



Specialty Products

MAXIMATOR has been designing and manufacturing specialty products to serve the high pressure market for over thirty years and has a worldwide reputation for quality and reliability.

Specialty Products features:

- ▶ Relief Valves rated up to 10,000 psig designed for gas and liquid service.
- ▶ MicroMetering Valves come standard with coned and threaded connections rated to 65,000 psig.
- ▶ Cryogenic Valves are designed for low temperature service down to -423° F.
- ▶ High Temperature Valves are designed for temperatures up to 1200° F.
- ▶ Block and Bleed Valves are designed for blocking, bleeding and calibrating of pressure gauges and transmitters up to 22,500 psi.
- ▶ Manifold Blocks are very compact and feature six connections.

HPT offers a diverse line of high pressure equipment for all your extreme applications. Not all options can be applied to the standard valve series, see specific product pages for ordering options.

Note: When selecting multiple items, the pressure rating would be that of the lowest rated component.

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Relief Valves

Pressures to 10,000 psi

HPT MT10RV series proportional relief valves are designed to protect systems and components against over-pressure for both gas and liquid applications. The unique poppet design allows for chatter free pressure release and excellent deadband pressure control. The soft seat design provides bubble tight shut-off and increased cycle life over conventional metal to metal seat relief valves. The MT10RV series proportional relief valves are designed to open gradually as the pressure increases, they are not recommended for full capacity at a given pressure, and therefore are not certified to ASME code requirements.

MT10RV Features:

- Gas or Liquid Service
- 316L Stainless Steel Body
- Nylon Seats
- Seal materials are PTFE/EPDM
- In line or panel mounting
- Externally adjustable
- Safety weep hole for seal area leak detection

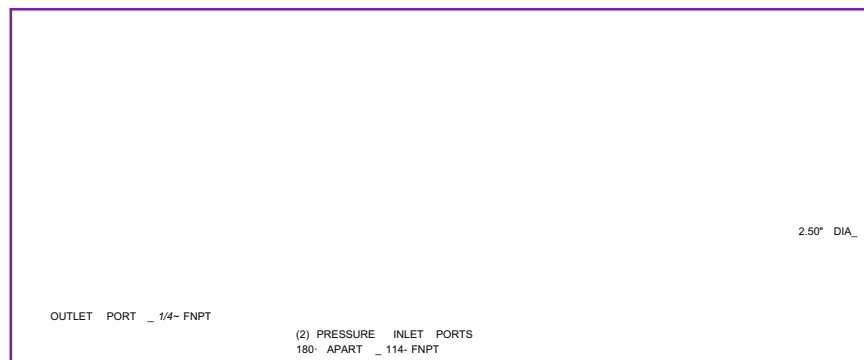
Repair Kits

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

| Catalog Number | Connection Size | | Orifice (in.) | Rated Cv | Pressure Rating (psi) @ R.T. | | Valve Panel Hole | Body Diameter |
|----------------|-----------------|----------|---------------|----------|------------------------------|-----------------|------------------|---------------|
| | Inlet | Outlet | | | Minimum Setting | Maximum Setting | | |
| MT10RV | 1/4" FNPT | 1/4 FNPT | 0.070 | 0.12 | 1,000 | 10,000 | 1.38 | 1.50 |

All dimensions are for reference only and are subject to change.

When selecting multiple items, the pressure rating would be that of the lowest rated components.



MT10RV

MicroMetering Valves

Pressures to 65,000 psi

MAXIMATOR Micrometering valves are designed for metering small flow rates with precise repeatable control for both gas and liquids. The metering barrel allows for fine adjustments and consistent settings. These valves are for metering control only, and are not recommended to be used as complete shutoff valves. Traceability is ensured through extensively documented data (batch number, maximum pressure, material number, type designation). All Micrometering valves come with female coned and threaded connections.

Ordering Information

Typical catalog number: **65V4H882-MV**

| 65V | 4H | 88 | 2 | -MV |
|--------------|----------------|--------------------|-------------------|-------------------|
| Valve Series | O.D. Tube Size | Stem Type | Body Pattern | Options |
| 65V | 4H - 1/4" | 88 - Metering Stem | 2 - two-way angle | MV-Micro Metering |

Temperature Ranges

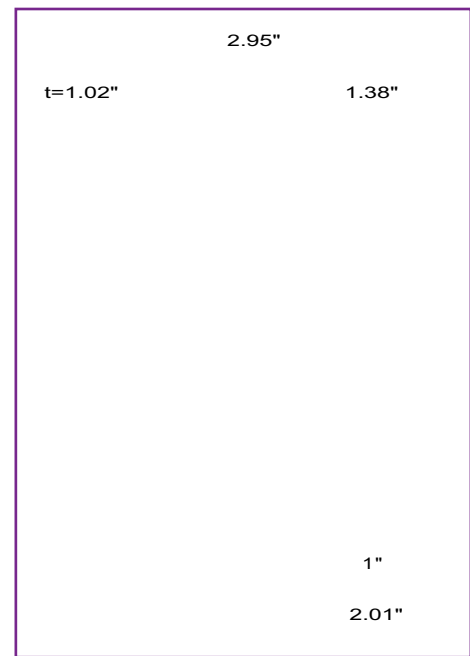
Standard valves are supplied with Teflon/Carbon packing and may be operated to 450°F. Consult **HPT** for higher temperature packing ratings.

Repair Kits

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

| O.D. Size (in.) | Connection Type | Orifice Size (in.) | Rated Cv | Press/Temp (psi@RT)** |
|-----------------|-----------------|--------------------|----------|-----------------------|
| 1/4 | 1/4 HF | 0.062 | 0.004 | 65,000 |

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



65V4H882-MV

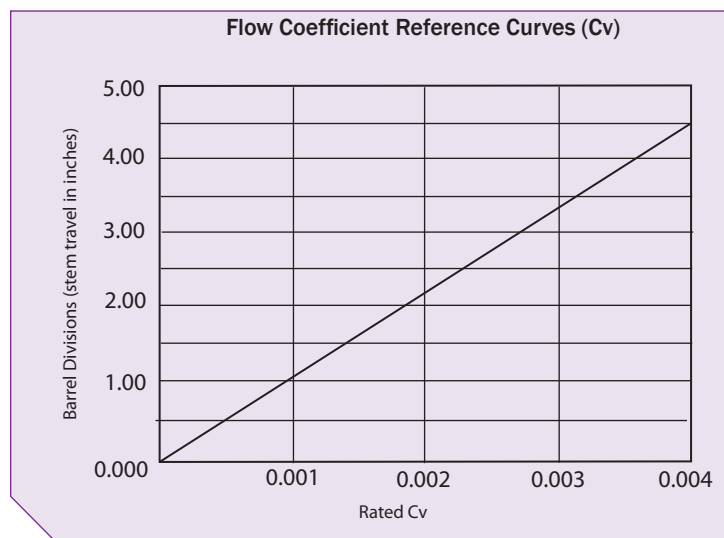
t = Valve body thickness

Panel mounting screw size 10-24 UNC.

Micrometering Valves are not recommended to be used as shutoff valves, operating these valves below the "0" barrel position may result in permanent stem damage.

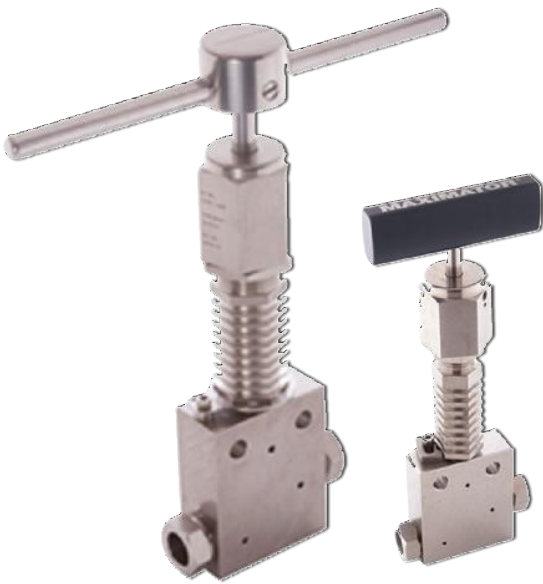
One handle revolution = 0.020" (.50 mm) of stem travel.

All dimensions are for reference only and are subject to change.



Cryogenic Valves

Temperatures to -423 °F



MAXIMATOR low temperature 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.

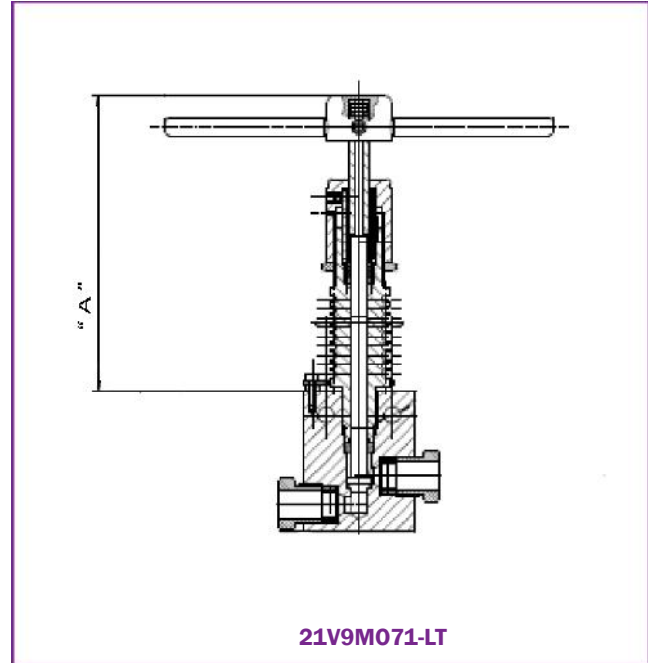
Traceability is ensured through extensively documented data (batch number, maximum pressure, material number, type designation). All valves include glands and collars.

Ordering Information

Typical catalog number: **21V4M071-LT**

| 21V | 4M | 07 | 1 | -LT |
|--------------|--|---|--------------------------------|--|
| Valve Series | O.D. Tube Size | Stem Type | Body Pattern | Option |
| 21V | 4M - 1/4" | 07 - VEE stem | 1 - two-way straight | LT - Low Temperature option with extended stuffing box |
| | 6M - 3/8" | 08 - REGULATING stem (tapered tip for regulating and shutoff) | 2 - two-way angle | |
| | 9M - 9/16" | 87 - VEE stem with replaceable seat | 3 - three-way, two on pressure | |
| | 12M - 3/4" | | 4 - three-way, one on pressure | |
| 16M - 1" | 88 - REGULATING stem with replaceable seat | 5 - three-way, two-stem manifold | | |
| 36V or 65V | | 4H - 1/4" | | |
| | | 6H - 3/8" | | |
| | 9H - 9/16" | | | |

Ordering numbers for all valves can be found by using our Maximator Part Number Generator located on our website, www.highpressuretech.com/catalogs.html Add the suffix -LT to the part number to choose the valves created to combat harsh, low temperature environments.



See Page 5 (HT Valves) for measurements on all sizes of this valve series.

Temperature Ranges

The Low Temperature Valves contain an extended stuffing box with Teflon packing and cryogenic trim material for line temperatures to -423 ° F. The extended packing area is raised away from the pressure stream and is limited to -100° F. The Low Temperature Valves are recommended for vertical installation only.

Repair Kits

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

High Temperature Valves

Temperatures to 1200 °F

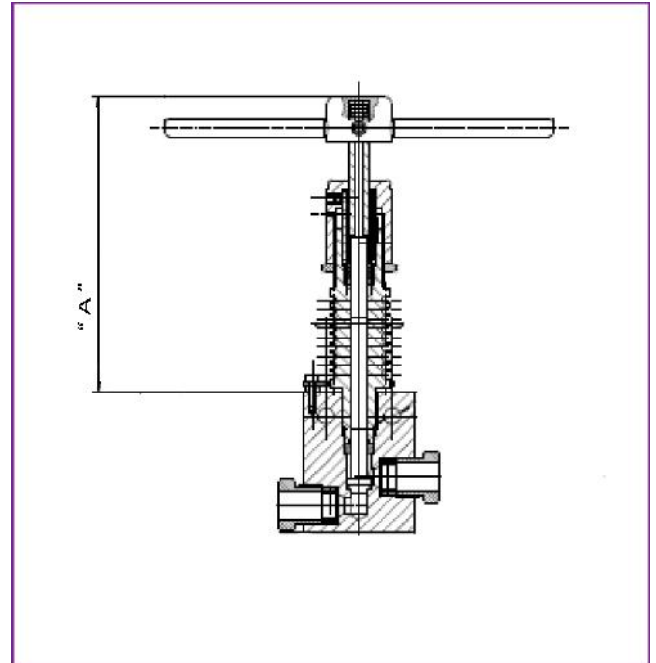


MAXIMATOR High Temperature Valves are designed for service up to 1200 °F for both gas and liquids*. This unique design extends the packing and stem thread area away from the hot zone and the additional heatsink grooves on the extended housing provides excellent additional temperature protection. Add “-HT” suffix to the standard valve catalog number will include the extended stuffing box with Graph packing.

Ordering Information

Typical catalog number: **21V4M071-HT**

| 21V | 4M | 07 | 1 | -HT |
|--------------|--|---|---|---|
| Valve Series | O.D. Tube Size | Stem Type | Body Pattern | Option |
| 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 | HT - High Temperature option with extended stuffing box |
| 36V or 65V | 4H - 1/4" 6H - 3/8" 9H - 9/16" | | | |



| Valve Series | Connection Type | Dimension "A" |
|--------------|-----------------|---------------|
| 21V | 4M | 6.00" |
| | 6M | 6.00" |
| | 9M | 6.00" |
| | 12M | 7.90" |
| | 16M | 9.60" |
| 36V or 65V | 4H | 6.30" |
| | 6H | 6.30" |
| | 9H | 6.30" |

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

*These HT Valves contain graph packing and are not recommended for hydrogen or helium service.

Minimum allowable stuffing box temperature is -100 °F.

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

All dimensions are for reference only and are subject to change.

Block and Bleed Valves

Pressures to 22,500 psi

Block and Bleed Valves

MAXIMATOR series BB block and bleed valves with metal to metal seats have a high level of safety and reliability under adverse operating conditions. Block and bleed valves are two stem manifold valves designed for blocking, bleeding and calibrating of pressure gauges and transmitters up to 22,500 psi @ R.T.

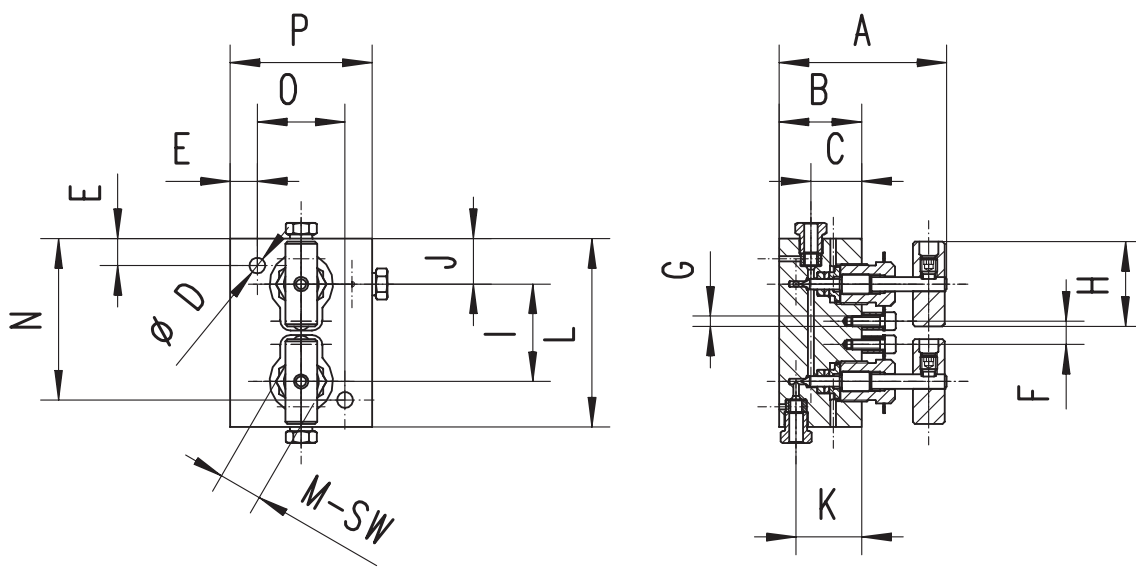
Due to the mini valve packing and stem design MAXIMATOR block and bleed valves are very compact and easy to use. In addition, manifold style valves reduce the number of fittings and space required for installation.

| Catalog Number | Stem Type | OD Tube in. | Orifice (in.) | Dimensions (in.) | | | | | | | | | | | | | | | |
|----------------|-----------|-------------|---------------|------------------|------|------|-----|-----|------|------|------|------|------|-----|------|-----|------|------|------|
| | | | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P |
| 21BBV4M | Vee | 1/4 | 0.11 | 3.11 | 1.54 | 0.94 | 0.3 | 0.5 | 0.43 | 1.57 | 1.81 | 0.85 | 1.22 | 3.5 | 0.81 | 3.0 | 1.63 | 2.64 | 2.64 |
| 21BBV4M | Vee | 1/4 | | | | | | | | | | | | | | | | | |

G - Panel mounting screw thread size 10-24 UNC (screw included).

A - Stem in closed position.

All dimensions are for reference only and are subject to change.

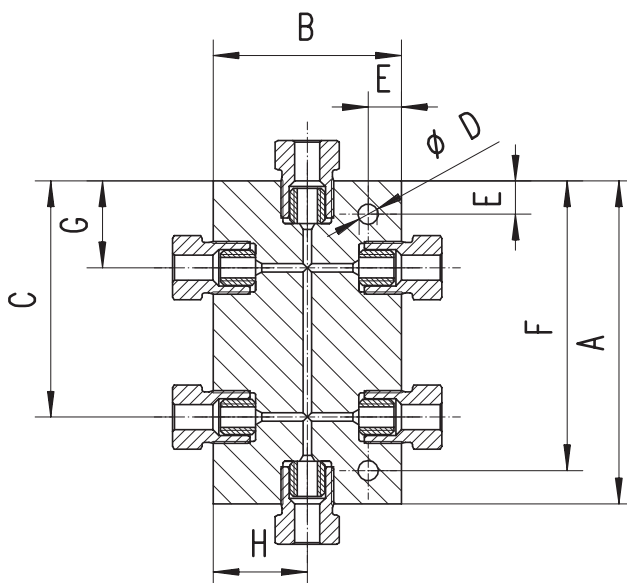


Manifold Blocks

MAXIMATOR Manifold Block Series allows reducing parts and potential leakages in high pressure piping systems.

The Manifold Blocks are very compact and have 6 connections.

| Catalog Number | Pressure (psi) (psi @ R.T.)** | OD Tube in. | Orifice (in.) | Dimensions (in.) | | | | | | | Block Thickness |
|----------------|-------------------------------|-------------|---------------|------------------|------|------|------|------|------|------|-----------------|
| | | | | A | B | C | D | E | F | G | |
| 21MB64M | 22,500 | 1/4 | 0.11 | 3.39 | 1.54 | 2.6 | 0.22 | 0.28 | 3.11 | 0.77 | 0.63 |
| 21MB66M | 22,500 | 3/8 | 0.2 | 3.39 | 2.01 | 2.38 | 0.26 | 0.37 | 3.01 | 1.0 | 0.79 |
| 21MB69M | 22,500 | 9/16 | 0.307 | 5.12 | 2.5 | 3.86 | 0.33 | 0.41 | 4.7 | 1.25 | 1.02 |
| 21MB612M | 22,500 | 3/4 | 0.438 | 6.5 | 2.99 | 5.0 | 0.35 | 0.49 | 6.0 | 1.5 | 1.38 |
| 21MB616M | 22,500 | 1 | 0.562 | 7.25 | 4.13 | 5.45 | 0.53 | 0.69 | 6.83 | 2.07 | 1.77 |
| 65MB64H | 65,000 | 1/4 | 0.094 | 3.44 | 2.01 | 2.52 | 0.22 | 0.35 | 3.09 | 1.0 | 1.02 |
| 65MB66H | 65,000 | 3/8 | 0.125 | 3.76 | 2.01 | 2.66 | 0.26 | 0.35 | 3.41 | 1.0 | 1.02 |
| 65MB69H | 65,000 | 9/16 | 0.19 | 5.12 | 2.64 | 3.74 | 0.33 | 0.37 | 4.74 | 1.32 | 1.54 |
| 152MB65U | 152,000 | 5/16 | 0.094 | 4.72 | 3.03 | 3.21 | 0.33 | 0.59 | 4.13 | 1.52 | 1.26 |



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