Copeland Industries, Inc. has set the standard for valves used in mining. 65 years of experience along with state-of-the-art HVOF applied coatings make Copeland valves the best choice for all applications, especially in extreme conditions. This guide will help you find the best solution for your application:

Copeland manufactures and repairs valves for mining companies including:

- **Barrick Gold Corporation**
- **Rio Tinto- Kennecott Copper Mine**
- **Newmont Mining**

Our Metal-Seated Ball Valves are made to perform in all mining applications including:

- Autoclave
- Slurry Transport
- Continuous Catalytic Reforming

“When you work with us, you’ll gain not only a world-class team but also a wealth of industry experience.”

- John Simmons (President/CEO)
Quick Links Menu

Select a Valve (p.3)

Product Details (p.4)

Design Features (p.5-7)

Mining Applications (p.8-9)

Copeland Website

Request a Quotation

Contact Us
Valve Selection

*All valves can be customized with materials and coatings to meet unique operating conditions*

**BV Series**
- Custom made to wide range of applications
- Tested to API 598 Standards
- For Temperatures: 400°F +
- End Types: Socket Weld, NPT, Butt Weld, Flange
- Sizes: 1/2" - 20"
- ANSI Class: 150 - 4500
- Materials: 410ss, 17-4 ph, 316ss, Inconels, Ferrallium 255 (autoclaves), Hastelloy, Monel, Alloy 20, Titanium, Zirconium

**BV Series (2-piece)**
- Power Plants, Steam Generation
- Available in a wide variety of sizes and materials
- End Types: Socket Weld, NPT, Butt- Weld, Flange
- Sizes: 1/2" - 4"
- ANSI Class: Up to 4500#
- Standard Materials: F22, A105, F91 (Other materials available)

**PV Series**
- Power Plants, Steam Generation
- For Temperatures:
- End Types: Socket Weld, NPT, Butt- Weld, Flange
- Sizes: 1/2" - 4"
- ANSI Class: 900, 1500, 3200, 4500
- Materials: F22, A105, F91 (Other materials available)

**PV2 Series (2-piece)**
- Power Plants, Steam Generation
- Available in a wide variety of sizes and materials
- End Types: Socket Weld, NPT, Butt- Weld, Flange
- Sizes: 1/2" - 4"
- ANSI Class: Up to 4500#
- Standard Materials: F22, A105, F91 (Other materials available)

**PV2 Series**
- Custom made to wide range of applications
- Tested to API 598 Standards
- For Temperatures: 400°F +
- End Types: Socket Weld, NPT, Butt Weld, Flange
- Sizes: 1/2" - 20"
- ANSI Class: 150 - 4500
- Materials: 410ss, 17-4 ph, 316ss, Inconels, Ferrallium 255 (autoclaves), Hastelloy, Monel, Alloy 20, Titanium, Zirconium

**BV3 Series**
- For temperatures exceeding 500°F
- Carbide sealing areas
- End Types: Socket Weld, NPT, Butt Weld, Flange
- Sizes: 1/2" - 4"
- Available in CF8M (316ss) and A216-WCB

**Carbide BV Series**
- Wide range of applications
- Full Bore, High Cycle
- Tested to API 598 Standards
- End Types: Socket Weld, NPT, Butt Weld, Flange
- Sizes: 1/2" - 8"
- ANSI Class: 150 - 4500
- Available in CF8M (316ss) and A216-WCB

**Trunnion BV Series**
- Wide range of high cycle applications
- Torque-Reducing Design
- End Types: Socket Weld, NPT, Butt Weld, Flange
- Sizes: 2” – 12”
- ANSI Class: 300, 600, 900
- Materials: (All BV Series materials)
Valve Details

<table>
<thead>
<tr>
<th>Series</th>
<th>Bore Size¹</th>
<th>End Size</th>
<th>ASME Class</th>
<th>Body Type</th>
<th>Body Mat'l.²</th>
<th>Trim Mat'l.³</th>
</tr>
</thead>
<tbody>
<tr>
<td>BV</td>
<td>.56&quot; - 18.81&quot;</td>
<td>1/2&quot; - 20&quot;</td>
<td>150#, 300#, 600#, 900#, 1500#, 2500#, 3200#, 4500#</td>
<td>2-PC Forged</td>
<td>A105, 316ss, Inconels, Ferralium 255, Hastelloys, Monel, Alloy 20, Titanium, Zirconium</td>
<td>17-4 ph, 316ss, Inconels, Ferralium 255, Hastelloys, Monel, Alloy 20, Titanium, Zirconium</td>
</tr>
<tr>
<td>Carbide BV</td>
<td>.56&quot; - 8&quot;</td>
<td>1/2&quot; - 8&quot;</td>
<td>150#, 300#, 600#</td>
<td>2-PC Casted</td>
<td>CF8M, WCB</td>
<td>17-4 ph, 316ss, Inconels, Ferralium 255, Hastelloys, Monel, Alloy 20, Titanium, Zirconium</td>
</tr>
<tr>
<td>BV3</td>
<td>.56&quot; - 4&quot;</td>
<td>1/2&quot; - 4&quot;</td>
<td>150#, 300#</td>
<td>3-PC Casted</td>
<td>CF8M, WCB</td>
<td>316ss</td>
</tr>
<tr>
<td>Trunnion BV</td>
<td>1.5&quot; - 12&quot;</td>
<td>2&quot; - 12&quot;</td>
<td>300#, 600#, 900#</td>
<td>2-PC Forged</td>
<td>A105, 316ss, Inconels, Ferralium 255, Hastelloys, Monel, Alloy 20, Titanium, Zirconium</td>
<td>17-4 ph, 316ss, Inconels, Ferralium 255, Hastelloys, Monel, Alloy 20, Titanium, Zirconium</td>
</tr>
<tr>
<td>PV</td>
<td>.56&quot; - 4&quot;</td>
<td>1/2&quot; - 4&quot;</td>
<td>900#, 1500#, 2500#, 3200#, 4500#</td>
<td>1-PC Forged</td>
<td>316ss, F22, A105, F91</td>
<td>17-4 ph, 316ss, Inconels, Ferralium 255, Hastelloys, Monel, Alloy 20, Titanium, Zirconium</td>
</tr>
<tr>
<td>PV2</td>
<td>.56&quot; - 4&quot;</td>
<td>1/2&quot; - 4&quot;</td>
<td>900#, 1500#, 2500#, 3200#, 4500#</td>
<td>2-PC Forged</td>
<td>316ss, F22, A105, F91</td>
<td>17-4 ph, 316ss, Inconels, Ferralium 255, Hastelloys, Monel, Alloy 20, Titanium, Zirconium</td>
</tr>
</tbody>
</table>

Note:
¹ Bore size range limited to corresponding end size
² Special body materials available
³ Special trim materials and HVOF applied coatings available

Available End Connections

Socket Weld (SW) | Butt Weld (BW) | Raised-Face Flange (RFF) | Ring Type Joint (RTJ) | Threaded (NPT)

Available Actuation

All Copeland valves can easily be equipped with actuators to meet user specifications. Contact us for information regarding different actuator options. Common actuation types include: Lever, Hand-wheel, Bevel Gear, Pneumatic, Hydraulic, and Electric.

Return to Menu
PV Series Design Features

1. **Stem** for convenient adaptation of manual, geared, pneumatic, hydraulic, and other motor actuators.
2. **Mounting Bracket** customized to various actuator specifications for easy installation.
3. **Guide Bearing** for smooth, quarter-turn opening and closing.
4. **Thrust Collars** for blow-out-proof operation.
5. **Adjustable Packing Follower** to ensure continued seal throughout valve life.
6. **Live-loaded Springs** apply continuous pressure on Packing Follower.
7. **Durable Packing** for leak-proof performance. (Available in Graphoil and Inconel)
8. **One-Piece Forged Body** (PV Series only) most readily available and cost effective forged valve on the market.
9. **Mate-Lapped Ball & Seats** for precise sealing during isolation.
10. **HVOF Applied Coatings** for wear resistance in extreme corrosive and abrasive conditions.

Return to Menu
PV2 Series  Design Features

1. **Stem Adapter** for convenient installation of manual, geared, pneumatic, hydraulic, and other motor actuators.
2. **Mounting Bracket** customized to unique actuator sizes for easy mounting.
3. **Guide Bearing** for smooth, quarter-turn opening and closing.
4. **Thrust Collars** for blowout-proof operation.
5. **Adjustable Packing Follower** to ensure stem alignment and continued seal throughout valve life.
6. **Live-loaded Springs** apply continuous pressure on Packing Follower so packing remains tight after thousands of cycles.
7. **Durable Packing** for leak-proof performance. (Available in Graphoil and Inconel Material)
8. **2-Piece Forged Body** For custom end connections and easy maintenance.
9. **Mate-Lapped Ball & Seats** for perfect seal.
10. **HVOF Applied Coatings** for wear resistance in extreme corrosive and abrasive conditions.

Return to Menu
**BV Series** Design Features

1. **Stem** for convenient installation of manual, geared, pneumatic, hydraulic, and other motor actuators.
2. **Mounting Bracket** customized to unique actuator sizes for easy mounting.
3. **Guide Bearing** for smooth, quarter-turn opening and closing.
4. **Adjustable Packing Follower** to ensure stem alignment and continued seal throughout valve life.
5. **Thrust Collar** for Blowout-proof operation.
6. **Live-loaded Springs** apply continuous pressure on Packing Follower so packing remains tight after thousands of cycles.
7. **Durable Packing** for leak-proof performance. (Available in Graphoil and Inconel Material)
8. **2-Piece Forged Body** For custom end connections and easy maintenance.
9. **Mate-Lapped Ball & Seats** for perfect seal.
10. **HVOF Applied Coatings** for wear resistance in extreme corrosive and abrasive conditions.

[Return to Menu]
Applications

Copeland Industries specializes in solutions for the following mining applications:

-Autoclave-

- Oxygen Injection
- Autoclave Vent
- Autoclave Vent Isolation
- Autoclave Discharge
- Autoclave Feed
- Sparge Valves
- Pump Isolation

- High Pressure Heater Drain Valve
- High Pressure Heater Isolation Valve
- Slurry Feed Pump Isolation Valve
- Acid Valves
- Acid Drain Valves
- Steam Supply Control Valve
- Steam Valves
- Vent Valves
- Rapid Decompression Valve
- Discharge Valves

- Slurry Feed Pump Isolation Valve
- Steam Supply Control Valve
- Steam / Quench Valves
- Oxygen Valves
- Vent Valves
- Rapid Decompression Valve
- Discharge Valves
- Quench Valves
- Steam Valves

More Applications

Return to Menu
-Slurry Transport-

**Pump Station:**
- Charge Valve
- Pump Isolation Valve
- Drain Valve
- Charge Pump Isolation

**Pressure Letdown Choke Station:**
- Choke Station Emergency Shutdown Valve
- Instrument Isolation
- Instrument Bleed Valve
- Drain Valve
- Emergency Dump Valve
- Choke Loop Cut Valve
- Choke Loop Seal Valve
- Choke Loop Isolation Valve
- By-pass Isolation
- Main Slurry Line Isolation

**Pressure Letdown Choke Station:**
- Choke Station Emergency Shutdown Valve
- Instrument Isolation
- Instrument Bleed Valve
- Pigging Isolation
- Drain Valve
- Emergency Dump Valve
- Discharge Valves
- Pig Launch Charge Valve
- Vent Valves