

## GATE, GLOBE AND CHECK VALVE TECHNICAL ACCESSORIES

### Equalizing Devices

High pressure gate valves can be supplied with a variety of arrangements to equalize upstream and downstream pressures. Typically, globe valves are used as bypass valves. Further, to prevent centre cavity over-pressurization, the cavity is connected to the upstream side of the valve. This connection may be done with or without a pressure equalizing valve.



Bypass  
(Bidirectional)



Equalizing  
(Unidirectional)



Bypass and Equalizing  
(Unidirectional)



Bypass and Equalizing  
(Unidirectional)

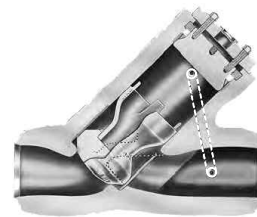


Bypass and Equalizing  
(Bidirectional)

Y Stop Check and 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.



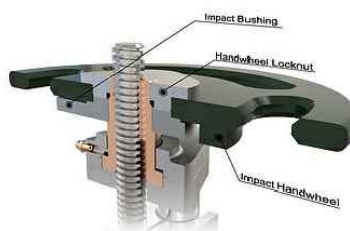
Equalizing



Equalizing

### Impact/Hammer Handwheel

Larger size valves mainly globe & stop check valves require an impact hand wheel, when a bevel gear actuator is not required.



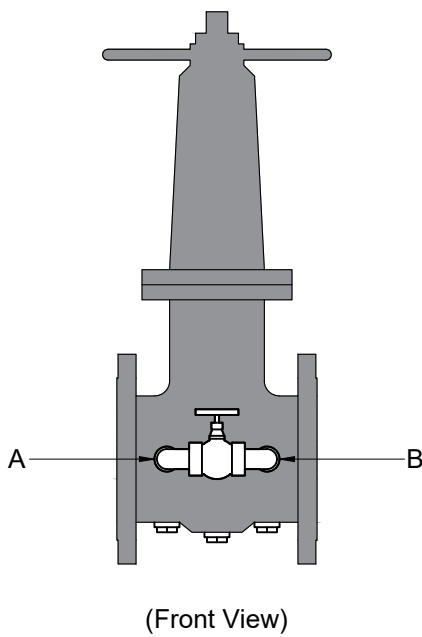
## Bypasses

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.

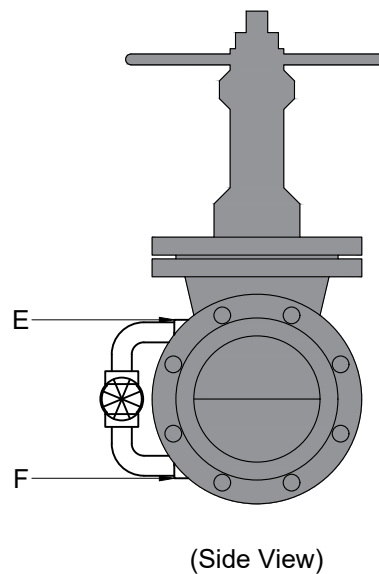
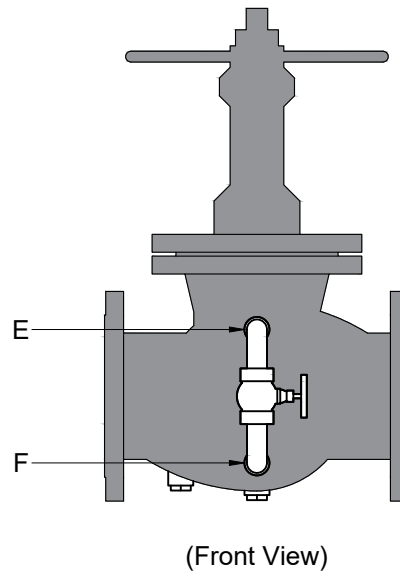
Main Valve Size:	1-1/2" (DN40) to 4" (DN100)	5" (DN125) to 8" (DN200)	10" (DN250) to 36" (DN900)
Bypass Size:	1/2" (DN15)	3/4" (DN20)	1" (DN25)

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.

**Gate and Globe Valves**



**Globe Valves**



## Drain and Bleed Connections

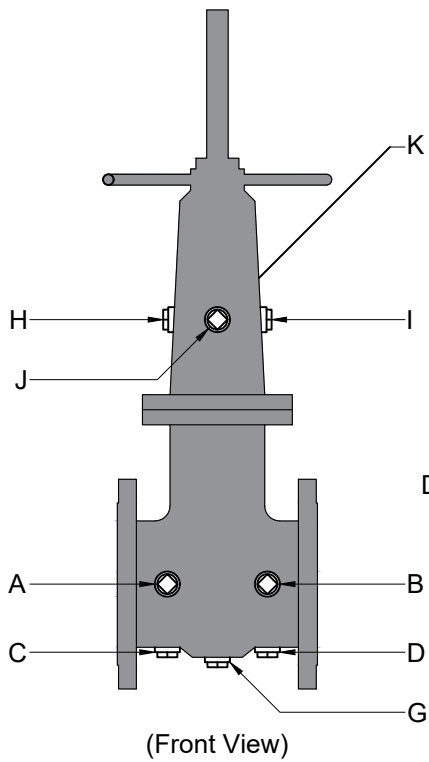
Valves can be furnished with drain connections at any of the locations shown below. Standard drain connections are the same size as shown below and are drilled, tapped and plugged.

Main Valve Size:	1-1/2" (DN40) to 4" (DN100)	5" (DN125) to 8" (DN200)	10" (DN250) to 36" (DN900)
Drain Size:	1/2" (DN15)	3/4" (DN20)	1" (DN25)

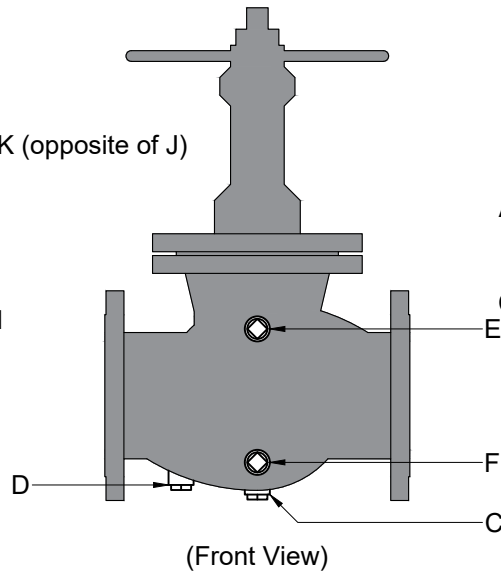
However, "special request" drain connections can be furnished with threaded or seal welded 6" long nipples with or without shut-off valves. Complete descriptions of desired configurations should be included in your inquiry.

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

### Gate Valves



### Globe Valves



### Check Valves

