

# MVBB Series: Pressures to 20,000 psi (1380 bar)

## Single Block & Bleed Needle Type Manifold Valve

### Principle of Operation:

Parker Autoclave Engineers series MVBB block and bleed needle valve is a two stem manifold valve providing an economical and convenient method of isolating and venting or pressurization when calibrating pressure transmitters and gauges.

The valve utilizes Parker Autoclave Engineers Mini Valve packing and stem design making it compact and easy to use. The valve can be surface or panel mounted for safe operation. Manifold style valves reduce the number of fittings and space required for installation.



### MVBB Single Block & Bleed Manifold Valve Features:

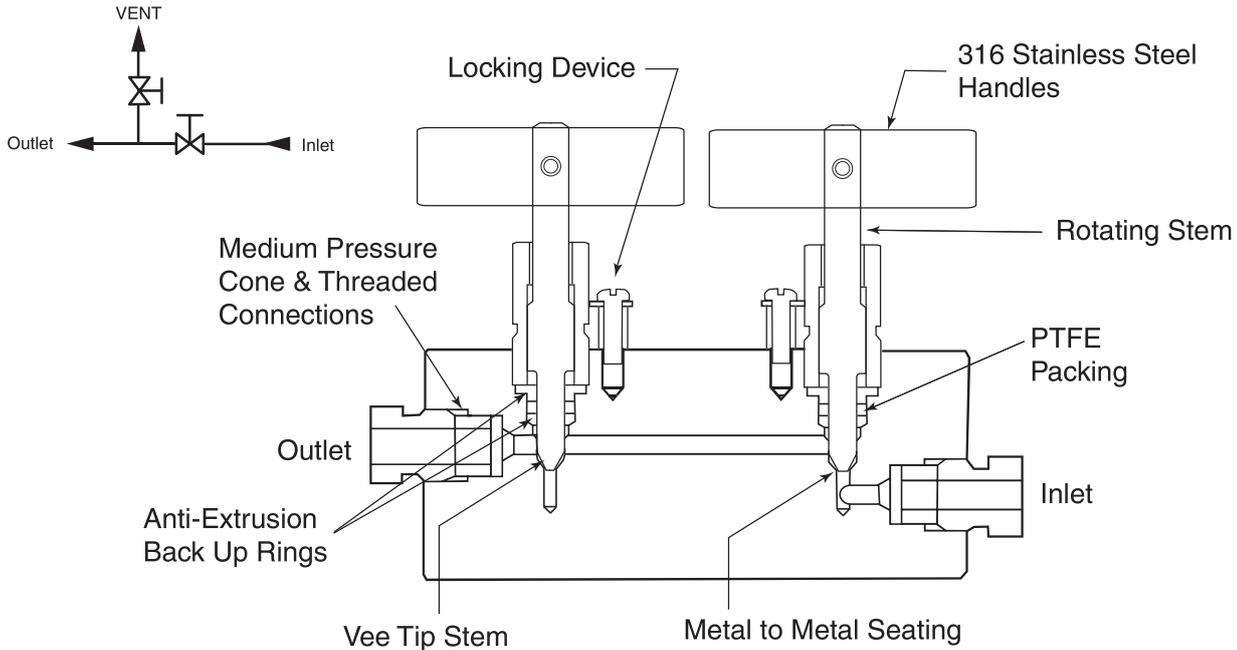
- MVBB Series valve design provides large valve performance in a small package
- Tubing sizes: 1/4" and 3/8". Pipe size: 1/2" NPT
- UNS S31600, CW 316 Stainless Steel body construction as standard. Additional Material options including NACE approved (SOG) materials are available.
- Rising stem/barstock body design
- Metal-to-metal seating achieves bubble-tight shut-off, longer stem/seat life in abrasive flow, greater durability for repeated on/off cycles and excellent corrosion resistance
- PTFE Glass packing provides dependable stem and body sealing with temperatures from -100° to 650°F (-70° to 340°C)
- Stem and packing gland design have been selected to achieve extended thread cycle life and reduced handle torque

Traceability of the materials used is ensured by use of heat and purchase order codes etched on valve body that also includes model number, MAWP rating, and material type references. All MVBB valves include connection collar and gland nut unless requested otherwise. Parker Autoclave Engineers' valves are complemented by a complete line of Medium Pressure Cone & Thread fittings, tubing, check valves, relief valves, and line filters that provide a reliable bubble tight seal for dependable performance in gas or liquid service.

Tube Outside Diameter Size (inches)	Connection Type	Orifice Size Inches (mm)	Rated $C_v^*$	Pressure Rating psi (bar) @Room Temperature**
1/4	SF250CX (1/4" MP)	0.094 (2.4)	0.20	20,000 (1380)
3/8	SF375CX (3/8" MP)	0.094 (2.4)	0.20	20,000 (1380)
1/2	NPT	0.094 (2.4)	0.20	15,000 (1035)

Notes

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



To ensure proper fit use Parker Autoclave tubing

## Valve Packing Options:

Standard Parker Autoclave Engineers valves with PTFE packing may be operated to 450°F (232°C). For additional temperatures, see options below and include suffix code in part number of valve selected:

- TG** Standard valve with PTFE-Glass packing -100° to 650°F (-70 to 340°C)
- B** Cryogenic trim materials and PTFE packing required when below 0°F to -100°F (-73°C)

Note: Refer to the Tools, Installation, Operation and Maintenance catalog for proper connection, packing, seating & running torques.

## Ordering Guide:

MVBB Series valves are furnished complete with connection components, unless otherwise specified. Valve options on page 15 do not apply for MVBB Manifold Valves.

### Building a Part Number: Example: 20MVBB6

Example Part Number:	<b>20MVBB</b>	<b>6</b>	<b>XX</b>
Ordering Parameters/Options:	Valve Series	Outside Diameter Tube Size	Options
Table Reference: (see below)	A	B	C

A - Valve Series	
20MVBB	20,000 psi Mini MVBB Block & Bleed Valve
15MVBB	15,000 psi Mini MVBB Block & Bleed Valves

B - Tubing OD or Pipe Size	
#	1/4" MP (20MVBB option only)
6	3/8" MP (20MVBB option only)
P8	1/2" Pipe NPT only (only applicable for 15MVBB Valve Series)

E - Options (Multiple Options can be chosen)	
TG	PTFE Glass (25%) Packing (to 650°F)
B	Low Temperature service required below 0°F (-18°C)
K	Antivibration Gland (replaces standard gland)
*SOG	NACE Material, Hardness Verification/Certificate
**2507	UNS 32750, 2507 Super Duplex Wetted Materials
***IN625	UNS N06625 Inconel 625 Wetted Materials

#### Notes:

# For 1/4" MP (typically 4 code) option leave part code blank. ie; 20MVBB

316 SS valve bodies are cold worked and not suitable for use in NACE (ISO 15156) applications. If required, contact factory for options.

\* SOG suffix also changes CW 316 SS Body material to Annealed 316 SS suitable for NACE service, Pressure reduction of 60% possible

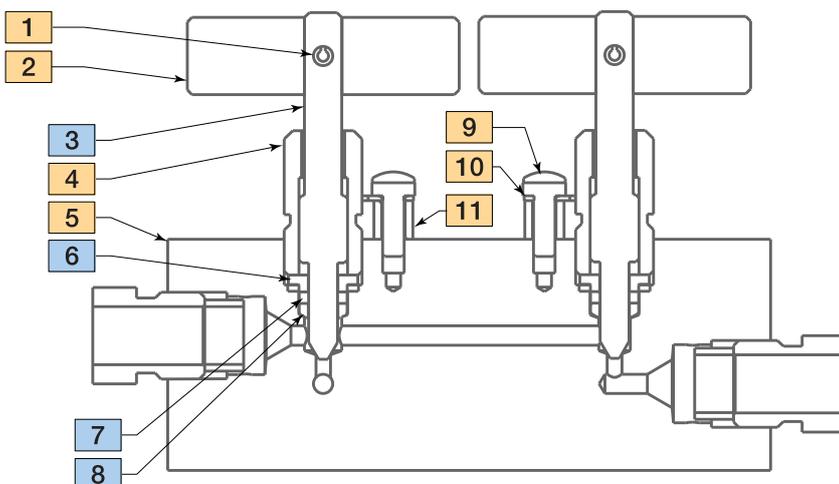
\*\*\* Special Materials often have reduced MAWP ratings, see Technical brochure for assistance and for additional material options

## Basic MVBB Repair Kits:

MVBB Valves are easily repaired. Add "R" to front of valve catalog number for proper repair kit (example: R20MVBB)

Include any catalog number suffix marked on original part when ordering repair kit. (ie; R20MVBB6-SOG)

## Material of Construction:



Item #	Description	Material
1	Spring Pin	18-8 SS
2	Handle	316 SS
3	Stem	316 SS
4	Packing Gland	316 SS
5	Body	316 SS
6	Packing Washer	316 SS
7	Packing	PTFE
8	Bottom Washer	316 SS
9	Screw	300 Series SS
10	Locking Device	316 SS
11	Spacer	316 SS

Typical spare parts found in Repair Kits

## MVBB Series Block & Bleed Dimensions:

Block and Bleed - MVBB		1/4 (6.35)	3/8 (9.53)	1/2 NPT
Outside Diameter Tube				
Orifice Diameter		0.094 (2.39)	0.094 (2.39)	0.094 (2.39)
Dimensions: inches (mm)				
	<b>A</b>	3.50 (88.90)	3.88 (98.60)	4.5 (114.3)
	<b>B</b>	0.813 (20.65)	1.00 (25.40)	1.31 (33.3)
	<b>C</b>	0.38 (9.65)	0.44 (11.10)	--
	<b>D</b>	0.625 (15.88)	0.625 (15.88)	0.75 (19)
	<b>D1</b>	0.938 (23.83)	0.938 (23.83)	1.25 (31.8)
	<b>E</b>	1.50 (38.10)	1.50 (38.10)	2.00 (50.8)
	<b>F</b>	1.75 (44.45)	1.75 (44.45)	1.75 (44.45)
	<b>G</b>	5/8" Hex	5/8" Hex	5/8" Hex
	<b>G1</b>	0.281 (7.14)	0.281 (7.14)	0.281 (7.14)
	<b>H*</b>	2.94 (74.68)	2.94 (74.68)	3.41 (86.6)
	<b>M</b>	2.50 (63.50)	2.88 (73.15)	3.50 (89)
	<b>N</b>	0.485 (12.32)	0.50 (12.70)	0.50 (12.70)
	<b>O</b>	1.63 (41.40)	1.63 (41.40)	1.75 (44.5)
	<b>P</b>	0.50 (12.7)	0.50 (12.7)	0.50 (12.7)
<b>Q</b>	2.63 (66.7)	2.63 (66.7)	2.75 (70)	

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.