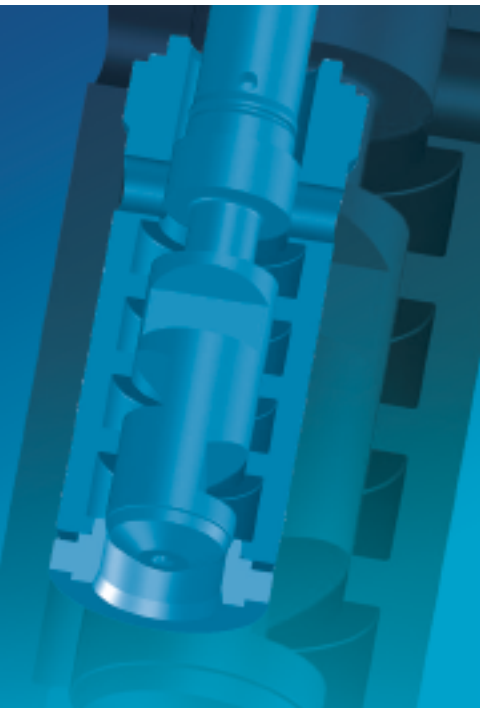


For more Severe Service solutions see us at www.fishersevereservice.com.



Modified design HP high pressure globe and block forged valves with 4-stage NotchFlo DST anti-cavitation severe service trim offer control of high pressure drop liquids (up to 2600 psi) while avoiding the damaging effects of cavitation.

Features:

- Longer Trim Life-NotchFlo trim features a protected seat design whereby the shutoff function is separate from the throttling areas of the trim.
- Class V Shutoff-Use of standard metal seats provides tight shutoff to minimize seat erosion.
- High Pressure Drops-Balanced trim is standard. Used with either diaphragm or piston actuators, NotchFlo DST trim is effective in applications covering a wide range of allowable pressure drops.

- Sour Service Capability-Materials are available for applications handling sour fluids. These materials comply with the recommendations of NACE MR0175.
- Availability-NotchFlo DST trim is available for both globe and angle valve body designs.

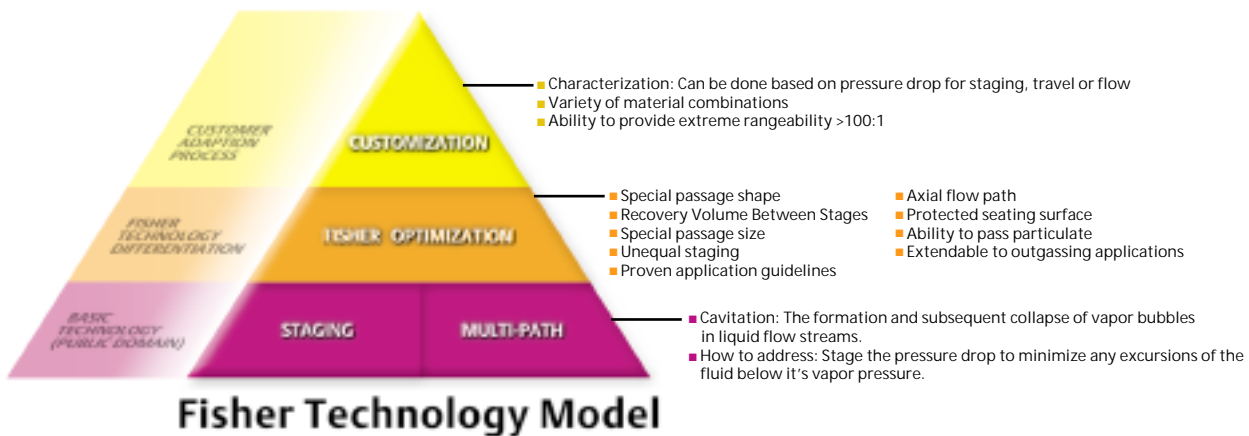
Operational Overview:

NotchFlo DST trim (figure 1) utilizes a high resistance, multi-stage, axial flow process where fluid flow is parallel to the axis of the plug and cage. Pressure reduction occurs throughout the length of the plug; thus individual stages aren't exposed to the full pressure differential. Therefore, trim life is enhanced. NotchFlo DST trim utilizes a series of notched flow restrictions and expansions to control the pressure drop of the fluid. The amount of pressure drop per stage is controlled to prevent cavitation problems and minimize erosion issues. Flow passage configuration provided by the multi-stage plug and cage design make the Design HP valves well-suited for applications involving fluids with entrained particles. This is a potentially serious problem for other anti-cavitation valve designs which are subject to clogged flow passages. Design of the trim allows for high rangeability.

Typical Applications:

Hydrocarbon: CHPS Sour water letdown, Produced Water Injection, Hot High Pressure Separator Letdown, Cold High Pressure Separator Letdown

Power: Boiler Feedpump Recirculation, Condensate Pump Recirculation



Optimization Details:

- Special passage shape-Eliminates flow separation which is key in reduction of trim area, reduction in fluid pressure and elimination of localized cavitation formation.
- Recovery Volume Between Stages-Key for pressure and flow stabilization between stages.
- Shrunk Cage Sleeves-Eliminates potential for short circuiting of flow.
- Special passage size-Provides benefits of frequency shifting for lower sound pressure levels.
- Unequal staging-Ensures majority of drop is taken in the initial stages to ensure lowest pressure drop across last stage.
- Proven application guidelines-Most guidelines are around water only. Fisher's proven experience extends to non-ideal fluids.
- Axial flow path-Provides further recovery volume to gain additional staging benefits.
- Protected seating surface-Ensures pressure drop is not taken across seating surface.
- Ability to pass particulate-Can be used in dirty services while still eliminating cavitation.
- Extendable to outgassing applications-Can be used in services where cavitation and outgassing can occur.

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