 | 0.219 | 5.20 | 2.62 | 1.62 | 0.22 | 0.37 | 1.24 | 2.95 | 1.00 | 2.01 | 1.19 | 0.75 | 0.79 |
| | 21V6M083 | Reg | | (5.6) | (132) | (66.5) | (41.1) | (5.6) | (9.5) | (31.5) | (75) | (25.4) | (51) | (30.2) | (19.1) | (20.1) |
| | 21V9M073 | Vee | 9/16 | 0.312 | 7.09 | 3.62 | 2.38 | 0.22 | 0.37 | 1.38 | 3.94 | 1.25 | 2.50 | 1.75 | 1.00 | 1.02 |
| | 21V9M083 | Reg | | (7.9) | (180.1) | (92) | (60.5) | (5.6) | (9.5) | (35) | (100) | (31.8) | (63.5) | (44.5) | (25.4) | (25.9) |
| | 21V12M073 | Vee | 3/4 | 0.438 | 7.97 | 4.63 | 3.00 | 0.43 | 0.63 | 1.76 | 10.31 | 1.50 | 3.00 | 2.25 | 1.25 | 1.38 |
| | 21V12M083 | Reg | | (11.1) | (201) | (117.5) | (76) | (11) | (16) | (44.7) | (262) | (38) | (76) | (57.2) | (31.8) | (35) |
| | 21V16M073 | Vee | 1 | 0.562 | 10.20 | 5.87 | 3.75 | 0.53 | 1.13 | 2.50 | 10.31 | 2.07 | 4.13 | 2.81 | 1.62 | 1.77 |
| | 21V16M083 | Reg | | (14.3) | (259) | (149) | (95.3) | (13.5) | (28.7) | (63.5) | (262) | (52.5) | (105) | (71.4) | (41.1) | (45) |

G - Panel mounting screw thread size 10-24 UNC.
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Ball Valves
to 21,000 psi (1,500 bar)

MAXIMATOR®

Medium Pressure Valves

Pressures to 21,000 psi (1,500 bar)

| Valve Pattern | Catalog Number | Stem Type | O.D. Tube in. | Orifice in. (mm) | Dimensions in. (mm) | | | | | | | | | | Valve Panel Hole | Block Thickness |
|---------------------------------------|----------------|-----------|---------------|------------------|---------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|-----------------|
| | | | | | A | B | C | D | E | F | H | I | J | K | | |
| 3-Way / 1 on Pressure | | | | | | | | | | | | | | | | |
| | 21V4M074 | Vee | 1/4 | 0.125 (3.2) | 5.00 (127) | 2.43 (61.7) | 1.19 (30.2) | 0.22 (5.6) | 0.37 (9.5) | 1.24 (31.5) | 2.95 (75) | 1.00 (25.4) | 2.01 (51) | 0.75 (19.1) | 0.79 (20.1) | |
| | 21V4M084 | Reg | | | | | | | | | | | | | | |
| | 21V6M074 | Vee | 3/8 | 0.219 (5.6) | 5.00 (127) | 2.43 (61.7) | 1.19 (30.2) | 0.22 (5.6) | 0.37 (9.5) | 1.24 (31.5) | 2.95 (75) | 1.00 (25.4) | 2.01 (51) | 0.75 (19.1) | 0.79 (20.1) | |
| | 21V6M084 | Reg | | | | | | | | | | | | | | |
| | 21V9M074 | Vee | 9/16 | 0.312 (7.9) | 6.85 (174) | 3.38 (85.9) | 1.75 (44.5) | 0.22 (5.6) | 0.37 (9.5) | 1.38 (35) | 3.94 (100) | 1.25 (31.8) | 2.50 (63.5) | 1.00 (25.4) | 1.02 (25.9) | |
| | 21V9M084 | Reg | | | | | | | | | | | | | | |
| | 21V12M074 | Vee | 3/4 | 0.438 (11.1) | 7.56 (192) | 4.25 (108) | 2.25 (57.2) | 0.43 (11) | 0.63 (16) | 1.76 (44.7) | 10.31 (262) | 1.50 (38) | 3.00 (76) | 1.25 (31.8) | 1.38 (35) | |
| | 21V12M084 | Reg | | | | | | | | | | | | | | |
| | 21V16M074 | Vee | 1 | 0.562 (14.3) | 9.53 (242) | 5.12 (130) | 2.81 (71.4) | 0.53 (13.5) | 1.13 (28.7) | 2.50 (63.5) | 10.31 (262) | 2.07 (52.5) | 4.13 (105) | 1.62 (41.1) | 1.77 (45) | |
| | 21V16M084 | Reg | | | | | | | | | | | | | | |
| 3-Way / 2-Stem Manifold | | | | | | | | | | | | | | | | |
| | 21V4M075 | Vee | 1/4 | 0.125 (3.2) | 8.54 (217) | 3.39 (86) | 1.69 (43) | 0.22 (5.6) | 0.37 (9.5) | 1.24 (31.5) | 2.95 (75) | 1.00 (25.4) | 2.01 (51) | 1.19 (30.2) | 0.75 (19.1) | 0.79 (20.1) |
| | 21V4M085 | Reg | | | | | | | | | | | | | | |
| | 21V6M075 | Vee | 3/8 | 0.219 (5.6) | 8.54 (217) | 3.39 (86) | 1.69 (43) | 0.22 (5.6) | 0.37 (9.5) | 1.24 (31.5) | 2.95 (75) | 1.00 (25.4) | 2.01 (51) | 1.19 (30.2) | 0.75 (19.1) | 0.79 (20.1) |
| | 21V6M085 | Reg | | | | | | | | | | | | | | |
| | 21V9M075 | Vee | 9/16 | 0.312 (7.9) | 12.06 (306.2) | 5.12 (130) | 2.56 (65) | 0.22 (5.6) | 0.37 (9.5) | 1.38 (35) | 3.94 (100) | 1.25 (31.8) | 2.50 (63.5) | 1.75 (44.5) | 1.00 (25.4) | 1.02 (25.9) |
| | 21V9M085 | Reg | | | | | | | | | | | | | | |
| | 21V12M075 | Vee | 3/4 | 0.438 (11.1) | 13.07 (332) | 6.50 (165) | 3.25 (82.5) | 0.43 (11) | 0.63 (16) | 1.76 (44.7) | 10.31 (262) | 1.50 (38) | 3.00 (76) | 2.25 (57.2) | 1.25 (31.8) | 1.38 (35) |
| | 21V12M085 | Reg | | | | | | | | | | | | | | |
| | 21V16M075 | Vee | 1 | 0.562 (14.3) | 16.18 (411) | 7.52 (191) | 3.76 (95.5) | 0.53 (13.5) | 1.13 (28.7) | 2.50 (63.5) | 10.31 (262) | 2.07 (52.5) | 4.13 (105) | 2.81 (71.4) | 1.62 (41.1) | 1.77 (45) |
| | 21V16M085 | Reg | | | | | | | | | | | | | | |
| 2-Way Angle / Replaceable Seat | | | | | | | | | | | | | | | | |
| | 21V4M872 | Vee | 1/4 | 0.125 (3.2) | 4.84 (123) | 2.25 (57.2) | 1.19 (30.2) | 0.22 (5.6) | 0.37 (9.5) | 1.24 (31.5) | 2.95 (75) | 1.00 (25.4) | 2.01 (51) | 0.75 (19.1) | 0.79 (20.1) | |
| | 21V4M882 | Reg | | | | | | | | | | | | | | |
| | 21V6M872 | Vee | 3/8 | 0.219 (5.6) | 4.84 (123) | 2.25 (57.2) | 1.19 (30.2) | 0.22 (5.6) | 0.37 (9.5) | 1.24 (31.5) | 2.95 (75) | 1.00 (25.4) | 2.01 (51) | 0.75 (19.1) | 0.79 (20.1) | |
| | 21V6M882 | Reg | | | | | | | | | | | | | | |
| | 21V9M872 | Vee | 9/16 | 0.312 (7.9) | 6.68 (169.6) | 3.21 (81.5) | 1.75 (44.5) | 0.22 (5.6) | 0.37 (9.5) | 1.38 (35) | 3.94 (100) | 1.25 (31.8) | 2.50 (63.5) | 1.00 (25.4) | 1.02 (25.9) | |
| | 21V9M882 | Reg | | | | | | | | | | | | | | |
| | 21V12M872 | Vee | 3/4 | 0.438 (11.1) | 7.56 (192) | 4.25 (108) | 2.25 (57.2) | 0.43 (11) | 0.63 (16) | 1.76 (44.7) | 10.31 (262) | 1.50 (38) | 3.00 (76) | 1.25 (31.8) | 1.38 (35) | |
| | 21V12M882 | Reg | | | | | | | | | | | | | | |
| | 21V16M872 | Vee | 1 | 0.562 (14.3) | 9.57 (243) | 5.25 (133.3) | 2.81 (71.4) | 0.53 (13.5) | 1.13 (28.7) | 2.50 (63.5) | 10.31 (262) | 2.07 (52.5) | 4.13 (105) | 1.62 (41.1) | 1.77 (45) | |
| | 21V16M882 | Reg | | | | | | | | | | | | | | |

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