

# VACUUM INSULATED PIPE VALVES

## VACUUM INSULATED AND NON-INSULATED VALVES

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### Vacuum Insulated Valves:

Vacuum insulated valves are recommended when system efficiency and elimination of frost, ice and moisture are essential. The initial cost is greater for the vacuum insulated valve option, but the savings outweigh the investment the less than a year. Vacuum insulated valves not only reduce product loss, but also maintain the quality of liquid from the bulk storage. The advantage comes from the fact that the additional head does not enter the liquid through the valve. The non-insulated valve is a direct heat path to the liquid. If a non-insulated valve is incorporated into the system, the liquid packs up additional head after leaving the valve, which lessens the amount of cooling produced by the liquid. Vacuum insulated valves also offer maintenance free operation. There is no presence of frost or moisture when using vacuum insulated valves. Non-insulated valves will form ice build-up and condensation causing moisture to drip onto floors or ceiling tiles. This presents a safety concern for slipping as well as creating an extremely cold surface that a worker may come into contact with. Vacuum insulated valves eliminate the need to foam insulate the valve. This is a very tedious maintenance task that must be repeated several times a year.

T-pattern valves can only be used in the horizontal position. The convenient feature that the Y-pattern valve offers is that it can be used in the vertical as well as the horizontal position. This makes it more user friendly at drop points to equipment.



***T-Pattern Non-Insulated  
Extended Stem Globe  
Valve***



***T-Pattern Vacuum Insulated  
Globe Valve***

***Y-Pattern Vacuum Insulated  
Globe Valve***

### Non-Insulated Valves:

Non-insulated valves are recommended for applications in which the elimination of ice and moisture is not critical for system operation.

Non-insulated valves offer a low-cost alternative to vacuum insulated valves for a trade of lost product or poor appearance. The degree of ice and moisture can be minimized by implementing internal traps into the design of the piping system. Internal traps prevent the liquid from coming into contact with the valve, holding it in the vacuum insulated line just above the trap. This results in reduced product loss and a valve that remains moisture free when not in use. The frequency of valve use will affect the amount of moisture and ice formation.

### Actuators:

Electric and pneumatic actuators are available on any of the valves. Please specify the type and whether it is normally open or closed during operation.



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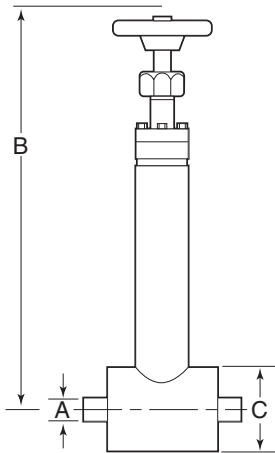
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Ranges\*: Operating Temperature -456°F to +300°F

Operating Pressure 275 psig

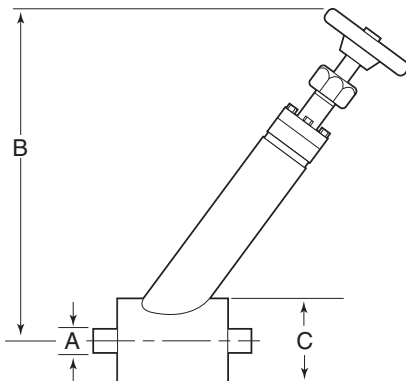
Proof of Pressure 225 psig (ambient)

\*Does not apply to non-insulated pipe globe valves



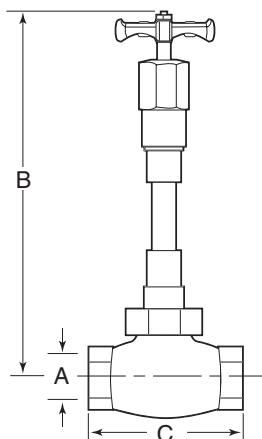
## T-Pattern Vacuum Insulated Globe Valve

A (Size)	B	C	CV	BTU/HR
1/2" PS	14.0	2.38	5.9	4.5
3/4" PS	16.5	2.88	8.0	6.6
1" PS	16.5	3.50	14.0	10.4
1 1/2" PS	19.5	4.00	34.0	21.8
2" PS	22.5	4.50	50.0	27.3
3" PS	28.0	8.62	139.0	68.1
4" PS	36.0	10.75	182.0	79.9



## Y-Pattern Vacuum Insulated Globe Valve

A (Size)	B	C	CV	BTU/HR
1/2" PS	14.0	2.38	6.2	4.5
3/4" PS	12.6	2.88	12.0	6.6
1" PS	12.6	2.88	22.0	10.4
1 1/2" PS	14.7	4.50	47.0	21.8
2" PS	14.7	4.50	96.0	27.3
3" PS	22.0	8.62	162.0	68.1
4" PS	34.0	10.75	288.0	79.9



## T-Pattern Non-Insulated Extended Stem Globe Valve

A (Size) NPT	B	C	CV
1/2" NPT	14.0	2.38	6.2
3/4" NPT	12.6	2.88	12.0
1" NPT	12.6	2.88	22.0
1 1/2" NPT	14.7	4.50	47.0