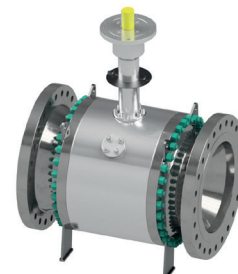


# Trunnion mounted

## Cryogenic applications

When the valve operating temperature is lower than  $-50\text{ }^{\circ}\text{C}$  ( $-58\text{ }^{\circ}\text{F}$ ), special materials selection, design and production features are required. This know-how is the key factor to ensure tightness capability and smooth operability even with liquefied gases.



Gas processing



Oil gathering



Compressor stations



Gas liquefaction



LNG marine trans



Gas reverse flow



Heavy industry



Gas engines



Regasification

Features	Values
Pressure rating*	ANSI classes from 150 to 2500
Design temperature*	From $-196\text{ }^{\circ}\text{C}$ to $+150\text{ }^{\circ}\text{C}$ From $-321\text{ }^{\circ}\text{F}$ to $+302\text{ }^{\circ}\text{F}$
Nominal sizes*	1/2" to 36" NPS 15 to NPS 900
Connections*	<ul style="list-style-type: none"> <li>RF and RTJ flanges as per ASME B16.5, B16.47 and MSS SP-44</li> <li>Butt welding ends as per ASME B16.25</li> <li>Threaded and socket weld ends</li> </ul>
End to end dimensions*	ASME B16.10
Construction*	Side entry bolted body Extended stem for insulation purposes
Operator*	<ul style="list-style-type: none"> <li>Bare stem</li> <li>Gear operated</li> <li>Motor operated (pneumatic, hydraulic or electric actuator)</li> </ul>

(\*) **REMARK: Different functional features and/or materials available on request.**

Stated temperature ranges are the maximum for which the standard equipment's full performance is fulfilled.

(\*\*) **REMARK: If necessary, proper material pups can be welded to the valve to fit connecting pipe material.**

**Table 1** Features

## Materials and Approvals

Part	Material
Metallic materials*	<ul style="list-style-type: none"> <li>Austenitic stainless steel (body, connectors**, ball, seats, cover, top flange)</li> <li>High strength austenitic stainless steel (stem)</li> </ul>
Soft parts*	<ul style="list-style-type: none"> <li>Thermoplastic (RPTFE + Elgiloy lip-seals)</li> <li>Graphite</li> </ul>
Coatings*	HVOF tungsten carbide coating (TCC) if metal to metal sealing is required

**(\*) REMARK: Different functional features and/or materials available on request.  
Stated temperature ranges are the maximum for which the standard equipment's full performance is fulfilled.  
(\*\*) REMARK: If necessary, proper material pups can be welded to the valve to fit connecting pipe material.**

**Table 2** Materials

### Product certification:



API 6D  
Cert. no.  
6D-1170



API 6A  
Cert. no.  
6A-1252



API 6DSS  
Cert. no.  
6DSS-0057



IEC 61508 SIL 2  
Cert. no.  
50 100 13288  
REV.005

### System certifications:



ISO 9001  
Cert. no.  
50 100 9927  
Rev.006



Pressure Equipment  
Directive (PED)  
2014/68/EU  
Certificate no.  
PED-0948-QSH-490-16  
REV. 3



ISO 14001  
Cert. no.  
50 100 13288  
REV.005



ISO 45001  
Cert. no.  
50 100 13322  
REV.005

TIV Valves production range has also a wide coverage for fire-safety as per API 607 and API 6FA and for fugitive emissions as per ISO 15848-1. In addition, thanks to a long-term cooperation with international energy companies and EPC contractors, TIV complies with many customers specifications, including design validation procedures.