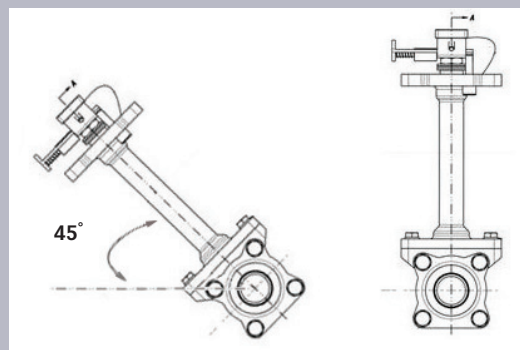


## Specifically Designed for Cryogenic Applications

PBM cryogenic valves have a unique design that provides superior performance through cooling and heating cycles. The valves meet leakage criteria per MSS SP-134. They are available in CP (standard), CN (ANSI) or CD (Diverter) valves.

## What Makes It Work

An extended bonnet with an upper set of **live loaded** stem packings. As metal shrinks, it keeps pressure on seals as temperature goes through cooling and heating cycles. Vented ball allows explosive gas expansion to vent upstream.



Cryogenic valves are optimally oriented with the stem 90° from the horizontal plane. PBM cryogenic valves are capable of operating with the stem oriented as low as 45° above the horizontal plane.

## Leakage Rate Comparison

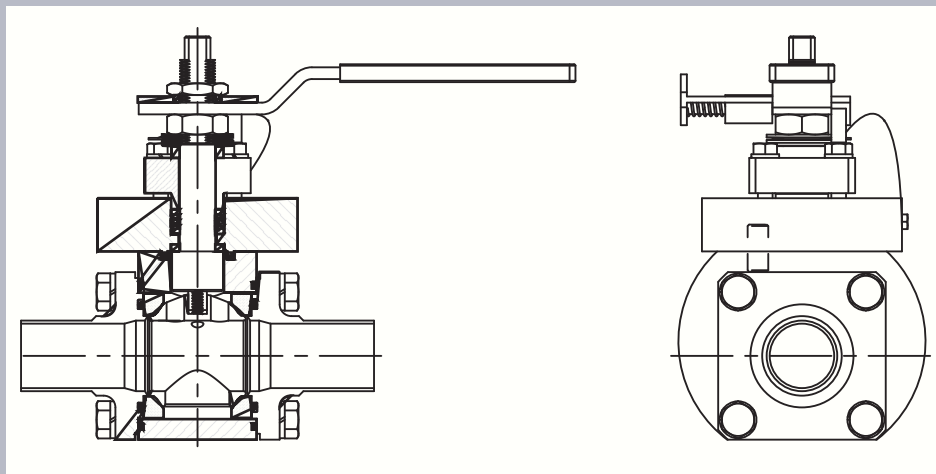
Cryogenic Allowable Leakage Rate Comparison Allowable He scc/min			
NPS	DN	MSS- SP-134-2010	BS 6364- 1984
1/2"	15	37.5	90
3/4"	20	56.25	120
1"	25	75	150
1-1/2"	40	112.5	240
2"	50	150	300
3"	80	225	480
4"	100	300	600

## Features

- Sizes 1/2" - 4" - Full port. Consult PBM for additional sizes.
- Temperatures from 400° F, 205° C down to -320° F, -200° C
- **Live-loaded** stem packings
- Fire safe to API 607
- Materials of construction: stainless steel, other materials available – consult PBM for details
- Pressures to 720 psi CWP (ANSI 300# class)
- Cleaned for oxygen service
- Quarter turn operation
- Locking lever handle or optional oval locking handwheel
- Automation available
- TFM™ seats/graphite seals
- Internal and external grounding
- Uni-directional flow and vented ball
- Valve meets or exceeds leakage performance per MSS SP-134
- Optional API-622 Low-e Packing (cannot be LOX cleaned)

# Special Application Cryogenic Valve

This Cryogenic valve is a non-cycling valve meant for applications to vent gases. It has a reduced bonnet height and can meet cryogenic temperatures, but is used to vent at non-cryogenic temperatures.



Helpful links:

<http://pbmvalve.com/build-a-part-number>

<http://pbmvalve.com/valves/cryogenic-valves>

<http://pbmvalve.com/maintenance-instructions>

<http://pbmvalve.com/actuator-and-controls>

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