



Valve Applications

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Update:

- 1983 Originally Founded
- 2004 Dave Buchwald Joined
- 2009 Pipestone Equipment
- 2010 Transition Complete
- 2023 an Impel Company
- Now:
 - 6 Engineers, 19 Staff
 - Technical Experts
 - Full Automation Facility
 - Service Department
 - Three Trucks
 - Quick Ship Inventory
 - Pipestone Academy
 - Pipestone Annex

Engineered Solutions for Flow Control





Industry Standards:

- AWWA C512 Air Valves
- AWWA C504 Butterfly Valves
- AWWA C517 Plug Valves
- AWWA C507 Ball Valves



Industry Standards:

- AWWA C500 Metal-Seated Gate Valves
- AWWA C509 Resilient Gate Valves
- AWWA C515 DI Resilient Gate Valves
- AWWA C508 Check Valves

Valve Materials and Engineering:

- Metals provide structure.
- Elastomer provide sealing.
- Coating prevent corrosion.



Structural Materials:

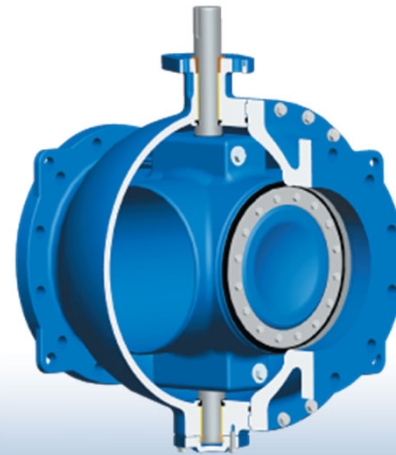
- Gray Iron: ASTM A126 Class B
- Ductile Iron: ASTM A536 Gr. 65-45-12
- Cast Steel: ASTM A216 Gr. WCB
- Cast SS: ASTM A351 Gr. CF8M





Trim Materials:

- Standard: zinc coated carbon steel
- Optional: stainless steel





- Buna-N (NBR, Nitrile, Hycar)
 - Compatible with petro-chemicals
 - Used for Water or Wastewater
- EPDM (Ethylene Propylene)
 - Compatible with chloramines
 - Recommended for Clean Water
- Viton (FKM, Fluorocarbon)
 - Compatible with many chemicals



- Acrylic Primer - Water or Latex Base
 - Requires field coating
- Two-Part Epoxy - Chemical Cured
 - Requirement for corrosion resistance
- Fusion Bonded Epoxy - Thermal Set
 - Highest quality



No coating



Two Part Epoxy



Fusion Bonded Epoxy
(All After 3 years)

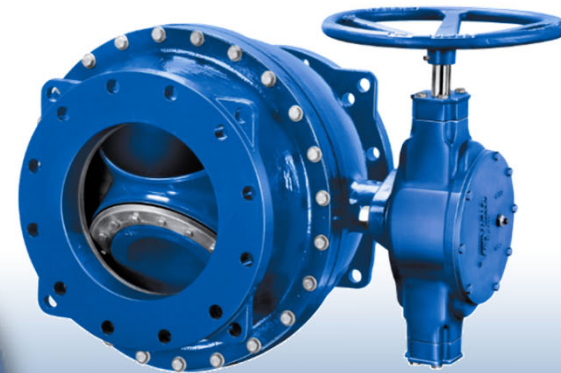
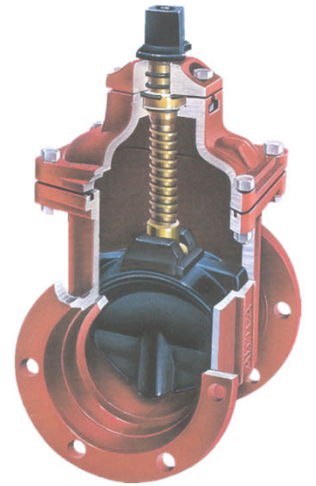


Matching Functions to Equipment:

- Isolation Valves
- Check Valves
- Air Valves
- Hydraulic Control Valves
- Actuated Valve Assemblies

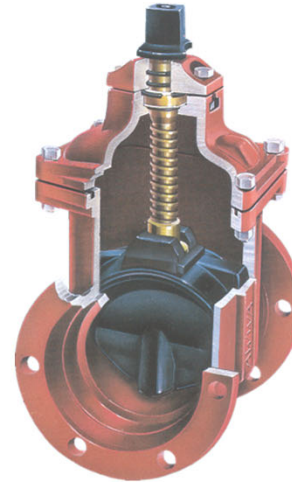
Matching Functions to Equipment:

- Isolation Valves
 - Gate Valves
 - Butterfly Valves
 - Ball Valves
 - Plug Valves
 - Slide Gates



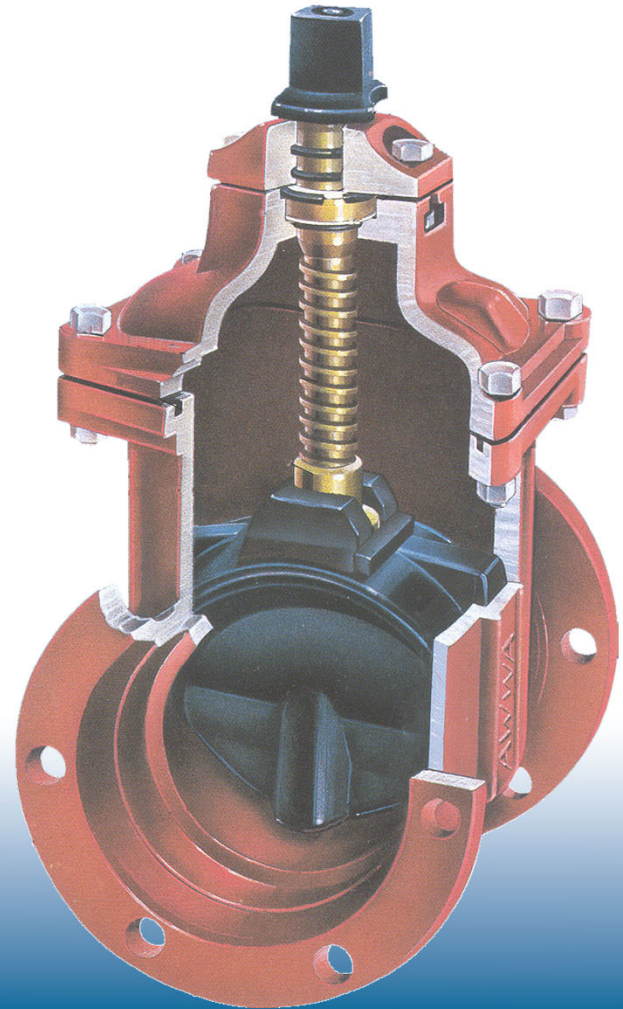
Matching Functions to Equipment:

- Isolation Valves
 - Gate Valves
 - Butterfly Valves
 - Ball Valves



Gate Valves

- Commodity
- Buried Service <12"
- Open/Close Duty
- Flanged or MJ Ends



Butterfly Valves

- Raw, Potable Water
- Treated Wastewater
- Buried or Plant



Butterfly Valves

- Flanged or MJ Ends
- Body/ Disc
- Shaft
- Bearings
- Metal Seat
- Resilient Disc



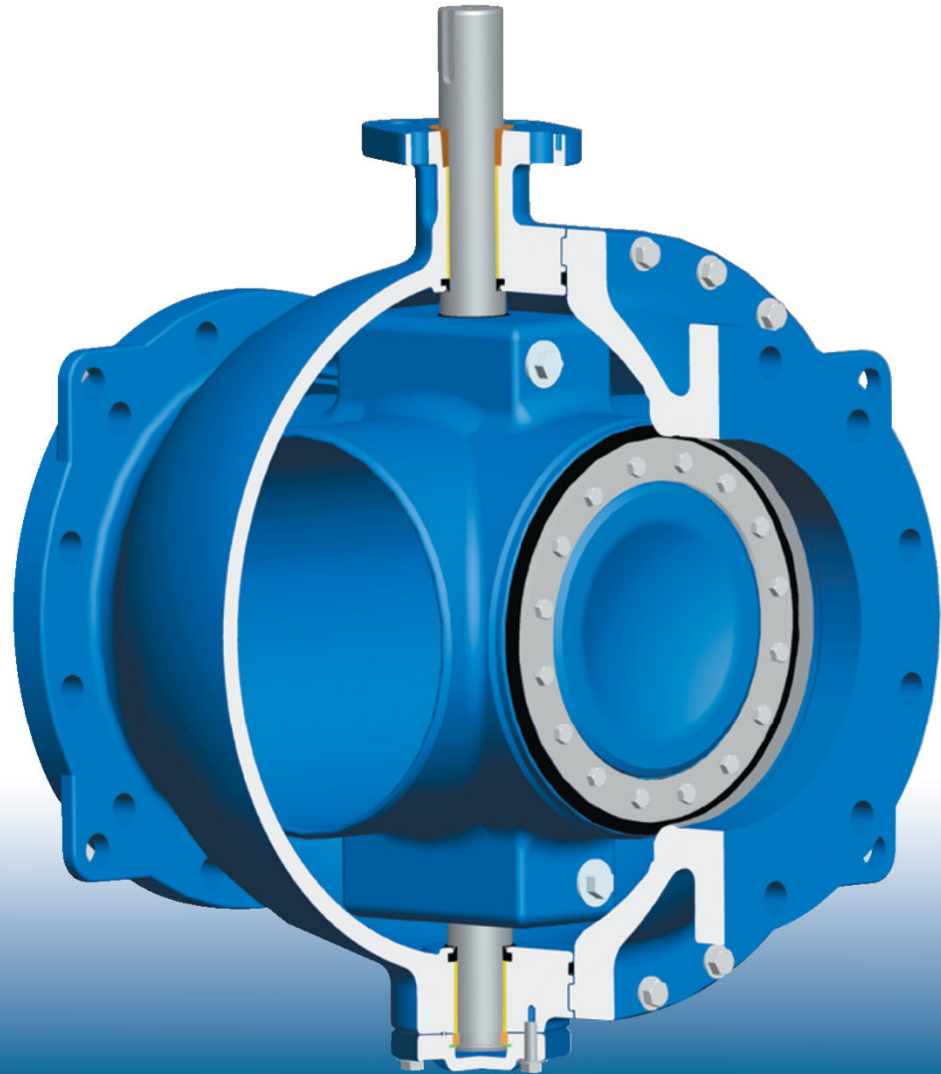
Ball Valves

- Throttling/Modulating
- Raw, Potable Water
- Wastewater
- Buried or Plant



Ball Valves

- Resilient Seat
- Body/Ball
- Shaft
- Bearings
- Metal Seat
- Grit Guards



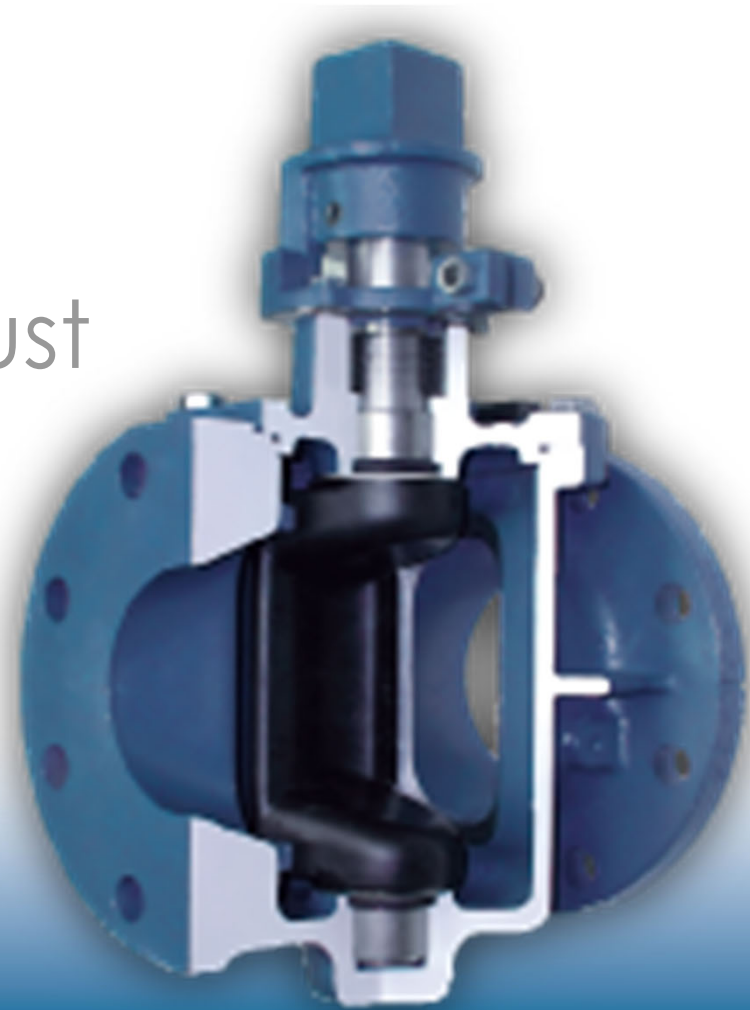
Plug Valves

- Throttling/Modulating
- Wastewater
- Buried or Plant



Plug Valves

- Rectangular Port
- Fully Encapsulated
- Bearings, Radial/Thrust
- Shaft Seal System
- Nickel Welded Seat
- Grit Guards



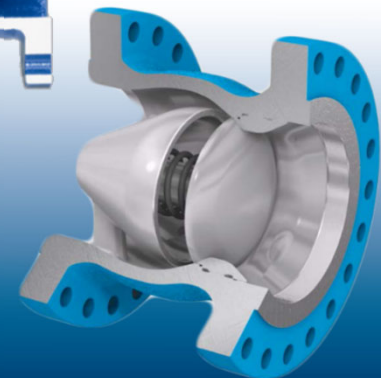
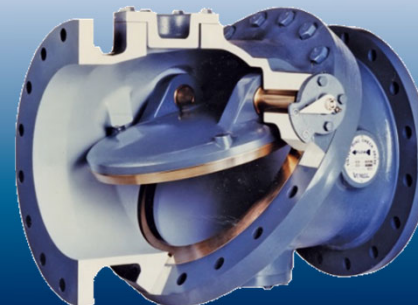
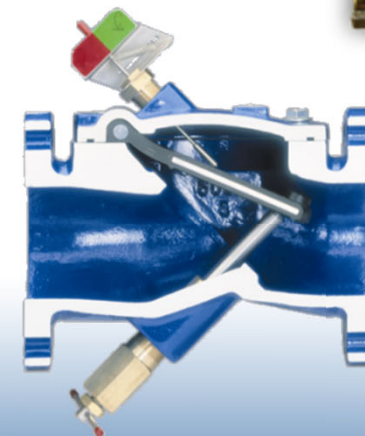
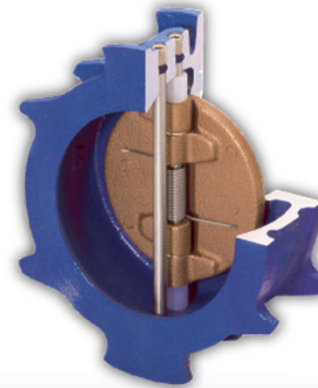
Slide Gates

- Uni-Directional
- Rectangular or Round
- Wall or Thimble Mount
- Aluminum or Stainless
- Rising or Non-Rising Stem
- Open or Self-Contained Frame

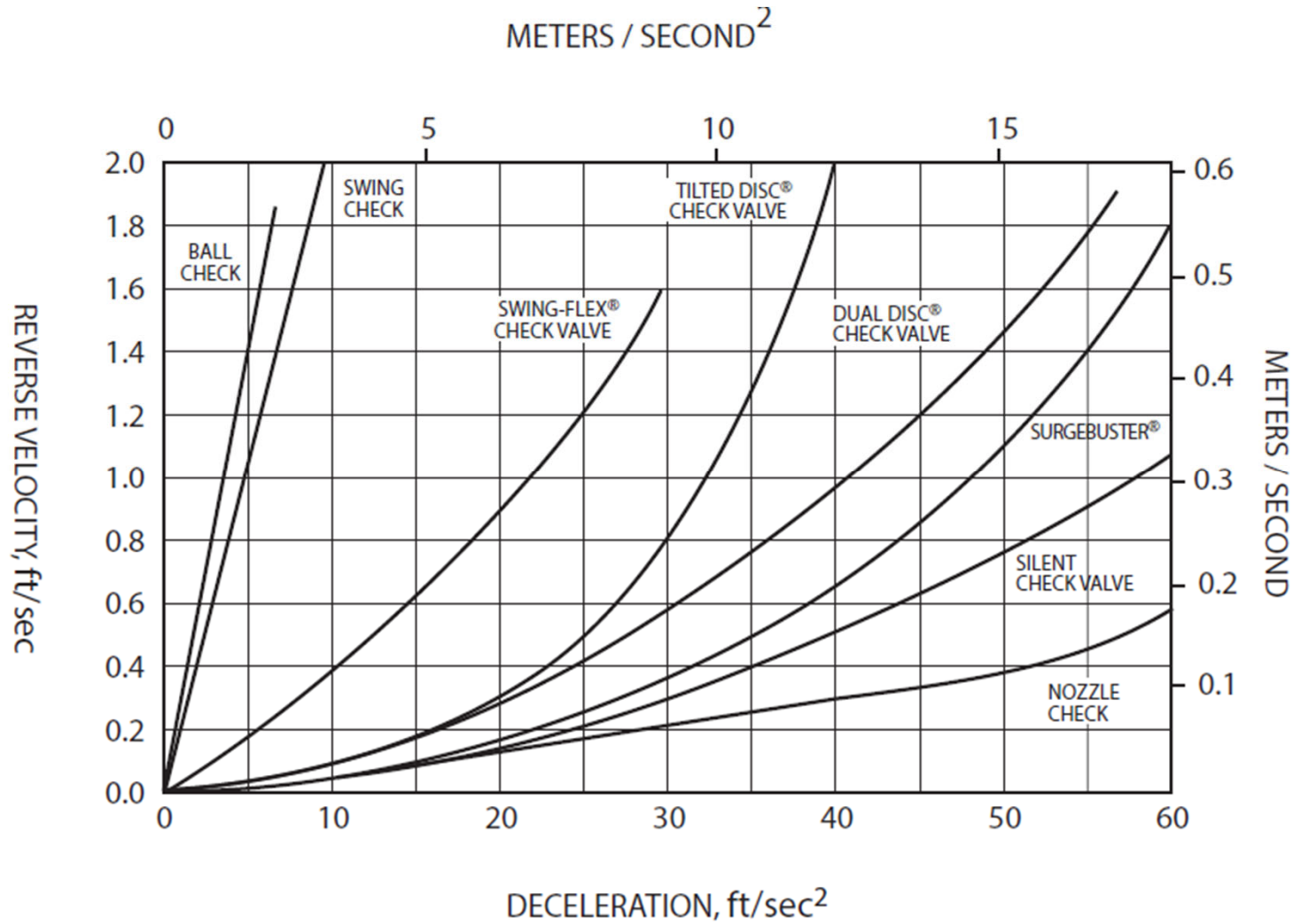


Check Valves

- Duckbill
- Ball Check
- Swing Check
- Silent Check
- Double Disc
- Tilting Disc
- Swing Flex
- Axial Check



Check Valves



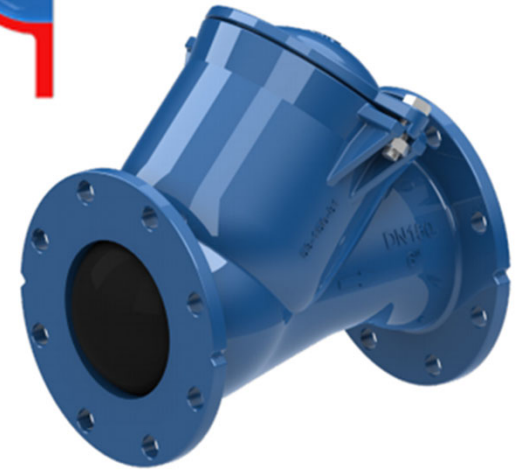
Duckbill Check Valve

- Elastomer
- Flanged or Slip On
- Slope Bottom
- In-Line



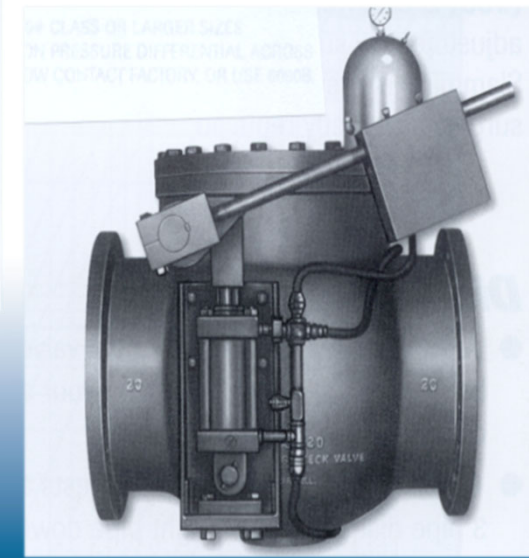
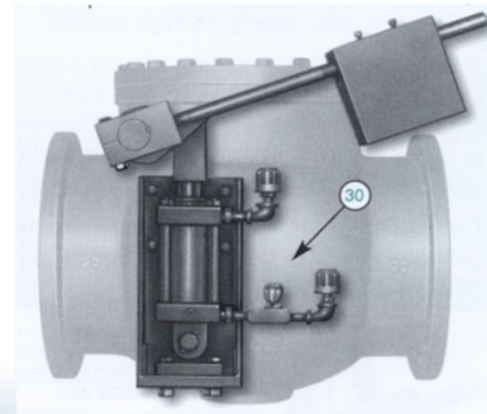
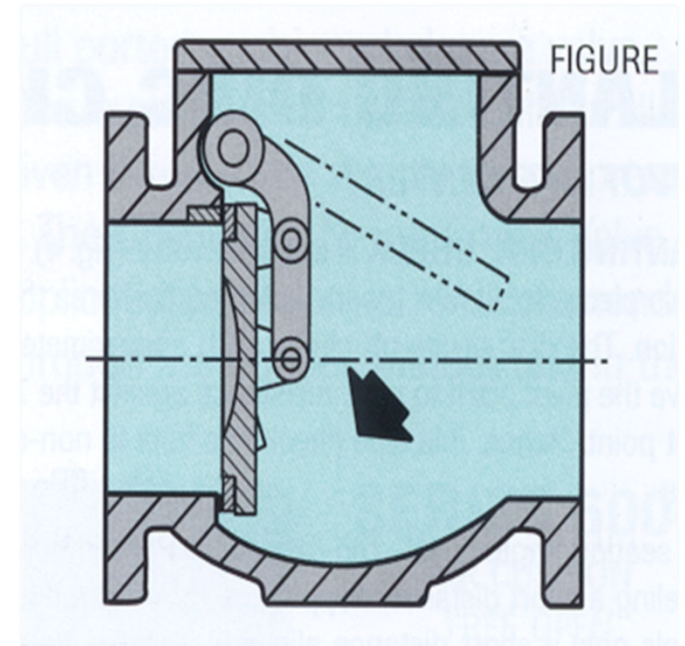
Ball Check Valve

- Horizontal or Vertical
- Self Cleaning
- Low Headloss
- Easy Ball Replacement
- Ductile Iron Body and Bonnet



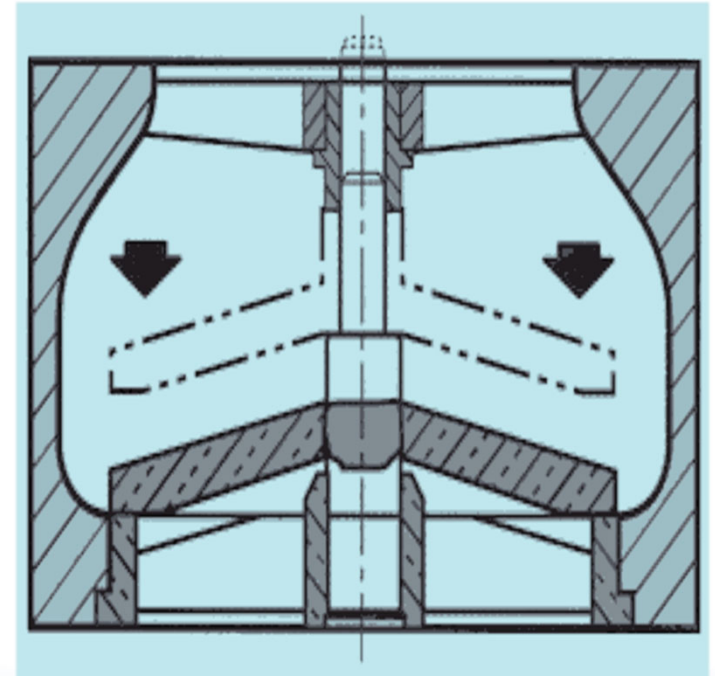
Swing Check Valve

- Free Swinging
- 12-15fps to Open
- Outside Lever
- Weight
- Last 10% Closing
- Air Cushion
- Oil Cushion



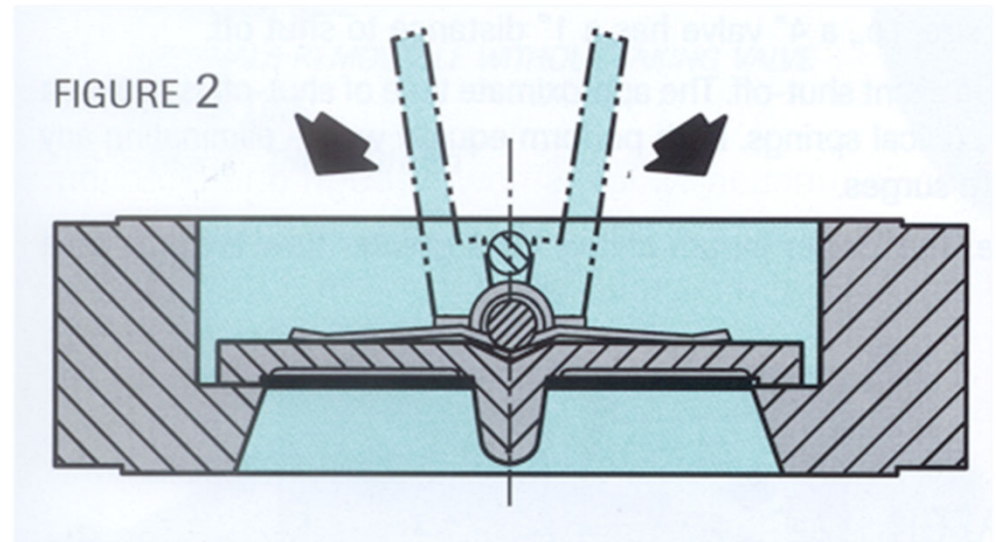
Silent Check Valve

- Center Guided
- Spring Loaded
- Short Stroke
- Quick Closing
- Cost Effective
- High Head Loss



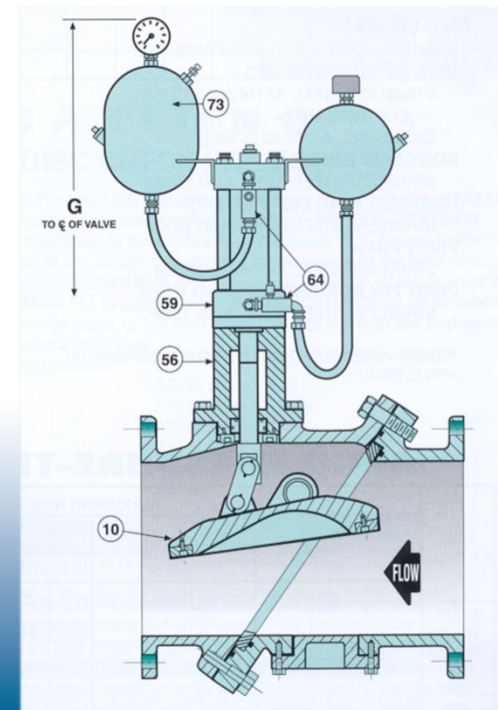
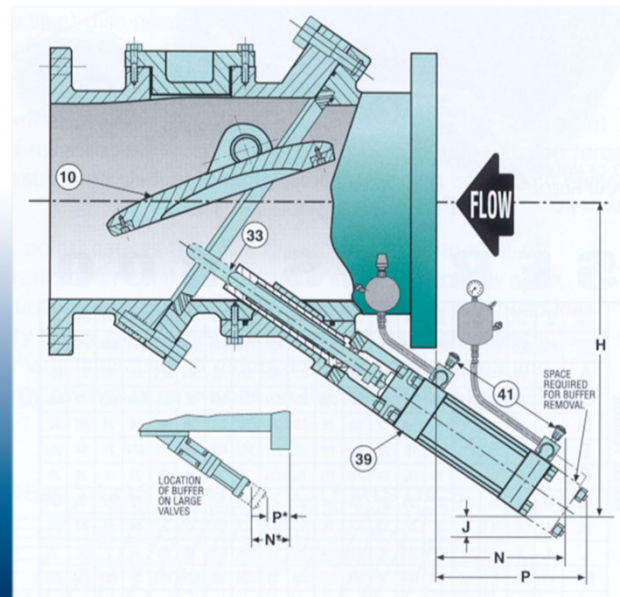
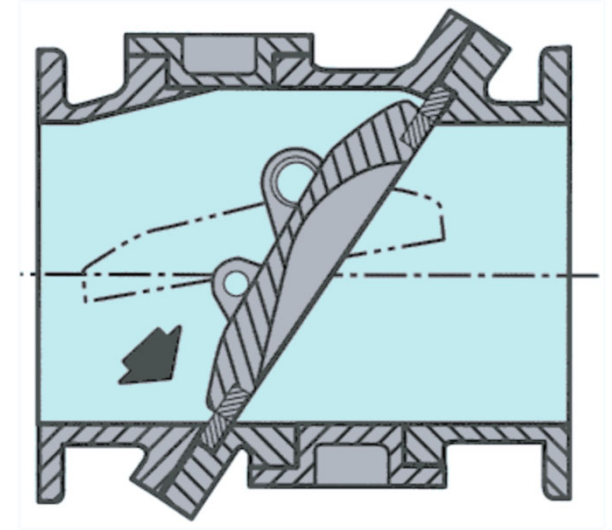
Double Disc Check Valve

- Light Halves
- Quick Closing
- Hinge Pin
- Torsion Spring
- Minimize Slamming
- Cost Effective
- High Head Loss



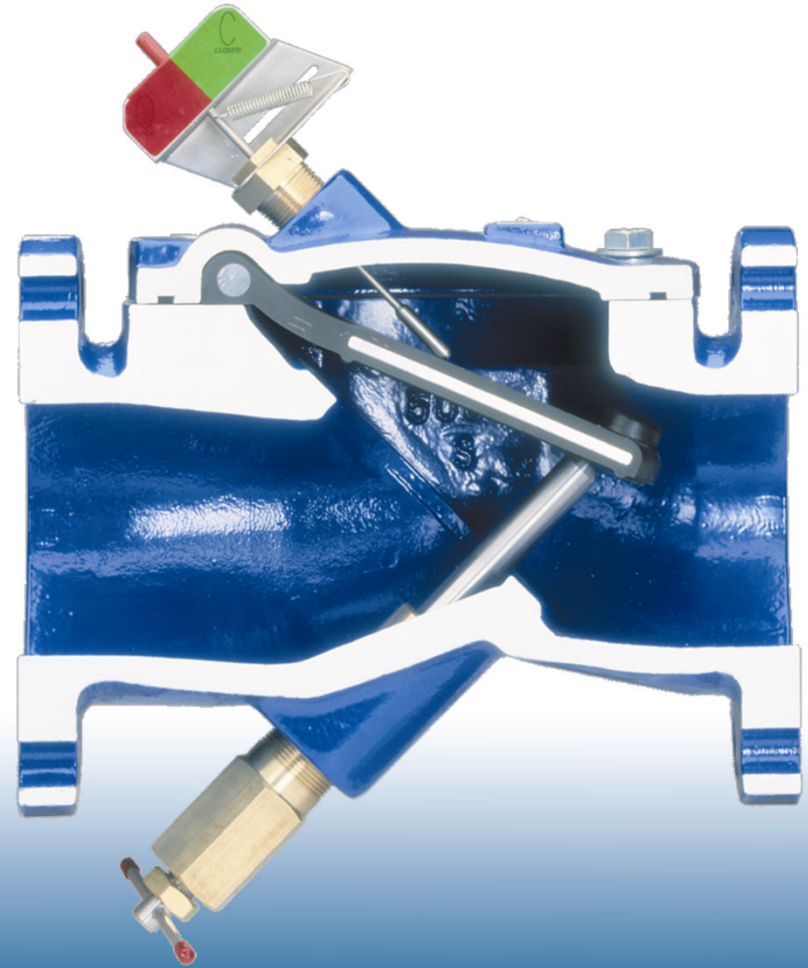
Tilting Disc Check Valve

- High Cv
- Balanced Disc
- 40deg Travel
- Top Mounted Oil Dashpot
- Bottom Buffer



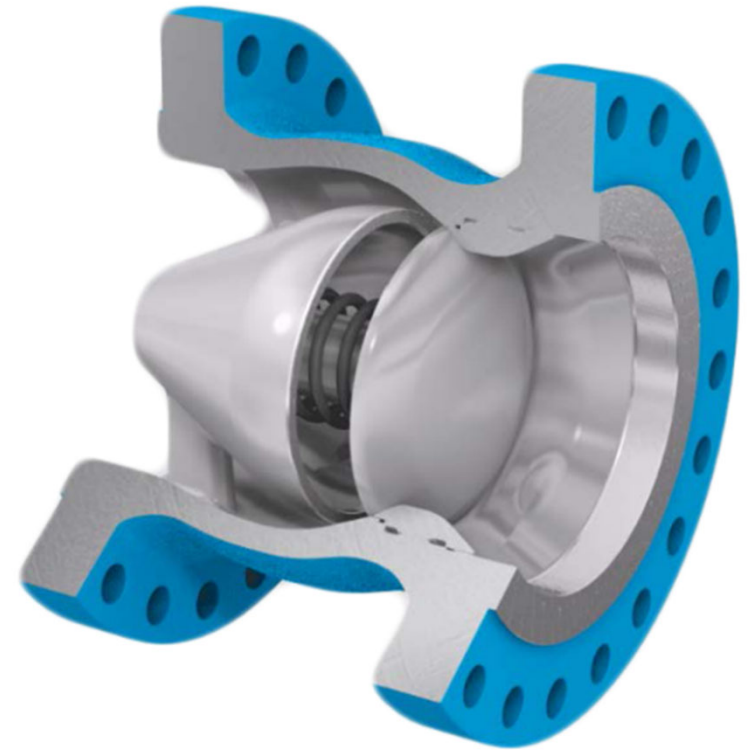
Surgebuster Check Valve

- Angled Seat
- Short Stroke
- Flexible Hinge
- Quick Acting
- Disc Accelerator
- Starts Sooner
- Two Moving Parts

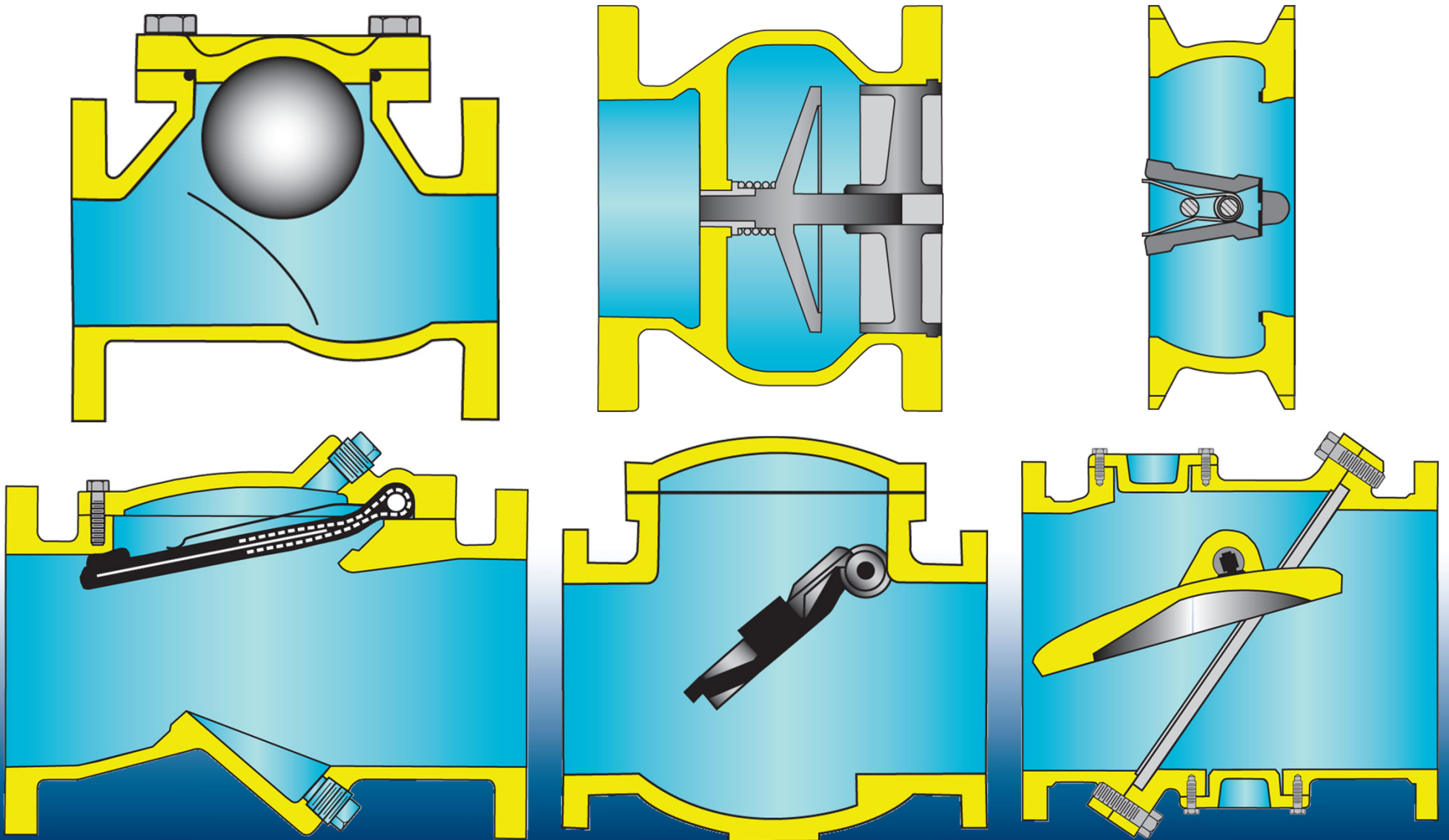


Axial Check Valve

- Low Headloss
- Expanded Body
- Low Cracking Pressure
- Extremely Fast Closing
- Reliable Performance



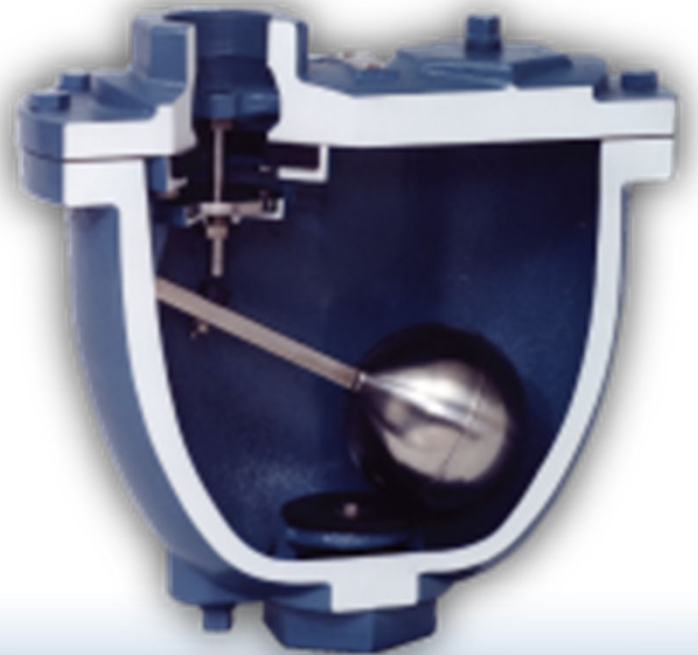
To Close Rapidly- use a Spring!



Matching Functions to Equipment:

- Air Valves
 - Air Release Valves (ARV)
 - Air/Vacuum Valves (AVV)
 - Combination Air Valves (CAV)



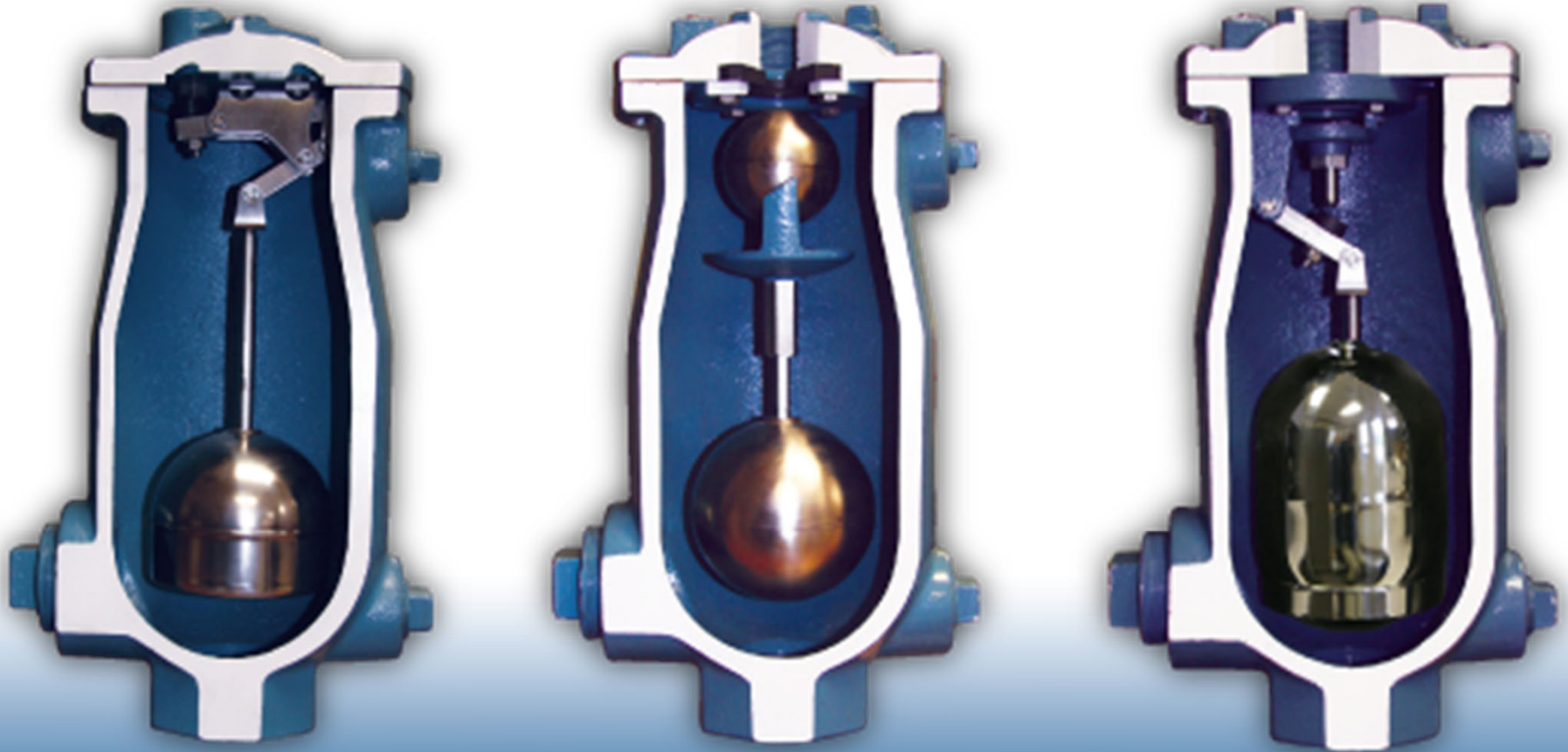




Matching Functions to Equipment:

- Air Valves
 - Wastewater Air Valves
 - Vacuum Breakers
 - Well Service
 - Floodsafe

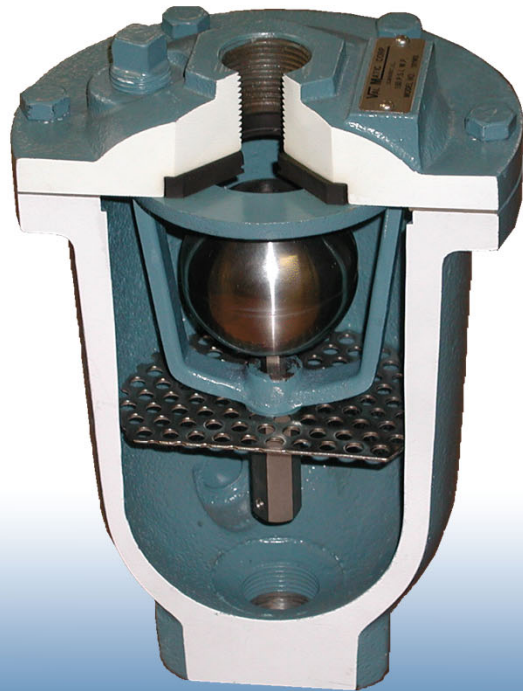
Wastewater Air Valves



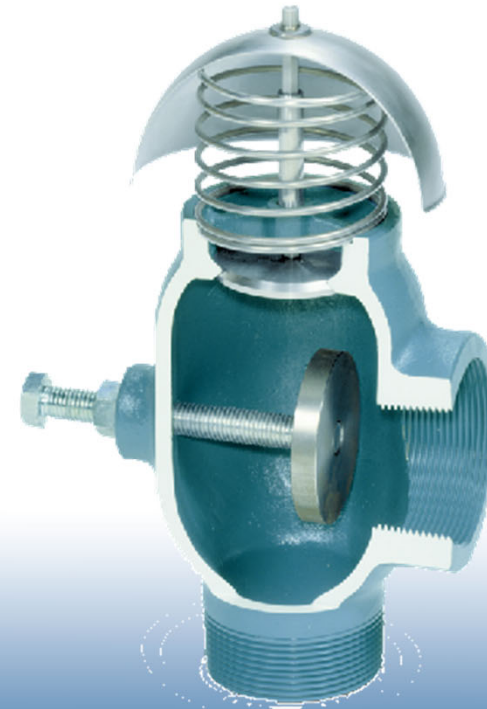
Vacuum Breakers



Well Service Diffuser



Throttling Device

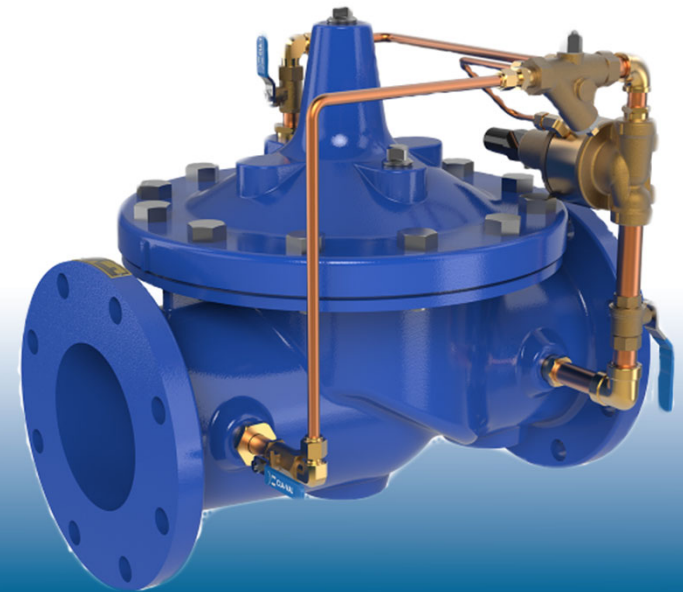
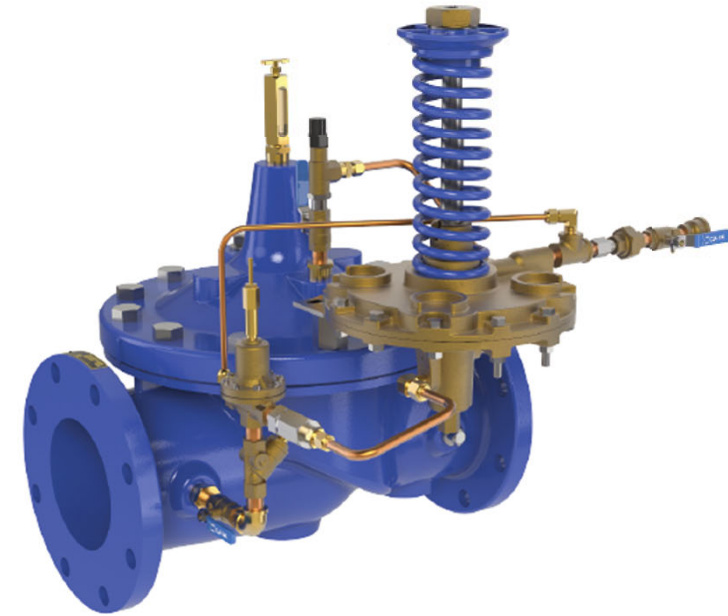


Floodsafe



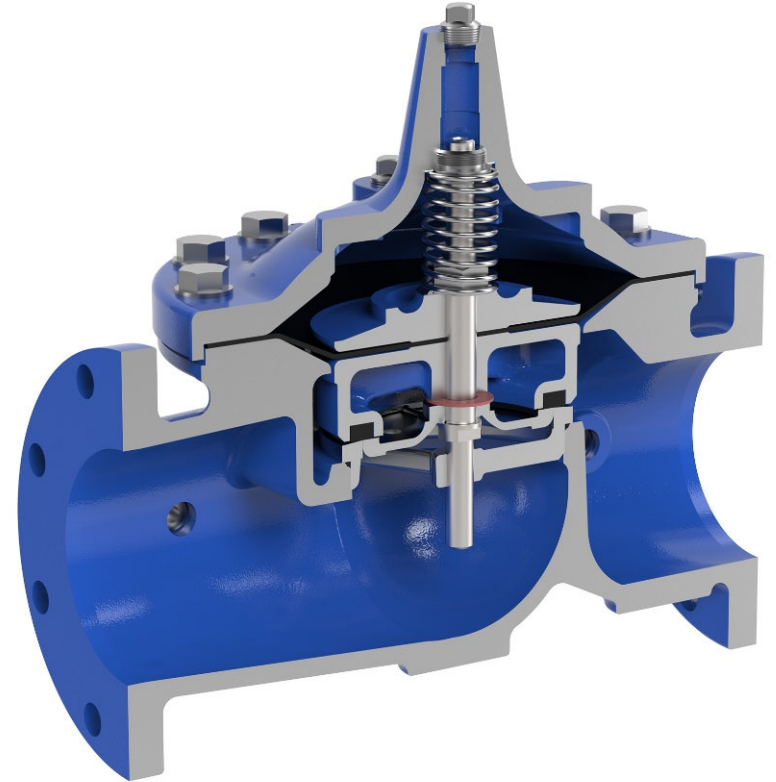
Hydraulic Control Valves

- Pressure Reducing
- Pressure Relief
- Pressure Sustaining
- Altitude

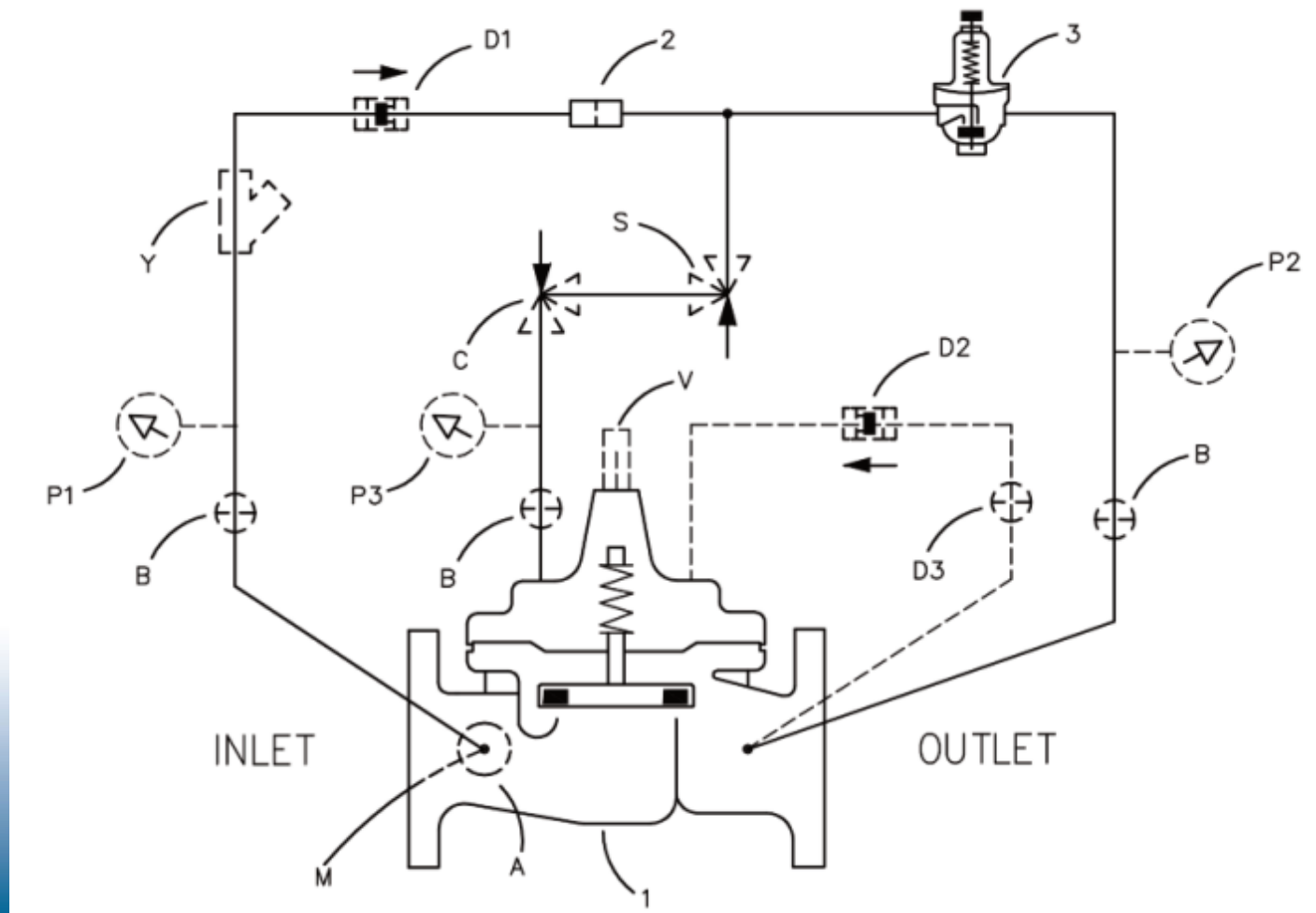


Hydraulic Control Valve:

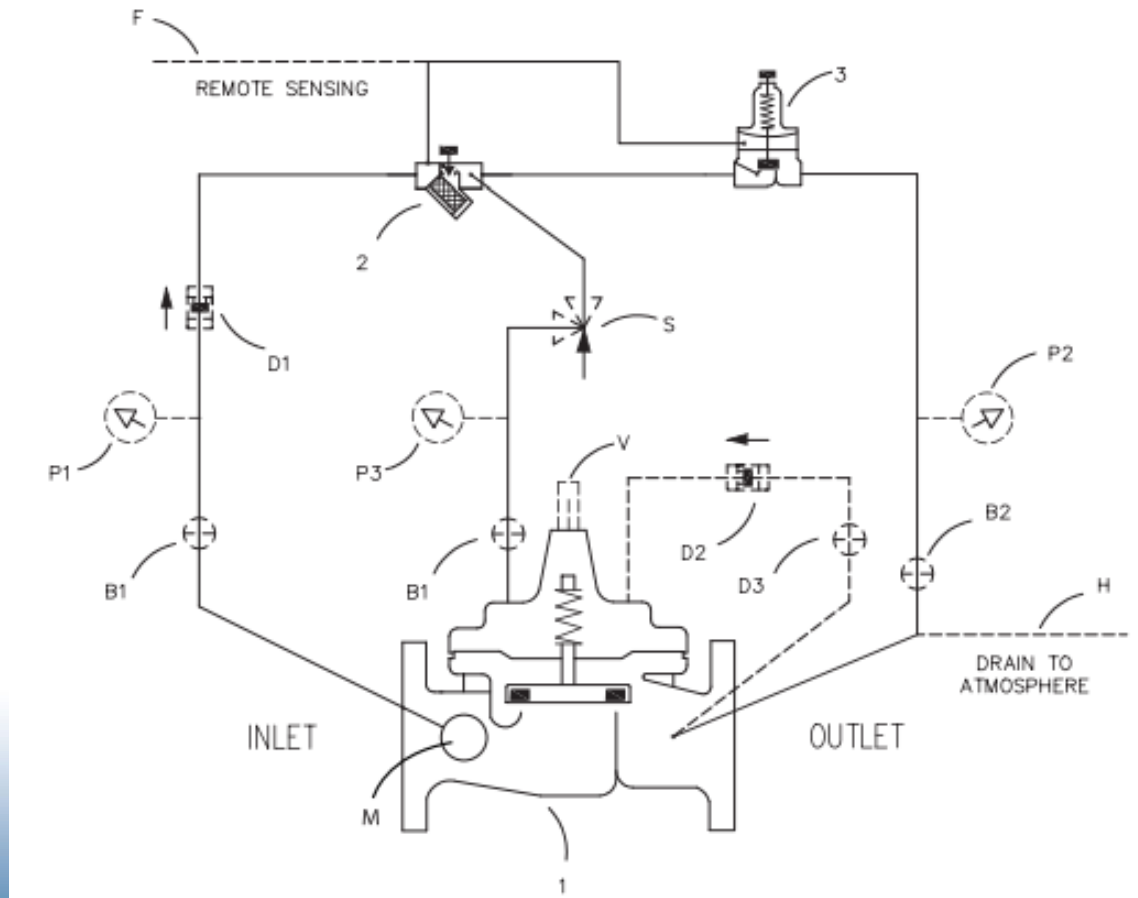
- Main Valve Body
- Diaphragm
- Bonnet
- Stem
- Seat
- Inner Valve



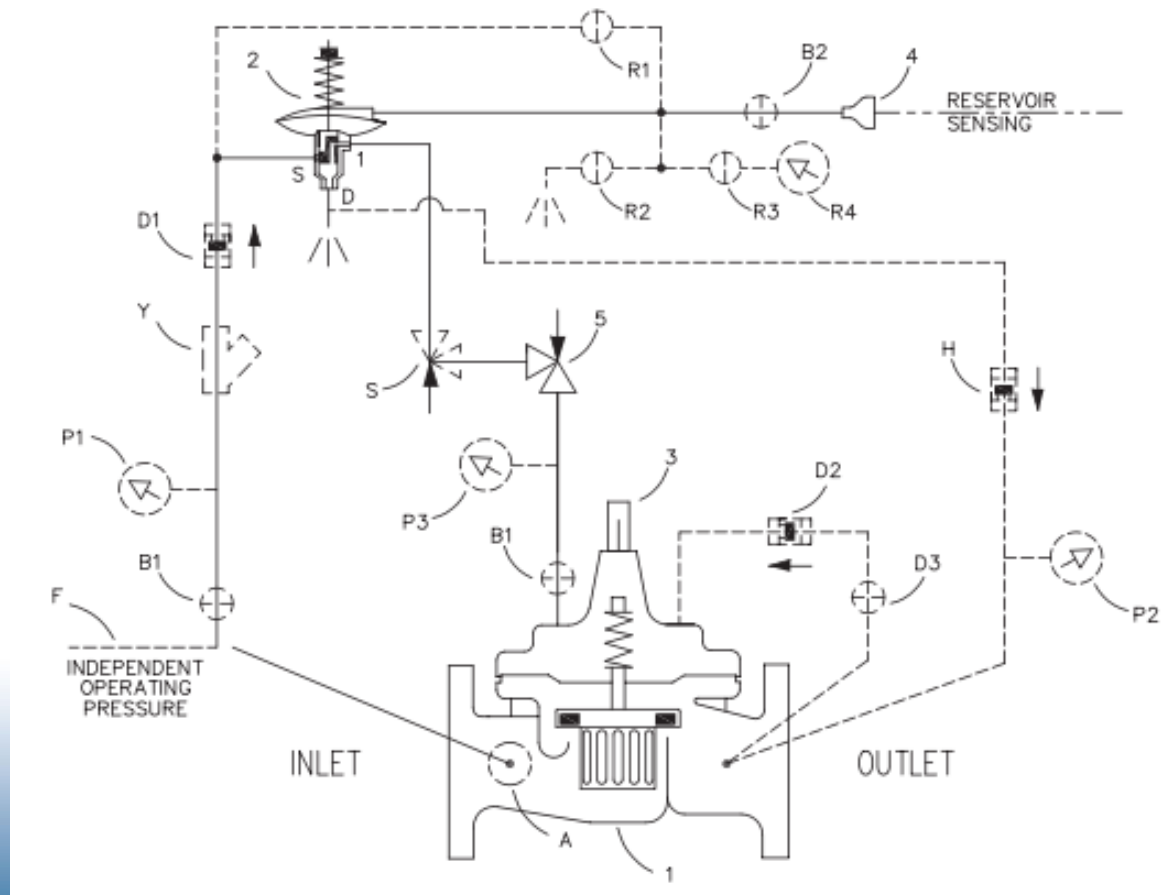
Pressure Reducing:



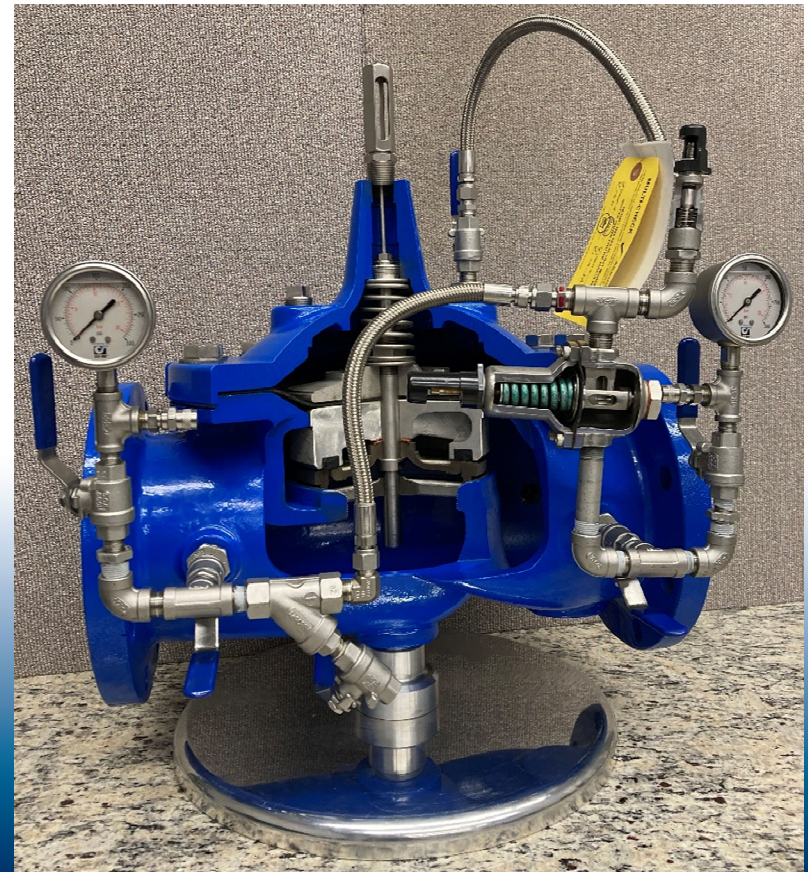
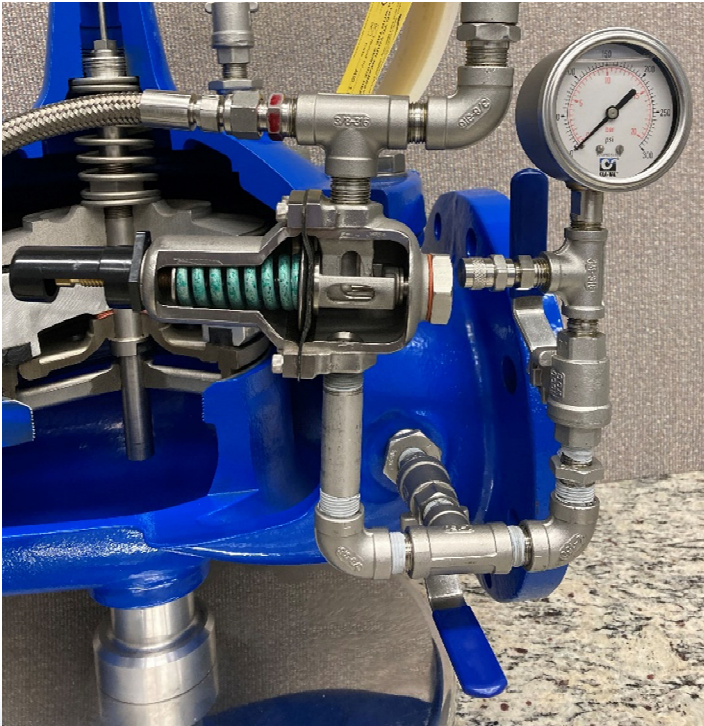
Pressure Relief/Sustaining:



Altitude:



Additional Options:



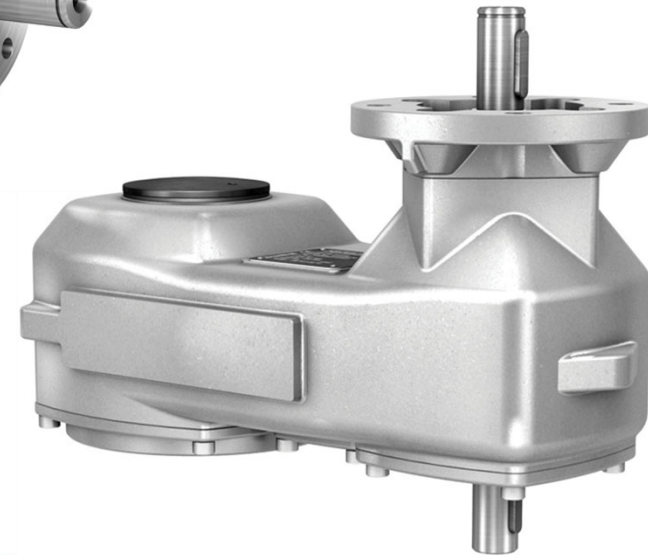
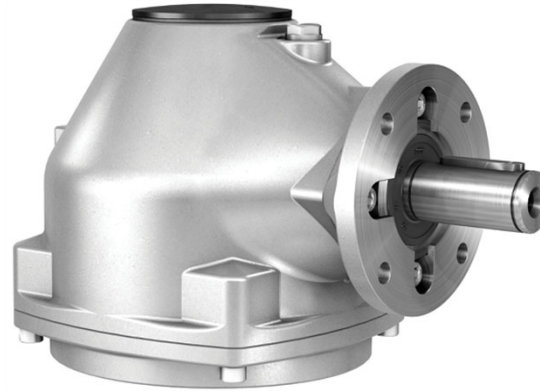
Electronic Control Valves

- Booster Pump Control
- Solenoid Controlled
- Metering



Manual Gearboxes

- Open-Close
- Modulating
- Part-Turn
- Multi-Turn
- Worm Gearbox
- Bevel Gearbox
- Spur Gearbox



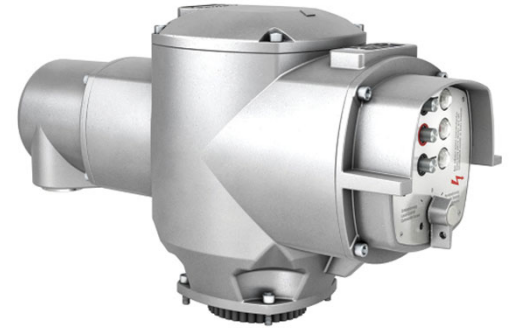
Pneumatic Actuators

- Double Acting
- Spring Return
- Universal Limit Switch
- IP or AP Positioner
- Declutchable Override



Electric Actuators

- Electro-Mechanical
- Non-Intrusive
- Fully Programmable



Actuated Assemblies





Adding Value:

- Engineered Solutions
- Bladder Style Air Chambers
- Pre-Assembled Vault Systems
- Complete Pump Stations
- Pipestone Academy

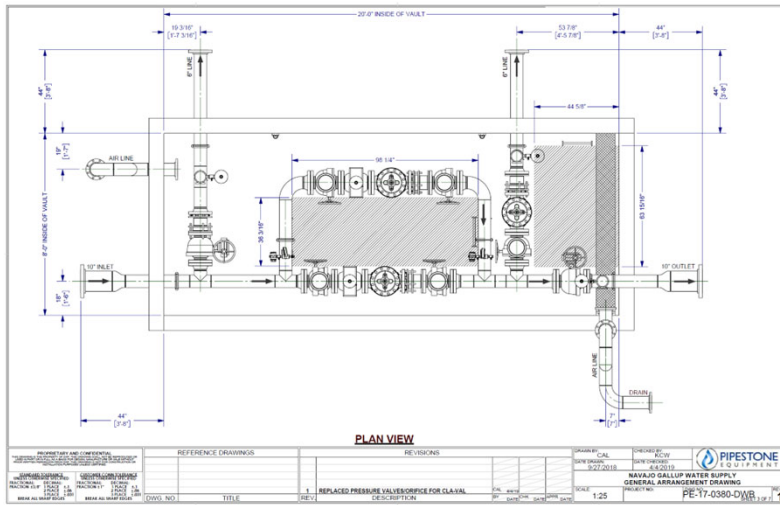
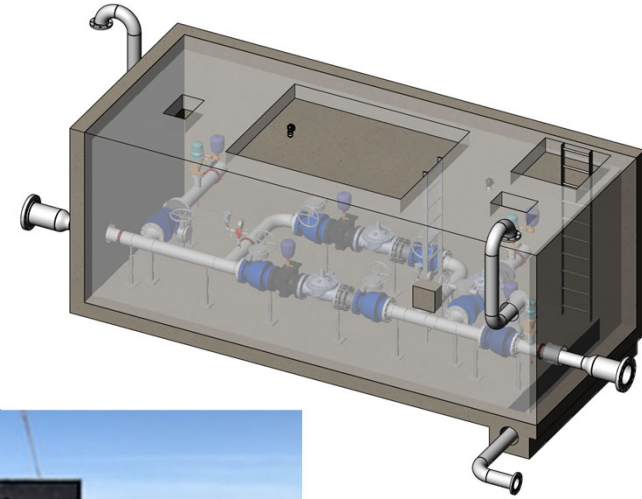
Bladder Style Air Chambers



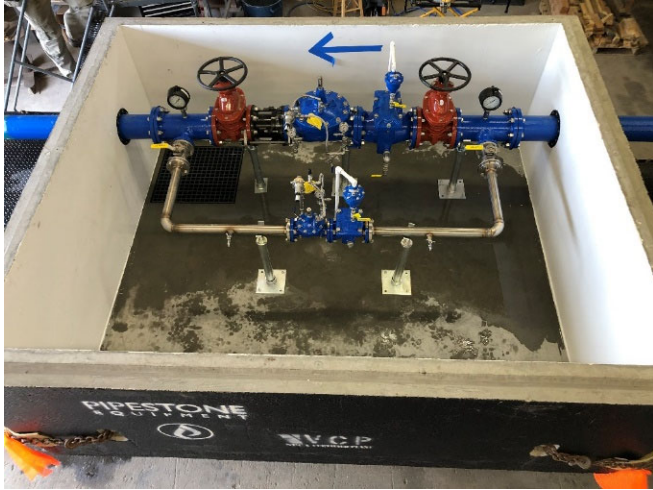
Bladder Style Air Chambers



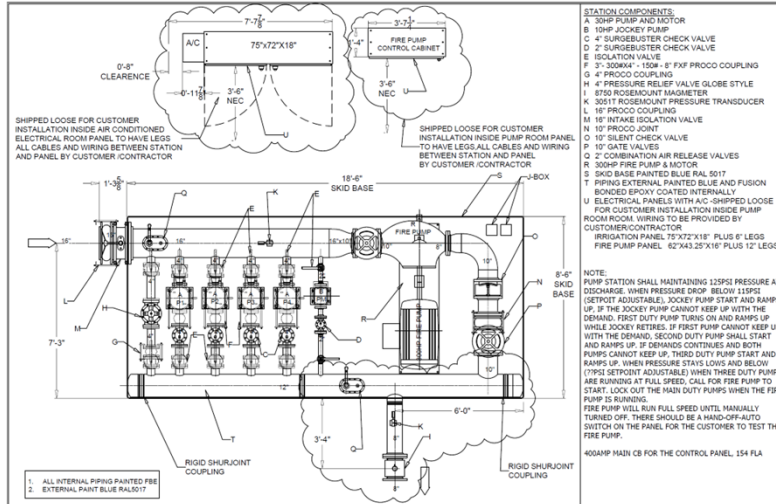
Pre-Assembled Vault Systems



Pre-Assembled Vault Systems



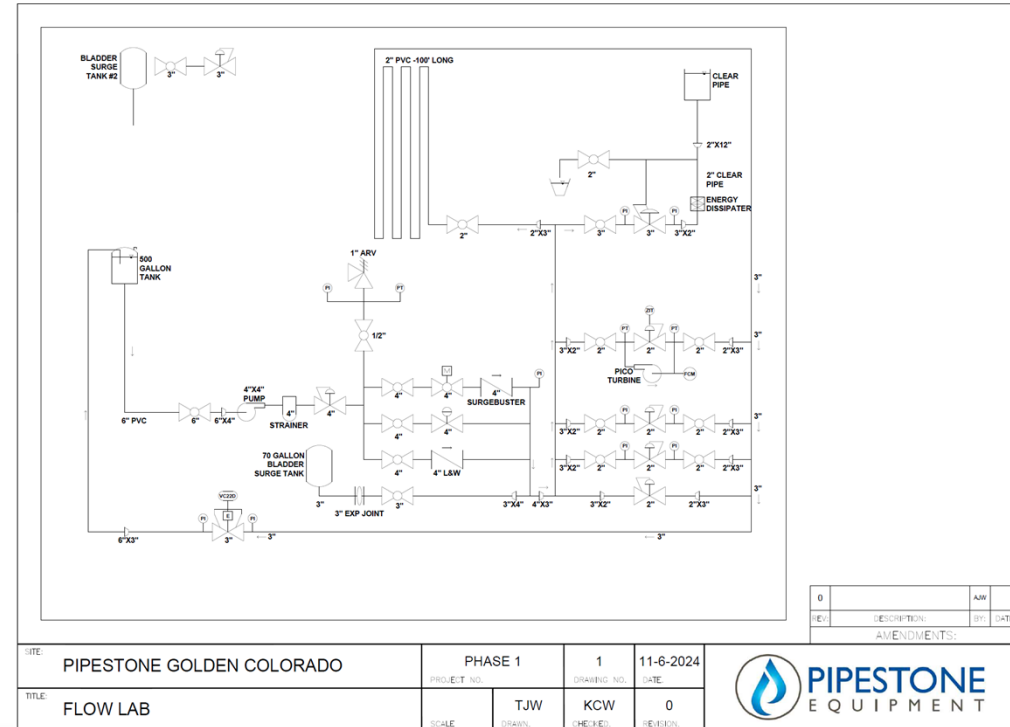
Complete Pump Stations



Complete Pump Stations



Pipestone Academy





Thank you!

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