SERIES TMBV 3-WAY MANUAL BALL VALVES
AN ENGINEERED MULTIPLE UNION BALL VALVE FOR
APPLICATIONS REQUIRING TWO INLETS, TWO OUTLETS,
SAMPLING OR DIVERTING

FEATURES:
• Heavy-duty, large diameter shaft to eliminate flexing and
breakage.
• Dual shaft seals eliminate leakage.
• PTFE bearing on shaft eliminates friction and wear; stem
design is “blow-out” proof.
• PTFE seats energized with O-rings eliminate wear and
improve cycle life.
• Trunnion design eliminates lateral ball stress and allows
downstream piping to be disconnected under full line pressure.
• Smooth flow path minimizes pressure loss.
• Fully concentric and mirror polished ball assures smooth,
leakproof operation.
• Three true-union ends for ease of piping installation and
removal; helps lower costs and reduce footprint.
• Choice of 2-hole or 3-hole ball.

Each valve is 100% individually inspected and tested prior to
shipment.

DESIGN:
Known as “The Engineered Ball Valve”, Series TMBV
provides more features than any other thermoplastic
ball valve. With its mirror-polished ball, perfectly
machined sealing surfaces, Trunnion centering design,
PTFE thrust bearing and O-ring loaded floating PTFE
seats, the True Blue three-way ball valve offers smooth
turning even in difficult applications. The floating seats
automatically compensate for seat wear, and after long-
term cycling, the carriers can easily be returned to their
original position simply by tightening the union nuts.
The 2-hole ball design is standard; it is ideal for
applications where flow cannot be mixed. To prevent a
momentary no-flow (“dead-head”) condition, an optional
3-hole ball is available. Please specify when ordering.
The top to bottom “Trunnion” design permits flow and
pressure in either direction, and eliminates the stresses
inherent to a ball secured only at the top. An ultra
smooth flow path virtually eliminates turbulence and
pressure loss and permits flow rates that far exceed pipe
manufacturers specifications.

MATERIALS OF CONSTRUCTION
Series TMBV is molded of Type 1 Grade 1 Geon® PVC
or Corzan® CPVC. Standard O-ring seals are FKM or
EPDM. Seats and shaft bearings are PTFE. Standard
connections are threaded (NPT or BSP) or socket
(Schedule 80 or Metric). For optional materials and
connections, please consult factory.
MATERIAL GUIDELINE FOR PRESSURE AND TEMPERATURE

This graph provides temperature and pressure guidelines for various materials of construction. Final selection should consider suitability of product and application.

**Note:** True Blue Valves are rated for full vacuum.

![Graph showing pressure and temperature guidelines for PVC and CPVC materials.](Image)

FLOW CHARACTERISTICS DURING CYCLING

**BALL STYLE**

Flow from bottom, center.

**TOP VIEW**

Flow from bottom, center.

**2-HOLE STANDARD**

During cycling, the standard 2-hole ball has a momentary dead-head when the ball outlet is between ports.

**3-HOLE OPTION**

Add "-A" to Part Number.

During cycling, the optional 3-hole ball has a momentary mixing of streams when the ball outlet is between ports. This option should be specified if a brief interruption of flow will be detrimental to your process.

ORDERING INFORMATION

**NOTE #1:** A two (2) hole ball is standard with 180° uni-directional rotation. To prevent a momentary no-flow (dead-heading) condition during cycling, a three (3) holed ball is available. Add "-A" to end of part number.

**NOTE #2:** End connections must be specified.

**NOTE #3:** Model numbers listed are for “threaded” end connectors. For “socket” change the “T” in the model number to “S”. For FKM seals, change EP to V for CPVC body, change -PV to -CP.

### CV FACTOR TORQUE

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ISO 9001:2015 CERTIFIED

PLAST-O-MATIC

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