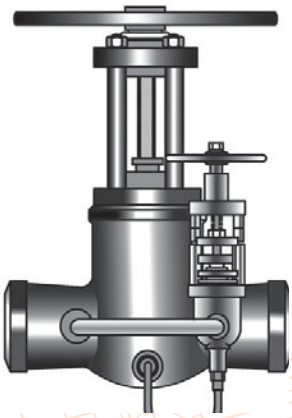
Technical Data Gate Globe & Check Valves

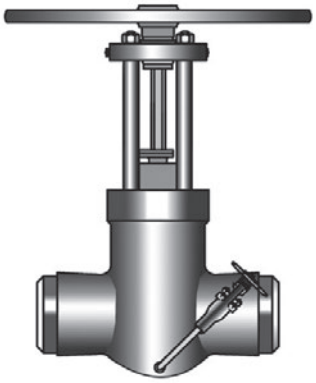
Equalising Devices

Equalising Device

In dual seated gate valves it is necessary to provide a means to prevent over pressurisation due to thermal expansion of trapped fluids inside the valve body. This expansion can cause pressures that exceed the valve materials' strength causing excessive leakage or actuator failure. The over pressurisation can be avoided with an internal hole or an external equalising pipe which makes the valve unidirectional.
Other solutions are as follows:



Equalising By pass

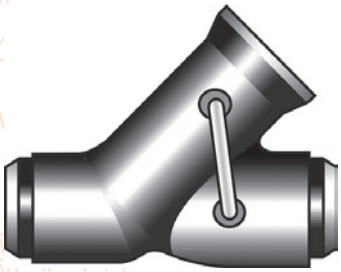


Equalising pipe with isolation valve

Equalising pipe with isolation valve or equalising by pass.

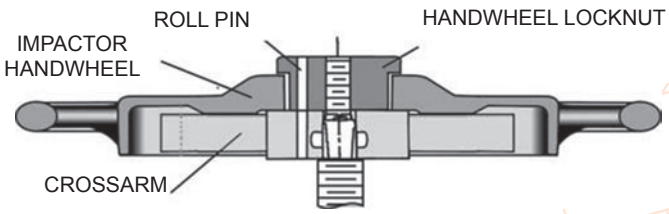
The equalising pipe connects the valve's center cavity to the inlet end of the valve allowing fluid displacement. The isolation valve in the equalising pipe is kept open during normal operating conditions. The isolation valve is closed when required for hydrostatic testing or other reason. A combined by-pass with equalising pipe can also be installed to permit the pressure relief in center cavity even with by-pass closed.

"Y" Stop Check & "Y" Lift Check Valves are provided with an equalising pipe connecting the area above the disc to the valve outlet. The equalising pipe eliminates any pressure build up over the disc allowing the higher pressure below to fully open the disc. This full disc lift reduces pressure drop and the required minimum flow to fully open the valve.



Equalising pipe

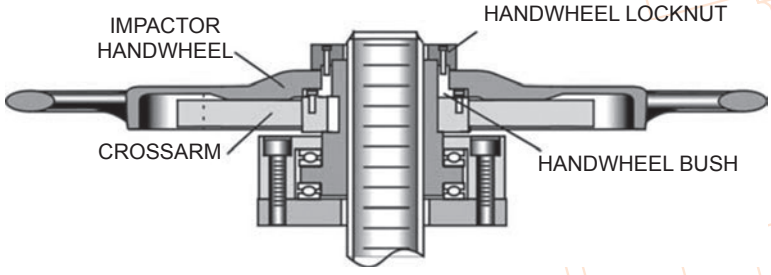
Impact Handwheel



For rotary stem

Impact Handwheel

Larger size valves (mainly Globe & Stop Check Valves) require an impact hand wheel, when a bevel gear actuator is not required.



For non rotary stem

www.australianpipelinevalve.com.au
9-15 Boolcunda Avenue Salisbury Plain, South Australia 5109
Telephone +61 (0)8 8285 0033 Fax +61 (0)8 8285 0044
admin@australianpipelinevalve.com.au

By-Passes

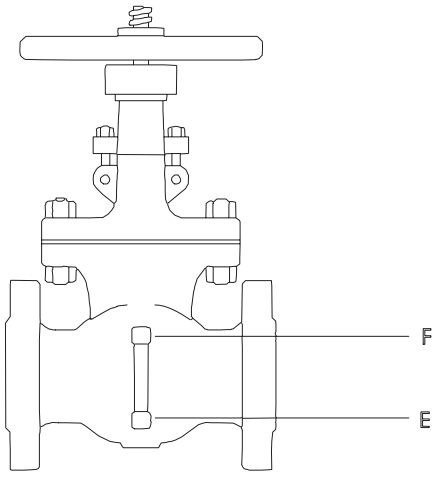
By-passes serve two purposes. They are used in steam service to warm-up the line before the main valve is opened. They are also used on steam and other lines to balance the pressure on both sides of the main valve wedge or disc to aid in opening a large valve.
Valves can be furnished with all welded-on by-passes when specified. By-passes are equipped with a single OS&Y globe valve with a pressure/temperature rating and corrosion resistance equal to or exceeding that of the main valve.

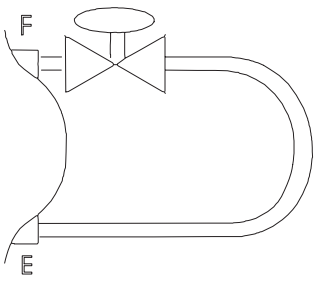
Main valve size:	1 1 / 2”-4”	5”-8”	10”-36”
By-pass size:	1 / 2”	3 /4”	1”

By-passes on valves 4” and larger are furnished to comply with MSS Standard Practice SP-45, Series A.

Gate valve by-passes shall be regularly attached to the side of the main valve with the stems of both valves parallel and pointing upward (between locations A & B).
Globe valve by-passes shall be regularly attached to the right side of the main valve with the stems of valve parallel and pointing upward. The right side of the globe valve is the side at the right when facing the flow port which leads to the underside of the disc (between location E & F).
Bleed, drain and by-pass piping can be furnished with manual or remote actuated valves, as required.
Where service conditions warrant larger-than-standard by-passes, it is recommended that the installation of the by-passes be around the main valve.

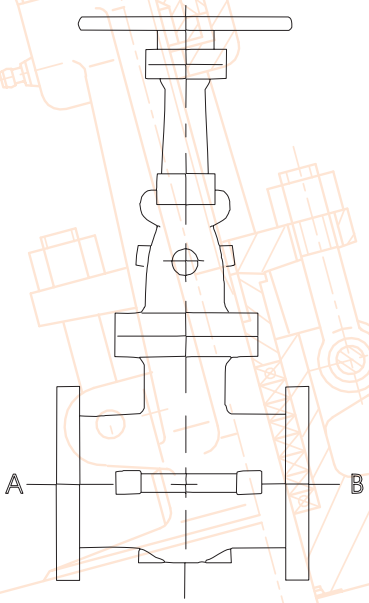
Globe Valve

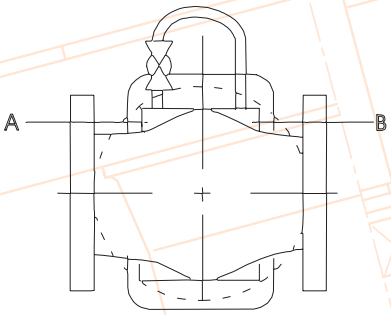




Side View

Gate & Globe Valves





Bottom View

Drain & Bleed Connections

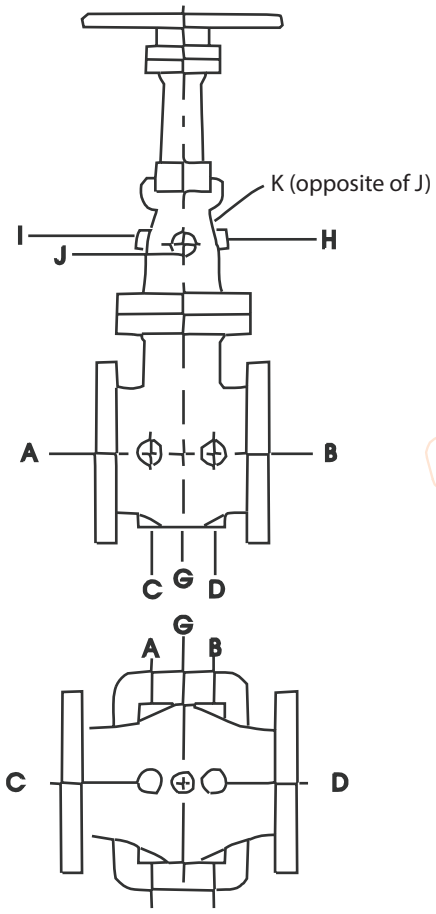
Drain & Bleed Connections

APV valves can be furnished with drain connections at any of the locations shown below. Standard drain connections are the same size as shown below and are drilled, tapped and plugged.

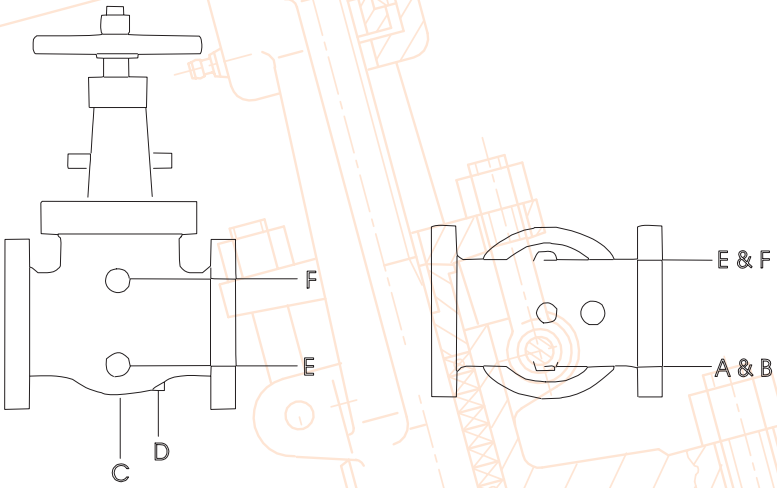
Main valve size:	1 1 /2”-4”	5”-8”	10”-36”
Drain size:	1 /2”	3 /4”	1”

However, “special request” drain connections can be furnished with threaded or seal welded 6” long nipples with or without shut-off valves. Complete descriptions of desired configurations should be included in your inquiry.

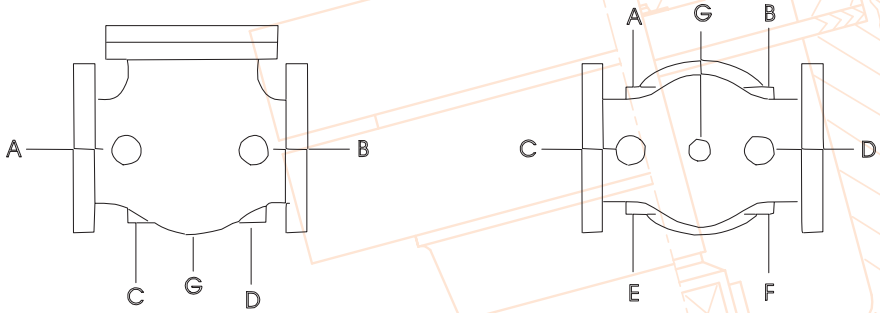
Bleed valves can be supplied upon request. APV’s standard bleed valve is a gate valve, but other configurations can be furnished.



Gate Valves



Globe Valves



Check Valves