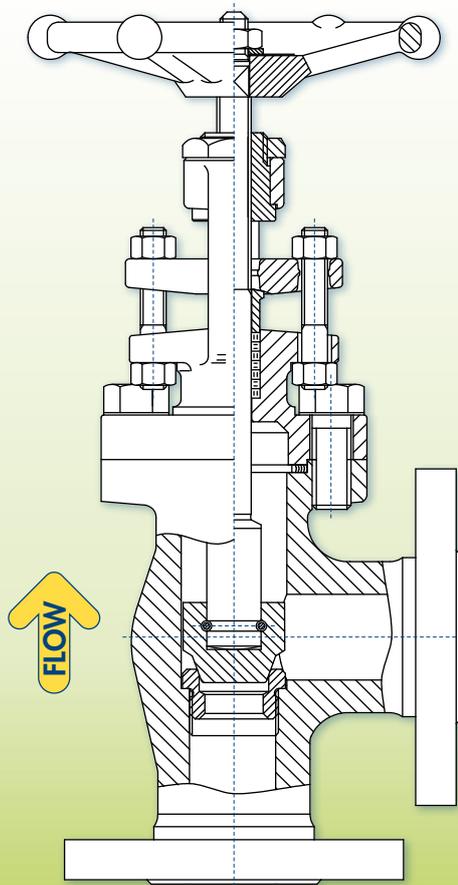


# ALTERNATIVE DESIGN SOLUTIONS

There are a large variety of available valves and valve configurations for a wide variety of purposes and conditions not tabulated in this catalogue. Some example are listed below. Other valve designs or customised configurations are available on request, contact bfe for special requirements.

## ANGLE PATTERN GLOBE VALVES



The Angle pattern globe valve is a modified version of "T"-Pattern Globe valve with inlet and outlet at right angles. When fitted at a change in piping direction, this valve eliminates a bend and has the advantage of smaller pressure drop than a conventional "T" pattern globe valve.

Angle valves have the same features of stem, disc and seat ring design as the globe valve.

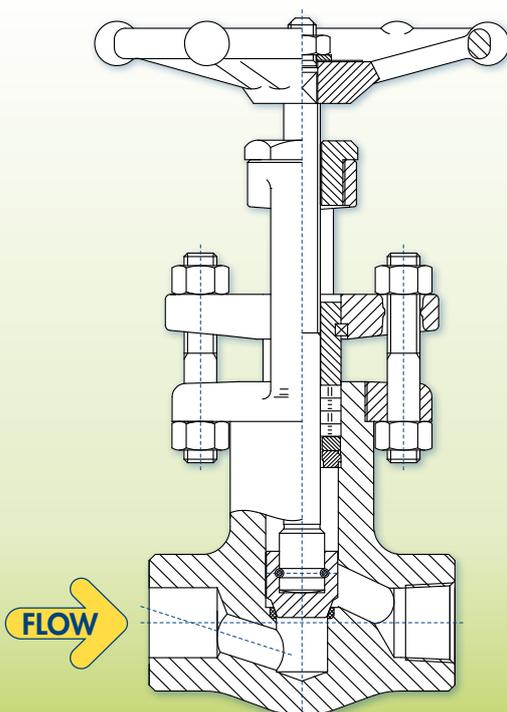
The fundamental difference between the two is that the fluid flow through the angle valve makes a 90° turn.

These valves offer less resistance to flow than a globe valve with an elbow which it would replace.

An angle valve reduces the number joints in a line, in addition to saving installation time.

They are also used in applications that have periods of pulsating flow because of their capability to handle the slugging effect of this type of flow.

## BONNET LESS VALVES



Bonnet less valves have no bonnet under pressure, the only pressure containing part of the valve is the body.

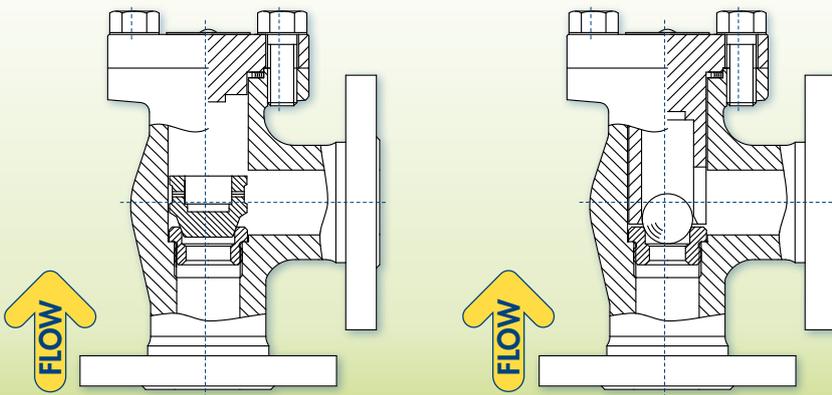
This feature removes the need for a separate bonnet and eliminates any gasket leakage, any bolted connection in case of bolted bonnet design and any welds in case welded bonnet designs.

Instead of the bonnet there is the yoke with structural functions only, this design allows in-line repair or inspection to be carried out more easily and at less cost than any other valve.

Stem, disc, and packing can be quickly removed and the seat fully exposed for "like new" restoration.

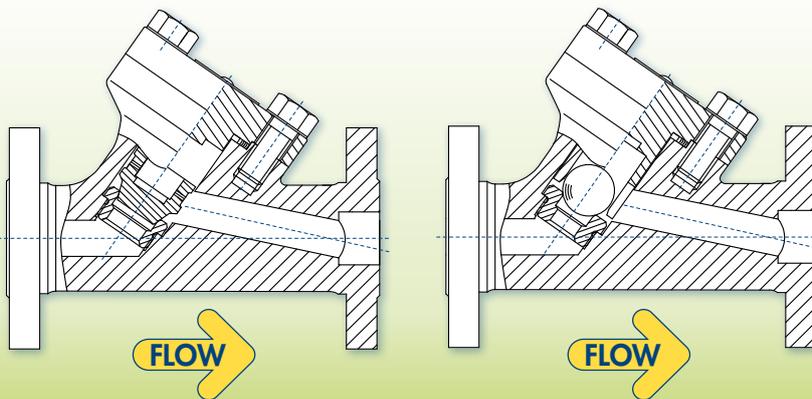
# ALTERNATIVE DESIGN SOLUTIONS

## ANGLE PATTERN PISTON & BALL CHECK VALVES



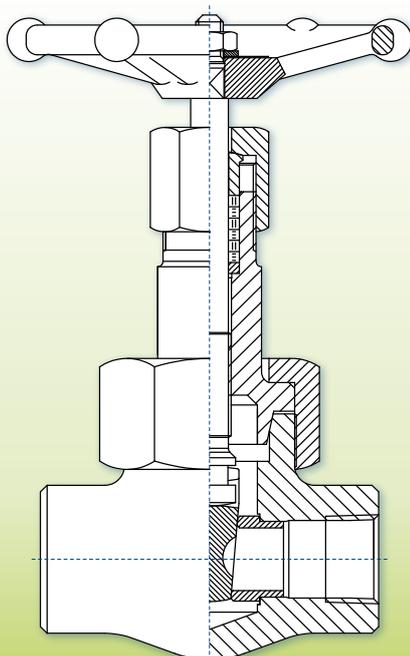
The Angle pattern check valve is a modified version of a standard check valve with inlet and outlet at right angles. When fitted at a change in piping direction, this valve eliminates a bend and has the advantage of smaller pressure drop than a conventional check valve. The fundamental difference between the two is that the fluid flow through the angle valve makes a 90° turn. These valves offer less resistance to flow than a standard check valve with an elbow which it would replace. An angle valve reduces the number joints in a line, in addition to saving installation time.

## "Y" PATTERN PISTON & BALL CHECK VALVES



The "Y"-Pattern check valve is a modified version of a standard check valve. The body design selected will determine the pressure drop; inclined designs will provide the best flow performance. "Y"-Pattern check Valves are generally used to protect pumps or similar equipment, allowing the flow in only one direction and preventing flow reversal due to back pressure with the best possible effort for laminar flow and increased CV.

## UNION BONNET VALVES



Union bonnet is the market standard design for bronze valves up to 2" size. A type of valve construction in which the bonnet is held on by a union nut with threads on the body. The nut is optimum sized hexagon shaped with high tensile properties to provide a leak-tight joint for maximum security under pressure. A union bonnet is appropriate for appliances that require regular inspection and maintenance and offers added reliability. Designed for rugged service applications, with maximum resistance to distortion produced by internal pressure.