

CGA Energy Nexus & Annual Technical Conference 2024

Fuelling the Future

S&C 111 Valves (Hands-on)

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Overview

Common Valves

- Gate, Globes and Checks
- Plug Valves
- Ball Valves

Recognize the Maintenance requirements for each type of valve

Recognize the Manufacturers Installation, Operations, and Maintenance manual

Gate Globe Check

API 602 (Forged steel)

Multi-turn-- Gates and Globes

Automatic- Check

Typically used 2" and under

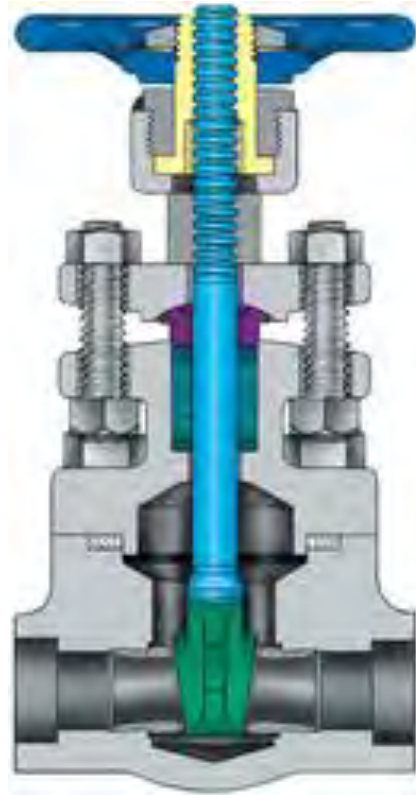
NPT or SW ends

Tested API 598



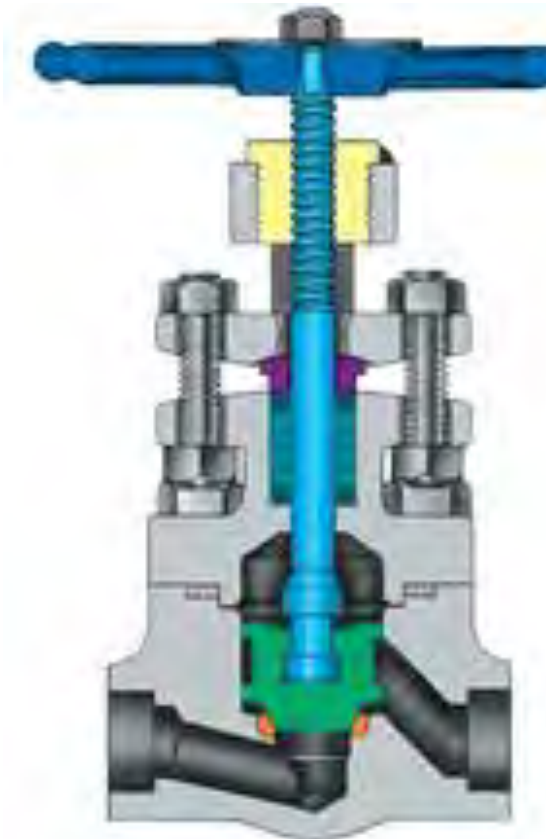
Compact Gate in detail

- On/Off service
- Grease stem directly
- Adjustable packing

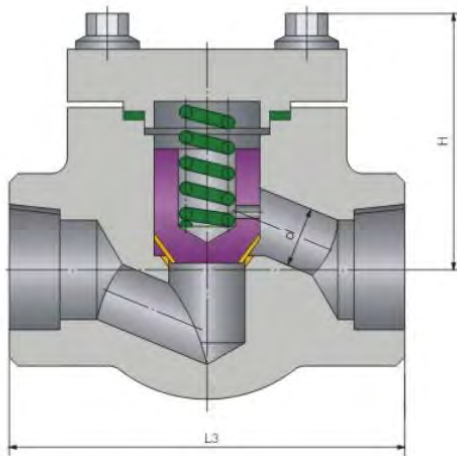


Compact Globe in detail

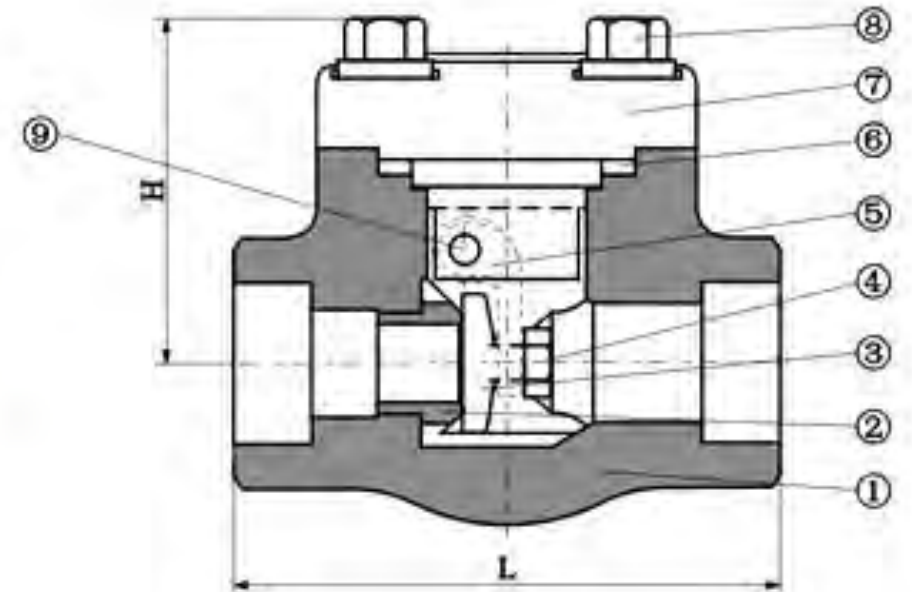
- On/Off and Control service
- Grease stem directly
- Adjustable packing



Compact Check Valves



Bolted Bonnet



S9P⁴₅Y

Information plates for forged steel



Cast Wedge gate

API 600 (Cast steel)

Multi Turn

ON /OFF

Bi-directional

Metal seated

Tested API 598



Cast Globe Valve

- API 623
- Multi Turn
- On/Off and throttling service
- Directional (Arrow points in direction of flow)



Check Valves

- API594
- Automatic operation
- Back flow prevention
- Metal seated
- Tested to API 598
- No operator and arrow points in direction of flow



API 6D Check valves

- Soft Seated
- Full internal clearance of disc (Piggable)
- Marked API 6D. CSA Z245.15
- Tested to 6D/CSA Z245.15
- API 6FA/API 607



Plug Valves



Roman Water valve from the 1st Century



Lubricated Plug valves

- Quarter Turn
- Renewable seat (metal seated) grease film assisted seal
- Body and Cap design
- On/off and Throttling service
- Originally designed to replace gate valves

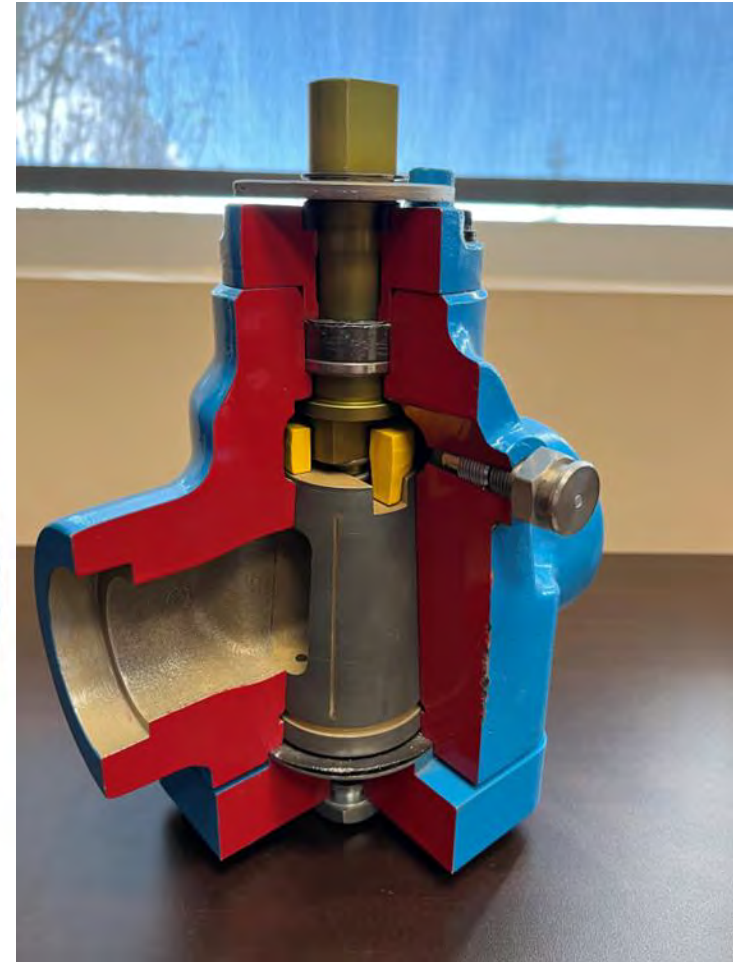
Tapered Plug

- API599
- Quarter Turn
- Lubrication is part of the function, plug needs to be floated



Pressure Balanced Lubricated Plug

- API 6D
- Pressure balanced to reduce operating torque



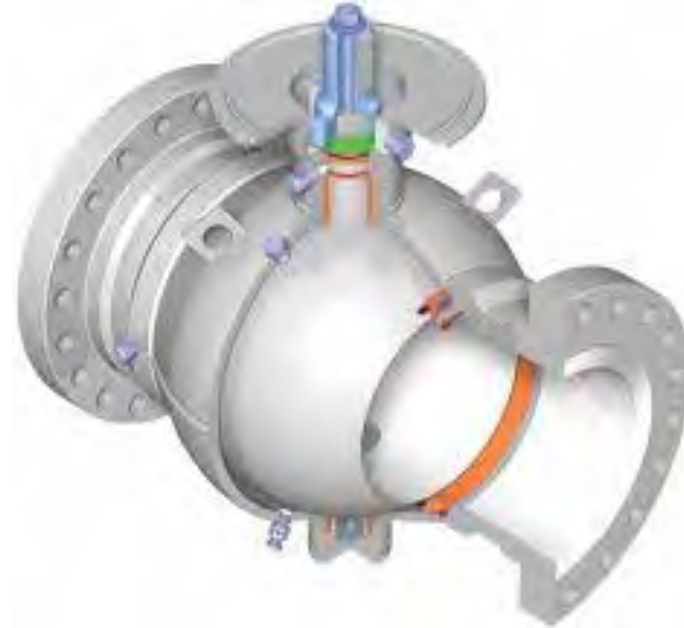
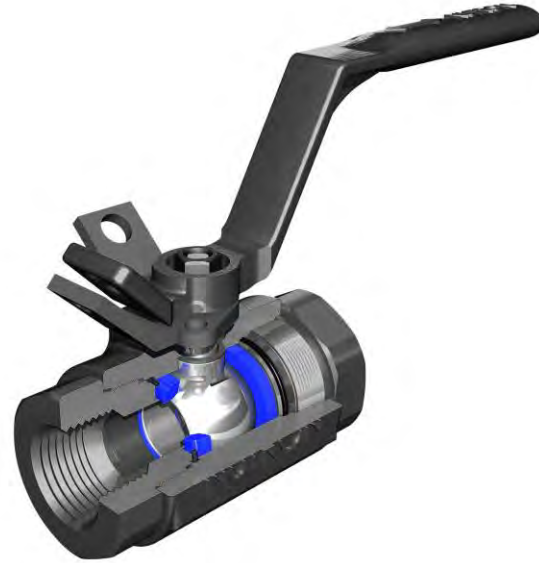
Operators



- Add square nut

Ball

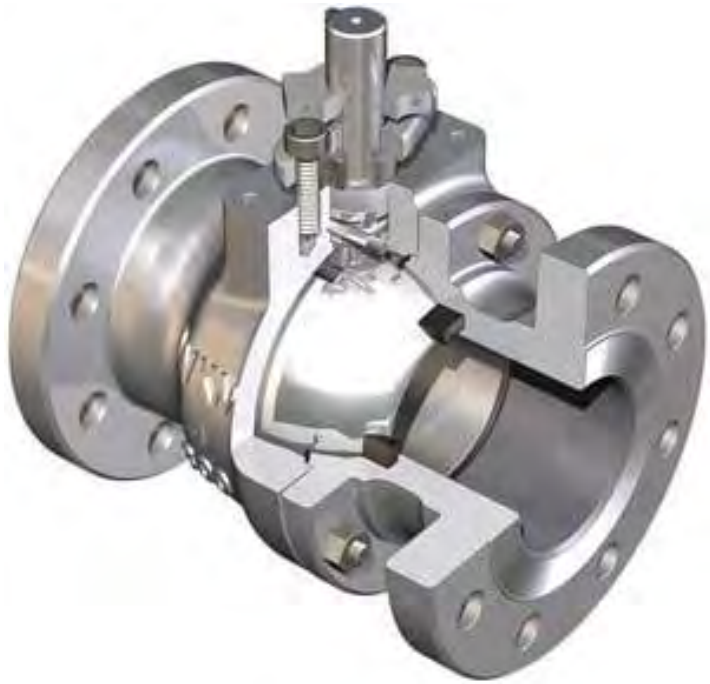
- Quarter turn
- On/Off service
- Floating
- Trunnion
- API 598
- API 608
- API6D/CSAZ241.15
- AP6FA/API607



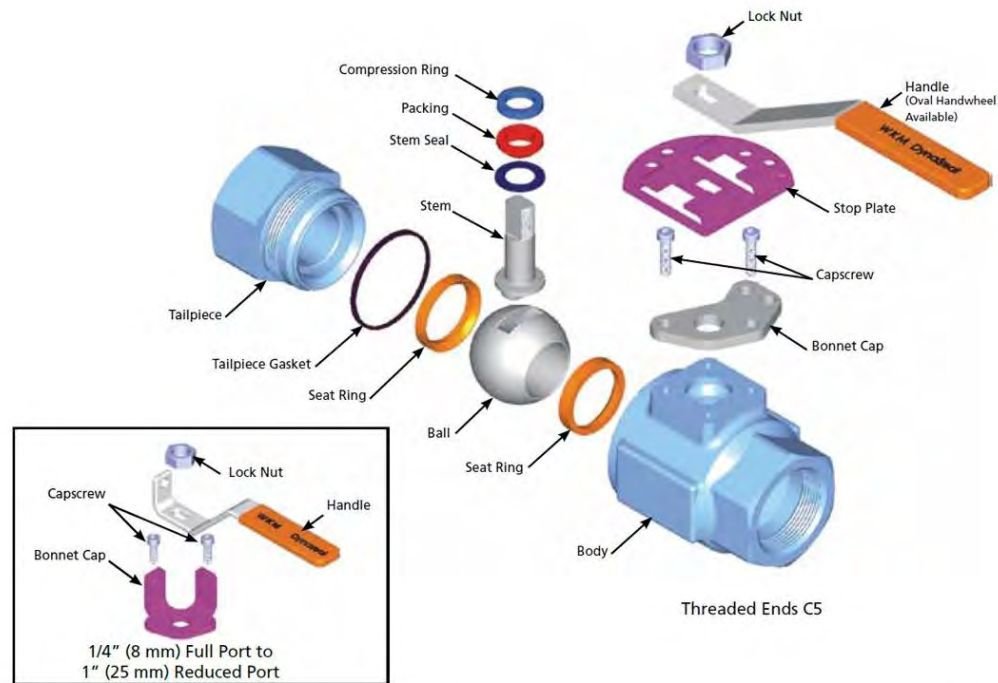
Body



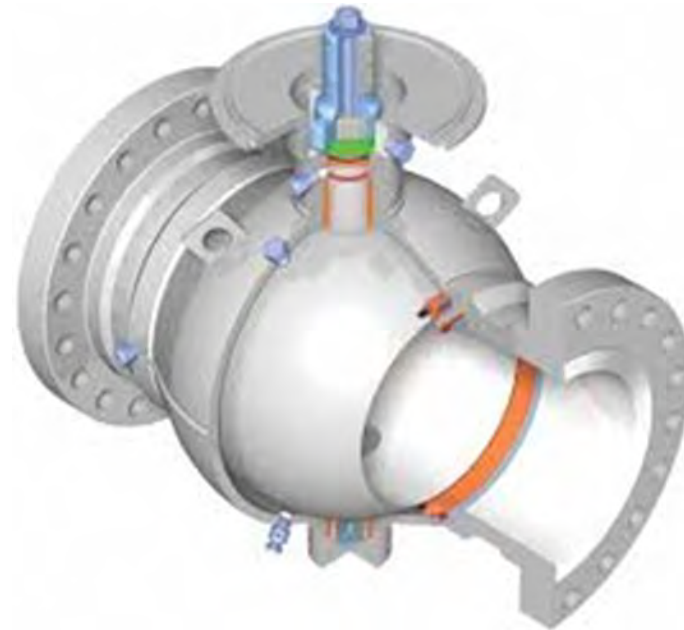
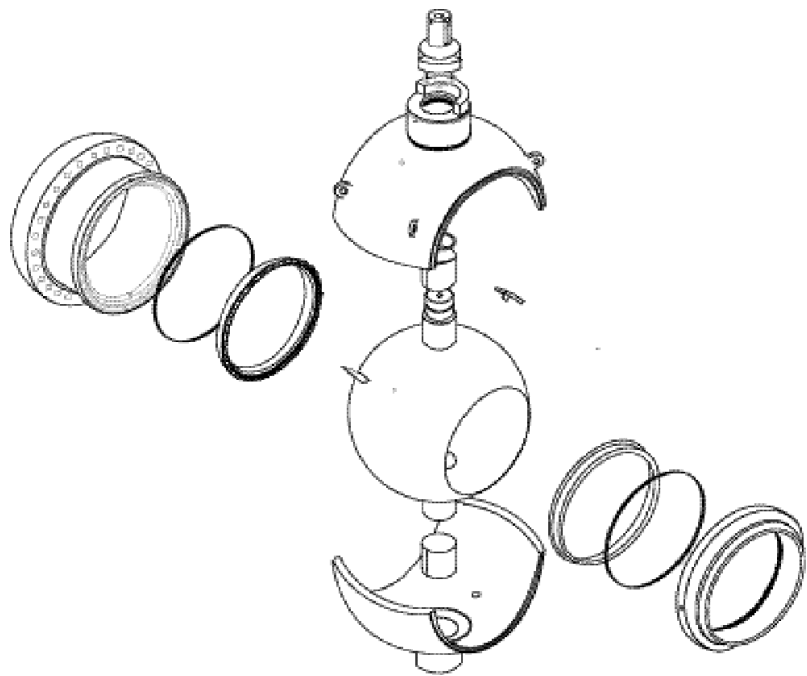
Floating Ball Valve



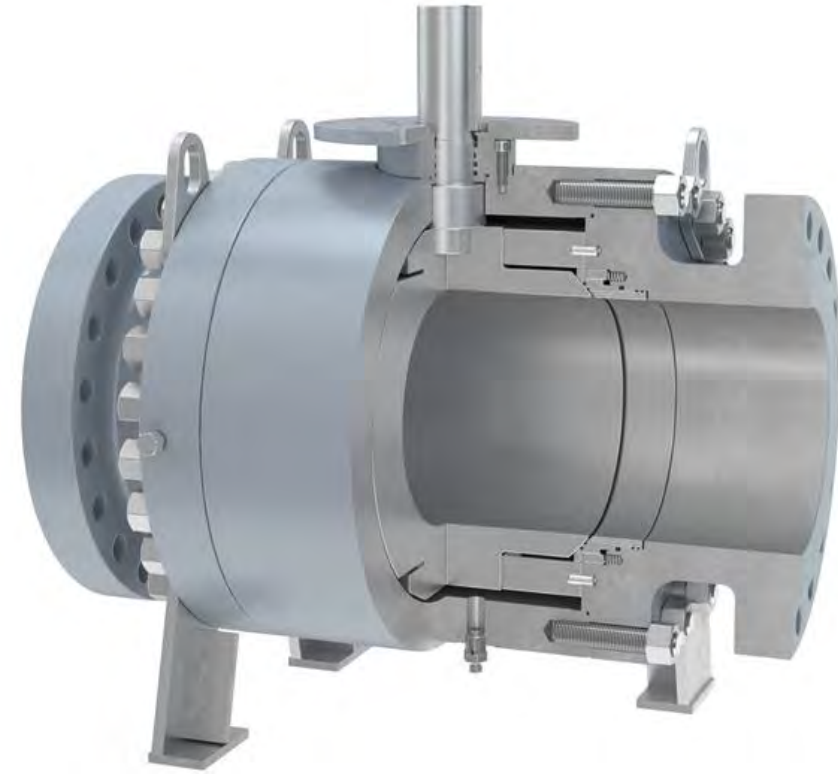
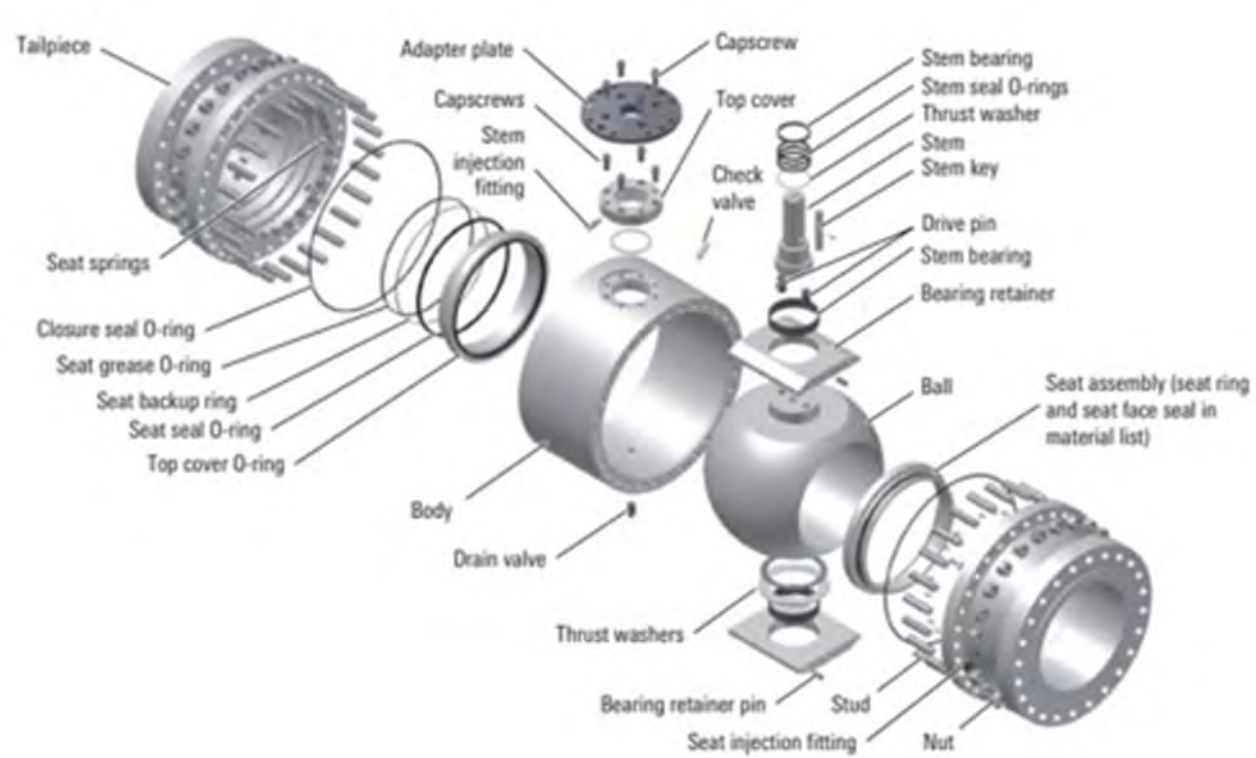
Floating Ball Valve (exploded view)



Trunnion Ball Valves

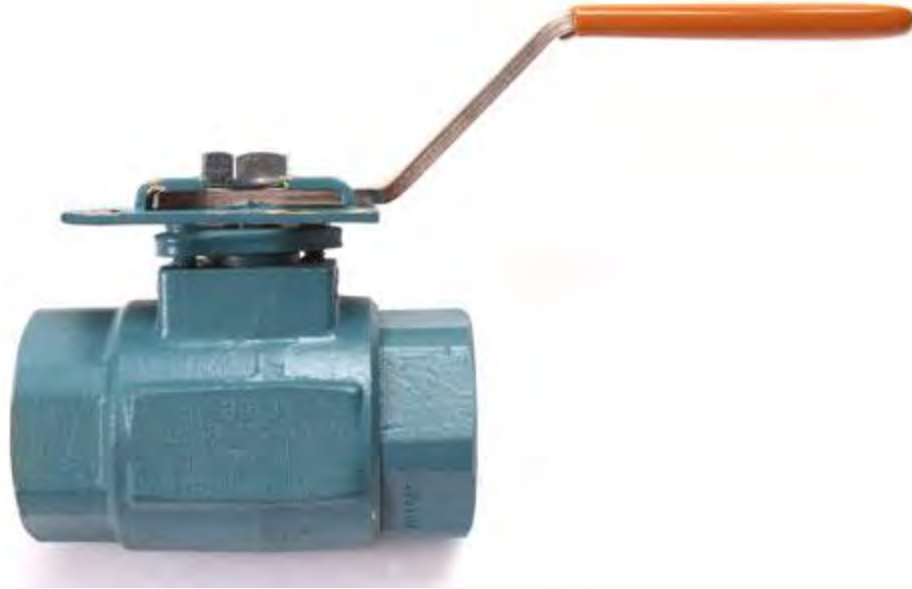


Bolted body Trunnion



Operation

Lever (wrench)



Square nut



Gear operated

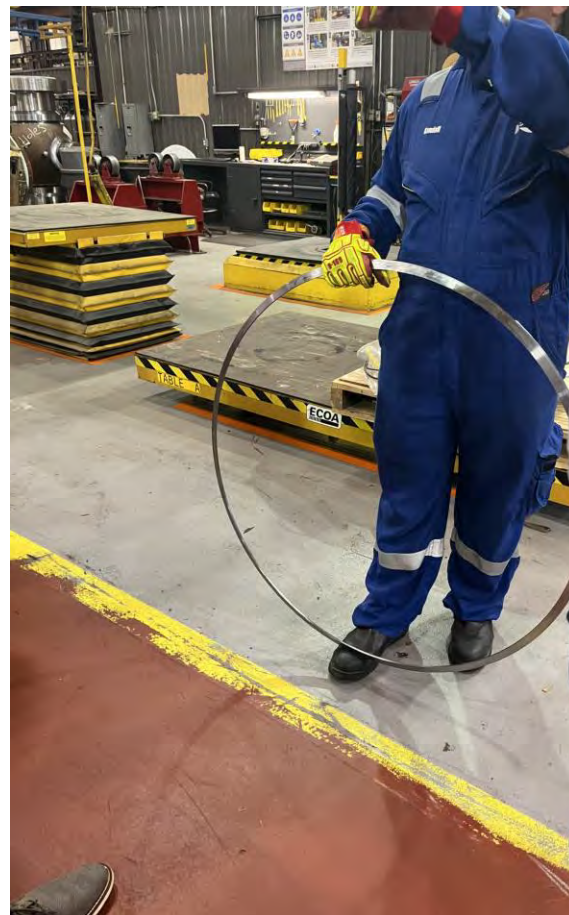


Double Block and Bleed

- Self relieving seat
- Isolating seat (Double acting)- DIB1, and DIB2



In Manufacture



User's Manual

Installation, Operation and Maintenance Manual

Cameron Type 31 Welded Body Ball Valve



What can be found

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Questions?