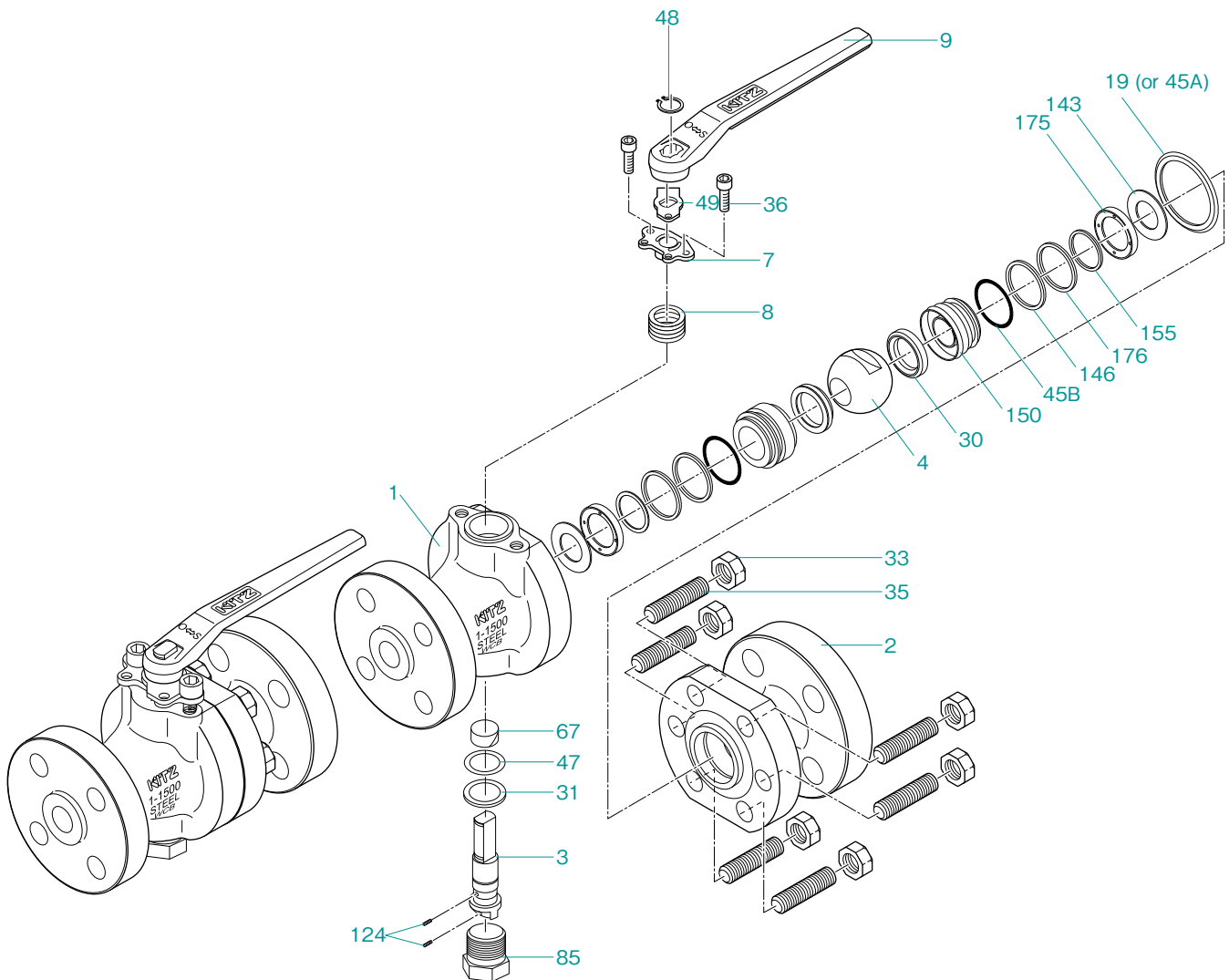


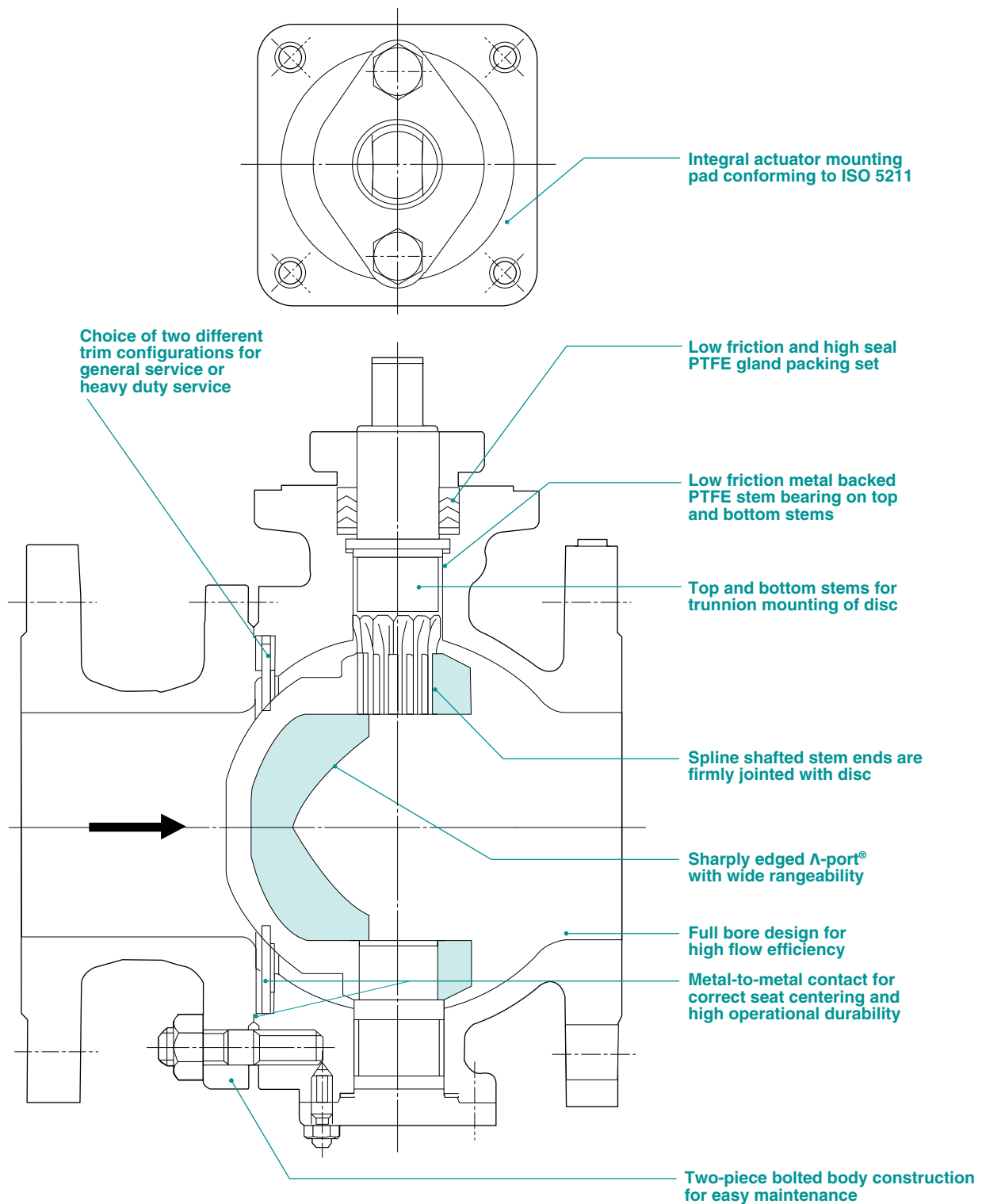
Construction and Materials

■ Class 1500 Floating Ball Valve



Λ (Lambda)-Port[®] Control Valves

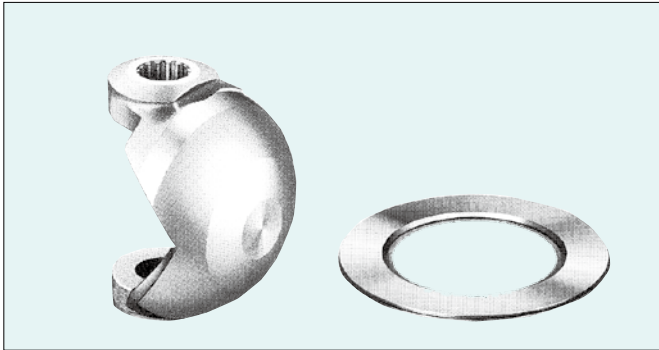
Design Features



Design Features

1. Sharp solid cutting

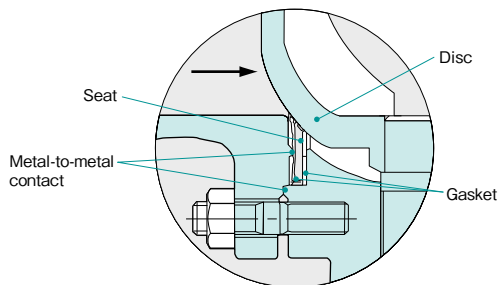
A trunnion mounted disc is sharply edged for cutting solids and fibrous objects mixed in line fluids, preventing disturbance to valve closing operation, and minimizing fluid residue within the valve bore.



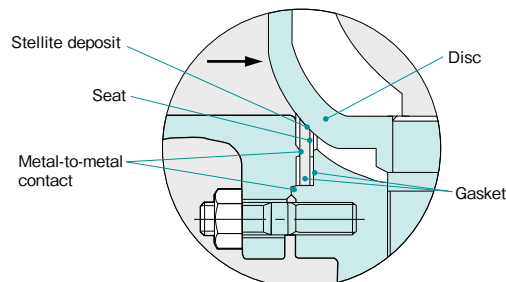
2. Choice of trims

Choice of two different trim configurations is available, depending on the planned service condition:

FLEKSEAT, made of spring Steel Type 316, provides elasticity in its contact with the hard-chromium plated CF8M disc for higher sealing performance. This seat is recommended for pulp and paper mill process control and services where higher sealing performance is critically required on valve shut-off. This seat is suited for throttling service. (KITZ Fig. UVC)



KNIFESEAT, made of Stellite deposited steel Type 316, contacts hard-chromium plated CF8M disc for heavy duty services. This seat is recommended for slurry service, and all other abrasion services. Also good for high viscosity services including pulp and paper mill processes. It is also recommended for throttling service. (KITZ Fig. UVCT)



3. Structural reliability

Metal-to-metal contact is accommodated between body and cap, and between seat and cap, for correct seat centering and adequate depressing force. Spline shafted stem ends are firmly jointed with the disc for correct disc centering and higher operational durability. In addition, trunnion mounting of the disc on the body helps increase total structural reliability of the valve against extraordinary piping stress.

4. Stabilized operating torque

Metal backed PTFE stem bearings are employed on top and bottom stems for minimized and stabilized torque of valve operation. Fine finish of the disc surface and other sliding surfaces of components also helps smooth operation of the valve.

5. Maintenance ease

Two-Piece split body construction provides the convenience of easy maintenance which is always critically required for handling viscous or fibrous line fluids.

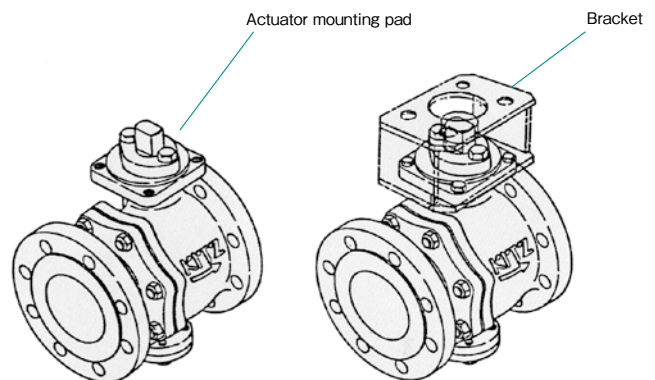
6. High flow efficiency

Full bore design guarantees maximized and linear flow characteristics with minimized pressure loss, helping viscous or fibrous line fluids pass through the valve bore smoothly.

7. Valve automation

Quarter-turn valve drive mechanism enables technically easier mounting of valve automation measures such as electric and pneumatic actuators. Integral pads are provided for easy, safe and assured on-the-spot actuator mounting without disassembly of valve glands, as required by ISO standard.

Note: Customers are requested to prepare mounting brackets and connectors chosen for their valve actuation as illustrated here.



Caution: KITZ Λ -port® control valves are designed for uni-directional flow control. Be sure to mount the valve correctly so that the direction of line flow matches the direction of the arrow mark cast on the valve body.

Design Data

Design Specifications

Valve structure	Split body side entry, RF-flanged, full bore, trunnion mounted disc
Wall thickness	ASME B16.34 Class 150/Class 300
F-F dimensions	JIS B2002 or ASME B16.10 Class 150/Class 300 for ball valves
End connection	RF-flanged to JIS B2220 10K/20K or ASME B16.5 Class 150/Class 300
Actuator mounting pad	ISO 5211
P-T rating	JIS B2220 10K/20K or ASME B16.34 Class 150/Class 300
Operation	Quarter-turn

Test Pressure

Seat test Hydrostatic or pneumatic at 0.39 MPa (4 kgf/cm ² or 60 psi)	FLEKSEAT for general service	Allowable leakage 0.0005% of Nominal Cv to IEC 534-4 Class IV-SI or ANSI FCI 70-2 Class IV × 0.05
	KNIFESEAT for heavy duty service	Allowable leakage 0.5% of Nominal Cv to IEC 534-4 or Class II ANSI FCI 70-2 Class II

Maximum Allowable Seat Leakage {Per minute under 0.4 MPa test pressure}

Nominal Size		FLEKSEAT (UVC)			KNIFESEAT (UVCT)		
		Cv at full opening	Hydrostatic (cc)	Pneumatic (NL)	Cv at full opening	Hydrostatic (L)	Pneumatic (NL)
NPS	DN						
1	25	25	3.6	0.16	31	4.42	193
1½	40	85	12.1	0.53	100	14.2	622
2	50	145	20.7	0.90	160	22.8	994
2½	65	240	34.2	1.49	265	37.8	1646
3	80	380	54.1	2.36	400	57.0	2486
4	100	550	78.3	3.42	585	83.4	3636
5	125	960	137	5.97	1010	144	6276
6	150	1500	214	9.32	1550	220	9632
8	200	2700	385	16.8	2750	392	17090
10	250	4300	613	26.7	4400	626	27340
12	300	6200	883	38.5	6300	898	39140
14	350	8200	1168	51.0	8300	1182	51580

Condition: Absolute air pressure 0.1 MPa at 20°C

Class 150/10K Lever Operated A-port® Control Valves

Trim

FLEKSEAT
KNIFESEAT

ASME Class 150

L-150UVC(M)

L-150UVCT(M)

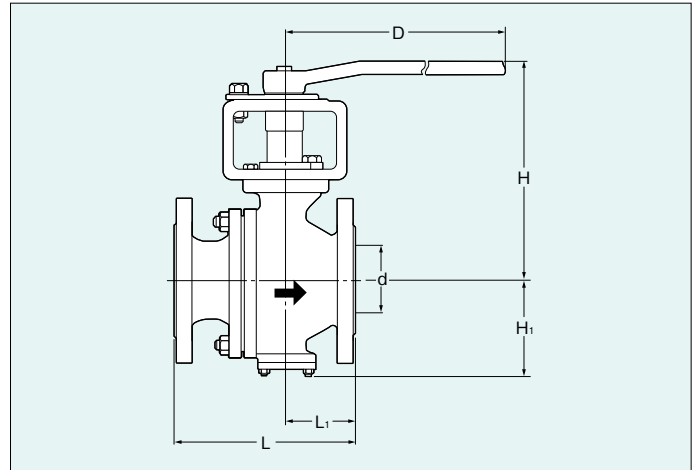
10K

L-10UVC(M)

L-10UVCT(M)

In case of CF8M valve body, KITZ Fig. shall be suffixed with "M".

Page 113 for Pressure-Temperature Ratings.



Dimensions of L-150UVC(M), L-150UVCT(M), L-10UVC(M), L-10UVCT(M)

Unit: mm

Nominal Size	NPS DN	1	1½	2	2½	3	4	5	6	8
		25	40	50	65	80	100	125	150	200
d		25	38	51	64	76	102	127	152	203
L		127	165	178	190	203	229	356	394	457
L ₁		48	67	69	76	77	89	158	197	228.5
H		190	199	205.5	252.5	259	292.5	315	397	471.5
H ₁		68.5	76	84.5	97	106	133.5	157	182	226.5
D		160	230	230	400	400	460	460	1000	1500

Class 150/10K Gear Operated A-port® Control Valves

Trim

FLEKSEAT
KNIFESEAT

ASME Class 150

G-150UVC(M)

G-150UVCT(M)

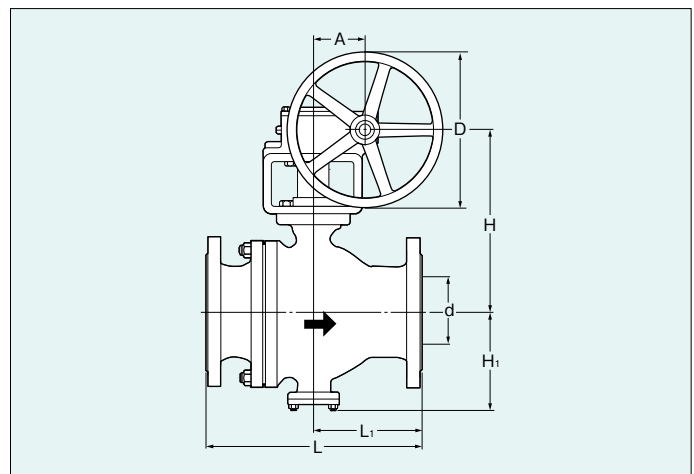
10K

G-10UVC(M)

G-10UVCT(M)

In case of CF8M valve body, KITZ Fig. shall be suffixed with "M".

Page 113 for Pressure-Temperature Ratings.



Dimensions of G-150UVC(M), G-150UVCT(M), G-10UVC(M), G-10UVCT(M)

Unit: mm

Nominal Size	NPS DN	5	6	10	12	14
		125	150	250	300	350
d		152	203	254	305	337
L		394	457	533	610	686
L ₁		197	228.5	266.5	260	293
H		330	410	446	524	547.5
H ₁		182	226.5	268.5	365.5	403.5
D		310	360	500	500	500
A		65.5	88.5	93.5	134	134

Class 300/20K Lever Operated A-port® Control Valves

Trim

FLEKSEAT
KNIFESEAT

ASME Class 300

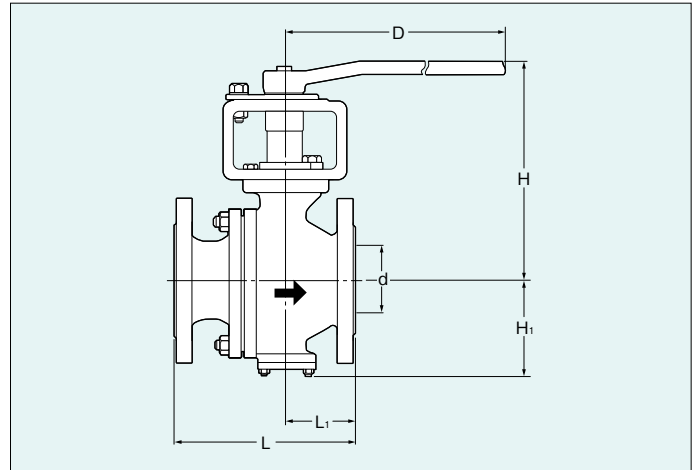
L-300UVC(M)
L-300UVCT(M)

20K

L-20UVC(M)
L-20UVCT(M)

In case of CF8M valve body, KITZ Fig. shall be suffixed with "M".

Page 113 for Pressure-Temperature Ratings.



Dimensions of L-300UVC(M), L-300UVCT(M), L-20UVC(M), L-20UVCT(M)

Unit: mm

Nominal Size	NPS DN	1	1½	2	2½	3	4	5	6	8
		25	40	50	65	80	100	125	150	200
d		25	38	51	64	76	102	127	152	203
L		165	190	216	241	283	305	381	403	502
L ₁		68	73.5	87.5	102	120.5	125	158	182	228.5
H		190	199	205.5	252.5	259	292.5	315	397	471.5
H ₁		71.5	79	87.5	100	109	133.5	157	182	226.5
D		160	230	230	400	400	460	460	1000	1500

Class 300/20K Gear Operated A-port® Control Valves

Trim

FLEKSEAT
KNIFESEAT

ASME Class 300

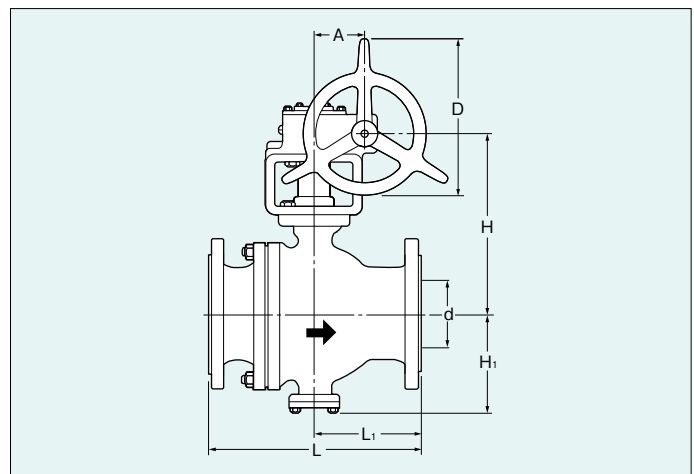
G-300UVC(M)
G-300UVCT(M)

20K

G-20UVC(M)
G-20UVCT(M)

In case of CF8M valve body, KITZ Fig. shall be suffixed with "M".

Page 113 for Pressure-Temperature Ratings.



Dimensions of G-300UVC(M), G-300UVCT(M), G-20UVC(M), G-20UVCT(M)

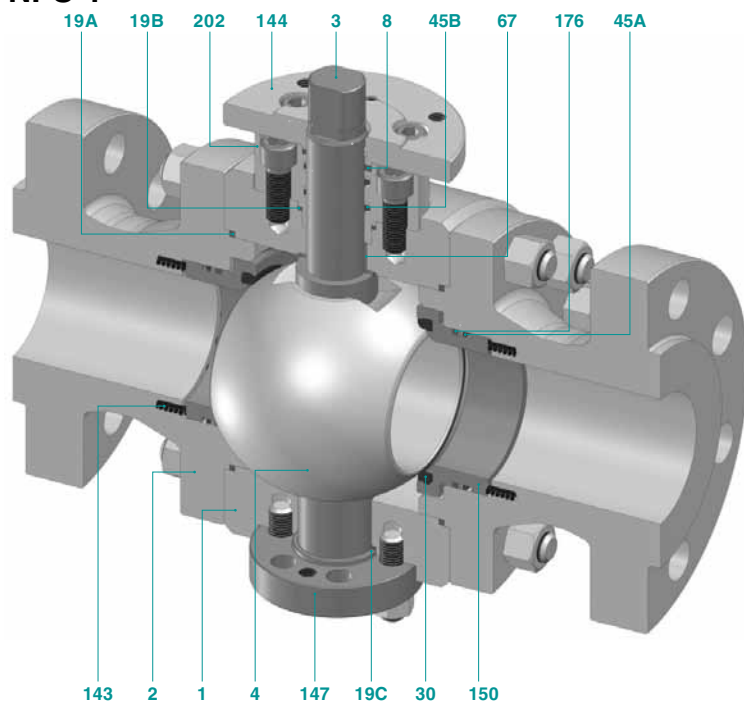
Unit: mm

Nominal Size	NPS DN	6	8	10
		150	200	250
d		152	203	254
L		403	502	568
L ₁		182	228.5	242.5
H		330	410	446
H ₁		182	226.5	268.5
D		310	360	500
A		65.5	88.5	93.5

T60S Soft Seated 3-Piece Body Trunnion Mounted Ball Valves

Component Drawing

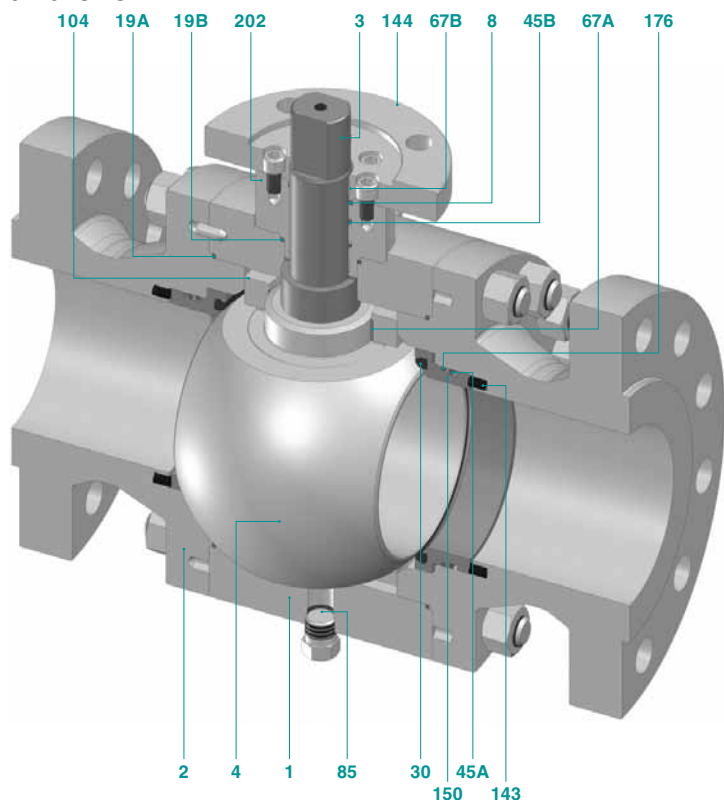
Up to NPS 4



- 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)
- 19C Gasket (Flexible graphite)
- 30 Ball seat
- 45A O-ring
- 45B O-ring
- 67 Stem bearing (Metal + R-PTFE)
- 143 Seat spring
- 144 Gland plate
- 147 End plate
- 150 Seat retainer
- 176 Fire-safe retainer packing (Flexible graphite)
- 202 Bonnet

*Note: Made of forged carbon steel, low alloy steel and high alloy steel. Made of forged or cast austenitic stainless steel, duplex stainless steel and other special alloy materials. Contact KITZ for current available materials.

NPS 6 and over



- 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 + R-PTFE)
- 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

*The illustration shown in this catalog represents the typical structure of Class 600 valves.

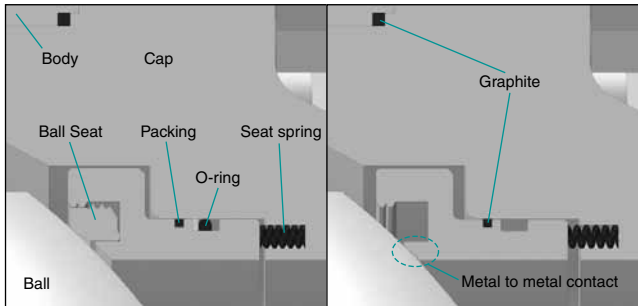
The structure may differ depending on sizes and classes. Please consult KITZ for more details on the specifications and structure of the valve.

Design Features

1. Fire-safe Design

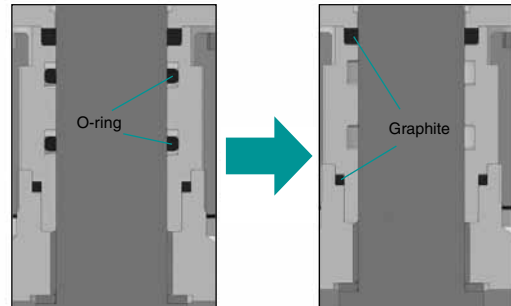
(1) Internal Leakage Prevention

When resilient sealing materials are damaged or decomposed by a plant fire, edges of upstream and downstream metal seat retainers preloaded by seat springs come into contact with the ball to shut off line fluid to minimize internal leakage through the valve bore. Meanwhile, flexible graphite seat retainer packing rings of KITZ original design prevent fluid leakage from between the valve caps and seat retainers during and after the plant fire.



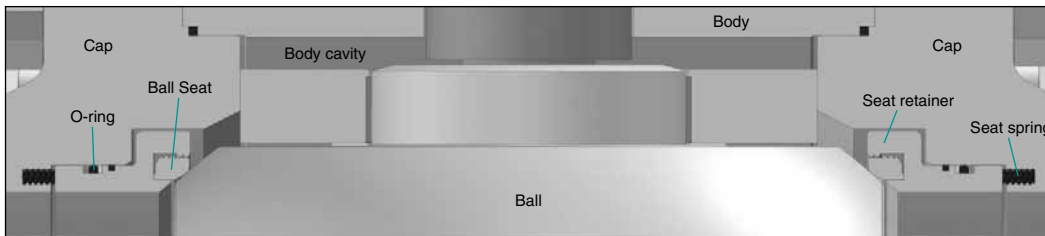
(2) External Leakage Prevention

External leakage from the valve stem area is prevented by double sealing with O-ring and flexible graphite gland packing ring. Leakage through the valve body joint is protected by flexible graphite gaskets. Even after a fire has deteriorated O-rings, flexible graphite gland packing ring and gaskets remain being the measure to prevent external fluid leakage.



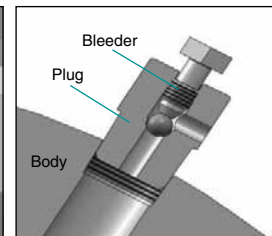
2. Tight Shut-off Sealing Mechanism

The resilient seat design adequately maintains each of the upstream and downstream ball seats in contact with the ball by means of repulsing force of seat springs inserted behind the seat retainers. Line fluid pressure also helps this contact method. This sealing mechanism features unfailing thru-the-bore sealing performance of upstream and downstream side ball seats at the same time.



3. Double Block and Bleed Function

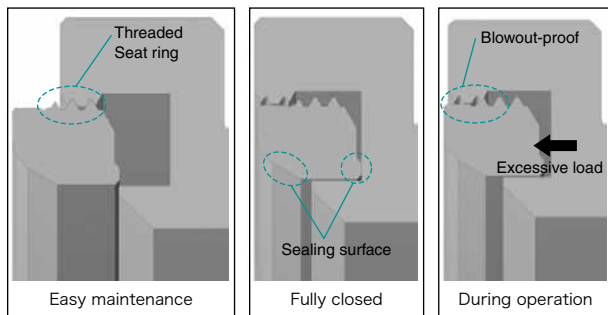
Ball seats may independently shut off the line fluid on the upstream and downstream side of the ball. The valve bore and the body cavity are isolated from each other when the valve is fully open or closed. Under this condition, the cavity pressure can be discharged with a vent valve and a drain plug. The vent valve is equipped with a blowout-proof bleeder for safe discharge. Relieving the cavity pressure with a vent valve is recommended for safe draining.



Design Features

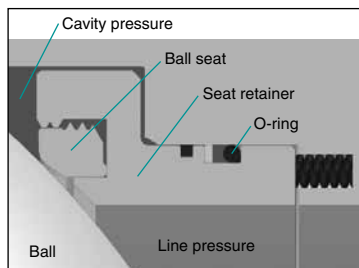
4. Blowout-proof Ball Seat Assembly

As illustrated below, ball seats are threaded into unthreaded back rooms of seat retainers to finally reach to inner walls and lower shoulders of the seat retainers for tightly sealing surface-to-surface contact. This unique design provides easy maintenance and blowout-proof seat assembly when ball seats are excessively loaded by back pressure due to incidental cavity pressure rise. (PATENT PENDING)



6. Cavity Pressure Relief

In case of incidental rise of servicing or ambient temperature, liquefied gas or highly volatile liquid trapped within the body cavity may evaporate, and cause an excessive rise in the cavity pressure. For safety consideration, when the cavity pressure exceeds the line pressure, either one of the ball seats will move slightly away from the ball surface together with seat retainers to relieve the excessive cavity pressure into the valve bore.

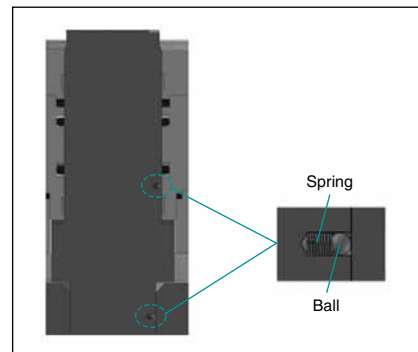


7. Low Emission Guaranteed Design

The fugitive emission suppressing design for both resilient and metal seated valves are certified to ISO 15848 tightness class "B" (Lower than 10^{-4} mg·s⁻¹·m⁻¹ for stem leakage and lower than 50 ppmv for body leakage). This verifies the outstanding low emission performance of the whole sealing mechanism of the valve.

5. Antistatic Design

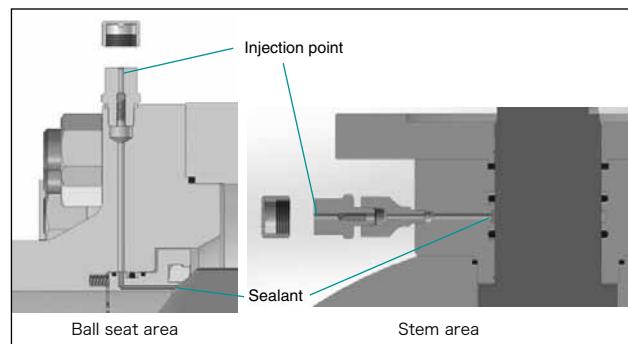
Spring loaded balls assembled between the stem and the bonnet and between the stem and the ball permits electric conductivity through all metallic valve components.



8. Options*

(1) Emergency Seal Restoration

For accidental leakage from ball seats or stem sealing area, a sealant supply mechanism may be provided as an option. Should sealing materials be damaged or decomposed by a fire or other accidental causes, leakage can be temporarily prevented or reduced by sealant injection into this mechanism.



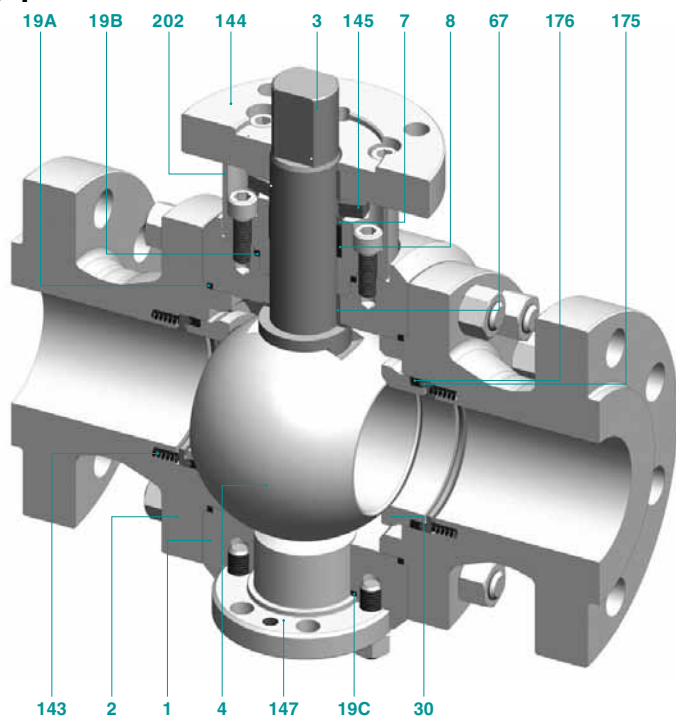
- (2) Special Shell and Trim Materials
- (3) Special Sealing Component Materials
- (4) Butt-welding Piping Connection
- (5) Pipe Pups Welded on Valve Ends
- (6) DIB: Double Isolation and Bleed (Double Seal)
- (7) Stem Extension
- (8) Overlay
- (9) Actuation (Pneumatic and Electric)

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

T60M Metal Seated 3-Piece Body Trunnion Mounted Ball Valves

Component Drawing

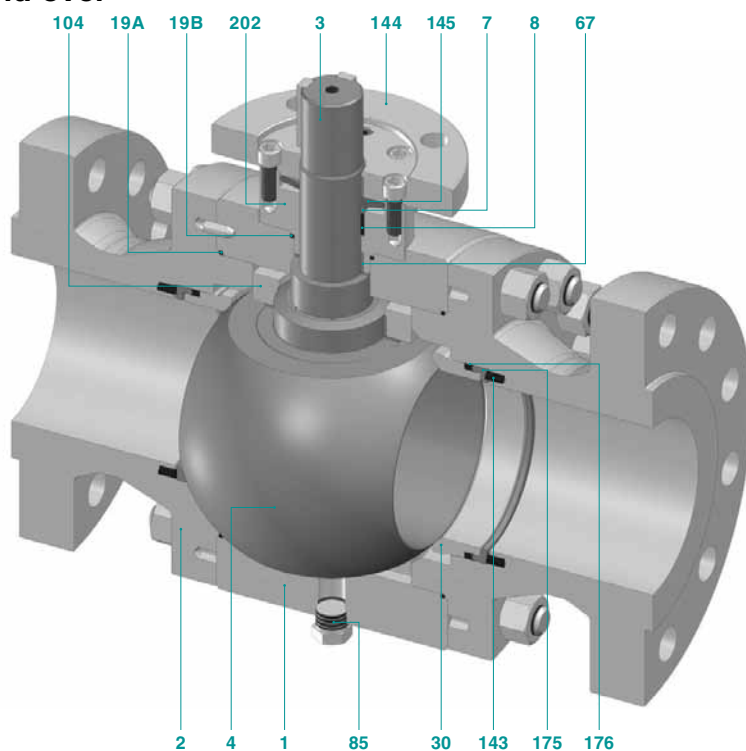
Up to NPS 4



- 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

*Note: Made of forged carbon steel, low alloy steel and high alloy steel. Made of forged or cast austenitic stainless steel, duplex stainless steel and other special alloy materials. Contact KITZ for current available materials.

NPS 6 and over



- 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

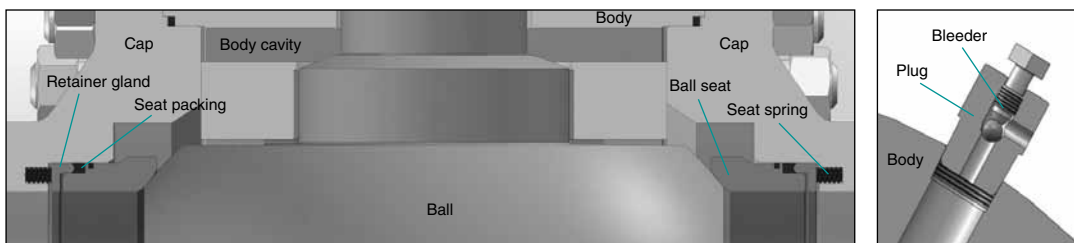
*The illustration shown in this catalog represents the typical structure of Class 600 valves.

The structure may differ depending on sizes and classes. Please consult KITZ for more details on the specifications and structure of the valve.

Design Features

1. Tight Shut-off Sealing Mechanism

The metal seat design, as the resilient seat design does, adequately maintains each of the upstream and downstream ball seats in contact with the ball by means of repulsing force of seat springs inserted behind seat retainers. Line fluid pressure also helps this contact method. This sealing mechanism features unfailing thru-the-bore sealing performance of upstream and downstream side ball seats at the same time. And surfaces of the ball and ball seats in contact are thermally sprayed with high alloy material. This provides higher wear resistance and durability for high temperature and abrasive services.

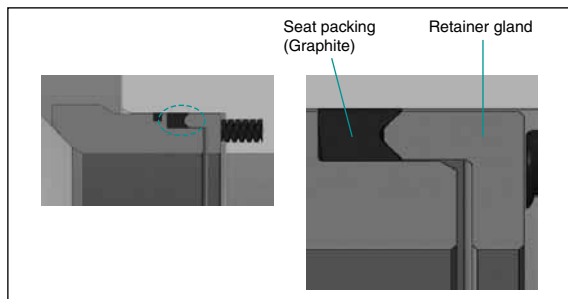


2. Double Block and Bleed Function

Ball seats may independently shut off the line fluid on the upstream and downstream side of the ball. The valve bore and the body cavity are isolated from each other when the valve is fully open or closed. Under this condition, the cavity pressure can be discharged with a vent valve and a drain plug. The vent valve is equipped with a blowout-proof bleeder for safe discharge. Relieving the cavity pressure with a vent valve is recommended for safe draining.

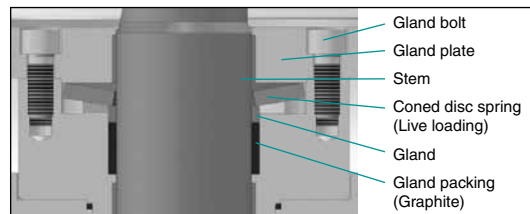
3. High Performance Seat Packing

The unique graphite seat packing rings with retainer glands provides reliable shut-off sealing performance during the entire service life. (PATENT PENDING)



4. Live Loaded Packing Structure

The gland packing ring is compressed with a coned disc spring to prevent stress relaxation. This live loaded packing system provides highly durable sealing performance with no need of packing retightening.



5. Cavity Pressure Relief

6. Low Emission Design

Please refer to Page 52.

7. Options

- (1) Special Shell and Trim Materials
- (2) Special Sealing Component Materials
- (3) Butt-welding Piping Connection
- (4) Pipe Pups Welded on Valve Ends
- (5) Stem Extension
- (6) Overlay
- (7) Actuation (Pneumatic and Electric)

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

Class 150 Stainless Steel/Carbon Steel Ball Valves

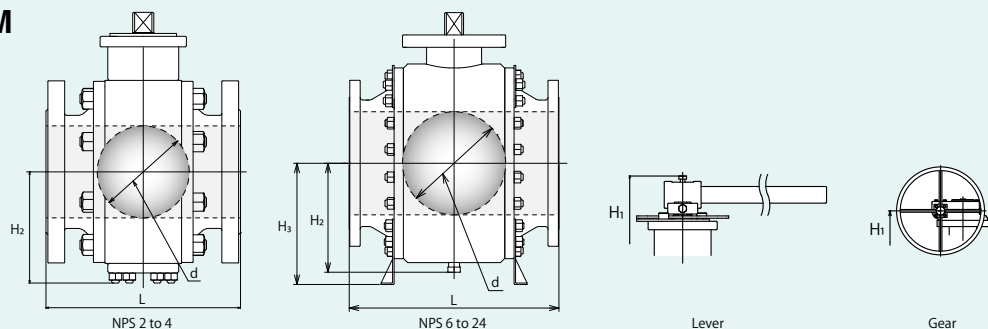
3-Piece body, Side entry design

T60S/(G-)150UF3TCSM

(Full Bore)

T60S/(G-)150SF3TCS

(Full Bore)



Dimensions of T60S/(G-)150UF3TCSM, T60S/(G-)150SF3TCS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS DN	2 50	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600
Valve operator		Lever				Gear							
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19	23.19
	mm	49	74	100	150	201	252	303	334	385	436	487	589
L	in.	7.00	8.00	9.00	15.50	18.00	21.00	24.00	27.00	30.00	34.00	36.00	42.00
	mm	178	203	229	394	457	533	610	686	762	864	914	1067
H ₁	in.	6.26	7.91	10.16	12.83	12.44	14.65	15.94	17.36	20.12	21.69	24.13	27.05
	mm	159	201	258	326	316	372	405	441	511	551	613	687
H ₂	in.	3.78	4.61	5.83	7.2	8.7	10.83	-	-	-	-	-	-
	mm	96	117	148	183	221	275	-	-	-	-	-	-
H ₃	in.	-	-	-	-	-	-	16.89	17.52	19.61	20.83	24.37	27.48
	mm	-	-	-	-	-	-	429	445	498	529	619	698

Class 150 Stainless Steel/Carbon Steel Ball Valves

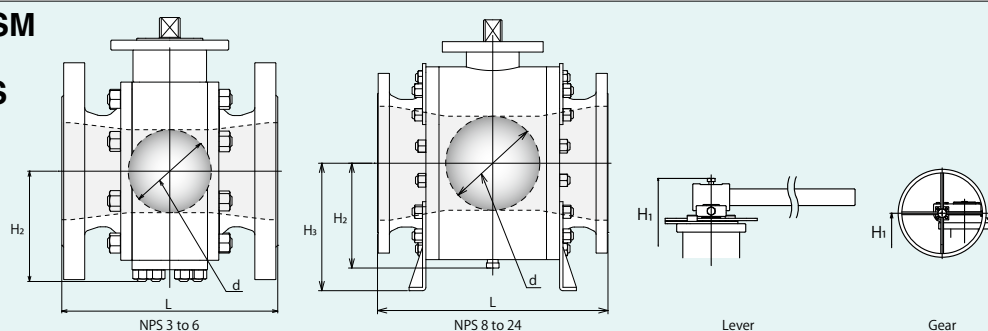
3-Piece body, Side entry design

T60S/(G-)150UF3TCRSM

(Reduced Bore)

T60S/(G-)150SF3TCRS

(Reduced Bore)



Dimensions of T60S/(G-)150UF3TCRSM, T60S/(G-)150SF3TCRS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	24
	DN	80	100	150	200	250	300	350	400	450	500	600
Valve operator		Lever				Gear						
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19
	mm	49	74	100	150	201	252	303	334	385	436	487
L	in.	8.00	9.00	15.50	18.00	21.00	24.00	27.00	30.00	34.00	36.00	42.00
	mm	203	229	394	457	533	610	686	762	864	914	1067
H ₁	in.	6.26	7.91	10.16	12.83	12.44	14.65	15.94	17.36	20.12	21.69	24.13
	mm	159	201	258	326	316	372	405	441	511	551	613
H ₂	in.	3.78	4.61	5.83	7.2	8.7	10.83	-	-	-	-	-
	mm	96	117	148	183	221	275	-	-	-	-	-
H ₃	in.	-	-	-	-	-	-	16.89	17.52	19.61	20.83	24.37
	mm	-	-	-	-	-	-	429	445	498	529	619

Class 300 Stainless Steel/Carbon Steel Ball Valves

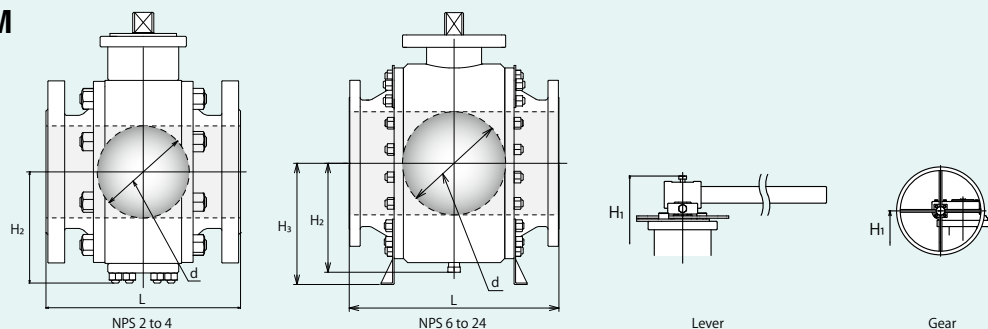
3-Piece body, Side entry design

T60S/(G)-300UF3TCSM

(Full Bore)

T60S/(G)-300SF3TCS

(Full Bore)



Dimensions of T60S/(G)-300UF3TCSM, T60S/(G)-300SF3TCS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS DN	2 50	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600
Valve operator		Lever				Gear							
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19	23.19
	mm	49	74	100	150	201	252	303	334	385	436	487	589
L	in.	8.50	11.13	12.00	15.88	19.75	22.38	25.50	30.00	33.00	36.00	39.00	45.00
	mm	216	283	305	403	502	568	648	762	838	914	991	1143
H ₁	in.	6.26	7.91	10.16	12.83	12.44	14.65	16.26	17.36	20.12	21.69	24.13	27.36
	mm	159	201	258	326	316	372	413	441	511	551	613	695
H ₂	in.	3.78	4.61	5.83	7.2	8.7	10.83	-	-	-	-	-	-
	mm	96	117	148	183	221	275	-	-	-	-	-	-
H ₃	in.	-	-	-	-	-	-	16.89	17.52	19.61	20.83	24.33	27.52
	mm	-	-	-	-	-	-	429	445	498	529	618	699

Class 300 Stainless Steel/Carbon Steel Ball Valves

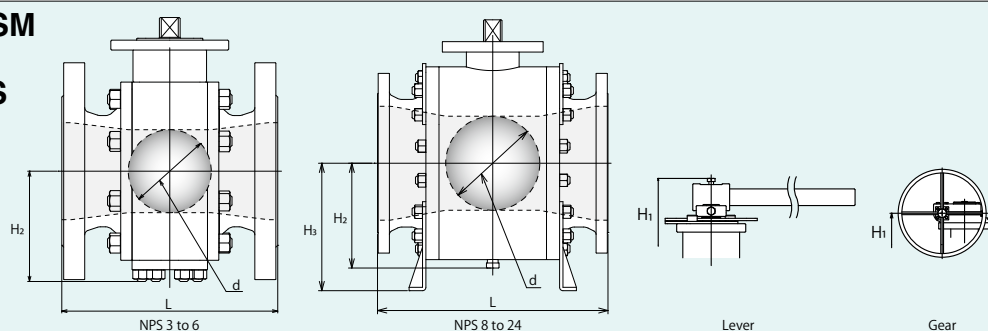
3-Piece body, Side entry design

T60S/(G)-300UF3TCRSM

(Reduced Bore)

T60S/(G)-300SF3TCRS

(Reduced Bore)



Dimensions of T60S/(G)-300UF3TCRSM, T60S/(G)-300SF3TCRS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	24
	DN	80	100	150	200	250	300	350	400	450	500	600
Valve operator		Lever				Gear						
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19
	mm	49	74	100	150	201	252	303	334	385	436	487
L	in.	11.13	12.00	15.88	19.75	22.38	25.50	30.00	33.00	36.00	39.00	45.00
	mm	283	305	403	502	568	648	762	838	914	991	1143
H ₁	in.	6.26	7.91	10.16	12.83	12.44	14.65	16.26	17.36	20.12	21.69	24.13
	mm	159	201	258	326	316	372	413	441	511	551	613
H ₂	in.	3.78	4.61	5.83	7.2	8.7	10.83	-	-	-	-	-
	mm	96	117	148	183	221	275	-	-	-	-	-
H ₃	in.	-	-	-	-	-	-	16.89	17.52	19.61	20.83	24.33
	mm	-	-	-	-	-	-	429	445	498	529	618

Class 600 Stainless Steel/Carbon Steel Ball Valves

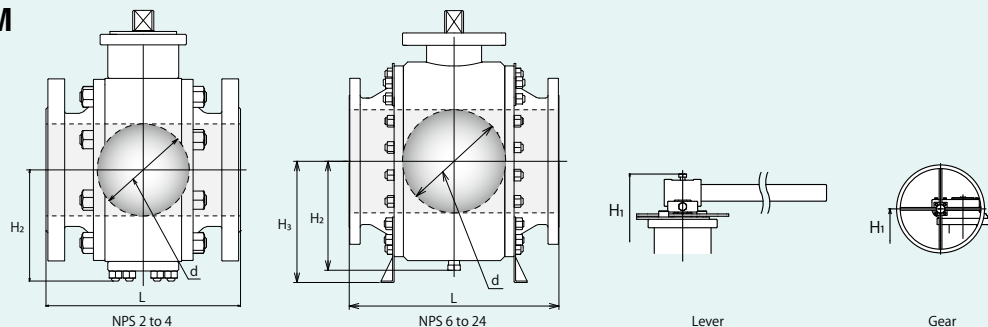
3-Piece body, Side entry design

T60S/(G)-600UF3TCSM

(Full Bore)

T60S/(G)-600SF3TCS

(Full Bore)



Dimensions of T60S/(G)-600UF3TCSM, T60S/(G)-600SF3TCS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS DN	2 50	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600
Valve operator		Lever				Gear							
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19	23.19
	mm	49	74	100	150	201	252	303	334	385	436	487	589
L	in.	11.50	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	292	356	432	559	660	787	838	889	991	1092	1194	1397
H ₁	in.	7.17	9.29	10.35	11.1	13.19	15.04	17.64	18.82	21.02	23.15	25.67	29.25
	mm	182	236	263	282	335	382	448	478	534	588	652	743
H ₂	in.	3.86	4.76	5.91	7.44	9.25	-	-	-	-	-	-	-
	mm	98	121	150	189	235	-	-	-	-	-	-	-
H ₃	in.	-	-	-	-	-	15.12	16.81	18.11	19.61	21.81	23.27	26.46
	mm	-	-	-	-	-	384	427	460	498	554	591	672

Class 600 Stainless Steel/Carbon Steel Ball Valves

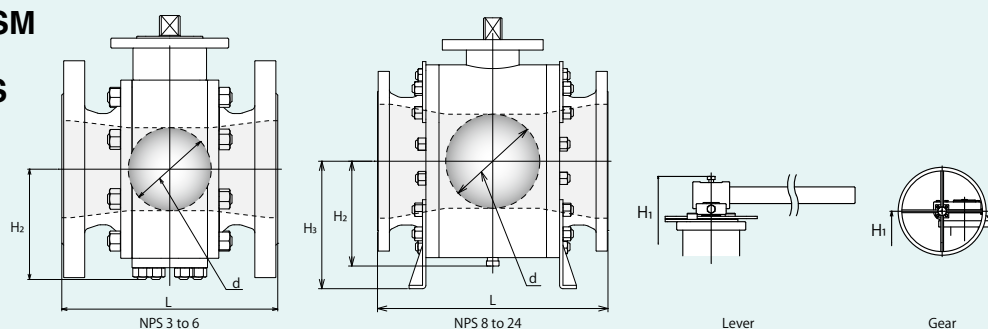
3-Piece body, Side entry design

T60S/(G)-600UF3TCRSM

(Reduced Bore)

T60S/(G)-600SF3TCRS

(Reduced Bore)



Dimensions of T60S/(G)-600UF3TCRSM, T60S/(G)-600SF3TCRS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	24
	DN	80	100	150	200	250	300	350	400	450	500	600
Valve operator		Lever			Gear							
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19
	mm	49	74	100	150	201	252	303	334	385	436	487
L	in.	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	356	432	559	660	787	838	889	991	1092	1194	1397
H ₁	in.	7.17	9.29	10.35	11.1	13.19	15.04	17.64	18.82	21.02	23.15	25.67
	mm	182	236	263	282	335	382	448	478	534	588	652
H ₂	in.	3.86	4.76	5.91	7.44	9.25	-	-	-	-	-	-
	mm	98	121	150	189	235	-	-	-	-	-	-
H ₃	in.	-	-	-	-	-	15.12	16.81	18.11	19.61	21.81	23.27
	mm	-	-	-	-	-	384	427	460	498	554	591

Class 150 Stainless Steel/Carbon Steel Ball Valves

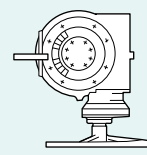
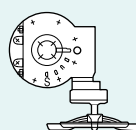
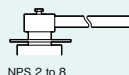
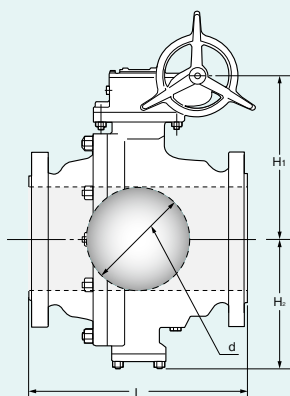
Split body, Side entry design

(G-)150UTCS(M)

(Full Bore)

(G-)150SCTCS

(Full Bore)



NPS 10 to 32

NPS 34 and larger

Dimensions of (G-)150UTCS(M), (G-)150SCTCS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	2	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
	DN	50	80	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
d (bore)	in.	2	3	4	6	8	10	12	13.25	15.25	17.25	19.25	21.25	23.25	25	27	29	30.75	32.75	34.5
	mm	51	76	102	152	203	254	305	337	387	438	489	540	591	635	686	737	781	832	876
L	in.	7	8	9	15.5	18	21	24	27	30	34	36	40	42	45	49	51	54	58	60
	mm	178	203	229	394	457	533	610	686	762	864	914	1016	1067	1143	1245	1295	1372	1473	1524
H ₁	in.	6.50	7.60	9.09	12.95	15.47	15.47	17.36	18.94	23.54	25.31	27.87	31.42	33.98	33.86	35.42	37.01	38.98	39.65	41.14
	mm	165	193	231	329	393	393	441	481	598	643	708	798	863	860	895	940	990	1007	1045
H ₂	in.	3.98	5.04	6.02	8.62	10.75	13.35	15.16	16.69	18.54	20.24	22.80	24.72	27.17	26.97	28.35	30.51	32.48	34.21	35.71
	mm	101	128	153	219	273	339	385	424	471	514	579	628	690	685	720	775	825	869	907

Class 150 Stainless Steel/Carbon Steel Ball Valves

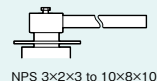
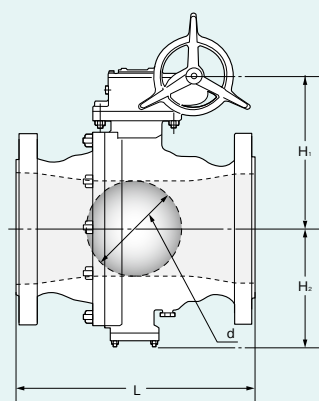
Split body, Side entry design

(G-)150UTCRS(M)

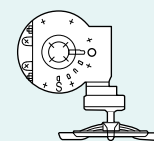
(Reduced Bore)

(G-)150SCTCRS

(Reduced Bore)



NPS 3x2x3 to 10x8x10



NPS 12x10x12 and larger

Dimensions of (G-)150UTCRS(M), (G-)150SCTCRS

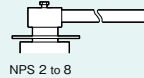
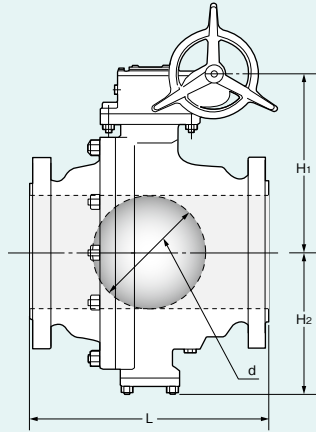
Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
	DN	80	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
d (bore)	in.	2	3	4	6	8	10	12	13.25	15.25	17.25	17.25	19.25	21.25	23.25	23.25	25	27	29
	mm	51	76	102	152	203	254	305	337	387	438	438	489	540	591	591	635	686	737
L	in.	8	9	15.5	18	21	24	27	30	34	36	40	42	45	49	51	54	58	60
	mm	203	229	394	457	533	610	686	762	864	914	1016	1067	1143	1245	1295	1372	1473	1524
H ₁	in.	6.50	7.60	9.09	12.95	15.47	15.47	17.36	18.94	23.54	25.31	25.31	27.87	31.42	33.98	33.98	33.86	35.42	37.01
	mm	165	193	231	329	393	393	441	481	598	643	643	708	798	863	863	860	895	940
H ₂	in.	3.98	5.04	6.02	8.62	10.75	13.35	15.16	16.69	18.54	20.24	20.24	22.80	24.72	27.17	27.17	26.97	28.35	30.51
	mm	101	128	153	219	273	339	385	424	471	514	514	579	628	690	690	685	720	775

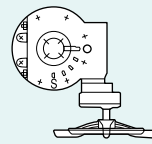
Class 300 Stainless Steel/Carbon Steel Ball Valves

Split body, Side entry design

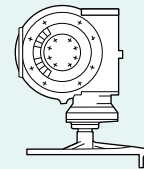
(G-)300UTCS(M)
(Full Bore)
(G-)300SCTCS
(Full Bore)



NPS 2 to 8



NPS 10 to 28



NPS 30 and larger

Dimensions of (G-)300UTCS(M), (G-)300SCTCS

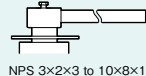
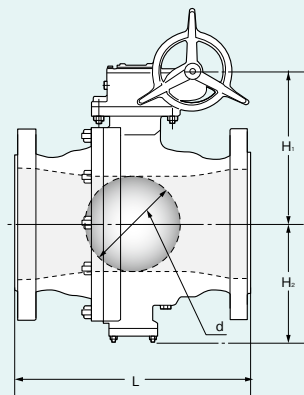
Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	2	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
	DN	50	80	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
d (bore)	in.	2	3	4	6	8	10	12	13.25	15.25	17.25	19.25	21.25	23.25	25	27	29	30.75	32.75	34.5
	mm	51	76	102	152	203	254	305	337	387	438	489	540	591	635	686	737	781	832	876
L	in.	8.5	11.125	12	403	19.75	22.375	25.5	30	33	36	39	43	45	49	53	55	60	64	68
	mm	216	283	305	403	502	568	648	762	838	914	991	1092	1143	1245	1346	1397	1524	1626	1727
H ₁	in.	6.50	7.60	9.09	8.62	15.47	15.47	17.36	18.94	23.54	25.31	27.87	31.42	33.98	35.04	37.20	37.80	39.76	42.52	44.02
	mm	165	193	231	329	393	393	441	481	598	643	708	798	863	890	945	960	1010	1080	1118
H ₂	in.	3.98	5.04	6.02	8.62	10.75	13.35	15.16	16.69	18.54	20.24	22.80	24.72	27.17	28.15	30.31	32.09	34.06	35.79	37.28
	mm	101	128	153	219	273	339	385	424	471	514	579	628	690	715	770	815	865	909	947

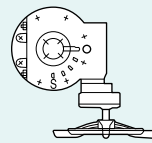
Class 300 Stainless Steel/Carbon Steel Ball Valves

Split body, Side entry design

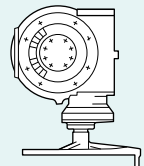
(G-)300UTCERS(M)
(Reduced Bore)
(G-)300SCTERS
(Reduced Bore)



NPS 3x2x3 to 10x8x10



NPS 12x10x12 to 34x28x34



NPS 36x30x36 only

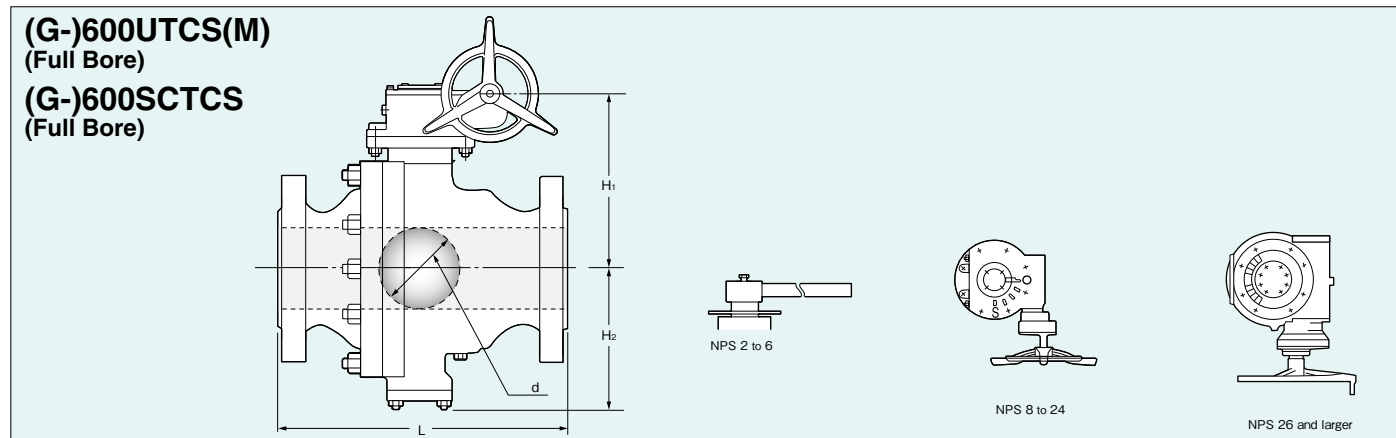
Dimensions of (G-)300UTCERS(M), (G-)300SCTERS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
	DN	80	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
d (bore)	in.	2	3	4	6	8	10	12	13.25	15.25	17.25	19.25	21.25	23.25	23.25	25	27	29	29
	mm	51	76	102	152	203	254	305	337	387	438	489	540	591	591	635	686	737	737
L	in.	11.125	12	15.875	19.75	22.375	25.5	30	33	36	39	43	45	49	53	55	60	64	68
	mm	283	305	403	502	568	648	762	838	914	991	1092	1143	1245	1346	1397	1524	1626	1727
H ₁	in.	6.50	7.60	9.09	12.95	15.47	15.47	17.36	18.94	23.54	25.31	25.31	27.87	31.42	33.98	33.98	35.04	37.20	37.80
	mm	165	193	231	329	393	393	441	481	598	643	643	708	798	863	863	890	945	960
H ₂	in.	3.98	5.04	6.02	8.62	10.75	13.35	15.16	16.69	18.54	20.24	20.24	22.80	24.72	27.17	27.17	28.15	30.31	32.09
	mm	101	128	153	219	273	339	385	424	471	514	514	579	628	690	690	715	770	815

Class 600 Stainless Steel/Carbon Steel Ball Valves

Split body, Side entry design



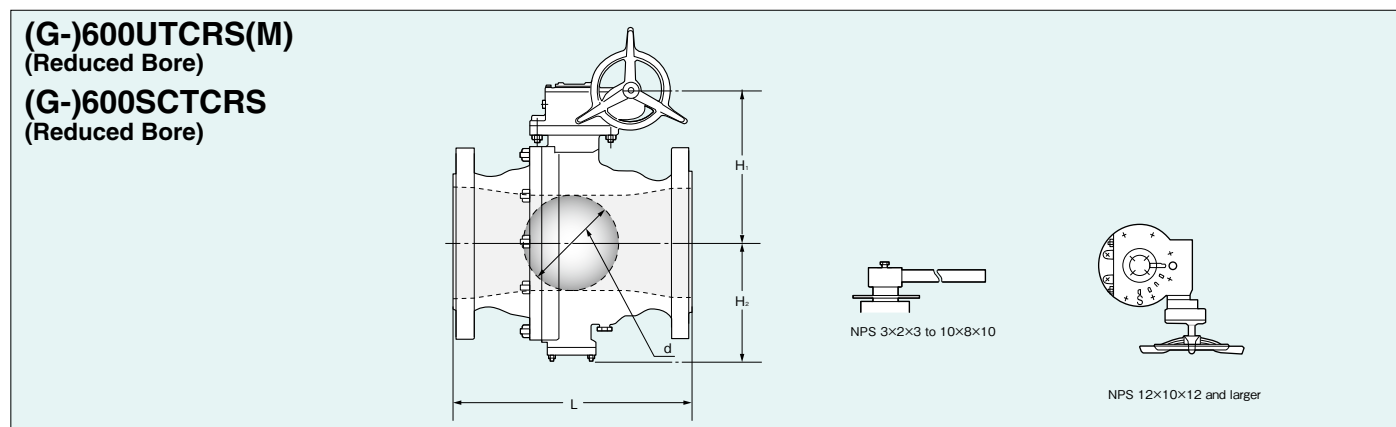
Dimensions of (G-)600UTCS(M), (G-)600SCTCS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	2	3	4	6	8	10	12	14	16	18	20	24	26	28	30
	DN	50	80	100	150	200	250	300	350	400	450	500	600	650	700	750
d (bore)	in.	2	3	4	6	8	10	12	13.25	15.25	17.25	19.25	23.25	25	27	29
	mm	51	76	102	152	203	254	305	337	387	438	489	591	635	686	737
L	in.	11.5	14	17	22	26	31	33	35	39	43	47	55	57	61	65
	mm	292	356	432	559	660	787	838	889	991	1092	1194	1397	1448	1549	1651
H ₁	in.	6.93	9.72	10.87	14.29	14.29	16.77	21.57	23.54	25.51	29.13	31.89	36.22	37.20	40.87	42.83
	mm	176	247	276	363	363	426	548	598	648	740	810	920	945	1038	1088
H ₂	in.	4.69	5.79	6.77	9.84	12.52	14.65	17.09	19.06	21.02	23.23	25.91	30.16	32.48	35.04	36.93
	mm	119	147	172	250	318	372	434	484	534	590	658	766	825	890	938

Class 600 Stainless Steel/Carbon Steel Ball Valves

Split body, Side entry design



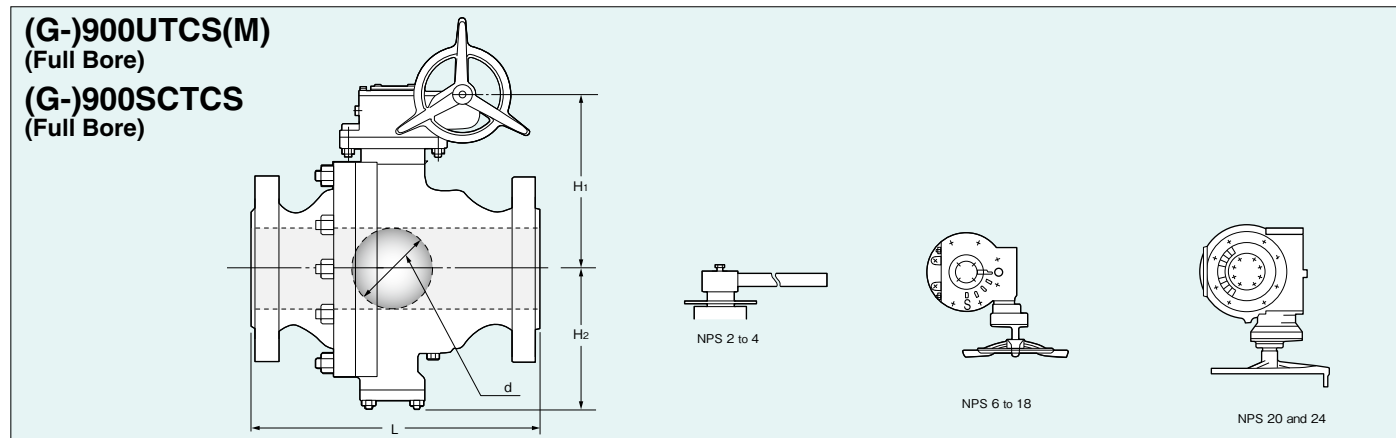
Dimensions of (G-)600UTCRS(M), (G-)600SCTCRS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	24	26	28	30
	DN	80	100	150	200	250	300	350	400	450	500	600	650	700	750
d (bore)	in.	2	3	4	6	8	10	12	13.25	15.25	17.25	19.25	21.25	23.25	23.25
	mm	51	76	102	152	203	254	305	337	387	438	489	540	591	591
L	in.	14	17	22	26	31	33	35	39	43	47	55	57	61	65
	mm	356	432	559	660	787	838	889	991	1092	1194	1397	1448	1549	1651
H ₁	in.	6.93	9.72	10.87	14.29	14.29	16.77	21.57	23.54	25.51	29.13	31.89	34.06	36.22	36.22
	mm	176	247	276	363	363	426	548	598	648	740	810	865	920	920
H ₂	in.	4.69	5.79	6.77	9.84	12.52	14.65	17.09	19.06	21.02	23.23	25.91	27.99	30.16	30.16
	mm	119	147	172	250	318	372	434	484	534	590	658	711	766	766

Class 900 Stainless Steel/Carbon Steel Ball Valves

Split body, Side entry design



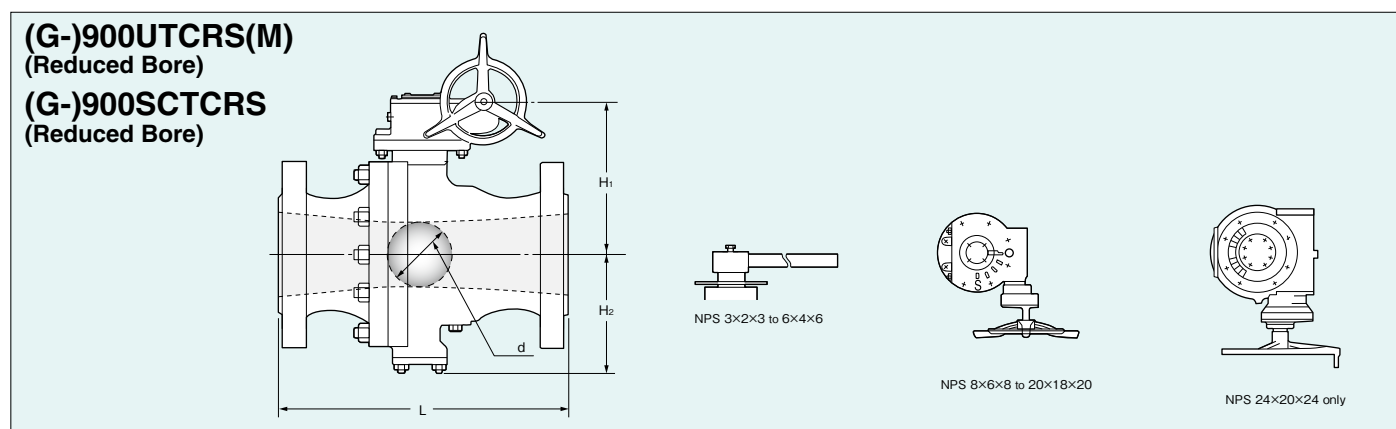
Dimensions of (G-)900UTCS(M), (G-)900SCTCS

Page 107 for Pressure-Temperature Ratings.

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
d (bore)	in.	2	3	4	6	8	10	12	12.75	14.75	16.75	18.625	22.5
	mm	51	76	102	152	203	254	305	324	375	426	473	572
L	in.	14.5	15	18	24	29	33	38	40.5	44.5	48	52	61
	mm	368	381	457	610	737	838	965	1029	1130	1219	1321	1549
H ₁	in.	7.56	10.98	12.40	12.72	15.00	20.39	22.36	26.18	28.74	31.30	32.48	38.31
	mm	192	279	315	323	381	518	568	665	730	795	825	973
H ₂	in.	5.59	6.77	8.07	10.71	13.19	15.98	18.15	20.20	22.95	25.43	27.80	32.72
	mm	142	172	205	272	335	406	461	513	583	646	706	831

Class 900 Stainless Steel/Carbon Steel Ball Valves

Split body, Side entry design



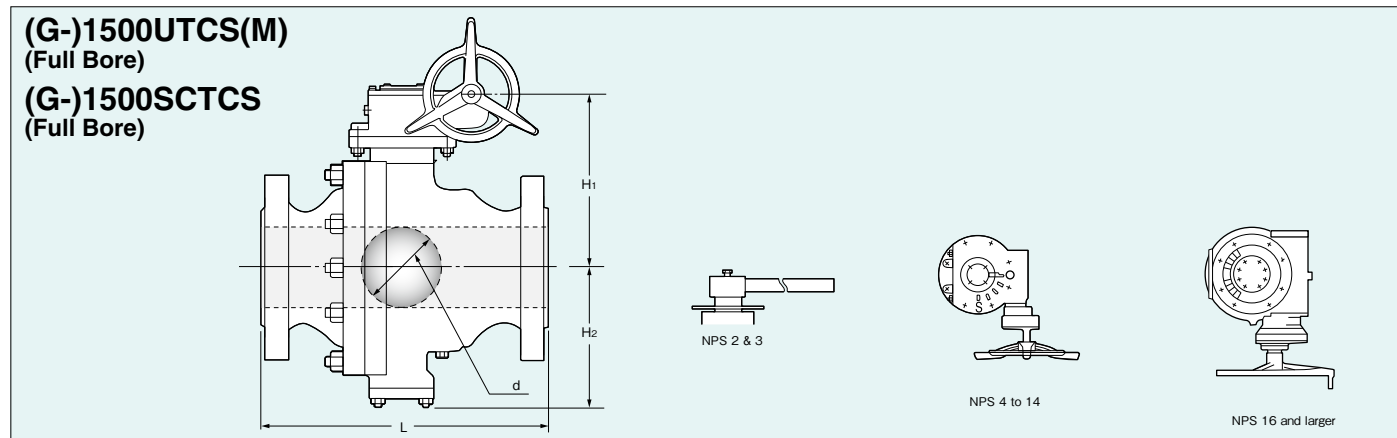
Dimensions of (G-)900UTCRS(M), (G-)900SCTCRS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	24
	DN	80	100	150	200	250	300	350	400	450	500	600
d (bore)	in.	2	3	4	6	8	10	12	12.75	14.75	16.75	18.625
	mm	51	76	102	152	203	254	305	324	375	426	473
L	in.	15	18	24	29	33	38	40.5	44.5	48	52	61
	mm	381	457	610	737	838	965	1029	1130	1219	1321	1549
H ₁	in.	7.56	10.98	12.40	12.72	15.00	20.39	22.36	26.18	28.74	31.30	32.48
	mm	192	279	315	323	381	518	568	665	730	795	825
H ₂	in.	5.59	6.77	8.07	10.71	13.19	15.98	18.15	20.20	22.95	25.43	27.80
	mm	142	172	205	272	335	406	461	513	583	646	706

Class 1500 Stainless Steel/Carbon Steel Ball Valves

Split body, Side entry design



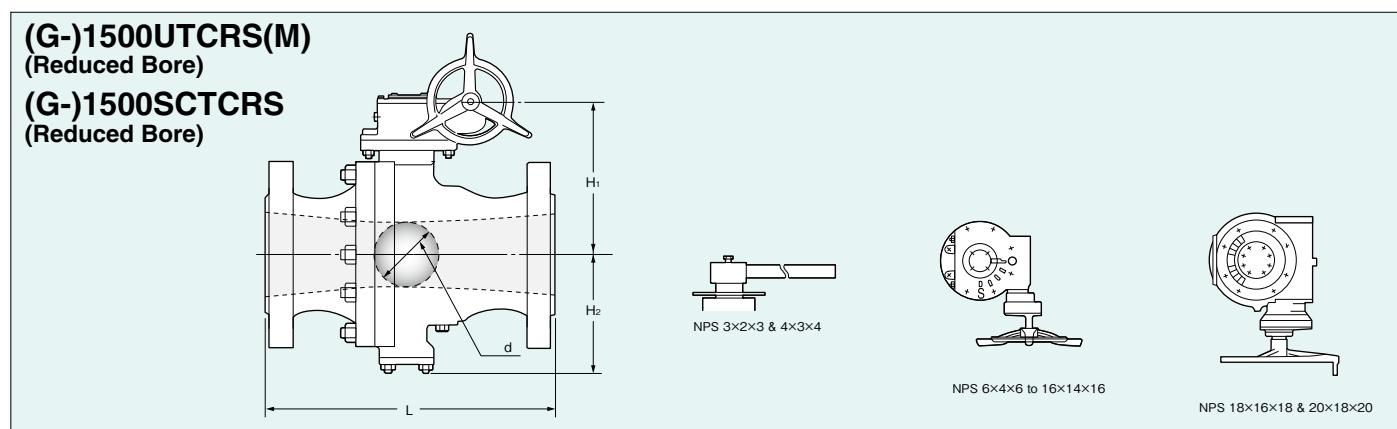
Dimensions of (G-)1500UTCS(M), (G-)1500SCTCS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	2	3	4	6	8	10	12	14	16	18	20
	DN	50	80	100	150	200	250	300	350	400	450	500
d (bore)	in.	2	3	4	5.75	7.625	9.5	11.375	12.5	14.25	16.125	17.875
	mm	51	76	102	146	194	241	289	318	362	410	454
L	in.	14.5	18.5	21.5	27.75	32.74	39	44.5	49.5	54.5	60.5	65.5
	mm	368	470	546	705	832	991	1130	1257	1384	1537	1664
H ₁	in.	9.92	11.81	10.71	13.43	19.41	22.24	27.56	29.41	31.30	34.53	38.78
	mm	252	300	272	341	493	565	700	747	795	877	985
H ₂	in.	6.50	8.07	8.90	11.77	15.28	18.07	21.85	23.78	26.93	29.80	32.68
	mm	165	205	226	299	388	459	555	604	684	757	830

Class 1500 Stainless Steel/Carbon Steel Ball Valves

Split body, Side entry design



Dimensions of (G-)1500UTCRS(M), (G-)1500SCTCRS

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20
	DN	80	100	150	200	250	300	350	400	450	500
d (bore)	in.	2	3	4	5.75	7.625	9.5	11.38	12.5	14.25	16.125
	mm	51	76	102	146	194	241	289	318	362	410
L	in.	18.5	21.5	27.75	32.74	39	44.5	49.5	54.5	60.5	65.5
	mm	470	546	705	832	991	1130	1257	1384	1537	1664
H ₁	in.	9.92	11.81	10.71	13.42	19.41	22.24	27.56	29.41	31.30	34.53
	mm	252	300	272	341	493	565	700	747	795	877
H ₂	in.	6.50	8.07	8.90	11.77	15.28	18.07	21.85	23.78	26.93	29.80
	mm	165	205	226	299	388	459	555	604	684	757

Class 150 Metal Seated Stainless Steel/Carbon Steel Ball Valves (Trim 6H)

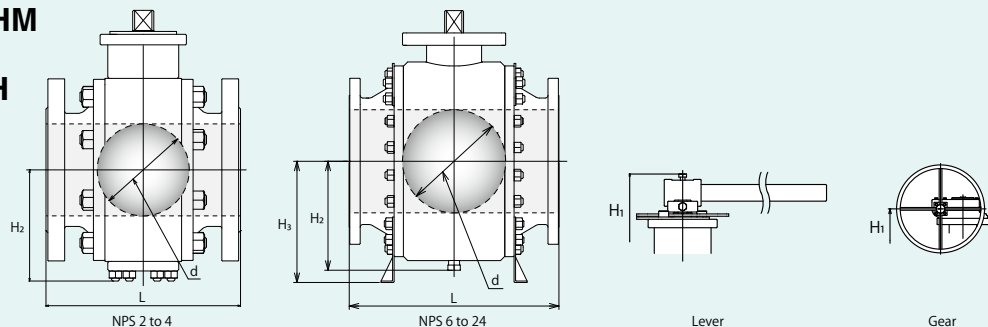
3-Piece body, Side entry design

T60M/(G-)150UF3TC6HM

(Full Bore)

T60M/(G-)150SF3TC6H

(Full Bore)



Dimensions of T60M/(G-)150UF3TC6HM, T60M/(G-)150SF3TC6H

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS DN	2 50	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600
Valve operator		Lever						Gear					
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19	23.19
	mm	49	74	100	150	201	252	303	334	385	436	487	589
L	in.	7.00	8.00	9.00	15.50	18.00	21.00	24.00	27.00	30.00	34.00	36.00	42.00
	mm	178	203	229	394	457	533	610	686	762	864	914	1067
H ₁	in.	7.44	7.28	9.21	11.14	13.74	15.67	18.23	19.02	22.91	24.09	28.5	31.77
	mm	189	185	234	283	349	398	463	483	582	612	724	807
H ₂	in.	3.94	4.84	5.94	7.52	9.33	11.18	-	-	-	-	-	-
	mm	100	123	151	191	237	284	-	-	-	-	-	-
H ₃	in.	-	-	-	-	-	-	16.89	17.52	19.61	20.75	24.37	27.44
	mm	-	-	-	-	-	-	429	445	498	527	619	697

Class 150 Metal Seated Stainless Steel/Carbon Steel Ball Valves (Trim 6H)

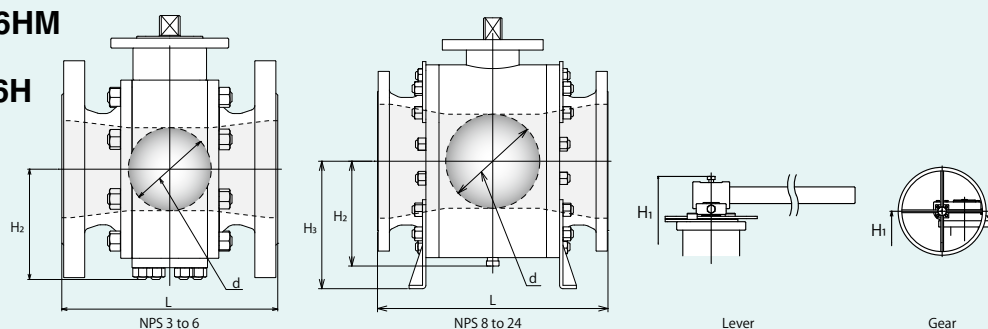
3-Piece body, Side entry design

T60M/(G-)150UF3TCR6HM

(Reduced Bore)

T60M/(G-)150SF3TCR6H

(Reduced Bore)



Dimensions of T60M/(G-)150UF3TCR6HM, T60M/(G-)150SF3TCR6H

Page 107 for Pressure-Temperature Ratings.

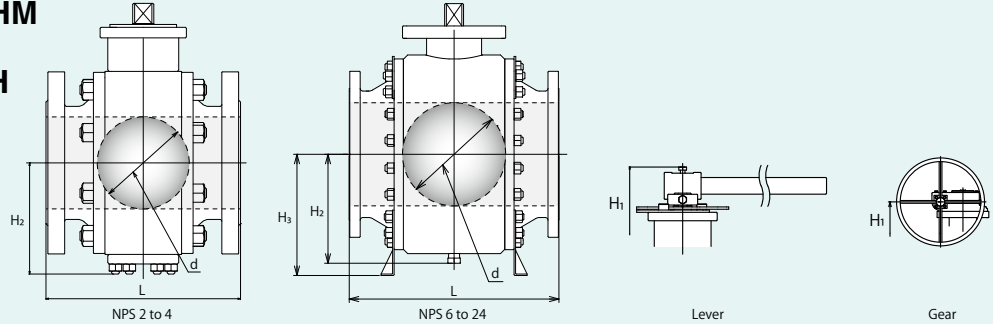
Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	24
	DN	80	100	150	200	250	300	350	400	450	500	600
Valve operator		Lever	Gear									
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19
	mm	49	74	100	150	201	252	303	334	385	436	487
L	in.	8.00	9.00	15.50	18.00	21.00	24.00	27.00	30.00	34.00	36.00	42.00
	mm	203	229	394	457	533	610	686	762	864	914	1067
H ₁	in.	7.24	7.28	9.21	11.14	13.74	15.67	18.23	19.02	22.91	24.09	28.5
	mm	184	185	234	283	349	398	463	483	582	612	724
H ₂	in.	3.94	4.84	5.94	7.52	9.33	11.18	-	-	-	-	-
	mm	100	123	151	191	237	284	-	-	-	-	-
H ₃	in.	-	-	-	-	-	-	16.89	17.52	19.61	20.75	24.37
	mm	-	-	-	-	-	-	429	445	498	527	619

Class 300 Metal Seated Stainless Steel/Carbon Steel Ball Valves (Trim 6H)

3-Piece body, Side entry design

T60M/(G)-300UF3TC6HM
(Full Bore)

T60M/(G)-300SF3TC6H
(Full Bore)



Dimensions of T60M/(G)-300UF3TC6HM, T60M/(G)-300SF3TC6H

Page 107 for Pressure-Temperature Ratings.

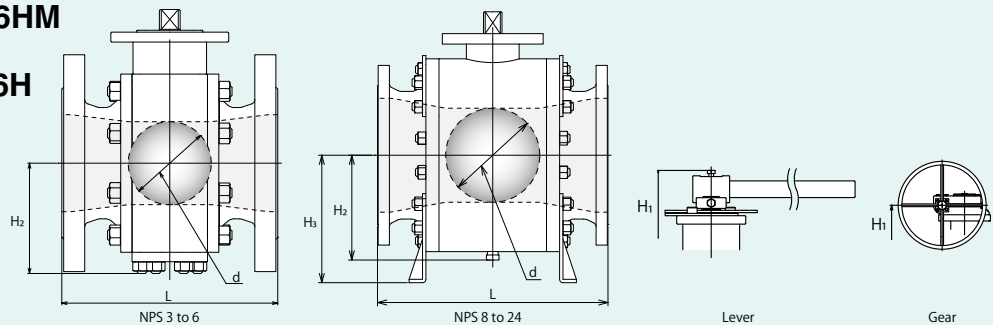
Nominal Size	NPS DN	2 50	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600
Valve operator		Lever											
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19	23.19
	mm	49	74	100	150	201	252	303	334	385	436	487	589
L	in.	8.50	11.13	12.00	15.88	19.75	22.38	25.50	30.00	33.00	36.00	39.00	45.00
	mm	216	283	305	403	502	568	648	762	838	914	991	1143
H ₁	in.	7.24	7.28	9.53	11.69	13.7	15.67	18.58	19.37	22.91	24.29	28.5	31.81
	mm	184	185	242	297	348	398	472	492	582	617	724	808
H ₂	in.	3.94	4.84	5.94	7.52	9.33	11.18	-	-	-	-	-	-
	mm	100	123	151	191	237	284	-	-	-	-	-	-
H ₃	in.	-	-	-	-	-	-	16.89	17.52	19.61	20.75	24.37	27.52
	mm	-	-	-	-	-	-	429	445	498	527	619	699

Class 300 Metal Seated Stainless Steel/Carbon Steel Ball Valves (Trim 6H)

3-Piece body, Side entry design

T60M/(G)-300UF3TCR6HM
(Reduced Bore)

T60M/(G)-300SF3TCR6H
(Reduced Bore)



Dimensions of T60M/(G)-300UF3TCR6HM, T60M/(G)-300SF3TCR6H

Page 107 for Pressure-Temperature Ratings.

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	24
	DN	80	100	150	200	250	300	350	400	450	500	600
Valve operator		Lever		Gear								
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19
	mm	49	74	100	150	201	252	303	334	385	436	487
L	in.	11.13	12.00	15.88	19.75	22.38	25.50	30.00	33.00	36.00	39.00	45.00
	mm	283	305	403	502	568	648	762	838	914	991	1143
H ₁	in.	7.24	7.28	9.53	11.69	13.7	15.67	18.58	19.37	22.91	24.29	28.5
	mm	184	185	242	297	348	398	472	492	582	617	724
H ₂	in.	3.94	4.84	5.94	7.52	9.33	11.18	-	-	-	-	-
	mm	100	123	151	191	237	284	-	-	-	-	-
H ₃	in.	-	-	-	-	-	-	16.89	17.52	19.61	20.75	24.37
	mm	-	-	-	-	-	-	429	445	498	527	619

Class 600 Metal Seated Stainless Steel/Carbon Steel Ball Valves (Trim 6H)

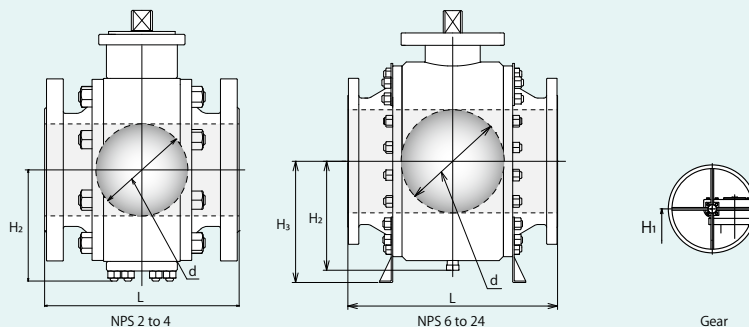
3-Piece body, Side entry design

T60M/(G)-600UF3TC6HM

(Full Bore)

T60M/(G)-600SF3TC6H

(Full Bore)



Page 107 for Pressure-Temperature Ratings.

Dimensions of T60M/(G)-600UF3TC6HM, T60M/(G)-600SF3TC6H

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		Gear											
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19	23.19
	mm	49	74	100	150	201	252	303	334	385	436	487	589
L	in.	11.50	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	292	356	432	559	660	787	838	889	991	1092	1194	1397
H ₁	in.	6.50	8.7	10.35	11.65	14.33	15.83	18.39	21.5	23.66	26.97	28.54	32.2
	mm	165	221	263	296	364	402	467	546	601	685	725	818
H ₂	in.	4.06	5.28	6.5	7.52	9.69	—	—	—	—	—	—	—
	mm	103	134	165	191	246	—	—	—	—	—	—	—
H ₃	in.	—	—	—	—	—	15.12	16.81	18.11	19.61	21.81	24.53	28.39
	mm	—	—	—	—	—	384	427	460	498	554	623	721

Class 600 Metal Seated Stainless Steel/Carbon Steel Ball Valves (Trim 6H)

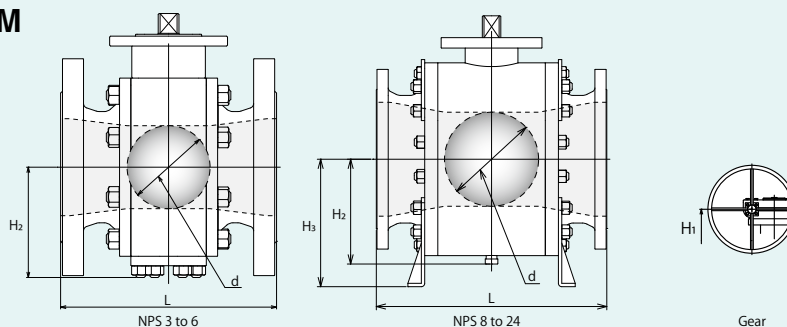
3-Piece body, Side entry design

T60M/(G)-600UF3TCR6HM

(Reduced Bore)

T60M/(G)-600SF3TCR6H

(Reduced Bore)



Page 107 for Pressure-Temperature Ratings.

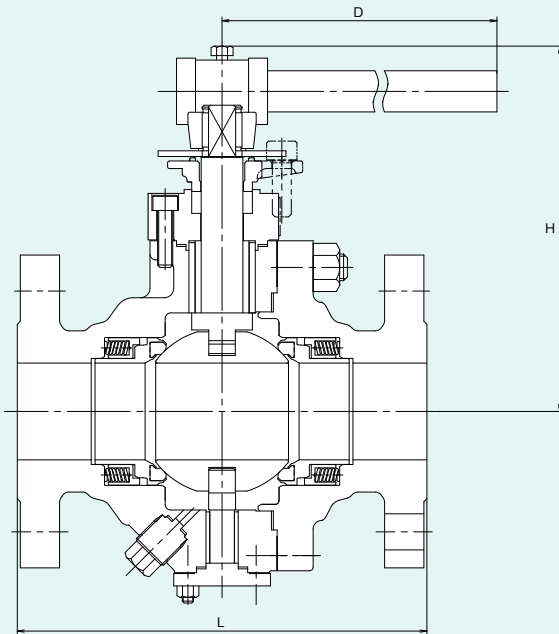
Dimensions of T60M/(G)-600UF3TCR6HM, T60M/(G)-600SF3TCR6H

Nominal Size	NPS	3	4	6	8	10	12	14	16	18	20	24
	DN	80	100	150	200	250	300	350	400	450	500	600
Valve operator		Gear										
Ball bore	in.	1.94	2.94	3.94	5.94	7.94	9.94	11.94	13.19	15.19	17.19	19.19
	mm	49	74	100	150	201	252	303	334	385	436	487
L	in.	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	356	432	559	660	787	838	889	991	1092	1194	1397
H ₁	in.	6.50	8.7	10.35	11.65	14.33	15.83	18.39	21.5	23.66	26.97	28.54
	mm	165	221	263	296	364	402	467	546	601	685	725
H ₂	in.	4.06	5.28	6.50	7.52	9.69	-	-	-	-	-	-
	mm	103	134	165	191	246	-	-	-	-	-	-
H ₃	in.	-	-	-	-	-	15.12	16.81	18.11	19.61	21.81	24.53
	mm	-	-	-	-	-	384	427	460	498	554	623

FILLTITE® Seated Trunnion Ball Design Valves (Trim 1H)

Split body, Side entry design

150/10UTC1H(M) 150/10SCTC1H



Dimensions of 150UTC1H(M), 150SCTC1H

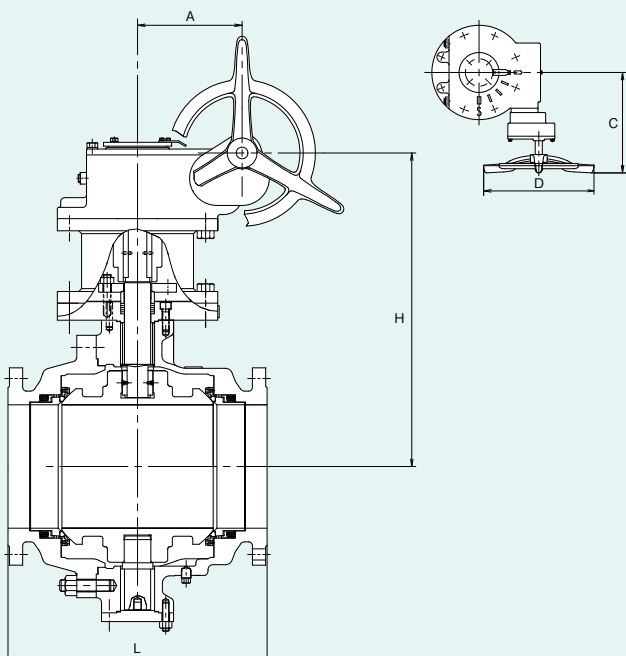
Unit: mm

Nominal Size	NPS	2	3	4	6	8
	DN	50	80	100	150	260
L		178	203	229	394	457
H		165	193	231	329	393
D		230	400	460	1000	1500

NOTE (1) Allowable seat leakage (ml/min.) = 21.75 × Port dia (inch) × Pressure (MPa)
(2) 10K: Please contact KITZ Corporation for details.

Page 109 for Pressure-Temperature Ratings.

G-150/10UTC1H(M) G-150/10SCTC1H



Dimensions of G-150UTC1H(M), G-150SCTC1H

Unit: mm

Nominal Size	NPS	10	12	14	16	18	20
	DN	250	300	350	400	450	500
L		533	610	686	762	864	914
H		647	722	762	883	928	953
D		500	500	500	500	500	500
A		213	213	213	277	277	277
C		377	377	377	457	457	457

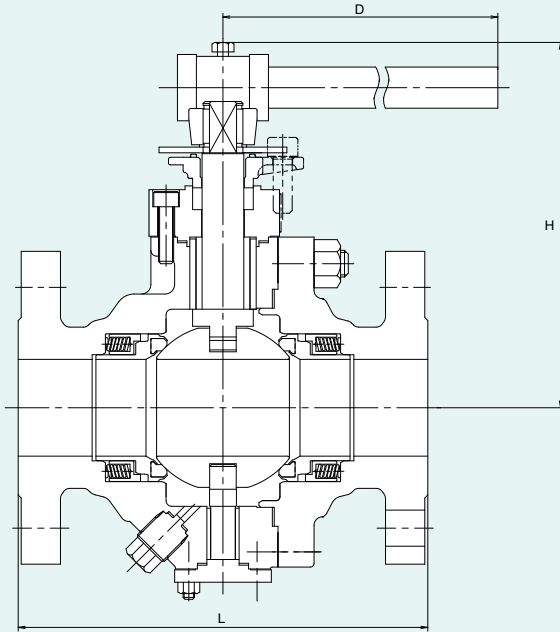
NOTE (1) Allowable seat leakage (ml/min.) = 21.75 × Port dia (inch) × Pressure (MPa)
(2) 10K: Please contact KITZ Corporation for details.

Page 109 for Pressure-Temperature Ratings.

FILLTITE® Seated Trunnion Ball Design Valves (Trim 1H)

Split body, Side entry design

300/20UTC1H(M) 300/20SCTC1H



Dimensions of 300UTC1H(M), 300SCTC1H

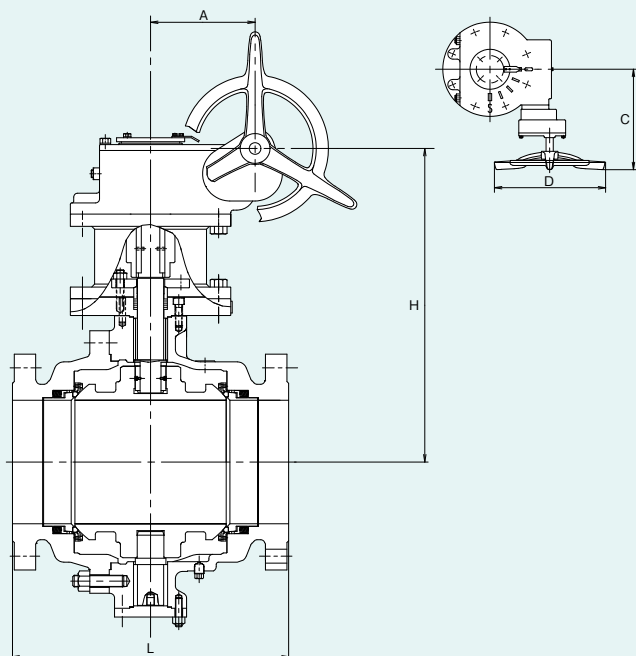
Unit: mm

Nominal Size	NPS	2	3
	DN	50	80
L		216	283
H		191	245
D		600	1000

NOTE (1) Allowable seat leakage (ml/min.) = 21.75 × Port dia (inch) × Pressure (MPa)
(2) 20K: Please contact KITZ Corporation for details.

Page 109 for Pressure-Temperature Ratings.

G-300/20UTC1H(M) G-300/20SCTC1H



Dimensions of G-300UTC1H(M), G-300SCTC1H

Unit: mm

Nominal Size	NPS	4	6	8	10	12
	DN	100	150	200	250	300
L		305	403	502	568	648
H		334	440	484	673	798
D		500	500	500	500	500
A		93.5	93.5	134	213	277
C		363	363	377	377	457

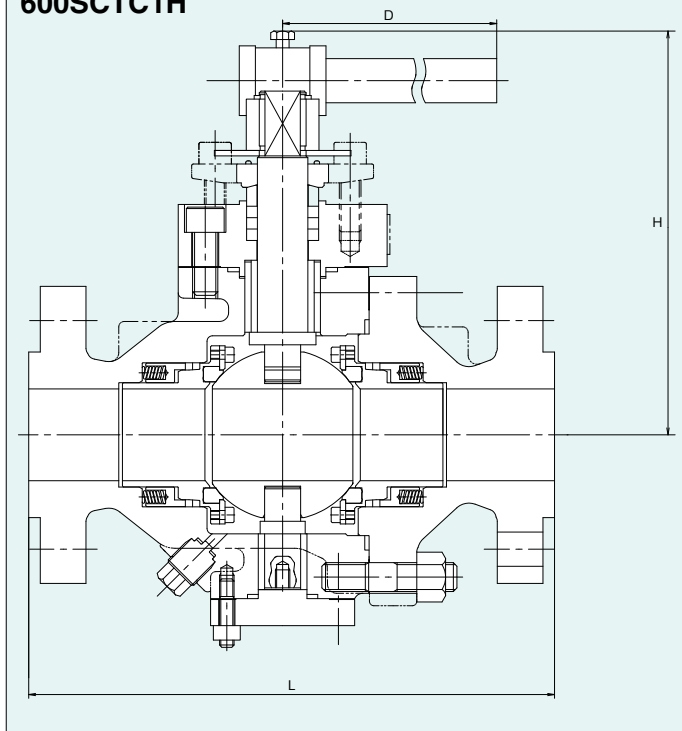
NOTE (1) Allowable seat leakage (ml/min.) = 21.75 × Port dia (inch) × Pressure (MPa)
(2) 20K: Please contact KITZ Corporation for details.

Page 109 for Pressure-Temperature Ratings.

FILLTITE® Seated Trunnion Ball Design Valves (Trim 1H)

Split body, Side entry design

600UTC1H(M) 600SCTC1H



Dimensions of 600UTC1H(M), 600SCTC1H

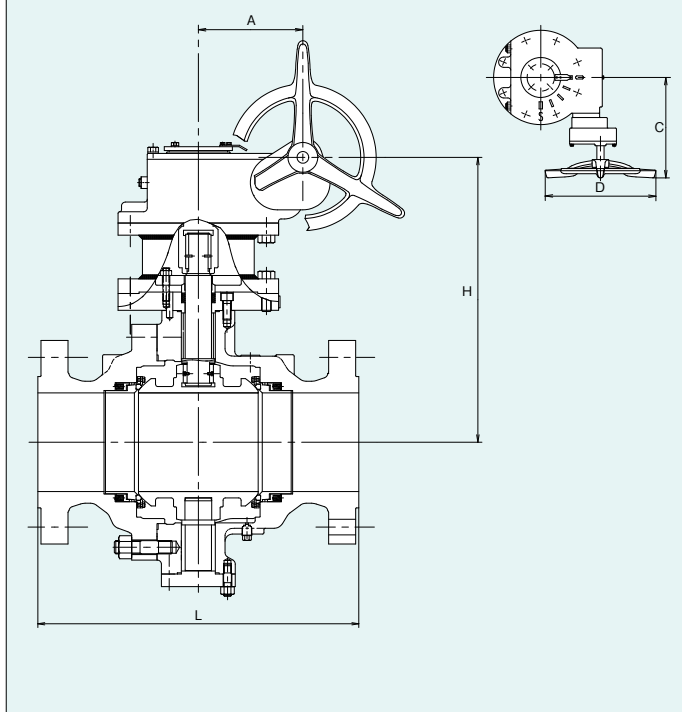
Unit: mm

Nominal Size	NPS	2	3
	DN	50	80
L		292	356
H		230	265
D		1000	1500

NOTE (1) Allowable seat leakage (ml/min.) = 21.75 × Port dia (inch) × Pressure (MPa)

Please contact KITZ Corporation for Pressure-Temperature Rating.

G-600UTC1H(M) G-600SCTC1H



Dimensions of G-600UTC1H(M), G-600SCTC1H

Unit: mm

Nominal Size	NPS	3	4	6	8	10	12
	DN	80	100	150	200	250	300
L		356	432	559	660	787	838
H		307	304	454	647	783	818
D		500	500	500	500	500	500
A		93.5	93.5	134	213	277	277
C		363	363	377	377	457	457

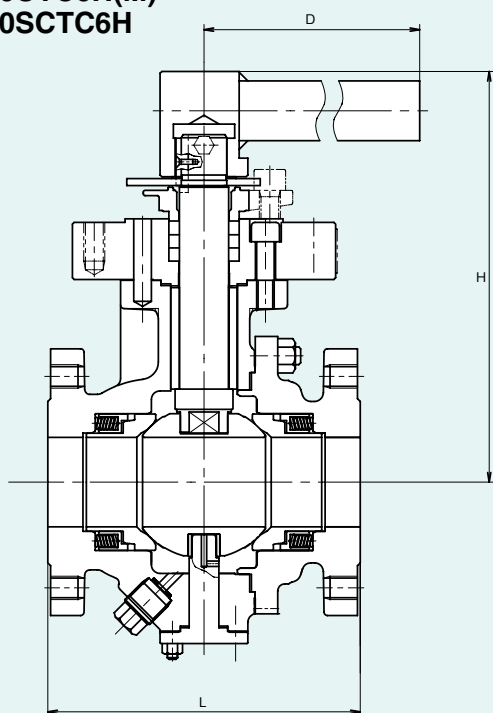
NOTE (1) Allowable seat leakage (ml/min.) = 21.75 × Port dia (inch) × Pressure (MPa)

Please contact KITZ Corporation for Pressure-Temperature Rating.

Metal Seated Trunnion Ball Design Valve (Trim 6H)

Split body, Side entry design

150/10UTC6H(M)
150/10SCTC6H



Dimensions of 150/10UTC6H(M), 150/10SCTC6H

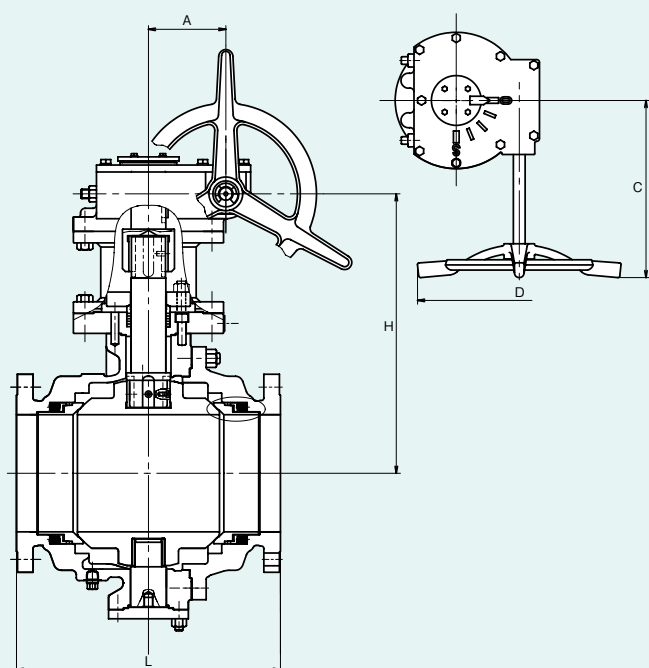
Unit: mm

Nominal Size	NPS	2	3
	DN	50	80
L		178	203
H		234	285
D		600	1000

- Reduced bore is also available. : 150/10UTC6H(M)
- Reduced bore is also available. : 150/10SCTC6H

Please contact KITZ Corporation for Pressure-Temperature Rating.

G-150/10UTC6H(M)
G-150/10SCTC6H



Dimensions of G-150/10UTC6H(M), G-150/10SCTC6H

Unit: mm

Nominal Size	NPS	4	6	8	10	12
	DN	100	150	200	250	300
L		229	394	457	533	610
H		334	440	484	673	798
D		500	500	500	500	500
A		93.5	93.5	134	213	277
C		363	363	377	377	457

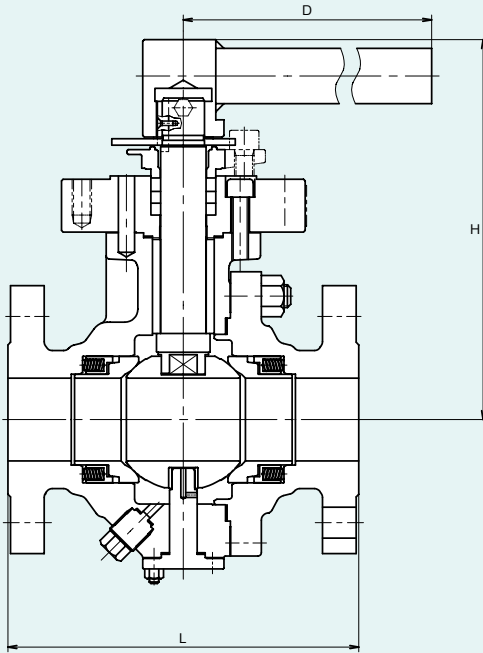
- Reduced bore is also available. : G-150/10UTC6H(M)
- Reduced bore is also available. : G-150/10SCTC6H

Please contact KITZ Corporation for Pressure-Temperature Rating.

Metal Seated Trunnion Ball Design Valve (Trim 6H)

Split body, Side entry design

300/20UTC6H(M)
300/20SCTC6H



Dimensions of 300/20UTC6H(M), 300/20SCTC6H

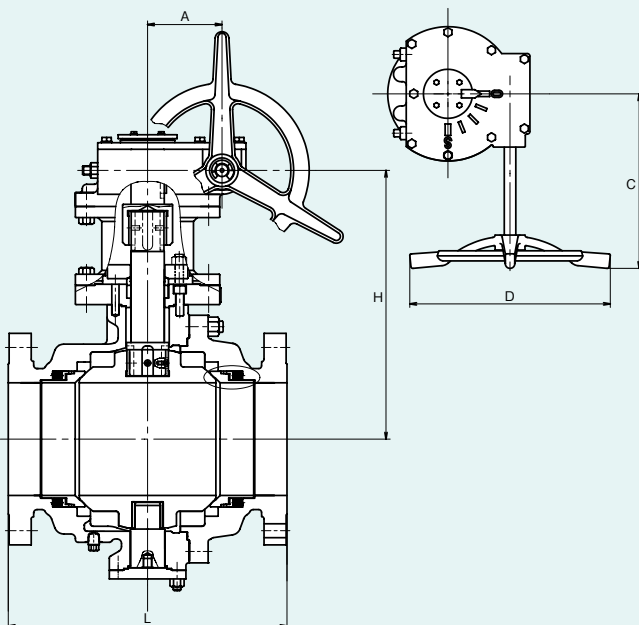
Unit: mm

Nominal Size	NPS	2	3
	DN	50	80
L		216	283
H		234	285
D		600	1000

- Reduced bore is also available. : 300/20UTC6H(M)
- Reduced bore is also available. : 300/20SCTC6H

Please contact KITZ Corporation for Pressure-Temperature Rating.

G-300/20UTC6H(M)
G-300/20SCTC6H



Dimensions of G-300/20UTC6H(M), G-300/20SCTC6H

Unit: mm

Nominal Size	NPS	4	6	8	10	12
	DN	100	150	200	250	300
L		305	403	502	568	648
H		334	440	484	673	798
D		500	500	500	500	500
A		93.5	93.5	134	213	277
C		363	363	377	377	457

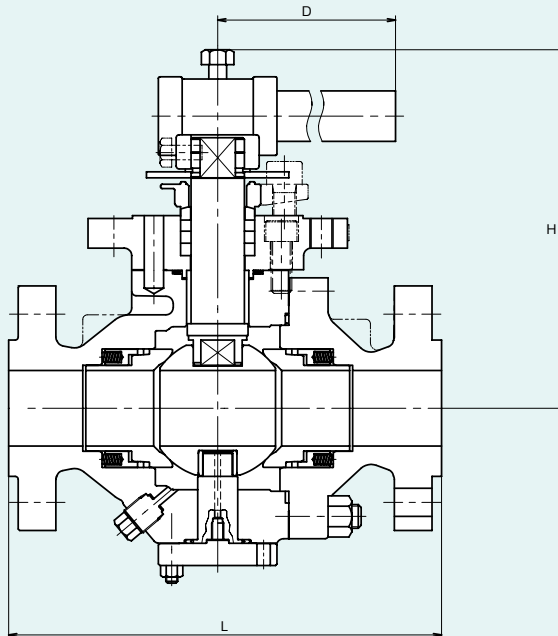
- Reduced bore is also available. : G-300/20UTC6H(M)
- Reduced bore is also available. : G-300/20SCTC6H

Please contact KITZ Corporation for Pressure-Temperature Rating.

Metal Seated Trunnion Ball Design Valve (Trim 6H)

Split body, Side entry design

600UTC6H(M) 600SCTC6H



Dimensions of 600UTC6H(M), 600SCTC6H

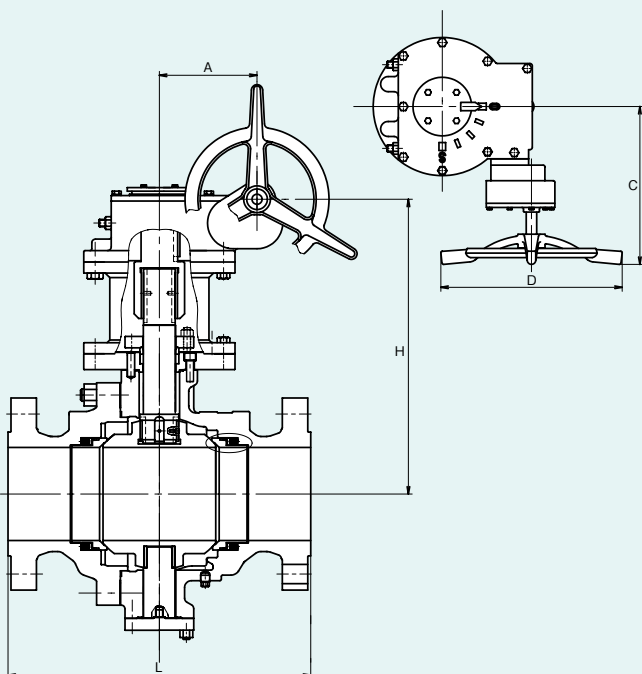
Unit: mm

Nominal Size	NPS	1	1½	2
	DN	25	40	50
L		216	241	292
H		183	221	242
D		600	1000	1000

- Reduced bore is also available. : 600UTC6H(M)
- Reduced bore is also available. : 600SCTC6H

Please contact KITZ Corporation for Pressure-Temperature Rating.

G-600UTC6H(M) G-600SCTC6H



Dimensions of G-600UTC6H(M), G-600SCTC6H

Unit: mm

Nominal Size	NPS	3	4	6	8	10	12
	DN	80	100	150	200	250	300
L		356	432	559	660	787	838
H		307	340	454	647	783	818
D		500	500	500	500	500	500
A		93.5	93.5	134	213	277	277
C		363	363	377	377	457	457

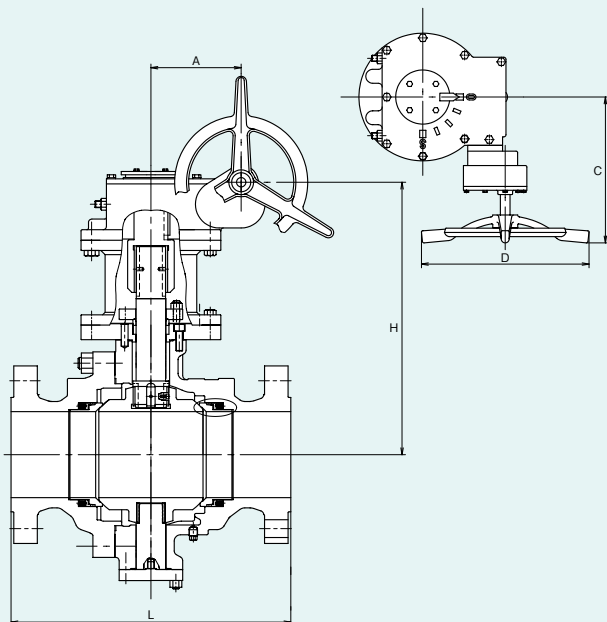
- Reduced bore is also available. : G-600UTC6H(M)
- Reduced bore is also available. : G-600SCTC6H

Please contact KITZ Corporation for Pressure-Temperature Rating.

Metal Seated Trunnion Ball Design Valve (Trim 6H)

Split body, Side entry design

G-900UTC6H(M) G-900SCTC6H



Dimensions of G-900UTC6H(M), G-900SCTC6H

Unit: mm

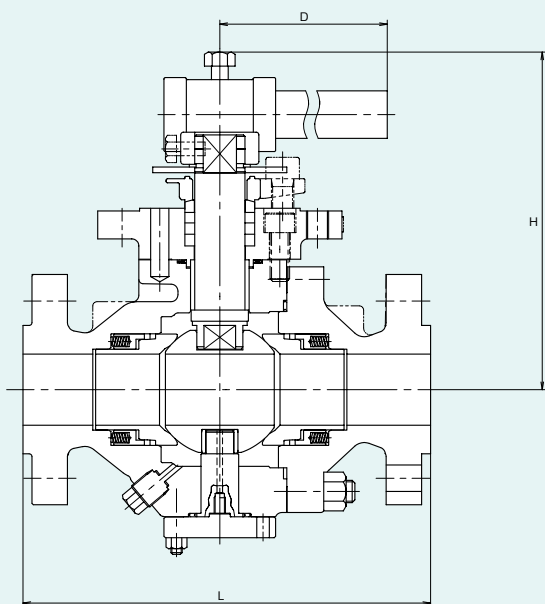
Nominal Size	NPS	2	3	4	6	8
	DN	50	80	100	150	200
L		368	381	457	610	737
H		343	342	406	612	738
D		360	500	500	500	500
A		88.5	93.5	134	213	277
C		210	363	377	377	457

- Reduced bore is also available. : G-900UTC6H(M)
- Reduced bore is also available. : G-900SCTC6H

Please contact KITZ Corporation for Pressure-Temperature Rating.

Metal Seated Trunnion Ball Design Valve (Trim 6H)

1500UTC6H(M)
1500SCTC6H



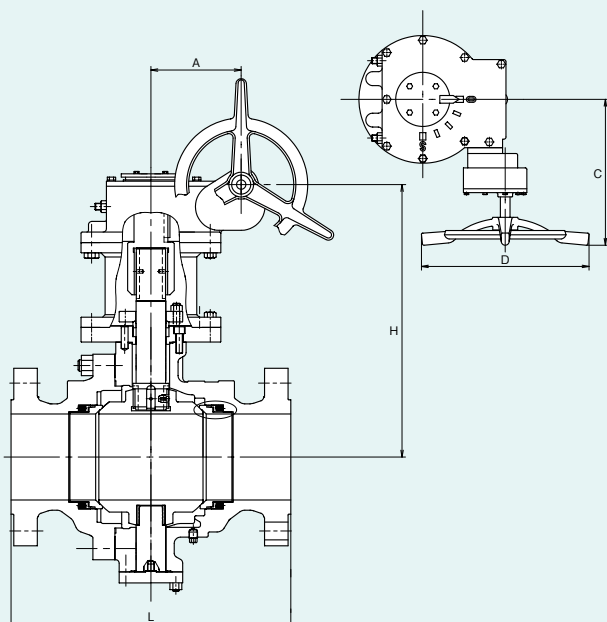
Dimensions of 1500UTC6H(M), 1500SCTC6H

Unit: mm

Nominal Size	NPS	1
	DN	25
L		254
H		225
D		1000

Please contact KITZ Corporation for Pressure-Temperature Rating.

G-1500UTC6H(M)
G-1500SCTC6H



Dimensions of G-1500UTC6H(M), G-1500SCTC6H

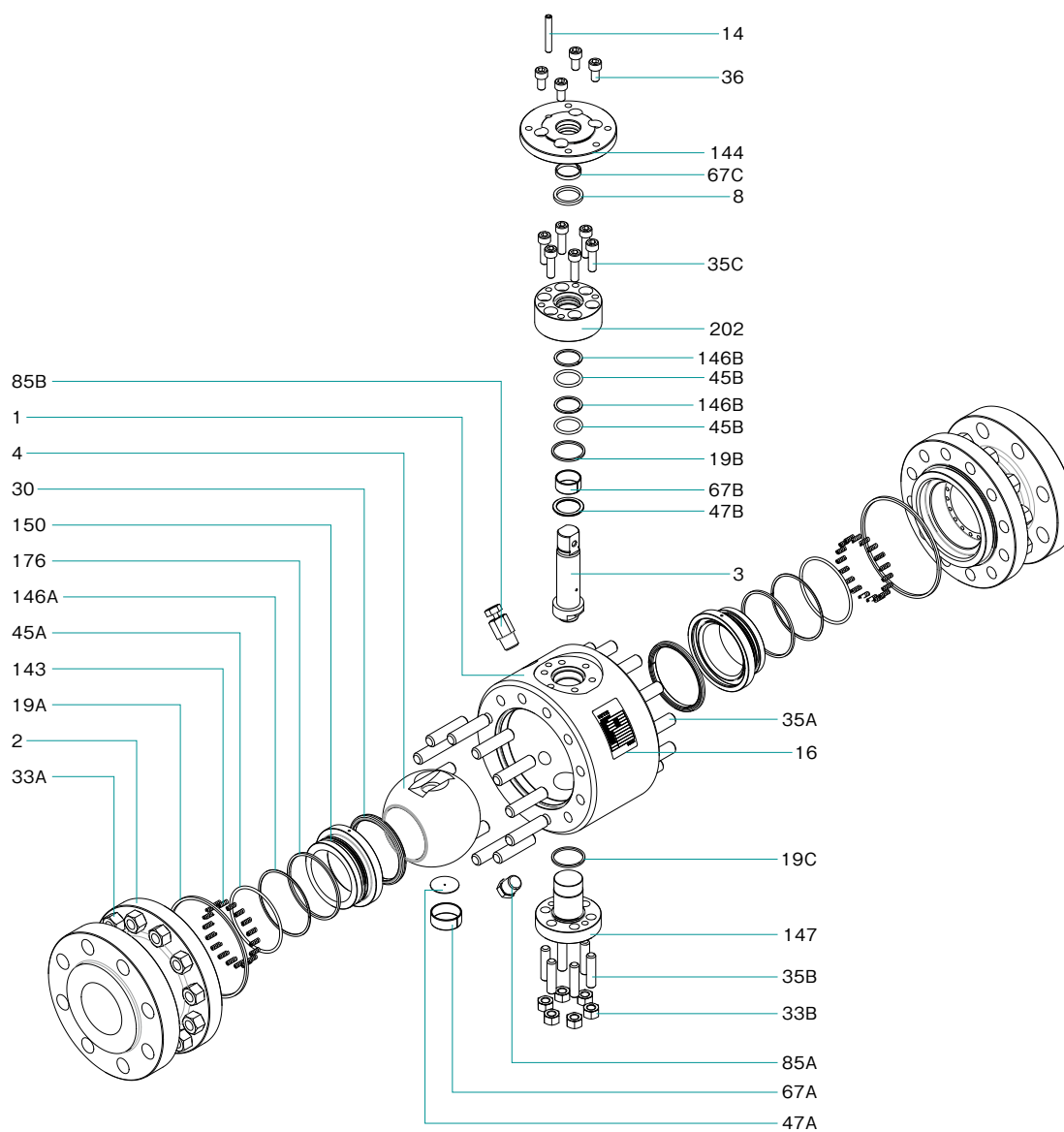
Unit: mm

Nominal Size	NPS	1½
	DN	40
L		305
H		292
D		310
A		65.5
C		165

Please contact KITZ Corporation for Pressure-Temperature Rating.

Construction

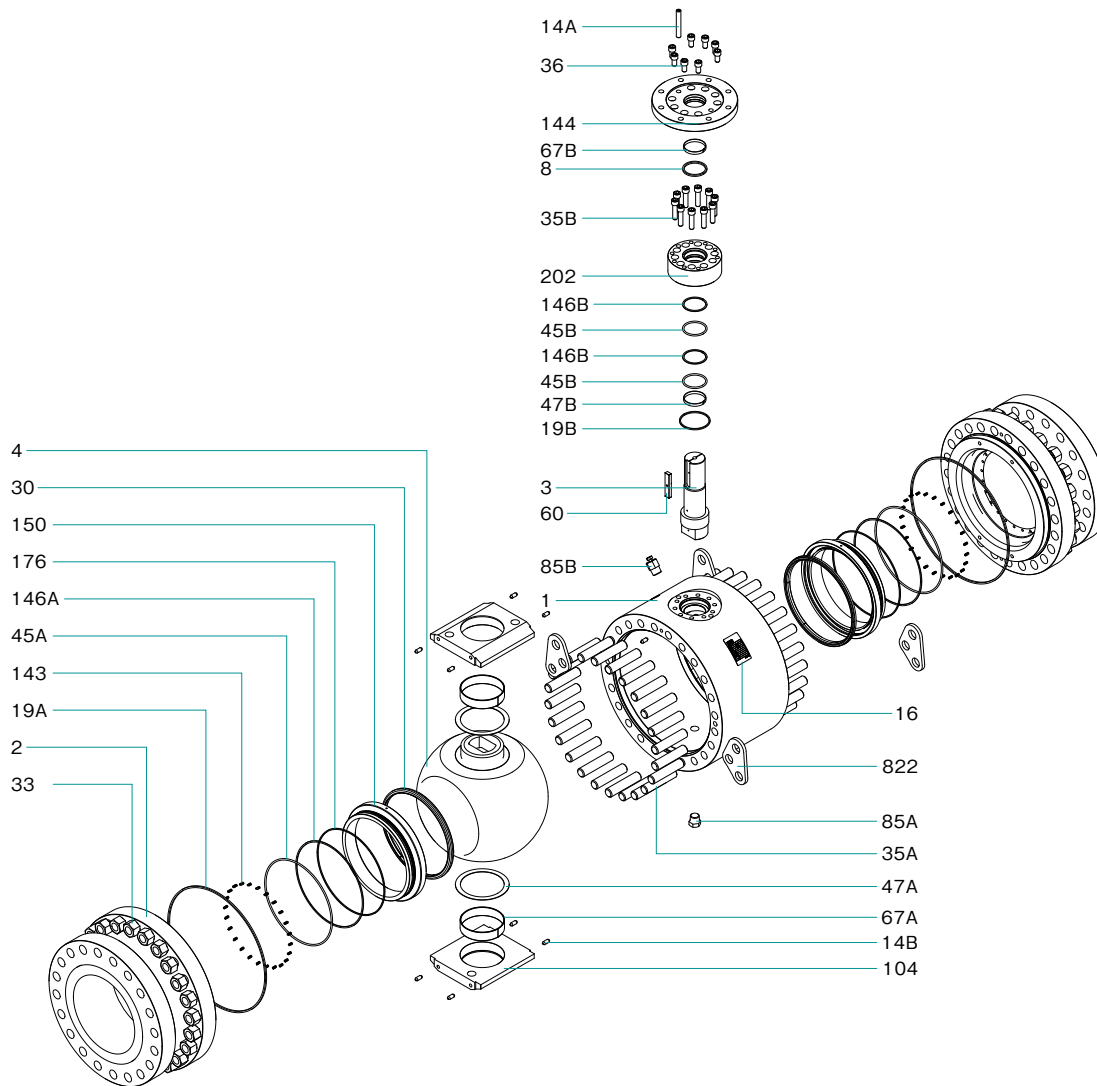
■ Class 150/300/600 Soft Seated 3-Piece Body Trunnion Ball Valves up to NPS 4



No	Name of Parts
1	Body
2	Cap
3	Stem
4	Ball
8	Gland packing
14	Set pin
16	Name plate
19A	Gasket
19B	Gasket
19C	Gasket
30	Ball seat
33A	Cap nut
33B	Cover nut
35A	Cap bolt
35B	Cover bolt
35C	Bonnet bolt
36	Gland bolt
45A	O-ring
45B	O-ring
47A	Thrust washer
47B	Thrust washer
67A	Curl bearing
67B	Stem bearing
67C	Stem bearing
85A	Plug
85B	Vent valve
143	Seat spring
144	Gland plate
146A	Back-up ring
146B	Back-up ring
147	End plate
150	Seat retainer
176	Retainer packing
202	Bonnet

Construction

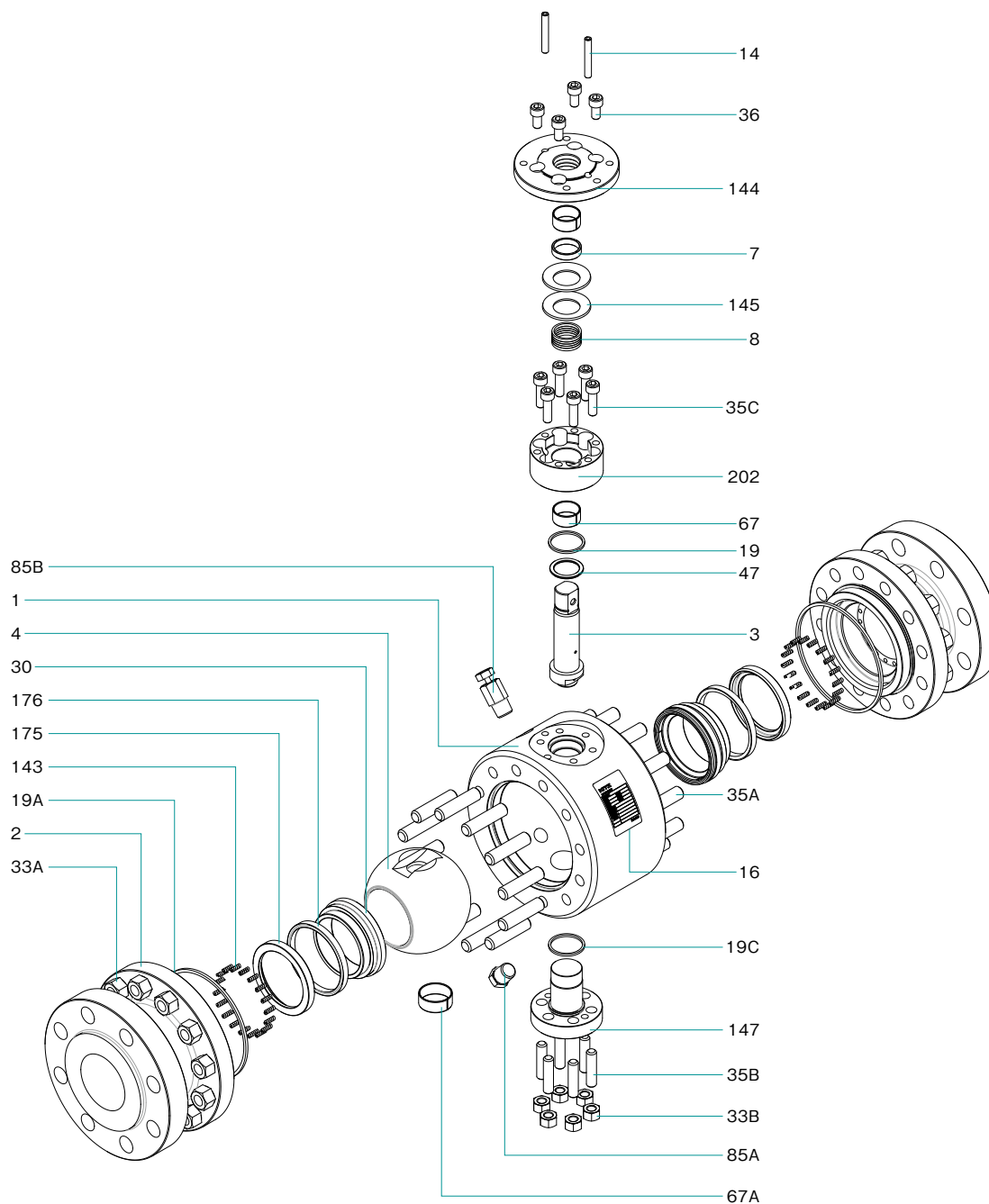
■ Class 150/300/600 Soft Seated 3-Piece Body Trunnion Ball Valves NPS 6 and larger



No	Name of Parts
1	Body
2	Cap
3	Stem
4	Ball
8	Gland packing
14A	Set pin
14B	Set pin
16	Name plate
19A	Gasket
19B	Gasket
30	Ball seat
33	Cap nut
35A	Cap bolt
35B	Bonnet bolt
36	Gland bolt
45A	O-ring
45B	O-ring
47A	Thrust washer
47B	Thrust washer
60	Key
67A	Curl bearing
67B	Stem bearing
85A	Plug
85B	Vent valve
104	Trunnion plate
143	Seat spring
144	Gland plate
146A	Back-up ring
146B	Back-up ring
150	Seat retainer
176	Retainer packing
202	Bonnet
822	Lifting lug

Construction

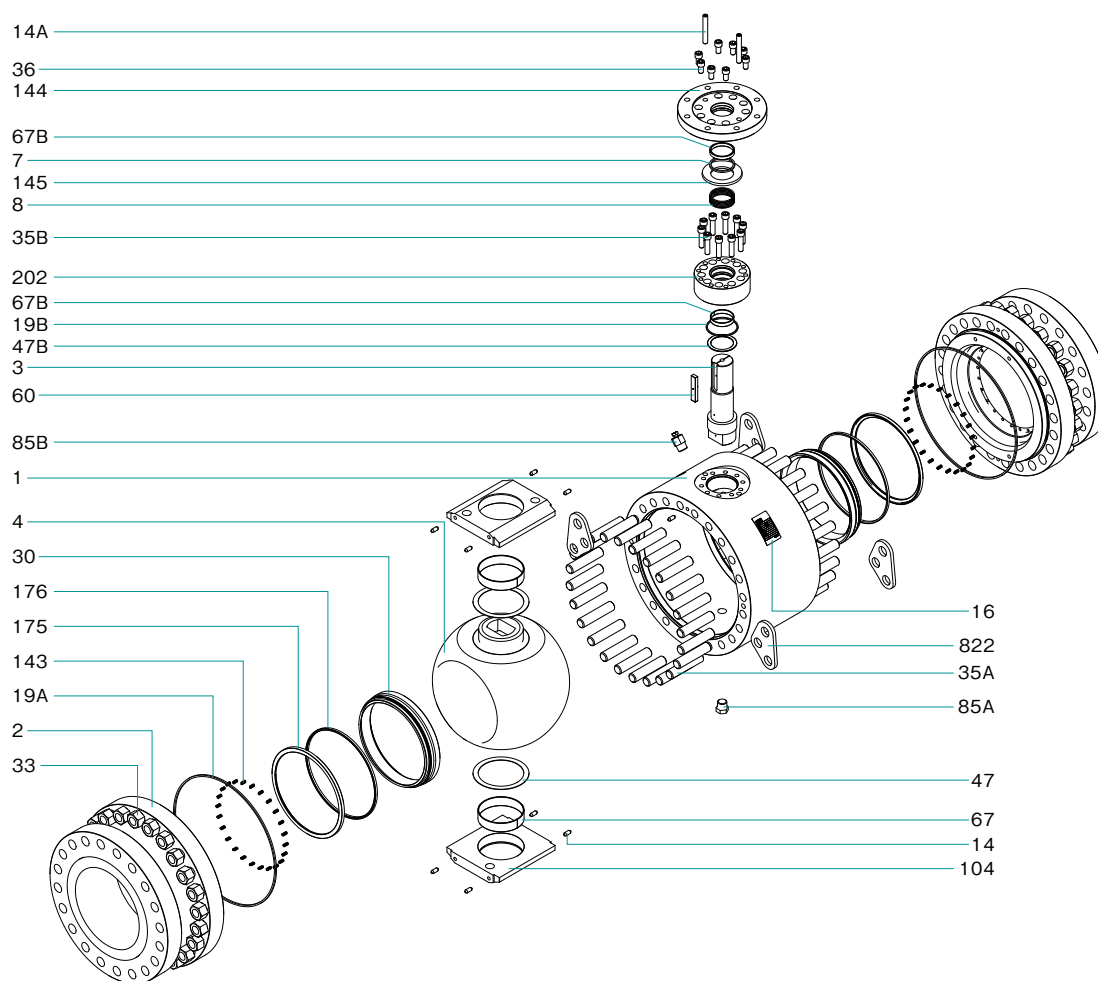
■ Class 150/300/600 Metal Seated 3-Piece Body Trunnion Ball Valves up to NPS 4



No	Name of Parts
1	Body
2	Cap
3	Stem
4	Ball
7	Gland
8	Gland packing
14	Set pin
16	Name plate
19A	Gasket
19B	Gasket
19C	Gasket
30	Ball seat
33A	Cap nut
33B	Cover nut
35A	Cap bolt
35B	Cover bolt
35C	Bonnet bolt
36	Gland bolt
47	Thrust washer
67A	Cur bearing
67B	Stem bearing
85A	Plug
85B	Vent valve
143	Seat spring
144	Gland plate
145	Coned disc spring
147	End plate
175	Retainer gland
176	Seat packing
202	Bonnet

Construction

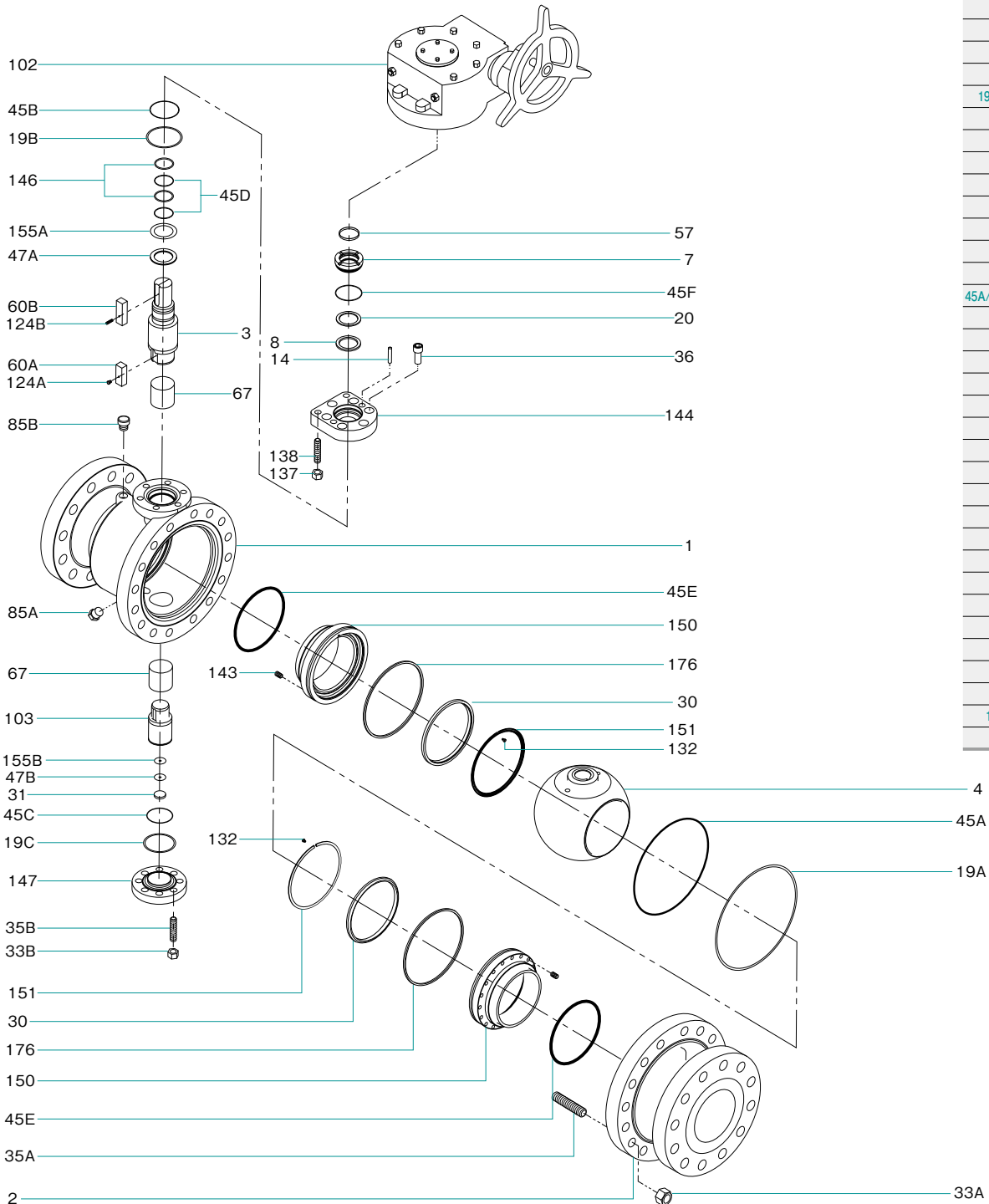
■ Class 150/300/600 Metal Seated 3-Piece Body Trunnion Ball Valves NPS 6 and larger



No	Name of Parts
1	Body
2	Cap
3	Stem
4	Ball
7	Gland
8	Gland packing
14A	Set pin
14B	Set pin
16	Name plate
19A	Gasket
19B	Gasket
30	Ball seat
33	Cap nut
35A	Cap bolt
35B	Bonnet bolt
36	Gland bolt
47A	Thrust washer
47B	Thrust washer
60	Key
67A	Curl bearing
67B	Stem bearing
85A	Plug
85B	Vent valve
104	Trunnion plate
143	Seat spring
144	Gland plate
145	Coned disc spring
175	Retainer gland
176	Retainer packing
202	Bonnet
822	Lifting lug

Construction

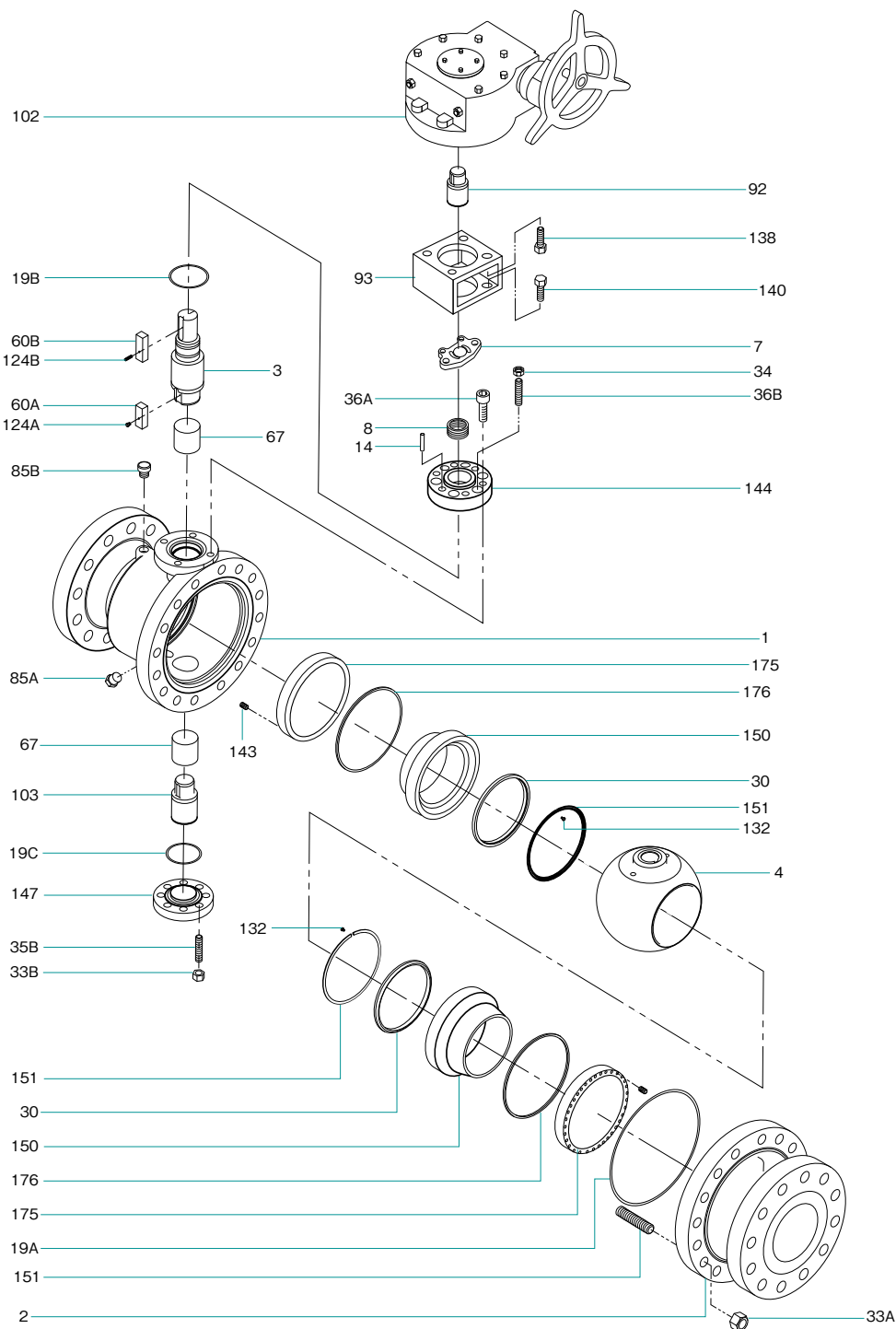
■ Class 150/300/600 Soft Seated Split Body Trunnion Ball Valves



No	Name of Parts
1	Body
2	Body cap
3	Stem
4	Ball
7	Gland
8	Gland packing
14	Set pin
19A/B/C	Gasket
20	Pacing washer
30	Ball seat
31	Stem washer
33A	Cap nut
33B	Cover nut
35A	Cap bolt
35B	Cover bolt
36	Gland bolt
45A/B/C/F	O-ring
45D/E	O-ring
47A/B	Thrust washer
57	Gland bush
60A/B	Key
67	Stem bearing
85A/B	Plug
102	Gear unit
103	Bottom stem
124A	Set bolt
124B	Spring & pin
132	Set bolt
137	Nut
143	Seat spring
144	Gland plate
146	Back-up ring
147	End plate
150	Seat retainer
151	Retainer ring
155A/B	Shim
176	Retainer packing

Construction

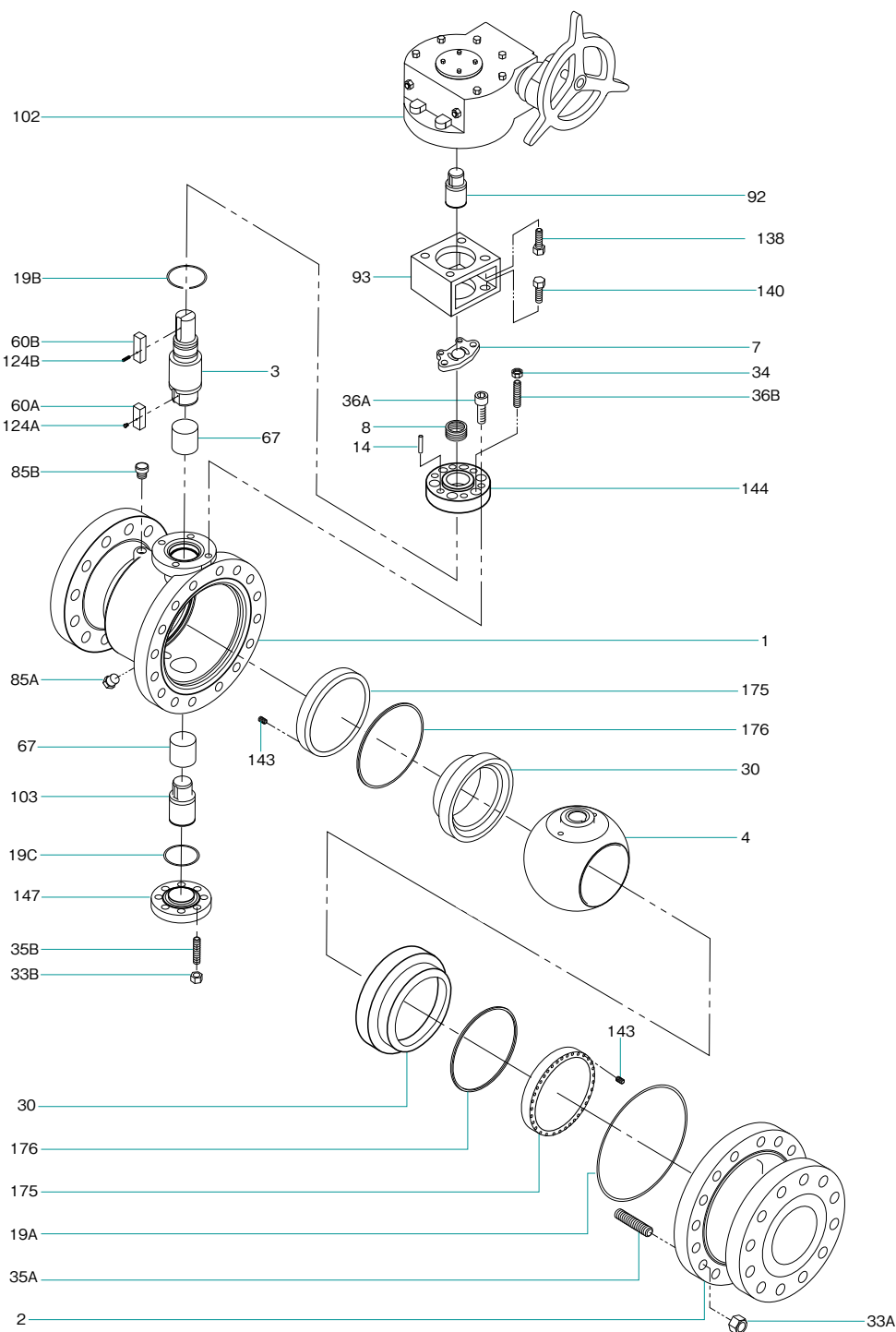
■ Class 150/300/600 FILLTITE® Seated Split Body Trunnion Ball Valve (Trim 1H)



No	Name of Parts
1	Body
2	Body cap
3	Stem
4	Ball
7	Gland
8	Gland packing
14	Set pin
19A/B/C	Gasket
30	Ball seat
33A	Cap nut
33B	Cover nut
34	Gland nut
35A	Cap bolt
35B	Cover bolt
36	Gland bolt
46	Flange
60A/B	Key
67	Stem bearing
85A/B	Plug
102	Gear unit
103	Bottom stem
124A	Set bolt
124B	Spring & pin
132	Set bolt
143	Seat spring
144	Gland plate
147	End plate
150	Seat retainer
151	Outer ring
175	Retainer grand
176	Retainer packing
146	Back-up ring
147	End plate
150	Seat retainer
151	Retainer ring
155A/B	Shim
176	Retainer packing

Construction

■ Class 150/300/600 Metal Seated Split Body Trunnion Ball Valve (Trim 6H)



No	Name of Parts
1	Body
2	Body cap
3	Stem
4	Ball
7	Gland
8	Gland packing
14	Set pin
19A/B/C	Gasket
30	Ball seat
33A	Cap nut
33B	Cover nut
34	Gland nut
35A	Cap bolt
35B	Cover bolt
36	Gland bolt
46	Flange
60A/B	Key
67	Stem bearing
85A/B	Plug
102	Gear unit
103	Bottom stem
124A	Set bolt
124B	Spring & pin
137	Nut
138	Bolt
143	Seat spring
144	Gland plate
147	End plate
175	Retainer gland
176	Retainer packing
146	Back-up ring
150	Seat retainer
151	Retainer ring
155A/B	Shim
176	Retainer packing

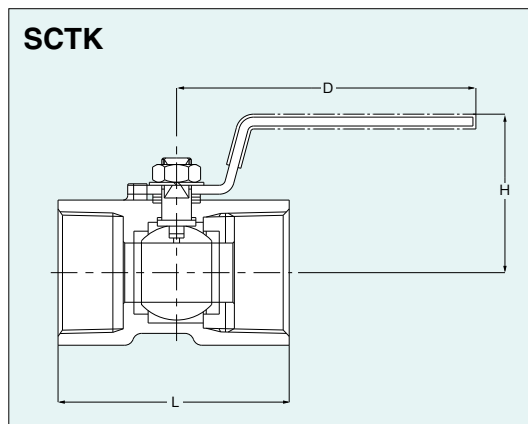
Floating Ball Valves (Threaded or Solder Joint)

Type 600 Carbon Steel Ball Valves

Reduced bore, Uni-body design, Threaded ends

Features

- Blowout-proof stem
- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. SCTK)
 - NPT threads to ASME B1.20.1 (Fig. AKSCTK)



Dimensions of SCTK

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
Ball bore		4.5	6.8	9.2	12.5	16	20	24.5	32
L		39	44	56.5	59	71	78	83	100
H		31	36	41	44	48	54	65	72
D		60	70	85	85	100	100	125	125

Standard Materials

Parts	Materials
Body	WCB
Ball	316 or 304 *1
Stem	316 or 304 *2
Ball seat	Glass filled PTFE
Gland packing	Glass filled PTFE
Handle	Plastic covered S.S.

* 1 304 for NPS 1/2 and larger
 * 2 304 for NPS 3/4 and larger

End to end dimensions: KITZ standard

Valve operator

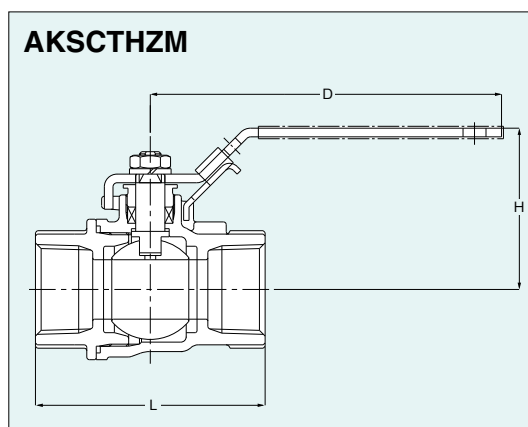
Lever operation
 T-type handle as option (NPS 3/4 and larger)

Type 1500/2000 Carbon Steel Ball Valves

Reduced bore, Split body design, Threaded ends

Features

- Blowout-proof stem
- API 607 fire-safe type as option
- NPT threaded ends to ASME B1.20.1



Dimensions of AKSCTH2M

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
Ball bore		9.5	9.5	10	15	20	25	32	40
L		53	53	62	72	85	94	107	120
H		50.5	50.5	58.5	63	63.5	67.5	83	91
D		100	100	115	115	135	135	155	190

Standard Materials

Parts	Materials
Body	WCB
Body cap	WCB
Ball	316
Stem	316
Seat	HYPATITE® PTFE
Gland packing	PTFE*
Gasket	PTFE*
Handle	Plastic covered C.S.

* API 607 fire-safe flexible graphite is optionally available.

End to end dimensions: KITZ standard

Valve operator

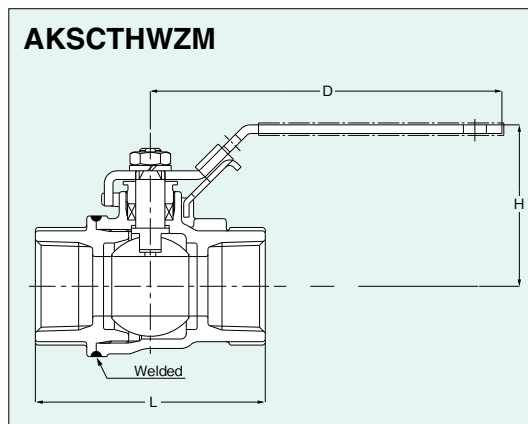
Lever operation with latch lock
 Oval handle as option

Type 1500/2000 Carbon Steel Ball Valves

Reduced bore, Welded body design, Threaded ends

Features

- Blowout-proof stem
- API 607 fire-safe type as option
- NPT threaded ends to ASME B1.20.1



Dimensions of AKSCTHWZM

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
Ball bore		9.5	9.5	10	15	20	25	32	40
L		53	53	62	72	85	94	107	120
H		50.5	50.5	58.5	63	63.5	67.5	83	91
D		100	100	115	115	135	135	155	190

Standard Materials

Parts	Materials
Body	WCB
Body cap	WCB
Ball	316
Stem	316
Seat	HYPATITE® PTFE
Gland packing	PTFE*
Handle	Plastic covered C.S.

* API 607 fire-safe flexible graphite is optionally available.

End to end dimensions: KITZ standard

Valve operator

Lever operation with latch lock
Oval handle as option

Class 800 and Type 3000 Carbon Steel Ball Valves

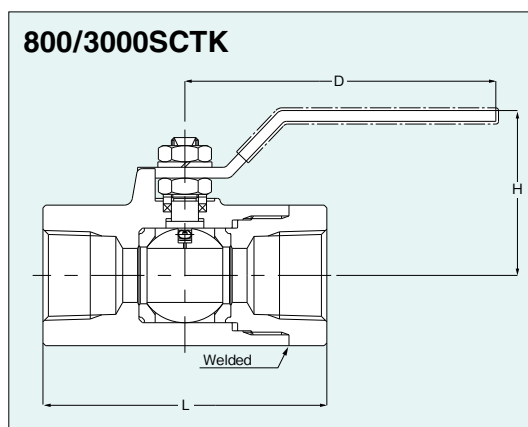
Reduced bore, Welded body design, Threaded ends

Features

- Antistatic device
- Blowout-proof stem
- Fire test certification (800SCTK only)★
- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. 800/3000SCTK)
 - NPT threads to ASME B1.20.1 (Fig. AK800/3000SCTK)

Note

1. Class 800 ball valves are designed to BS 5351.
2. Type 3000 ball valves are designed to KITZ standard for servicing water, oil and gaseous fluid under the maximum working pressure of 3000 psi.



Dimensions of 800SCTK, 3000SCTK

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
Ball bore		10	10	10	15	20	25	32	38
L		88	88	88	90	105	117	130	150
H		44	44	44	54	57	64	69	80
D	Class 800	100	100	100	115	115	135	135	150
	Type 3000	100	100	100	115	115	160	160	230

Standard Materials

Parts	Materials
Body	A105
Body cap	A105
Stem	316 (Class 800) 329 (Type 3000)
Ball	316
Gland packing	PTFE
Ball seat	PTFE (Class 800) PCTFE* (Type 3000)

* Polychloro-Trifluoro-Ethylene.

Valve operator

Lever operation

Option

★Flexible graphite packing.

Class 800 and Type 3000 Carbon Steel Ball Valves

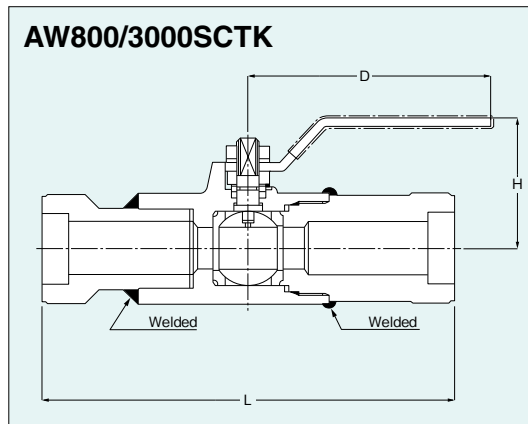
Reduced bore, Split body design, Socket welding ends

Features

- Antistatic device
- Blowout-proof stem
- Socket welding ends to ASME B16.11

Note

1. Class 800 ball valves are designed to BS 5351.
2. Type 3000 ball valves are designed to KITZ standard for servicing water, oil and gaseous fluid under the maximum working pressure of 3000 psi.



Dimensions of AW800SCTK, AW3000SCTK

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
Ball bore		10	10	10	15	20	25	32	38
L		170	170	170	176	196	210	226	262
H		44	44	44	54	57	65	70	81
D	Class 800	100	100	100	115	115	135	135	150
	Type 3000	100	100	100	115	115	160	160	230

Standard Materials

Parts	Materials
Body	A105
Body cap	A105
Stem	316 (Class 800) 329 (Type 3000)
Ball	316
Gland packing	Flexible graphite
Ball seat	PTFE (Class 800) PCTFE* (Type 3000)

* Polychloro-Trifluoro-Ethylene.

End to end dimensions: KITZ standard

Valve operator

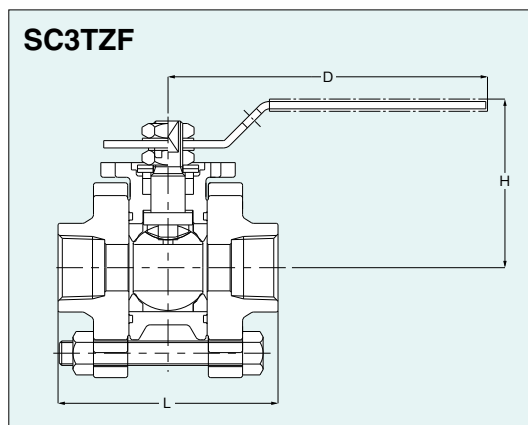
Lever operation

Type 1000 Carbon Steel Ball Valves

Full bore, Three-piece body design, Threaded or socket welding ends

Features

- Blowout-proof stem
- Swing-away body for maintenance ease
- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. SC3TZF)
 - NPT threads to ASME B1.20.1 (Fig. AKSC3TZF)
 - Socket welding ends to JIS B2316 (BS 5351)/ASME B16.11 (Fig. SWSC3TZF)
 - Socket welding ends to ASME B16.11 (Fig. AWSC3TZF)



Dimensions of SC3TZF

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2
	DN	8	10	15	20	25	32	40
Ball bore		10	10	14	19	24	30	38
L		63	63	71	90	103	110	127
H		48	48	60	69	82	88	104
D		120	120	130	130	150	150	180

Standard Materials

Parts	Materials
Body	WCB
Body cap	WCB
Ball	CF8M/316
Stem	316
Seat	HYPATITE® PTFE
Gland packing	PTFE
Gasket	PTFE
Handle	Plastic covered S.S.

End to end dimensions: KITZ standard

Valve operator

Lever operation
Oval handle as option

Note

· Use SC3TZ for NPS 2.

Type 1000 Carbon Steel Ball Valves

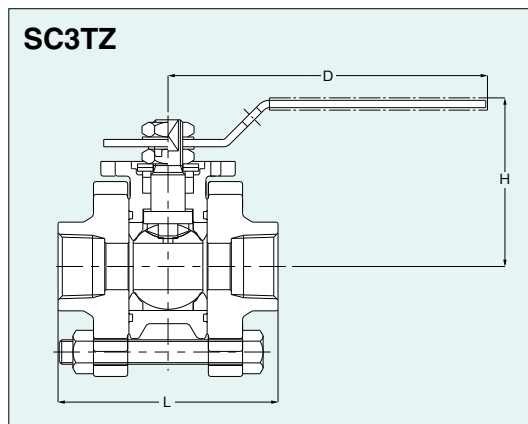
Reduced bore, Three-piece body design, Threaded or socket welding ends

Page 114 for Pressure-Temperature Ratings.

Features

- Blowout-proof stem
- Swing-away body for maintenance ease
- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. SC3TZ)
 - NPT threads to ASME B1.20.1 (Fig. AKSC3TZ)
 - Socket welding ends to JIS B2316 (BS 5351)/ASME B16.11 (Fig. SWSC3TZ)
 - Socket welding ends to ASME B16.11 (Fig. AWSC3TZ)

SC3TZ



Standard Materials

Parts	Materials
Body	WCB
Body cap	WCB
Ball	CF8M/316
Stem	316
Seat	HYPATITE® PTFE
Gland packing	PTFE
Gasket	PTFE
Handle	Plastic covered S.S.

End to end dimensions: KITZ standard

Dimensions of SC3TZ

Unit: mm

Nominal Size	NPS	1/2	3/4	1	1 1/4	1 1/2	2
	DN	15	20	25	32	40	50
Ball bore		10	14	19	24	30	38
L		63	71	90	103	110	127
H		48	60	69	83	88	104
D		120	130	130	150	150	180

Valve operator

Lever operation
Oval handle as option

Note

• Use SC3TZF for NPS 1/4 and 3/8.

Type 600 Stainless Steel Ball Valves

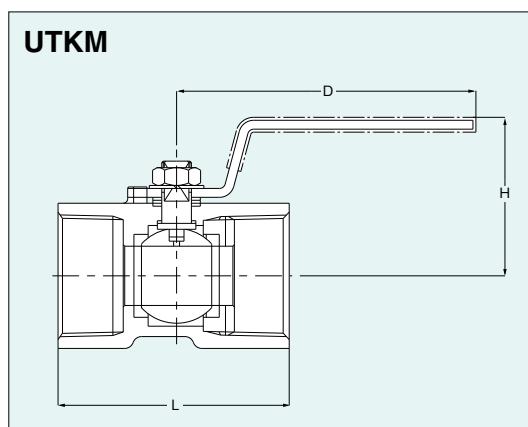
Reduced bore, Uni-body design, Threaded ends

Page 114 for Pressure-Temperature Ratings.

Features

- Blowout-proof stem
- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. UTKM)
 - NPT threads to ASME B1.20.1 (Fig. AKUTKM)

UTKM



Standard Materials

Parts	Materials
Body	CF8M
Ball	CF8M/316
Stem	316
Seat	Glass filled PTFE
Gland packing	Reinforced PTFE
Handle	Plastic covered S.S.

End to end dimensions: KITZ standard

Dimensions of UTKM

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
Ball bore		4.5	6.8	9.2	12.5	16	20	24.5	32
L		39	44	56.5	59	71	78	83	100
H		31	36	41	44	48	54	65	72
D		60	70	85	85	100	100	125	125

Valve operator

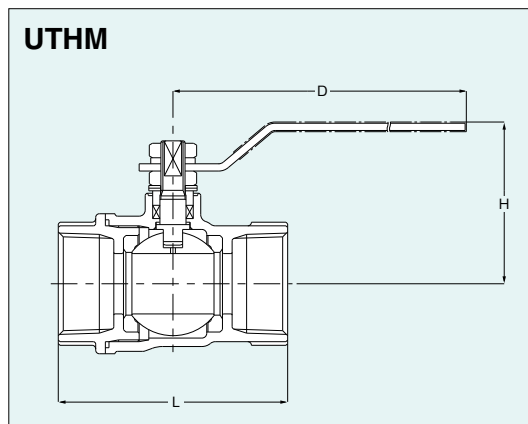
Lever operation
T-type handle as option

Type 800 Stainless Steel Ball Valves

Reduced bore, Split body design, Threaded ends

Features

- Blowout-proof stem
- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. UTHM)
 - NPT threads to ASME B1.20.1 (Fig. AKUTHM)



Dimensions of UTHM

Unit: mm

Nominal Size	NPS	1/2	3/4	1	1 1/4	1 1/2	2
	DN	15	20	25	32	40	50
Ball bore		10	15	20	25	32	40
L		60	70	80	95	108	124
H		49	54	64	68	79	85
D		100	100	130	130	150	150

Standard Materials

Parts	Materials
Body	CF8M
Body cap	CF8M
Ball	316
Stem	316 Cr plated
Seat	PTFE
Gland packing	PTFE
Handle	Plastic covered S.S.

End to end dimensions: KITZ standard

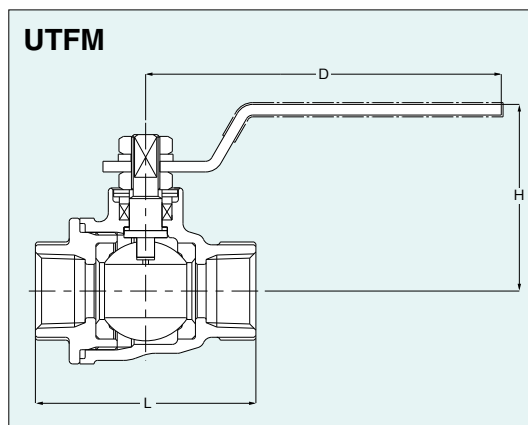
Valve operator
Lever operation

Type 1000 Stainless Steel Ball Valves

Full port, Split body design, Threaded ends

Features

- Blowout-proof stem
- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. UTFM)
 - NPT threads to ASME B1.20.1 (Fig. AKUTFM)



Dimensions of UTFM

Unit: mm

Nominal Size	NPS	1/2	3/4	1	1 1/4	1 1/2	2
	DN	15	20	25	32	40	50
Ball bore		15	20	25	32	40	50
L		62	73	85	98	108	124
H		53	63	67	75	81	102
D		100	130	130	150	150	200

Standard Materials

Parts	Materials
Body	CF8M
Body cap	CF8M
Ball	316
Stem	316
Seat	HYPATITE® PTFE
Gland packing	PTFE
Gasket	PTFE
Handle	Plastic covered S.S.

End to end dimensions: KITZ standard

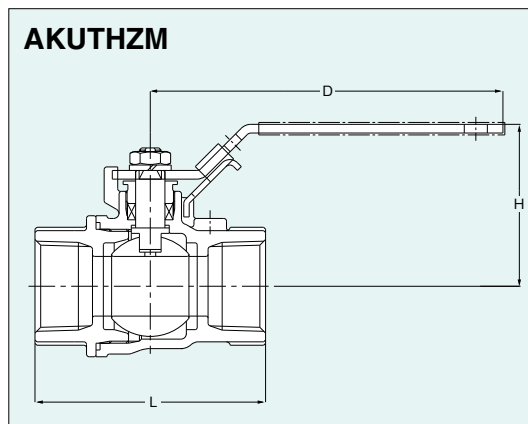
Valve operator
Lever operation

Type 1500/2000 Stainless Steel Ball Valves

Reduced bore, Split body design, Threaded ends

Features

- Blowout-proof stem
- API 607 fire-safe type as option
- NPT threads to ASME B1.20.1



Dimensions of AKUTHZM

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
Ball bore		9.5	9.5	10	15	20	25	32	40
L		53	53	62	72	85	94	107	120
H		50.5	50.5	58.5	63	63.5	67.5	83	91
D		100	100	115	115	135	135	155	190

Standard Materials

Parts	Materials
Body	CF8M
Body cap	CF8M
Ball	316
Stem	316
Seat	HYPATITE® PTFE
Gland packing	PTFE
Gasket	PTFE
Handle	Plastic covered S.S.

* API 607 fire-safe flexible graphite is optionally available.

End to end dimensions: KITZ standard

Valve operator

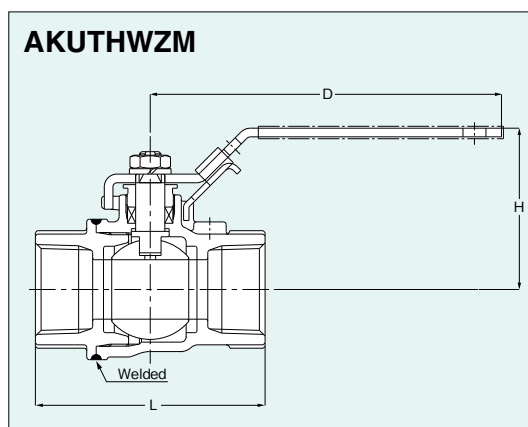
Lever operation with latch lock
Oval handle as option

Type 1500/2000 Stainless Steel Ball Valves

Reduced bore, Welded body design, Threaded ends

Features

- Blowout-proof stem
- API 607 fire-safe type as option
- NPT threads to ASME B1.20.1



Dimensions of AKUTHWZM

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
Ball bore		9.5	9.5	10	15	20	25	32	40
L		53	53	62	72	85	94	107	120
H		50.5	50.5	58.5	63	63.5	67.5	83	91
D		100	100	115	115	135	135	155	190

Standard Materials

Parts	Materials
Body	CF8M
Body cap	CF8M
Ball	316
Stem	316
Seat	HYPATITE® PTFE
Gland packing	PTFE
Handle	Plastic covered S.S.

* API 607 fire-safe flexible graphite is optionally available.

End to end dimensions: KITZ standard

Valve operator

Lever operation with latch lock
Oval handle as option

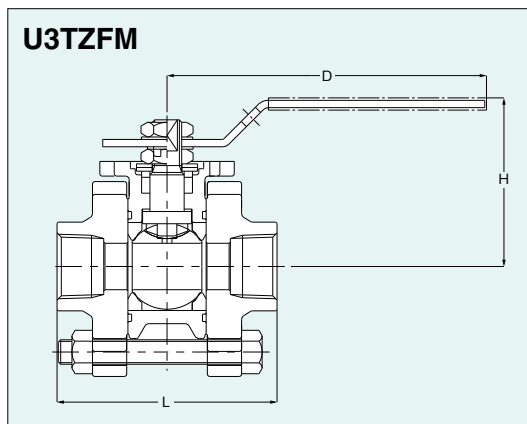
Type 1000 Stainless Steel Ball Valves

Full bore, 3-piece body design, Threaded or socket welding ends

Page 114 for Pressure-Temperature Ratings.

Features

- Blowout-proof stem
- Swing-away body for maintenance ease
- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. U3TZFM)
 - NPT threads to ASME B1.20.1 (Fig. AKU3TZFM)
 - Socket welding ends to JIS B2316 (BS 5351)/ASME B16.11 (Fig. SWU3TZFM)
 - Socket welding ends to ASME B16.11 (Fig. AWU3TZFM)



Standard Materials

Parts	Materials
Body	CF8M
Body cap	CF8M
Ball	316 or CF8M
Stem	316
Seat	HYPATITE® PTFE
Gland packing	PTFE
Gasket	PTFE
Handle	Plastic covered S.S.

End to end dimensions: KITZ standard

Dimensions of U3TZFM

Unit: mm

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2
	DN	8	10	15	20	25	32	40
Ball bore		10	10	14	19	24	30	38
L		63	63	71	90	103	110	127
H		48	48	60	69	82	88	104
D		120	120	130	130	150	150	180

Valve operator

Lever operation
Oval handle as option

Note

· Use U3TQM for NPS 2.

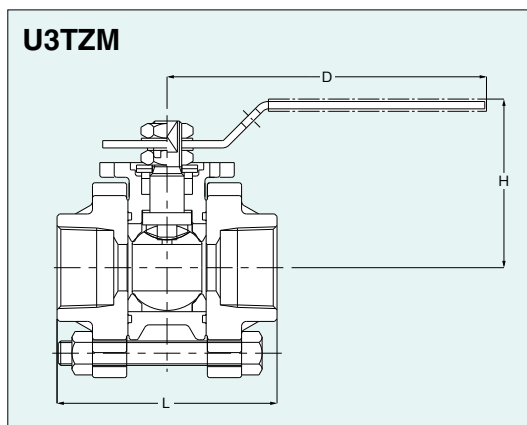
Type 1000 Stainless Steel Ball Valves

Reduced bore, 3-piece body design, Threaded or socket welding ends

Page 114 for Pressure-Temperature Ratings.

Features

- Blowout-proof stem
- Swing-away body for maintenance ease
- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. U3TZM)
 - NPT threads to ASME B1.20.1 (Fig. AKU3TZM)
 - Socket welding ends to JIS B2316 (BS 5351)/ASME B16.11 (Fig. SWU3TZM)
 - Socket welding ends to ASME B16.11 (Fig. AWU3TZM)



Standard Materials

Parts	Materials
Body	CF8M
Body cap	CF8M
Ball	316 or CF8M
Stem	316
Seat	HYPATITE® PTFE
Gland packing	PTFE
Gasket	PTFE
Handle	Plastic covered S.S.

End to end dimensions: KITZ standard

Dimensions of U3TZM

Unit: mm

Nominal Size	NPS	1/2	3/4	1	1 1/4	1 1/2	2
	DN	15	20	25	32	40	50
Ball bore		10	14	19	24	30	38
L		63	71	90	103	110	127
H		48	60	69	83	88	104
D		120	130	130	150	150	180

Valve operator

Lever operation
Oval handle as option

Note

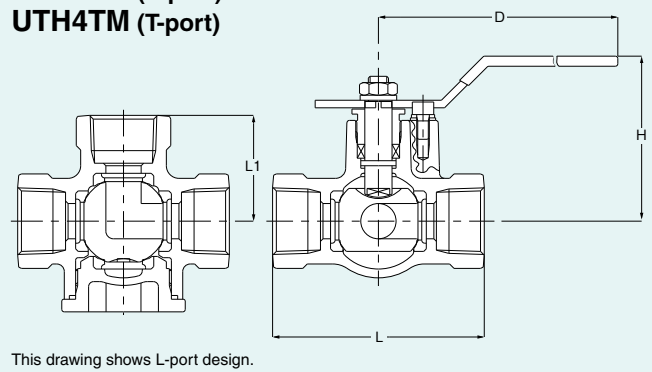
· Use U3TZFM for NPS 1/4 and 3/8.

Type 800 Stainless Steel 3-way Ball Valves

Reduced bore, 4-seated, Split body, Threaded ends

- L-port and T-port
- Rc threads to JIS B0203 (BS 21)

UTH4LM (L-port)
UTH4TM (T-port)



Dimensions of UTH4LM, UTH4TM

Unit: mm

Nominal Size	NPS	1/2	3/4	1	1 1/4	1 1/2	2
	DN	15	20	25	32	40	50
Ball bore		10	14	19	25	32	38
L		69	84	96	114	132	150
L1		34.5	42	48	57	66	75
H		63	65	75.5	79.5	95.5	101
D		130	130	150	150	230	230

Page 114 for Pressure-Temperature Ratings.

Standard Materials

Parts	Materials
Body	CF8M
Body cap	CF8M
Ball	316 or CF8M
Stem	316 Cr. plated
Seat	HYPATITE® PTFE
Gland packing	PTFE
Gasket	PTFE
Handle	Plastic covered S.S.

End to end dimensions: KITZ standard

Page 118 for Allowable Port Orientation.

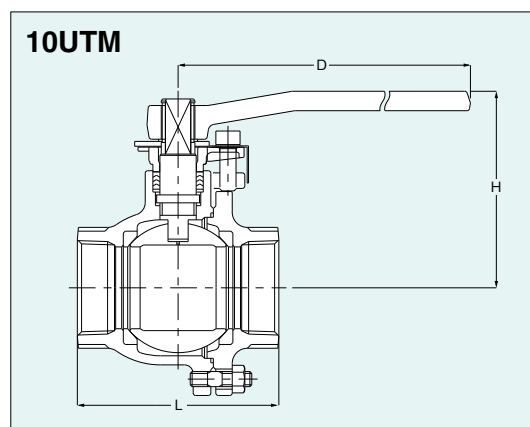
Valve operator
Lever operation

10K Stainless Steel Ball Valves

Full bore, Split body, Side entry design, Threaded ends

- Choice of threaded ends:
 - Rc threads to JIS B0203 (BS 21) (Fig. 10UTM)

10UTM



Dimensions of 10UTM

Unit: mm

Nominal Size	NPS	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	DN	10	15	20	25	32	40	50	65	80
Ball bore		10	15	20	25	32	40	50	65	80
L		62	65	80	90	110	120	140	160	182
H		71	102	105	124	130	115	120	155	165
D		130	130	130	160	160	230	230	400	400

Page 115 for Pressure-Temperature Ratings.

Standard Materials

Parts	Materials
Body	CF8M
Body cap	CF8M
Ball	316
Stem	316 or CF8M
Seat	PTFE
Gland packing	PTFE
Gasket	PTFE
Handle	Plastic covered S.S.

End to end dimensions: KITZ standard
Wall thickness: ASME B16.34 Class 150

Valve operator
Lever operation