Ball Valve Quick Reference Guide

Meeting the Demands of Industrial Applications

Parker

ENGINEERING YOUR SUCCESS.

Ball Valves

Mini Valve 608/609 & 708/709

Specifications:

Pressure Range

- 608/9: 450 PSI (31 bar)
- 708/9: 500 PSI (34.4 bar)

Temperature

- 608/9: 0° to +200°F (-18° to +93°C)
- 708/9: -35° to +300°F (-37° to +149°C)

MV 608/9 Product Features:

- Chrome plated brass body
- Chrome plated brass ball
- PTFE seats/seals
- Fluorocarbon stem seal
- Wedge handle
- Male X Female, Female X Female

MV 708/9 Product Features:

- Brass body
- Chrome plated brass ball
- PTFE seats/seals
- Nitrile stem seal
- Chrome plated steel handle
- Male X Female, Female X Female

Applications:

Medical, Control Valves, Pneumatic, Tire Inflater

Uses:

Economical & compact 1/8”-1/4” option

Standard Port 525P & Full Flow 520P

Specifications:

Pressure Range

- 600 PSI (41.4 bar)

Temperature

- 525P: -40° to +350°F (-40° to +177°C)
- 520P: 0° to +350°F (-18° to +177°C)

Product Features:

- Standard port or full flow available
- Forged brass body
- Fluorocarbon stem O-rings
- 100% 24 hour leak testing
- PTFE seal reduces leakage by ensuring 10% minimum contact between ball and seals
- Date code allows batch traceability
- 520 Series available with locking and non-locking handle

Applications:

Aerial Lift Trucks Hydraulic Reservoir, Fracking Blenders, Cement Trucks, Mobile equipment, Oil Field Water Truck, Waste Water Plants, Commercial Reverse Osmosis

Uses:

Economical option for female x female configuration

Ball Valves

Full Flow 500P

Specifications:

Pressure Range

- 600 PSI (41.4 bar)*

Temperature

- 0° to +350°F (-18° to +177°C)*

Product Features:

- Forged brass body
- PTFE adjustable stem packing
- Optional Features:
  - Vented & non-vented
  - Locking & non-locking handle
  - Panel mounted
  - SS ball, stem, handle & nut
  - Electroless nickel plated brass
  - Straight Thread SAE J1926-1
  - Short tee, oval, locking, extended & stainless steel handle options

Configurations:

Male X Female, Beaded Hose Barb X Female , 3 Way Diversion, 4 Way Diversion, 90° Angled

Applications:

CO2 Carbonation Tanks, Life Science, Test Benches

Uses:

Wide variety of configurations available up to 1"

*Note: Pressures and temperatures will vary depending on product series

Stainless Steel 501SS/502SS

Specifications:

Pressure Range

- Up to 2000 PSI (137.8 bar)

Temperature

- 0° to +400°F (-18° to +204.4°C)*

Product Features:

- Male X Female, Female X Female
- CF-8M stainless steel body
- PTFE seats/seals
- Stainless steel handle
- Silicone free
- Meets material requirements of NACE MR-01-75
- Short handle, oval handle, and welded retainer nut options

Applications:

Semiconductor, Food and Beverage, Pharmaceutical, Cryogenics

Uses:

Used in corrosive environments, outdoors, and in clean rooms

Product Specs

Industrial Ball Valves

	Type	Body Material	Temperature		Maximum Pressure	
			MIN.	MAX.	PSI	BAR
500 Series	Female/Female	Brass	0°F (-18°C)	350°F (176°C)	600	41
501 Series	Male/Female	Brass	0°F (-18°C)	350°F (176°C)	600	41
502 Series	Panel Mount	Brass	0°F (-18°C)	350°F (176°C)	600	41
506 Series	Female/Female Straight Thread	Brass	0°F (-18°C)	350°F (176°C)	600	41
509 Series	Solder Ends	Brass	0°F (-18°C)	350°F (176°C)	600	41
510 Series	Male/Female Straight Thread	Brass	0°F (-18°C)	350°F (176°C)	600	41
520 Series	Female/Female	Brass	0°F (-18°C)	350°F (176°C)	600	41
525 Series	Female/Female	Brass	-40°F (-40°C)	350°F (176°C)	600	41
533 Series	3-Way Diversion	Brass	-20°F (-29°C)	350°F (176°C)	400	27
540 Series	4-Way	Brass	-20°F (-29°C)	350°F (176°C)	400	27
590/591 Series	Male/Female Right Angle	Brass	-50°F (-45°C)	350°F (176°C)	250	17
500HB Series	Hose Barb	Brass	0°F (-18°C)	350°F (176°C)	150	10
600 Series	Six Port Diversion	Brass	0°F (-18°C)	250°F (121°C)	150	10
500CS/502CS Series	Female/Female	Carbon Steel	-20°F (-29°C)	425°F (218°C)	2,000 (1/4 - 1) 1,500 (1 1/4 - 2)	137 (1/4 - 1) 103 (1 1/4 - 2)
506CS Series	Straight Thread	Carbon Steel	-20°F (-29°C)	425°F (218°C)	3,000	206
500HP/506HP Series	High Pressure	Carbon Steel	-10°F (-23°C)	210°F (99°C)	6,000	413
501SS	Male/Female	Stainless Steel	0°F (-18°C)	400°F (204°C)	2,000	137
502SS	Female/Female	Stainless Steel	0°F (-18°C)	400°F (204°C)	2,000 (1/4 - 1) 1,500 (1 1/4 - 2)	137 (1/4 - 1) 103 (1 1/4 - 2)
708 Series	Male/Female	Brass	-35°F (-37°C)	300°F (148°C)	500	34
709 Series	Female/Female	Brass	-35°F (-37°C)	300°F (148°C)	500	34
200 Series	Female/Female	Chrome Plated Brass	0°F (-18°C)	200°F (93°C)	200	13
608 Series	Male/Female	Brass	0°F (-18°C)	200°F (93°C)	450	31
609 Series	Female/Female	Brass	0°F (-18°C)	200°F (93°C)	450	31

For more information, contact customer support at (269) 692-6555.
For additional product literature, CAD drawings, technical support, or educational resources, visit www.parker.com/fsc.

Custom Ball Valve Solutions for OEMs

Parker FSC has the capability to create custom OEM parts tailored to your specific application.

In situations where standard ball valves aren't suitable, Parker offers special order and custom assemblies. Our team of highly skilled, US-based engineers can design a part based on your requirements, develop a prototype, and complete testing based on designated criteria or specific specifications. Common applications include fuel shutoff, biodiesel fuel shutoff, coolant shutoff, purging air from the engine, and draining the air tank.

Hose Barb Ends

Commonly used on engine applications such as coolant shut off, Parker's beaded hose barb ends can be used whenever rubber hose or tubing is required.

Metric Ends

Many of our custom ball valves utilize metric ends including ISO 6149, ISO 4039, ISO 9974, and our Parker Universal design. Metric ends are commonly used in pneumatic air tank connections.

Material Variations

Whether it's an electroless nickel plated ball valve for CO2 drink carbonation or an aluminum ball valve for an electric car, Parker can accommodate your material needs.

The Process

1. Customer Input & Objectives

Parker's team of engineers will work with you to understand the requirements for your application, including specifications for size, temperature, application, media, and pressure.

2. Define Part Attributes

Based on your objectives and the specifications, our engineers then define the part attributes including type of end connections and material selection.

3. Design Non-Standard Fitting or Modify Existing Fitting

Our team of engineers will either modify a standard fitting or create an entirely new design. Prints and CAD models will be provided for your review.

4. Create Prototype

After the design has been agreed upon, a prototype is created. This may involve the creation of a new forging for shaped brass bodies or a new mold for composite bodies.

5. Approval & Testing

Upon your approval, we will complete any necessary testing. Testing will always depend on the specific fitting designed; this may be as part of a specification or due to your own internal requirements.

Custom options include:

- Integrated Check Valve
- Low Temperature
- Custom Components
- Optional Seal Materials
- Custom Handles
- Custom Bodies
- Custom Threads

Material options include:

- Brass
- Nickel Plated Brass
- Electroless Nickel Plated Brass
- Chrome Plated Brass
- Carbon Steel
- Stainless Steel
- Aluminum

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