

## T60M

### **Trunnion Mounted Ball Valve, Metal seated** **ASME CLASS 150 / 300 / 600**



#### Features

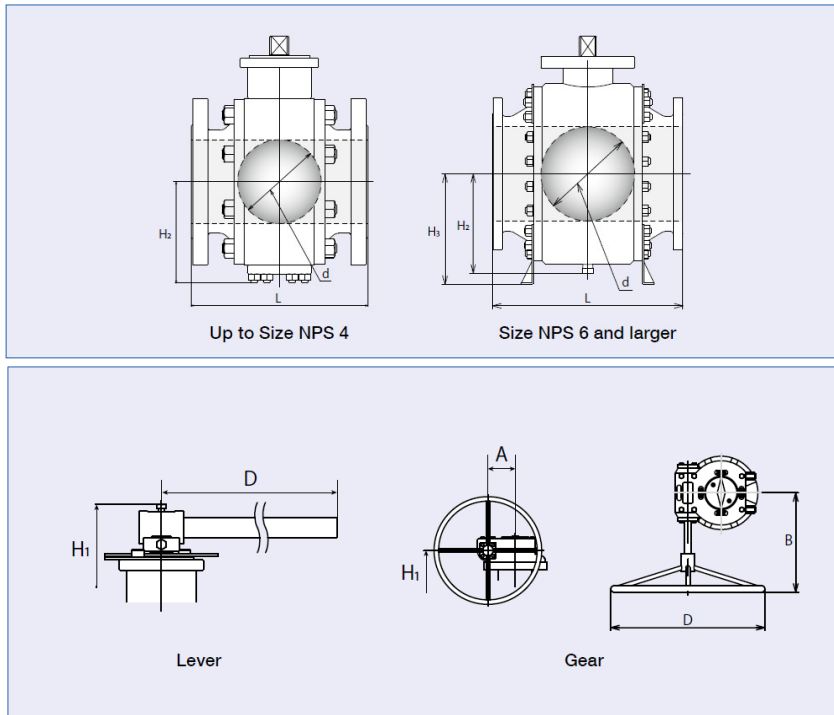
- Full bore or Reduced bore. 3-piece bolted body and cap.
- **Design Standards:** API 6D / ISO 14313 / ASME B16.34:2009
- **Flanges:** ASME B16.5, RF
- **Lengths/Face-to-face:** API 6D / ASME B16.10
- **Leak test:** API 6D
- **Top flange:** ISO 5211
- **Seats:** 316SS+WC-Co
- **Stem:** Anti-static and proof Blow-out
- High performance sealing mechanism and low operation torque
- Locking device in open and close position
- Packing with live loaded sealing mechanism
- Double Block and Bleed function
- Self-relief of excessive cavity pressure
- NACE MR 0175
- **Options:** Actuation (Pneumatic & Electric), Stem extension, Butt-weld pipping connection, Overlay (Bore & Cavity), Pipe pups welded to valve ends.\*

\*For all optional provisions, please contact your local KITZ agents or distributors.

#### Approvals

- Fire test Certification: API 607 / API 6FA / ISO 10497
- PED 2014/68/UE approval for CE marked products.
- Fugitive Emission Certification: ISO 15848-1 BH CO<sub>1</sub>
- ATEX approval
- SIL IEC 61508:2019 (SIL 2)
- EAC TR CU approval

## Dimensions



Units (mm)

		<b>Class 150</b>											
Nominal Size	NPS	2	3	4	6	8	10	12	14	16	18	20	24
	DN	50	80	100	150	200	250	300	350	400	450	500	600
Valve Operator		Lever						Gear					
d		49	74	100	150	201	252	303	334	385	436	487	589
L		178	203	229	394	457	533	610	686	762	864	914	1067
H1		182	188	234	283	349	398	463	483	582	612	724	807
H2		100	123	151	191	237	284	-	-	-	-	-	-
H3		-	-	-	-	-	-	427	445	499	526	619	698
A		-	49	71	86	53	130	130	130	182	182	68	68
B		-	215	282	305	396	567	567	567	570	570	613	613
D		300	200	300	500	500	600	600	600	800	800	800	800
Weight (kg)		25	45	80	190	350	550	840	1030	1650	1970	2940	4310

Units (mm)

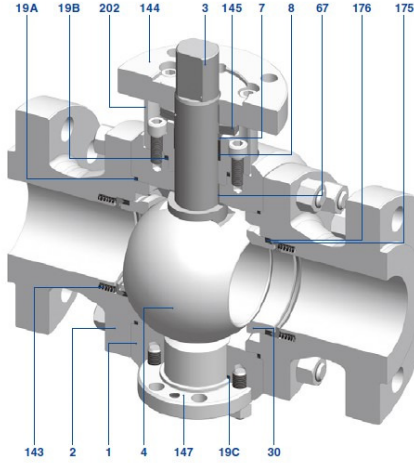
		<b>Class 300</b>											
Nominal Size	NPS	2	3	4	6	8	10	12	14	16	18	20	24
	DN	50	80	100	150	200	250	300	350	400	450	500	600
Valve Operator		Lever						Gear					
d		49	74	100	150	201	252	303	334	385	436	487	589
L		216	283	305	403	502	568	648	762	838	914	991	1143
H1		182	188	242	297	348	398	472	492	582	617	724	808
H2		100	123	151	191	237	284	-	-	-	-	-	-
H3		-	-	-	-	-	-	429	445	498	529	618	699
A		-	49	105	53	130	130	140	140	182	209	68	280
B		-	215	311	348	417	567	581	581	570	491	600	713
D		400	200	300	500	500	600	600	800	800	800	800	800
Weight (kg)		30	55	110	225	390	590	860	1110	1760	2130	3210	4780

Units (mm)

		<b>Class 600</b>											
Nominal Size	NPS	2	3	4	6	8	10	12	14	16	18	20	24
	DN	50	80	100	150	200	250	300	350	400	450	500	600
Valve Operator		Lever						Gear					
d		49	74	100	150	201	252	303	334	385	436	487	589
L		292	356	432	559	660	787	838	889	991	1092	1194	1397
H1		168	221	263	296	364	402	467	546	601	685	725	818
H2		103	134	165	191	246	-	-	-	-	-	-	-
H3		-	-	-	-	-	384	427	460	498	554	643	721
A		49	105	53	130	140	182	182	209	426	280	280	343
B		215	311	313	398	531	571	571	491	613	701	701	727
D		200	300	300	500	600	600	800	800	800	800	800	800
Weight (kg)		45	100	175	300	560	850	1180	1560	2200	3100	3970	6150

## Material List

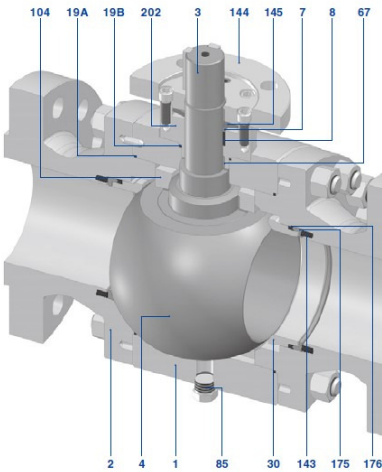
Up to size 4"



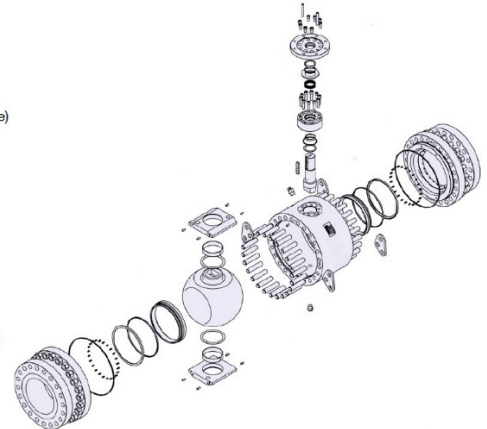
- 1 Body
- 2 Cap
- 3 Stem
- 4 Precision machined ball
- 7 Gland
- 8 Gland packing (Flexible graphite)
- 19A Gasket (Flexible graphite)
- 19B Gasket (Flexible graphite)
- 19C Gasket (Flexible graphite)
- 30 Ball seat
- 67 Stem bearing
- 143 Seat spring
- 144 Gland plate
- 145 Coned disc spring
- 147 End plate
- 175 Retainer gland
- 176 Seat packing (Flexible graphite)
- 202 Bonnet



Size 6" and larger



- 1 Body
- 2 Cap
- 3 Stem
- 4 Precision machined ball
- 7 Gland
- 8 Gland packing (Flexible graphite)
- 19A Gasket (Flexible graphite)
- 19B Gasket (Flexible graphite)
- 30 Ball seat
- 67 Stem bearing
- 85 Plug
- 104 Trunnion plate
- 143 Seat spring
- 144 Gland plate
- 145 Coned disc spring
- 175 Retainer gland
- 176 Seat packing (Flexible graphite)
- 202 Bonnet



Item	Carbon Steel	Stainless Steel
Body	A105	316, F316
Cap	A105	316, F316
Stem	630 H1150D	
Ball	316SS+WC-Co	
Ball Seat	316SS+WC-Co	
Spring	N07750	
Bolt	B7M	B8M
Nut	2HM	8M

## Operating Torque (BTO)

<b>T60M 2" to 24"</b>				
VALVE SIZE		MAXIMUM DIFFERENTIAL PRESSURE (barg) / OPERATING TORQUE (N-m)		
NPS	DN	Class 150	Class 300	Class 600
2"	50	103	176	329
3"	80	219	383	742
4"	100	410	745	1502
6"	150	1029	1996	3608
8"	200	1972	3858	7237
10"	250	3174	6284	11468
12"	300	4961	9943	18246
14"	350	6223	12644	24417
16"	400	8954	17928	32886
18"	450	11796	24377	47077
20"	500	16456	33881	62923
24"	600	24765	52829	99603

NOTES: (1) All torque values include a 30% safety factor. Values are for clean, static water at ambient temperature.  
 (2) Ball seat material: 316 Stainless steel + WC-Co (Tungsten carbide hard facing)  
 (3) In case of using higher safety factor than 30%, please confirm the maximum allowable stem strength.

## P-T Rating

**Pressure-Temperature Rating**  
**T60M Series**

