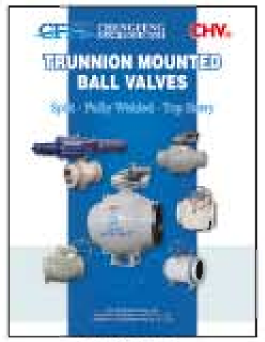
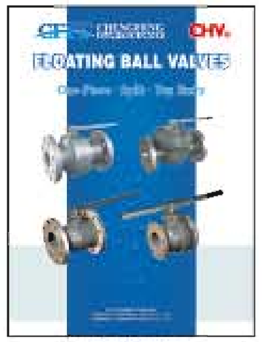
THE MOST COMPREHENSIVE INDUSTRIAL SOLUTION FOR FORGED STEEL AND CAST STEEL BALL, GATE, GLOBE, CHECK, PLUG, BUTTERFLY AND PIG VALVES

COMPLETE SOLUTIONS YOU CAN TRUST



CHV-TB



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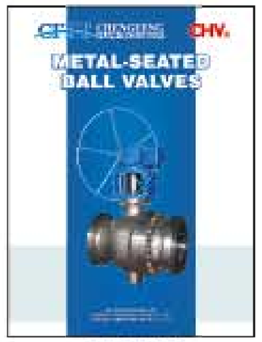

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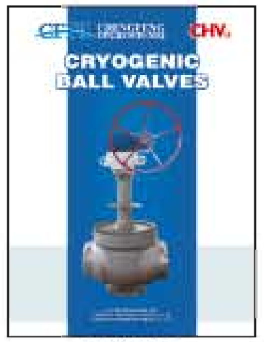
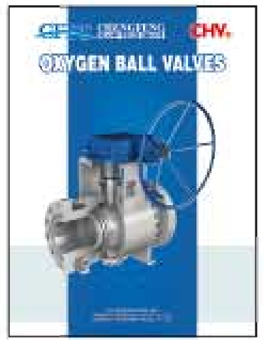


CHV-CB

CHV-DBB



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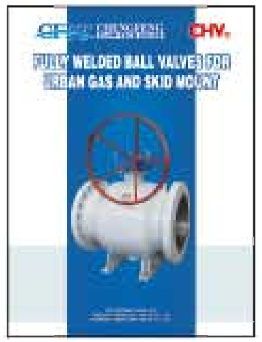

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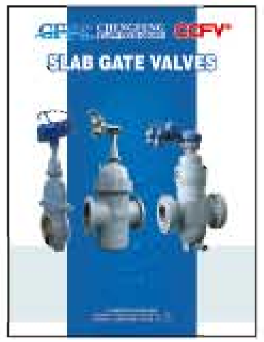

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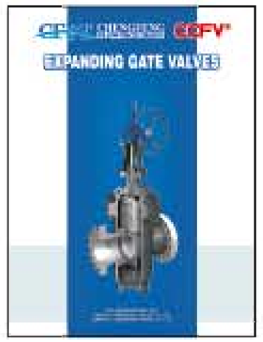

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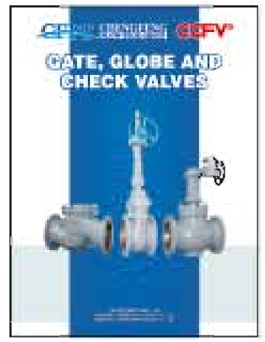
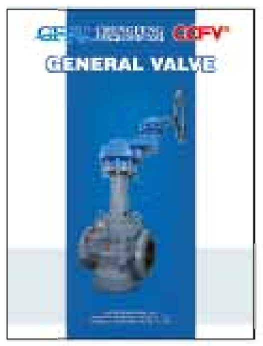
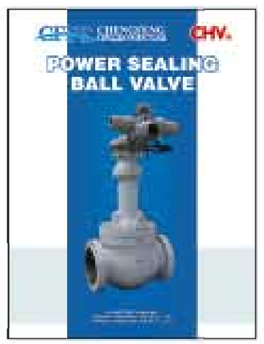


CCFV-GGC



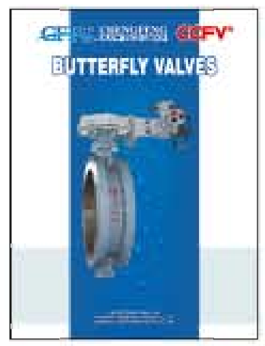
CCFV-GV

CCFV-PL

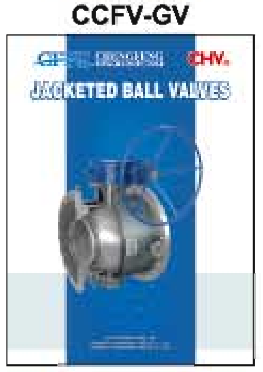


CHV-PSB

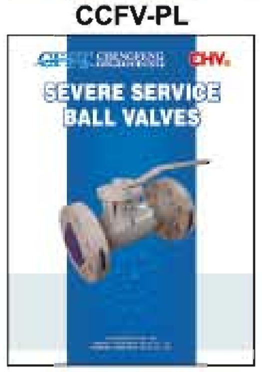
CHV-EB



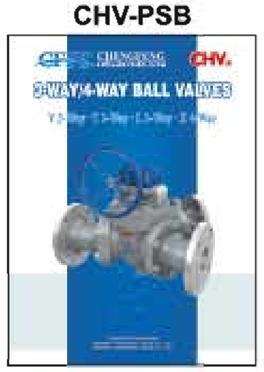
CCFV-TOB



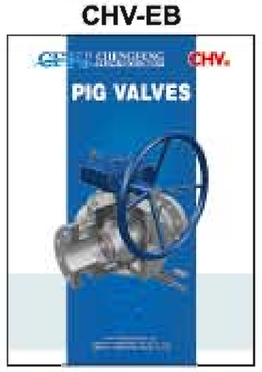
CHV-JV



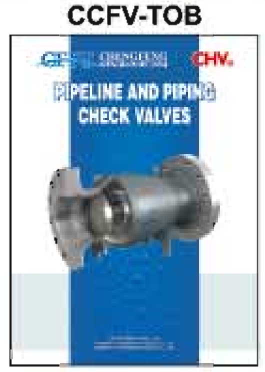
CHV-HS



CHV-WB



CHV-PV



CHV-CV

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CHV-FB-1601

CFFT CHENGFENG FLOW-TECH GROUP CHV®

FLOATING BALL VALVES

One-Piece · Split · Top Entry

CHV INTERNATIONAL, INC.
CHENGDU CHENGGAO VALVE CO., LTD.
CHENGDU CHENGFENG VALVE CO., LTD.

PROFILE

CHENGFENG FLOW-TECH GROUP

Chengfeng Flow-Tech Group, headquartered in Chengdu, China, is the leading flow technology company in China. Being a high-tech group specialized in R&D, manufacturing of industrial valves, and being one of the core suppliers to Petro-China, SINOPEC and CNOOC for decades, it has transformed into a multi-dimensional group that is committed to providing the most complete solutions to the oil&gas markets. With industry-leading facilities, innovative technical teams and highly professional engineers, its top-notch services cover various realms in the energy sector – valve manufacturing and maintenance, fluids equipment solutions, flow control solutions and industrial data analytics, etc.

Chengfeng's products have been widely used in the oil&gas pipelines, petrochemical industries, aerospace industry and power stations, etc. Chengfeng's top two brands, CHV and CCFV, have established the nationwide reputation for their quality and service. Now, Chengfeng Flow-Tech Group has begun its new adventure – serving the world market.

CHENGDU CHENGGAO VALVE CO., LTD. (CHV)

CHV was founded in 1993, and has been specialized in the R&D and manufacturing of mid&high end ball valves ever since. CHV offers complete ball valve product lines. Among all the product lines, the High Pressure Large Diameter Fully Welded Ball Valves have captured more than half the domestic fully welded ball valve market. High Temperature Metal-Seated Oxygen Ball Valve and NACE Ball Valve are also leading the domestic market.

CONTENTS

CHENGDU CHENGFENG VALVE CO., LTD. (CCFV)

CCFV was founded in 1966. Its main product lines include slab gate valves, expanding gate valves, tri-eccentric butterfly valves, check valves, globe valves and plug valves, etc. CCFV is leading the domestic slab gate valve market, taking up 70% of the oil transportation and storage sector.

CHV INTERNATIONAL, INC.

CHV International, Inc. is the newest branch of Chengfeng Flow-Tech Group. Based in Houston, Texas, U.S.A, its mission is to shorten the distance between the Group and the international market by providing faster response and better service to our customers around the globe.

CERTIFICATION

Chengfeng Flow-Tech Group's quality program is fully compliant with the industry's most stringent standards. The group holds all major certifications, including but not limited to API 6D, ISO 9001, ISO 14001, OHS 18001, CE, API 6FA, API 607 fire safety inspection certificate.






PRODUCT RANGE

RANGE

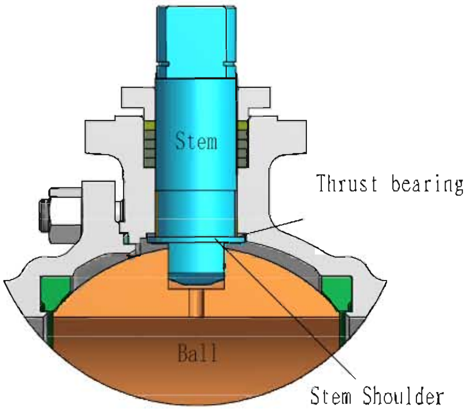
SERVICE	SIZE (NPS/DN) – PRESSURE RANGE		
	ASME CLASS 150	ASME CLASS 300	ASME CLASS 600
Cast Steel Split Body Floating Ball Valve (F10 Series)			
Standard	1/2–12 15–300	1/2–12 15–300	1/2–12 15–300
Low Temperature –46°C / –50°F	1/2–12 15–300	1/2–12 15–300	1/2–12 15–300
Forged Steel Split Body Floating Ball Valve (F11 Series)			
Standard	1/2–12 15–300	1/2–12 15–300	1/2–12 15–300
Low Temperature –46°C / –50°F	1/2–12 15–300	1/2–12 15–300	1/2–12 15–300
Cast Steel One–Piece Floating Ball Valve (F30 Series)			
Standard	1/2–12 15–300	1/2–12 15–300	N/A
Low Temperature –46°C / –50°F	1/2–12 15–300	1/2–12 15–300	N/A
Cast Steel Top Entry Floating Ball Valve (F40 Series)			
Standard	2–12 50–300	2–12 50–300	2–12 50–300
Low Temperature –46°C / –50°F	2–12 50–300	2–12 50–300	2–12 50–300

STANDARD & SPECIFICATIONS

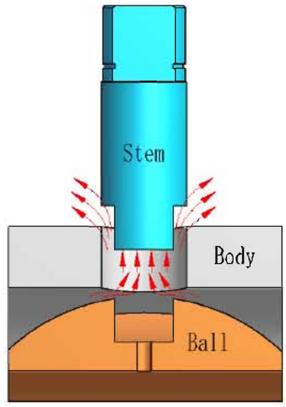
Design Standard	ISO 17292, API 608, ASME B16.34
Test Standard	ISO 17292, API 608, API 598
End Connection	ASME B16.5, ASME B31.8, ASME B16.25, etc.
Face–to–Face	ISO 17292, ASME B16.10
Fire Test	API 6FA, API 607
Anti–Corrosion, Acid–Resisting*	NACE MR0103, NACE MR0175, ISO 15156

*Optional, available upon request.

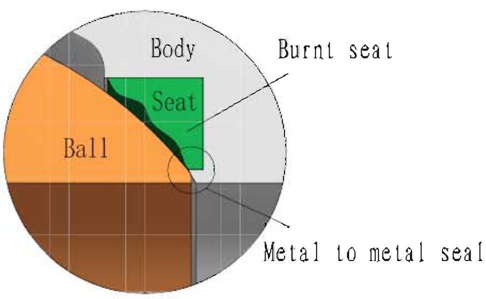
DESIGN FEATURES



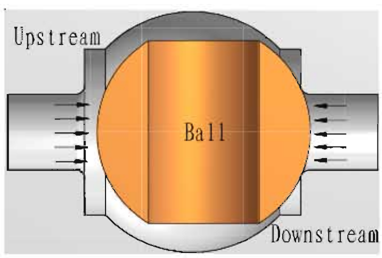
CHV Stem Structure



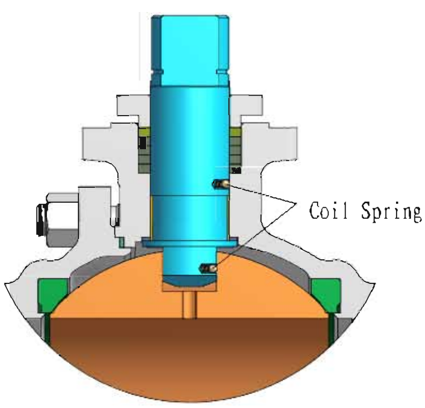
Stem Structure of
Common Ball Valve



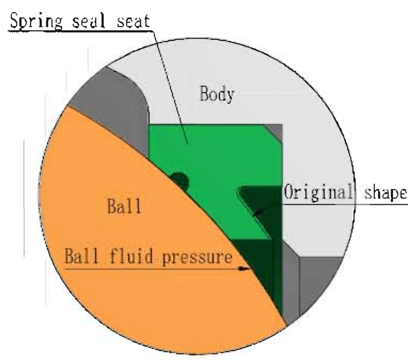
Seat Burnt



Downstream Metal Sealing



Anti-static Device



Downstream Side Seat

BLOW-OUT PROOF STEM

In floating ball valve, for the purpose of preventing the stem from flying off resulting in abnormal rising of the inner pressure of valve, shoulder is fixed at the lower part of the stem .In addition, in order to prevent leakage resulting from burnout of packing set of the stem in a fire, thrust bearing is set at the contact position of the shoulder at lower part of the stem and valve body. Thus an inverse seal seat is formed which will prevent leakage and deterioration of accident.

In common ball valve, if the packing is burnt, or in case of any defect in the gland of the packing set or the bolt, the stem is easy to fly off because of the inner pressure, which will result in outflow of fluid that may cause an accident and even make the accident more serious. That is forbidden by safety requirement.

FIRE SAFE CONSTRUCTION

In order to avoid serious leakage that support fire when fire or concentrate heat occur and the seat is burnt, in Floating ball valve, fireproof seal ring is set between the ball and the seat. when the seat is brunt, the medium pushes the ball to the metal seal ring at the lower part. metal-metal contact is formed. It enables sealing at a certain extent thus guarantee system safety.

ANTI-STATIC DEVICE

To prevent the friction static electricity between trim and sealing parts which may cause a static ignition to ignite flammable material in an easily arise accident conditions, CHV set anti-static spring assembly between stem and ball and between ball and body, so that static electricity can go through the anti-static spring assembly into the ground to ensure valve's security.

SPECIAL SEAT STRUCTURE

With years of experience in manufacturing, double-sealing seat structure of elastic force was designed. The seat possesses perfect sealing performances for high pressure, low pressure and vacuum state.

TESTING

≪ FIRE TESTS

Designed to meet API 6FA / API 607 standards, and passed the fire tests to meet the requirements, The certificate covers all CHV floating ball valves.

LIFE TESTS ≫

All CHV valves are rigorously tested to guarantee their life and reliability before sale.

≪ MANUFACTURING TESTS

Through rigorously sealing test and strength test, all CHV floating ball valves will meet the design standards and test requirements.

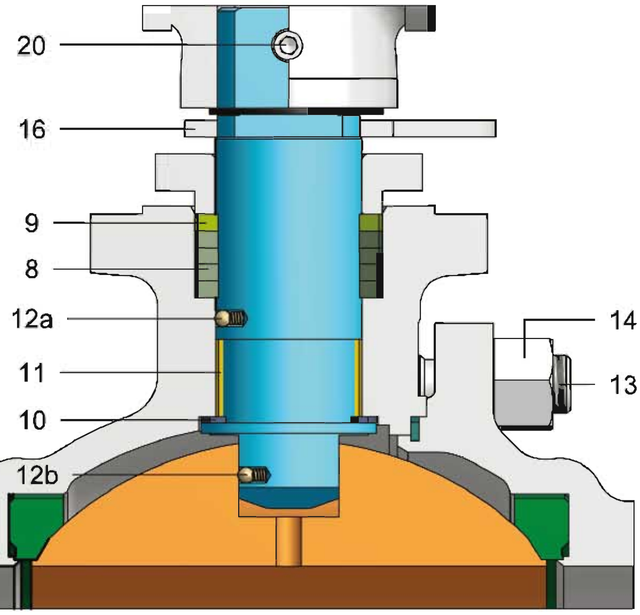
MATERIAL TESTS ≫

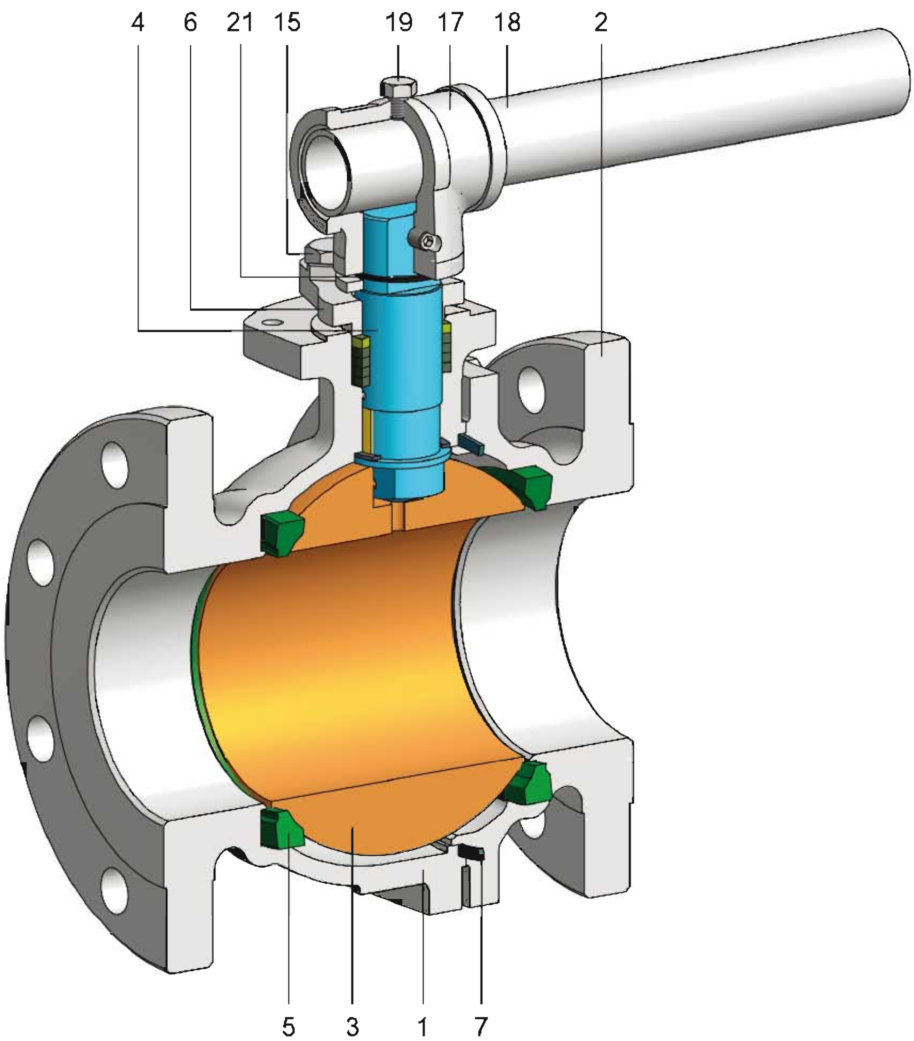
All raw materials can only be processed and assembled after strict quality tests, ensuring each part meets the its specific standards and factory specifications.

F10 SERIES PARTS LIST

CAST STEEL SPLIT BODY PARTS LIST			
1	Body	12a	Anti-static Device
2	End Cap	12b	Anti-static Device
3	Ball	13	Stud
4	Stem	14	Hexagon Nut
5*	Seat Inset	15	Bolt
6	Gland Flange	16	Stopper
7*	Spiral Wound Gasket	17	Connector
8*	Combined Packing	18	Handle
9*	Rectangular Packing	19	Bolt
10	Thrust Bearing	20	Set Screw
11	Sliding Bearing	21	Snap Ring

*Recommended spare parts

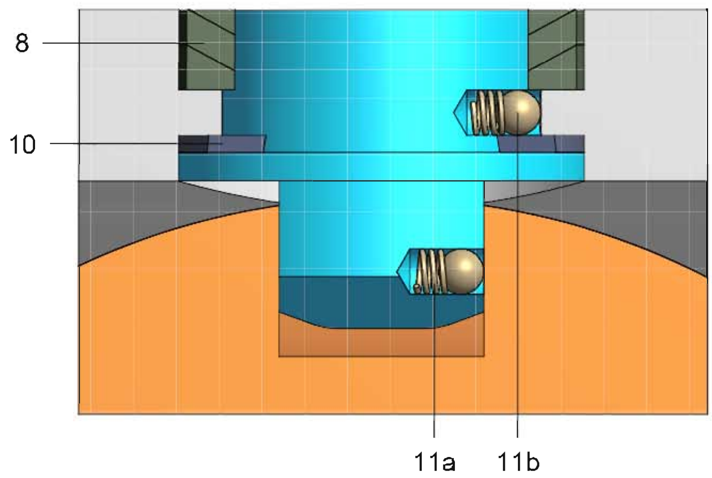


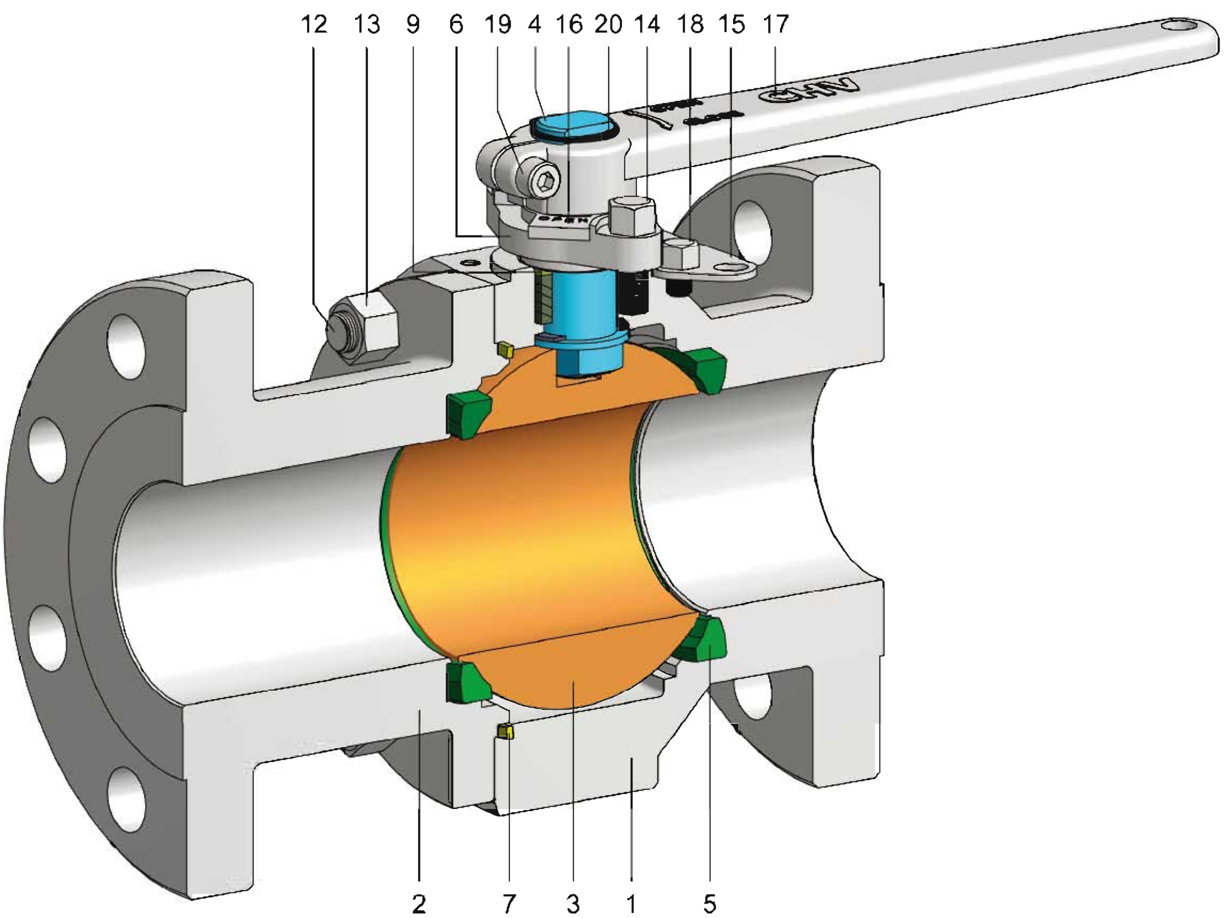


F11 SERIES PARTS LIST

FORGED STEEL SPLIT BODY (UP TO 4")			
1	Body	11b	Anti-static Device
2	End Cap	12	Stud
3	Ball	13	Hexagon Nut
4	Stem	14	Bolt
5*	Seat Insert	15	Locking Plate
6	Gland Flange	16	Stopper
7*	Spiral Wourd Gasket	17	Lever
8*	Combined Packing	18	Bolt
9*	Rectangular Packing	19	Head Bolt
10	Thrust Bearing	20	Snap Ring
11a	Anti-static Device		

*Recommended spare parts

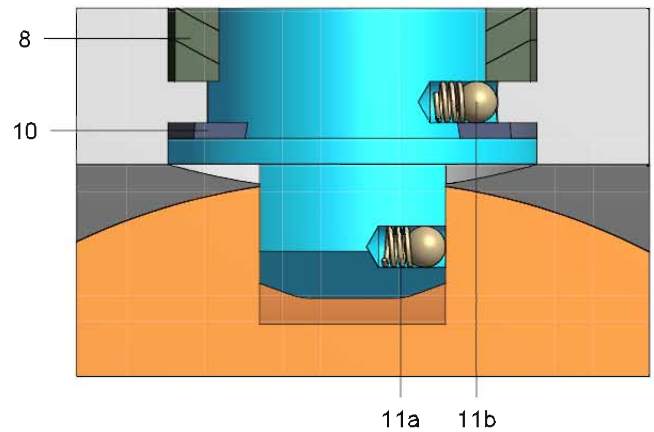


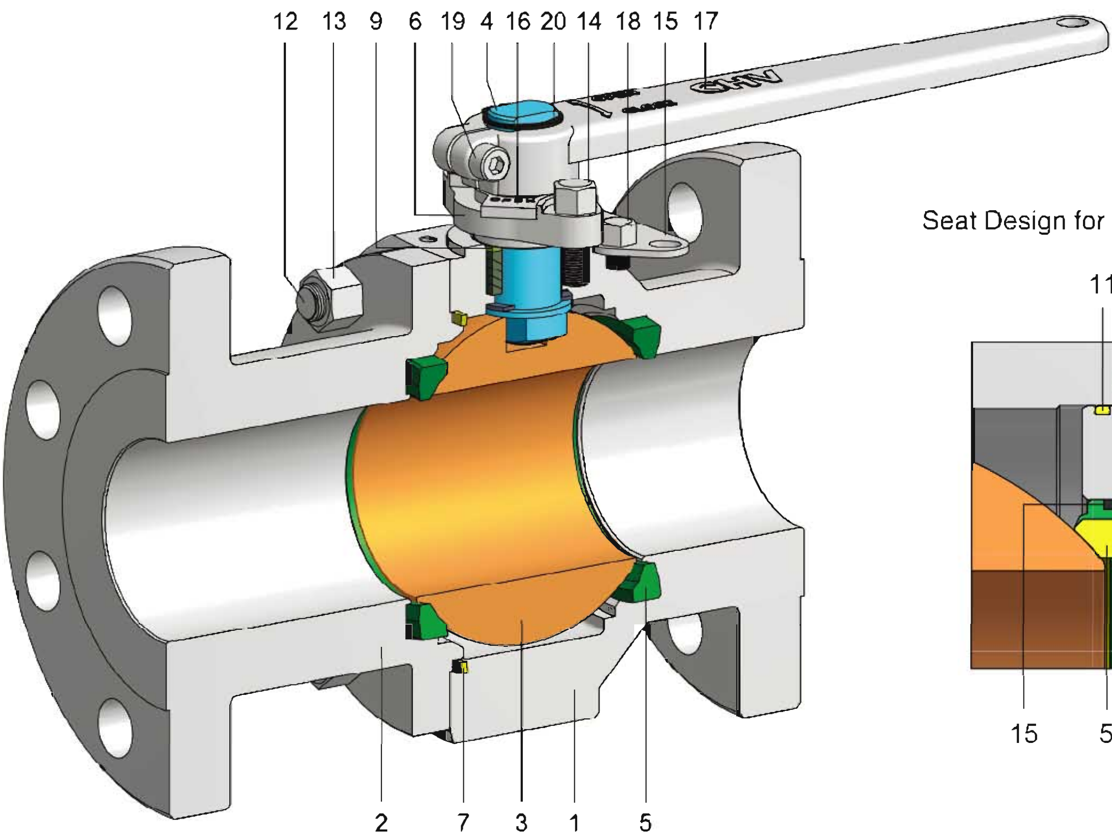


F11 SERIES PARTS LIST

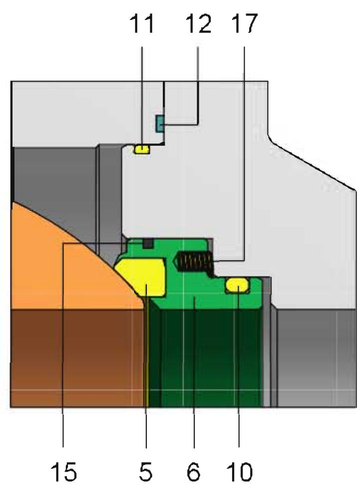
FORGED STEEL SPLIT BODY FLOATING BALL (4" AND ABOVE)					
1	Body	9*	O–ring	17	Coil Spring
2	End Cap	10△	O–ring	18a	Anti–static Device
3	Ball	11△	O–ring	18b	Anti–static Device
4	Stem	12△	Spiral Wound Gasket	19	Stud
5*	Seat	13*	Combined Packing	20	Stud
6	Seat Insert	14*	Rectangular Packing	21	Hexagon Nut
7	Gland Flange	15△	Graphite Rope	22	Hexagon Nut
8	Packing Ring	16	Thrust Bearing		

*Recommended spare parts;
△Only for Class 600 and above





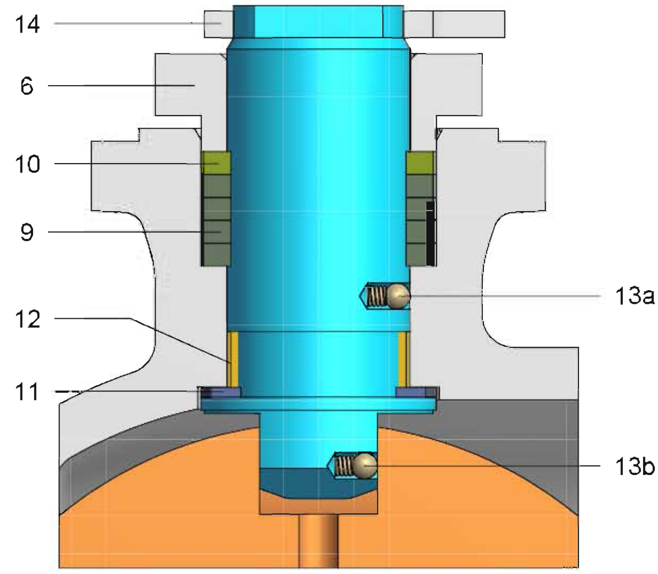
Seat Design for calss 600 and above

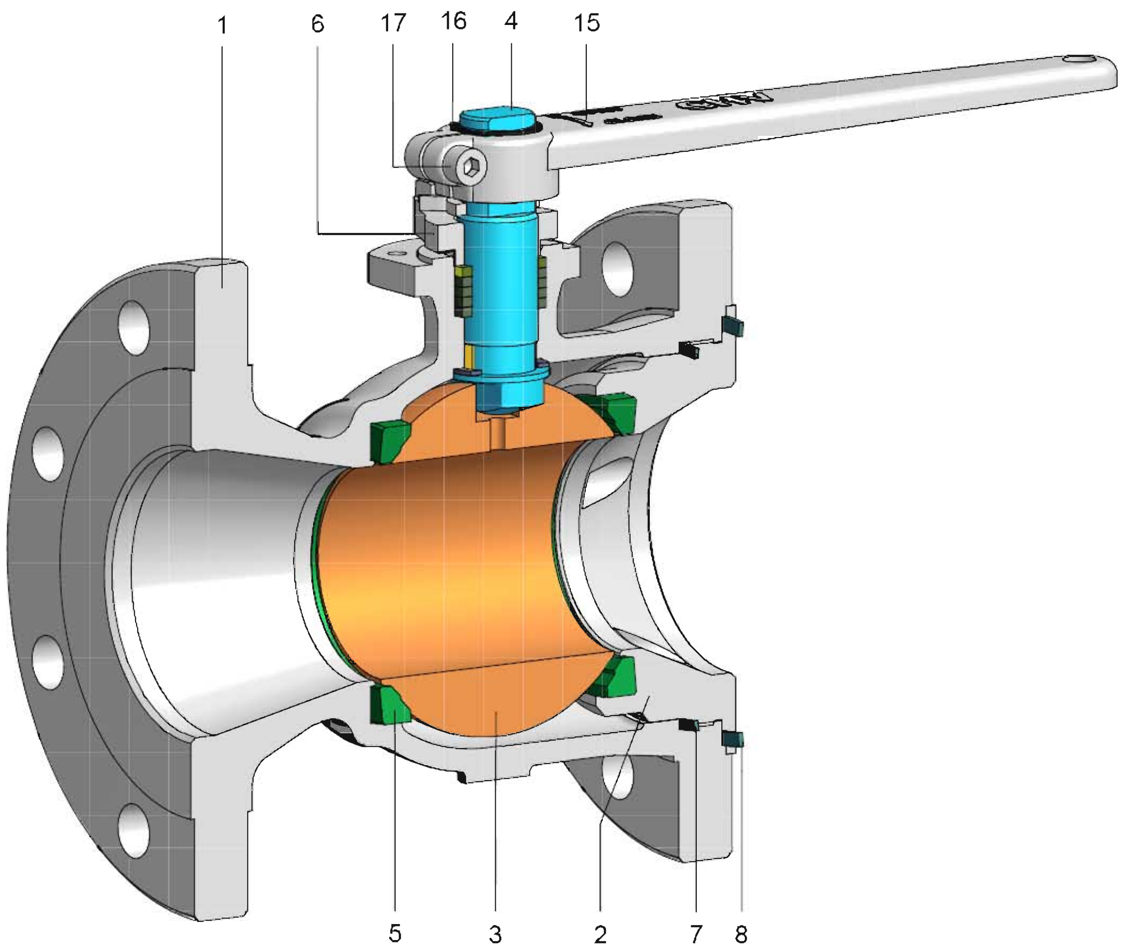


F30 SERIES PARTS LIST

CAST STEEL ONE–PIECE PARTS LIST			
1	Body	10*	Rectangular Packing
2	End Cap	11	Thrust Bearing
3	Ball	12	Sliding Bearing
4	Stem	13a	Anti–static Device
5*	Seat Insert	13b	Anti–static Device
6	Gland Flange	14	Stopper
7*	Gasket	15	Lever
8*	Spiral Wound Gasket	16	Snap Ring
9*	Combined Packing	17	Head Bolt

* Recommended spare parts

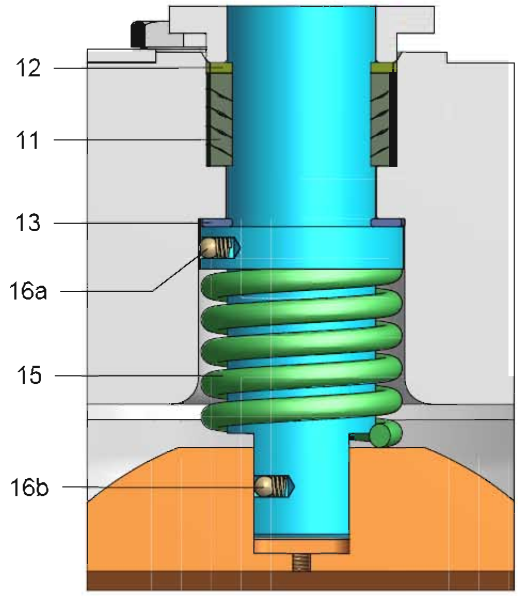


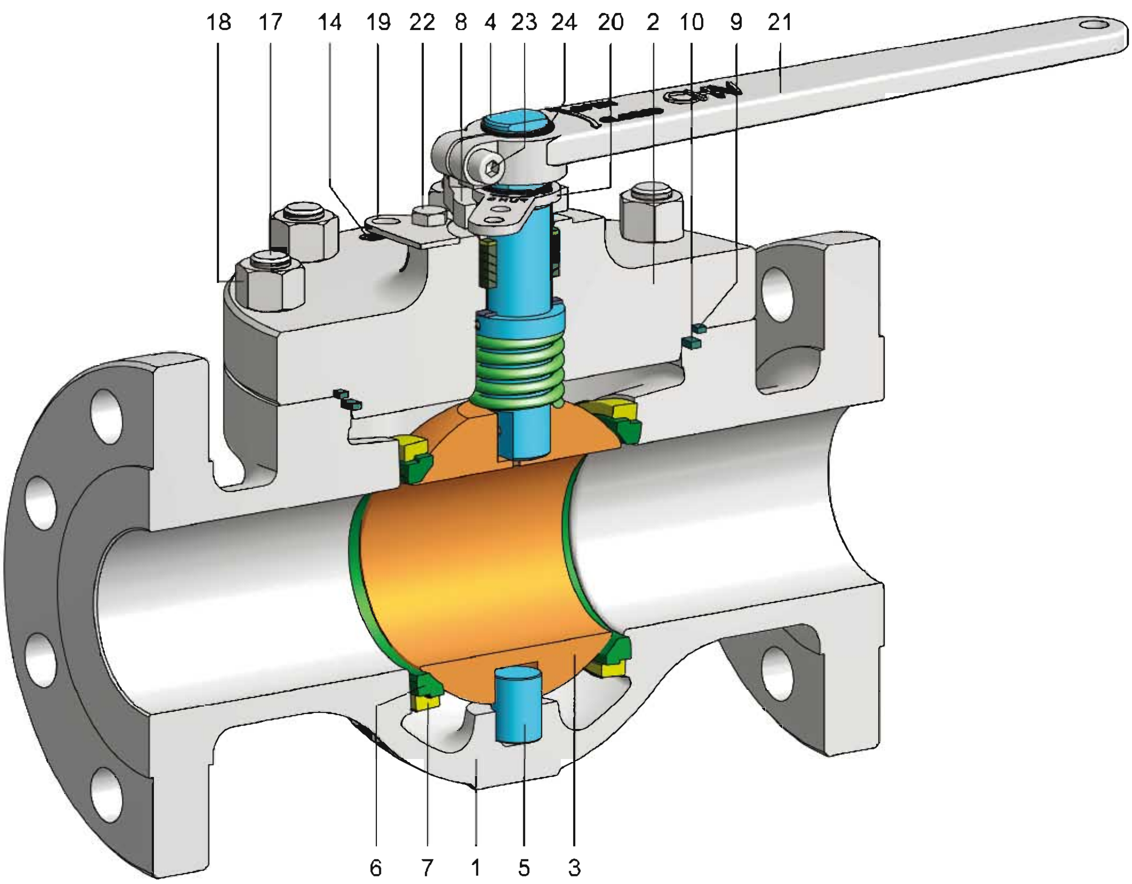


F40 SERIES PARTS LIST

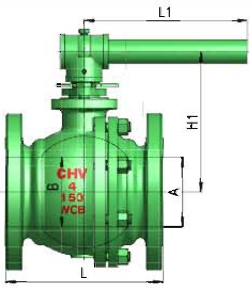
CAST STEEL TOP ENTRY PARTS LIST					
1	Body	10*	Spiral Wound Gasket	18	Hexagon Nut
2	Bonnet	11*	Combined Packing	19	Locking Plate
3	Ball	12*	Rectangular Packing	20	Stopper
4	Stem	13	Thrust Bearing	21	Lever
5	Trunnion	14	Pin	22	Bolt
6*	Seat	15	Coil Spring	23	Head Bolt
7	Seat Insert	16a	Anti–static Device	24	Snap Ring
8	Gland Flange	16b	Anti–static Device		
9*	Gasket	17	Stud		

* Recommended spare parts

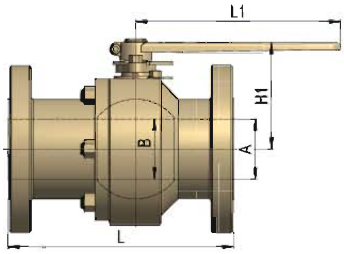




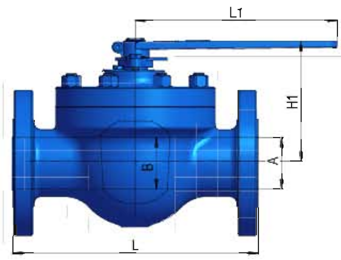
DIMENSIONS & WEIGHTS



F10 Series



F11 Series



F40 Series

ASME CLASS 150 FULL BORE

	All Types		F10 Series					F11 Series					F40 Series				
Size NPS/DN	A	B	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	H2	Weight* lb/Kg
1/2	0.50	0.50	4.25	5.51	3.20	5.91	5	4.25	5.51	3.23	5.91	8	–	–	–	–	–
15	13	13	108	140	81.3	150	2	108	140	82	150	4					
3/4	0.75	0.75	4.61	5.98	3.38	5.91	6	4.61	5.98	3.40	5.91	10	–	–	–	–	–
20	19	19	117	152	85.8	150	3	117	152	86.3	150	5					
1	1.00	1.00	5.00	6.50	3.90	7.09	10	5.00	6.50	3.96	7.09	17	–	–	–	–	–
25	25	25	127	165	99	180	5	127	165	100.5	180	8					
1 1/4	1.25	1.25	5.51	7.01	4.06	7.09	14	5.51	7.01	4.06	7.09	24	–	–	–	–	–
32	32	32	140	178	103	180	6	140	178	103	180	11					
1-1/2	1.50	1.50	6.50	7.48	5.24	11.02	15	6.50	7.48	4.74	11.02	26	–	–	–	–	–
40	38	38	165	190	133	280	7	165	190	120.5	280	12					
2	1.94	1.94	7.00	8.50	5.65	11.02	21	7.00	8.50	5.10	11.02	33	11.50	11.50	6.59	11.02	88
50	49	49	178	216	143.5	280	10	178	216	129.5	280	15	292	292	167.5	280	40
2-1/2	2.44	2.44	7.50	9.50	5.37	15.75	33	7.50	9.50	4.86	15.75	55	13.00	13.00	6.77	15.75	97
65	62	62	191	241	136.5	400	15	191	241	123.5	400	25	330	330	172	400	44
3	2.94	2.94	8.00	11.13	5.91	15.75	42	8.00	11.13	5.26	15.75	71	14.00	14.00	6.95	15.75	106
80	74	74	203	283	150	400	19	203	283	133.5	400	32	356	356	176.5	400	48
4	3.94	3.94	9.00	12.00	8.07	25.59	66	9.00	12.00	7.11	25.59	112	17.00	17.00	7.68	25.59	199
100	100	100	229	305	205	650	30	229	305	180.5	650	51	432	432	195	650	90
6	5.94	5.94	15.50	18.00	▲	▲	▲	15.50	18.00	▲	▲	▲	22.00	22.00	▲	▲	▲
150	150	150	394	457				394	457				559	559			
8	7.94	7.94	18.00	20.50	▲	▲	▲	18.00	20.50	▲	▲	▲	26.00	26.00	▲	▲	▲
200	201	201	457	521				457	521				660	660			
10	9.94	9.94	21.00	22.00	▲	▲	▲	21.00	22.00	▲	▲	▲	31.00	31.00	▲	▲	▲
250	252	252	533	559				533	559				787	787			
12	11.94	11.94	24.00	25.00	▲	▲	▲	24.00	25.00	▲	▲	▲	33.00	33.00	▲	▲	▲
300	303	303	610	635				610	635				838	838			

ASME CLASS 300 FULL BORE

	All Types		F10 Series					F11 Series					F40 Series				
Size NPS/DN	A	B	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	H2	Weight* lb/Kg
1/2	0.50	0.50	5.51	5.51	3.28	5.91	6	5.51	5.51	3.23	5.91	10	–	–	–	–	–
15	13	13	140	140	83.3	150	3	140	140	82	150	5					
3/4	0.75	0.75	5.98	5.98	3.38	5.91	8	5.98	5.98	3.40	5.91	14	–	–	–	–	–
20	19	19	152	152	85.8	150	4	152	152	86.3	150	6					
1	1.00	1.00	6.50	6.50	3.90	7.09	12	6.50	6.50	3.96	7.09	21	–	–	–	–	–
25	25	25	165	165	99	180	5.5	165	165	100.5	180	10					
1-1/4	1.25	1.25	7.01	7.01	4.06	7.09	15	7.01	7.01	4.06	7.09	26	–	–	–	–	–
32	32	32	178	178	103	180	7	178	178	103	180	12					
1-1/2	1.50	1.50	7.48	7.48	5.24	11.02	20	7.48	7.48	4.74	11.02	33	–	–	–	–	–
40	38	38	190	190	133	280	9	190	190	120.5	280	15					
2	1.94	1.94	8.50	8.50	5.65	11.02	29	8.50	8.50	5.10	11.02	49	11.50	11.50	6.59	11.02	95
50	49	49	216	216	143.5	280	13	216	216	129.5	280	22	292	292	167.5	280	43
2-1/2	2.44	2.44	9.50	9.50	5.37	15.75	46	9.50	9.50	4.86	15.75	79	13.00	13.00	6.77	15.75	110
65	62	62	241	241	136.5	400	21	241	241	123.5	400	36	330	330	172	400	50
3	2.94	2.94	11.13	11.13	5.91	15.75	60	11.13	11.13	5.26	15.75	99	14.00	14.00	6.95	15.75	121
80	74	74	283	283	150	400	27	283	283	133.5	400	45	356	356	176.5	400	55
4	3.94	3.94	12.00	12.00	8.07	25.59	88	12.00	12.00	7.11	25.59	154	17.00	17.00	7.68	25.59	220
100	100	100	305	305	205	650	40	305	305	180.5	650	70	432	432	195	650	100
6	5.94	5.94	15.88	18.00	▲	▲	▲	15.88	18.00	▲	▲	▲	22.00	22.00	▲	▲	▲
150	150	150	403	457				403	457				559	559			
8	7.94	7.94	19.75	20.50	▲	▲	▲	19.75	20.50	▲	▲	▲	26.00	26.00	▲	▲	▲
200	201	201	502	521				502	521				660	660			
10	9.94	9.94	22.38	22.00	▲	▲	▲	22.38	22.00	▲	▲	▲	31.00	31.00	▲	▲	▲
250	252	252	568	559				568	559				787	787			
12	11.94	11.94	25.50	25.00	▲	▲	▲	25.50	25.00	▲	▲	▲	33.00	33.00	▲	▲	▲
300	303	303	648	635				648	635				838	838			

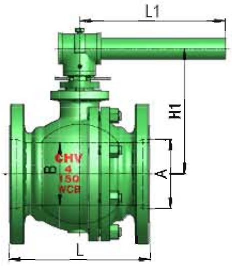
ASME CLASS 600 FULL BORE

	All Types		F10 Series					F11 Series					F40 Series				
Size NPS/DN	A	B	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	H2	Weight* lb/Kg
1/2	0.50	0.50	6.50	6.50	3.68	5.91	8	6.50	6.50	3.84	7.09	11	–	–	–	–	–
15	13	13	165	165	93.5	150	4	165	165	97.5	180	5					
3/4	0.75	0.75	7.48	7.48	3.98	7.09	14	7.48	7.48	3.98	7.09	18	–	–	–	–	–
20	19	19	190	190	101	180	6	190	190	101	180	8					
1	1.00	1.00	8.50	8.50	5.08	11.02	18	8.50	8.50	4.76	11.02	22	–	–	–	–	–
25	25	25	216	216	129	280	8	216	216	120.8	280	10					
1-1/4	1.25	1.25	9.02	9.02	5.12	11.02	24	9.02	9.02	4.87	11.02	31	–	–	–	–	–
32	32	32	229	229	130	280	11	229	229	123.8	280	14					
1-1/2	1.50	1.50	9.49	9.49	5.19	11.02	30	9.49	9.49	5.34	11.02	44	–	–	–	–	–
40	38	38	241	241	131.7	280	14	241	241	135.7	280	20					
2	1.94	1.94	11.50	11.50	4.94	15.75	53	11.50	11.50	4.70	15.75	66	11.50	11.50	7.87	15.75	115
50	49	49	292	292	125.5	400	24	292	292	119.5	400	30	292	292	200	400	52
2-1/2	2.44	2.44	13.00	13.00	6.71	25.59	88	13.00	13.00	6.36	25.59	110	13.00	13.00	8.86	25.59	126
65	62	62	330	330	170.5	650	40	330	330	161.5	650	50	330	330	225	650	57
3	2.94	2.94	14.00	14.00	7.01	25.59	126	14.00	14.00	7.52	25.59	159	14.00	14.00	9.45	25.59	143
80	74	74	356	356	178	650	57	356	356	173.5	650	72	356	356	240	650	65
4	3.94	3.94	17.00	17.00	▲	▲	▲	17.00	17.00	▲	▲	▲	17.00	17.00	▲	▲	▲
100	100	100	432	432				432	432				432	432			
6	5.94	5.94	22.00	22.00	▲	▲	▲	22.00	22.00	▲	▲	▲	22.00	22.00	▲	▲	▲
150	150	150	559	559				559	559				559	559			
8	7.94	7.94	26.00	26.00	▲	▲	▲	26.00	26.00	▲	▲	▲	26.00	26.00	▲	▲	▲
200	201	201	660	660				660	660				660	660			
10	9.94	9.94	31.00	31.00	▲	▲	▲	31.00	31.00	▲	▲	▲	31.00	31.00	▲	▲	▲
250	252	252	787	787				787	787				787	787			
12	11.94	11.94	33.00	33.00	▲	▲	▲	33.00	33.00	▲	▲	▲	33.00	33.00	▲	▲	▲
300	303	303	838	838				838	838				838	838			

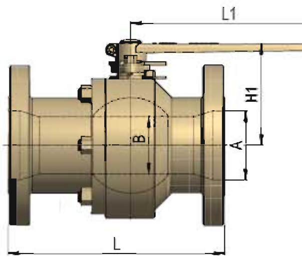
*Weight figures are relevant to flanged end valves. "▲" indicates Gears adopted, the meight of Gears NOT included, please contact the manufacture for more details.

Note: For dimensions & weights in larger sizes consult the factory.
Dimensions and weighes are subject to change without notice.
Face to face dimensions not listed in industry standards are subject to change without notice.
Gears can be adopted for all the valves above.

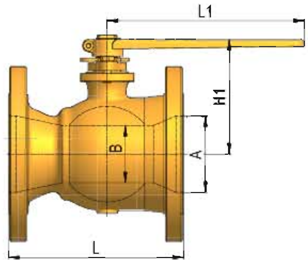
DIMENSIONS & WEIGHTS



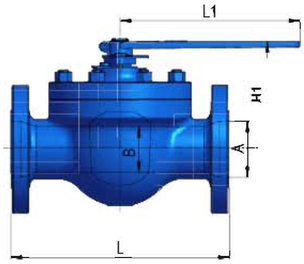
F10 Series



F11 Series



F30 Series



F40 Series

ASME CLASS 150 REDUCED BORE

All Types			F10 Series					F11 Series					F30 Series					F40 Series				
Size NPS/DN	A	B	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	L1	Weight	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	L1	Weight* lb/Kg
1 × 3/4	1.00	0.75	5.00	6.50	3.38	5.91	8	5.00	6.50	3.40	5.91	14	5.00	6.50	3.94	5.91	5	–	–	–	–	–
25 × 20	25	19	127	165	85.8	150	4	127	165	86.3	150	6	127	165	100	150	2					
1-1/2 × 1	1.50	1.00	6.50	7.48	3.90	7.09	12	6.50	7 48	3.96	7.09	20	6.50	7.48	4.13	7.09	6	–	–	–	–	–
40 × 25	38	25	165	190	99	180	5.5	165	190	100.5	180	9	165	190	105	180	3					
2 × 1-1/2	1.94	1.50	7.01	8.50	5.24	11.024	18	7.01	8.50	4.74	11.02	31	7.01	8.50	5.20	11.02	12	–	–	–	–	–
50 × 40	49	38	178	216	133	280	8	178	216	120.5	280	14	178	216	132	280	5.5					
3 × 2	2.94	1.94	8.00	11.13	5.65	11.02	31	8.00	11.13	5.10	11.02	53	8.00	11.13	5.20	11.02	20	14.00	14.00	6.59	11.02	97
80 × 50	74	49	203	283	143.5	280	14	203	283	129.5	280	24	203	283	132	280	9	356	356	167.5	280	44
4 × 3	3.94	2.94	9.00	12.00	5.91	15.75	51	9.00	12.00	5.26	15.75	86	9.00	12.00	5.55	15.75	35	17.00	17.00	6.95	15.75	121
100 × 80	100	74	229	305	150	400	23	229	305	133.5	400	39	229	305	141	400	16	432	432	176.5	400	55
6 × 4	5.94	3.94	15.50	18.00	8.07	25.5	121	15.50	18.00	7.11	25.5	210	15.50	18.00	6.10	25.59	56	22.00	22.00	7.68	25.59	243
150 × 100	150	100	394	457	205	650	55	394	457	180.5	650	95	394	457	155	650	26	559	559	195	650	110
8 × 6	7.94	5.94	18.00	20.50	▲	▲	▲	18.00	20.50	▲	▲	▲	18.00	20.50	▲	▲	▲	26.00	26.00	▲	▲	▲
200 × 150	201	150	457	521				457	521				457	521				660	660			
10 × 8	9.94	7.94	21.00	22.00	▲	▲	▲	21.00	22.00	▲	▲	▲	21.00	22.00	▲	▲	▲	31.00	31.00	▲	▲	▲
250 × 200	252	201	533	559				533	559				533	559				787	787			
12 × 10	11.94	9.94	24.00	25.00	▲	▲	▲	24.00	25.00	▲	▲	▲	24.00	25.00	▲	▲	▲	33.00	33.00	▲	▲	▲
300 × 250	303	252	610	635				610	635				610	635				838	838			
14 × 12	13.19	11.94	27.00	30.00	▲	▲	▲	27.00	30.00	▲	▲	▲	27.00	30.00	▲	▲	▲	35.00	35.00	▲	▲	▲
350 × 300	334	303	686	762				686	762				686	762				889	889			

ASME CLASS 300 REDUCED BORE

All Types			F10 Series					F11 Series					F30 Series					F40 Series				
Size NPS/DN	A	B	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	L1	Weight* lb/Kg
1 × 3/4	1.00	0.75	6.50	6.50	3.38	5.91	8	6.50	6.50	3.40	5.91	14	6.50	6 50	3.94	5.91	6	–	–	–	–	–
25 × 20	25	19	165	165	85.8	150	4	165	165	86.3	150	6	165	165	100	150	3					
1-1/2 × 1	1.50	1.00	7.48	7.48	3.90	7.09	14	7.48	7.48	3.96	7.09	22	7.48	7.48	4.13	7.09	10	–	–	–	–	–
40 × 25	38	25	190	190	99	180	6	190	190	100.5	180	10	190	190	105	180	5					
2 × 1-1/2	1.94	1.50	8.50	8.50	5.24	11.024	24	8.50	8.50	4.74	11.02	42	8.50	8.50	5.31	11.02	19	–	–	–	–	–
50 × 40	49	38	216	216	133	280	11	216	216	120.5	280	19	216	216	135	280	9					
3 × 2	2.94	1.94	11.13	11.13	5.65	11.02	46	11.13	11.13	5.0984	11.02	79	11.13	11.13	5.20	11.02	24	14.00	14.00	6.59	11.02	110
80 × 50	74	49	283	283	143.5	280	21	283	283	129.5	280	36	283	283	132	280	11	356	356	167.5	280	50
4 × 3	3.94	2.94	12.00	12.00	5.91	15.75	84	17.00	12.00	5.26	15.75	143	12.00	12.00	5.55	15.75	49	17.00	17.00	6.95	15.75	139
100 × 80	100	74	305	305	150	400	38	432	305	133.5	400	65	305	305	141	400	22	432	432	176.5	400	63
6 × 4	5.94	3.94	15.88	18.00	8.07	25.59	143	15.88	18.00	7.11	25.59	243	15.88	18.00	6.10	25.59	79	22.00	22.00	7.68	25.59	254
150 × 100	150	100	403	457	205	650	65	403	457	180.5	650	110	403	457	155	650	36	559	559	195	650	115
8 × 6	7.94	5.94	19.75	20.50	▲	▲	▲	19.75	20.50	▲	▲	▲	19.75	20.50	▲	▲	▲	26.00	26.00	▲	▲	▲
200 × 150	201	150	502	521				502	521				502	521				660	660			
10 × 8	9.94	7.94	22.38	22.00	▲	▲	▲	22.38	22.00	▲	▲	▲	22.38	22.00	▲	▲	▲	31.00	31.00	▲	▲	▲
250 × 200	252	201	568	559				568	559				568	559				787	787			
12 × 10	11.94	9.94	25.50	25.00	▲	▲	▲	25.50	25.00	▲	▲	▲	25.50	25.00	▲	▲	▲	33.00	33.00	▲	▲	▲
300 × 250	303	252	648	635				648	635				648	635				838	838			
14 × 12	13.19	11.94	30.00	30.00	▲	▲	▲	30.00	30.00	▲	▲	▲	30.00	30.00	▲	▲	▲	35.00	35.00	▲	▲	▲
350 × 300	334	303	762	762				762	762				762	762				889	889			

ASME CLASS 600 REDUCED BORE

All Types			F10 Series					F11 Series					F40 Series				
Size NPS/DN	A	B	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	L1	Weight* lb/Kg	L-RF	L-BW	H1	H2	Weight* lb/Kg
1 × 3/4	1.00	0.75	8.50	8.50	3.98	7.09	18	8.50	8.50	3.98	7.09	22	–	–	–	–	–
25 × 20	25	19	216	216	101	180	8	216	216	101	180	10					
1-1/2 × 1	1.50	1.00	9.49	9.49	5.08	11.02	29	9.49	9.49	4.76	11.02	37	–	–	–	–	–
40 × 25	38	25	241	241	129	280	13	241	241	120.8	280	17					
2 × 1-1/2	1.94	1.50	11.50	11.50	5.34	11.024	37	11.50	11.50	5.34	11.02	46	–	–	–	–	–
50 × 40	49	38	292	292	135.7	280	17	292	292	135.7	280	21					
3 × 2	2.94	1.94	14.00	14.00	4.94	15.75	75	14.00	14.00	4.70	15.75	93	14.00	14.00	7.87	15.75	132
80 × 50	74	49	356	356	125.5	400	34	356	356	119.5	400	42	356	356	200	400	60
4 × 3	3.94	2.94	17.00	17.00	7.01	25.59	190	17.00	17.00	7.52	25.59	243	17.00	17.00	9.45	25.59	165
100 × 80	100	74	432	432	178	650	86	432	432	173.5	650	110	432	432	240	650	75
6 × 4	5.94	3.94	22.00	22.00	▲	▲	▲	22.00	22.00	▲	▲	▲	22.00	22.00	▲	▲	▲
150 × 100	150	100	559	559				559	559				559	559			
8 × 6	7.94	5.94	26.00	26.00	▲	▲	▲	26.00	26.00	▲	▲	▲	26.00	26.00	▲	▲	▲
200 × 150	201	150	660	660				660	660				660	660			
10 × 8	9.94	7.94	31.00	31.00	▲	▲	▲	31.00	31.00	▲	▲	▲	31.00	31.00	▲	▲	▲
250 × 200	252	201	787	787				787	787				787	787			
12 × 10	11.94	9.94	33.00	33.00	▲	▲	▲	33.00	33.00	▲	▲	▲	33.00	33.00	▲	▲	▲
300 × 250	303	252	838	838				838	838				838	838			
14 × 12	13.19	11.94	35.00	35.00	▲	▲	▲	35.00	35.00	▲	▲	▲	35.00	35.00	▲	▲	▲
350 × 300	334	303	889	889				889	889				889	889			

*Weight figures are relevant to flanged end valves. "▲" indicates Gears adopted, the meight of Gears NOT included, please contact the manufacture for more details.

Note: For dimensions & weights in larger sizes consult the factory.
Dimensions and weighes are subiect to change without notice.
Face to face dimensions not listed in industry standards are subject to change without notice.
Gears can be adopted for all the valves above.

ENGINEERING DATA

BODY & TRIM MATERIAL

CARBON	AUSTENITIC STAINLESS STEEL	NICKEL ALLOYS
A105N A216 WCB A216 WCC	A182 F304 A182 F316	Incoloy 825 (UNS N08825)
LOW TEMPERATURE STEEL	A182 F304L A182 F316L	Incoloy 925 (UNS N09925)
A350 LF2 A352 LCB A352 LCC	A182 F347 A182 FXM-19(Nitronic 50)	Inconel 625 (UNS N06625)
LOW ALLOY STEEL	A351 CF8M A351 CF3 A351 CF3M	Inconel 718 (UNS N07718)
AISI 4140 A694 F65 A694 F52	**PRECIPITATION HARDENING STAINLESS STEEL**	Inconel 750 (UNS N07750)
A694 F60 A350 LF3	A564 Gr.630 (UNS S17400)	Monel 400
MARTENSITIC STAINLESS STEEL	**DUPLEX STAINLESS**	Monel K500
A182 F6A A182 F6NM	A182 F51(UNS S31803) A182 F53 (UNS S31750)	
A217 CA15 A487 CA6NM	A182 F55(UNS S31760) A995 4A (UNS J92205)	
	A995 5A(UNS J93404)	

VALVE TESTING

All valves manufactured by CHV are tested in compliance with ISO 17292 requirements, prior to shipping.

LEAKAGE RATES

Standard	Soft Seated	Metal-Seated	Cryogenic
ISO 17292	ISO 17292	ISO 17292	(1)

(1) Please consult the factory.

STANDARD PERFORMANCE TESTS

- Visual & dimensional check
- High pressure hydrostatic shell test
- High pressure hydrostatic seats test
- Low pressure air seats test
- Stem torque check

RATING & TEST PRESSURES AT AMBIENT TEMPERATURE (ASME B16.34 GROUP 1.1 MATERIALS)

ASME CLASS	RATING(1)			BODY TEST			H.P. SEAT TEST			AIR SEAT TEST		
	psi	bar	kgf/cm²	psi	bar	kgf/cm²	psi	bar	kgf/cm²	psi	bar	kgf/cm²
150	285	19.6	20	428	29.4	30	314	21.6	22	100	6.9	7
300	740	51.1	52	1110	76.7	78	814	56.2	57	100	6.9	7
600	1480	102.1	104	2220	153.2	156	1628	112.3	115	100	6.9	7

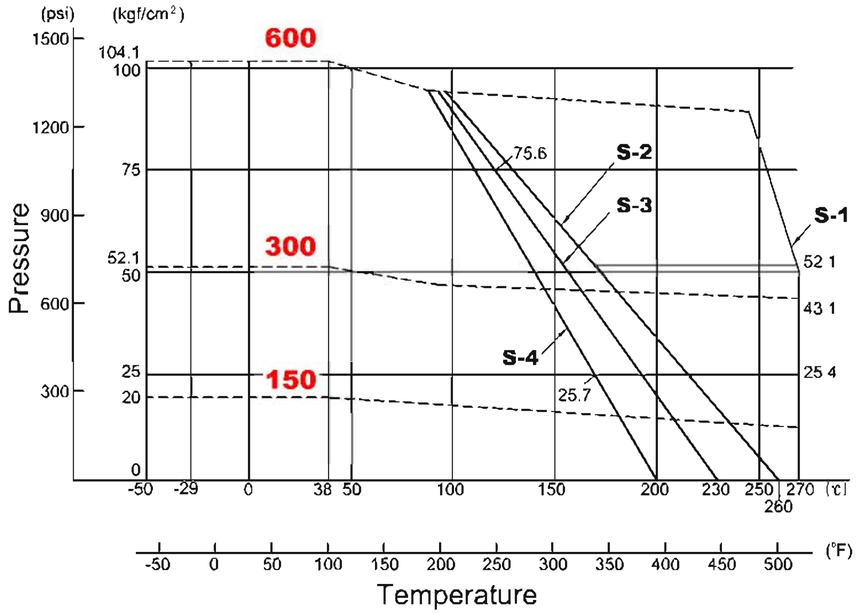
(1) Typical only - Rating pressure may change for different materials.

Conversion Factors 1 bar =14.50 psi 1 kgf/cm^2= 0.981 bar 1 bar = 100 kpa 1 kgf/cm^2 = 14.22 psi

1 °F = (1.8 x °C) +32 1°C = (°F-32) / 1.8

SEAT TEMPERATURE-PRESSURE RATING

Class 150 / 300 / 600



Seat Seal

S-1: PEEK

S-2: Carbon Fiber + PTFE

S-3: (1) Glass Fiber + PTFE

(2) Glass Fiber + PTFE + MoS2

S-4: Virgin PTFE

S-5: Nylon + MoS2

S-6: PPL

HOW TO ORDER

PLEASE PROVIDE FOLLOWING INFORMATION :

1. Max./Min. OperatingPressure, Max. /Min. Service Temp, Special Flow/Service Environment Requirements.
2. Design Standard (ISO 17292, ASME B16.34, API 608 or Other).
3. Test Requirements (Standard Package, UT, PT, MT, RT, High Pressure (N2/Air), Low Emission, Low Temp. or other).
4. Other Requirements (Mating Flange, PUP, Third-party Inspection or other).

A —	B —	C	D —	E —	F	G	H	I	J —	K
MODEL	SIZE	PRESSURE RATING	CONNECTION	ACTUATION	BODY MATERIAL	SEALS	TRIM MATERIAL	TRIM COATING	BOLTS&NUTS	SPECIAL REQUIREMENTS
F10	6	600	RF	W	C5	FV	002	1	B2	BZ

EXAMPLE: F10-6-600RF-W-C5FV0021B2-BZ

Cast steel split body floating ball valve, 6" full size, ASME 600, Flanged RF, Wrench, A105N body, RPTFE seat, A105N trim, ENP trim coating, B7/2H bolts & nuts, Bolts & nuts coating zinc plating.

A	MODEL		
CODE	TYPE	CODE	TYPE
F10	Cast Steel Split Body Floating Ball Valve	F30	Cast Steel One-Piece Floating Ball Valve
F11	Forged Steel Split Body Floating Ball Valve	F40	Cast Steel Top Entry Floating Ball Valve

B	SIZE		
FULL BORE		REDUCED BORE	
CODE	NPS(DN)	CODE	NPS(DN)
1/2	1/2(15)	1 × 3/4	1 × 3/4(25 × 20)
3/4	3/4(20)	1-1/2 × 1	1-1/2 × (40 × 20)
1	1(25)	2 × 1-1/2	2 × 1-1/2(50 × 40)
1-1/4	1-1/4(32)	3 × 2	3 × 2(80 × 50)
1-1/2	1-1/2(40)	4 × 3	4 × 3(100 × 80)
2	2(50)	6 × 4	6 × 4(150 × 100)
2-1/2	2-1/2(65)	8 × 6	8 × 6(200 × 150)
3	3(80)	10 × 8	10 × 8(250 × 200)
4	4(100)	12 × 10	12 × 10(300 × 250)
6	6(150)	14 × 12	14 × 12(350 × 300)
8	8(2000		
10	10(150)		
12	12(300)		

C	PRESSURE RATING		
CODE	TYPE	CODE	TYPE
150	ASME 150	1.6P	PN 16
300	ASME 300	3.2P	PN 32
400	ASME 400	6.4P	PN 64
600	ASME 600	8P	PN 80
		10P	PN 100

D	CONNECTION		
CODE	TYPE	CODE	TYPE
RF	Flanged RF-B16.5(NPS 1/2~NPS 24)	BW	Butt Weld-ASME B31.8*
RJ	Flanged RJ-B16.5(NPS 1/2~NPS 24)	XX	Others
SW	Socket Weld-ASME B16.11		
ET	External Thread-ASME B1.20.1		

*For weld end valves, specify ID or OD, wall thickness and grade of pipe.

E	ACTUATION		
CODE	TYPE	CODE	CODE
B	Bare Stem	S	Pneumatic-Spring Return
W	Wrench	D	Pneumatic-Double Acting
G	Worm Gear	M	Gas- Hydraulic
E	Electric	N	Electro-Hydraulic
H	Hydraulic	X	Others

Type operator desired (electric, hydraulic, pneumatic), provide following information:
1. Speed of opening and closing, probable frequency of operation.
2. Accessories and controls (limit switches, valving, instrumentation, tanks, pumps, etc).
3. Information on operating medium. (If electric: voltage, frequency, single-or three-phase, open-or explosion-proof motor, If hydraulic or pneumatic: operating medium and pressure. etc.)

F	BODY MATERIAL							
CODE	BODY	CLOSURES(SPLIT-BODY) BONNET(TOP ENTRY) END CONNECTION(FOR BW)	CODE	BODY	CLOSURES(SPLIT-BODY) BONNET(TOP ENTRY) END CONNECTION(FOR BW)	CODE	BODY	CLOSURES(SPLIT-BODY) BONNET(TOP ENTRY) END CONNECTION(FOR BW)
C1	A216 WCB	A216 WCB	S8	A182 F316L	A182 F316L	AA	A350 LF2	A350 LF6 CL1
C2	A216 WCC	A216 WCC	D0	A995 4A(UNS J92205)	A995 4A(UNS J92205)	AB	A350 LF2	A350 LF6 CL2
C5	A105N	A105N	D1	A995 5A(UNS J93404)	A995 5A(UNS J93404)	AC	A105N	A216 WCB
L1	A352 LCB	A352 LCB	D5	A182 F51(UNS S31803)	A182 F51(UNS S31803)	AD	A105N	A350 LF2
L2	A352 LCC	A352 LCC	D6	A182 F53(UNS S32750)	A182 F53(UNS S32750)	AE	A350 LF2	A352 LCB
L5	A350 LF2	A350 LF2	D7	A182 F55(UNS S32760)	A182 F55(UNS S32760)	AF	A350 LF2	A694 F60
S0	A351 CF8	A351 CF8	D8	A182 F60(UNS S32205)	A182 F60(UNS S32205)	AH	A105N	A350 LF6 CL2
S1	A351 CF3	A351 CF3	I5	INCONEL 600(UNS N06600)	INCONEL 600(UNS N06600)	AL	A105N	A350 LF6 CL1
S2	A351 CF8M	A351 CF8M	I6	INCONEL 625(UNS N06625)	INCONEL 625(UNS N06625)	AM	A216 WCB	A105N
S3	A351 CF3M	A351 CF3M	I7	CW6MC(UNSN26625)	CW6MC(UNSN26625)	XX	Others	Others
S5	A182 F304	A182 F304	I8	INCOLOY 825(UNS N08825)	INCOLOY 825(UNS N08825)			
S6	A182 F316	A182 F316	M6	MONEL K500(UNS N05500)	MONEL K500(UNS N05500)			
S7	A182 F304L	A182 F304L	H5	HASTELLOY C-276 (UNS N10276)	HASTELLOY C-276 (UNS N10276)			

G	SEALS(1)							
CODE	SEAT INSERT	O-Ring	CODE	SEAT INSERT	O-Ring	CODE	SEAT INSERT	O-Ring
FV	RPTFE	VITON-B	DT	DEVLON	VITON-GLT	YH	N/A(2)	HNBR
FH	RPTFE	HNBR	DQ	DEVLON	PTFE-Elgiloy Spring	YG	N/A(2)	VITON-GF
FG	RPTFE	VITON-GF	KV	PEEK	VITON-B	YT	N/A(2)	VITON-GLT
FT	RPTFE	VITON-GLT	KH	PEEK	HNBR	YQ	N/A(2)	PTFE-Elgiloy Spring
FQ	RPTFE	PTFE-Elgiloy Spring	KG	PEEK	VITON-GF	PQ	PCTFE	PTFE-Elgiloy Spring
DV	DEVLON	VITON-B	KT	PEEK	VITON-GLT	XX	Others	Others
DH	DEVLON	HNBR	KQ	PEEK	PTFE-Elgiloy Spring	(1) All seals on gaskets are Graphite.		
DG	DEVLON	VITON-GF	YV	N/A(2)	VITON-B	(2) Metal-to-Metal.		

H	TRIM MATERIAL						
CODE	BALL	SEAT RINGS	STEM	CODE	BALL	SEAT RINGS	STEM
002	A105N	A105N	AISI 4140	405	A182 F316	A182 F316	A182 F51(UNS S31803)
004	A105N	A182 F304	AISI 4140	409	A182 F316	A182 F316	HASTELLOY C-276 (UNS N10276)
008	A105N	N/A	AISI 4140	411	A182 F316	A182 F316	A182 FXM-19(UNSS20910)
012	A105N	A182 F6A	AISI 4140	501	A182 F304L	A182 F304L	A182 F304L
017	A105	A105N	A182 F316	502	A182 F304L	A182 F304L	A182 F51(UNS S31803)
019	A105	A105N	A564 GR.630(UNS S17400)	503	A182 F304L	N/A	A564 GR.630(UNS S17400)
020	A105N	A105N	A182 F6A	602	A182 F316L	N/A	A182 F316L
021	A105N	A105N	AISI 4140	603	A182 F316L	A182 F316L	A182 F51(UNS S31803)
081	A694 F60	A105N	A694 F60	605	A182 F316L	A182 F316L	A564 GR.630(UNS S17400)
101	A350 LF2	A350 LF2	A350 LF2	606	A182 F316L	N/A	A182 F51(UNS S31803)
102	A350 LF2	A350 LF2	AISI 4140	609	A182 F316L	N/A	A564 GR.630(UNS S17400)
104	A350 LF2	A182 F304	AISI 4140	650	A182 FXM-19(UNS S20910)	A182 FXM-19(UNS S20910)	A182 FXM-19(UNS S20910)
107	A350 LF2	N/A	AISI 4140	680	A564 GR.630(UNS S17400)	A564 GR.630(UNS S17400)	A564 GR.630(UNS S17400)
109	A350 LF2	A350 LF2	A564 GR.630(UNS S17400)	701	A182 F51(UNS S31803)	A182 F51(UNS S31803)	A182 F51(UNS S31803)
122	A350 LF2	A350 LF2	A182 F6A	702	A182 F51(UNS S31803)	A182 F51(UNS S31803)	INCONEL 718(UNS N07718)
270	A276 410	A276 410	A276 410	706	A182 F51(UNS S31803)	A182 F51(UNS S31803)	A182 F53(UNS S32750)
278	A182 F6A	A182 F6A	A182 F6A	751	A182 F53(UNS S32750)	A182 F53(UNS S32750)	A182 F53(UNS S32750)
279	A182 F6A	A182 F304	A564 GR.630(UNS S17400)	752	A182 F53(UNS S32750)	A182 F53(UNS S32750)	INCONEL 718(UNS N07718)
280	A182 F6A	A182 F304	A182 F6A	761	A182 F55(UNS S32760)	A182 F55(UNS S32760)	A182 F55(UNS S32760)
283	A182 F6A	N/A	A182 F6A	801	INCONEL 600(UNS N06600)	INCONEL 600(UNS N06600)	INCONEL 600(UNS N06600)
301	A182 F304	A182 F304	A182 F304	802	INCONEL 600(UNS N06600)	INCONEL 600(UNS N06600)	INCONEL 718(UNS N07718)
303	A182 F304	A182 F304	A564 GR.630(UNS S17400)	805	INCONEL 625(UNS N06625)	INCONEL 625(UNS N06625)	INCONEL 625(UNS N06625)
304	A182 F304	N/A	A182 F304	809	INCONEL 718(UNS N07718)	INCONEL 718(UNS N07718)	INCONEL 718(UNS N07718)
305	A182 F304	N/A	A564 GR.630(UNS S17400)	821	INCOLOY 825 (UNS N08825)	INCOLOY 825(UNS N08825)	INCOLOY 825(UNS N08825)
310	A182 F304	A182 F304	A564 GR.630(UNS S17400)	826	INCOLOY 925 (UNS N09925)	INCOLOY 925(UNS N09925)	INCOLOY 925(UNS N09925)
311	A182 F304	A182 F304	A182 F51(UNS S31803)	831	HASTELLOY C-276 (UNS N10276)	HASTELLOY C-276 (UNS N10276)	HASTELLOY C-276 (UNS N10276)
401	A182 F316	A182 F316	A182 F316	832	HASTELLOY C-276 (UNS N10276)	N/A	HASTELLOY C-276 (UNS N10276)
402	A182 F316	N/A	A182 F316	841	MONEL K500(UNS N05500)	MONEL K500(UNS N05500)	MONEL K500(UNS N05500)
403	A182 F316	A182 F316	A564 GR.630(UNS S17400)	XXX	Others	Others	Others
404	A182 F316	N/A	A564 GR.630(UNS S17400)				

I	TRIM COATING		
CODE	BALL	SEAT RINGS	STEM/TRUNNION
0	N/A	N/A	N/A
1	ENP	ENP	ENP
B	Stellite*	Stellite*	ENP
L	Chrome Carbide*	Chrome Carbide*	ENP
M	Tungsten Carbide*	Tungsten Carbide*	ENP
P	NiCrMoCu*	NiCrMoCu*	ENP
X	Others	Others	Others

*Ball and seat rings sealing surface.

J	BOLTS & NUTS				
CODE	BOLT	NUT	CODE	BOLT	NUT
B1	A193 B7M	A194 2HM	N5	A320 B8M CL.2	A194 Gr.8M-S1
B2	A193 B7	A194 2H	N6	A320 B8M CL.1	A194 Gr.8MA
B3	A320 L7M	A194 7M	XX	Others	Others
B4	A320 L7	A194 Gr.7			
B5	A193 B8M	A194 Gr.8M			
B6	A193 B8	A194 Gr.8			
B7	A193 B16	A194 Gr.7			
B8	A320 L7	A194 Gr.4			

K	SPECIAL REQUIREMENTS, MISC (MULTIPLE CHOICE)
CODE	SPECIAL NOTES
K	Anti-corrosion, acid-resisting regs are in compliance with NACE MR0103, NACE MR0175, ISO 15156. Please provide detailed medium composition.
B-	Bolts & nuts coating, BE: ENP, BZ: Zinc Plating, BT: PTFE, BC: Cadmium+PTFE.
X	Others special requirements.

Notes:If you are uncertain about some categories, we will make suggestions based on your working conditions or your special requirement.
The item marked with default will be used if no item is selected in that category unless it doesn't meet the working requirements.