



TP-1 Power Valves

Top Entry

Trunnion Mounted

Metal Seated

Proven Design

Minimal Spare Parts

In-Line Repairable, without
special tools

After First Installation:

- No Cutting

- No Welding

- No Stress Relief

- No X-Ray

Reduce Maintenance Cost

Reduce Downtime

Single Upstream Seating

Top Entry Ball Valve

Model: TP1



IN - LINE REPAIRABLE, TRUNNION BALL VALVE, FORGED BAR, UNI-DIRECTIONAL

Sizes: 1/2" - 2"

Pressure Class: ASME / ANSI 600 - 4500

Temperature: (-) 20° F to (+) 1200° F
(-) 29°C to (+) 590°C

End Connections: SW, BW, RF, RTJ, Customer Specified, ASME B16.11 / ASME B16.5 / ASME B16.25

Leakage Class Options: -API 6D & API 598
-Bubble Tight (Metal Seated)
-ISO 5208 Rate A

Actuation: -Manual, Pneumatic, Hydraulic, Electric
-Other options available per customer specifications.



Standard Features

1. STRAIGHT-FORWARD PROVEN DESIGN

2. LIVE-LOADED ENGINEERED STEM & SEAT SEALS
Other seal options available.

3. SINGLE SEATED DESIGN FOR UPSTREAM UNI-DIRECTIONAL SHUT-OFF
Pre-loading provides uniform torque. Pressure assist assures a tighter seal.

4. YOUR CHOICE OF END CONNECTIONS
The valve's simple design allows an easy fit to your application.

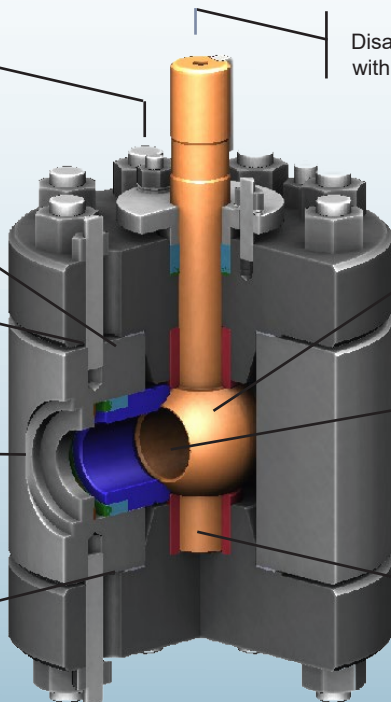
5. METAL TO METAL BONNET SEATS
Reliable & fire-safe.

6. IN-LINE SERVICEABLE
Disassembly and maintenance can be performed with the valve in-line. NO CUTTING REQUIRED.

7. ONE PIECE BALL & STEM
Solid, responsive & reliable. Prevents hysteresis. Quality begins at the heart of our valves.

8. TRUE FULL BORE
For maximum Cv.

9. TRUSTED TRUNNION MOUNTED DESIGN
Reduces torque, maintenance and down-time.

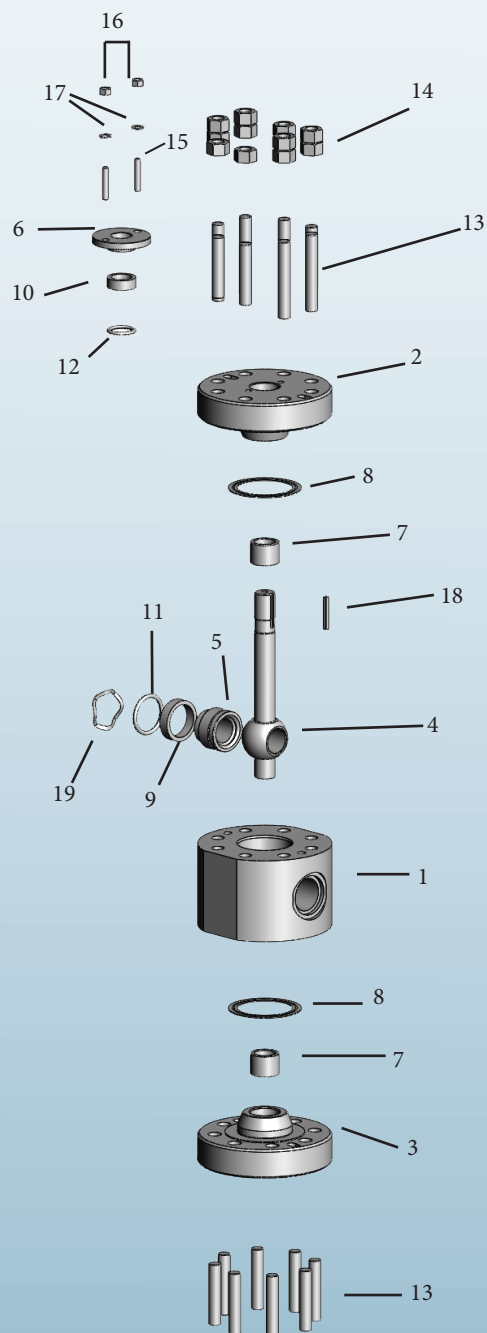


Model: TP1

PARTS LIST

A/R = AS REQUIRED

ITEM	QTY	DESCRIPTION
1	1	Body
2	1	Upper Bonnet
3	1	Lower Bonnet
4	1	Ball
5	1	Seat
6	1	Packing Flange
7	2	Metal Bearing
8	2	Bonnet Seal
9	1	Seat Seal
10	1	Stem Seal
11	1	Seat Pusher Ring
12	1	Stem Pusher Ring
13	A/R	Bonnet Studs
14	A/R	Bonnet Nuts
15	A/R	Packing Stud
16	A/R	Packing Nuts
17	A/R	Belleville Springs
18	1	Key
19	1	Wave Spring



Materials Options

Standard:

Body - F22

Ball/Stem - 410 SS + Ni-Bo

Seats - 410 SS + Stellite 6

Bearing - Nitronic 60

Trim - 410 SS

Bolting (custom)

Ball Coating: Nickel Boride

Super Critical:

Body - F91

Ball/Stem - Inconel 625 + Ni+Bo

Seats - Inconel 625 + Stellite 6

Bearing - Nitronic 60

Trim - Inconel 625

Bolting (custom)

Ball Coating: Nickel Boride

Available Options

- Other Body materials available upon request
- Steam Purge Ports
- Metal Seated for Steam Service
- Pipe Pups Sized per Customer Specification
- Welding and Heat Treat per customer specification

CORNERSTONE VALVE
CAN ASSIST IN
SELECTION OF THE
OPTIMUM MATERIALS FOR
YOUR SPECIFIC SERVICE.



Case Study

A Northeast power plant, realizing the costly down-time and out-of-pocket expense of recurring valve failures, replaced all their problem valves with Cornerstone TP-1 valves.

The valves operate at conditions from 500 psi at 1065°F (574°C) to 2420 psi at 660°F (349°C). This plant continues to replace problem valves with Cornerstone valves.

Their new facility expansion will operate solely with Cornerstone valves, based on their reliable performance and low maintenance cost.

CORNERSTONE HAS SOLUTIONS FOR THE FOLLOWING APPLICATION AREAS:

Isolation

- Control Valve Isolation
- Main Steam Stop/Isolation
- Feedwater Heater Isolation
- Boiler Feed Pump Isolation
- Bottom Ash Isolation
- Steam Trap Isolation
- Turbine Isolation
- Superheater Spray Isolation
- Gauge Glass/Instrument Isolation
- Pump Isolation

Drains

- Main Boiler Drain
- Condensate Drain
- Main Steam Drain and Vent
- Economizer Drain

- Preheat Drain
- Turbine Drain

Other

- Bottom Blowdown
- Economizer Sampling
- Bypass Lines
- Blowdown

Applications

- Blocking Valves after Control Valves
- Steam Letdown & Control
- Boiler Venting
- Condensate Block & Control
- Soot Blower Applications
- Main Steam Supply

- Steam Turbine Drains
- Attemperating
- Feedwater Isolation
- Feedwater Bypass
- Noise Control
- Steam Drum Vent
- Superheated Steam
- Boiler Recirculation

