



#### About us

BVT Sweden was started with the ambition of becoming world leading in critical applications in process steam and thermal power plant turbine bypass. Based in Säffle, BVT Sweden employs experts with over 30 years experience in turbine bypass, steam conditioning, temperature control, design and manufacturing processes. We design turbine bypass valves, select actuation to fit our customer's requirements. Our products are optimized on a per-order basis, and we have the experience necessary to design special solutions. These products cover steam conditioning valves, pressure reduction valves, stop valves, desuperheaters and spray water control valves.

# Steam blowing

Mill scale and construction debris introduced in the steam pipeline during the installation of new equipment can during start-up be carried with the steam flow and cause damage to valve trims and desuperheaters. It can also clog up spargers and other control elements downstream.

In order to protect the equipment and ensure proper system function, it is recommended that the steam pipeline is cleaned using high velocity steam. Operational trim parts and nozzles should be replaced before steam blowing by special commissioning tools provided by BVT.

## Blow through tool

The blow through tool isolates the valve neck while providing passage from inlet to outlet. This method of steam blowing is only recommended for valves that do not have any pressure reducing pipes in the outlet.

Example: BVT-SV stop valve installed upstream from a pressure reducing valve.

### Blow out tool

For valves with pressure reducing pipes, it is recommended that the steam is blown through the valve neck rather than through the outlet. The blow out tool isolates the outlet while providing passage through the neck.

Example: BVT-TB, BVT-SC or BVT-PB steam control valves.

### **Dummy nozzles**

It is recommended that any NS nozzles are removed prior to steam blowing as debris may damage the nozzles or the nozzle holders. Dummy nozzles come in two designs, one blocks off the water line, while the other allows steam to flow from the water pipe to the steam pipe.

Example: BVT-TB, BVT-DLP, BVT-DLB, BVT-DLH

#### Sacrificial trim

BVT can provide fully operational sacrificial trims that are designed to provide a similar function as the original valve trims, but are typically manufactured from lower alloy metals.

Example: BVT-TB, BVT-SC, BVT-PB steam control valves.



BLOW OUT TOOL





# **Hydrostatic testing**

When pressure testing the steam / water piping valve trims and nozzles should be removed from BVT products and replaced by hydrotest tools.

### Angle-style valve hydrotest tool

The valve hydrotest tool blocks the valve neck and the outlet, isolating the upstream and downstream piping. This allows the upstream higher pressure line and the downstream lower pressure line to be tested separately.

Example: BVT-TB, BVT-SC or BVT-PB steam control valves or BVT-SV stop valve

### Globe-style valve hydrotest tool

For globe-style water control / water stop valves, BVT can supply two basic designs for hydro-testing. The pass through design only blocks off the valve neck, allowing both upstream and downstream piping to be tested simultaneously, while the block design separates the upstream and downstream piping for separate testing.

### **Dummy nozzles**

It is recommended that NS nozzles are replaced with dummy nozzles during hydro-testing as particles in the steam pipe can cause damage to the nozzles. Dummy nozzles come in two designs, one blocks off the water line for when it is to be tested separately, while the other design keeps the passage open.

Example: BVT-TB, BVT-DLP, BVT-DLB, BVT-DLH



HYDRO-TEST TOOL AND DUMMY NOZZLE