



- **Cryogenic Service**

Valves are demanded widely in cryogenic applications (-196 ~ -50 °C), including LNG that is fast becoming a better alternative source of clean energy. VIZA developed its cryogenic floating (Series FY) and Trunnion mounted (Series TY) ball valve accordingly.

- **Standards**

ASME B16.34, ASME B16.5
API 6D, BS 5351, BS 6364, Shell MESC 77/200
BS 6755, Shell MESC 77/306

- **Applications**

Ethane:	-89°C
Ethylene:	-104°C
Methane:	-162°C
Liquefied Natural Gas (LNG):	-162°C
Oxygen:	-183°C
Nitrogen:	-196°C

- **Cryogenic Test**

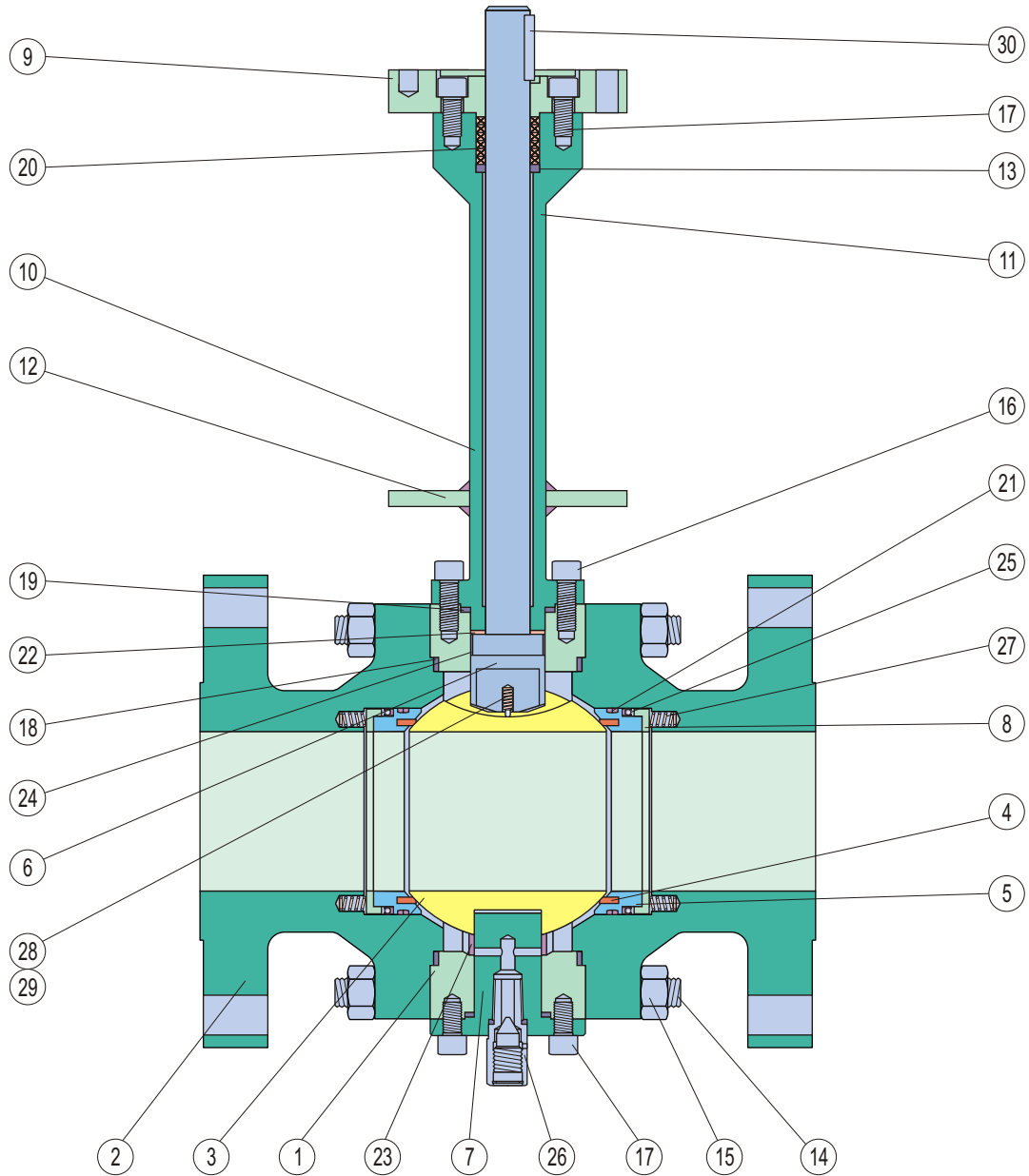
Valves can be tested by in house cryogenic test facility and issue the report on request.

- **General Features**

Extension bonnet gives enough vapour space to maintain the stem packing at a temperature high enough to protect the stem packing against malfunctioning due to freezing;
Cavity pressure relief;
Low operating torque for smoother operations;
Blow-out proof stem, anti-static device and fire safe design;
Double block & Bleed (Series TY);
Low fugitive emission compliance.

- **Technical Data**

Design type:	Floating, Trunnion
Sizes:	1/2"~24"
Pressure:	class 150lb~600lb
Temperature:	-196°C to ambient temperature
Body material:	A351 Gr CF8/CF8M, A182 F304/F316 (-196°C)



Material Specifications

No.	Part	Standard Materials	No.	Part	Standard Materials
1	Body	ASTM A182-F316	16	Screw	ASTM A320-B8
2	Adapter	ASTM A182-F316	17	Screw	ASTM A320-B8
3	Ball	ASTM A182-F316	18	*Body Gasket	316SS+Graphite
4	Seat Insert	PCTFE	19	*Gasket	316SS+Graphite
5	Seat ring	ASTM A182-F316	20	*Stem Packing	Graphite
6	Stem	ASTM A182-F316/17-4PH	21	*Seat Packing	Carbon Fibre+Graphite
7	Trunnion	ASTM A182-F316	22	Thrust Washer	PTFE/316SS+PTFE+MoS2
8	Seat Follower	ASTM A182-F316	23	Bearing	316SS+PTFE+MoS2
9	Top Flange	ASTM A182-F316	24	Stem Bearing	316SS+PTFE+MoS2
10	Extension	Assembled by 14&15	25	Lip-Seal	PTFE+Spring
11	Extended Bonnet	ASTM A182-F316	26	Vent Valve	Stainless Steel
12	Adiabatic Plate	ASTM A182-F316	27	Seat Spring	INCONEL X-750
13	Packing Washer	ASTM A276-316	28	Antistatic Spring	INCONEL X-750
14	Body Stud	ASTM A320-B8	29	Grounding Plunger	Stainless Steel
15	Body Nut	ASTM A194-8	30	Key	Stainless Steel

* Recommended Spare Parts