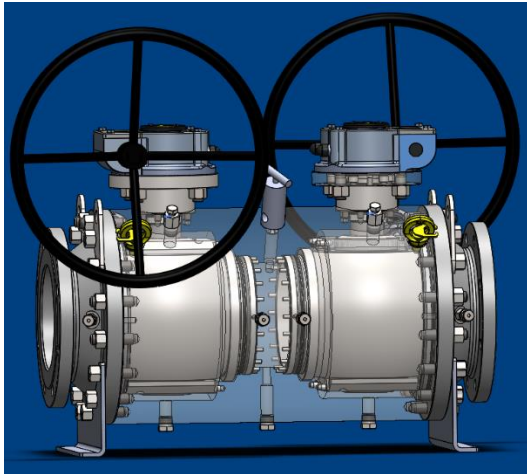


## **T60S - DB**

### **Trunnion Mounted Double Ball Valve, Soft seated**

### **ASME CLASS 150 / 300 / 600 / 900 / 1500**



#### **Features**

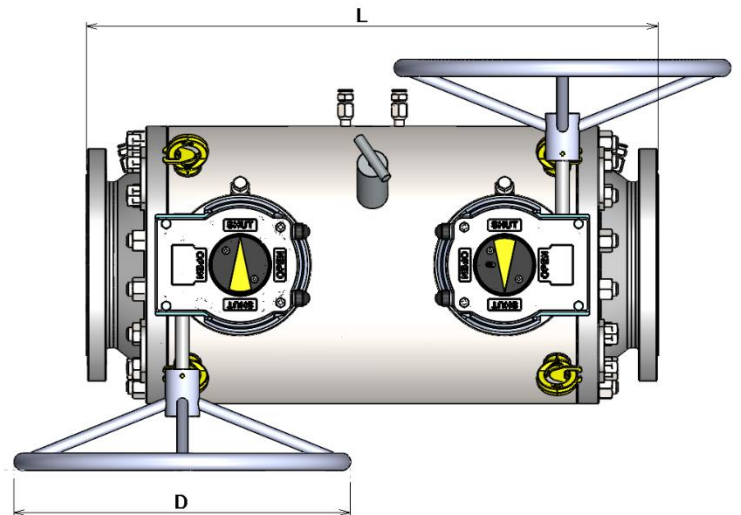
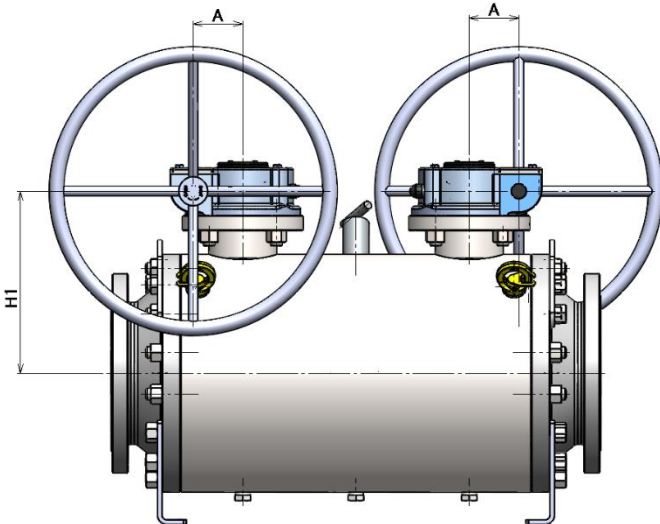
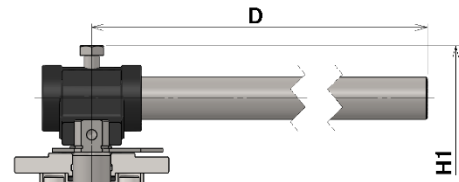
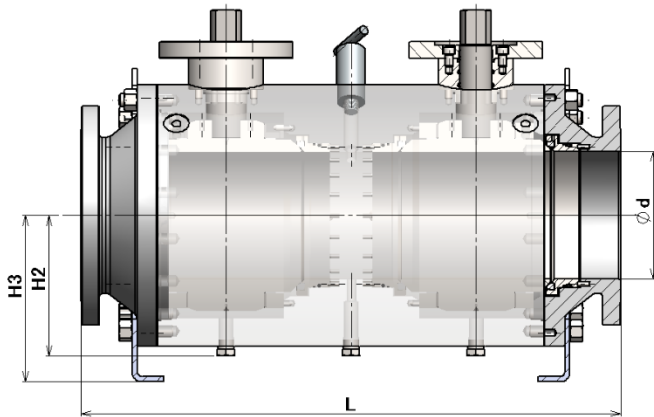
- Full bore or Reduced bore. 3-piece bolted body and cap.
- **Design Standards:** API 6D / ISO 14313 / ASME B16.34:2009
- **Flanges:** ASME B16.5, RF
- **Leak test:** API 6D
- **Top flange:** ISO 5211
- **Seats:** Reinforced PTFE (Cl.150-600), Reinforced Nylon (Cl.900-1500)
- **Stem:** Anti-static and proof Blow-out
- Tight shut-off sealing mechanism and low operation torque
- Locking device in open and close position
- Triple stem sealing system with 2 O-rings & Packing
- Double Block and Bleed function
- Self-relief of excessive cavity pressure in each ball
- Pressure relief in central cavity by automatic or manual valve
- Available for DPE (Double Piston Effect) / SPE (Single Piston Effect)
- NACE MR 0175
- **Options:** Actuation (Pneumatic & Electric), Sealing injection (stem & seats), Stem extension, Butt-weld piping connection, DIB (Double Isolation and Bleed), 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 CO1
- ATEX approval
- SIL IEC 61508:2019
- EAC TR CU approval
- Marine Division approval

## Dimensions



Units (mm)

Class 150													
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*													
H1		159	201	260	275	316	372	407	441	511	551	613	687
H2		96	117	148	183	-	-	-	-	-	-	-	-
H3		-	-	-	-	261,8	-	427	445	499	526	619	698
A		-	-	-	-	86	105	105	53	130	130	130	130
B		-	-	-	-	305	396	396	396	567	567	567	567
D		300	400	450	750	500	600	600	600	800	800	800	800

\*Consult minimum dimension.

<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*														
H1		159	201	260	275	316	372	413	438	502	542	604	698	
H2		96	117	148	183	-	-	-	-	-	-	-	-	
H3		-	-	-	-	-	-	411	435	477	511	558	640	
A		-	-	-	-	86	105	53	53	130	130	130	140	
B		-	-	-	-	305	392	398	398	567	567	567	580	
D		300	400	450	749	500	600	600	600	800	800	800	800	

<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*														
H1		182	236	263	282	316	372	413	438	502	542	604	698	
H2		98	120	150	191	-	-	-	-	-	-	-	-	
H3		-	-	-	-	-	-	411	435	477	511	558	640	
A		-	-	-	86	86	105	53	53	130	130	130	140	
B		-	-	-	305	305	392	398	398	567	567	567	580	
D		400	450	780	500	500	600	600	600	800	800	800	800	

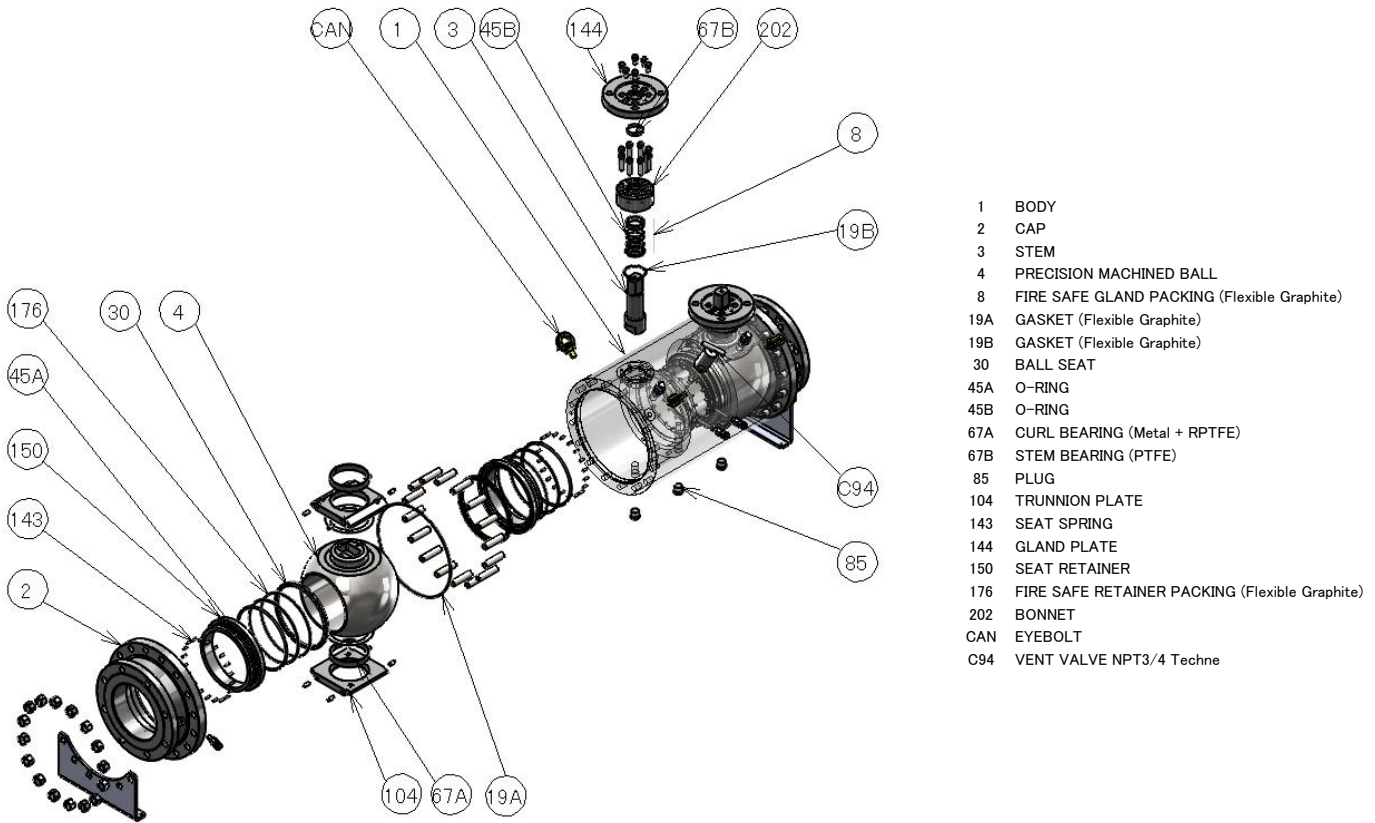
<b>Class 900</b>										
Nominal Size	NPS	2	3	4	6	8	10	12		
	DN	50	80	100	150	200	250	300		
Valve Operator		Lever					Gear			
d		49	74	100	150	201	252	303		
L*										
H1		218	243	276	295	355	406	480		
H2		109	134	172	201	-	-	-		
H3		-	-	-	-	-	414	454		
A		-	-	-	86	53	130	130		
B		-	-	-	305	396	417	567		
D		700	700	900	600	600	600	800		

<b>Class 1500</b>									
Nominal Size	NPS	2	3	4	6	8	10	12	
	DN	50	80	100	150	200	250	300	
Valve Operator		Lever					Gear		
d		49	74	100	144	192	239	287	
L*									
H1		218	250	262	353	435	482	600	
H2		109	146	186	237	-	-	-	
H3		-	-	-	-	408	446	556	
A		-	-	86	53	130	130	182	
B		-	-	305	396	567	567	570	
D		700	900	500	600	600	800	800	

\*Consult minimum dimension.

## Material List

Size 6" and larger



- 1 BODY
- 2 CAP
- 3 STEM
- 4 PRECISION MACHINED BALL
- 8 FIRE SAFE GLAND PACKING (Flexible Graphite)
- 19A GASKET (Flexible Graphite)
- 19B GASKET (Flexible Graphite)
- 30 BALL SEAT
- 45A O-RING
- 45B O-RING
- 67A CURL BEARING (Metal + RPTFE)
- 67B STEM BEARING (PTFE)
- 85 PLUG
- 104 TRUNNION PLATE
- 143 SEAT SPRING
- 144 GLAND PLATE
- 150 SEAT RETAINER
- 176 FIRE SAFE RETAINER PACKING (Flexible Graphite)
- 202 BONNET
- CAN EYEBOLT
- C94 VENT VALVE NPT3/4 Techné

## Operating Torque (BTO)

Item	Non-corrosive	Low Temperature	Corrosive	Sour service	
Body	A105	LF2	F316	F51, S31803 or CD3MN	F55, S32760 or CD3MWCuN
Cap	A105	LF2	F316	F51, S31803 or CD3MN	F55, S32760 or CD3MWCuN
Stem	316SS	316SS	316SS	F51 or S31803	F55 or S32760
Ball	A105+ENP	LF2+ENP F60+ENP (Cl.900/1500)	316SS, F51, S31803 or CD3MN (Cl.900/1500)	F51, S31803 or CD3MN	F55, S32760 or CD3MWCuN
Seat Retainer	A105+ENP	LF2+ENP	316SS	F51, S31803 or CD3MN	F55, S32760 or CD3MWCuN
Ball Seat	R-PTFE (Class 150 to 600) R-NYLON (Class 900 and over)				
Spring	N07750				
O-ring	HNBR	L-NBR	FKM	FKM	FKM
Bolt	B7M	L7M	B8M	B8M	B8M
Nut	2HM	7M	8M	8M	8M

<b>T60S 2" to 24"</b>				
VALVE SIZE		MAXIMUM DIFFERENTIAL PRESSURE (barg) / OPERATING TORQUE (N-m)		
NPS	DN	Class150	Class 300	Class 600
2"	50	50	60	120
3"	80	97	117	216
4"	100	154	195	377
6"	150	421	571	1028
8"	200	668	978	1904
10"	250	1032	1490	2756
12"	300	1542	2325	4450
14"	350	1763	2689	5152
16"	400	2392	3652	7010
18"	450	3138	4937	9538
20"	500	4222	6671	13078
24"	600	6594	10662	20898

NOTES: (1) All torque values include a 30% safety factor. Values are for clean, static water at ambient temperature.  
 (2) Ball seat material: PTFE + 15% Glass filled + 5%MoS2  
 (3) In case of using higher safety factor than 30%, please confirm the maximum allowable stem strength.

## P-T Rating

### Pressure-Temperature Rating

#### T60S-DB Series

