# Series TM

## Metal to Metal Seat Trunnion Mounted Ball Valve



#### **Severity Service**

Normal soft-seated valve can not be used for abrasive service or/and for operation under high temperatures that prohibits the use of a resilient material. VIZA metal-to-metal seated trunnion mounted ball valve (series TM, range 2"~24" class 150~2500) is designed for this type of severity service has seating action provided by the metal to metal contacting seating action is provided between ball and seat ring.

### General Design

Blow-out proof stem, anti-static device, double block & bleed, self relieving seats, Mechanical stops for ball seat alignment are designed as standard requirements; while for fire safe and sealant injection system will be supplied when service request.

### **Superior Sealing**

High precision machining and seat to ball rubbing result in superior ball and seat interfacing for reliable sealing conforming to ANSI/FCI 70-2 class V.

#### **Reliable Operations**

Spring-loaded seats maintain close contacting with the ball ensuring tight sealing even at low pressures. This also results in stable operating torques at high differential pressures over a wide range of temperatures or/and high frequency.

Part number: C-TM-1504

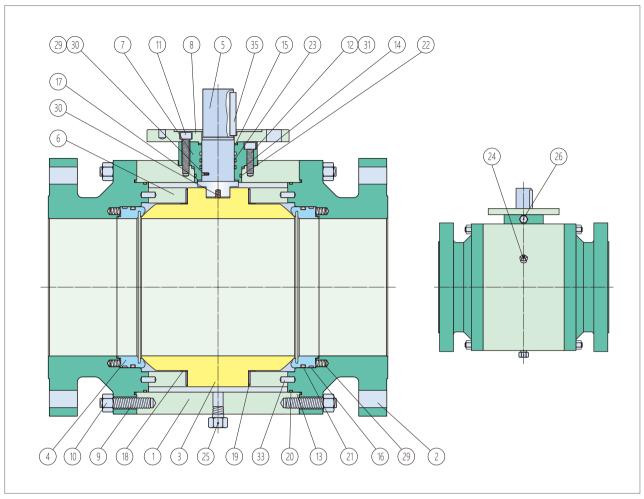
#### **Material Selection**

Various materials can be chosen from for the service up to 500°C. For service temperature above 300°C, the extension bonnet is required.

### **Applications**

Hard faced ball and seats (TCC as standard, other special coatings are available on request) allow the valve to be used in more severe services such as slurries, pulp stock, mining and other abrasive media in long life.

## MATERIAL SPECIFICATIONS

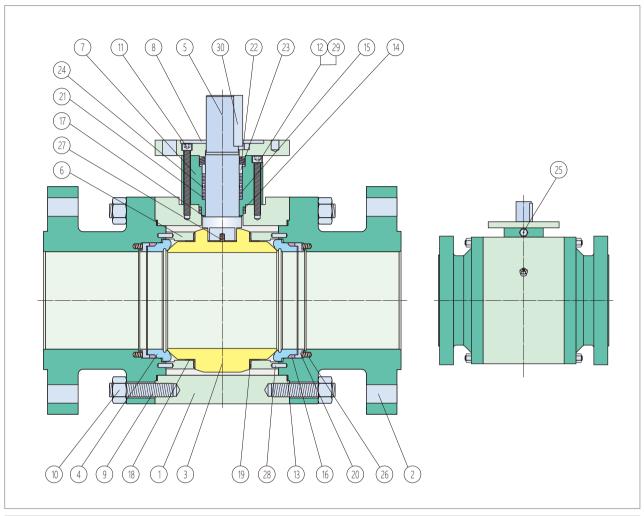


NO.	PART	Standard Materials	NO.	PART	Standard Materials
1	Body	ASTM A105N or A182-F316	18	Washer	PTFE/316SS+PTFE+MoS2
2	Adapter	ASTM A105N or A182-F316	19	Bearing	316SS+PTFE+MoS2
3	Ball	ASTM A105N+TTC or A182-F316+TTC	20	* O-ring	Viton
4	Seat	ASTM A105N+TTC or A182-F316+TTC	21	* O-ring	Viton
5	Stem	AISI4140 ENP/F51	22	* O-ring	Viton
6	Trunnion Supprot	ASTM A105N/ENP or A182-F316	23	* O-ring	Viton
7	Gland Flange	ASTM A105N/ENP or A182-F316	24	Vent Valve	Stainless Steel
8	Top Flange	ASTM A105N or A182-F316	25	Drain	Stainless Steel
9	Body Stud	ASTM A193-B7 or A193-B8	26	Stem Injection	Stainless Steel
10	Body Nut	ASTM A194-2H or A194-8	27	Seat Spring	Inconel X-750
11	Screw	Carbon Steel or Stainless Steel	28	Antistatic Spring	Inconel X-750
12	Screw	Carbon Steel or Stainless Steel	29	Antistatic Spring	Inconel X-750
13	* Body Gasket	Graphite	30	Grounding Plunger	Stainless Steel
14	* Gland Gasket	Graphite	31	Alignment Pin	Stainless Steel
15	* Stem Firesafe Packing	Graphite	32	Gland Pin	Carbon Steel or Stainless Steel
16	* Seat Firesafe Packing	Carbon Fibre+Graphite	33	Key	Carbon Steel or Stainless Steel
17	Thrust Washer	PTFE/316SS+PTFE+MoS2			

Note: 1. \* Recommended Spare Parts

- 2. WC: Tungsten Carbide Coating.
- ${\it 3. Customer shall order the valve according to service condition.}\\$

## MATERIAL SPECIFICATIONS



NO.	PART	Standard Materials	NO.	PART	Standard Materials
1	Body	ASTM A105N or A182-F316	16	Seat Firesafe Packing	Graphite
2	Adapter	ASTM A105N or A182-F316	17	Thrust Washer	316SS+Copper
3	Ball	ASTM A105N+TTC or A182-F316+TTC	18	* Washer	316SS+Copper
4	Seat	ASTM A105N+TTC or A182-F316+TTC	19	* Bearing	316SS+Copper
5	Stem	AISI 4140 ENP/A182 F6a	20	* Push Ring	316
6	Trunnion Supprot	ASTM A105N/ENP or A182-F316	21	* Spacer Ring	316
7	Gland Flange	ASTM A105N/ENP or A182-F316	22	Disc Spring	17-7PH
8	Top Flange	ASTM A105N or A182-F316	23	Gland	316
9	Body Stud	ASTM A193-B7 or A193-B8	24	Lanter Ring	316
10	Body Nut	ASTM A194-2H or A194-8	25	Stem Injection	Stainless Steel
11	Screw	Carbon Steel or Stainless Steel	26	Seat Spring	Inconel X-750
12	Screw	Carbon Steel or Stainless Steel	27	Antistatic Spring	Inconel X-750
13	* Body Gasket	Graphite or SW Graphite	28	Alignment Pin	Stainless Steel
14	* Gland Gasket	Graphite	29	Gland Pin	Carbon Steel or Stainless Steel
15	* Stem Firesafe Packing	Graphite	30	Key	Carbon Steel or Stainless Steel

Note: 1. \* Recommended Spare Parts

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