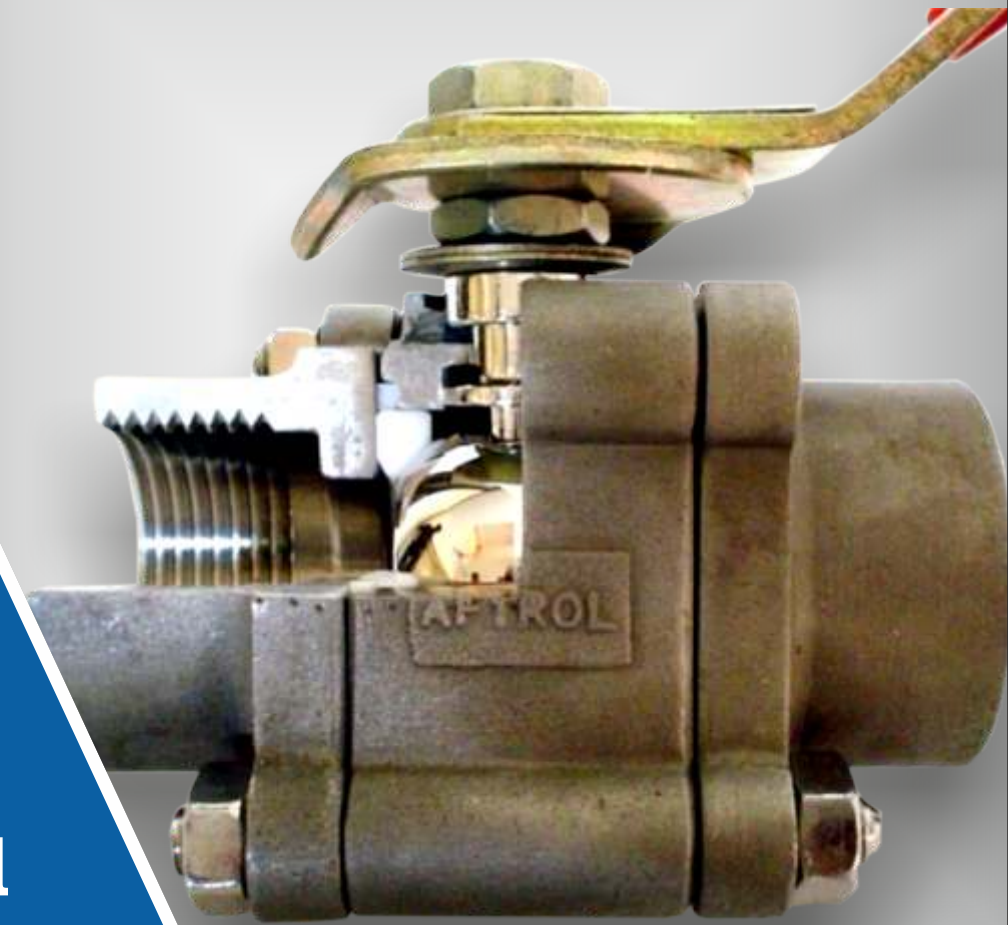


AFTROL



Industrial Valves



Shree Ram Engineers

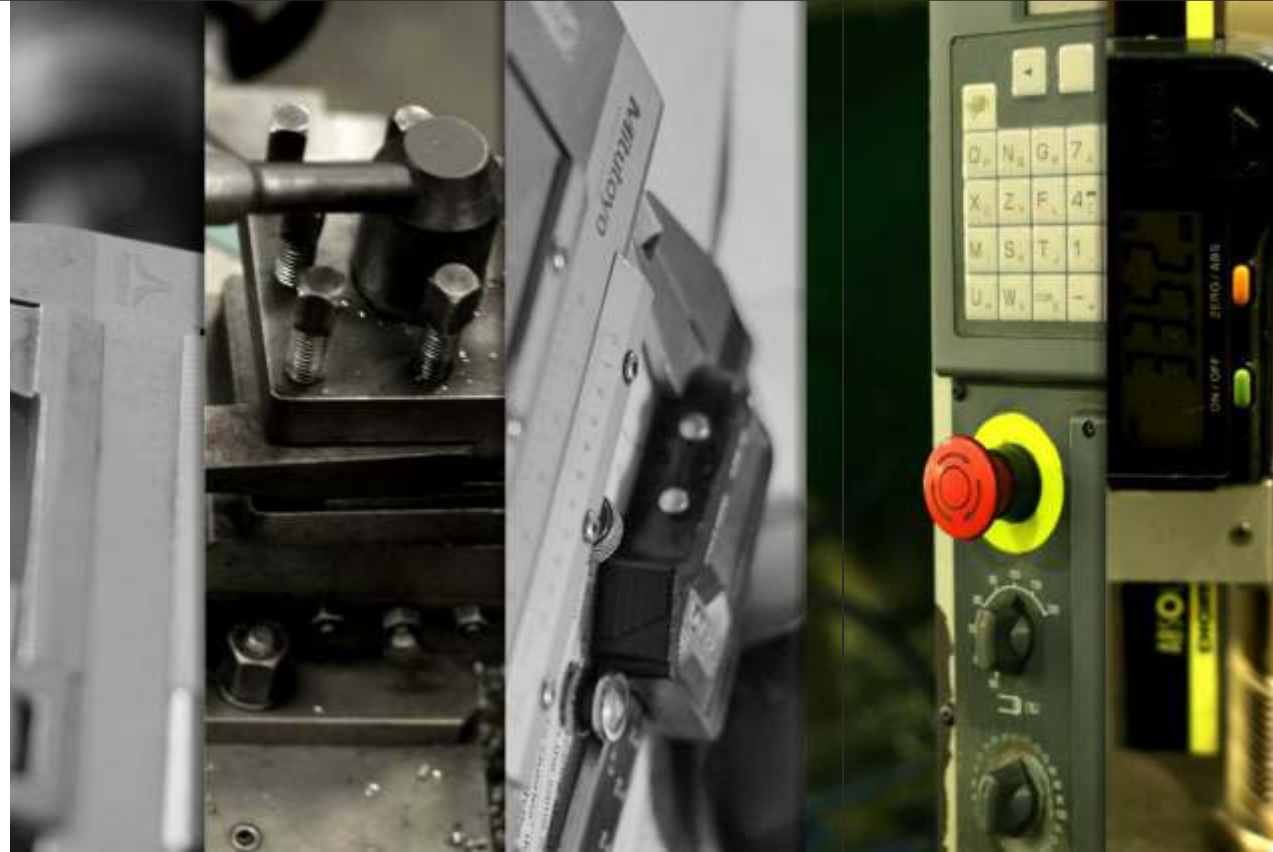
386, GIDC, Makarpura, Vadodara - 390 010.
Phone : +91 265 2651318, Fax : +91 265 2645056
Email : aftrolvalve@satyam.net.in



INTRODUCTION

SHREE RAM ENGINEERS manufacturer of "AFTROL" brand valves was established in the year 1990. Valves are manufactured as per the latest international designs and manufacturing techniques with stringent quality control tracks. It is Customer focused organization with well Qualified and experienced team members. "AFTROL" valves are specifically developed to meet the industry's requirement of a safe and reliable shut off valve for high and low pressure applications.

Our manufacturing plant consists of an in-house advance technologies for fast new development and to manufacture various engineering component with excellence with quality, on time delivery and cost effectiveness by establishing process measures and goals to guide and track improvement.

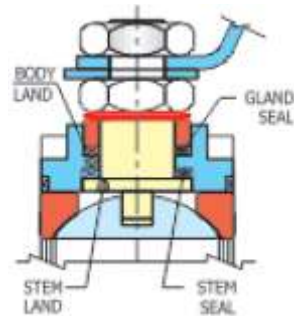


QUALITY POLICY

SHREE RAM ENGINEERS is committed to design, manufacture & supply valves in compliance with customer needs and to relevant national & international specifications, to give total customer satisfaction by establishing industry standard for quality, integrity, reliability, and long service

At SHREE RAM ENGINEERS a wide range of industrial valves are manufactured with low maintenance cost with ISO 9001:2008 certified design and quality management system. Our commitments is to provide superior process solutions in valves for use in air, water, oil and chemical services, pharmaceutical, petrochemical, and other allied industries. The valves are manufactured with strict quality control right from procurement of raw materials to the final assembly and testing of the valves.

Blow-out Proof Stem



AFTROL ball valves have bottom entry stem design. In blow out proof design the stem land sits on the integral land of the body. The higher the line pressure, the tighter the seal. This design eliminates possibilities of accident. This design can offer safety features

because it does not allow the seal to squeeze and break because of line pressure and temperature. This sealing system is virtually maintenance free but, if the necessity arises, then it can be easily retightened during service. In extreme cases the packing of the gland can easily be replaced.

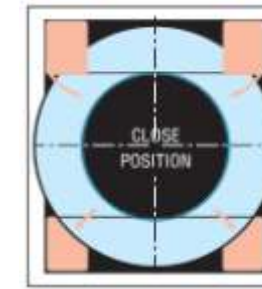
Operating Stem Seal with Belleville Washers

The Belleville washers are installed under the stem nut. They are pre-stressed and ensure the stress is maintained on the stuffing box. This Compensates the varying Stresses on the sealing gland resulting from changes in pressure and temperature. This also gives excellent thermal conductivity.

Always Leak-tight PTFE Seats

PTFE seats are manufactured from closed grain structure. Slots are provided in the seats to relieve the pressure passing the upstream seat and prevents it from being forced against ball Deflection are provided in the seats. These both the features help in Lower operating torques, permit higher differential pressure and increase life of the valves.

Long Life, Economy and Easy Servicing



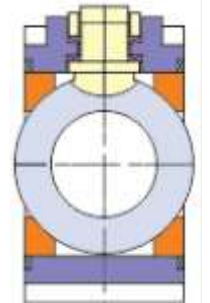
AFTROL ball valves are made from long lasting materials. And when necessary every part can be supplied as an individual replacement; there is no need to buy a complete new valve. Three piece body; this means that the centre part-which contains all moving parts-is easily accessible, So that component can easily be replaced.

Mirror Finished Stainless Steel Ball

Balls are manufactured to very close sphericity tolerances and mirror finish polished; results in bubble tight sealing and low operating torque.

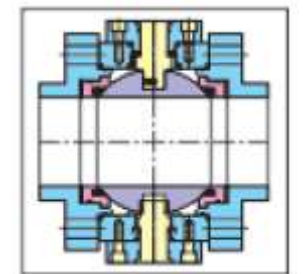
Floating Ball

"AFTROL" Ball valves are manufactured with floating ball or trunion mounted . In floating ball design, the sealing takes place by allowing the ball to move towards the down stream seat under pressure by giving an effective tight seal. This design is internationally accepted by most of the process and utility application.



Trunion Mounted Ball

In this design the sealing takes place by allowing the seat to move towards the ball along the flow axis. Trunion mounted ball valves with soft seals are for critical process application. This design is preferred for higher sizes and the pressure rating for special services that require double block and bleed features.



Three Piece design

These valves allow the online maintenance and installation by removing three body connector bolts and loosening the fourth bolt as a fulcrum, and the body can be swung away easily. Sometimes due to some chemical corrosion and sticky material the balls and seats gets jammed and in this design it can be easily replaced.



Two/ Single Piece Design

This design offers the unique advantage of eliminating the possibility of external leakage to the atmosphere and internal leakage [vacuum] from the atmosphere through the bolted body joints. These are high performance valves. These high integrity valves are generally used in critical application such as toxic, expensive material, where external leakage or wastage is unacceptable.



Valve Size	Design	Body and Connector	Ball	Seat	Stem	Ends	Bore Type	Options
02-15mm (1/2")	3-Three Piece	CS-WCB	CF 8M/ SS 316	T-PTFE	AISI 304	A- Screwed BSP Parallel	F-Full Bore	LO-Lever Operated
03-20mm (3/4")	2-Two Piece	S4-CF 8	CF 8/ SS 304	C-Carbon Filled	AISI 316	B-Screwed BSPT	R-Regular	GO-Gear Operated
04-25mm (1")	1-Single Piece	S6-CF 8M	CF 3M/ SS 316L	G-Glass Filled	AISI 304L	C-Screwed NPT		EL.A-Electrical
05-32mm (1-1/4")		AL-ALLOY 20 (CN 7M)	CF 3/ SS 304L	R-R-PTFE	AISI 316L	D-Socket Weld/ Butt Weld		PN.A-Pneumatic Actuator
06-40mm (1-1/4")		H-HAST B/C	AL-ALLOY 20	X-PEEK	ALLOY 20	FL 150-Flanged Class 150 RF		EX.S-Extension Nipple
07-50mm (2")		H-HAST BC			HAST B/C	FL 300-Flanged Class 300 RF		LL- Lever Lock
08-65mm (2-1/2")						FL 600-Flanged Class 600 RF		
09-80mm (2-1/2")						FL 900-Flanged Class 900 RTJ		
10-100mm (4")								
11-150mm (6")								
12-200mm (8")								

Three Place Design : Body and Connector CF 8M, Flanged Class 150 full bore. Means : SRE -3-S6-FL150(F) Single Piece Design: Body and Connector WCB, Screwed Ends. Means : SRE-1-CS-A

*Any other Materials & Combinations on Request to be Supplied.

Specifications

Manufacturing Standard : BS EN ISO 17292:2004

Testing Standard : BS EN 12266-1:2003

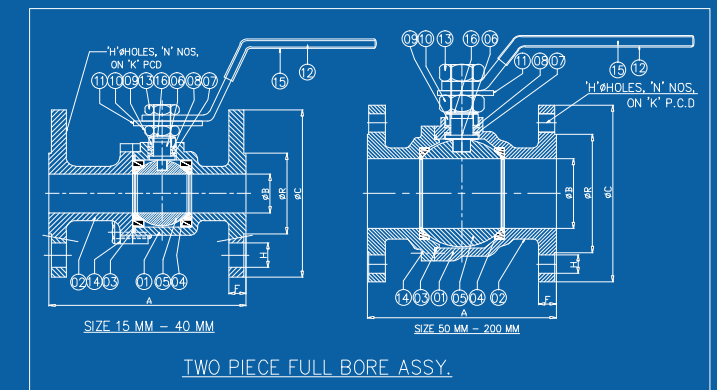
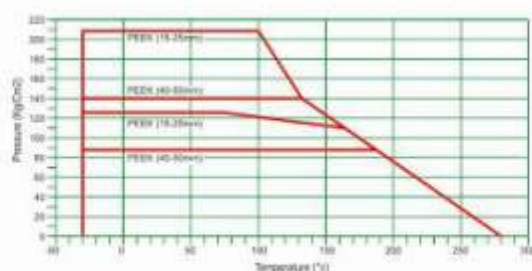
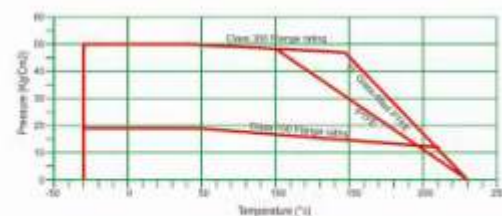
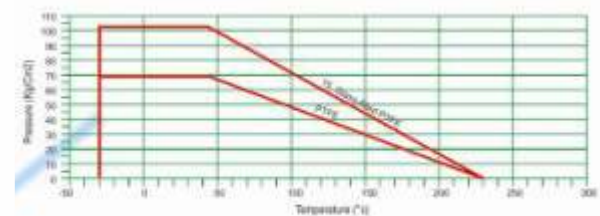
Face to Face Dimensions : ASME B 16.10

End Flange : ASME B 16.5
(Class 150 & Class 300RF)

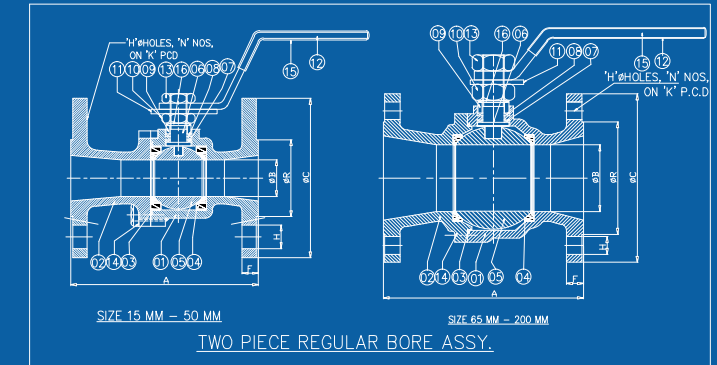
Socket Weld Ends : ASME B 16.11

Butt-Weld Ends : ASME B 16.9

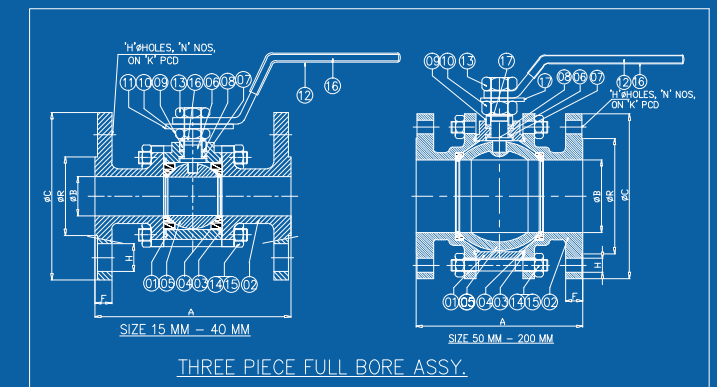
Pressure-Temp. Graph



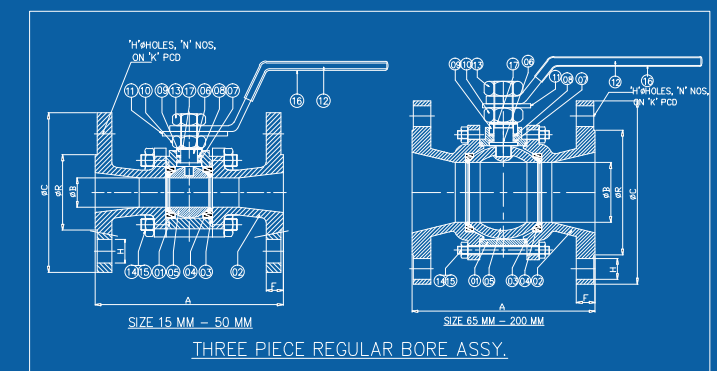
TWO PIECE FULL BORE ASSY.



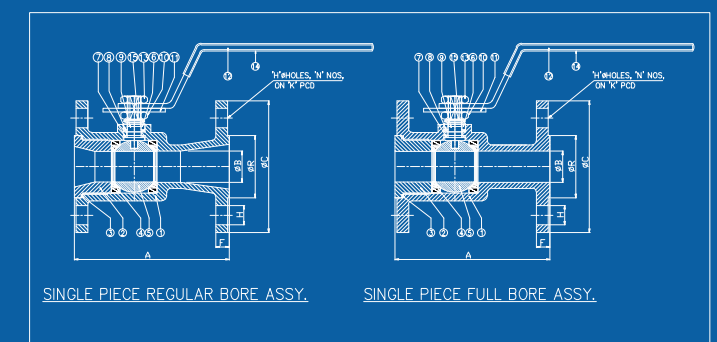
TWO PIECE REGULAR BORE ASSY.



THREE PIECE FULL BORE ASSY.



THREE PIECE REGULAR BORE ASSY.



SINGLE PIECE REGULAR BORE ASSY.

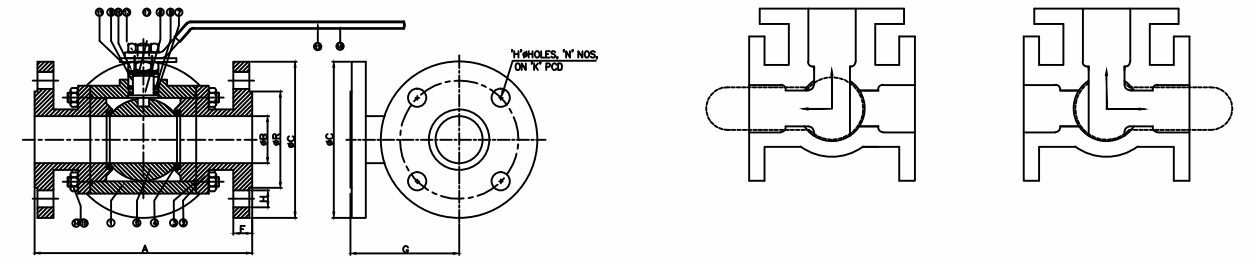
SINGLE PIECE FULL BORE ASSY.

**Dimensions for ANSI
150#/300/1 Piece, 2 Piece & 3 Piece Flanged
Full Bore And Regular Bore Ball Valves**

DIMENSIONS (IN MM)

SIZE	CLASS 150							CLASS 300							FULL BORE	REGULAR BORE
	A	C	R	F	K	N	H	A	C	R	F	K	N	H	B	B
DN 15	108	89	35	11.1	60.5	4	16	140	95.2	35	14.3	67.0	4	16	14	11
DN 20	117	98.5	43	11.1	70.0	4	16	152	117.5	43	15.9	82.5	4	19	20	14
DN 25	127	108	51	11.1	79.5	4	16	165	124	51	17.5	89.0	4	19	25	20
DN 32	140	117	63.5	13.0	89.0	4	16	178	133	63.5	19.5	98.5	4	19	32	25
DN 40	165	127	73	14.5	98.5	4	16	190	156	73	20.6	114.5	4	22	38	32
DN 50	178	152.4	92	16.0	120.5	4	19	216	165	92	22.2	127.0	4	19	50	38
DN 65	190	178	105	17.5	140.0	4	19	241	191	105	25.5	149.0	4	22	63	50
DN 80	203	191	127	19.0	152.5	4	19	283	210	127	28.6	168.5	4	22	75	63
Dn100	229	229	157	24.0	190.5	8	19	305	254	157	31.7	200.0	4	22	100	75
DN 150	267	279	216	25.5	241.0	8	22	403	317.5	216	36.5	270.0	12	22	150	100
DN 200	292	343	269	28.6	298.5	8	22	419	381	269	41.5	330.0	12	25	200	150

NO.	NAME OF PARTS	MATERIAL						
01	BODY	ASTM A 216 WCB	ASTM A 351 CF8	ASTM A 351 CF8M	ASTM A 351 CF3	ASTM A 351 CF3M	ALLOY 20 CN7M	HAST B/C
02	BODY\ CONNECTOR							
03	BODY\ SEAL					PTFE		
04	BALL\ SEAT					PTFE		
05	BALL	ASTM A 216 WCB	ASTM A 351 CF8	ASTM A 351 CF8M	ASTM A 351 CF3	ASTM A 351 CF3M	ALLOY 20 CN7M	HAST B/C
06	STEM	AISI 304	AISI 304	AISI 316	AISI 304L	AISI 316L	ALOY 20	HAST B/C
07	STEM\ SEAL					PTFE\ GFT		
08	GLAND\ PACKING					PTFE		
09	GLAND	AISI 304	AISI 304	AISI 316	AISI 304L	AISI 316L	ALOY 20	HAST B/C
10	GLAND\ NUT					ASTM A 194 Gr. 2H		
11	LOCK\ PLATE					SS 304 / MS Cd. PLATED		
12	LEVER					SS 304 / MS Cd. PLATED		
13	LEVER\ NUT					SS 304 / MS Cd. PLATED		
14	BODY\ STUD					ASTM A 193 Gr.B7		
15	BODY\ NUT					ASTM A 194 Gr.2H		
16	LEVER\ SLEEVE					PVC		
17	DISC SPRING					SPRING STEEL		

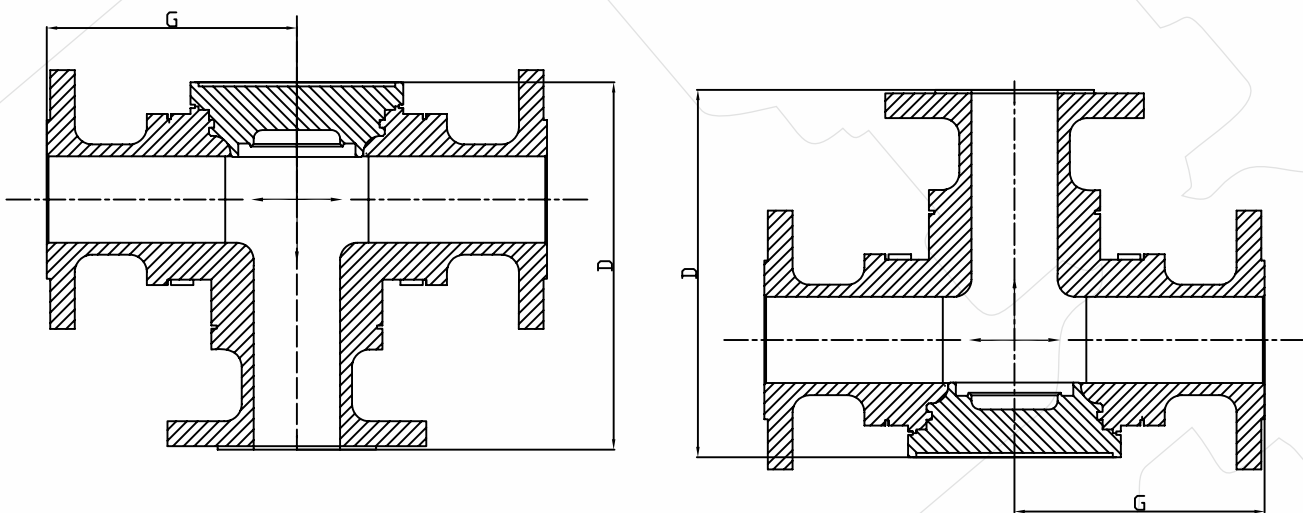
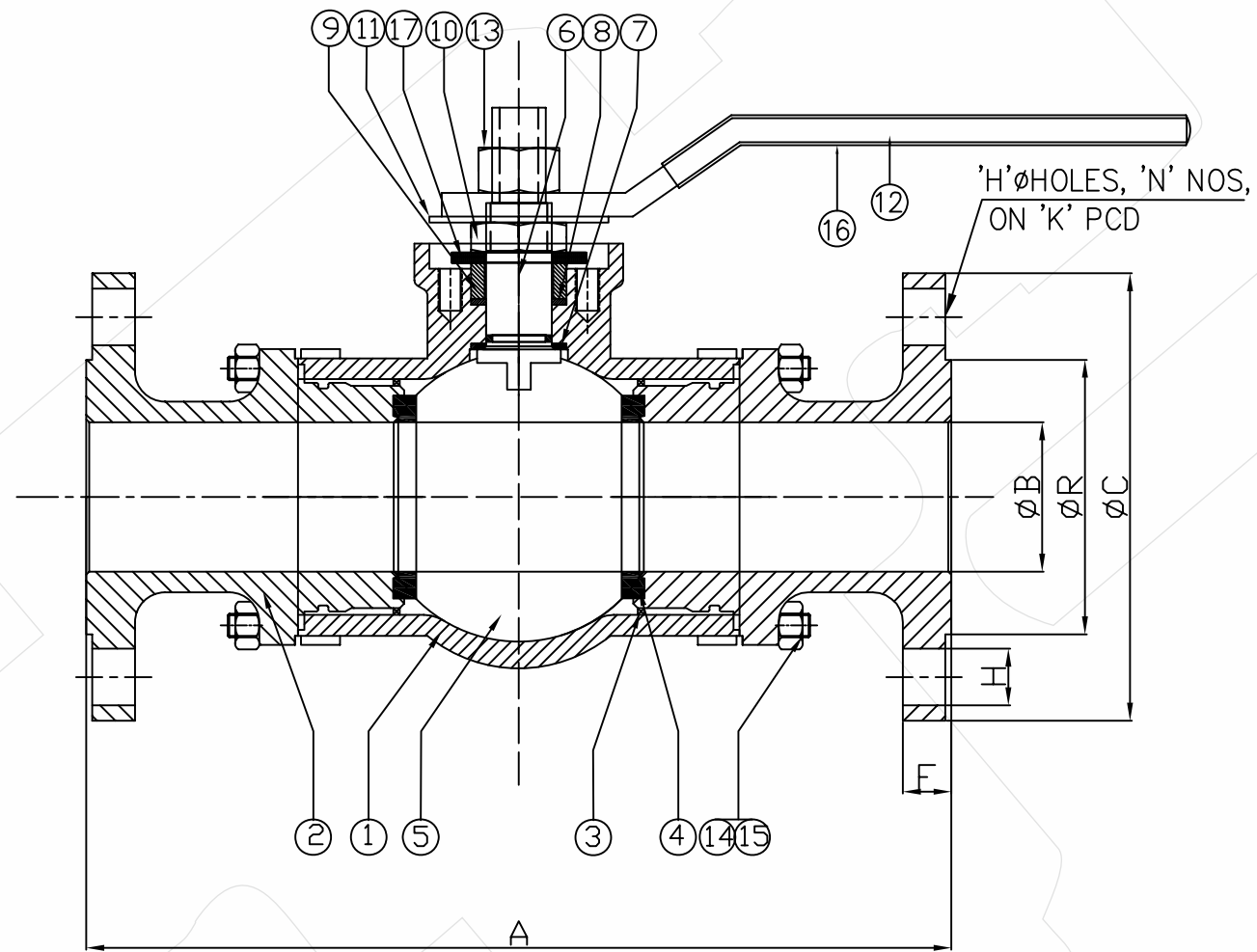


Dimensions for ANSI 150# / 300# 3 - WAY Flanged Full Bore and Regular Bore Ball Valves

DIMENSIONS\ (IN\ MM)

SIZE	CLASS\ 150							CLASS\ 300							FULL BORE	REGULAR BORE		
	A	G	C	R	F	K	N	H	A	G	C	R	F	K	N	H	B	B
DN\ 1	108	70	89	35	11.1	60.5	4	16	140	76	95.2	35	14.3	67.0	4	16	14	11
DN\ 2	117	76	98.5	43	11.1	70.0	4	16	152	96	117.5	43	15.9	82.5	4	19	20	14
DN\ 2	127	80	108	51	11.1	79.5	4	16	165	100	124	51	17.5	89.0	4	19	25	20
DN\ 3	140	86	117	63.5	13.0	89.0	4	16	178	106	133	63.5	19.5	98.5	4	19	32	25
DN\ 4	165	92	127	73	14.5	98.5	4	16	190	120	156	73	20.6	114.5	4	22	38	32
DN\ 5	178	107	152.4	92	16.0	120.5	4	19	216	125	165	92	22.2	127.0	4	19	50	38
DN\ 6	190	125	178	105	17.5	140.0	4	19	241	142	191	105	25.5	149.0	4	22	63	50
DN\ 8	203	133	191	127	19.0	152.5	4	19	283	155	210	127	28.6	168.5	4	22	75	63
DN\ 100	229	157	229	157	24.0	190.5	8	19	305	180	254	157	31.7	200.0	4	22	100	75
DN\ 150	267	184	279	216	25.5	241.0	8	22	403	218	317.5	216	36.5	270.0	12	22	150	100

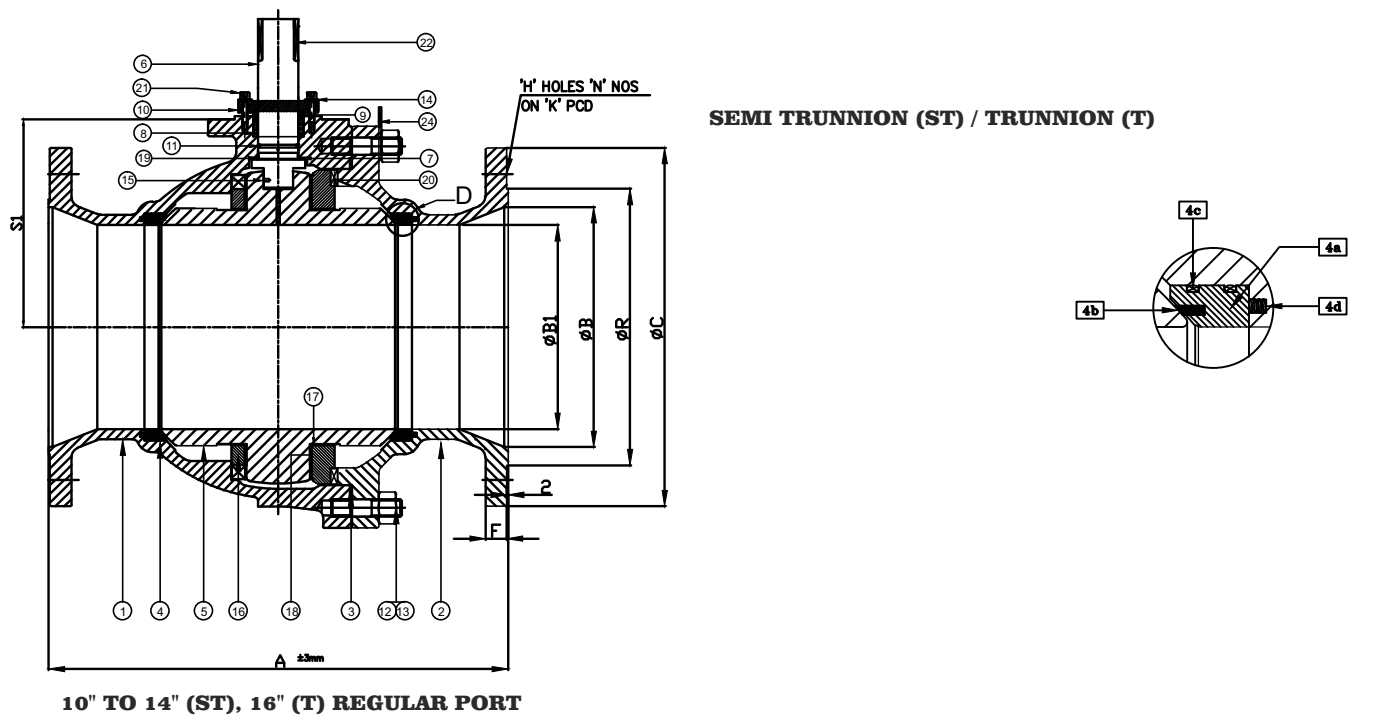
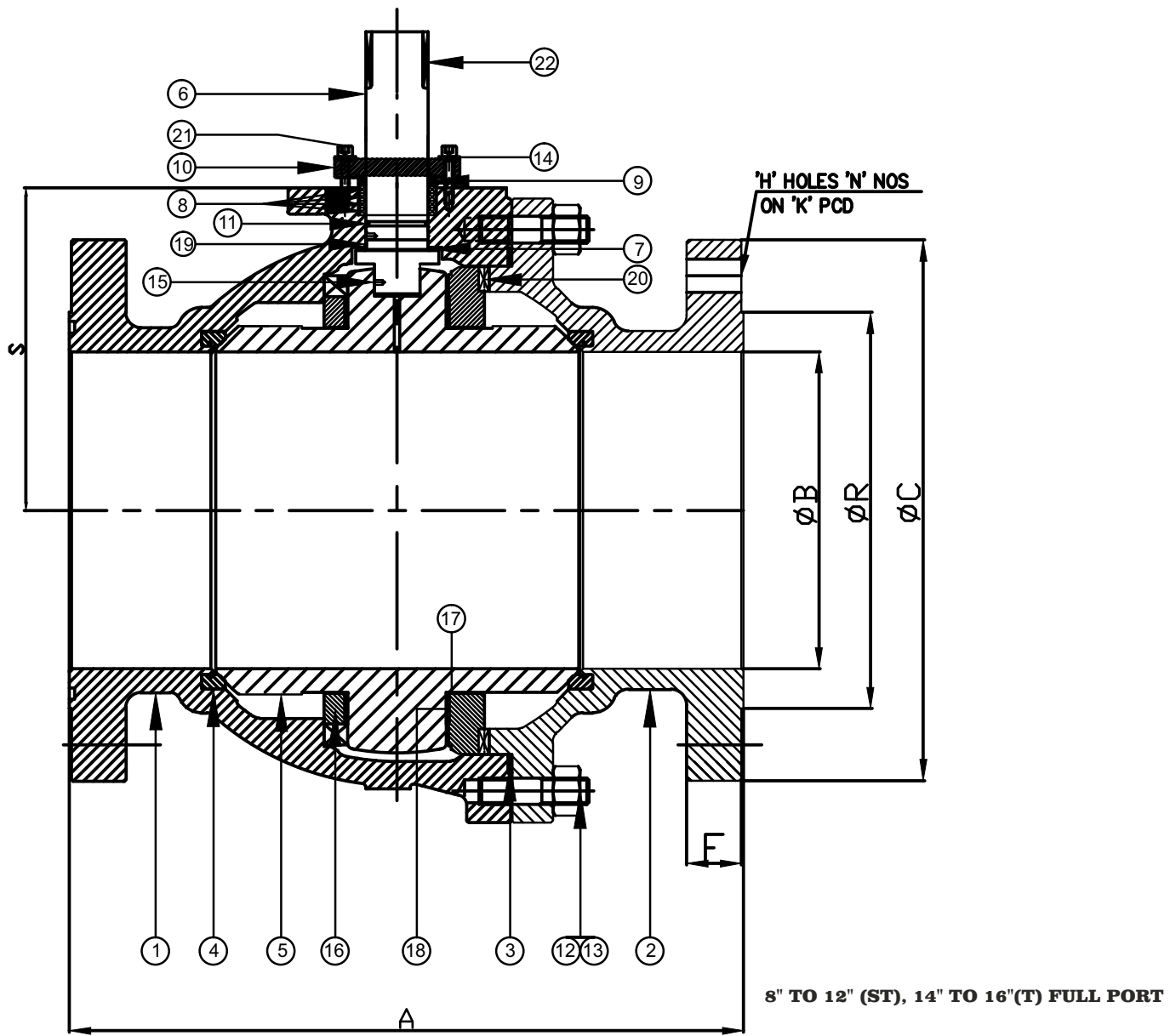
NO.	NAME OF PARTS	MATERIAL						
01	BODY	ASTM A 216 WCB	ASTM A 351 CF8	ASTM A 351 CF8M	ASTM A 351 CF3	ASTM A 351 CF3M	ALLOY 20 CN7M	HAST B/C
02	BODY\ CONNECTOR							
03	BODY\ SEAL					PTFE		
04	BALL\ SEAT					PTFE		
05	BALL	ASTM A 216 WCB	ASTM A 351 CF8	ASTM A 351 CF8M	ASTM A 351 CF3	ASTM A 351 CF3M	ALLOY 20 CN7M	HAST B/C
06	STEM	AISI 304	AISI 304	AISI 316	AISI 304L	AISI 316L	ALOY 20	HAST B/C
07	STEM\ SEAL					PTFE\ GFT		
08	GLAND\ PACKING					PTFE		
09	GLAND	AISI 304	AISI 304	AISI 316	AISI 304L	AISI 316L	ALOY 20	HAST B/C
10	GLAND\ NUT					ASTM A 194 Gr. 2H		
11	LOCK\ PLATE					SS 304 / MS Cd. PLATED		
12	LEVER					SS 304 / MS Cd. PLATED		
13	LEVER\ NUT					SS 304 / MS Cd. PLATED		
14	BODY\ STUD					ASTM A 193 Gr.B7		
15	BODY\ NUT					ASTM A 194 Gr.2H		
16	LEVER\ SLEEVE					PVC		
17	DISC SPRING					SPRING STEEL		



Dimensions for PN 16/150 3&4 - Way Flanged Ball Valves

DIMENSIONS (IN MM)										
Class 150										
Size	A	G	B	C	R	F	D	K	N	H
DN 25	212	106	25	110	50	11.6	146.5	79.4	4	15.9
DN 40	262	131	40	125	73	14.7	182.5	98.4	4	15.9
DN 50	290	145	50	150	92	15.3	205.5	120.7	4	19.05
DN 65	325	162.5	65	180	104	17.9	235	139.7	4	19.05
DN 80	370	185	80	190	127	19.5	267.5	152.4	4	19.05
DN100	430	215	100	230	157	24.3	310.5	190.5	8	19.05
DN 150	500	250	150	280	215	25.9	379	241	8	22.2

NO.	NAME OF PARTS	MATERIAL							
01	BODY	ASTM A 216 WCB	ASTM A 351 CF8	ASTM A 351 CF8M	ASTM A 351 CF3	ASTM A 351 CF3M	ALLOY 20	HAST	
02	BODY\ CONNECTOR						CN7M	B/C	
03	BODY SEAL	PTFE							
04	BALL\ SEAT	PTFE							
05	BALL	ASTM A 216 WCB	ASTM A 351 CF8	ASTM A 351 CF8M	ASTM A 351 CF3	ASTM A 351 CF3M	ALLOY 20	HAST	
06	STEM	AISI 304	AISI 304	AISI 316	AISI 304L	AISI 316L	ALOY 20	HAST	B/C
07	STEM SEAL	PTFE\ GFT							
08	GLAND\ PACKING	PTFE							
09	GLAND	AISI 304	AISI 304	AISI 316	AISI 304L	AISI 316L	ALOY 20	HAST	B/C
10	GLAND\ NUT	ASTM A 194 Gr. 2H							
11	LOCK\ PLATE	SS 304 / MS Cd. PLATED							
12	LEVER	SS 304 / MS Cd. PLATED							
13	LEVER\ NUT	SS 304 / MS Cd. PLATED							
14	BODY\ STUD	ASTM A 193 Gr.B7							
15	BODY\ NUT	ASTM A 194 Gr.2H							
16	LEVER\ SLEEVE	PVC							
17	DISC SPRING	SPRING STEEL							



Semi Trunnion / Trunnion

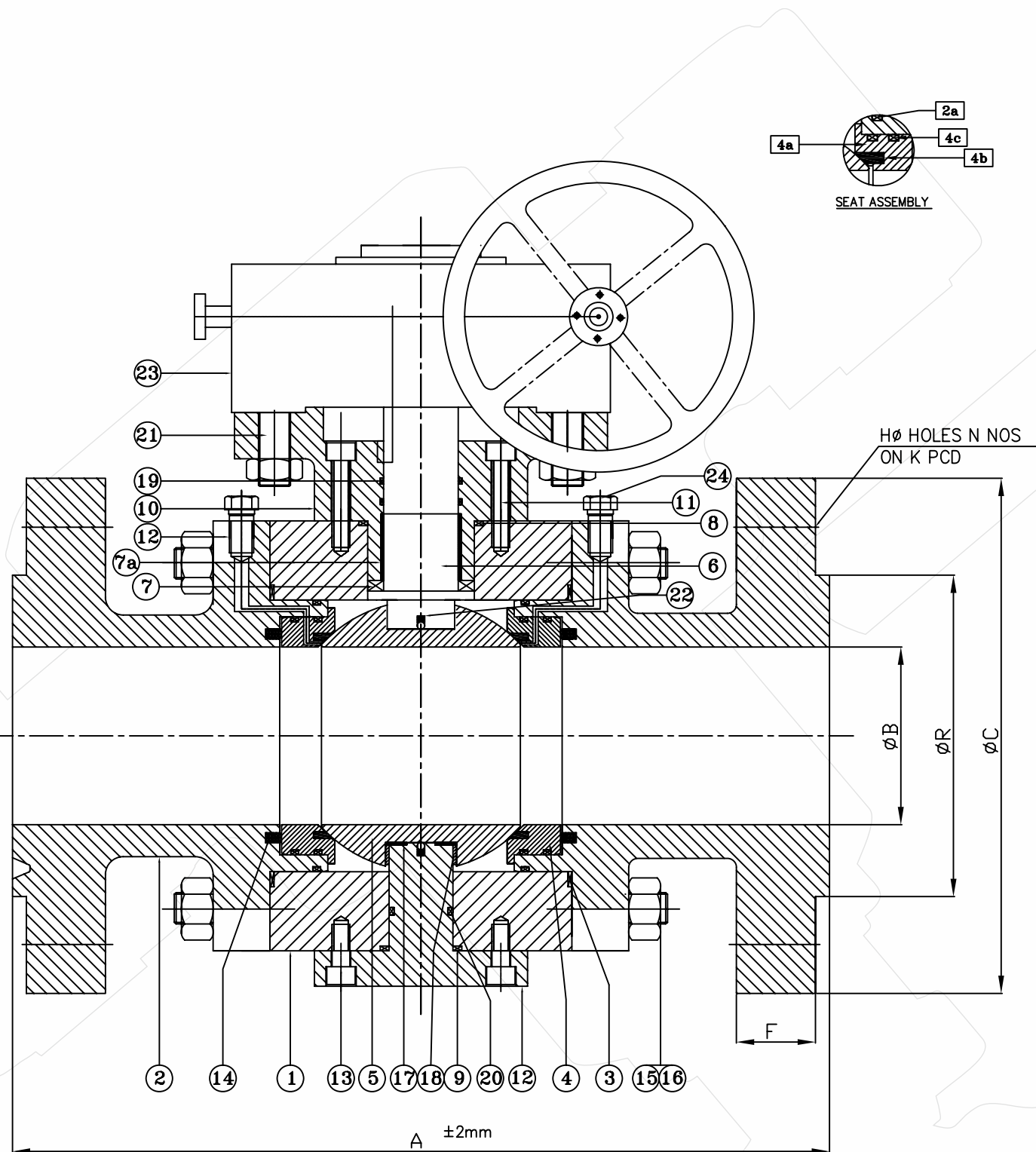
PART	DESCRIPTION	MATERIAL		
1	BODY	ASTM A	ASTM A	ASTM A
2	BODY CONNECTOR	216 WCB	315CF8	351CF8M
3	SPIRAL WOUND GASKET	SS 316 + GR	SS 316 + GR	SS 316 + GR
4	SEAT ASSEMBLY			
4a	SEAT HOLDER	SS316	SS 304	SS316
4b	SEAT	PTFE	PTFE	PTFE
4c	SEAT 'O' RING	VITON	VITON	VITON
4d	SPRING	SS316	SS 316	SS316
5	BALL	CF8M	CF8	CF8M
6	STEM	SS316	SS 304	SS316
7	STEM SEAL	CFT	CFT	CFT
8	GLAND PACKING	GRAPHOIL	GRAPHOIL	GRAPHOIL
9	GLAND	SS316	SS 304	SS316
10	GLAND ADPTER	CARBON ST.	SS 304	SS 316
11	'O' RING	VITON	VITON	VITON
12	BODY STUD	A193-B7	A193-B8	A193-B8M
13	BODY NUT	A194-2H	A194-8	A194-B8
14	DISC SPRING	SPRING ST.	SPRING ST.	SPRING ST.
15	ANTISTATIC DEVIDE	SS 316	SS 316	SS 316
16	TRUNNION PLATE	CF8M	CF8M	CF8M
17	THRUST BEARING	PTFE	PTFE	PTFE
18	TRUNNION BEARING	PTFE	PTFE	PTFE
19	STEM BEARING	PTFE	PTFE	PTFE
20	TRUNNION KEY	SS316	SS316	SS316
21	ALLEN BOLT	A194-2H	A194-2H	A194-2H
22	STEM KEY	SS316	SS316	SS316

DIMENSIONS (IN MM)

SIZE	CLASS / 150									Detail-D					
	RP ^A	FP	C	R	F	K	N	H	S	S1	L	L1	B	B1	
DN 200	-	457	345	270	27.0	298.5	8	22.2	246	-	GEAR BOX	-	201	-	
DN 250	533	533	405	324	28.6	362	12	25.4	260	246	GEAR BOX	GEAR BOX	252	201	
DN 300	610	610	485	381	30.2	431.8	12	25.4	315	260	GEAR BOX	GEAR BOX	305	252	
DN 350	686	-	535	413	33.4	476.3	12	28.5	-	315	-	GEAR BOX	-	305	
DN 400	762	762	595	470	35.0	539.8	16	28.5	415	335	GEAR BOX	GEAR BOX	385	334	
SIZE	CLASS / 300									Detail-D					
	RP ^A	FP	C	R	F	K	N	H	S	S1	L	L1	B	B1	
DN 200	502	502	381	270	39.7	330.2	12	25.4	246	290	GEAR BOX	GEAR BOX	750	201	
DN 250	457	568	445	324	46.1	387.4	16	28.5	260	246	GEAR BOX	GEAR BOX	252	201	
DN 300	502	648	520	381	49.3	450.8	16	31.8	315	260	GEAR BOX	GEAR BOX	305	252	
DN 400	838	838	650	470	55.6	571.5	20	35	415	335	GEAR BOX	GEAR BOX	385	334	

TEST SPECIFICATION

TEST	Medium	Class-150 kg/cm ²		Class-300 kg/cm ²	
		WCB	CF8/CF8M	WCB	CF8/CF8M
SHELL	Water	31	30	79	76
SEAT	Water	23	22	58	56
SEAT	Air	6	6	6	6



Semi Trunnion / Trunnion

PART	DESCRIPTION	MATERIAL		
1	BODY	ASTM A 216WCB	ASTM A 315CF8	ASTM A 351CF8M
2	CONNECTOR			
2a	CONNECTOR 'O' RING	VITON	VITON	VITON
3	SPIRAL WOUND GASKET	SS 316 + GR	SS 316 + GR	SS 316 + GR
4	SEAT ASSEMBLY			
4a	SEAT HOLDER	Ss316	Ss304	Ss316
4b	SEAT	PTFE	PTFE	PTFE
4c	SEAT 'O' RING	VITON	VITON	VITON
5	BALL	CF8M	CF8	CF8M
6	STEM	SS316	SS304	SS316
7	STEM SEAL	PTFE	PTFE	PTFE
7a	STEM BEARING	PTFE	PTFE	PTFE
8	BODY TOP SEAL	EX.GRAPHITE	EX.GRAPHITE	EX.GRAPHITE
9	BODY BOTTOM SEAL	EX.GRAPHITE	EX.GRAPHITE	EX.GRAPHITE
10	ADPTER FLANGE	CS	SS	SS
11	ALLEN BOLT FOR ADAPTER	A193-B7	A193-B8	A193-B8M
12	TRUNNION	CS	SS	SS
13	ALLEN BOLT FOR TRUNNION	A193-B7	A193-B8	A193-B8M
14	SPRING	SS 316	SS 316	SS 316
15	BODY STUD	A193-B7	A193-B8	A193-B8M
16	BODY NUT	A193-2H	A194-8	A194-8M
17	TRUNNION TRUST BEARING	PTFE	PTFE	PTFE
18	TRUNNION BEARING	PTFE	PTFE	PTFE
19	ADAPTER 'O' RING	VITON	VITON	VITON
20	TRUNNION 'O' RING	VITON	VITON	VITON
21	HARDWARE FOR GEAR BOX	B7 & 2H	B7 & 2H	B7 & 2H
22	ANTISTATIC ASSEMBLY	Ss316	Ss316	Ss316
23	SEALANT INJECTION FITTING	STD	STD	STD
24	GEAR BOX	STD	STD	STD

DIMENSIONS (IN MM)

Size	CLASS 600						CLASS 900						
	A	C	R	F	K	H	A	C	R	F	K	N	H
DN 50	292	165	921	25.4	127	19	368	215	921	38.1	165.1	8	25
DN 80	356	210	127	31.8	168.3	22	381	240	127	38.1	190.5	8	25
DN 100	432	275	157.2	38.1	215.9	25	457	290	157.2	45.5	235	8	32
DN 150	559	355	215.9	47.7	292.1	28	610	380	215.9	55.6	317.5	12	32
DN 200	660	420	269.9	55.6	349.2	32	737	470	269.9	63.5	393.7	12	38
DN 250	787	510	323.8	63.5	431.8	35	838	545	323.8	69.9	469.9	16	38
DN 300	838	560	381	66.7	489	35	965	610	381	79.4	533.4	20	38
DN 350	889	605	412.8	69.9	527	38	1029	640	412.8	85.8	558.8	20	42
DN 400	991	685	469.9	76.2	603.2	42	1130	705	469.9	88.9	616	20	45