



VST Upgrade to VST-SE

- Steam atomized spray water injection
- Better atomization means faster evaporation distance
- Less risk of condensation fall out
- Increased steam temperature control rangeability
- Improved performance at low steam flow

General

The VST steam conditioning valve has been developed for increased steam temperature control performance. The original VST valve is designed with multi-stage steam pressure drop for optimum vibration and noise performance. The VST valve spray water injection system has built-in water proportioning system for accurate spray water control. The spray water is injected into the center of the steam flow in an area of high velocity, minimum pressure and very high turbulence. These factors contribute to a very efficient mixing and fast water evaporation.

The new VST-SE valve adds improved feature to the original VST valve; steam atomized water injection. In the VST-SE valve steam from the high pressure valve inlet is used to atomize the spray water. Through channels in the VST-SE valve plug the atomizing steam is injected and mixed with the spray water. The atomizing steam adds energy to the water. The water temperature increases. The mix of water and atomizing steam is highly turbulent and creates small water droplets. The water droplets are then injected in the steam.

With the atomizing steam introduced in the VST-SE valve the droplet evaporation is faster than for the original VST valve. The improved droplet evaporation performance gives additional steam temperature control range ability. In particular for operating conditions with low steam flow the atomizing steam assist in efficient water evaporation. The VST-SE valve steam temperature control operating range ability is excellent at low steam flow cases.

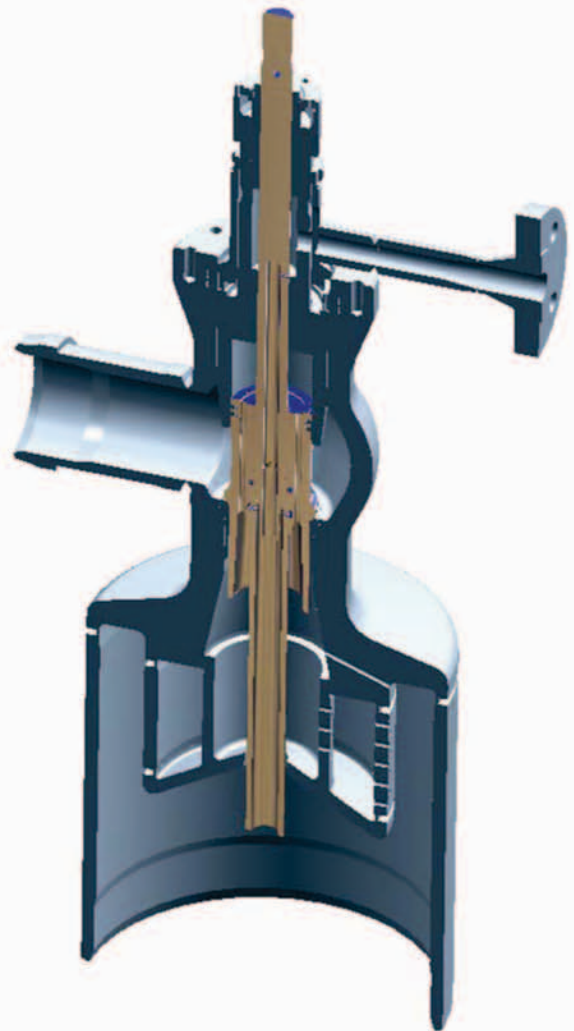


Fig 1 Valve type VST-SE

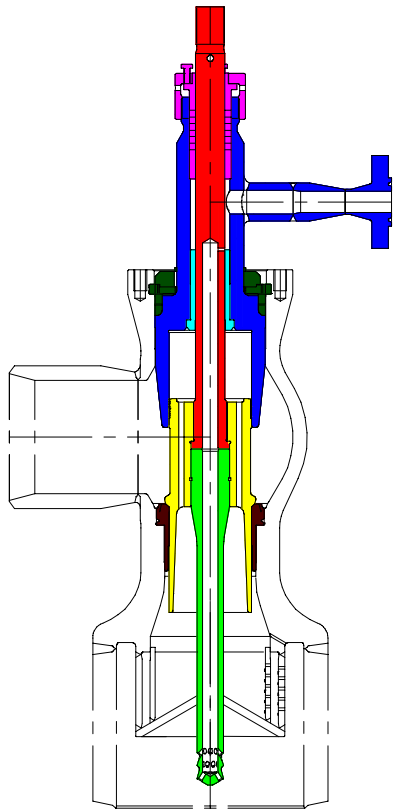


Fig 2 VST Classic

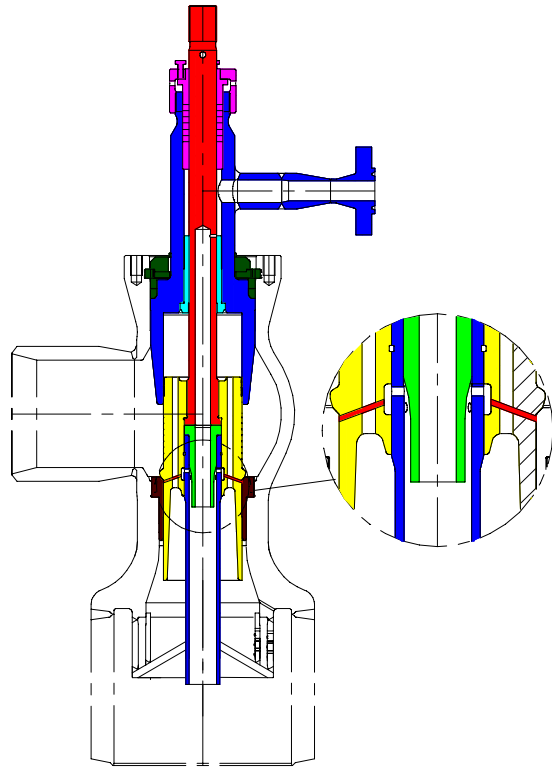


Fig 3 VST-SE