

MERCER VALVE COMPANY, INC.



"Auto Seat Technology"®



MERCER VALVE CO., INC.
AUTO SEAT TECHNOLOGY®

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Introduction

- Mercer Valve has been manufacturing valves for approximately 20 years
- Mercer Valve began with Auto-Seat Technology® in the 8100 Series. Auto-seat Technology is a soft seated design, made to outlast the competition.

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Auto-Seat Technology®

- Fully Guided Disk
- Fully Guided Spring
- Lip Seal Soft Seat
- Low Rated Springs
- Non rising stem (no torque apply to the seat)
- Mechanical Stops

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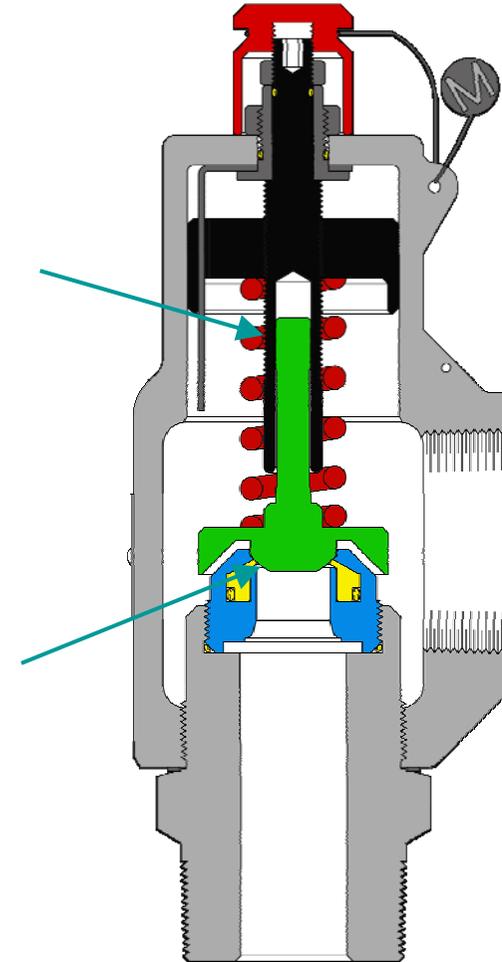
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Auto-Seat Technology®

Fully Guided Disk

- Disk is aligned at the top and bottom.
- Bottom alignment is spherical and machined to conform to the seat.
- This allows disk to be realigned every pop.



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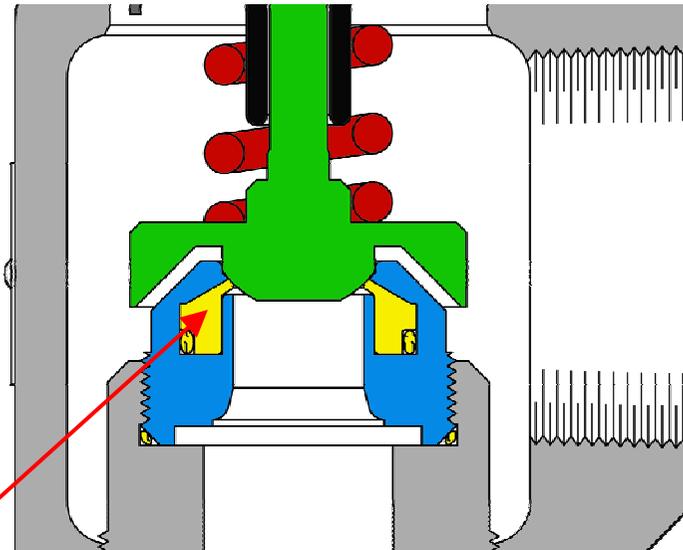
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Auto-Seat Technology® Seat



- Soft seat using standard materials of Viton®, Teflon®, or Peek®.
- Nozzle takes valve closing impact of disk.
- The seat has a lip seal that energizes with pressure.

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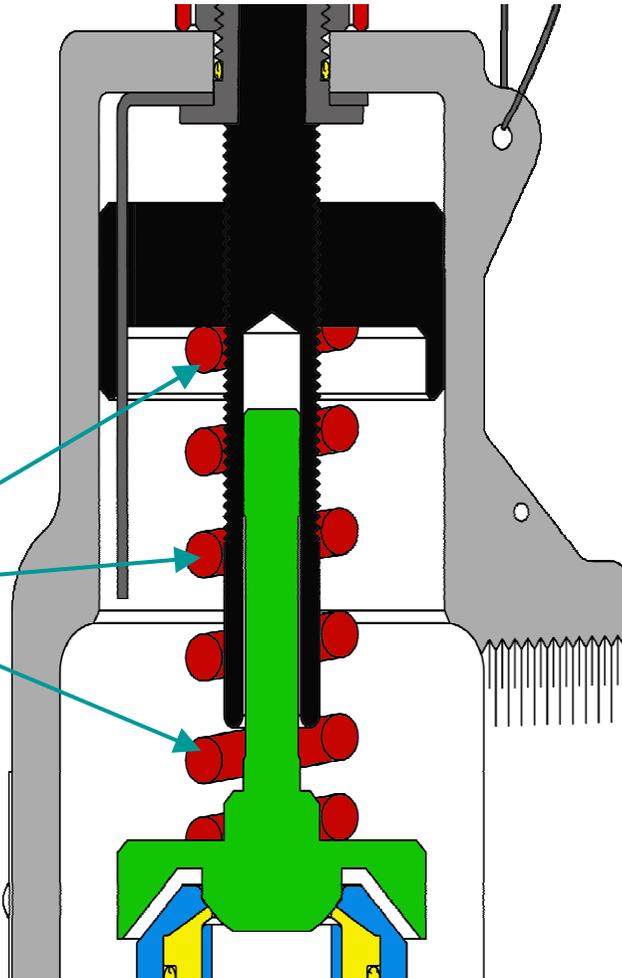
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Fully Guided Spring



- Mercer Valve design allows the spring to be guided from top to bottom.
- This guides the the forces into vertical alignment.
- Spring alignment helps with repeatable spring tension.

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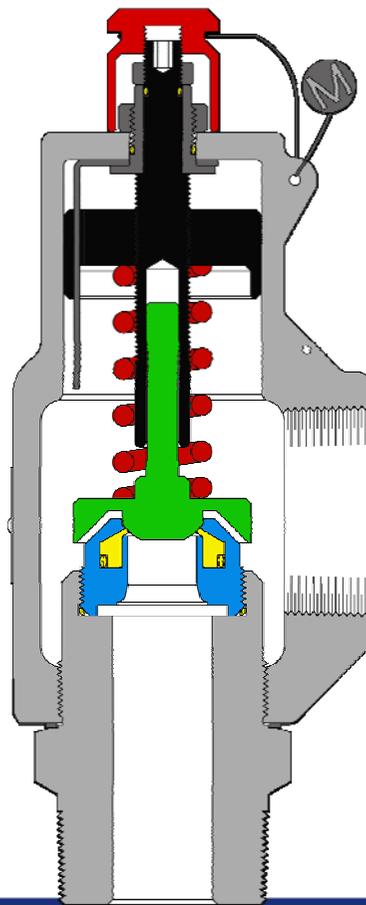
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Auto-Seat Technology®

Low Rate Spring



- A low rate spring allows the valve to have the same characteristics at set pressure, and at full lift.
- Lower spring stresses means longer spring life.
- More accurate set pressure.

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Auto-Seat Technology® Non Rising Stem

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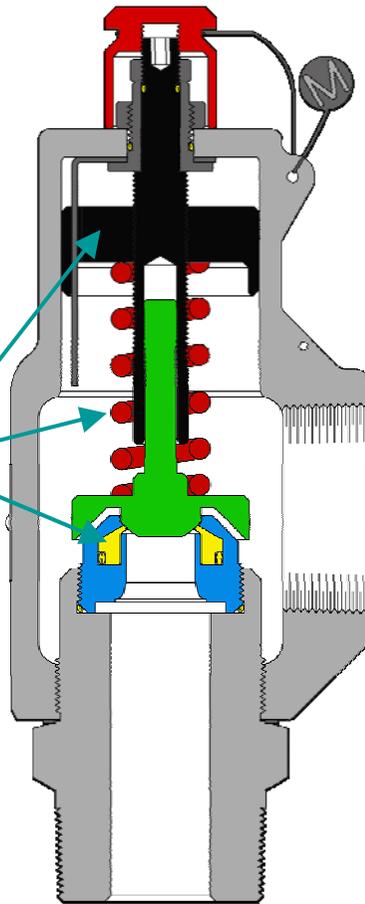
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Does
Not
Turn



- When adjusting the set pressure there is no torque on the seat through the spring.
- The disk can not turn during setting preventing seat damage.



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Mechanical Stop On Lift

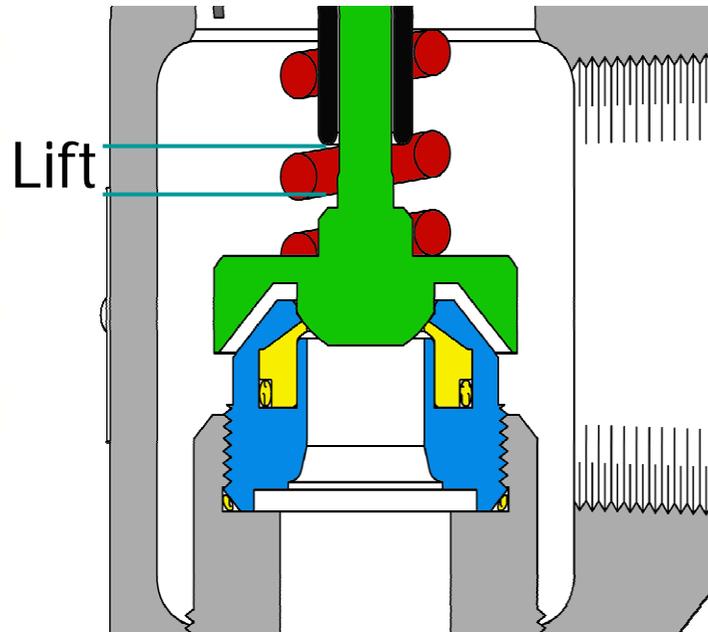
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- Lifting of the disk is limited by the adjustment screw.
- Assures flow is at rated capacity.
- Prevents valve flutter and maintains the integrity of the spring.



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Using Auto-Seat Technology®

- Allows for a tighter seal and less product loss.
- Reduces the need for valve repair.
- Helps keep an accurate set pressure.

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Spring Operated Valves

- 8100 Series



- 9100 Series

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Spring Operated Valves

8100 Series and 9100 Series

- Auto-Seat Technology
- Bubble Tight Sealing
- Repeatable Set Pressure
- Gas/Vapor and Liquid Certified

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Spring Operated Valves

8100 Series

- 1/2" Diameter Orifice
 - MNPT x FNPT or FNPT x FNPT
 - 3/4" x 1"
 - 1" x 1"
 - Maximum Set Pressure
 - 2400 psig
- 3/4" Diameter Orifice
 - MNPT x FNPT or FNPT x FNPT
 - 1 1/2" x 2"
 - 2" x 2"
 - Maximum Set Pressure
 - 2000 psig

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Spring Operated Valves

9100 Series

- Threaded
 - Orifice Sizes C to K
 - MNPT x FNPT or FNPT x FNPT
- $\frac{1}{2}$ " x 1" to 3" x 3"



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Spring Operated Valves

9100 Series

- Flanged
 - Orifice Sizes C to M
 - RF x RF, RTJ x RF, or RTJ x RTJ
 - 1/2" x 1" to 4" x 6"



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Spring Operated Valves

9100 Series Model 20



- Orifice Sizes C and D
- MNPT x FNPT or FNPT x FNPT
 - $\frac{3}{4}$ " x 1" to 1" x 1 $\frac{1}{4}$ "
 - Set Pressure Range
 - C Orifice: 3000 to 8700 psig
 - D Orifice: 3000 to 7500 psig

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Pilot Operated Valves

9500 Series



- Snap and Modulating Pilots
- Auto-Seat Technology®
- Gas/Vapor Certified
- Cast Flanges
- Nedox® Coated Piston Sleeves

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Pilot Operated Valves

9500 Series

- Direct Mounted Pilots
 - Better for Vibration
- API Letter Orifices
 - D to T
- Full Bores Orifices
 - 1 ½" to 8"
- 1" x 2" to 8" x 10" x 10"



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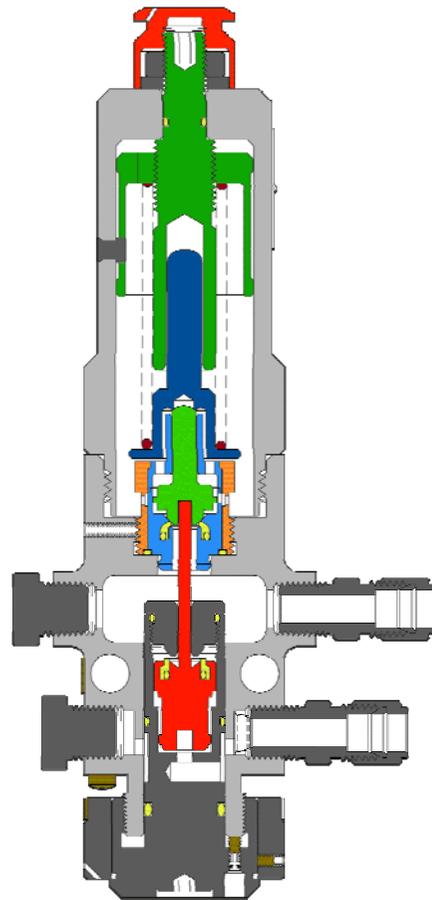
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Snap Pilot



- Adjustable Blowdown of 5-12% as a Standard.
- Main Valve is at Full Lift at Set Pressure.
- Maximum Set Pressure of 3750 psig

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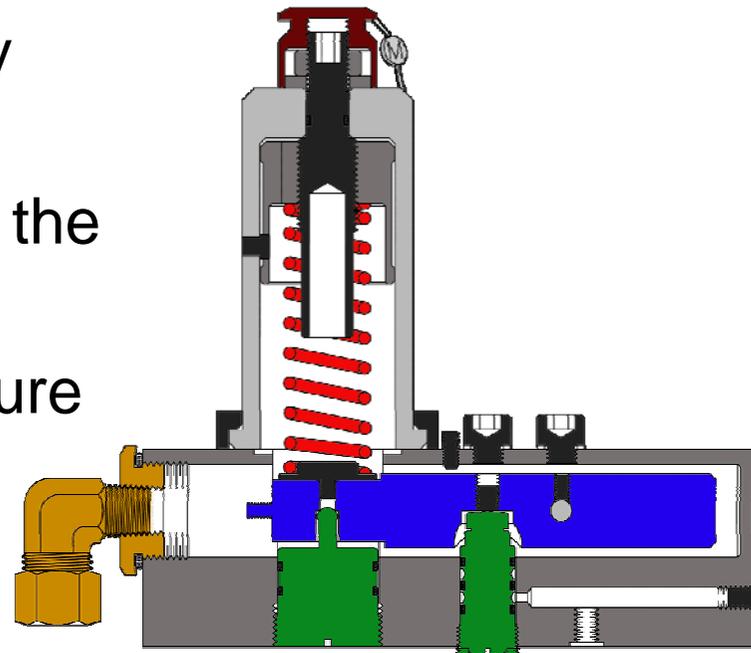
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Modulating Pilot

- Main Valve Begins to Open at Set Pressure.
- Main Valve gradually opens and closes.
- 5% Blowdown set at the factory.
- Maximum Set Pressure 1440 psig



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Pilot Operated vs. Spring Operated

- Blowdown
 - Pilot Operated: 5% to 12%
 - Spring Operated: 15% or more
- Back Pressure
 - Spring Operated: Set Pressure directly affected
 - Pilot Operated: No Set Pressure Variation
- Price



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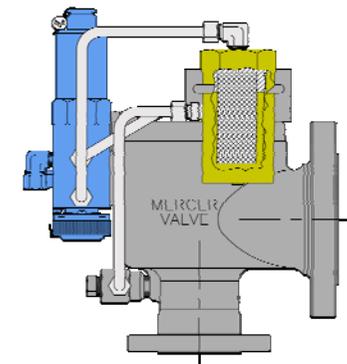
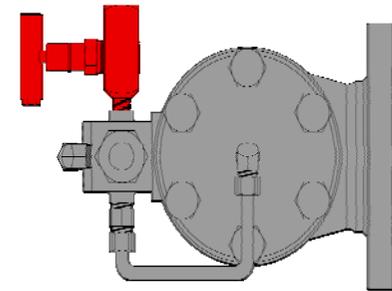
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Common Pilot Operated Valve Options

- Field Test Connection
- Backflow Preventer
- Pressure Snubber
- Auxiliary Filter
- Remote and Manual Blowdown





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