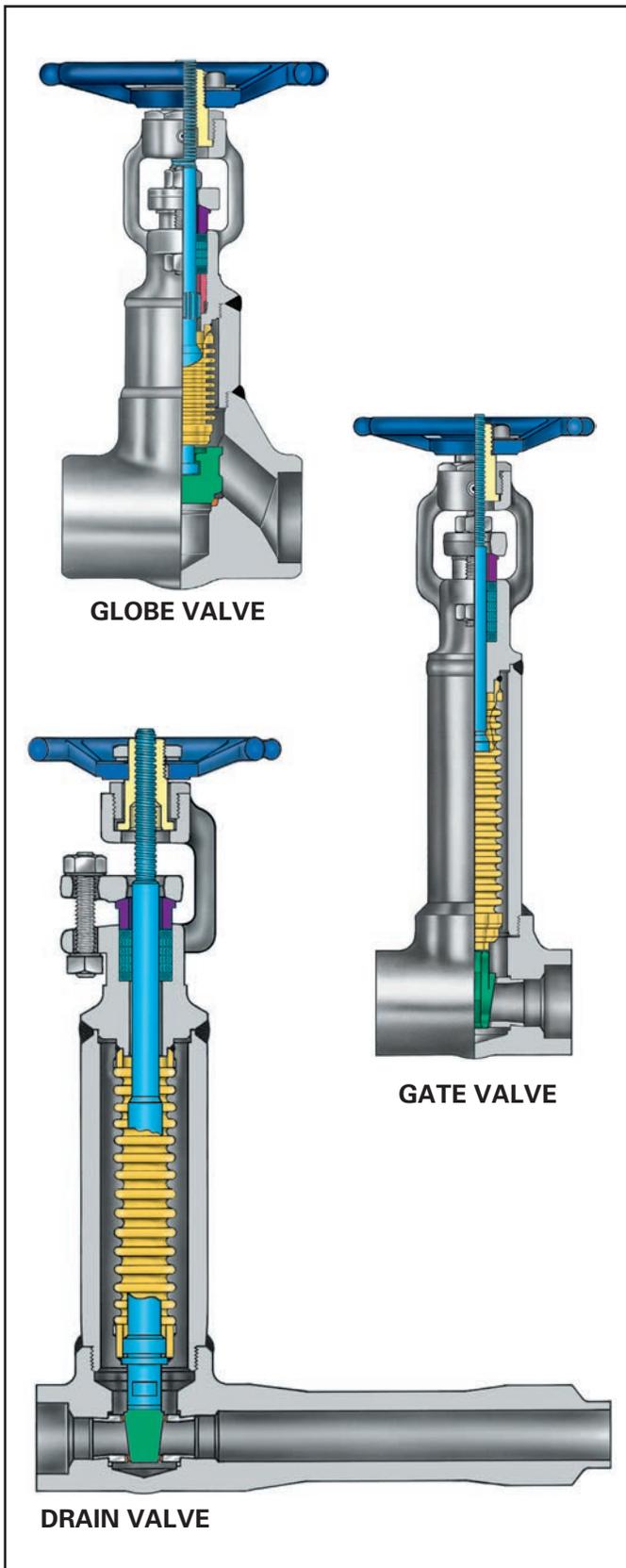


# VELAN SPECIAL SERVICES

## BELLOWS SEAL COMPACT FORGED STEEL ZERO LEAKAGE VALVES



GLOBE VALVE

GATE VALVE

DRAIN VALVE

### FOR HIGH PRESSURE, NUCLEAR, AND OTHER CRITICAL SERVICE

**GATE VALVES: API 602, CLASSES 800 – 1500, FLANGED: ASME CLASSES 150 – 1500**

**GLOBE VALVES: ASME CLASSES 150 – 600**

**EXTENDED BODY (DRAIN) VALVES: API 602, CLASSES: 800 – 1500**

A valve with a bellows to seal off the stem enclosure is an ideal choice whenever leakage to the atmosphere is intolerable due to toxicity, chemical corrosion, radioactivity, other health or ecological reasons. In addition, seal welding the body-bonnet seal makes the valve hermetically sealed. The bellows is welded to the stem and to the bottom of the bonnet. Velan has been a leader in bellows seal valves since pioneering the technology in the 1950s.

### DESIGN FEATURES

- Complies to API 602 and ASME B16.34 standards.
- **No torsion of bellows.**  
Proper stem guiding of the non-rotating stem prevents torsion of bellows and ensures long cycle life on all valves.
- **Long cycle life bellows.** Designed for and successfully tested in high pressure/temperature applications.
- **The lift** is 50% in extension and 50% in compression.
- **Bellows available in SS 321, Inconel or Hastelloy.**
- **Two secondary stem seals:** a) backseat (stem bevel) protects from line pressure when open and b) stem packing.

### CYCLE LIFE

- Axial movement of the bellows is limited to a maximum of 20 to 25% of the free length, depending on pressure-temperature and desired life cycle.

Velan bellows seal valves are designed to API 602 / MSS SP-117 / ISO 15761 for:

- 5,000 cycles for NPS ½–2 (DN 15–50) globe valves.
- 2,000 cycles for NPS ½–2 (DN 15–50) gate valves.

*For more information,  
see our Bellows seal valve catalog (VEL-BS)  
at [www.velan.com](http://www.velan.com)*