



BALL VALVES



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SPECIAL CONSTRUCTIONS

JC VALVES

The quality option



"We make valves
since 1968"

JC Fábrica de Válvulas S.A., established in 1968, is a multinational company specialised in the manufacture and sale of high quality industrial valves.

The expertise and know how acquired over the years coupled with the continued investments in the design of valves, has made JC a world renowned company in the field of valve applications.

» Market sectors

JC develops and designs valves for all applications, but the main focus is in Oil & Gas, Chemical, Petrochemical, Pulp & Paper and Energy sectors.



Oil



Chemical



Gas



Pulp & Paper



Petrochemical



Energy

» JC World Wide

JC Valves provides world wide coverage thanks to the strategic locations of its factories and offices:





» Global services

JC Fábrica de Válvulas S.A. offers its customers a world wide service, from technical advice to choose the right valve up to the design and manufacture of custom built valves to meet special service requirements.

Our R+D department is always ready to find solutions for severe applications and our global distribution network offers quick availability of JC valves and an efficient after sales service.

GLOBAL SERVICE

TECHNICAL SUPPORT



DESIGN



MANUFACTURE



WORLD WIDE DISTRIBUTION



AFTER-SALES SERVICE





The quality option

» Quality assurance

JC Valves are designed and produced to meet the major international standards and we take great care and put a lot of emphasis on QUALITY, which provides our customers with a total guarantee and trouble free operation of their process. And in addition, we take great care to make our facilities and our products Environment friendly.

JC Quality Assurance System

- ISO 9001 : 2000 certified by BVQI
- API Q1 certified by the AMERICAN - PETROLEUM INSTITUTE
- PED 97 / 23 / EC certified by BVQI

Products Approvals

- API 6D certified by the AMERICAN - PETROLEUM INSTITUTE
- CE Marking (Module H, Category III) in accordance with PED 97 / 23 / EC certified by BVQI
- Fire Safe ISO 10947 : 2004 certified by SGS
- API 607 3rd., 4th. and 5th. Edition certified by SGS
- BS 6755 Part 2 certified by Lloyd's Register and SGS
- GOST "R" certified for Russian market
- SIL 3 (Safety integrity level)
- Atex
- EN 13774

Environmental Certifications

- ISO 14001 : 2004 certified by BVQI
- ISO-EN 15848-1 certified by SGS



FUGITIVE
EMISSIONS
EN-ISO 15848-1



FIRE SAFE
ISO 10497 : 2004
API 607: 3rd, 4th, 5th edition

GENERAL HIGHLIGHTS

- » Full and Reduced bore
- » Floating and Trunnion mounted ball
- » Soft and Metal seats
- » Castings Quality as per ASME B16.34 Mandatory Appendix I to IV in ASME valves and Severity Levels S3-V3 to DIN 1690 and EN 10203 in EN-DIN valves
- » Polished ball Ra 1 in soft seated valves (in metal seated valves ball is lapped); grinded stem Ra 1.6
- » Full traceability of shell components, ball and stem as per EN 10204 3.1
- » Antistatic device integral with the stem
- » Viton A, Aflas or Kalrez primary stem seal and secondary graphite packing
- » NACE MR.01.75 wetted parts and bolting as Standard
- » Fire safe as standard construction ISO 10947 : 2004 and API607 : 3rd, 4th, 5th edition
- » Fugitive emissions EN-ISO 15848-1
- » SIL 3 (Safety Integrity level 3)

| BALL VALVES |

METAL SEATED

1/2" - 24" | Class 150 - Class 1500
15 - 600 | PN 16 - PN 40



JC offers also a large range of metal seated ball valves for different services (slurries, pulp and liquors, high temperature, abrasive or sticking fluids, control).

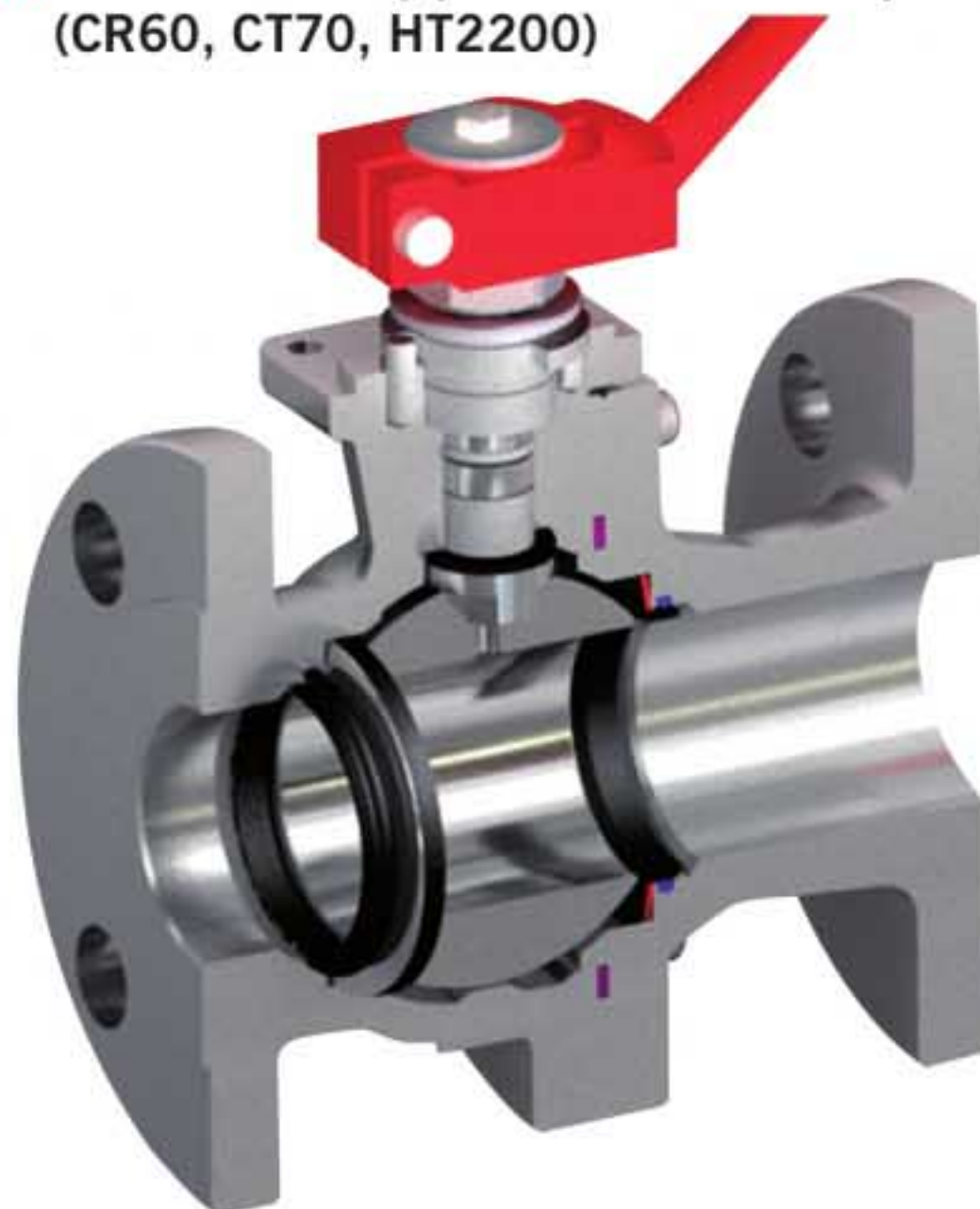
What is HT-65?

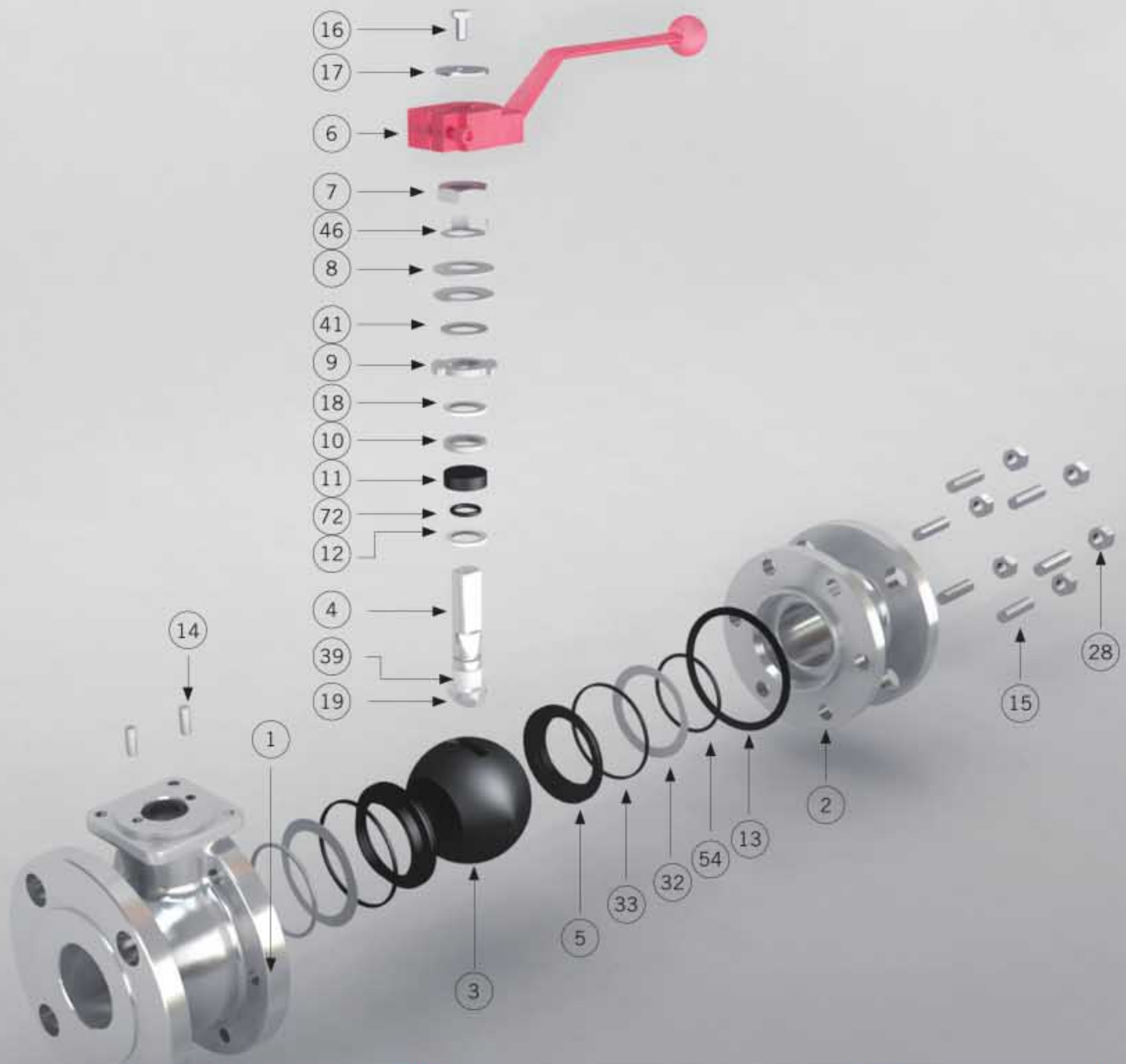
HT-65 is a thermal-chemical diffusion process where ferrous parts are heat treated at 565 °C (1050 °F) through an appropriate formulation to assure the interface of the materials being processed. The intrinsic properties of HT-65 are its low coefficient of friction as well as the degree of lubricity in both the dry state as well as under lubrication. This highly lubricious process prevents stainless steel from galling and, once HT-65 is applied, the surface becomes Rockwell 70 in hardness on the "C" scale. The HT-65 layer is highly resistant to wear, seizure & corrosion. Typically HT-65 penetrates the ferrous matrix to a depth of 0,2 to 0,25 mm (0,0079 to 0,01") to form the diffusion zone. Austenitic steels develop an extremely hard & complex compound zone distinctive from all ferrous metals, typically 17 to 22 microns (0,0007 to 0,0009") thick and a diffusion zone approximately 76 microns (0,003") deep.

HT-65 components have excellent sliding and running properties, a very low friction coefficient that minimizes the incidence of abrasion due to wear and galling.

With HT-65, JC can assure a bubble tight sealing up to temperatures of 327 °C and Class V up to 500 °C.

- » Bubble tight sealing up to 327 °C and Class V up to 500 °C
- » Low coefficient of friction
- » Excellent sliding and running properties
- » Hardens the complete surface of ball and seats
- » Other hardening procedure under request (CR60, CT70, HT2200)





Materials		DIN		ASME	
		3516 AIM 3540 AIM	3516 IIM 3540 IIM	3515 AIM 3530 AIM	3515 IIM 3530 IIM
Item	Description	Material		Material	
1	Body	1.0619	1.4408	A216 Gr.WCB (C≤0,25%)	A351 Gr. CF8M
2	Body connector	1.0619	1.4408	A216 Gr.WCB (C≤0,25%)	A351 Gr. CF8M
3	Ball	316 S.S. + HT-65 Lapped		316 S.S. + HT-65 Lapped	
4	Stem	See options		See options	
5	Seat ring	316 S.S. + HT-65 Lapped		316 S.S. + HT-65 Lapped	
6	Wrench	Nodular Iron		Nodular Iron	
7	Gland nut	Zinc plated carbon steel	AISI 303	Zinc plated carbon steel	AISI 303
8	Disk spring	Carbon steel	ENP Carbon Steel	Carbon steel	ENP Carbon Steel
9	Stop plate	Carbon steel	AISI 304	Carbon steel	AISI 304
10	Gland	AISI 303	AISI 316	AISI 303	AISI 316
11	Gland packing	Graphite		Graphite	
12	Stem thrust seal	316 S.S. + HT-65		316 S.S. + HT-65	
13	Body connector seal	AISI 316L + Graphite		AISI 316L + Graphite	
14	Stop pin	Carbon St.	Stainless St.	Carbon St.	Stainless St.
15	Stud (DN 32 to DN 100)	A4-70		A193Gr. B7M	A193 Gr. B8M
15.1	Bolt	A4-70		-	-
16	Bolt	DIN 933 A4-70		DIN 933 A4-70	
17	Washer	Zinc plated carbon steel	AISI 304	Zinc plated carbon steel	AISI 304
18	Thrust washer	316 S.S. + HT65		316 S.S. + HT65	
19	Antistatic device	Stainless St.		Stainless St.	
28	Nut (DN 32 to DN 100)	A4-70		A194 Gr. 2HM	A194 Gr. 8M
32	Seat disk spring	Inconel X-750		Inconel X-750	
33	Seat Seal	See options		See options	
39	Stem bushing	25% G.F. PTFE		25% G.F. PTFE	
41	Spacer (DN 40 to DN200)	Carbon steel	AISI 304	Carbon steel	AISI 304
46	Locking washer	AISI 304		AISI 304	
54	Seat Seal	Graphite		Graphite	
72	Stem "O" Ring	See options		See options	

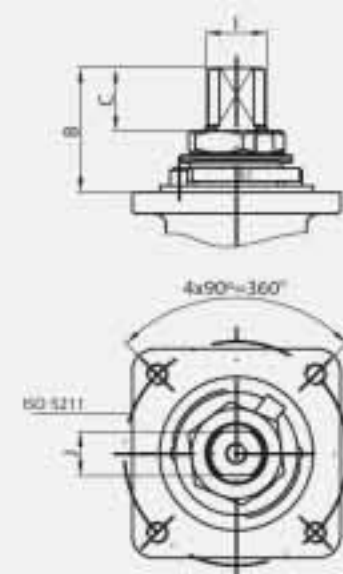
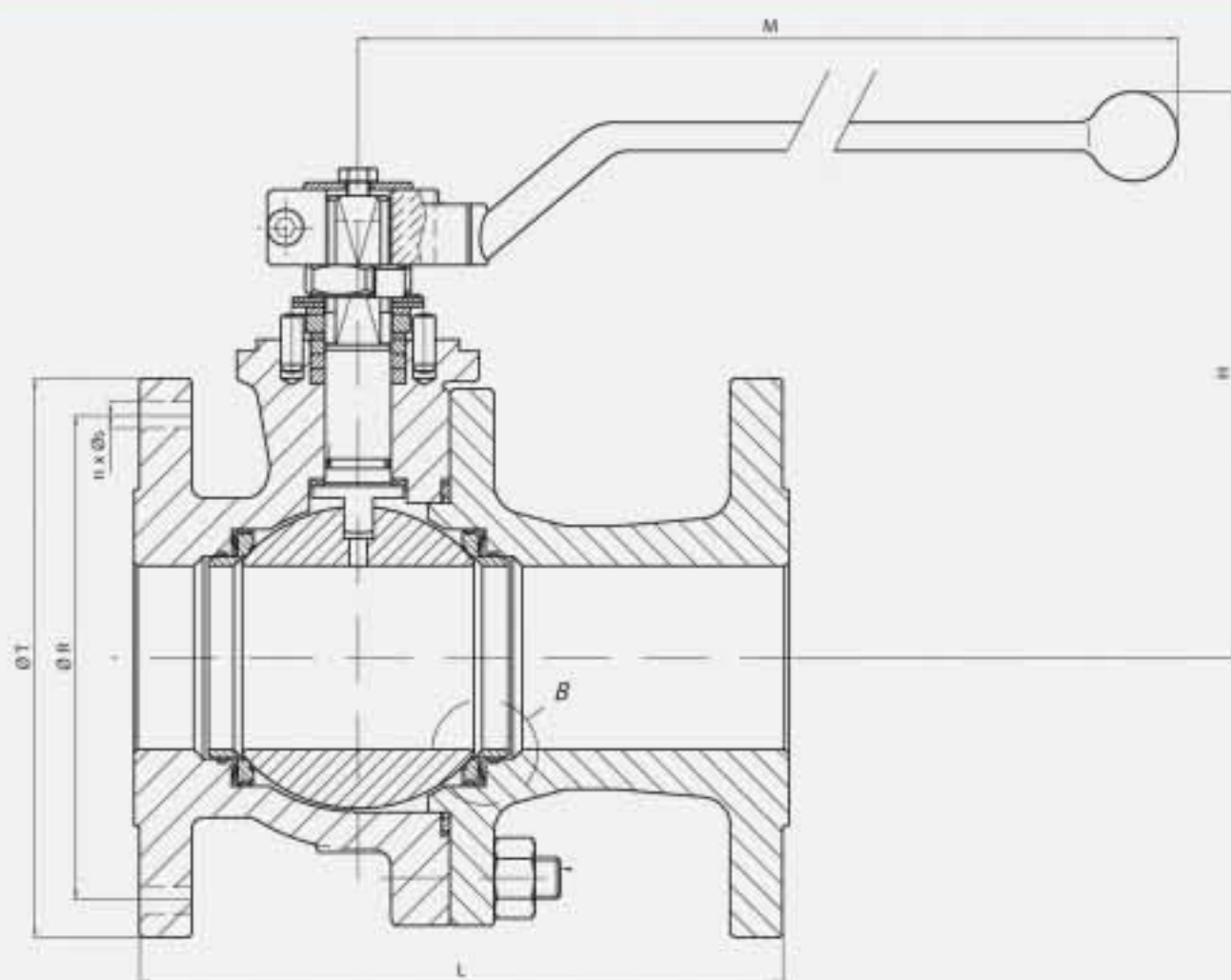
DIN 3516 / 3540 / 3316 / 3340

PN 16 / 40

Full Bore

PN 16. From DN 65 to DN 200

PN 40. From DN 15 to DN 150



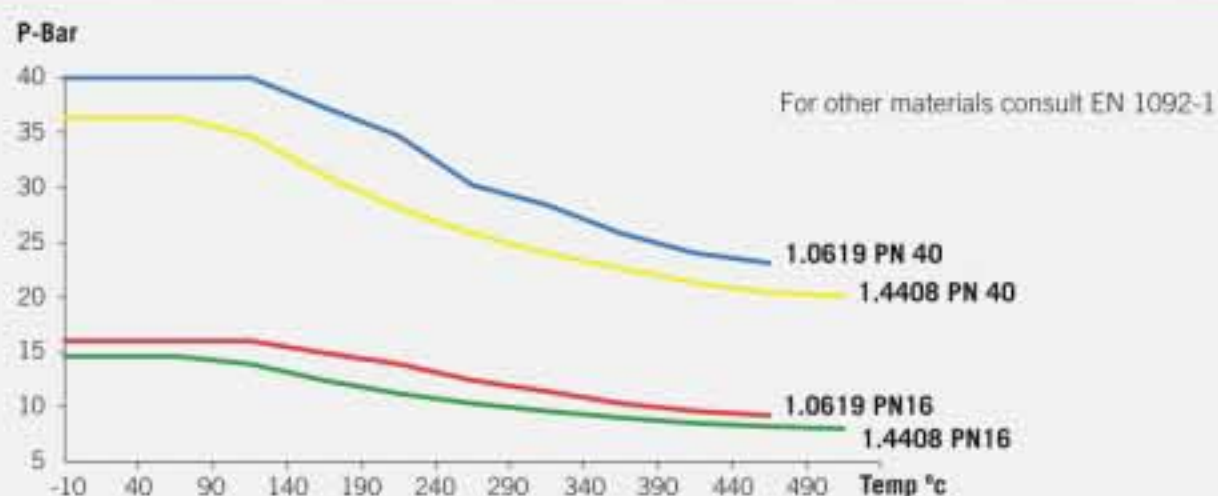
DETAIL B

ONLY DN-1/2" & 3/4"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature



PN 16

DN	ØP	L	L'	ØR	n x ØS	ØT	H	M	ISO 5211	B	C	I	J	WEIGHT	WEIGHT*	TORQUE	Kv
65	65	170	290	145	4x18	169	169	348	F07	44	18,1	M22x1.5	16	16	18,3	121	550
80	80	180	310	160	8x18	207	207	445	F10	44,5	18,7	M25x1.5	18	22	25	161	1000
100	100	190	350	180	8x18	231	231	495	F10	56,5	28,5	M28x1.5	20	32	36	247	1650
125	125	325	--	210	8x18	262	262	698	F12	56	27,6	M35x2	25	52,5	--	360	3000
150	151	350	--	240	8x22	298	298	698	F12	66	35,2	M40x1.5	29	76	--	675	4200
200	203	400	--	295	12x22	352	352	868	F14	70	36	M45x2	32	111	--	1130	9000

PN 40

DN	ØP	L	L'	ØR	n x ØS	ØT	H	M	ISO 5211	B	C	I	J	WEIGHT	WEIGHT*	TORQUE	Kv
15	15	115	130	65	4x14	97	97	224	F05	11,5	5,7	M12x1.5	9	2,8	3	26	20
20	20	120	--	75	4x14	104	104	224	F05	15	9,2	M12x1.5	9	3,6	--	35	40
25	25	125	160	85	4x14	117	117	224	F05	24	10,2	M12x1.5	9	5	5,2	40	75
32	32	130	180	100	4x18	131	131	287	F05	32	12,2	M16x1.5	12	7	7,6	52	130
40	40	140	200	110	4x18	148	148	315	F07	39,5	16,2	M18x1.5	13	9	9,6	60	170
50	50	150	230	125	4x18	155	155	315	F07	41,5	18,2	M18x1.5	13	12	12,9	120	270
65	65	170	--	145	8x18	169	169	348	F07	44	18,1	M22x1.5	16	17	--	160	550
80	80	180	--	160	8x18	207	207	445	F10	44,5	18,7	M25x1.5	18	23	--	254	1000
100	100	190	--	190	8x22	231	231	495	F10	56,5	28,5	M28x1.5	20	35	--	1650	
125	125	325	--	220	8x26	262	262	698	F12	56	27,6	M35x2	25	57	--	3000	
150	151	350	--	250	8x26	298	298	698	F12	66	35,2	M40x1.5	29	83,5	--	4200	

(*) Dimensions in mm and weight in kg.

(**) Weights and dimensions can be changed without notice.

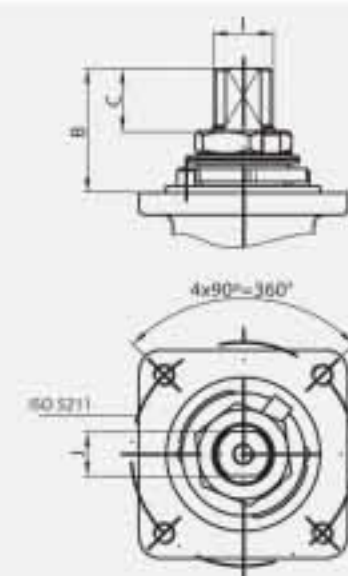
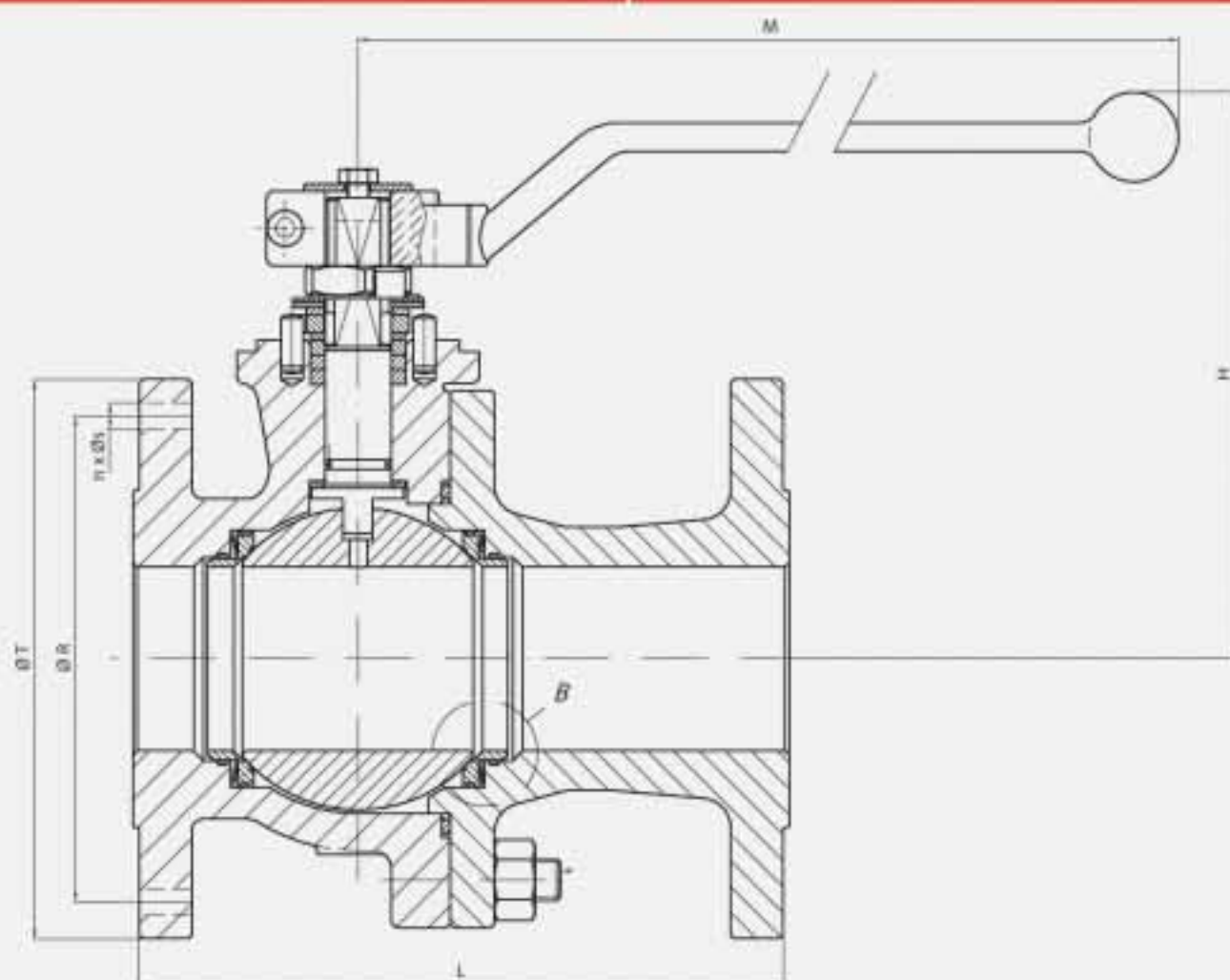
ASME 3515 / 3530

Class 150 / 300

Full Bore

Class 150. From ½" to 8"

Class 300. From ½" to 6"



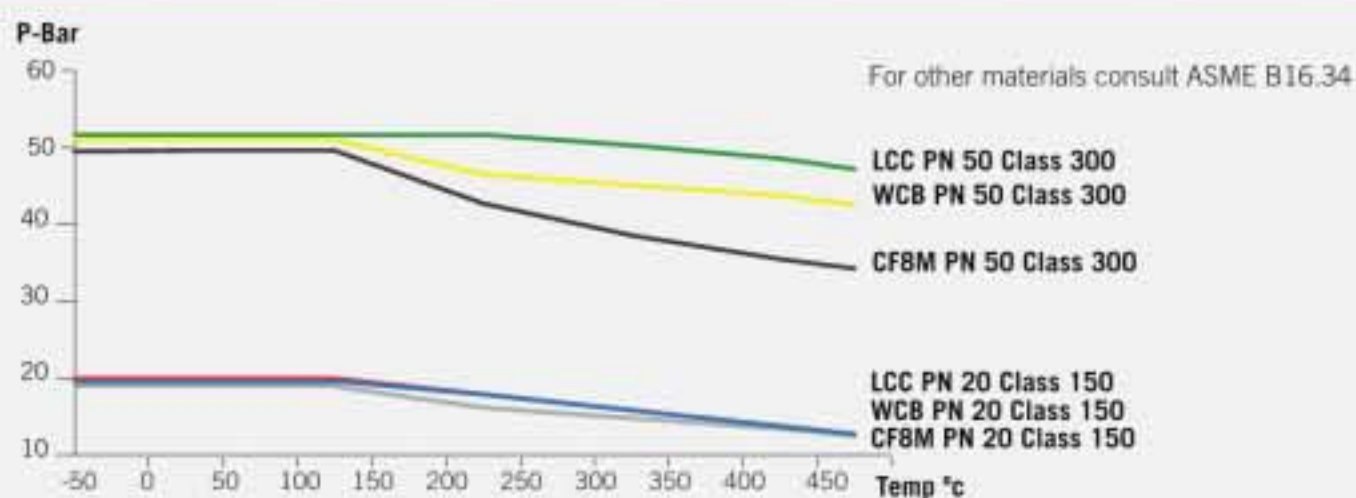
DETAIL B

ONLY DN-1/2" & 3/4"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature



Class 150 SERIES

DN	øP	L	øR	n x øS	øT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
15 (½")	15	108	60,3	4x15,9	88,9	98	224	F05	11,5	5,7	M12x1,5	9	2	26	20
20 (¾")	20	117	69,8	4x15,9	98,4	107	224	F05	15	7,4	M12x1,5	9	3	32	40
25 (1")	25	127	79,4	4x15,9	108	118	224	F05	24	10,2	M12x1,5	9	3,5	38	75
40 (1½")	40	165	98,4	4x15,9	127	148	315	F07	39,5	16,7	M18x1,5	13	8	55	170
50 (2")	50	178	120,6	4x19	152	156	315	F07	41,5	17,6	M18x1,5	13	11	92	270
65 (2½")	65	190	139,7	4x19	177,8	169	348	F07	44	18,1	M22x1,5	16	16	140	550
80 (3")	80	203	152,4	4x19	191	207	445	F10	44,5	18,7	M25x1,5	18	23	170	1000
100 (4")	100	229	190,5	8x19	229	231	495	F10	56,5	28,7	M28x1,5	20	38	273	1650
150 (6")	151	394	241,3	8x22,2	279,5	297	698	F12	68	38,5	M40x1,5	29	88	778	4200
200 (8")	203	457	298,4	8x22,2	343	351	868	F14	70	37	M45x2	32	155	1313	9000

Class 300 SERIES

DN	øP	L	øR	n x øS	øT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
15 (½")	15	140	66,7	4x15,9	95,2	98	224	F05	11,5	5,7	M12x1,5	9	3	32	20
20 (¾")	20	152	82,5	4x19	117,5	107	224	F05	15	7,4	M12x1,5	9	4	40	40
25 (1")	25	165	88,9	4x19	123,8	118	224	F05	24	10,2	M12x1,5	9	5	45	75
40 (1½")	40	190	114,3	4x22,2	155,6	148	315	F07	39,5	16,7	M18x1,5	13	11	70	170
50 (2")	50	216	127	8x19	165,1	156	315	F07	41,5	17,6	M18x1,5	13	14	135	270
80 (3")	80	283	168,3	8x22,2	210,5	207	445	F07	44	18,1	M22x1,5	16	32	286	550
100 (4")	100	305	200	8x22,2	254	231	495	F10	44,5	18,7	M25x1,5	18	52		1000
150 (6")	151	403	269,9	12x22,2	317,5	297	698	F10	56,5	28,7	M28x1,5	20	94		1650

(*) Dimensions in mm and weight in kg.

(**) Weights and dimensions can be changed without notice.

| BALL VALVES |

METAL SEATED UDV

1/2" - 2" | Class 800 - Class 1500

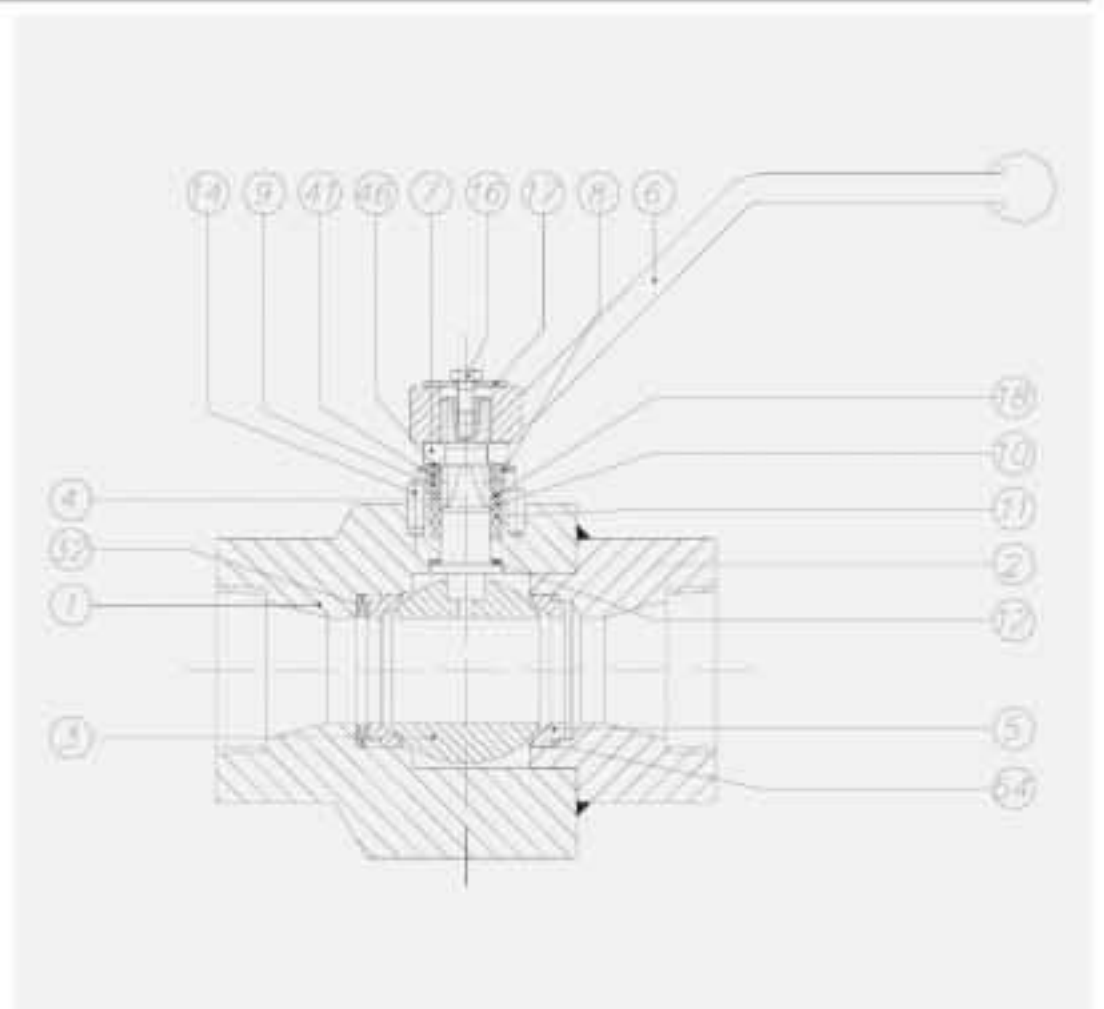
The Ultimate Drain Valve (UDV) it is a high temperature special design. The valve has got a monobloc welded body and it is reduced bore. This Valve is designed to support high temperatures at high pressures.



Materials

METAL SEATED UDV

Item	Description	C.S. BODY	S.S. BODY
1	Body	A 105	A 479 Type 316
2	Body connector	A 105	A 479 Type 316
3	Ball	AISI 316 + HT-65 (*)	
4	Stem	17-4 PH + HT-65 (*)	
5	Seat ring	AISI 316 + HT-65	
6	Wrench	GGG-40	
7	Gland nut	Zinc plated carbon st.	AISI 303
8	Disk spring	Carbon St.	E.N.P. Carbon St.
9	Stop plate	Carbon St.	AISI 304
10	Gland	AISI 316 + HT-65	
11	Gland packing	Graphite	
12	Stem thrust seal	AISI 316 + HT-65	
14	Stop pin	Carbon St.	Stainless St.
16	Bolt	DIN 933 5.6 Zinc platedDIN 933 A2	
17	Washer	Carbon St.	Stainless St.
18	Thrust washer	AISI 316 + HT-65	
32	Disk spring	Inconel 718	
41	Spacer	Carbon St.	Stainless St.
46	Washer	AISI 304	
54	Seat gasket	Graphite	



(*) Other materials under request.

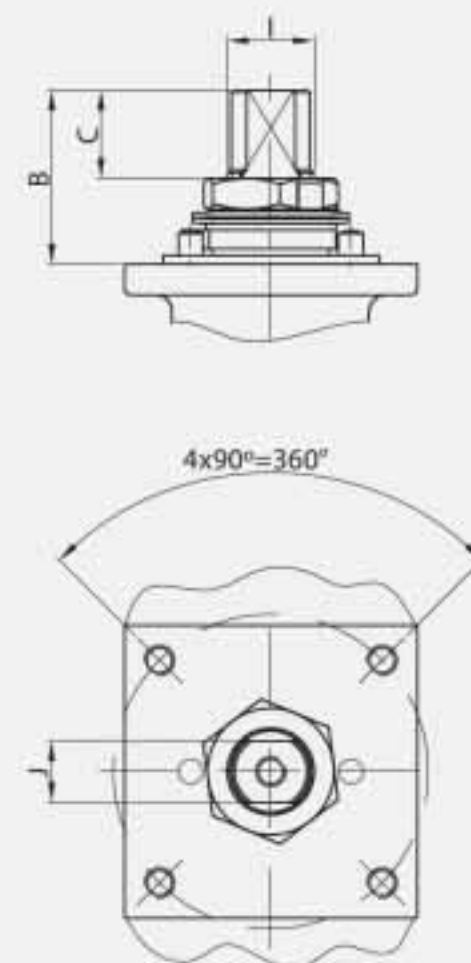
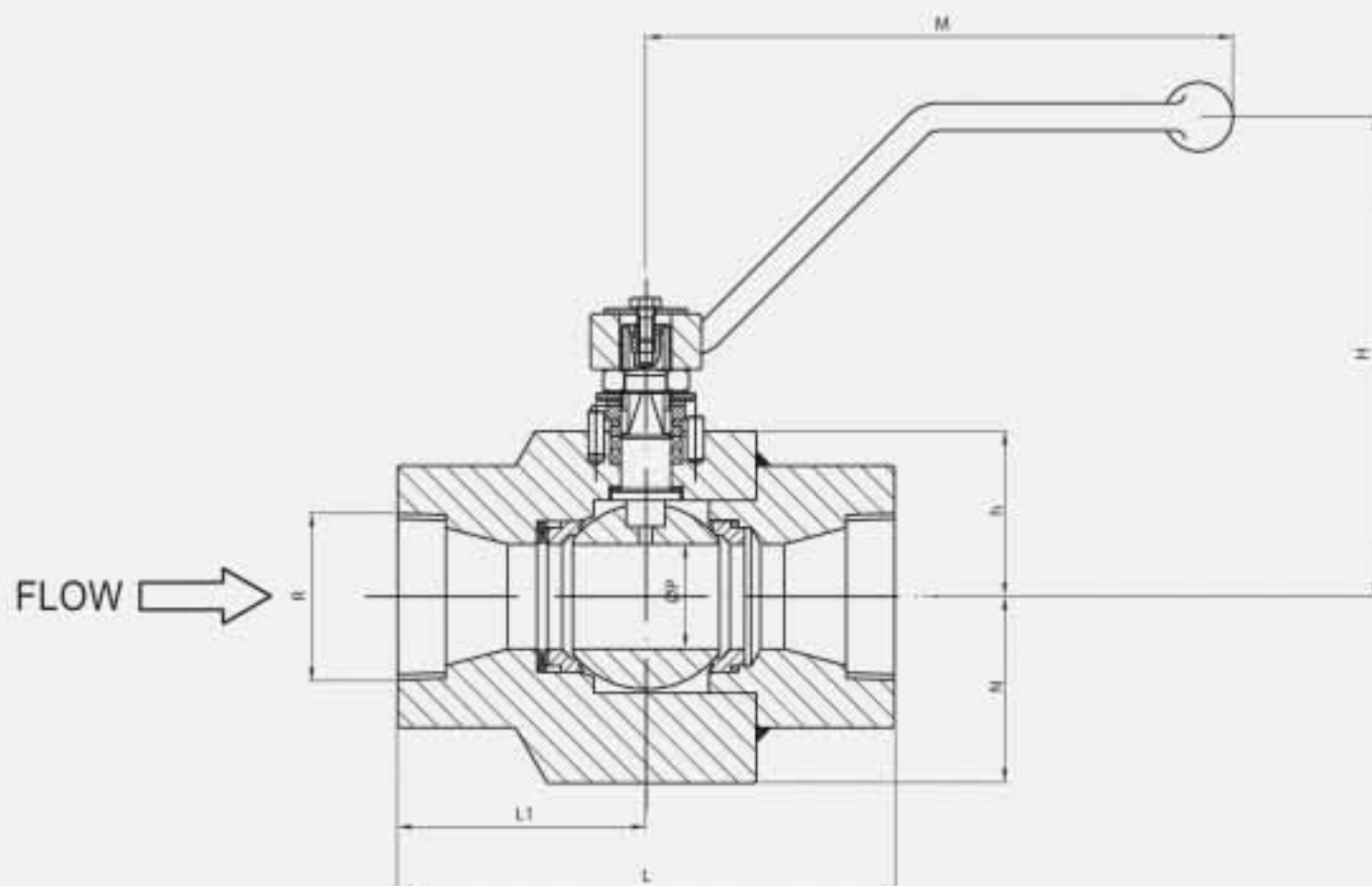
CLASS 800 AIM & IIM TYPE

Class 800 / 1500

Reduced Bore

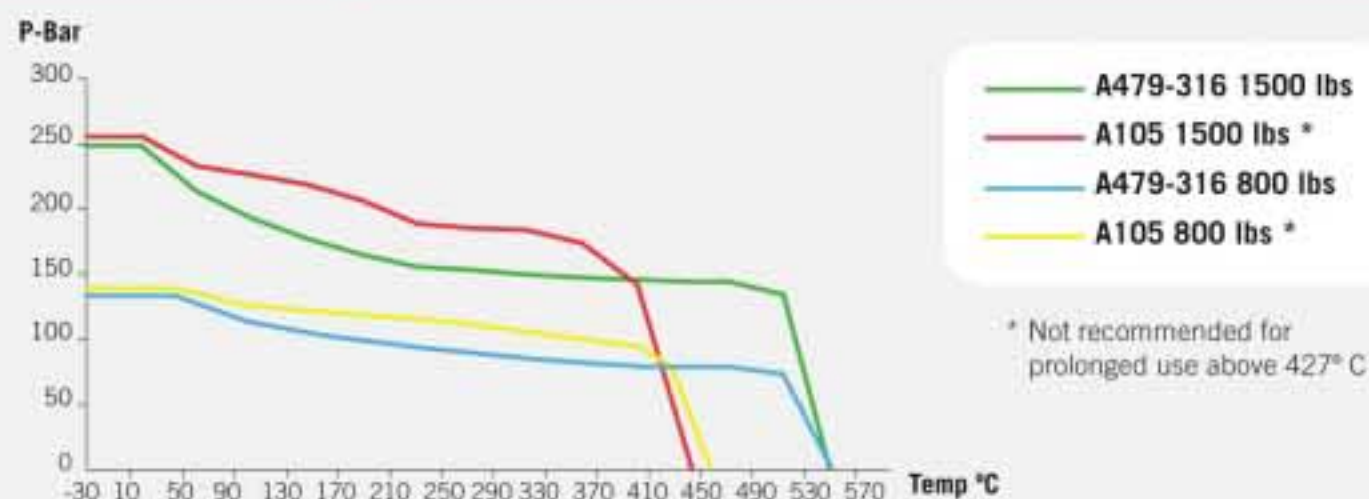
Class 800. From ½" to 2"

Class 1500. From ½" to 2"



(**) Diameter of drills ISO 5211 = n x F.

Pressure - Temperature



CLASS 800

DN	L	L1	R	ØP	N	h	H	M	ISO 5211	B	C	ØD	n x F	I	J	WEIGHT
½"	90	45	NPT	15	37,5	32	88	170	F04	18,4	6,8	42	4 x M5	M12x1,5	9	3,5
¾"	110	55	NPT	15	37,5	32	88	170	F04	18,4	6,8	42	4 x M5	M12x1,5	9	4,5
1"	120	60	NPT	20	42,5	35,5	92	170	F05	18,7	6,6	50	4 x M6	M12x1,5	9	5
1½"	150	75	NPT	28	60	50	115	247	F05	31,5	12,4	50	4 x M6	M16x1,5	12	6
2"	180	90	NPT	38	67,5	60	118	302,5	F07	38,5	16,2	70	4 x M8	M18x1,5	13	10

CLASS 1500

DN	L	L1	R	ØP	N	h	H	M	ISO 5211	B	C	ØD	n x F	I	J	WEIGHT
½"	90	45	NPT	15	37,5	32	88	170	F04	18,4	6,8	42	4 x M5	M12x1,5	9	3,5
¾"	110	55	NPT	15	37,5	32	88	170	F04	18,4	6,8	42	4 x M5	M12x1,5	9	4,5
1"	120	60	NPT	20	42,5	35,5	92	170	F05	18,7	6,6	50	4 x M6	M12x1,5	9	5
1½"	150	75	NPT	28	60	50	115	247	F05	31,5	12,4	50	4 x M6	M16x1,5	12	6
2"	180	90	NPT	38	67,5	60	118	302,5	F07	38,5	16,2	70	4 x M8	M18x1,5	13	10

(**) Dimensions in mm and weight in kg.
(***) Weights and dimensions can be changed without notice.

| BALL VALVES |

METAL SEATED TRUNNION

2" - 20" | Class 150 - Class 600

Materials METAL TO METAL TRUNNION

Item	Description	AIM	IIM
1	Body	A 216 Gr. WCB (C ≤ 0.25%)	A 351 Gr. CF8M
2	Body connector	A 216 Gr. WCB (C ≤ 0.25%)	A 351 Gr. CF8M
3	Ball	Tp.316 + HT-65	
4	Stem	NITRONIC-50	
5	Seat ring	Tp.316 + HT-65	
7	Gland nut	Zinc Plated Carbon Steel	AISI-303
8	Disk spring / Spring	Carbon St. *	E.N.P. Carbon St. *
9	Stop plate	Carbon St.	AISI-304
10	Gland ring	AISI-303 + HT-65	AISI-316 + HT-65
10.1	Gland	AISI-303	AISI-316
11	Gland packing	Graphite	
12	Stem thrust seal	AISI-316 + HT-65	
13	Body connector seal	AISI-316L + Graphite	
14	Stop pin	Carbon St.	Stainless St.
15	Stud	A 193 Gr. B7M	A 193 Gr. B8M **
18	Thrust washer	50% S.S. PTFE	
19	Antistatic device	Stainless St.	
21 / 21a	Ball trunnion	A 351 Gr. CF8M	
22 / 22a	Trunnion bearing	AISI-316 + PTFE	
26	Bolt	DIN 912 8.8 Zinc Plated	DIN 912 A2
28	Nut	A 194 Gr. 2HM	A 194 Gr. 8M **
32	Spring	Inconel - 750	
33	O' Ring	FKM -- Note 1 --	
35	Spring carrier	A 351 Gr. CF8M	
39	Stem bushing	25% G.F. PTFE	
39.1	Stem bushing	AISI-316 + PTFE -- Note 2 & Note 3 --	
41	Spacer	Carbon St.	Stainless St.
43	Key	AISI-316	
46	Locking washer	AISI-304	
47	Key	Carbon St.	
50	Drain plug	A 105	AISI-316
50.1	Vent plug	A 105	AISI-316
52	O' Ring	FKM -- Note 1 & Note 2 --	
54	Seat carrier seal	Graphite	
58	Spring protection	Carbon St.	Stainless St.
72	O' Ring	FKM -- Note 1 --	
75	Stem bushing	AISI-316 + PTFE -- Note 2 & Note 3 --	
89	Identification plate	Stainless St.	
471	Retainer	Carbon St.	Stainless St.

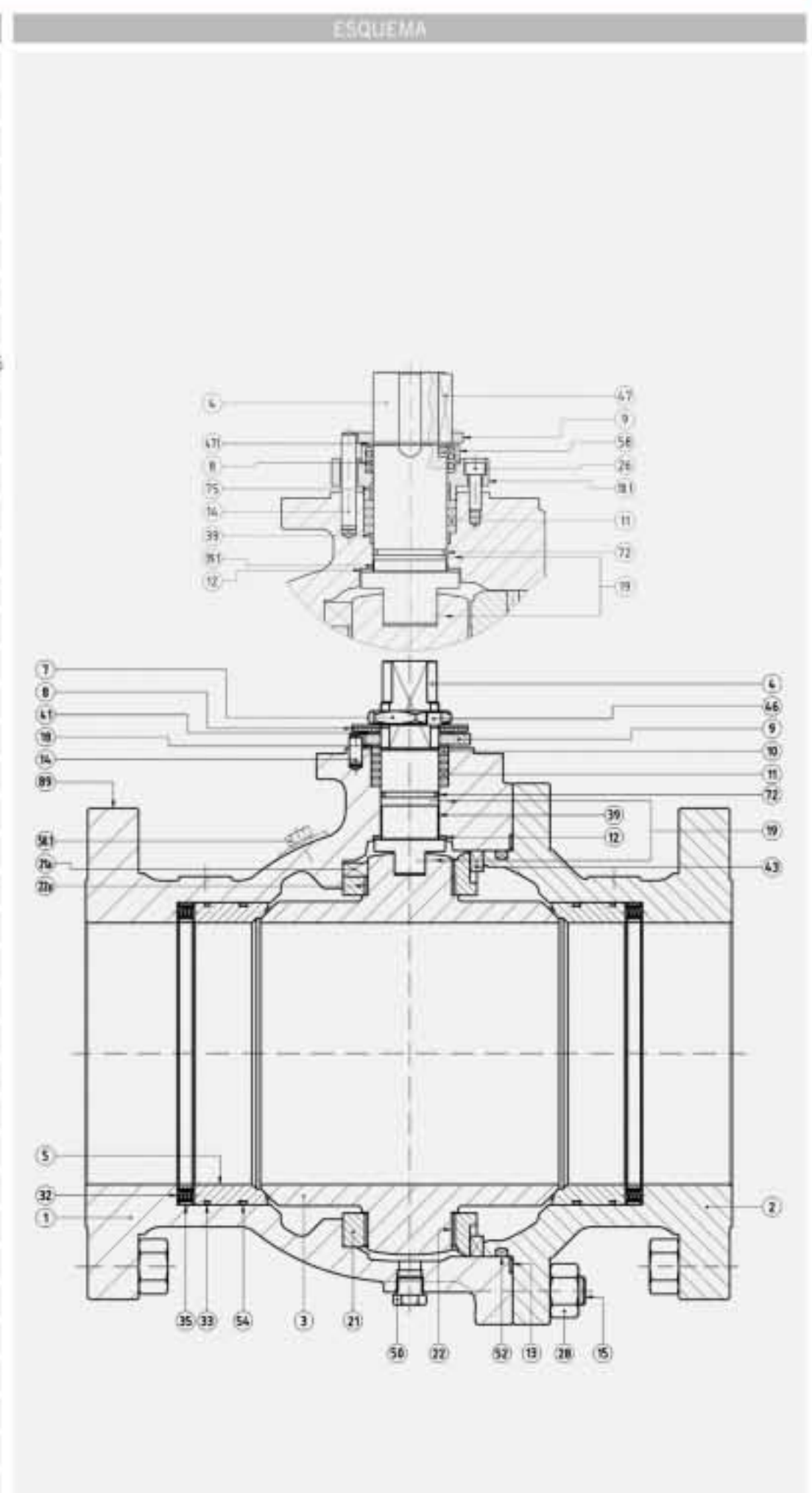
(*) On request Inconel X-750.

(**) On request B7M / 2HM Zinc Plated & Bichromated.

Note 1: Depending on design conditions AFLAS, KALREZ or KALREZ Spectrum.

Note 2: Only DN-350 & 400 and all Fig.2560.

Note 3: Over 350°C Steel Inconel + HT-625



CAST TRUNNION METAL 2515 / 2530 / 2560

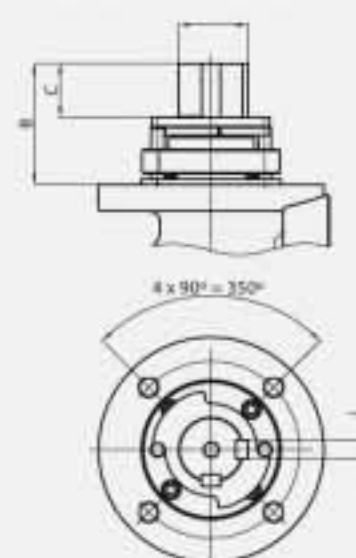
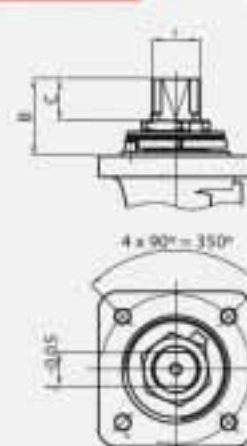
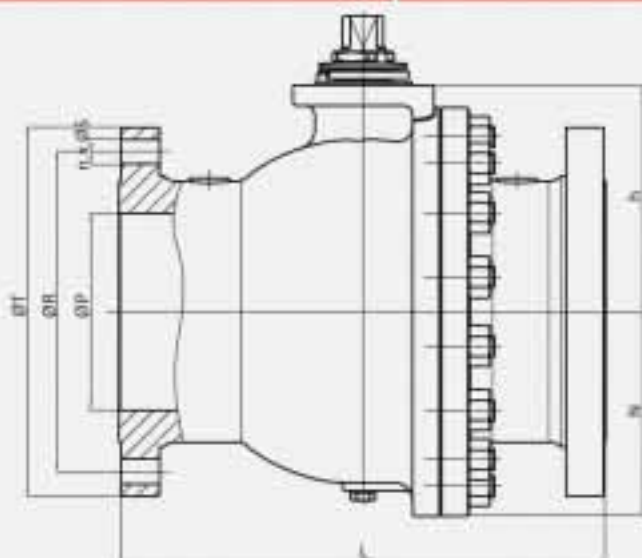
Class 150 / 300 / 600

Full Bore

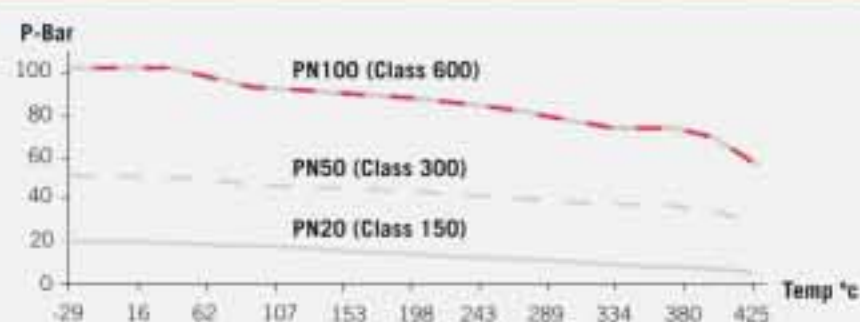
Class 150. From 2" to 20"

Class 300. From 2" to 20"

Class 600. From 2" to 16"



Pressure - Temperature



METAL SEATS

2" to 16"

For A216 Gr. WCB only.
For other materials consult ASME B16.34

(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.



Series 2515 (Class 150)

DN	ØP	L	L1	ØQ	ØR	n x ØS	ØT	X	Y	h	N	WEIGHT
50 (2")	50	178	78.5	92	120.7	4x19.1	152	1.6	15.7	84	80	13
80 (3")	80	203	87	127	152.4	4x19.1	191	1.6	19	126	-	22
100 (4")	100	229	101	157	190.5	8x19.1	229	1.6	23.9	152	120	39
150 (6")	151	394	197	216	241.3	8x22.2	279	1.6	25.4	212	168	98
200 (8")	203	457	230	270	298.5	8x22.2	343	1.6	28.4	233	208	124
250 (10")	254	533	267	324	362	12x25.4	406	1.6	30.2	256	243	175
300 (12")	305	609	305	381	431.8	12x25.4	483	1.6	31.8	297	287.5	295
350 (14")	337	686	343	413	476.3	12x28.5	533	1.6	35	333	323	580
400 (16")	388	762	381	470	539.8	16x28.5	597	1.6	36.6	412	358	750
450 (18")	438	863	430	533	577.9	16x31.8	635	1.6	39.6	450	-	970
500 (20")	490	914	495	584	635	20x31.8	699	1.6	42.9	505	-	1165

Series 2530 (Class 300)

DN	ØP	L	L1	ØQ	ØR	n x ØS	ØT	X	Y	h	N	WEIGHT
50 (2")	50	216	84	92	127	8x19.1	165	1.6	22.4	84	-	16
80 (3")	80	283	115	127	168.1	8x22.2	210	1.6	28.4	126	-	33
100 (4")	100	305	133	157	200.1	8x22.2	254	1.6	31.8	152	-	43
150 (6")	151	403	202	216	269.7	12x22.2	318	1.6	36.6	212	173	113
200 (8")	203	502	251	270	330.2	12x25.4	381	1.6	41.1	233	210	157
250 (10")	254	568	284	324	387.4	16x28.5	445	1.6	47.8	257	253	263
300 (12")	305	647	315	381	450.9	16x31.8	521	1.6	50.8	310	300	480
350 (14")	337	762	381	413	514.4	20x31.8	584	1.6	53.8	333	331	655
400 (16")	388	838	420	470	571.5	20x35	648	1.6	57.2	412	365	890
450 (18")	438	863	430	533	577.9	16x31.8	635	1.6	39.6	450	-	970
500 (20")	490	914	495	584	635	20x31.8	699	1.6	42.9	505	-	1165

Series 2560 (Class 600)

DN	ØP	L	L1	ØQ	ØR	n x ØS	ØT	X	Y	h	N	WEIGHT
50 (2")	50	292	96	92	127	8x19.1	165	6.4	31.8	84	---	20
80 (3")	80	356	140	127	168	8x22.2	210	6.4	38.1	126	113	41
100 (4")	100	432	160	157	215.9	8x25.2	273	6.4	44.5	152	---	77
150 (6")	151	559	246	216	292.1	12x28.5	356	6.4	54.15	212	188	192
200 (8")	203	660	315	270	349.3	12x31.8	419	6.4	62	237	235	329
250 (10")	254	787	340	324	431.8	16x35	508	6.4	69.8	275	273	460
300 (12")	305	838	397	381	489	20x35	559	6.4	73	345	335	570

(*) Dimensions in mm and weight in kg.

(**) Weights and dimensions can be changed without notice.

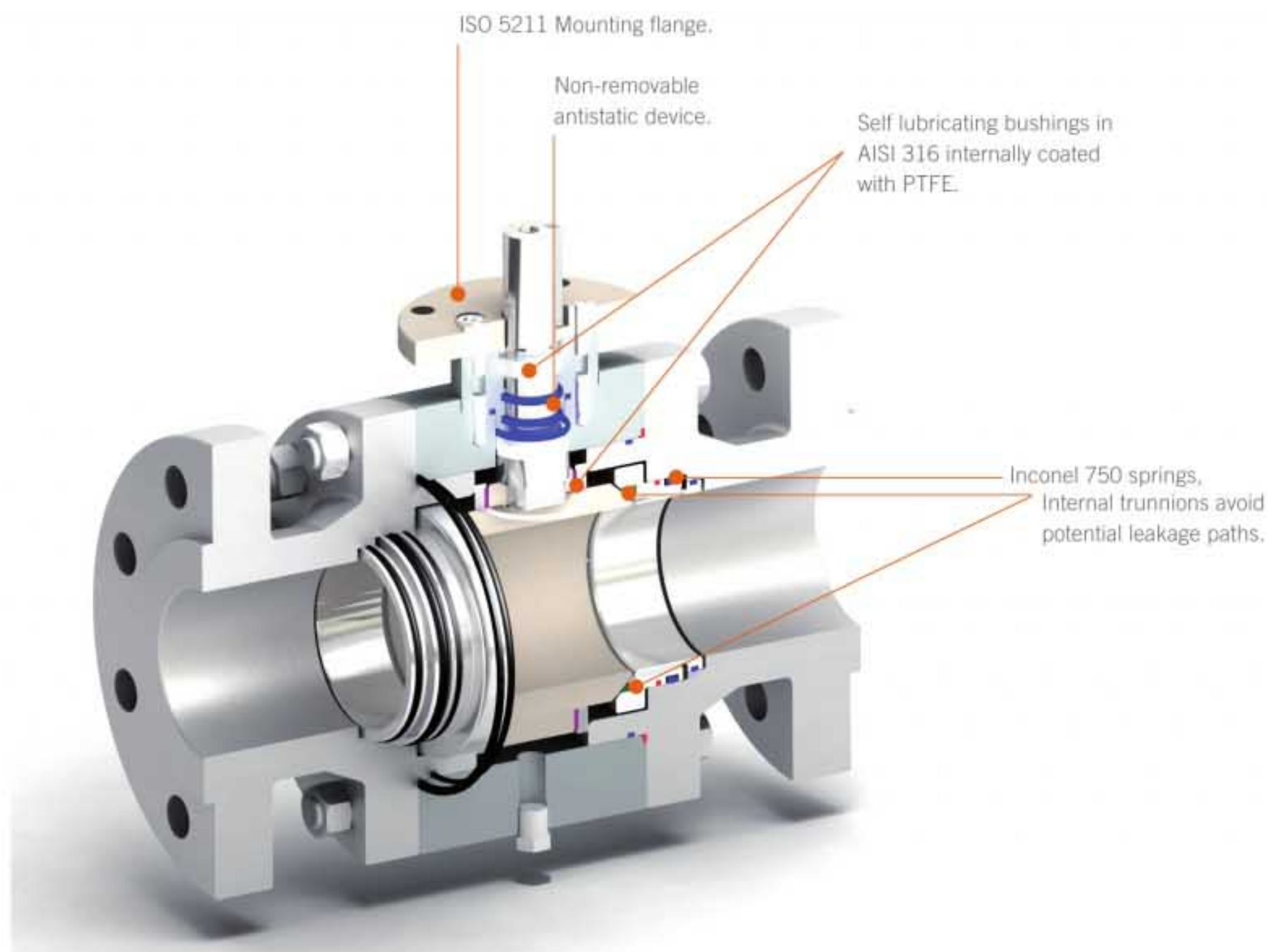
| BALL VALVES |

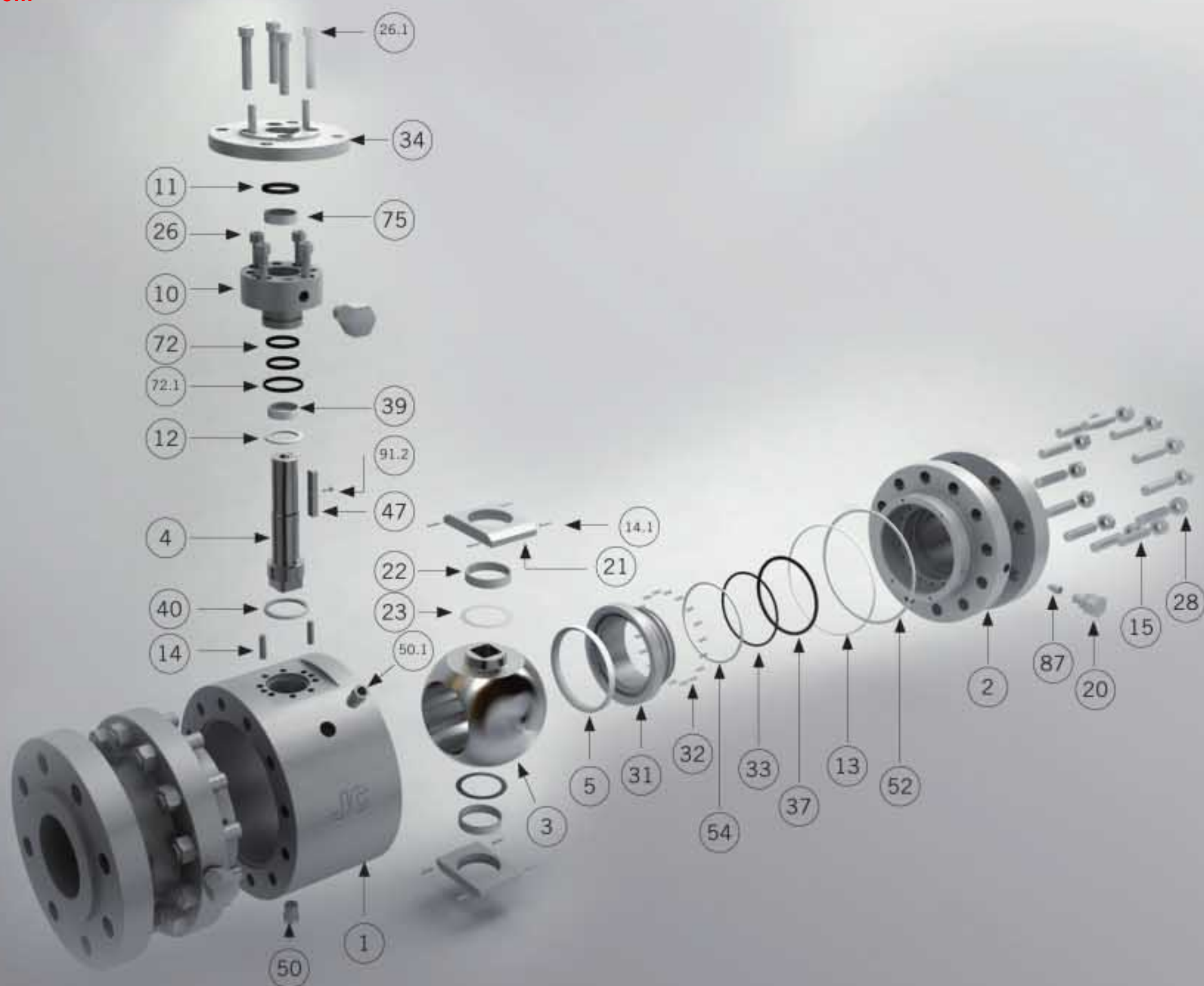
3-PIECE FORGED TRUNNION MOUNTED

1½" - 42" | Class 150 - Class 2500

A trunnion ball valve has additional mechanical anchoring of the ball at the top and the bottom, suitable for larger and higher pressure valves.

The JC trunnion mounted ball valves are suitable to stand the harsh service conditions often presented in the hydrocarbon industry and in the gas storage and transportation field. In general, they are recommended for tight shut-off in high pressure and double block and bleed applications.





Materials

SERIES 6000 & 7000

Item	Description	AIT	LIT	IIT
1	Body	A 105N	A 350 Gr. LF2 Class. 1	A182 F316
2	Body Connector	A 105N	A 350 Gr. LF2 Class. 1	A182 F316
3	Ball		A182 F316 or A351Gr. CF8M	
4	Stem		A 479 Tp.316	
5	Seat Ring		RPTFE	
10	Gland	A 105N	A 350 Gr. LF2 Class-1	A 479 Tp.316
11	Gland Packing		Graphite	
12	Stem Thrust Seal		25% G.F. + PTFE	
13	Body Connector Seal		Graphite	
14 / 14.1	Pin	Carbon St.	Carbon St.	Stainless St.
15	Stud	A 193 Gr. B7M	A 320 Gr. L7M	A 193 Gr. B8M
19	Antistatic Device		Stainless St.	
20	Sealant Injector	Carbon St.	Carbon St.	Stainless St.
21	Ball Trunnion		A 479 Tp.316	
22	Trunnion Bearing		AISI 316 with inside in PTFE	
23	Bearing		PTFE	
26 / 26.1	Bolt	A 193 Gr. B7M	A 320 Gr. L7M	A 193 Gr. B8M
28	Nut	A 194 Gr. 2HM	A 194 Gr. 7M	A 194 Gr. 8M
31	Seat Carrier		A 479 Tp.316 A182 F316	
32	Spring		Inconel - 750	
33	"O" Ring		FKM	
34	Mounting Flange	A 105N	A 350 Gr. LF2 Class-1	A 479 Tp.316
37	"O" Ring		FKM	
39	Stem Bushing		AISI 316 with inside in PTFE	
40	Gasket		Graphite	
47	Key	Carbon Steel	Carbon Steel	Stainless St.
50	Drain Plug	A 105	A 350 Gr. LF2 Class-1	AISI 316
50.1	Relieve Plug	A 105	A 350 Gr. LF2 Class-1	AISI 316
52	"O" Ring		FKM	
54	Seat Carrier Seal		Graphite	
72 / 72.1	"O" Ring		FKM	
75	Stem Bushing		AISI 316 with inside in PTFE	
87	Check Valve		Stainless St.	
89	Identification plate		Stainless St.	
912	Bolt		DIN 912 A2	

FORGED BALL VALVES 6015 / 6030 / 6060 / 6090 / 6050 / 6042

Full Bore

Class 150.
From 2" to 24"

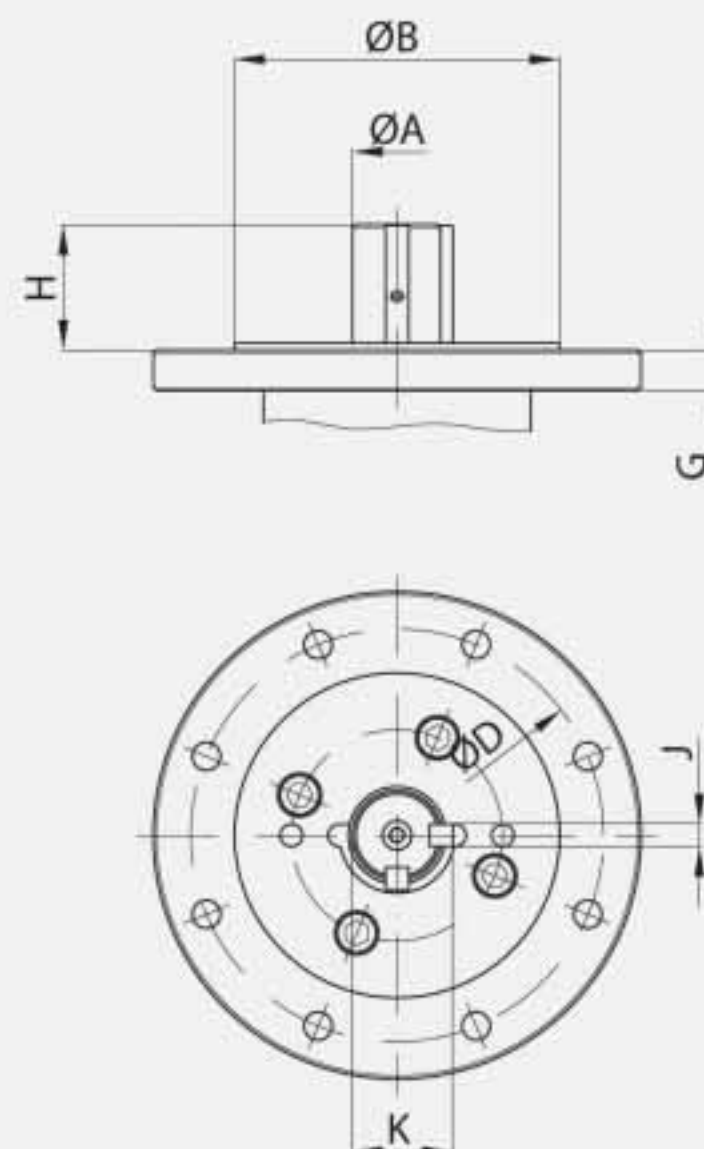
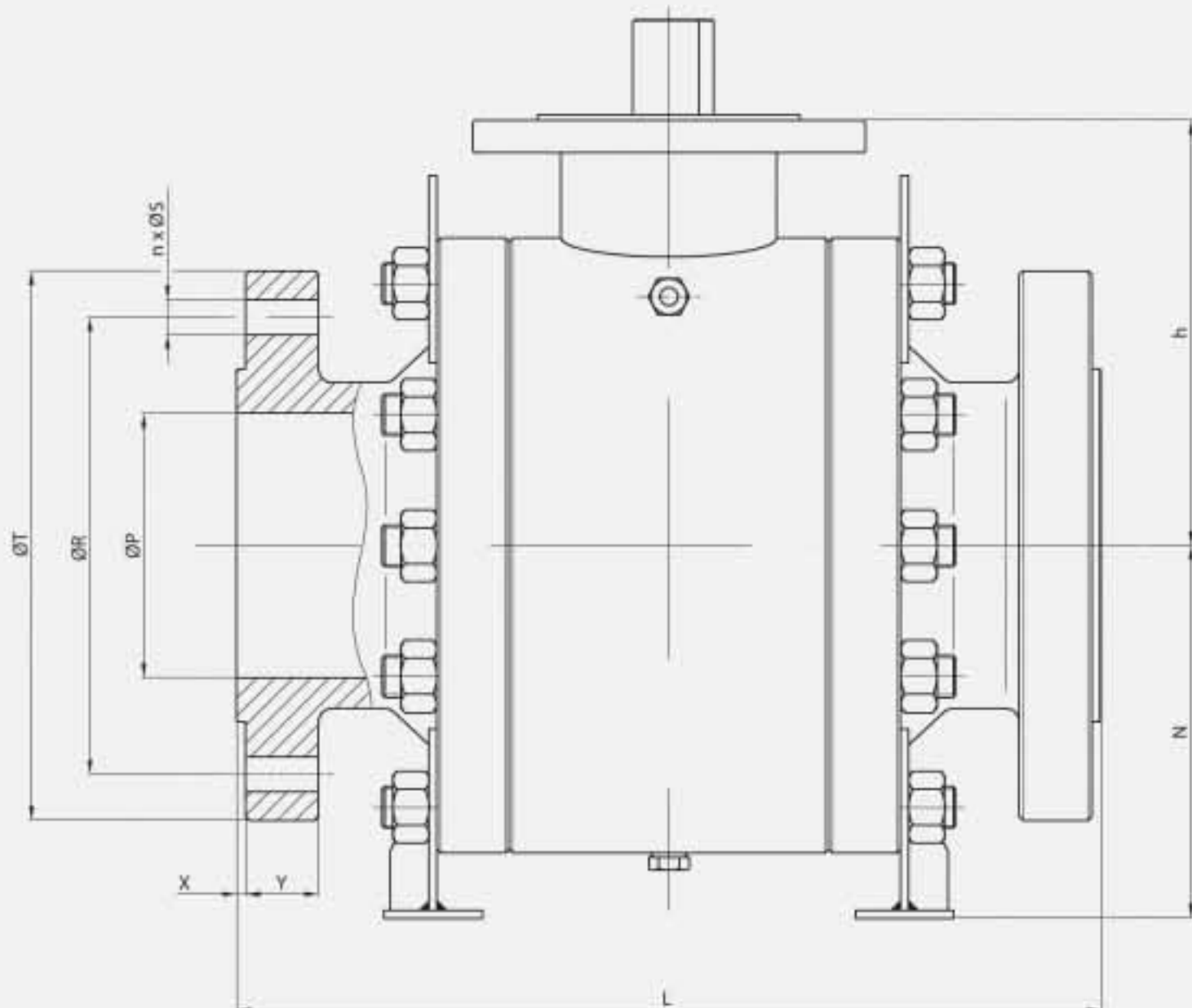
Class 300.
From 2" to 24"

Class 600.
From 2" to 24"

Class 900.
From 2" to 24"

Class 1500.
From 2" to 12"

Class 2500.
From 2" to 8"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature

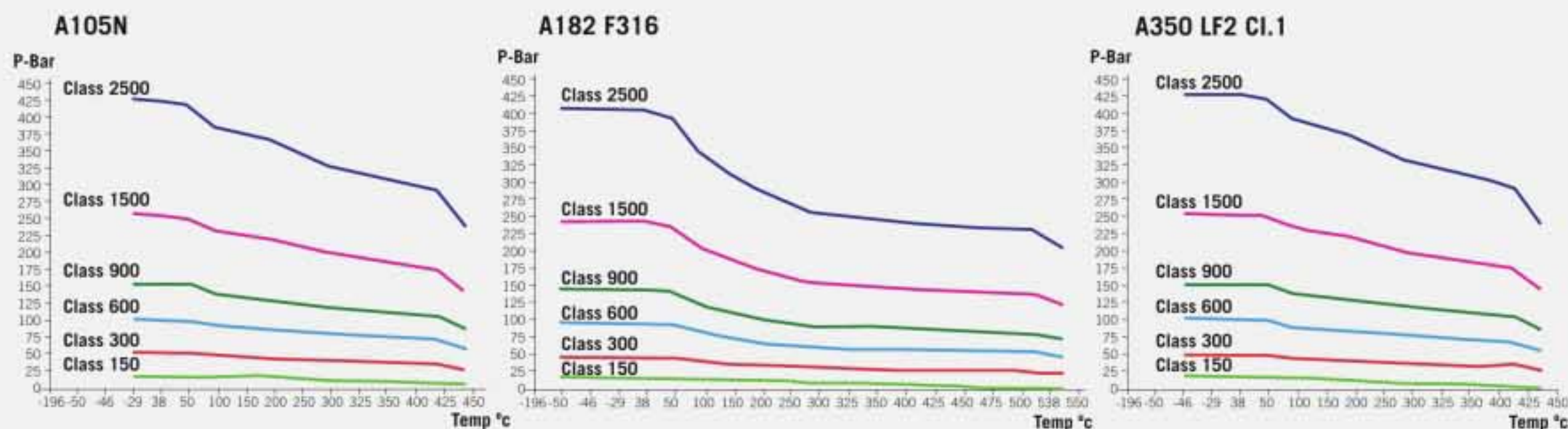


Fig. 6015 (Class 150)

DN	dP	L	dT	dR	n x dS	X	Y	h	N	ISO 5211	H	dA	J	K	WEIGHT	TORQUE	Cv
2"	49	178	150	121	4 x 19	2	14	125	120	F10	45	20	6	22,5	52	27	366
3"	76	203	190	152	4 x 19	2	18	150	170	F12	55	28	8	32	59	52	938
4"	102	229	230	191	8 x 19	2	22	175	200	F12	62	31	10	36	110	98	1.465
6"	152	394	280	241	8 x 22	2	24	269	254	F16	67	44,9	14	51,4	171	225	3.297
8"	203	457	345	299	8 x 22	2	27	325	285	F25	73	54,9	14	61,4	334	450	5.861
10"	254	533	405	362	12 x 25	2	29	362	366	F25	81	59,9	16	67	458	668	9.454
12"	305	610	485	432	12 x 25	2	30	423	428	F25	100	69,9	18	78	736	1.317	13.631
14"	337	686	535	476	12 x 29	2	33	455	448	F30	115	79,9	22	87,9	1.019	1.547	16.641
16"	387	762	595	540	16 x 29	2	35	490	504	F30	130	84,9	22	94,9	1.778	2.000	23.554
18"	438	864	635	578	16 x 32	2	38	542	568	F30	144	99,9	28	111,9	1.860	3.027	29.672
20"	488	914	700	635	20 x 32	2	41	577	581	F30	144	99,9	28	111,9	2.439	3.803	36.633
24"	589	1.067	815	749	20 x 35	2	46	599	692	F40	152	120	32	134	4.302	9.100	52.751

(*) Dimensions in mm and weight in kg.

(**) Weights and dimensions can be changed without notice.

Fig. 6030 (Class 300)

DN	øP	L	øT	øR	n x øS	X	Y	h	N	ISO 5211	H	øA	J	K	WEIGHT	TORQUE	Cv
2"	49	216	165	127	8 x 19	2	21	125	120	F10	45	20	6	22,5	60	49	366
3"	76	283	210	168	8 x 22	2	27	150	170	F12	55	28	8	32	72	107	938
4"	102	305	255	200	8 x 22	2	30	175	200	F12	62	31	10	36	120	210	1.465
6"	152	403	320	270	12 x 22	2	35	269	254	F16	67	44,9	14	51,4	195	522	3.297
8"	203	502	380	330	12 x 25	2	40	325	285	F25	73	54,9	14	61,4	352	1.060	5.861
10"	254	568	445	387	16 x 29	2	46	362	366	F25	81	59,9	16	67	534	1.559	9.454
12"	305	648	520	451	16 x 32	2	49	423	428	F25	100	69,9	18	78	847	3.125	13.631
14"	337	762	585	514	20 x 32	2	52	455	448	F30	115	79,9	22	87,9	1.221	3.642	16.641
16"	387	838	650	572	20 x 35	2	56	490	504	F30	130	84,9	22	94,9	1.831	4.732	23.554
18"	438	914	710	629	24 x 35	2	59	542	568	F30	144	99,9	28	111,9	2.057	7.000	29.672
20"	488	991	775	686	24 x 35	2	62	577	581	F30	144	99,9	28	111,9	2.721	8.959	36.633
24"	589	1.143	915	813	24 x 41	2	68	599	673	F40	152	120	32	134	5.525	23.400	52.751

Fig. 6060 (Class 600)

DN	øP	L	øT	øR	n x øS	X	Y	h	N	ISO 5211	H	øA	J	K	WEIGHT	TORQUE	Cv
2"	49	292	165	127	8 x 19	7	25	125	120	F10	45	20	6	22,5	63	85	366
3"	76	356	210	168	8 x 22	7	32	150	170	F12	55	28	8	32	78	196	938
4"	102	432	275	216	8 x 25	7	38	175	200	F12	62	31	10	36	132	392	1.465
6"	152	559	355	292	12 x 29	7	48	269	254	F16	67	44,9	14	51,4	262	1.007	3.297
8"	203	660	420	349	12 x 32	7	56	325	285	F25	73	54,9	14	61,4	490	2.057	5.861
10"	254	787	510	432	16 x 35	7	64	362	366	F25	81	59,9	16	67	728	3.013	9.454
12"	305	838	560	489	20 x 35	7	67	423	428	F25	100	69,9	18	78	1.218	6.079	13.631
14"	337	889	605	527	20 x 38	7	70	455	448	F30	115	79,9	22	87,9	1.374	7.062	16.641
16"	387	991	685	603	20 x 41	7	76	490	504	F30	130	84,9	22	94,9	2.474	9.196	23.554
18"	438	1.092	745	654	20 x 44	7	83	542	568	F30	144	99,9	28	111,9	2.595	13.485	29.672
20"	488	1.194	815	724	24 x 44	7	89	577	581	F30	144	99,9	28	111,9	3.183	17.381	36.633
24"	589	1.397	940	838	24 x 51	7	102	599	674	F40	152	120	32	134	6.250	40.100	52.751

Fig. 6090 (Class 900)

DN	øP	L	øT	øR	n x øS	X	Y	h	N	ISO 5211	H	øA	J	K	WEIGHT	TORQUE	Cv
2"	51	368	215	165,1	8 x 26	7	38,1	120	101	F10	35	23	8	27	52	199	366
3"	77	381	240	190,5	8 x 26	7	38,1	153	124	F14	37	33	10	38	80	545	938
4"	102	457	290	234,9	8 x 32	7	44,5	170	151	F16	37	33	10	38	170	786	1.465
6"	152	610	380	317,5	12 x 32	7	55,6	214	380	F25	59	46	14	53	390	1.330	3.297
8"	203	737	470	393,7	12 x 39	7	63,5	258	428	F25	75	58	18	67	640	2.536	5.861
10"	254	838	545	469,9	16 x 39	7	69,9	303	489	F25	113	68	20	78	1.070	4.950	9.454
12"	305	965	610	533,4	20 x 39	7	79,4	348	525	F25	111	68	20	78	1.610	7.850	13.631
14"	324	1.029	640	558,8	20 x 42	7	85,8	381	545	F25	110	88	24	100	1.760	10.868	16.641
16"	375	1.130	705	615,9	20 x 45	7	88,9	418	580	F25	110	88	24	100	2.240	18.112	23.554
18"	425	1.219	785	685,8	20 x 51	7	101,6	464	630	F35	130	120	32	136	3.000	28.738	29.672
20"	473	1.321	855	749,3	20 x 54	7	108	507	672	F35	130	120	32	136	4.360	43.470	36.633
24"	571	1.549	1.040	901,7	20 x 67	7	139,7	596	760	F35	127	148	32	164	7.050	55.555	52.751

Fig. 6050 (Class 1500)

DN	øP	L	øT	øR	n x øS	X	Y	h	N	ISO 5211	H	øA	J	K	WEIGHT	TORQUE	Cv
2"	51	371	215	165,1	8 x 26	7,92	38,1	129	107	F12	31	23	8	27	55	369	366
3"	77	473	265	203,2	8 x 32	7,92	47,7	156	137	F14	36	33	10	38	105	942	938
4"	102	549	310	241,3	8 x 35	7,92	54	193	168	F16	39,5	38	10	43	205	1.425	1.465
6"	146	711	395	317,5	12 x 39	9,52	82,6	242	395	F25	69,5	46	14	53	525	2.795	3.297
8"	194	841	485	393,7	12 x 45	11,13	92,1	292	445	F25	112,5	68	20	78	890	4.468	5.861
10"	241	1.000	585	482,6	12 x 51	11,13	108	336	505	F25	110,5	78	20	88	1.560	7.486	9.454
12"	289	1.146	675	571,5	16 x 54	14,27	123,9	399	565	F25	110	88	24	100	2.355	10.626	13.631

Fig. 6042 (Class 2500)

DN	øP	L	øT	øR	n x øS	X	Y	h	N	ISO 5211	H	øA	J	K	WEIGHT	TORQUE	Cv
2"	44,5	454	235	171,4	8 x 29	7,92	50,9	150	125	F16	39	33	10	38	110	786	366
3"	64	584	305	228,6	8 x 35	9,53	66,7	182	151	F16	39	38	10	43	215	1.932	938
4"	89	683	355	273,0	8 x 42	11,13	76,2	214	187	F25	66	46	14	53	385	2.042	1.465
6"	133	927	485	368,3	8 x 54	12,7	108	282	430	F25	78,5	58	18	67	840	4.368	3.297
8"	181	1.038	550	438,1	12 x 54	14,27	127	356	495	F25	105,5	78	20	88	1.435	8.211	5.861

(*) Dimensions in mm and weight in kg.
(**) Weights and dimensions can be changed without notice.

FORGED BALL VALVES 7015 / 7030 / 7060 / 7090 / 7050 / 7042

Reduced Bore

Class 150.
From 3" to 30"

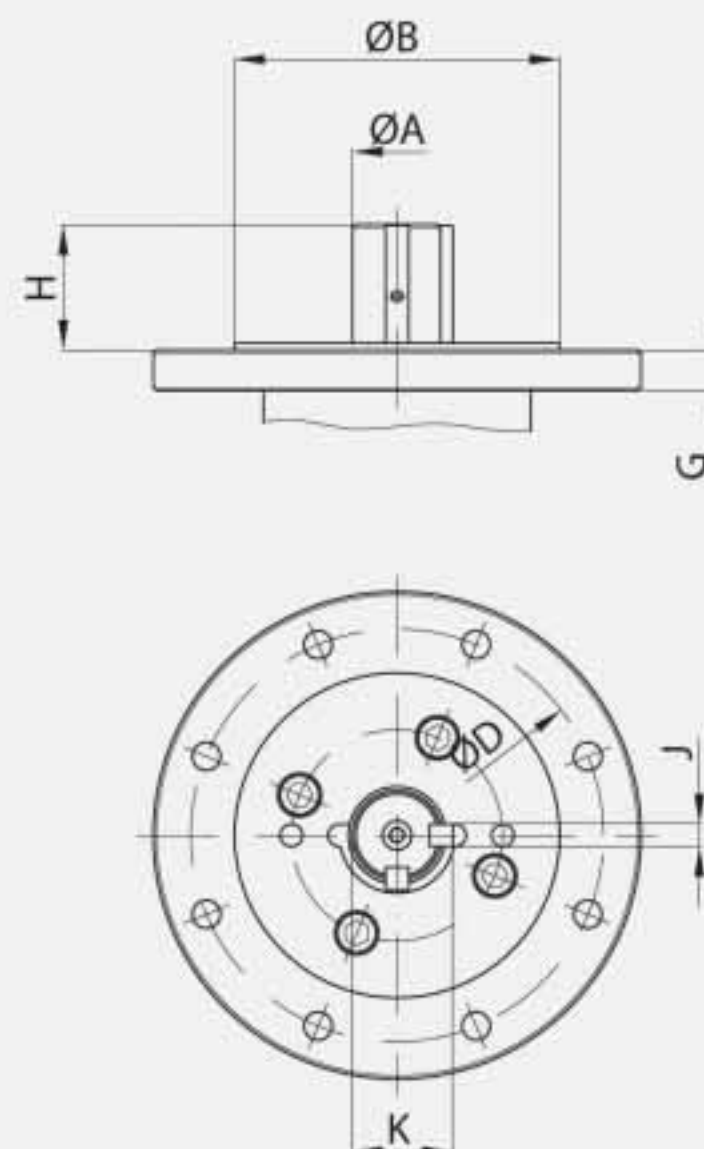
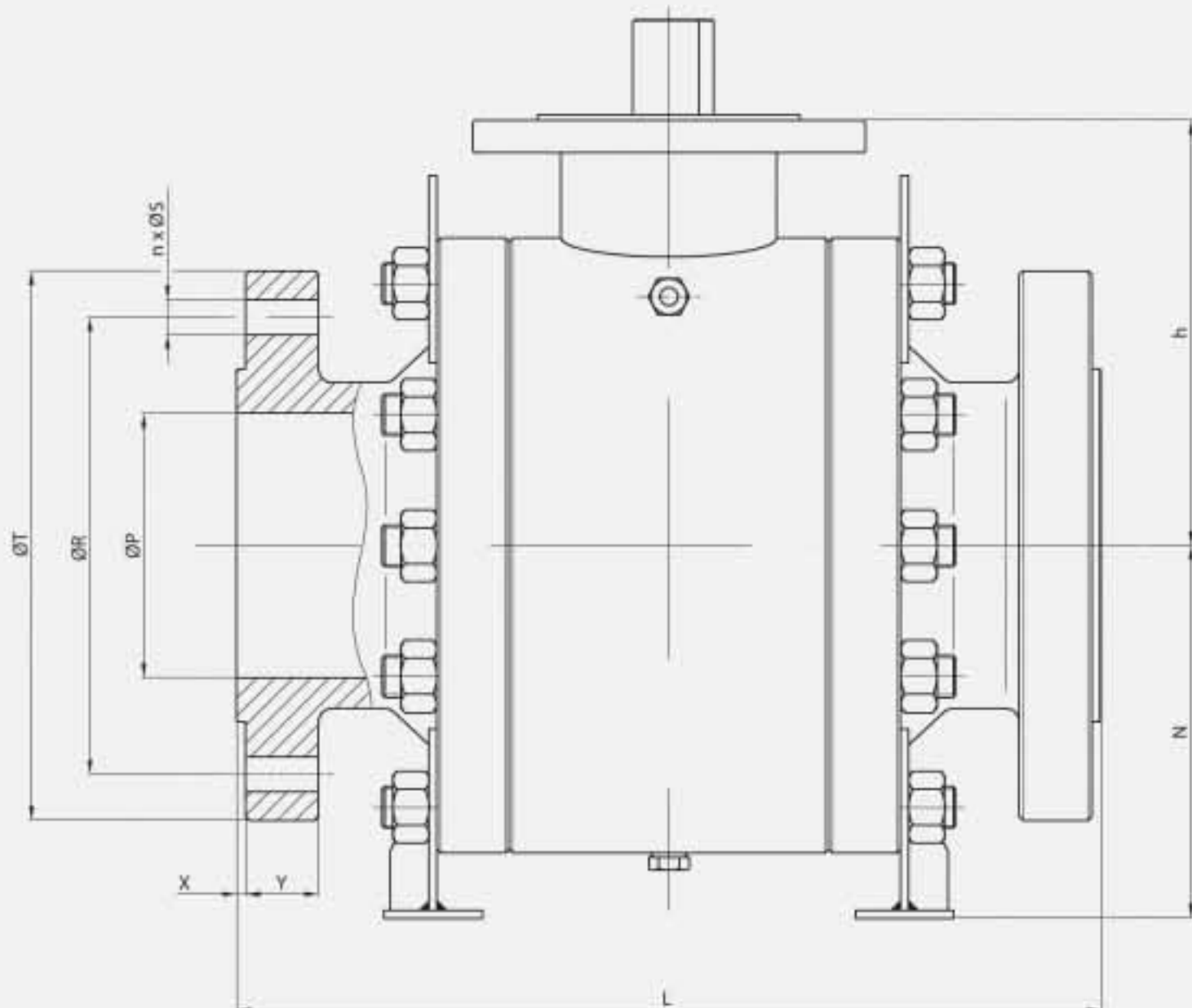
Class 300.
From 3" to 30"

Class 600.
From 3" to 30"

Class 900.
From 3" to 30"

Class 1500.
From 3" to 14"

Class 2500.
From 3" to 10"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature

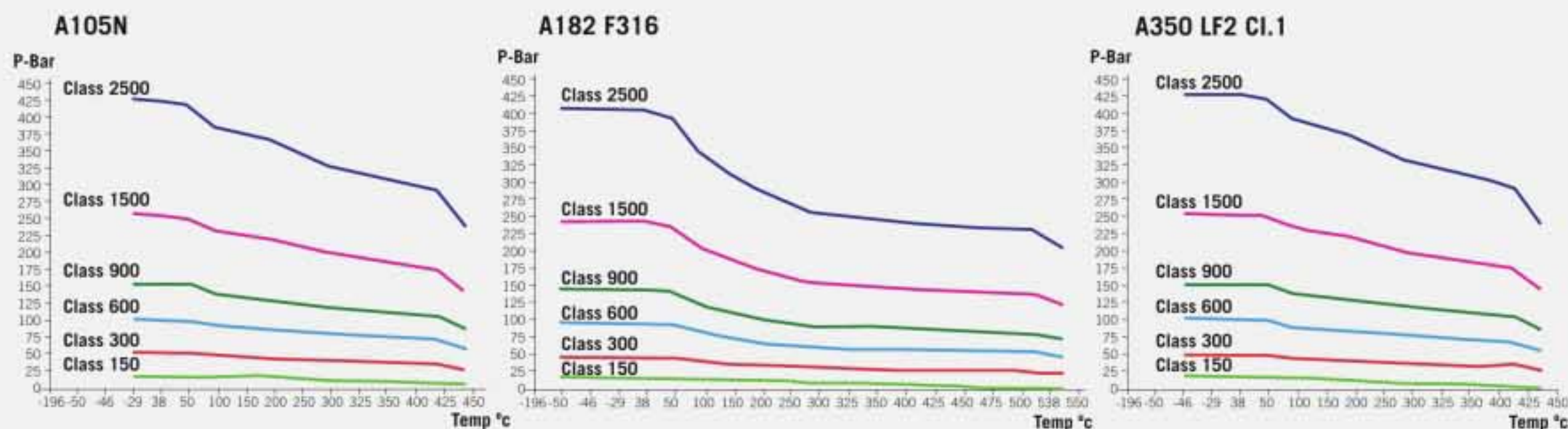


Fig. 7015 (Class 150)

DN	gJ	gP	L	gT	gR	n x gS	X	Y	n	N	ISO 5211	H	gA	J	K	WEIGHT	TORQUE	Cv
3" x 2"	76	49	203	190	152	4 x 19	2	18	125	120	F10	45	20	6	22,5	66	27	190
4" x 3"	102	76	229	230	191	8 x 19	2	22	150	170	F12	55	28	8	32	75	52	567
6" x 4"	152	102	394	280	241	8 x 22	2	24	175	200	F12	62	31	10	36	115	98	815
8" x 6"	203	152	457	345	299	8 x 22	2	27	269	254	F16	67	44,9	14	51,4	205	225	2.021
10" x 8"	254	203	533	405	362	12 x 25	2	29	325	285	F25	73	54,9	14	61,4	375	450	4.205
12" x 10"	305	254	610	485	432	12 x 25	2	30	362	366	F25	81	59,9	16	67	565	668	7.348
14" x 12"	337	305	686	535	476	12 x 29	2	33	423	428	F25	100	69,9	18	78	825	1.317	10.120
16" x 14"	387	337	762	595	540	16 x 29	2	35	455	448	F30	115	79,9	22	87,9	1.250	1.547	12.000
18" x 16"	438	387	864	635	578	16 x 32	2	38	490	504	F30	130	84,9	22	94,9	1.820	2.000	17.269
20" x 18"	488	438	914	700	635	20 x 32	2	41	542	568	F30	144	99,9	28	111,9	2.450	3.027	18.647
24" x 20"	589	488	1.067	815	749	20 x 35	2	46	577	581	F30	144	99,9	28	111,9	2.790	3.803	27.010
30" x 24"	684	589	1.295	985	857	28 x 35	2	73	599	692	F40	152	120	32	134	5.530	9.100	32.150

(*) Dimensions in mm and weight in kg.
(**) Weights and dimensions can be changed without notice.

Fig. 7030 (Class 300)

DN	aJ	aP	L	aT	aR	n x aS	X	Y	h	N	ISO 5211	H	aA	J	K	WEIGHT	TORQUE	Cv
3" x 2"	76	49	283	210	168	8 x 22	2	27	125	120	F10	45	20	6	22,5	65	49	190
4" x 3"	102	76	305	255	200	8 x 22	2	30	150	170	F12	55	28	8	32	85	107	567
6" x 4"	152	102	403	320	270	12 x 22	2	35	175	200	F12	62	31	10	36	135	210	815
8" x 6"	203	152	502	380	330	12 x 25	2	40	269	254	F16	67	44,9	14	51,4	225	522	2.021
10" x 8"	254	203	569	445	387	16 x 29	2	46	325	285	F25	73	54,9	14	61,4	385	1.060	4.205
12" x 10"	305	254	648	520	451	16 x 32	2	49	362	366	F25	81	59,9	16	67	650	1.559	7.348
14" x 12"	337	305	762	585	514	20 x 32	2	52	423	428	F25	100	69,9	18	78	995	3.125	10.120
16" x 14"	387	337	838	650	572	20 x 35	2	56	455	448	F30	115	79,9	22	87,9	1.460	3.642	12.000
18" x 16"	438	387	914	710	629	24 x 35	2	59	490	504	F30	130	84,9	22	94,9	1.925	4.732	17.269
20" x 18"	488	438	991	775	686	24 x 35	2	62	542	568	F30	144	99,9	28	111,9	2.450	7.000	18.647
24" x 20"	589	488	1.143	915	813	24 x 41	2	68	577	581	F30	144	99,9	28	111,9	3.250	8.959	27.010
30" x 24"	735	589	1.397	1.092	857	28 x 48	2	90	599	673	F40	152	120	32	134	5.900	23.400	32.150

Fig. 7060 (Class 600)

DN	aJ	aP	L	aT	aR	n x aS	X	Y	h	N	ISO 5211	H	aA	J	K	WEIGHT	TORQUE	Cv
3" x 2"	76	49	356	210	168	8 x 22	7	32	125	120	F10	45	20	6	22,5	72	85	190
4" x 3"	102	76	432	275	216	8 x 25	7	38	150	170	F12	55	28	8	32	93	196	567
6" x 4"	152	102	559	355	292	12 x 29	7	48	175	200	F12	62	31	10	36	169	392	815
8" x 6"	203	152	660	420	349	12 x 32	7	56	269	254	F16	67	44,9	14	51,4	301	1.007	2.021
10" x 8"	254	203	787	510	432	16 x 35	7	64	325	285	F25	73	54,9	14	61,4	555	2.057	4.205
12" x 10"	305	254	838	560	489	20 x 35	7	67	362	366	F25	81	59,9	16	67	829	3.013	7.348
14" x 12"	337	305	889	605	527	20 x 38	7	70	423	428	F25	100	69,9	18	78	1.426	6.079	10.120
16" x 14"	387	337	991	685	603	20 x 41	7	76	455	448	F30	115	79,9	22	87,9	1.751	7.062	12.000
18" x 16"	438	387	1.092	745	654	20 x 44	7	83	490	504	F30	130	84,9	22	94,9	2.625	9.196	17.269
20" x 18"	488	438	1.194	815	724	24 x 44	7	89	542	568	F30	144	99,9	28	111,9	3.111	13.485	18.647
24" x 20"	589	488	1.397	940	838	24 x 51	7	102	577	581	F30	144	99,9	28	111,9	4.250	17.381	27.010
30" x 24"	735	589	1.651	1.130	857	28 x 54	7	108	599	674	F40	152	120	32	134	7.125	40.100	32.150

Fig. 7090 (Class 900)

DN	aJ	aP	L	aT	aR	n x aS	X	Y	h	N	ISO 5211	H	aA	J	K	WEIGHT	TORQUE	Cv
3" x 2"	77	51	381	240	190,5	8 x 26	7	38,1	120	101	F10	35	23	8	27	62	199	190
4" x 3"	102	77	457	290	234,9	8 x 32	7	44,5	153	124	F14	37	33	10	38	105	545	567
6" x 4"	152	102	610	380	317,5	12 x 32	7	55,6	170	151	F16	37	33	10	38	201	786	815
8" x 6"	203	152	737	470	393,7	12 x 39	7	63,5	214	380	F25	59	46	14	53	436	1.330	2.021
10" x 8"	254	203	838	545	469,9	16 x 39	7	69,9	258	428	F25	75	58	18	67	735	2.536	4.205
12" x 10"	305	254	965	610	533,4	20 x 39	7	79,4	303	489	F25	113	68	20	78	1.200	4.950	7.348
14" x 12"	324	305	1.029	640	558,8	20 x 42	7	85,8	348	525	F25	111	68	20	78	1.795	7.850	10.120
16" x 14"	375	324	1.130	705	615,9	20 x 45	7	88,9	381	545	F25	110	88	24	100	2.105	10.868	12.000
18" x 16"	425	375	1.219	785	685,8	20 x 51	7	101,6	418	580	F25	110	88	24	100	2.720	18.112	17.269
20" x 18"	473	425	1.321	855	749,3	20 x 54	7	108	464	630	F35	130	120	32	136	4.050	28.738	18.647
24" x 20"	571	473	1.549	1.040	901,7	20 x 67	7	139,7	507	672	F35	130	120	32	136	4.650	43.470	27.010
30" x 24"	712	571	1.803	1.232	857,0	20 x 72	7	142,0	596	760	F35	127	148	32	164	7.950	55.555	32.150

Fig. 7050 (Class 1500)

DN	aJ	aP	L	aT	aR	n x aS	X	Y	h	N	ISO 5211	H	aA	J	K	WEIGHT	TORQUE	Cv
3" x 2"	77	51	470	265	203,2	8 x 32	7,92	47,7	129	107	F12	31	23	8	27	80	369	190
4" x 3"	102	77	546	310	241,3	8 x 35	7,92	54	156	137	F14	36	33	10	38	156	942	567
6" x 4"	146	102	705	395	317,5	12 x 39	9,52	82,6	193	168	F16	39,5	38	10	43	325	1.425	815
8" x 6"	194	146	832	485	393,7	12 x 45	11,13	92,1	242	395	F25	69,5	46	14	53	603	2.795	2.021
10" x 8"	241	194	991	585	482,6	12 x 51	11,13	108	292	445	F25	112,5	68	20	78	950	4.468	4.205
12" x 10"	289	241	1.130	675	571,5	16 x 54	14,27	123,9	336	505	F25	110,5	78	20	88	1.825	7.486	7.348
14" x 12"	318	289	1.257	750	635	16 x 60	15,88	133,4	399	565	F25	110	88	24	100	2.750	10.626	10.120

Fig. 7042 (Class 2500)

DN	aJ	aP	L	aT	aR	n x aS	X	Y	h	N	ISO 5211	H	aA	J	K	WEIGHT	TORQUE	Cv
3" x 2"	64	44,5	578	305	228,6	8 x 35	9,53	66,7	150	125	F16	39	33	10	38	140	786	190
4" x 3"	89	64	673	355	273,0	8 x 42	11,13	76,2	182	151	F16	39	38	10	43	250	1.932	567
6" x 4"	133	89	914	485	368,3	8 x 54	12,7	108	214	187	F25	66	46	14	53	520	2.042	815
8" x 6"	181	133	1.022	550	438,1	12 x 54	14,27	127	282	430	F25	78,5	58	18	67	1.000	4.368	2.021
10" x 8"	226	181	1.270	675	539,8	12 x 66	17,48	165	356	495	F25	105,5	78	20	88	1.850	8.211	4.205

(*) Dimensions in mm and weight in kg.
(**) Weights and dimensions can be changed without notice.

| BALL VALVES |

2-PIECE CAST TRUNNION MOUNTED CAST TRUNNION

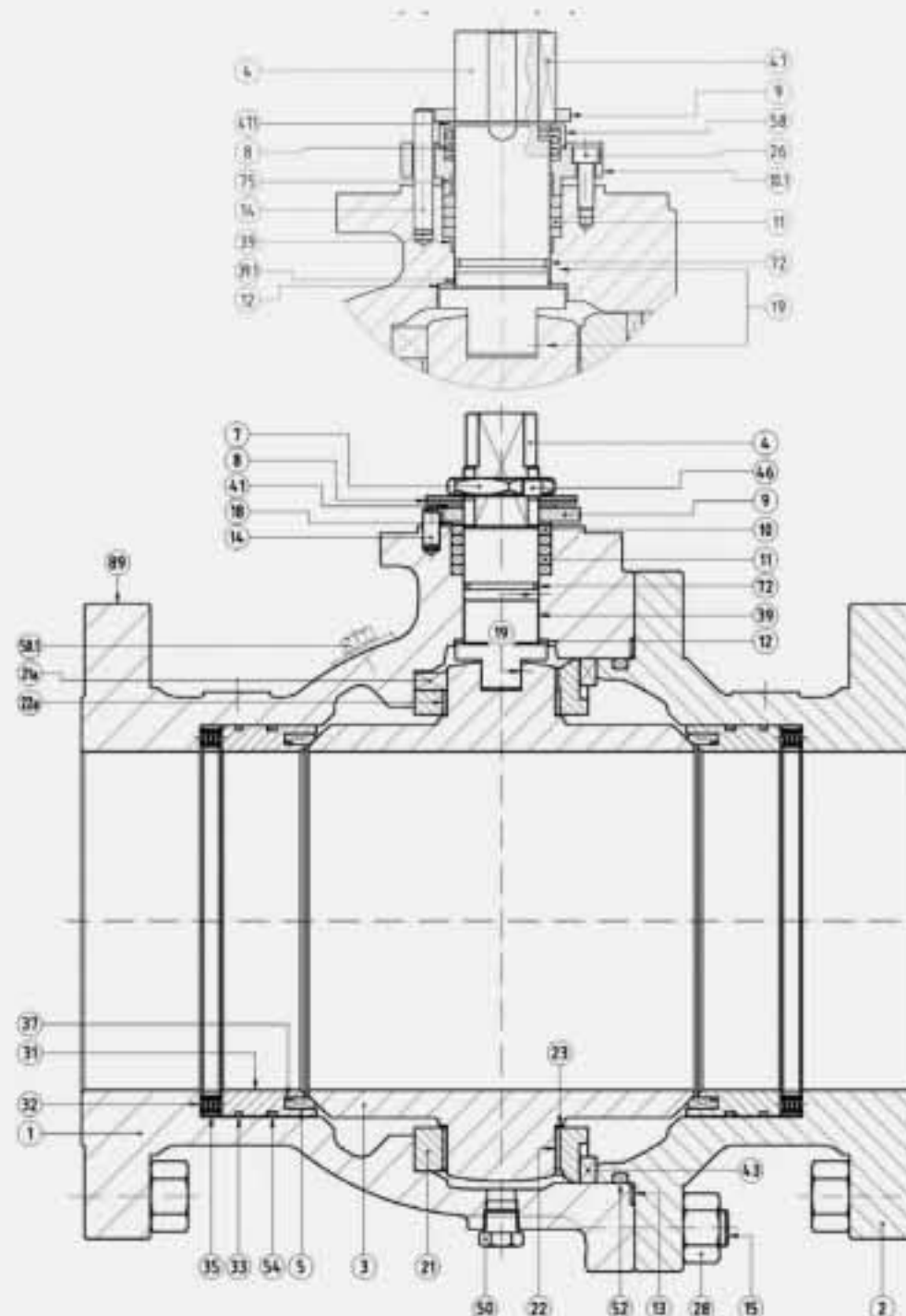
2" - 16" | Class 150 - Class 600

Materials

CAST TRUNNION

Item	Description	AIT	IIT
1	Body	A 216 Gr. WCB (C ≤ 0.25%)	A 351 Gr. CF8M
2	Body connector	A 216 Gr. WCB (C ≤ 0.25%)	A 351 Gr. CF8M
3	Ball	A 351 Gr. CF8M	
4	Stem	A 479 Tp.316	
5	Seat ring	PTFE	
7	Gland nut	Zinc Plated Carbon Steel	AISI-303
8	Disk spring / Spring	Carbon St. *	E.N.P. Carbon St. *
9	Stop plate	Carbon St.	AISI-304
10	Gland ring	AISI-303	AISI-316
10.1	Gland	AISI-303	AISI-316
11	Gland packing	Graphite	
12	Stem thrust seal	25% G.F. PTFE	
13	Body connector seal	AISI-316L + Graphite	
14	Stop pin	Carbon St.	Stainless St.
15	Stud	A 193 Gr. B7M	A 193 Gr. B8M **
18	Thrust washer	25% G.F. PTFE	
19	Antistatic device	Stainless St.	
21 / 21a	Ball trunnion	A 351 Gr. CF8M	
22 / 22a	Trunnion bearing	AISI-316 + PTFE	
23	Bearing	PTFE	
26	Bolt	DIN 912 8.8 Zinc Plated	DIN 912 A2
28	Nut	A 194 Gr. 2HM	A 194 Gr. 8M **
31	Seat Carrier	A 351 Gr. CF8M	
32	Spring	Inconel - 750	
33	O' Ring	FKM -- Note 1 --	
35	Spring carrier	A 351 Gr. CF8M	
37	O' Ring	FKM -- Note 1 --	
39	Stem bushing	25% G.F. PTFE	
39.1	Stem bushing	AISI-316 + PTFE -- Note 2 --	
41	Spacer	Carbon St.	Stainless St.
43	Key	AISI-316	
46	Locking washer	AISI-304	
47	Key	Carbon St.	
50	Drain plug	A 105	AISI-316
50.1	Vent plug	A 105	AISI-316
52	O' Ring	FKM -- Note 2 --	
54	Seat carrier seal	Graphite	
58	Spring protection	Carbon St.	Stainless St.
72	O' Ring	FKM -- Note 1 --	
75	Stem bushing	AISI-316 + PTFE -- Note 2 --	
89	Identification plate	Stainless St.	
471	Retainer	Carbon St.	Stainless St.

ESQUEMA



(*) On request Inconel X-750.

(**) On request B7M / 2HM Zinc Plated & Bichromated.

Note 1: Depending on design conditions AFLAS, KALREZ or KALREZ Spectrum.

Note 2: Only DN-350 & 400 and all Fig.2560.

CAST BALL VALVES 2515 / 2530 / 2560

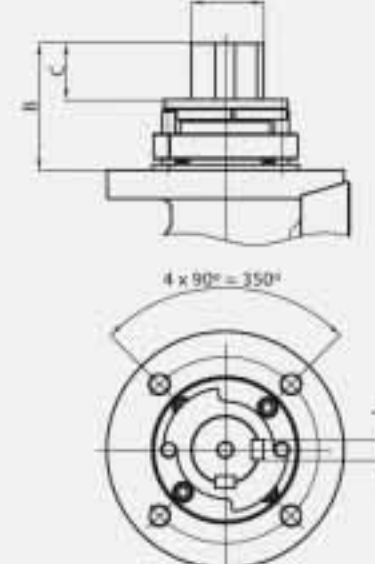
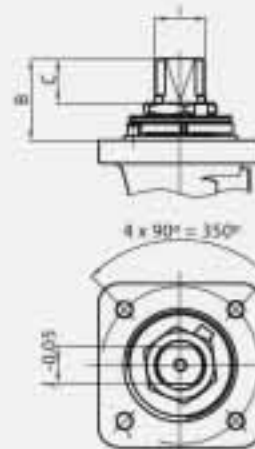
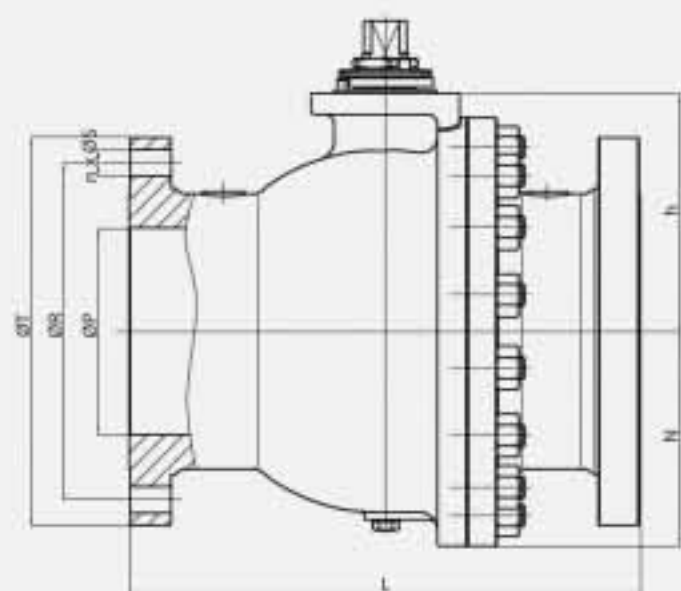
Class 150 / 300 / 600

Full Bore

Class 150, From 2" to 16"

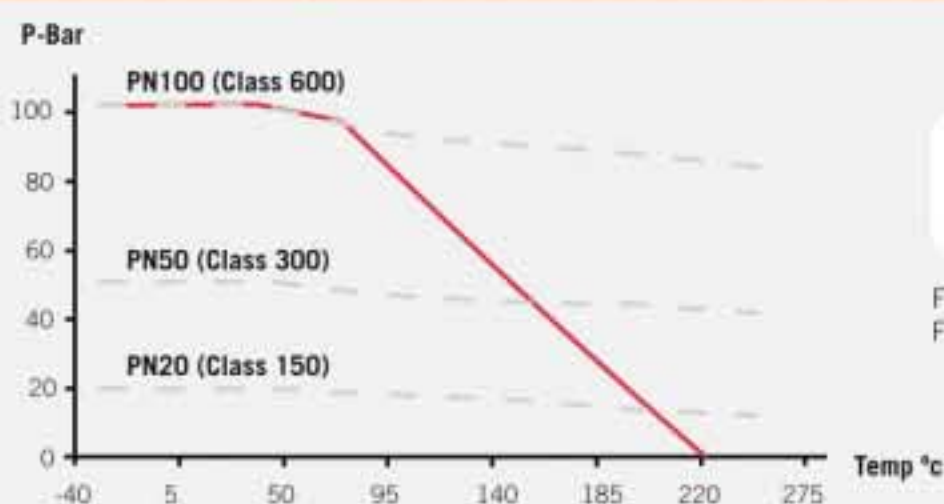
Class 300, From 2" to 14"

Class 600, From 2" to 12"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature



Series 2515 (Class 150)

DN	øP	L	øR	n x øS	øT	h	N	ISO 5211	B	C	I	J	WEIGHT	TORQUE
50 (2")	50	178	120.7	4x19.1	152	84	80	F07	42	17	M22x1,5	16	13	70
80 (3")	80	203	152.4	4x19.1	191	126	-	F10	55	27	M28x1,5	20	22	130
100 (4")	100	229	190.5	8x19.1	229	152	120	F12	56	27	M35x2	25	39	340
150 (6")	151	394	241.3	8x22.2	279	212	168	F14	70	36	M45x2	32	98	500
200 (8")	203	457	298.5	8x22.2	343	233	208	F14	70	37	M45x2	32	124	800
250 (10")	254	533	362	12x25.4	406	256	243	F16	70	37	M45x2	32	175	1.010
300 (12")	305	609	431.8	12x25.4	483	297	287.5	F14	106	58	50	14	295	1.800
350 (14")	337	686	476.3	12x28.5	533	333	323	F16	103	49	60	18	580	2.600
400 (16")	388	762	539.8	16x28.5	597	412	358	F25	159	103	90	25	750	3.500

Series 2530 (Class 300)

DN	øP	L	øR	n x øS	øT	h	N	ISO 5211	B	C	I	J	WEIGHT	TORQUE
50 (2")	50	216	127	8x19.1	165	84	-	F07	42	17	M22x1,5	16	16	80
80 (3")	80	283	168.1	8x22.2	210	126	-	F10	55	27	M28x1,5	20	33	140
100 (4")	100	305	200.1	8x22.2	254	152	-	F12	56	27	M35x2	25	43	380
150 (6")	151	403	269.7	12x22.2	318	212	173	F14	70	36	M45x2	32	113	700
200 (8")	203	502	330.2	12x25.4	381	233	210	F14	70	37	M45x2	32	157	900
250 (10")	254	568	387.4	16x28.5	445	257	253	F14	70	37	M45x2	32	263	1.300
300 (12")	305	647	450.9	16x31.8	521	310	300	F16	103	49	50	18	480	2.500
350 (14")	337	762	514.4	20x31.8	584	333	331	F16	103	49	60	18	655	3.750

Series 2560 (Class 600)

DN	øP	L	øR	n x øS	øT	h	N	ISO 5211	B	C	I	J	WEIGHT	TORQUE
50 (2")	50	292	127	8x19.1	165	84	-	F07	42	17	M22x1,5	16	20	90
80 (3")	80	356	168	8x22.2	210	126	113	F10	55	27	M28x1,5	20	41	170
100 (4")	100	432	215.9	8x25.2	273	152	-	F12	56	27	M35x2	26	77	400
150 (6")	151	559	292.1	12x28.5	356	212	188	F14	97	49	45	14	192	900
200 (8")	203	660	349.3	12x31.8	419	237	235	F14	113	64	50	14	329	1.400
250 (10")	254	787	431.8	16x35	508	275	273	F16	103	49	60	18	460	3.050
300 (12")	305	838	489	20x35	559	345	335	F16	127	73	56	18	570	3.800

(*) Dimensions in mm and weight in kg.
(**) Weights and dimensions can be changed without notice.

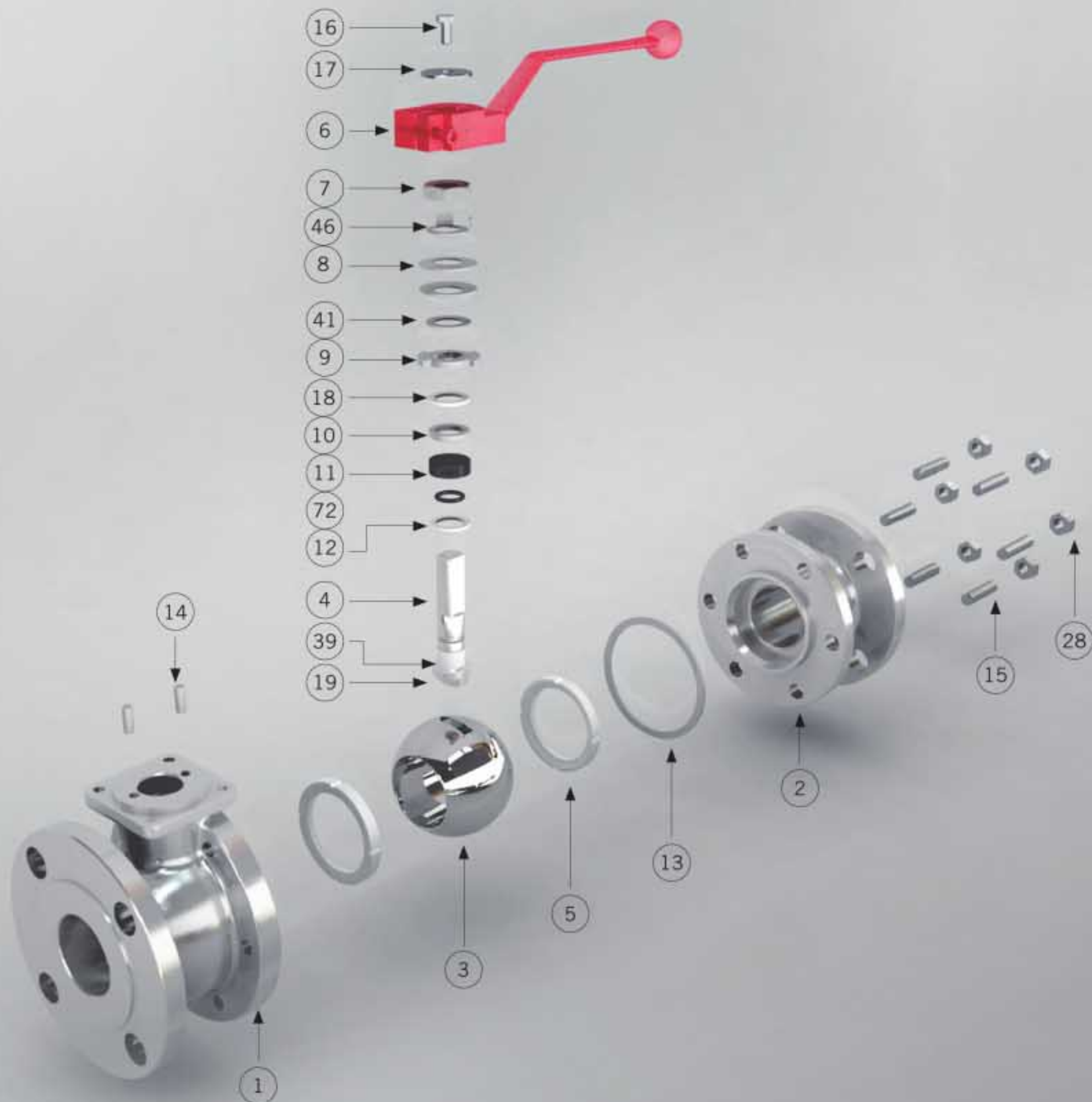
| BALL VALVES |

FLOATING ASME

3/8" - 10" | Class 150 - Class 2500

A floating ball valve is a valve with seats supported ball, that is pushed by upstream pressure towards the downstream seat to ensure sealing. The DN of the floating ball valves range is limited by the capability of the seats material to support the pressure, temperature and weight of the ball.





Materials ASME

Item	Description	AIT	LIT	IIT
1	Body	A 216 Gr. WCB (C ≤ 0,25%)	A 352 Gr. LCC	A 351 Gr. CF8M
2	Body connector	A 216 Gr. WCB (C ≤ 0,25%)	A 352 Gr. LCC	A 351 Gr. CF8M
3	Ball	A 351 Gr. CF8M (DN 15 : 25 A 479 Tp.316)		
4	Stem	A 479 Tp.316		
5	Seat ring	PTFE		
6	Wrench	Nodular Iron		
7	Gland nut	Zinc plated carbon steel	AISI 303	AISI 303
8	Disk spring	Carbon St.	E.N.P. Carbon St.	E.N.P. Carbon St.
9	Stop plate	Carbon St.	AISI 304	AISI 304
10	Gland	AISI 303	AISI 316	AISI 316
11	Gland packing	Graphite		
12	Stem thrust seal	25% G.F. PTFE		
13	Body connector seal	AISI 316L + PTFE + Graphite		
14	Stop pin	Carbon St.	Stainless St.	Stainless St.
15	Stud	A 193 Gr. B7M	A 193 Gr. L7M	A 193 Gr. B8M
16	Bolt	DIN 933 5.6 Zinc plated	DIN 933 A2	DIN 933 A2
17	Washer	Zinc plated carbon steel	AISI 304	AISI 304
18	Thrust washer	25% G.F. PTFE		
19	Antistatic device	Stainless St.		
28	Nut	A 194 Gr. 2HM	A 194 Gr. 7M	A 194 Gr. 8M
39	Stem bushing (DN 25 to 200)	25% G.F. PTFE		
41	Spacer (DN 40 to 200)	Carbon St.	AISI 304	AISI 304
46	Washer	AISI-304	AISI 304	AISI 304
72	"O" Ring	FKM		
89	Identification plate	Stainless St.		

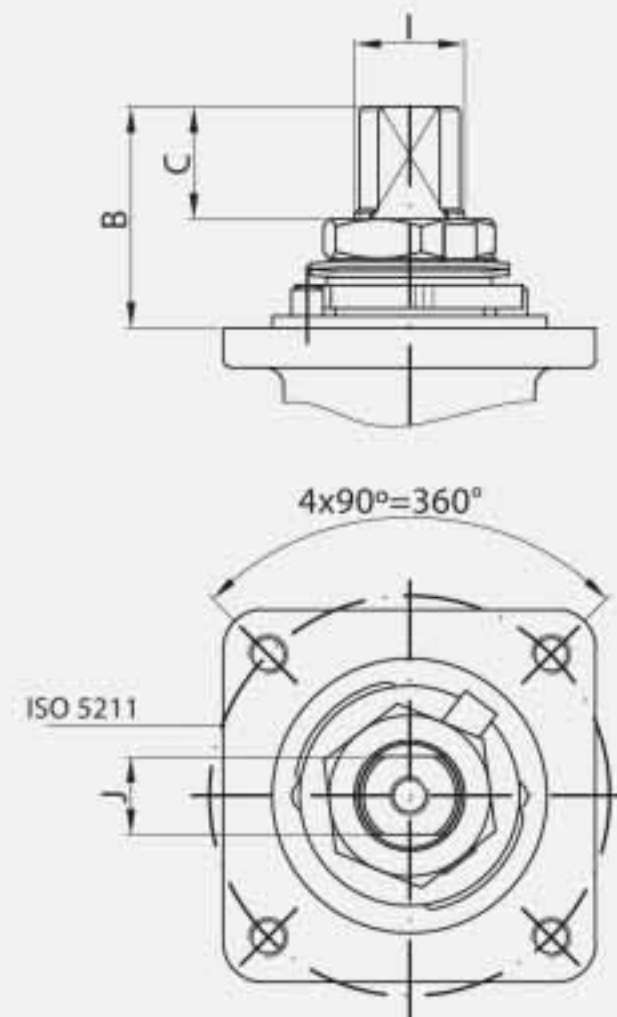
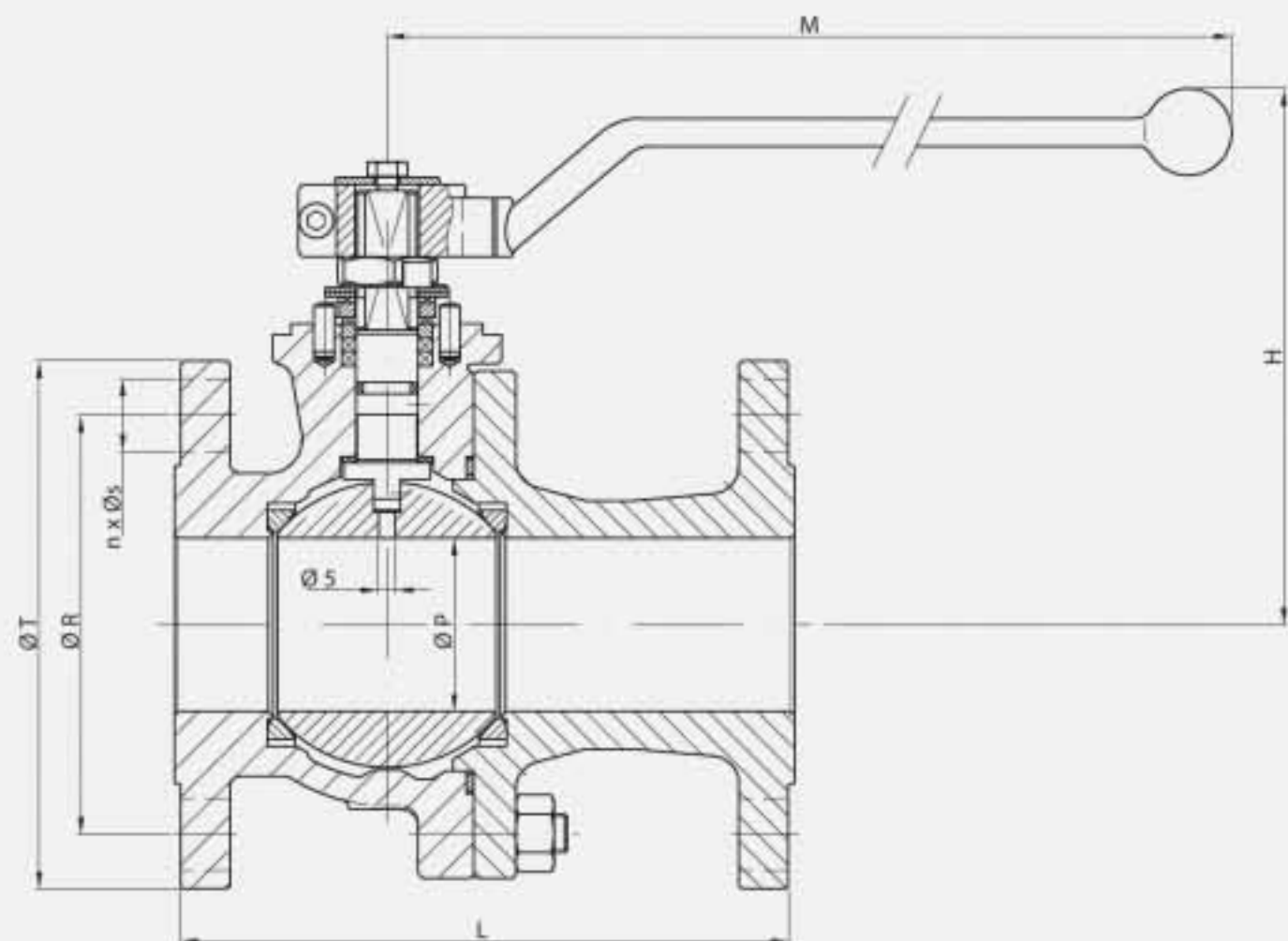
ASME 515 / 530

Class 150 / 300

Full Bore

Class 150, From 1/2" to 8"

Class 300, From 1/2" to 6"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature

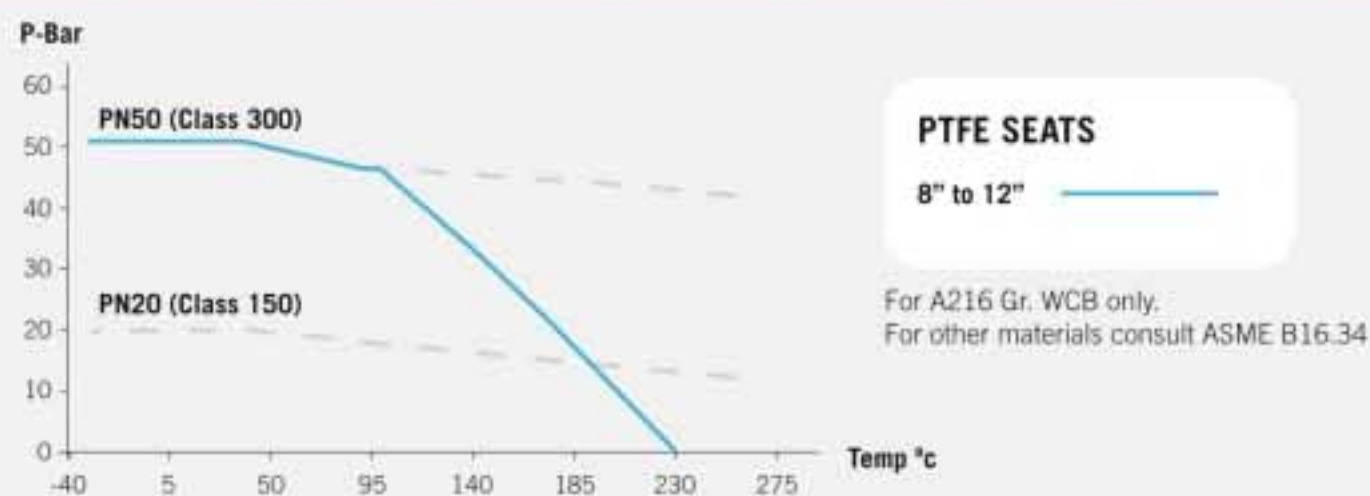


Fig. 515 (Class 150)

DN	øP	L	øR	n x øS	øT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
15 (1/2")	15	108	60,3	4x15,9	88,9	97	224	F05	11,5	5,7	M12x1.5	9	2	8	20
20 (3/4")	20	117	69,8	4x15,9	98,4	104	224	F05	15	7,4	M12x1.5	9	3	10	40
25 (1")	25	127	79,4	4x15,9	108	117	224	F05	24	10,2	M12x1.5	9	3,5	15	75
40 (1 1/2")	40	165	98,4	4x15,9	127	148	315	F07	39,5	16,7	M18x1.5	13	8	25	170
50 (2")	50	178	120,6	4x19	152	155	315	F07	41,5	17,6	M18x1.5	13	11	40	270
65 (2 1/2")	65	190	139,7	4x19	177,8	169	348	F07	44	18,1	M22x1.5	16	16	60	550
80 (3")	80	203	152,4	4x19	191	207	445	F10	44,5	18,7	M25x1.5	18	23	90	1000
100 (4")	100	229	190,5	8x19	229	231	495	F10	56,5	28,7	M28x1.5	20	38	150	1650
150 (6")	151	394	241,3	8x22,2	279,5	298	698	F12	68	38,5	M40x1.5	29	88	250	4200
200 (8")	203	457	298,4	8x22,2	343	352	868	F14	72	37	M45x2	32	155	700	9000

Fig. 530 (Class 300)

DN	øP	L	øR	n x øS	øT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
15 (1/2")	15	140	66,7	4x15,9	95,2	97	224	F05	11,5	5,7	M12x1.5	9	3	12	20
20 (3/4")	20	152	82,5	4x19	117,5	104	224	F05	15	9,2	M12x1.5	9	4	16	40
25 (1")	25	165	88,9	4x19	123,8	117	224	F05	24	10,2	M12x1.5	9	5	20	75
40 (1 1/2")	40	190	114	4x22,2	155,6	148	315	F07	39,5	12,2	M18x1.5	13	11	35	170
50 (2")	50	216	127	8x19	165,1	155	315	F07	41,5	16,2	M18x1.5	13	14	55	270
80 (3")	80	283	168	8x22,2	210,5	207	445	F10	44,5	18,2	M25x1.5	18	32	150	1000
100 (4")	100	305	200	8x22,2	254	231	495	F10	56,5	18,1	M28x1.5	20	52	230	1650
150 (6")	151	403	270	12x22,2	317,5	298	698	F12	68	18,7	M40x1.5	29	94	342	4200

(*) Dimensions in mm, weight in kg and Torque in Nm.
(**) Weights and dimensions can be changed without notice.

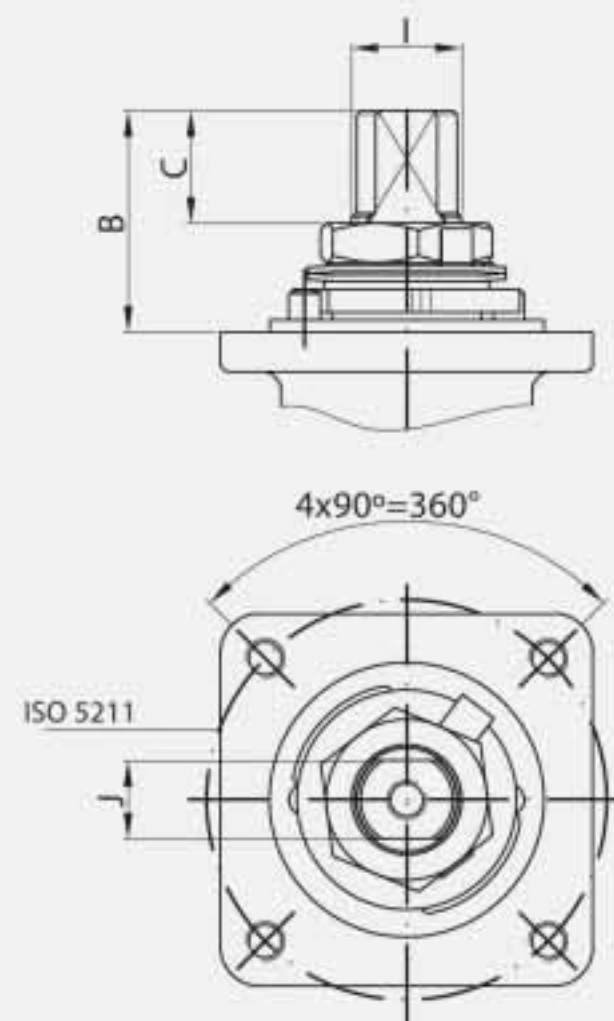
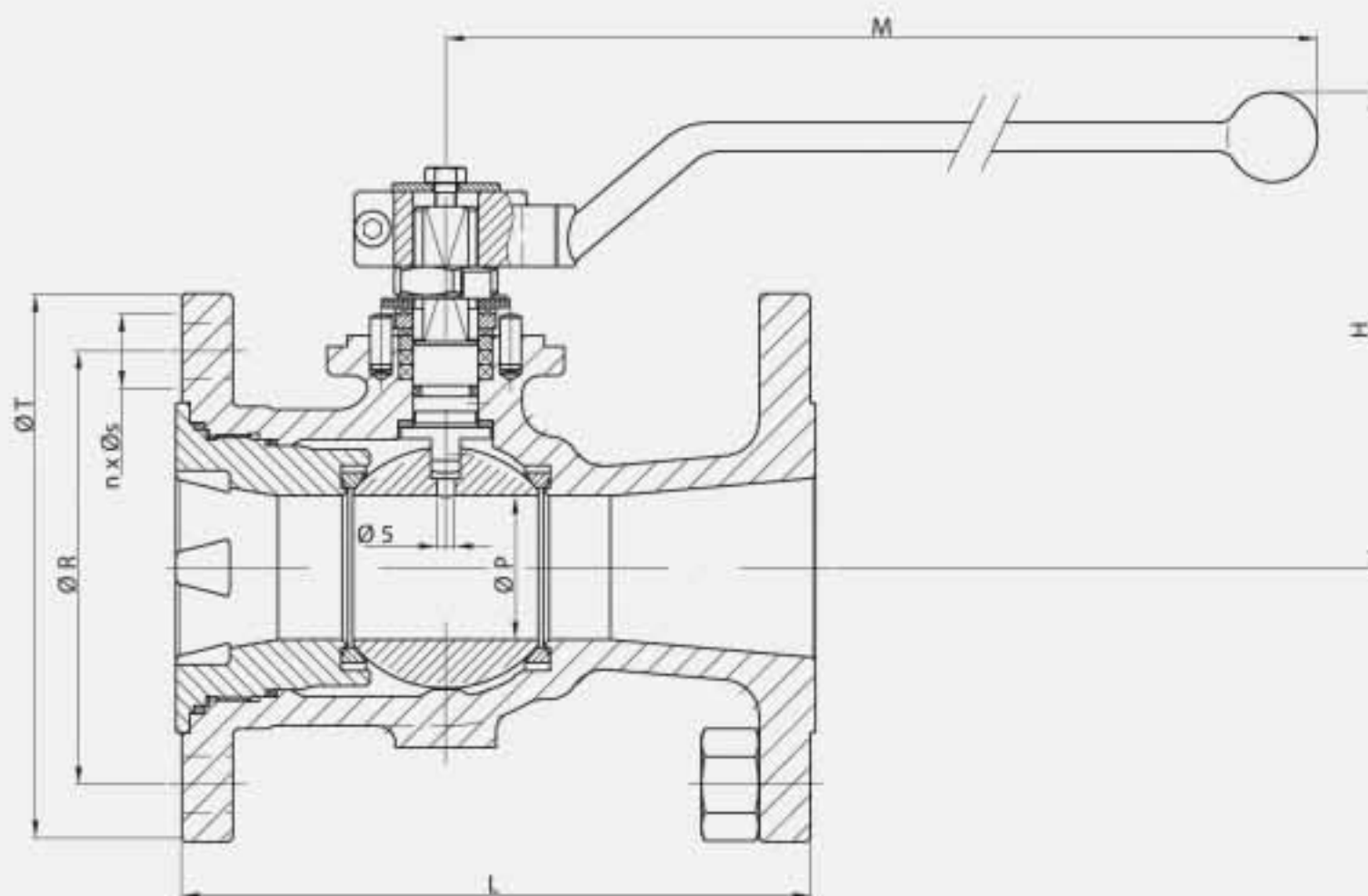
ASME 715 / 730

Class 150 / 300

Reduced Bore

Class 150, From 1/2" to 10"

Class 300, From 1/2" to 8"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature

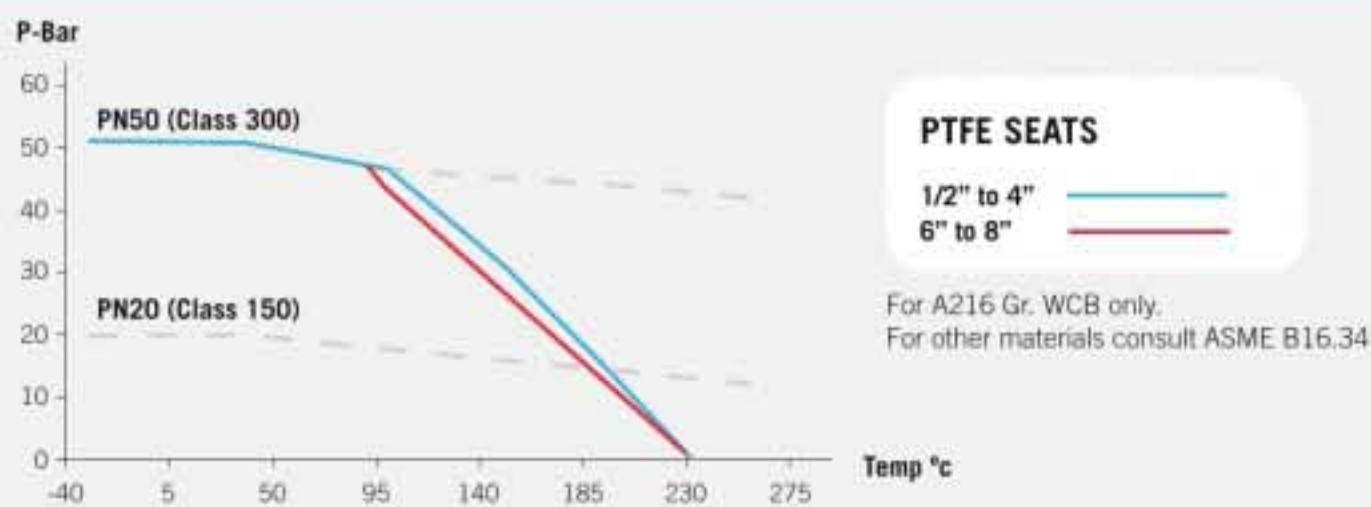


Fig. 715 (Class 150)

DN	aP	L	eR	n x øS	aT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
15 (1/2")	9,5	108	60,3	4x15,9	88,9	81	224	F05	22	8,1	M10x1,5	7	1,6	6	7
20 (3/4")	15	117	69,8	4x15,9	98,4	85	224	F05	23	7,1	M12x1,5	9	2,1	9	10
25 (1")	20	127	79,4	4x15,9	108	90	224	F05	23	7,7	M12x1,5	9	2,7	10	26
40 (1 1/2")	32	165	98,4	4x15,9	127	118	287	F05	33,5	12,2	M16x1,5	12	5,1	21	107
50 (2")	40	178	121	4x19	152	134	315	F07	41,5	18,2	M18x1,5	13	7,9	25	140
80 (3")	58	203	152	4x19	191	149	348	F07	44	18	M22x1,5	16	14,3	40	300
100 (4")	80	229	191	8x19	229	189	450	F10	44,5	18,7	M25x1,5	18	25,9	90	600
150 (6")	111	267	241	8x22,2	279,5	227	495	F12	56,5	28,5	M28x1,5	20	43,8	180	1000
200 (8")	144	292	298	8x22,2	343	320	698	F12	56	27,6	M35x2	25	77	250	2000

Fig. 730 (Class 300)

DN	aP	L	eR	n x øS	aT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
15 (1/2")	9,5	140	66,7	4x15,9	95,2	81	224	F05	22	8,1	M10x1,5	7	1,6	10	7
20 (3/4")	15	152	82,5	4x19	117,5	85	224	F05	23	7,1	M12x1,5	9	2,1	12	10
25 (1")	20	165	88,9	4x19	123,8	90	224	F05	23	7,7	M12x1,5	9	4,1	16	26
40 (1 1/2")	32	190	114	4x22,2	155,6	118	287	F05	33,5	12,2	M16x1,5	12	8,2	30	107
50 (2")	40	216	127	8x19	165,1	134	315	F07	41,5	18,2	M18x1,5	13	10,9	35	140
80 (3")	58	283	168	8x22,2	210,5	149	348	F07	44	18	M22x1,5	16	21,4	60	300
100 (4")	80	305	200	8x22,2	254	189	450	F10	44,5	18,7	M25x1,5	18	28,9	150	600
150 (6")	111	403	270	12x22,2	317,5	227	495	F12	56,5	28,5	M28x1,5	20	70	280	1000

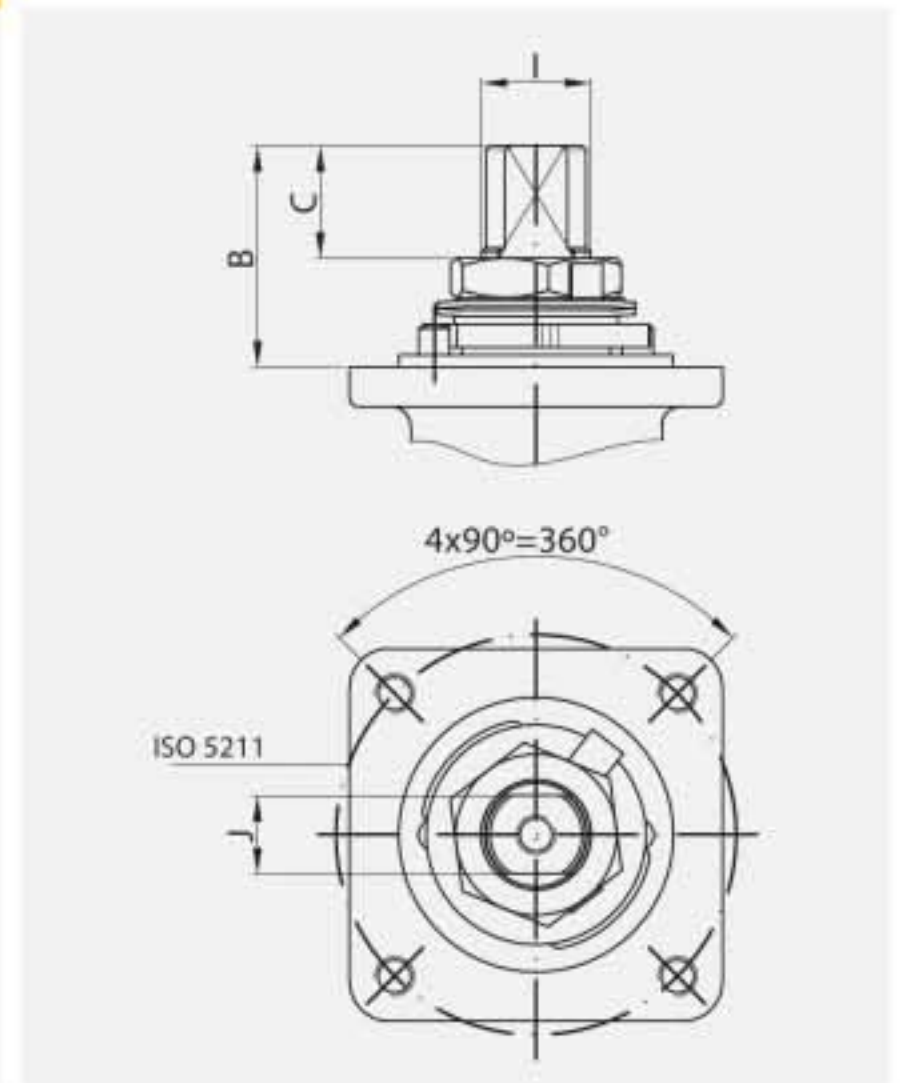
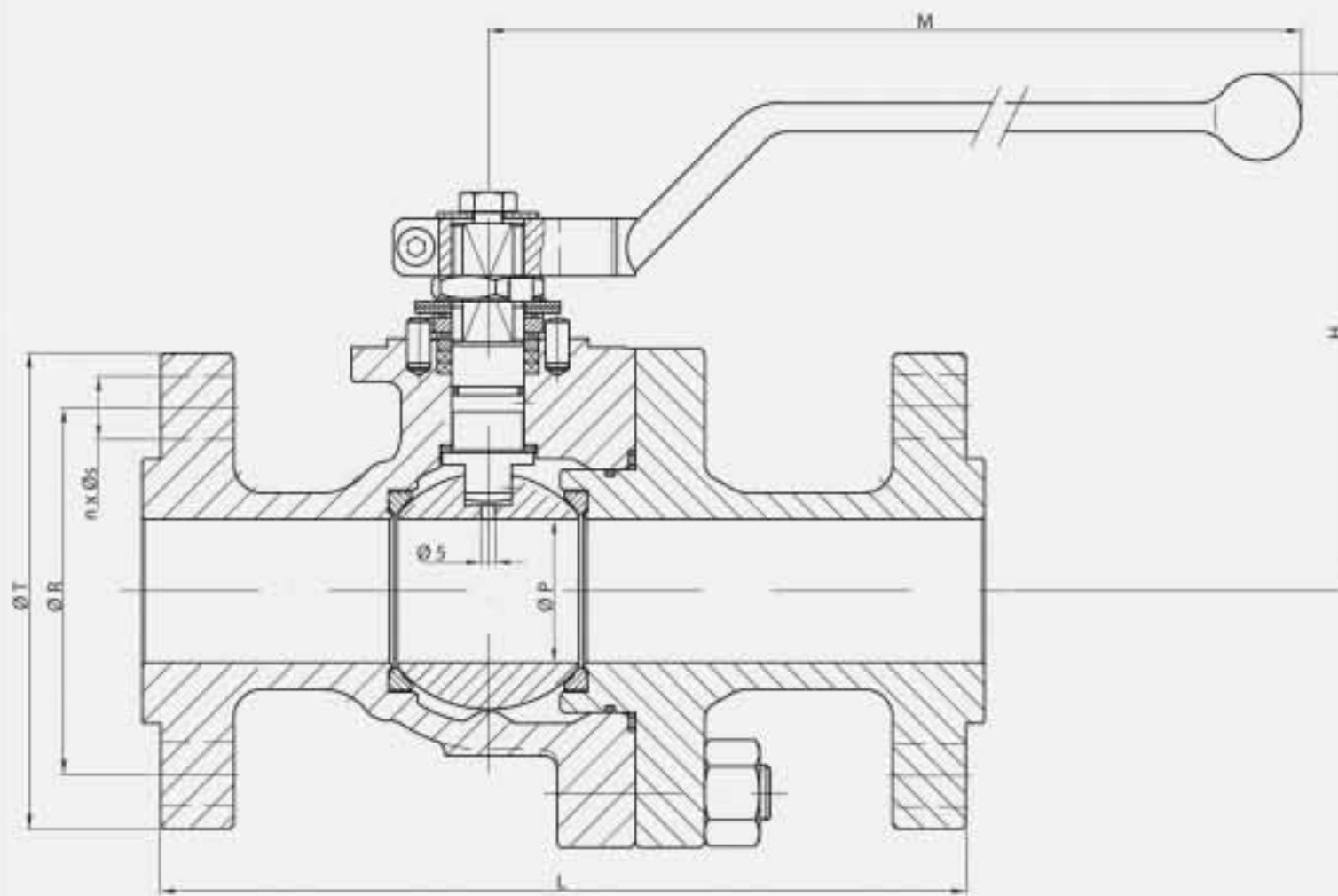
(*) Dimensions in mm, weight in kg and Torque in Nm.
(**) Weights and dimensions can be changed without notice.

ASME 560

Class 600

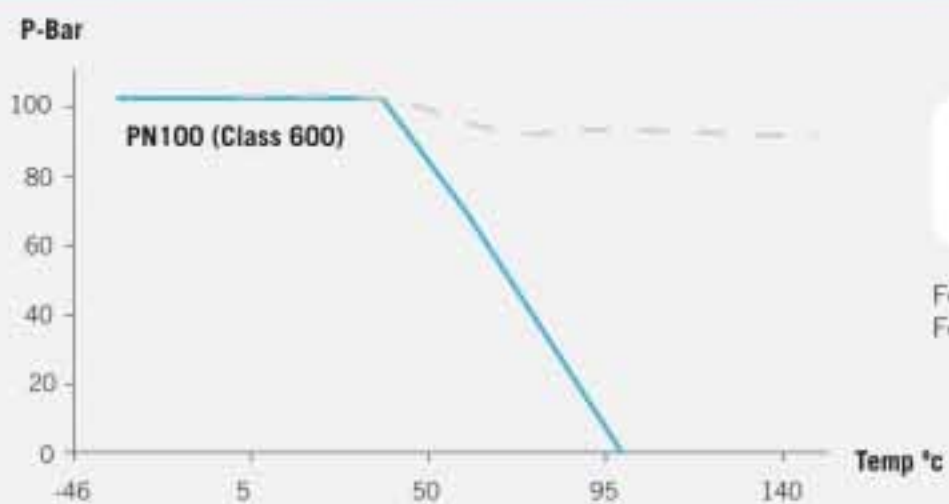
Full Bore

Class 600. From 2" to 4"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46

Pressure - Temperature



Valve with wrench

DN	øP	L	øR	n x øS	øT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
50 (2")	50	292	127	8x19	165	176,3	450	F10	45	19,2	M22x1.5	18	29	135	270
80 (3")	80	356	168	8x22,3	209,5	211,5	715	F12	55,5	26,7	M35x2	25	42	325	1000
100 (4")	100	432	216	8x25,4	273	232,5	715	F12	55	26,2	M35x2	25	78	450	1650

Actuator connection

DN	ISO 5211	øA	B	C	øD	n x F	G	I	J	WEIGHT
50 (2")	F10	70	45	19,2	102	4xM10	3	M25x1.5	18	27,9
80 (3")	F12	85	55,5	26,7	125	4xM12	3	M35x2	25	40,3
100 (4")	F12	85	55	26,2	125	4xM12	3	M35x2	25	76,1

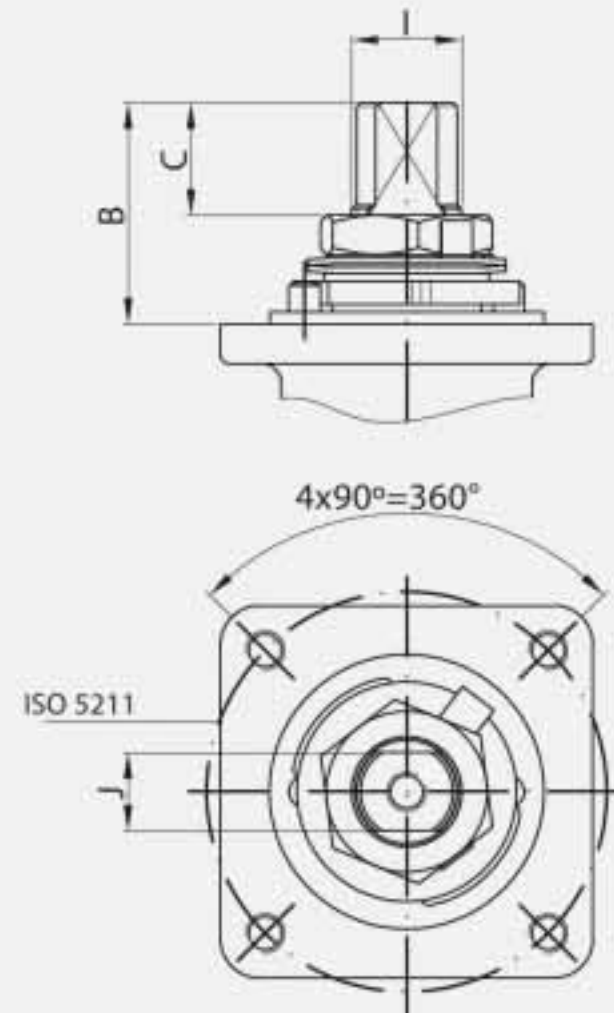
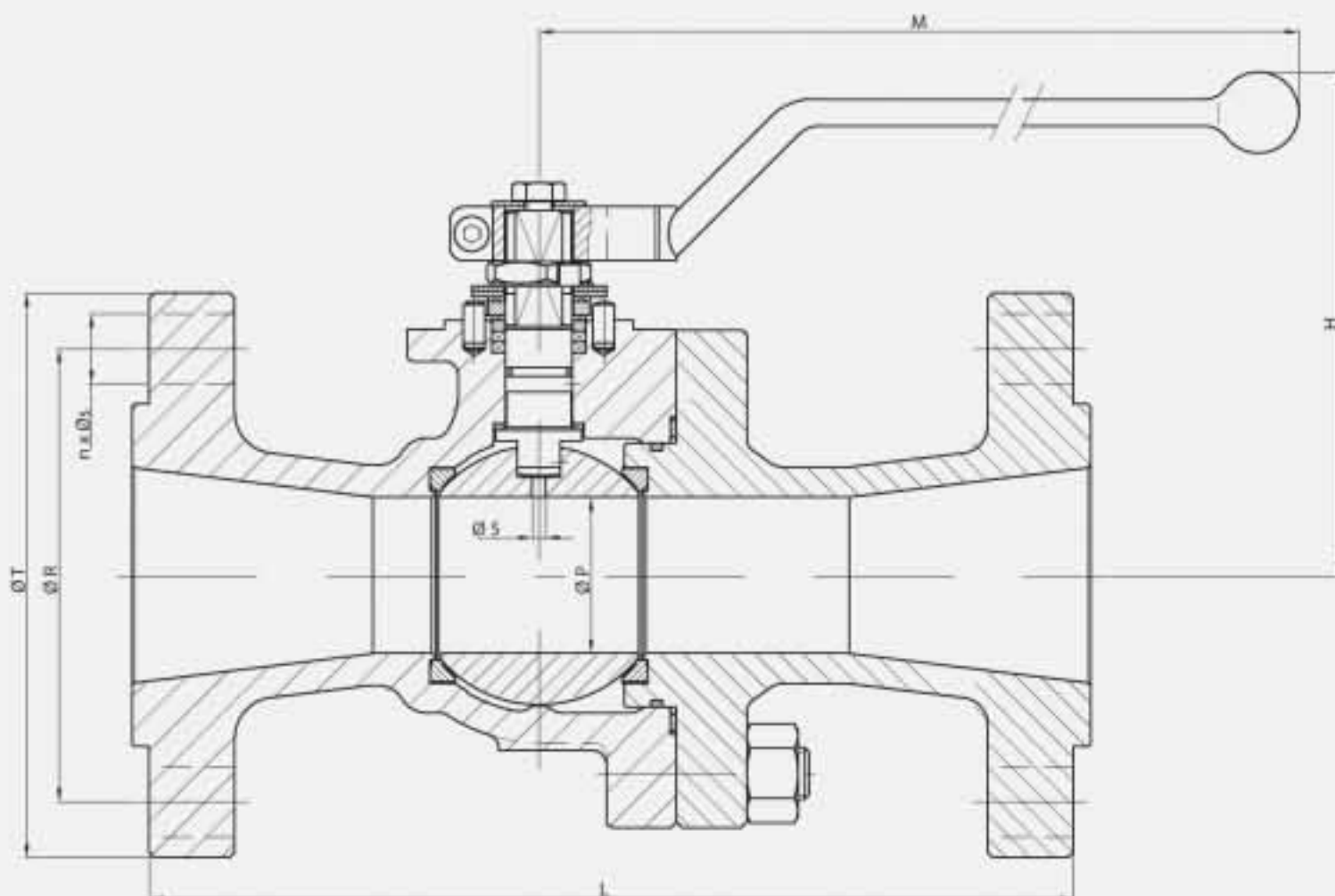
(*) Dimensions in mm, weight in kg and Torque in Nm.
(**) Weights and dimensions can be changed without notice.

ASME 660

Class 600

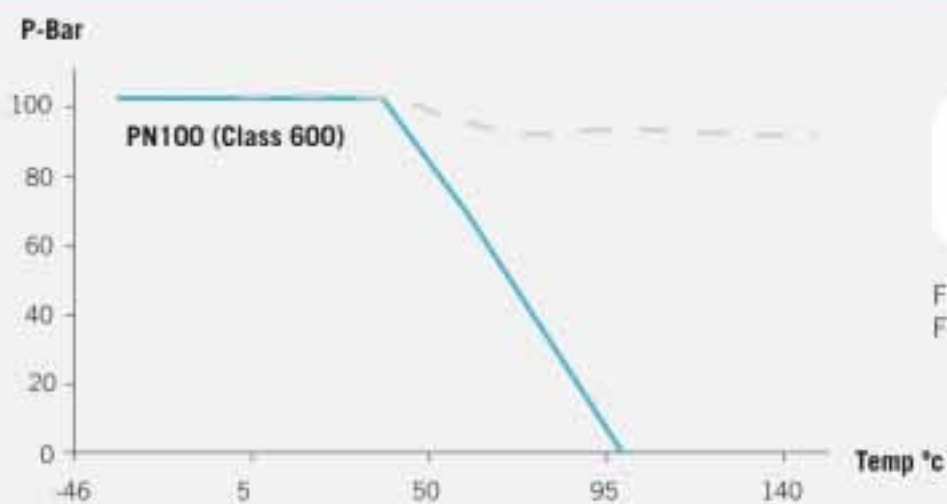
Reduced Bore

Class 600. From 2" to 4"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature



Valve with wrench

DN	σP	L	σR	n x σS	σT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
50 (2")	40	292	127	8x19	165	156	350	F07	43	17,7	M22x1.5	16	17	95	140
80 (3")	58	356	168	8x22,2	209,5	183,3	450	F10	44	17,4	M25x1.5	18	30	185	300
100 (4")	80	432	216	8x25,4	273	211,5	715	F10	55,5	26,7	M35x2	25	64	325	600

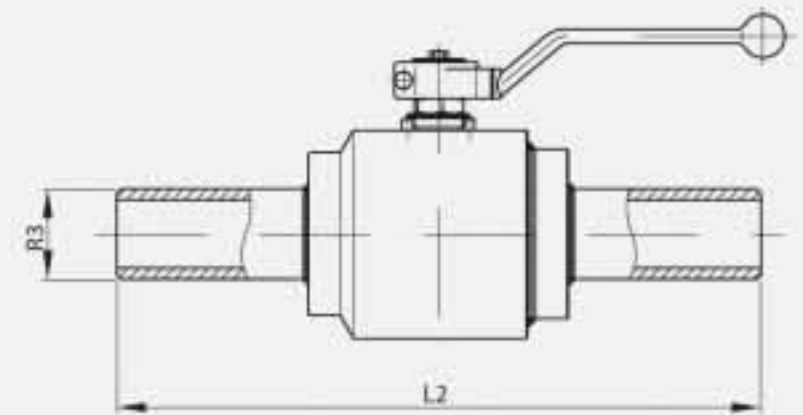
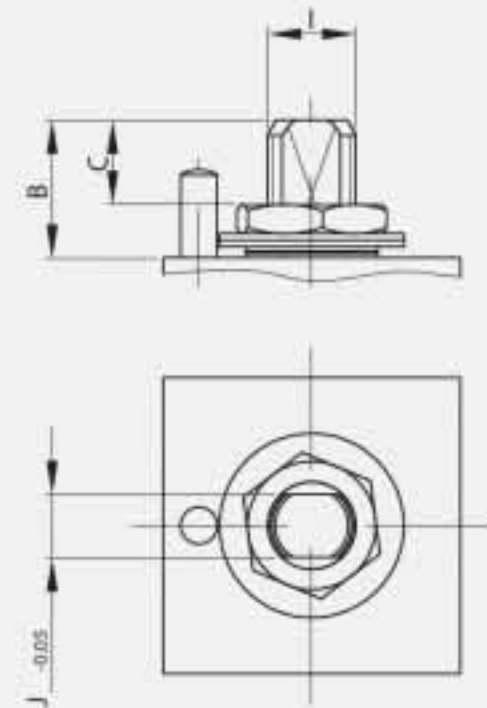
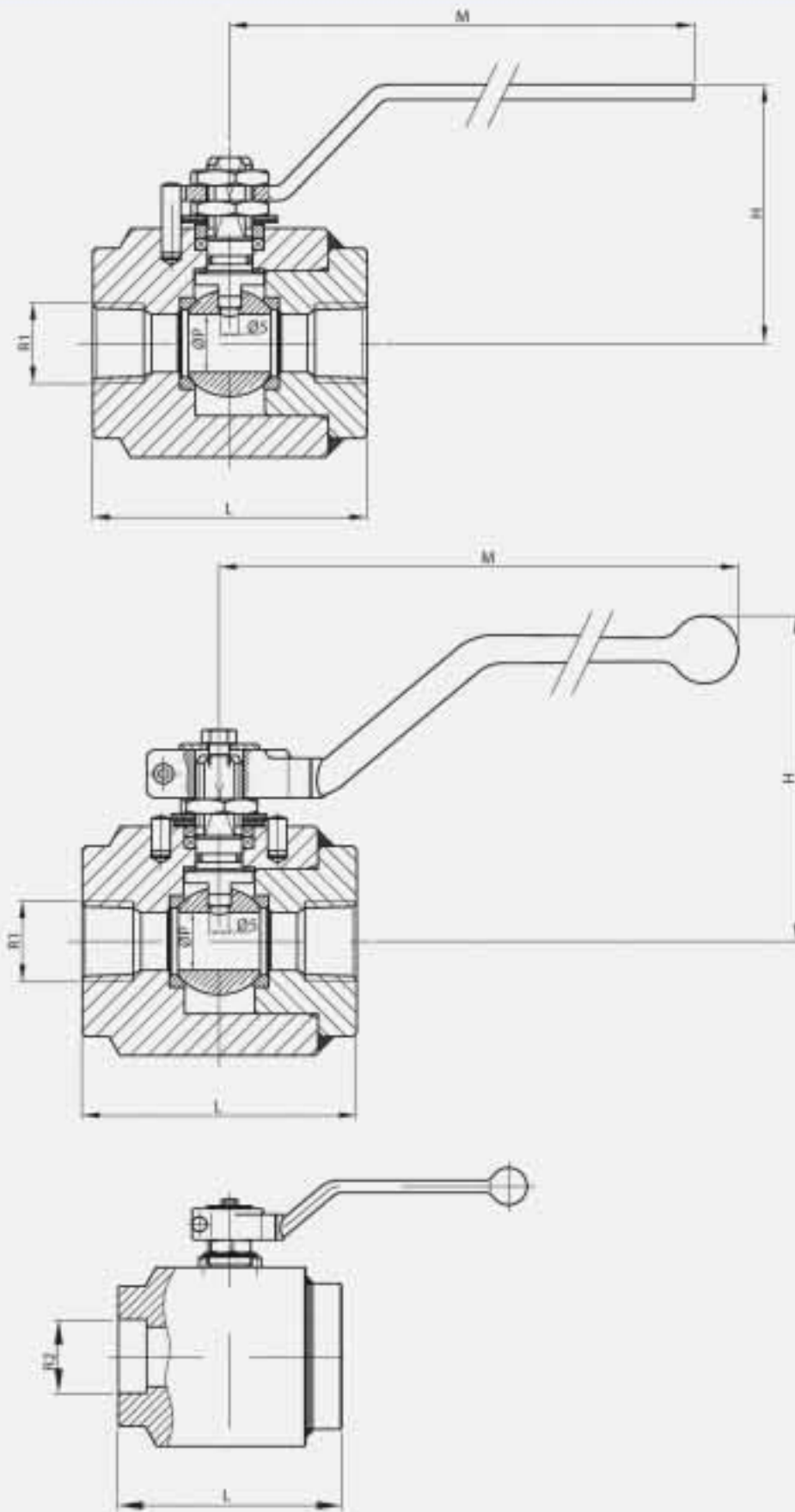
(*) Dimensions in mm, weight in kg and Torque in Nm.
(**) Weights and dimensions can be changed without notice.

ASME 400

Class 800

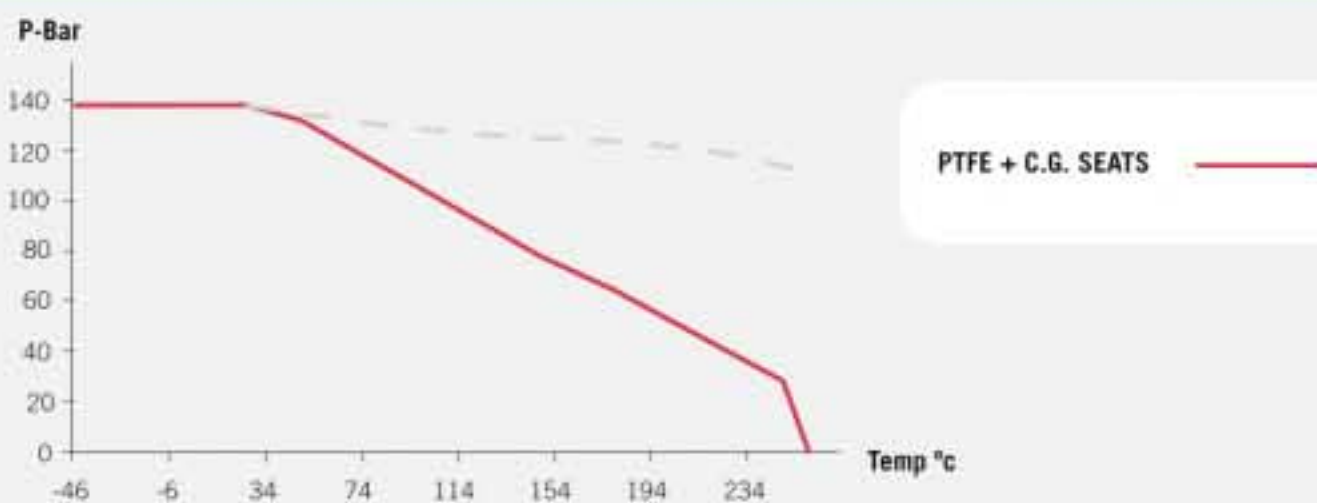
Full Bore

Class 800. From 3/8" to 2"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature



Series 400 (PN16)

DN	L	μP	H	M	B	C	I	J	WEIGHT	TORQUE 20 bar	TORQUE 55 bar	TORQUE 138 bar
3/8"	70	9,5	86	158	16	8,9	M10x1.5	7	1	6	9	16
1/2"	72	15	91	158	18,7	11,4	M12x1.5	9	1,6	8	12	20
3/4"	90	20	94	158	19,2	11,9	M12x1.5	9	2,4	10	16	25
1"	95	25	98	158	19,7	11,9	M12x1.5	9	3,1	15	20	30
1 1/2"	130	40	128	315	38,5	20	M18x1.5	13	10	25	35	50
2"	140	50	141	348	41	20	M22x1.5	16	14,6	40	55	70

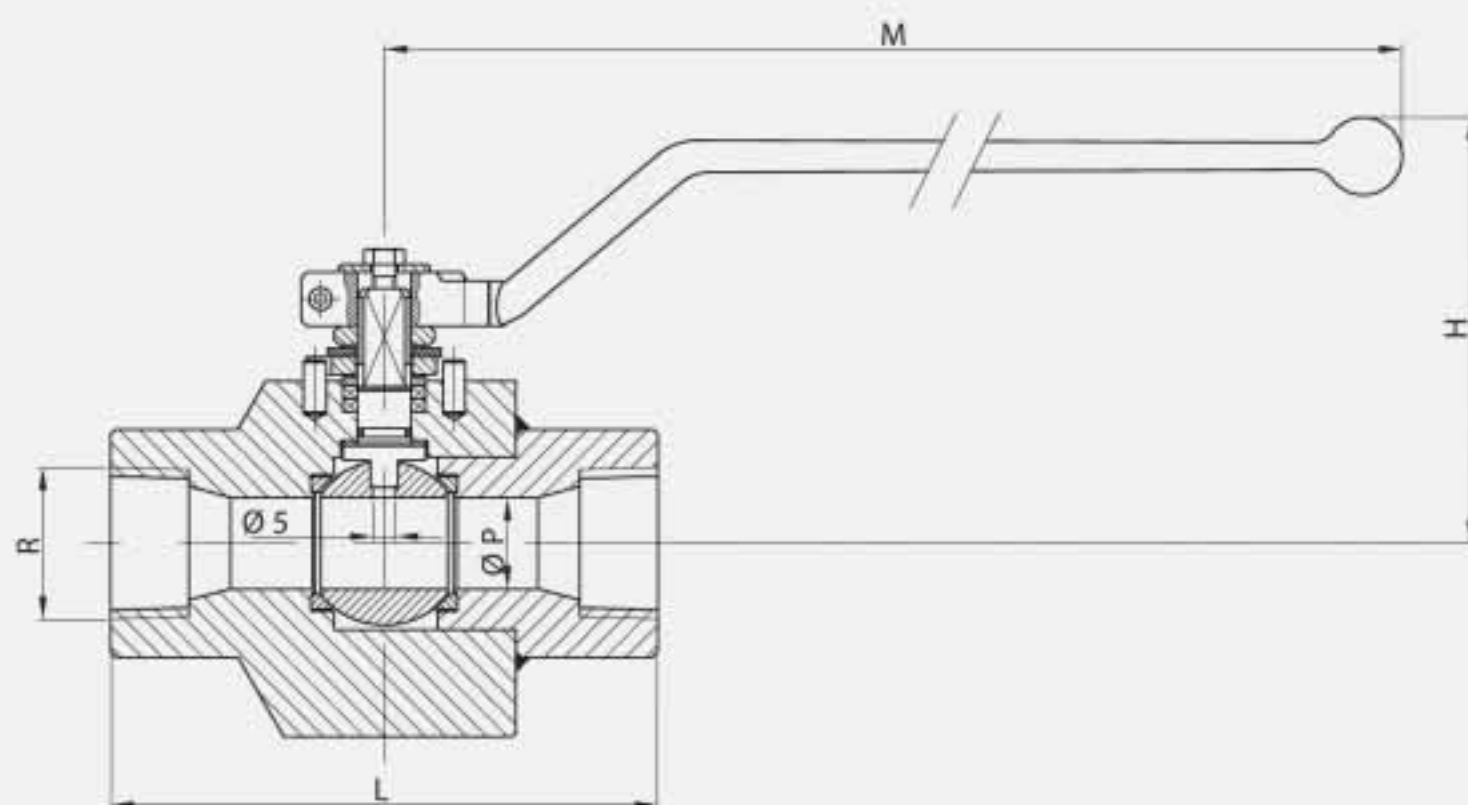
(*) Dimensions in mm and weight in kg.
(**) Weights and dimensions can be changed without notice.

ASME 411/411N

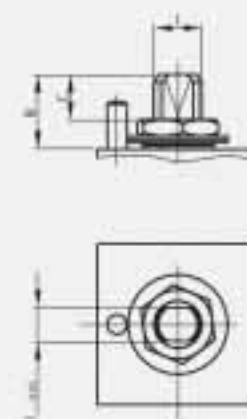
Class 800

Reduced Bore

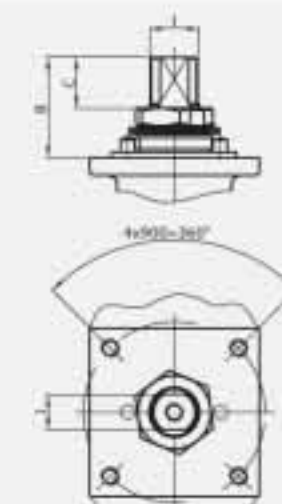
Class 800. From 1/2" to 2"



411



411N



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature



Fig. 411 / 411N (Class 800)

DN	L	sP	H	M	B	C	I	J	WEIGHT	TORQUE 20 bar	TORQUE 55 bar	TORQUE 135 bar
1/2"	90	15	88	170	18,4	6,8	M12x1.5	9	3,5	7	10	16
3/4"	110	15	88	170	18,4	6,8	M12x1.5	9	4,5	7	10	16
1"	120	20	92	170	18,7	6,6	M12x1.5	9	5	9	14	25
1 1/2"	150	28	115	247	31,5	12,4	M16x1.5	12	6	19	34	71
2"	180	36	118	302,5	38,5	16,2	M18x1.5	13	10	43	79	164

(*) Dimensions in mm and weight in kg.

(**) Weights and dimensions can be changed without notice.

| BALL VALVES |

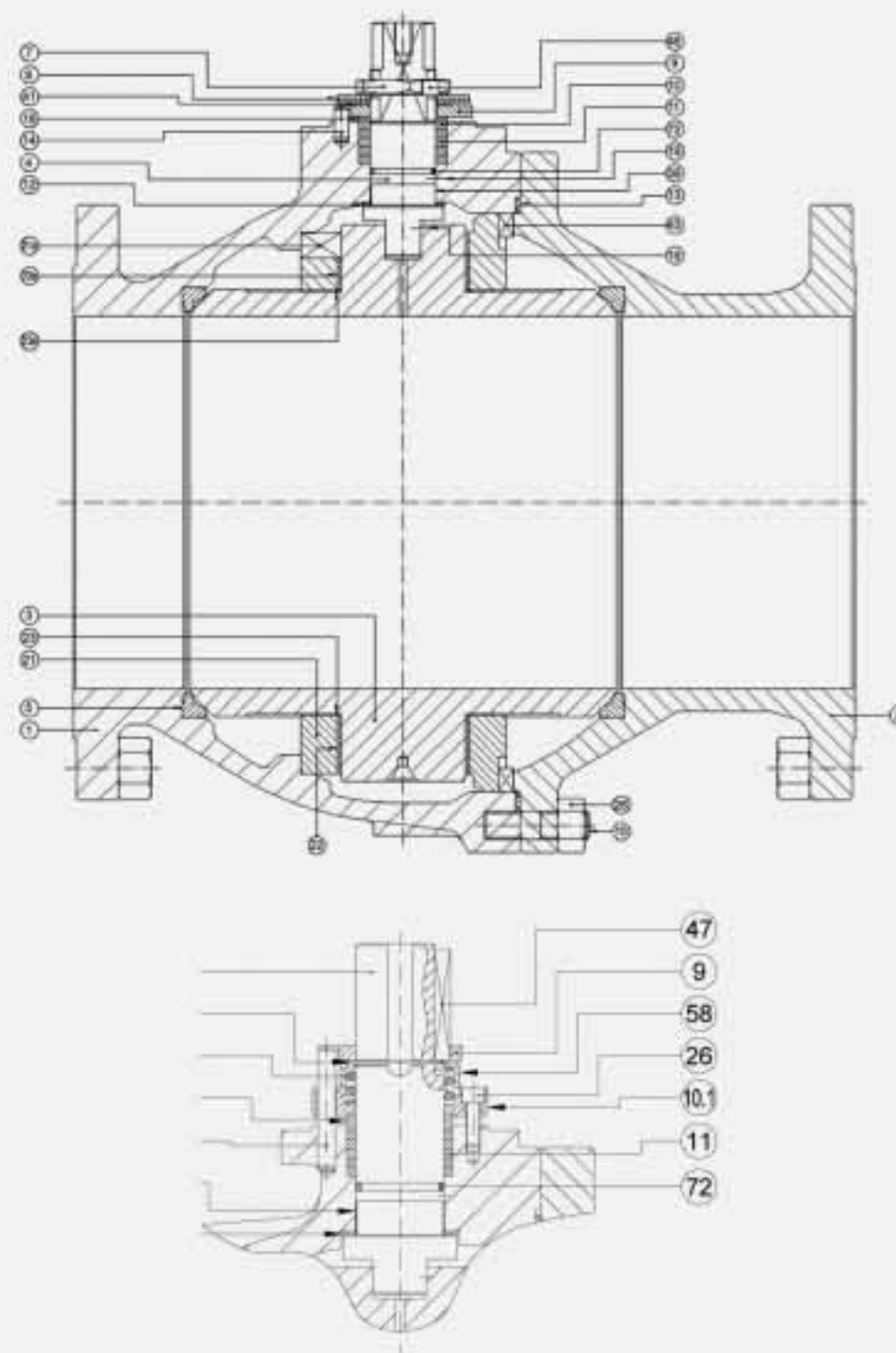
SEMI-TRUNNION ASME BALL VALVES

8" - 12" | Class 150 - Class 300

Materials

CAST TRUNNION

Item	Description	AIM	IIM
1	Body	A 216 Gr. WCB (C ≤ 0,25%)	A 351 Gr. CF8M
2	Body connector	A 216 Gr. WCB (C ≤ 0,25%)	A 351 Gr. CF8M
3	Ball	A 351 Gr. CF8M	
4	Stem	A 479 Tp.316	
5	Seat ring	PTFE	PTFE
7	Gland nut	Zinc plated carbon steel	AISI 303
8	Disk spring	Carbon St.	E.N.P. Carbon St.
9	Stop plate	Carbon St.	AISI 304
10	Gland	AISI 303	AISI 316
10.1	Gland	AISI 303	AISI 316
11	Gland packing	Graphite	
12	Stem thrust seal	25% G.F. PTFE	
13	Body connector seal	AISI 316L + Graphite	
14	Stop pin	Carbon St.	Stainless St.
15	Stud	A 193 Gr. B7M	A 193 Gr. B8M
18	Thrust washer	25% G.F. PTFE	
19	Antistatic device	Stainless St.	
21 /21a	Ball Trunnion	AISI 316	
22 /22a	Trunnion Bearing	PTFE + 50% SS	
23	Bearing	PTFE	
26	Bolt	DIN 912 8.8 Zinc plated	DIN 912 A2
28	Nut	A 194 Gr. 2HM	A 194 Gr. 8M
39	Stem Bushing	25% G.F. PTFE *	
41	Spacer	Carbon St.	Stainless St.
43	Key	AISI 316	
46	Locking washer	AISI 304	
47	Key	AISI 316	
58	Spring Protection	Carbon St.	Stainless St.
72	O Ring	FKM	
89	Identification plate	Stainless St.	
471	Retainer	Steel	Stainless St.



(*) AISI 316 + PTFE only in DN300 (12").

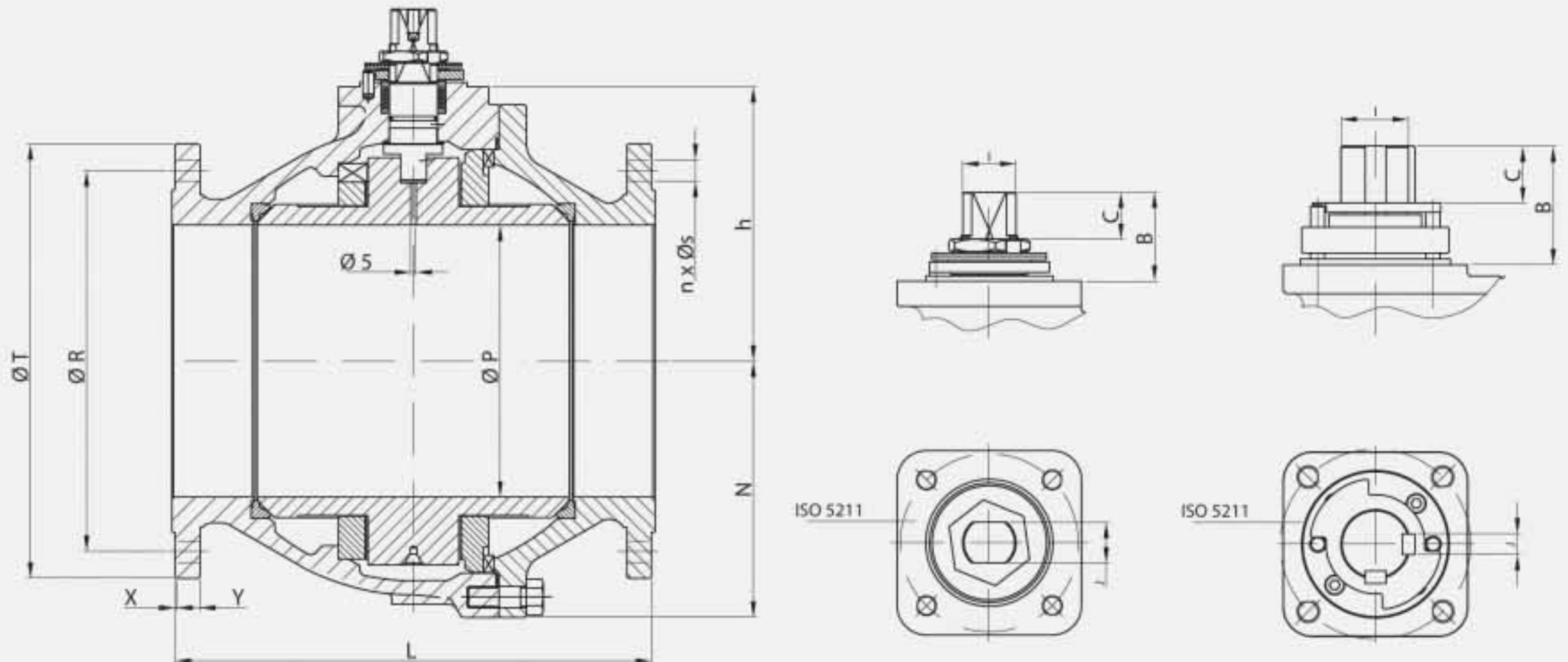
ASME 1515 / 1530

Class 150 / 300

Full Bore

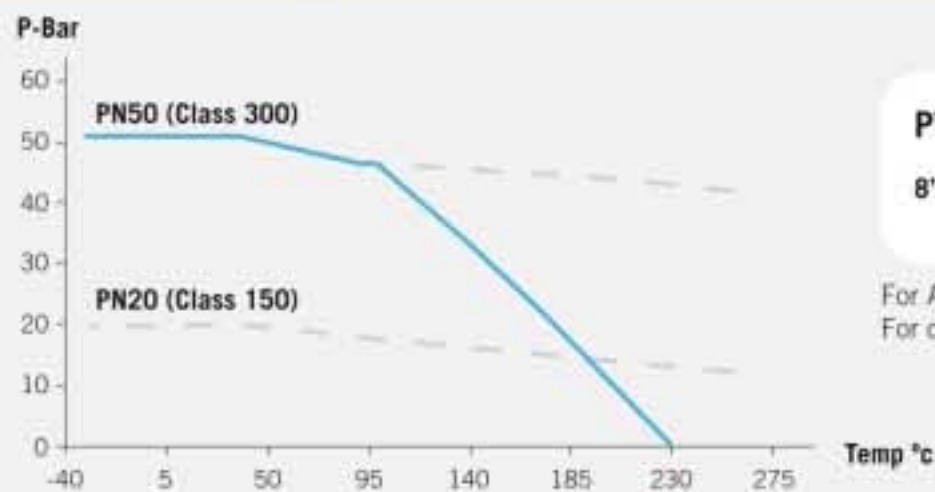
Class 150. From 10" to 12"

Class 300. From 8" to 12"



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature



PTFE SEATS

8" to 12"

For A216 Gr. WCB only.
For other materials consult ASME B16.34



Series 1515 (PN 20)

DN	$\varnothing P$	L	$\varnothing R$	$n \times \varnothing S$	ISO 5211	B	C	I	J	$\varnothing T$	X	Y	h	N	WEIGHT	TORQUE	Kv
250 (10")	254	533	362	12x25,4	F14	72	39	M45x2	32	406	1,6	28,7	256	239	237	1280	15000
300 (12")	305	610	431,8	12x25,4	F14	106	58	50	14	483	1,6	30,2	297	287,5	357	2000	20800

Series 1530 (PN 50)

DN	$\varnothing P$	L	$\varnothing R$	$n \times \varnothing S$	ISO 5211	B	C	I	J	$\varnothing T$	X	Y	h	N	WEIGHT	TORQUE	Kv
200 (8")	203	502	330,2	12x25,4	F14	72	39	M45x2	32	381	1,6	39,6	233	208	189	1280	9000
250 (10")	254	568	387,4	16x28,4	F14	72	39	M45x2	32	445	1,6	46,2	256	252,5	301	1480	15000
300 (12")	305	648	450,9	16x31,8	F14	106	58	50	14	521	1,6	49,2	310	300	520	2550	20800

(**) Dimensions in mm and weight in kg.

(**) Weights and dimensions can be changed without notice.

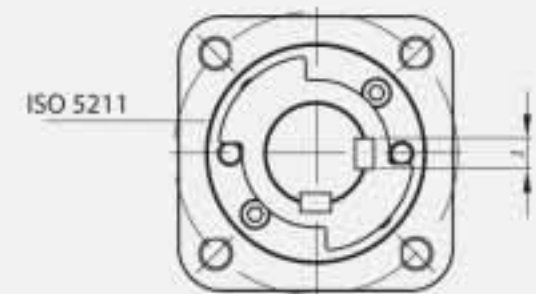
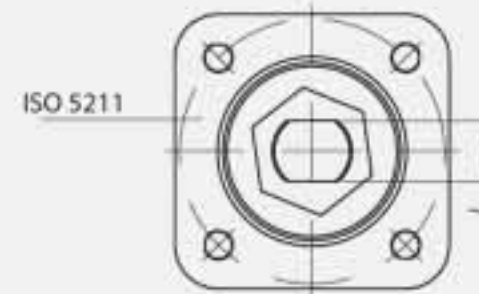
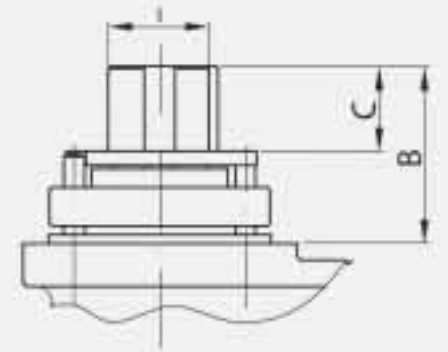
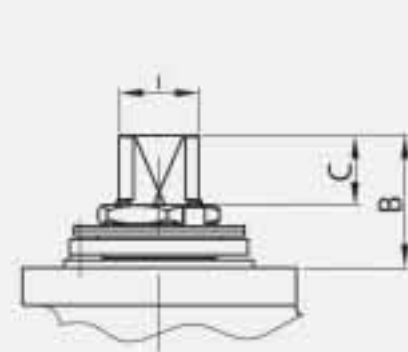
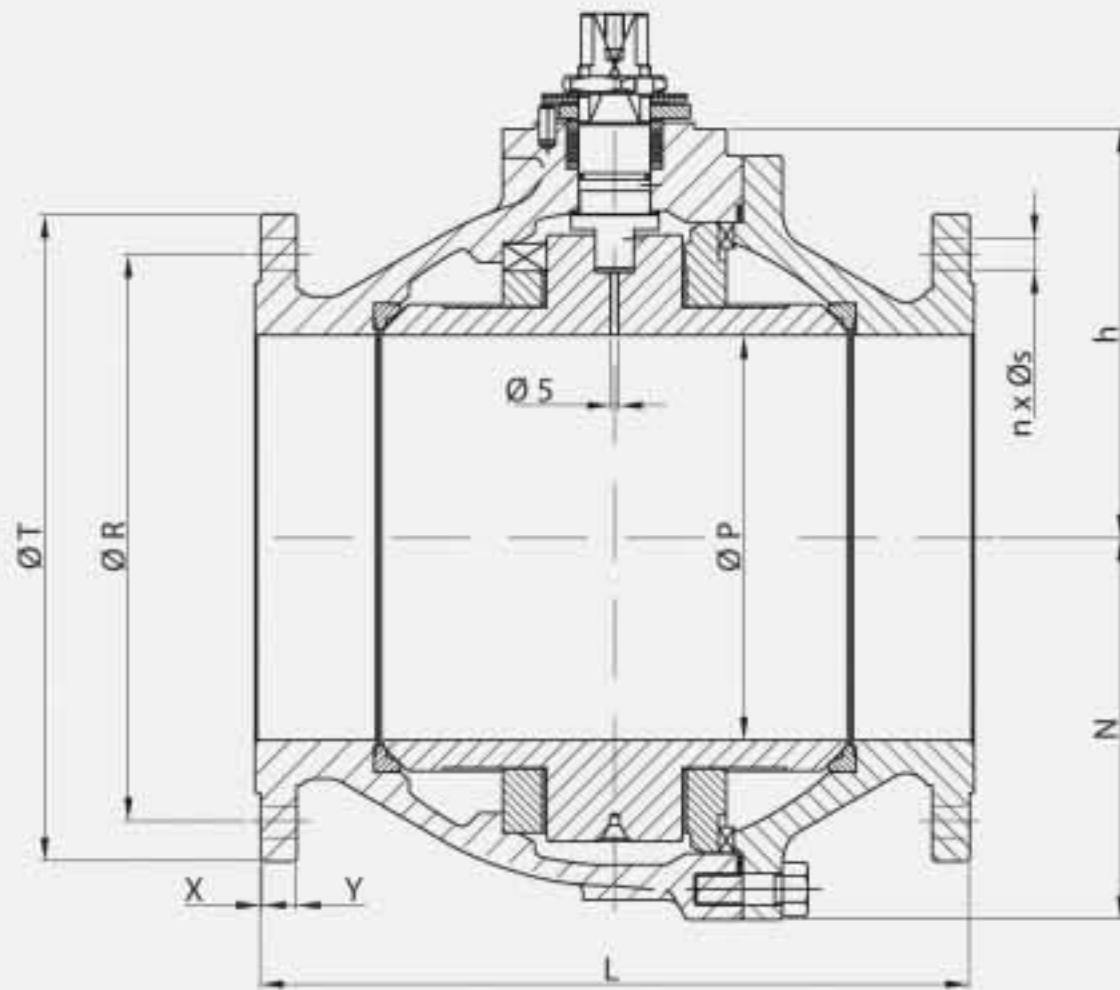
EN-DIN 1516 / 1540

PN 16 / PN 40

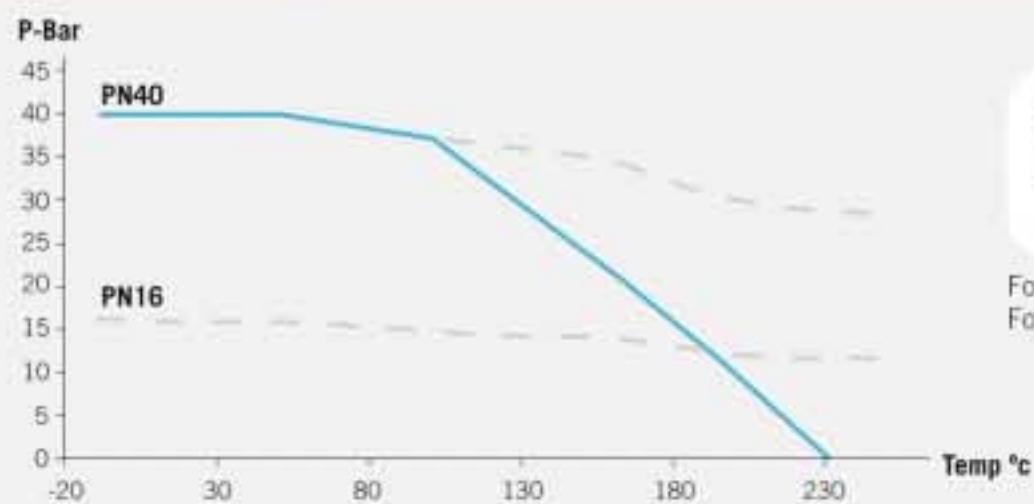
Full Bore

PN 16

PN 40



Pressure - Temperature



PTFE SEATS

DN 200 to 300

For 1.0619 only.
For other materials consult EN 1092-1

(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.
(**) Only DN300



Fig. 1516 (PN 16)

DN	pP	L	pR	n x pS	ISO 5211	B	C	I	J	pT	X	Y	h	N	WEIGHT	TORQUE	Kv
250	254	450	355	12x26	F14	72	39	M45x2	32	405	2	26	256	239	223	1120	15000
300	305	500	410	12x26	F14	106	58	50	14	460	2	26	297	288	323	1800	20800

Fig. 1540 (PN 40)

DN	pP	L	pR	n x pS	ISO 5211	B	C	I	J	pT	X	Y	h	N	WEIGHT	TORQUE	Kv
200	203	400	320	12x30	F14	72	200	M45x2	32	375	2	34	233	208	162	1000	9000
250	254	450	385	12x33	F14	72	250	M45x2	32	450	2	38	256	253	264	1400	15000
300	305	500	450	16x33	F14	106	300	50	14	515	2	42	310	300	440	2300	20800

(*) Dimensions in mm and weight in kg.
(**) Weights and dimensions can be changed without notice.

NOTES

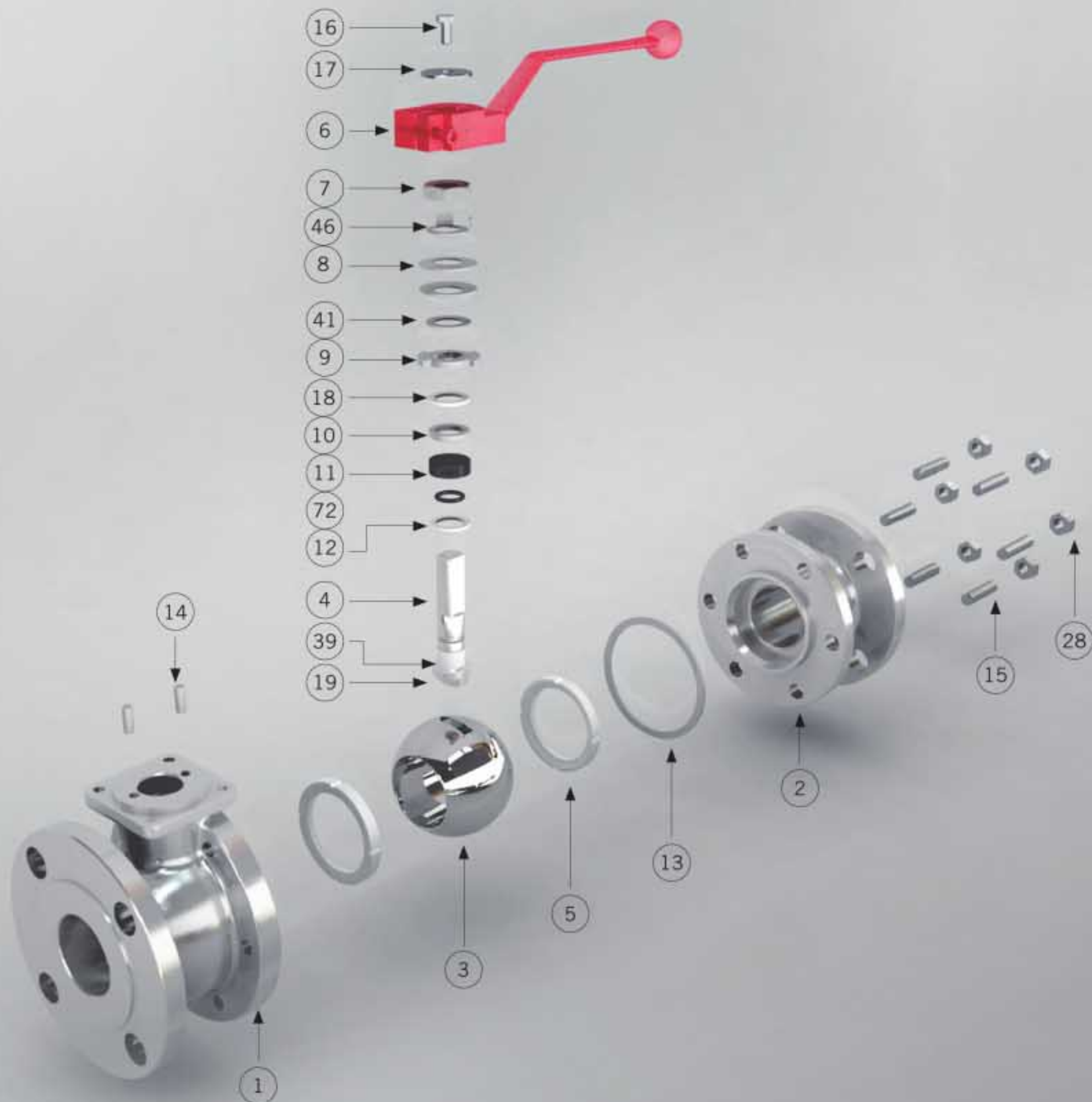
| BALL VALVES |

FLOATING EN-DIN

DN 15 - DN 200 | PN 16 - PN 40

A floating ball valve is a valve with seats supported ball, that is pushed by upstream pressure towards the downstream seat to ensure sealing. The DN of the floating ball valves range is limited by the capability of the seats material to support the pressure, temperature and weight of the ball.





Materials EN-DIN

Item	Description	AIT	IIT
1	Body	1.0619	1.4408
2	Body connector	1.0619	1.4408
3	Ball	A 351 Gr. CF8M (DN 15 : 25 A 479 Tp.316)	
4	Stem	A 479 Tp.316	
5	Seat ring	PTFE	
6	Wrench	Nodular Iron	
7	Gland nut	Zinc plated carbon steel	AISI 303
8	Disk spring	Carbon St.	E.N.P. Carbon St.
9	Stop plate	Carbon St.	AISI 304
10	Gland	AISI 303	AISI 316
11	Gland packing	Graphite	
12	Stem thrust seal	25% G.F. PTFE	
13	Body connector seal	AISI 316L + PTFE + Graphite	
14	Stop pin	Carbon St.	Stainless St.
15	Bolt (DN 32 to DN 100 Stud)	DIN 933 A4-70 (DN 32 to DN 100 : A4-70)	
16	Bolt	DIN 933 A4-70	
17	Washer	Zinc plated carbon steel	AISI 304
18	Thrust washer	25% G.F. PTFE	
19	Antistatic device	Stainless St.	
28	Nut (DN 32 to DN 100)	DIN 934 A4-70	
39	Stem bushing (DN 25 to DN 200)	25% G.F. PTFE	
41	Spacer (DN 40 to 200)	Carbon St.	AISI 304
46	Washer	AISI 304	AISI 304
72	"O" Ring	FKM	
89	Identification plate	Stainless St.	

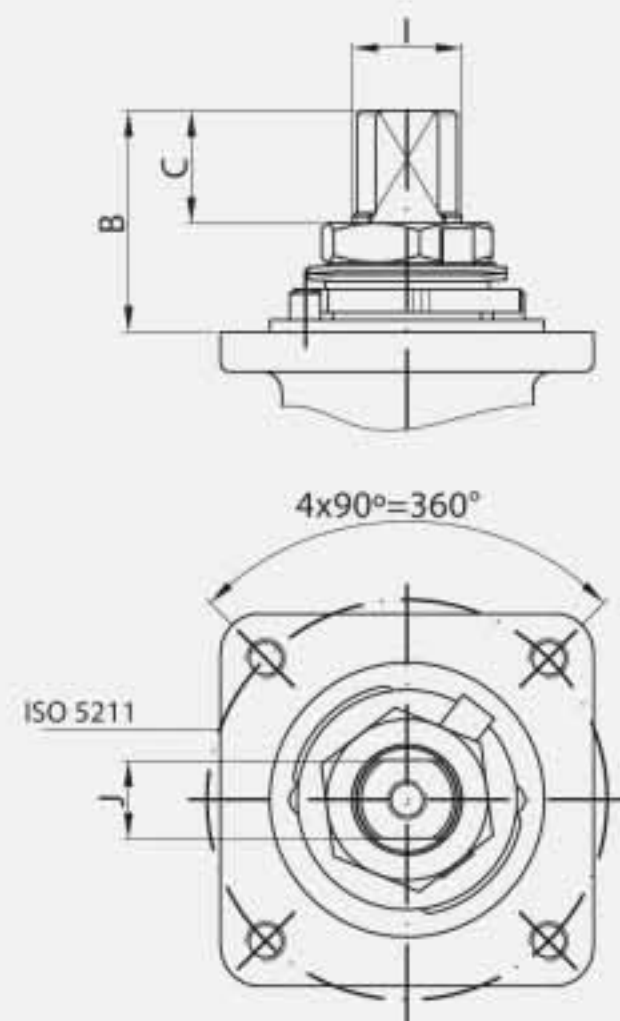
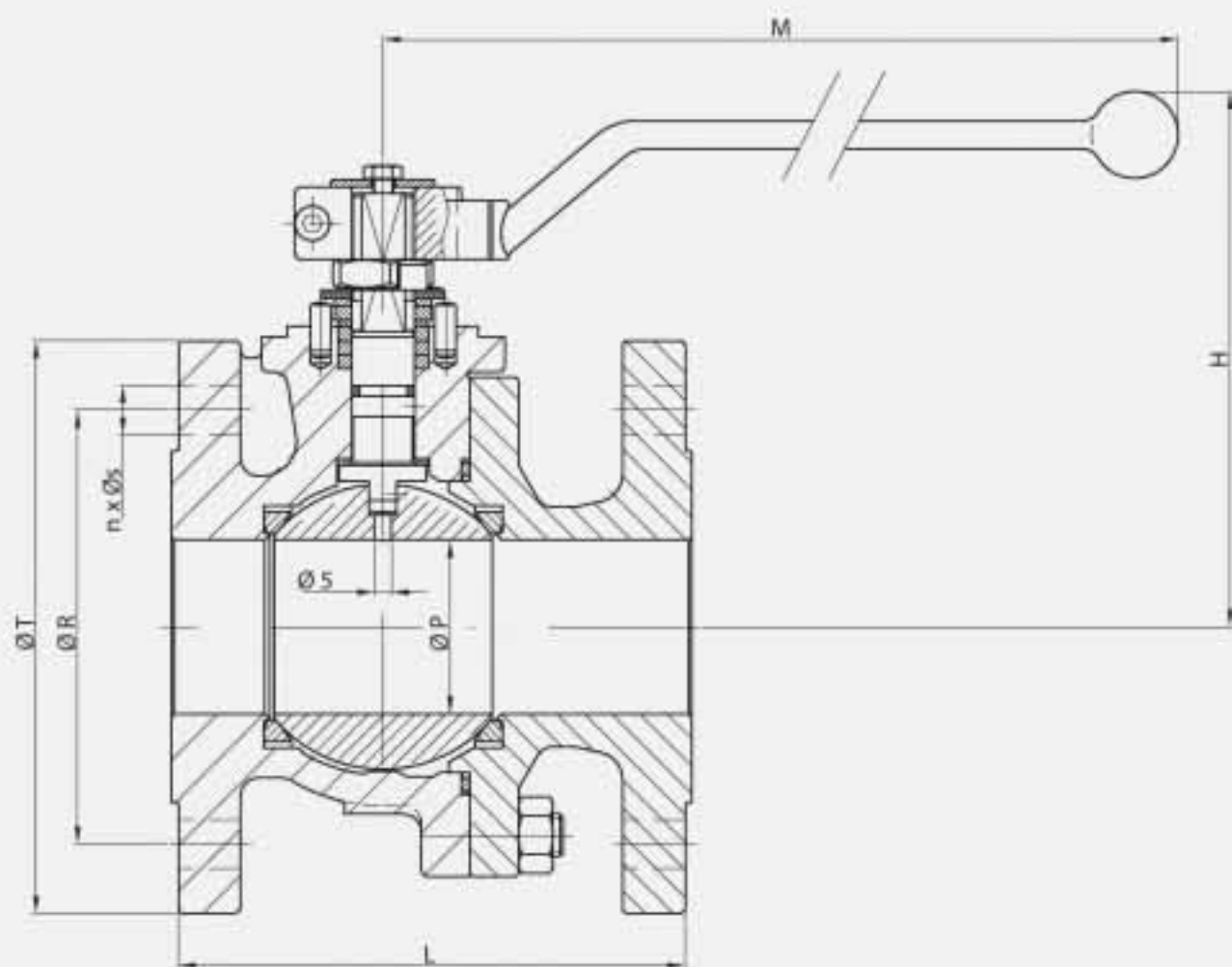
EN-DIN 516 / 540

PN 16 / 40

Full Bore

PN 16

PN 40



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature

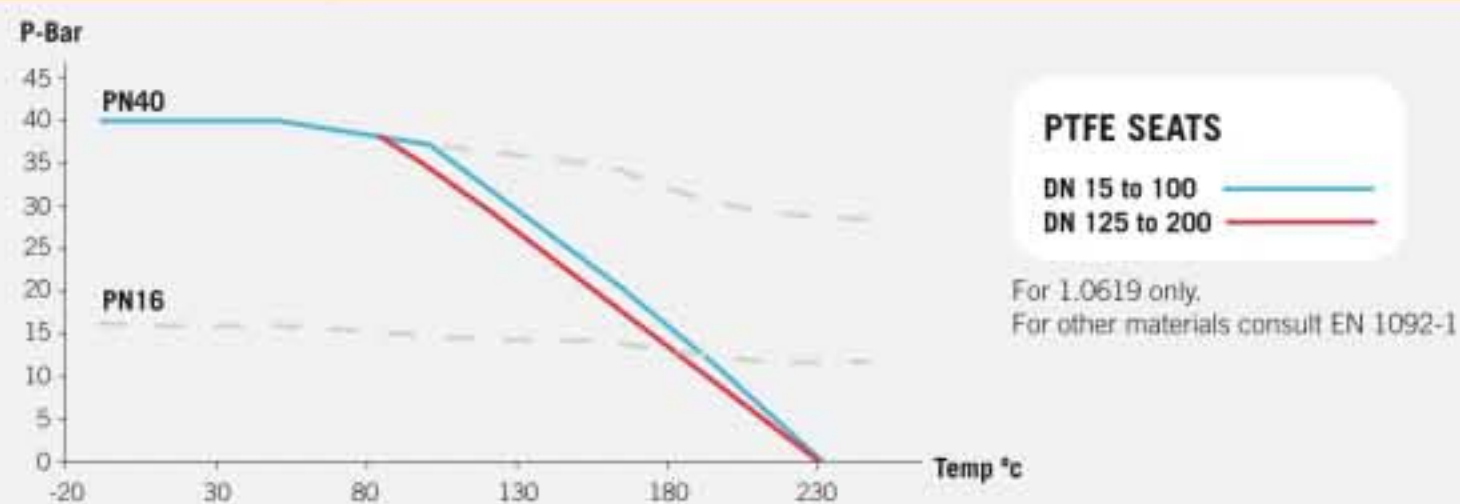


Fig. 516 (PN 16)

DN	øP	L	øR	n x øS	øT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
65	65	170	122	4x18	169	169	348	F07	44	18,1	M22x1.5	16	16	55	550
80	80	180	138	8x18	207	207	445	F10	44,5	18,7	M25x1.5	18	22	85	1000
100	100	190	158	8x18	231	231	495	F10	56,5	28,5	M28x1.5	20	32	130	1650
125	125	325	188	8x18	262	262	698	F12	56	27,6	M35x2	25	52,5	180	3000
150	151	350	212	8x22	298	298	698	F12	66	35,2	M40x1.5	29	76	250	4200

Fig. 540 (PN 40)

DN	øP	L	øR	n x øS	øT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
15	15	115	65	4x14	97	97	224	F05	11,5	5,7	M12x1.5	9	2,8	10	20
20	20	120	75	4x14	104	104	224	F05	15	9,2	M12x1.5	9	3,6	14	40
25	25	125	85	4x14	117	117	224	F05	24	10,2	M12x1.5	9	5	16	75
32	32	130	100	4x18	131	131	287	F05	32	12,2	M16x1.5	12	7	25	130
40	40	140	110	4x18	148	148	315	F07	39,5	16,2	M18x1.5	13	9	30	170
50	50	150	125	4x18	155	155	315	F07	41,5	18,2	M18x1.5	13	12	55	270
65	65	170	145	8x18	169	169	348	F07	44	18,1	M22x1.5	16	17	80	550
80	80	180	160	8x18	207	207	445	F10	44,5	18,7	M25x1.5	18	23	130	1000
100	100	190	190	8x22	231	231	495	F10	56,5	28,5	M28x1.5	20	35	150	1650
125	125	325	220	8x26	262	262	698	F12	56	27,6	M35x1.5	25	57	240	3000
150	151	350	250	8x26	298	298	698	F12	66	35,2	M40x1.5	29	83,5	480	4200

(*) Dimensions in mm, weight in kg and Torque in Nm.
(**) Weights and dimensions can be changed without notice.

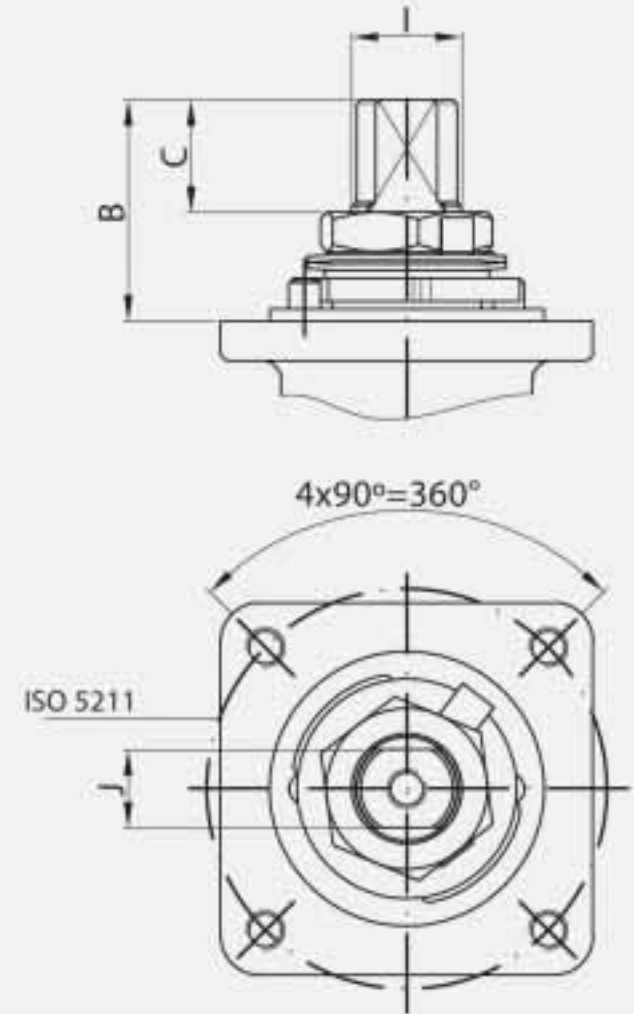
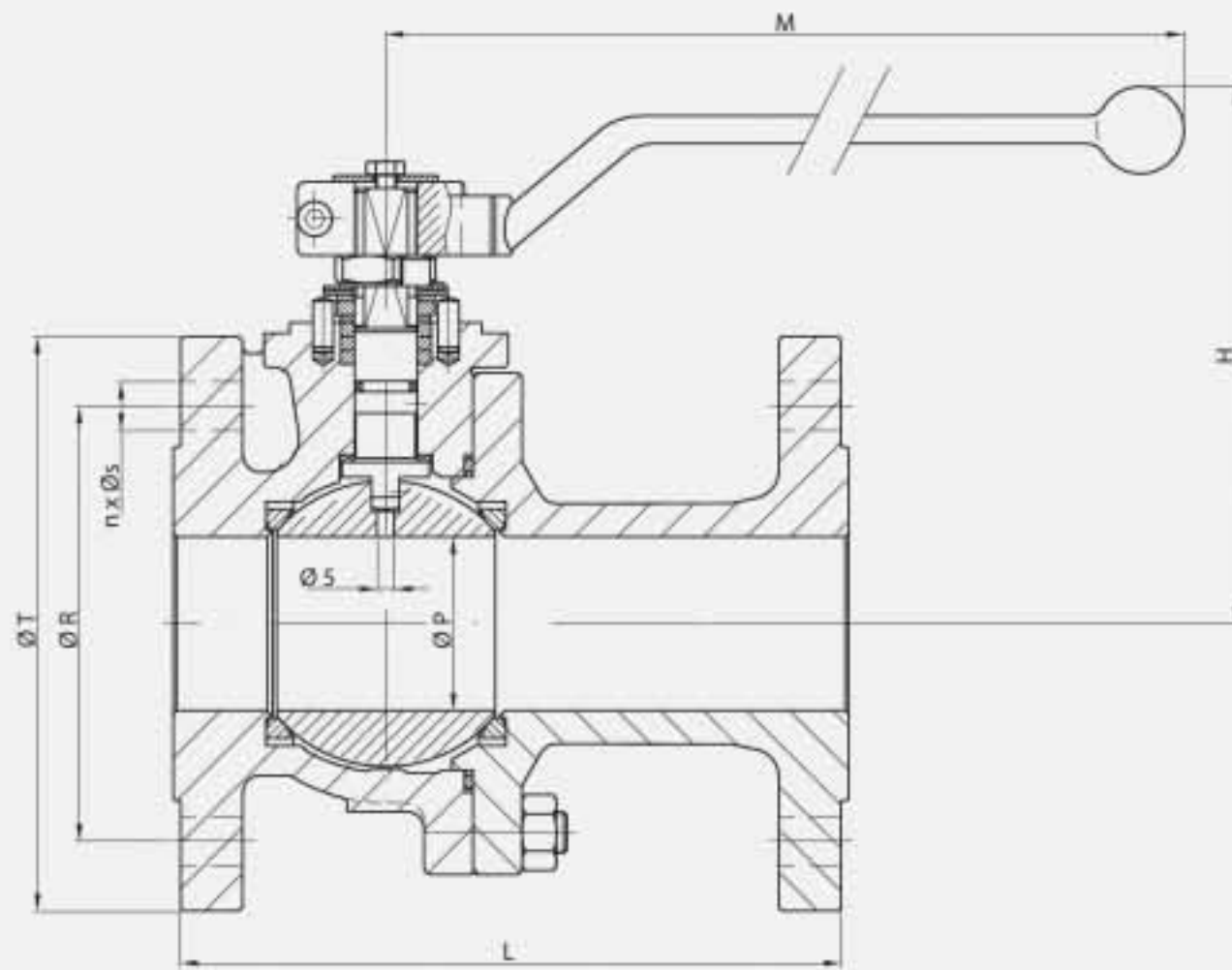
EN-DIN 316 / 340

PN 16 / 40

Full Bore

PN 16

PN 40



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature

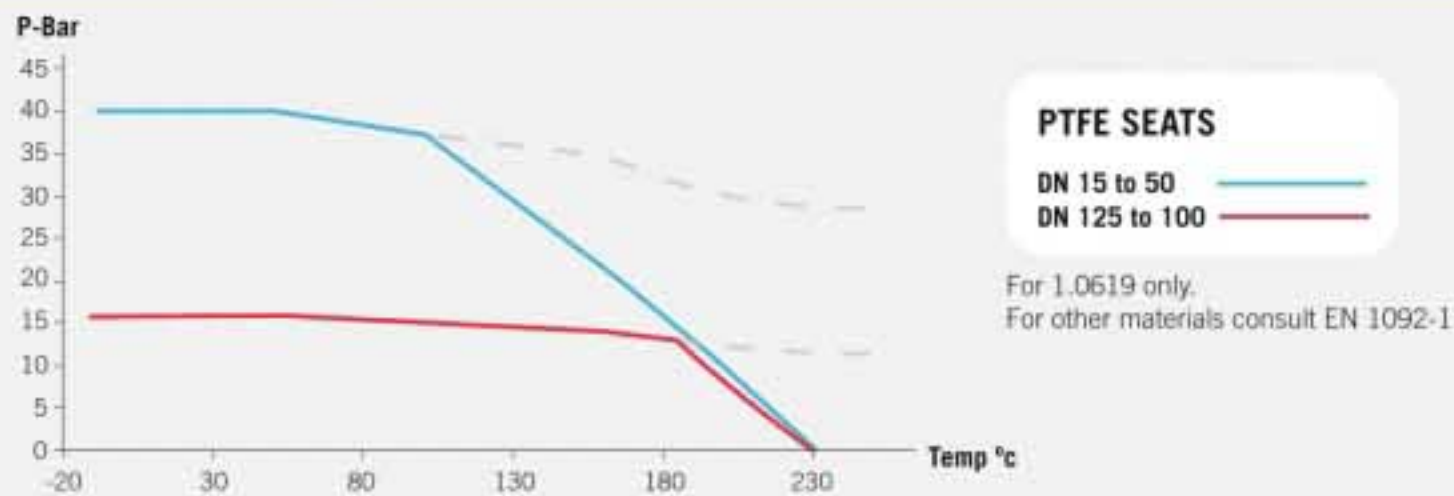


Fig. 340 (PN 16)

DN	øP	L	øR	n x øS	øT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
65	65	290	145	4x18	185	169	348	F07	44	18,1	M22x1.5	16	18,3	55	550
80	80	310	160	8x18	200	207	445	F10	44,5	18,7	M25x1.5	18	24	85	1000
100	100	350	180	8x18	220	231	495	F10	56,5	28,5	M28x1.5	20	36	130	1650

Fig. 316 (PN 40)

DN	øP	L	øR	n x øS	øT	H	M	ISO 5211	B	C	I	J	WEIGHT	TORQUE	Kv
15	15	130	65	4x14	95	97	224	F05	11,5	5,7	M12x1.5	9	3	10	20
25	25	160	85	4x14	115	117	224	F05	24	10,2	M12x1.5	9	5,2	16	75
32 (**)	32	180	100	4x18	140	131	287	F05	32	12,7	M16x1.5	12	7,6	25	130
40	40	200	110	4x18	150	148	315	F07	39,5	16,2	M18x1.5	13	9,6	30	170
50	50	230	125	4x18	165	155	315	F07	41,5	18,2	M18x1.5	13	12,9	55	270

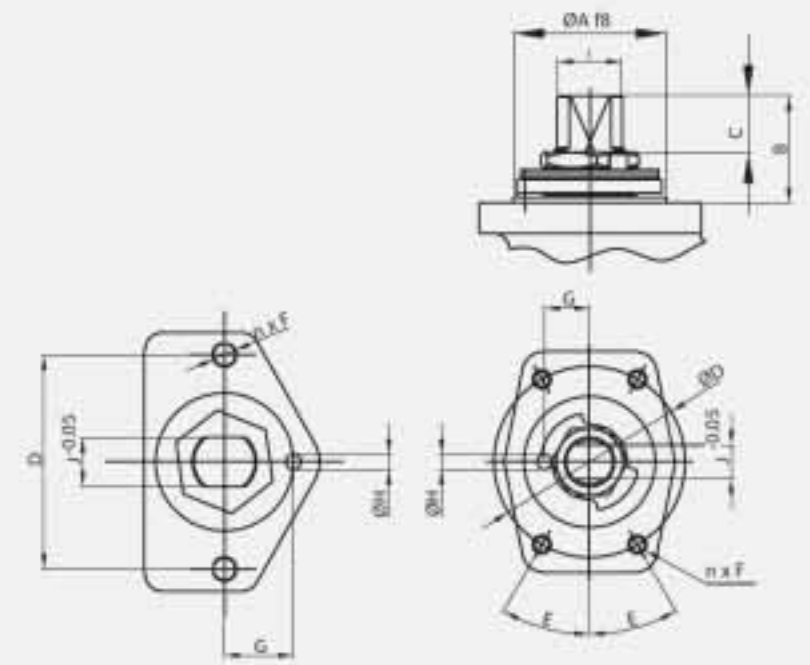
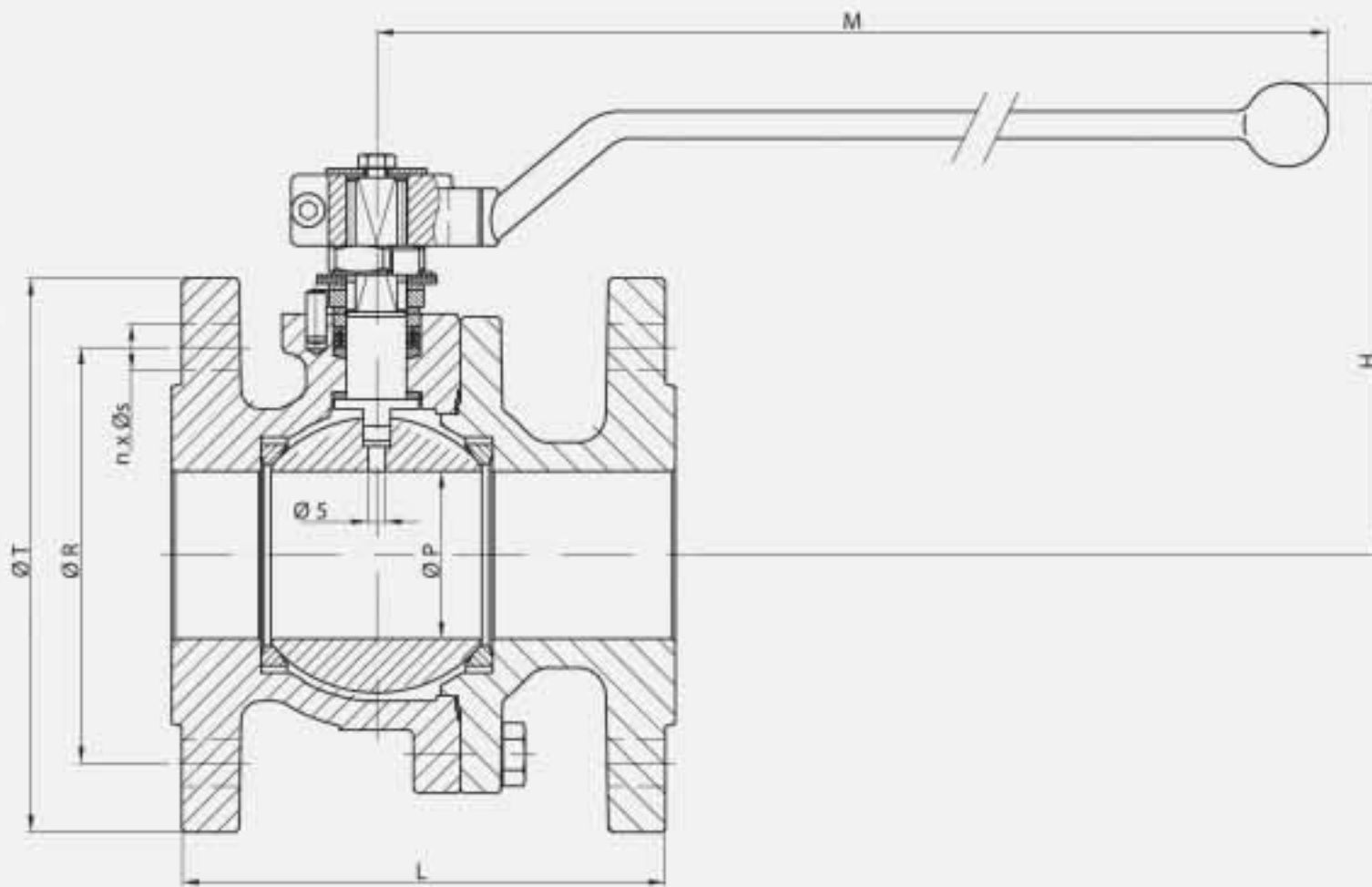
(*) Dimensions in mm, weight in kg and Torque in Nm.
(**) Weights and dimensions can be changed without notice.

EN-DIN 512

PN 16

Full Bore

PN 16



ONLY DN 15, DN 20 & DN 25

(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46

Pressure - Temperature

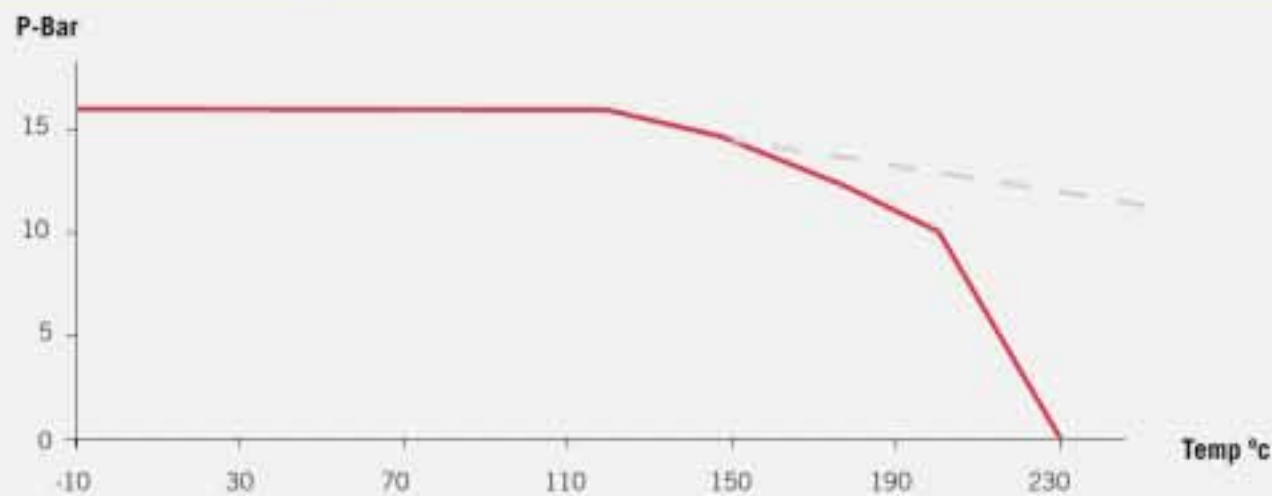


Fig. 512 (PN 16)

DN	ØP	L	LI	ØQ	ØR	N x ØS	ØT	X	Y	h	N	H	M	WEIGHT
15	15	115	50	46	65	4x14	95	2	12	29	-	86	224	2,39
20	20	120	52	56	75	4x14	105	2	14	32	-	89	224	3,19
25	25	125	52	65	85	4x14	115	3	13	36	-	93	224	3,9
32	32	130	54	76	100	4x19	140	3	15	54	-	116	287	6,3
40	40	140	55	84	110	4x19	150	3	15	64,5	-	133	315	8
50	50	150	61	99	125	4x19	165	3	17	72	-	140	315	10,7
65	65	170	75	118	145	4x19	185	3	17	83,5	-	152	348	15,4
80	80	180	78,5	132	160	8x19	200	3	19	95,5	-	187	445	20,2
100	100	190	90	156	180	8x19	220	3	21	125	118	219	495	25,8
125	125	325	121	184	210	8x19	250	3	23	151	143	253	698	49,5
150	150	350	160	211	240	8x23	285	3	23	170	168	280	698	74,1
200	200	400	200	266	295	12x23	340	3	27	224	208	337	868	110,5

(*) Dimensions in mm and weight in kg.
(**) Weights and dimensions can be changed without notice.

NOTES

| BALL VALVES |

FLOATING 3 WAY BALL VALVES

DN 25 - DN 200 | PN 16
1" - 8" | Class 150

The JC Three way ball valves, have been designed to divert the flow at 90° in several options between two pipes. Three way ball valves are available with either and double L (X) port, or T-port design. The full port design is easily automated and is available with various seat materials.



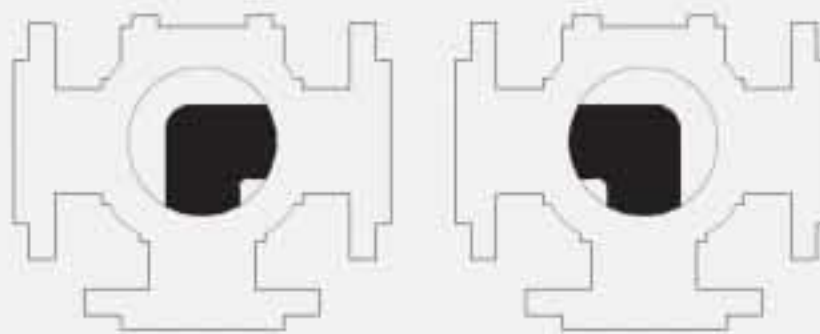
TORQUE

VALVE SIZE	AT MAXIMUM DIFFERENTIAL PRESSURE	
	L	T
25 (1")	32	32
40 (1 1/2")	71	71
50 (2")	130	130
65 (2 1/2")	195	195
80 (3")	250	250
100 (4")	494	494
150 (6")	689	689
200 (8")	850	850

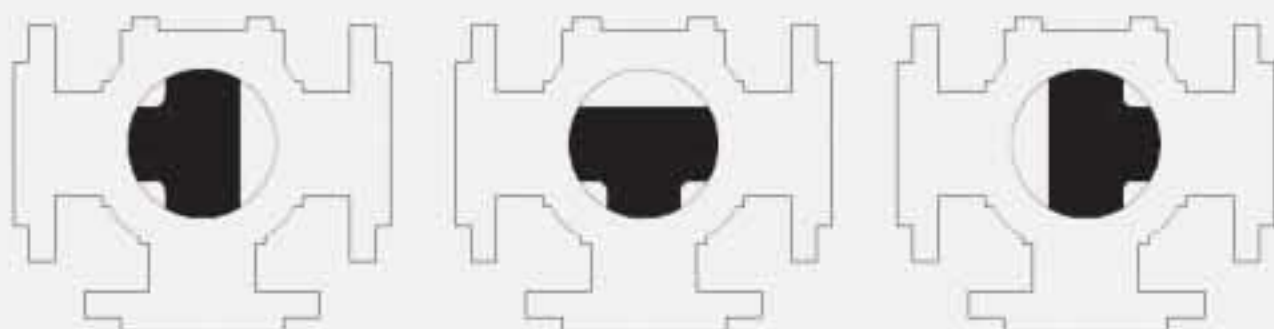
Torque Values in Nm.
Kv Values in m3/h.

PORT COMBINATIONS

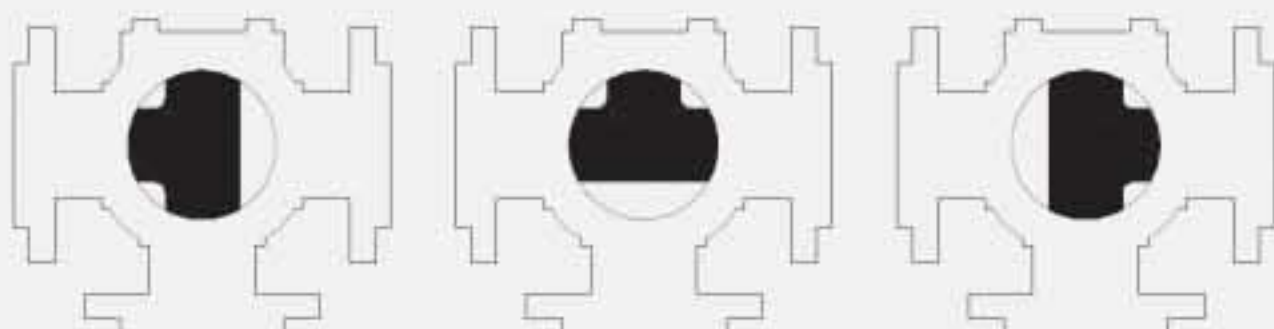
3 WAY L PORT

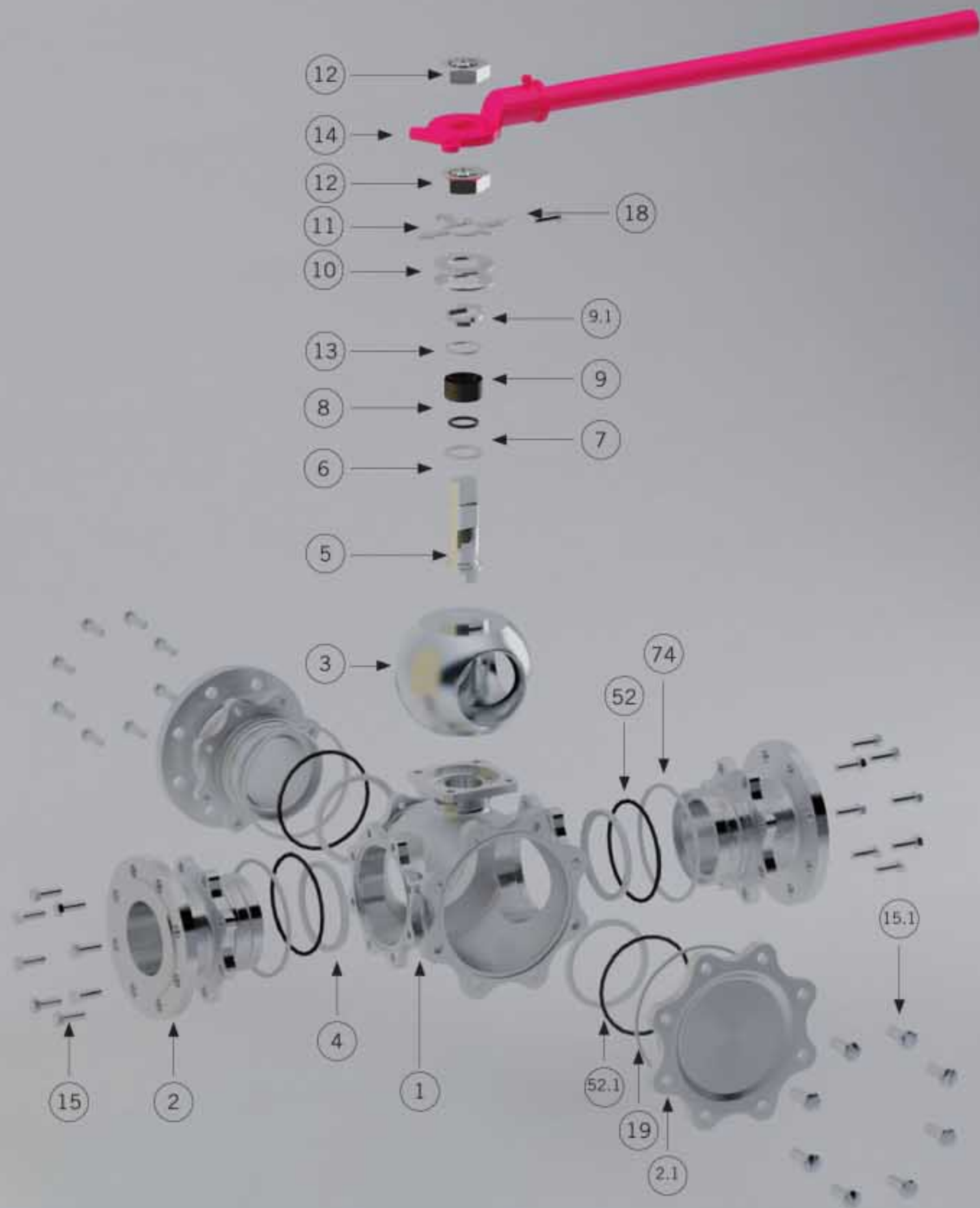


3 WAY T PORT



3 WAY INVERTED PORT





Materials

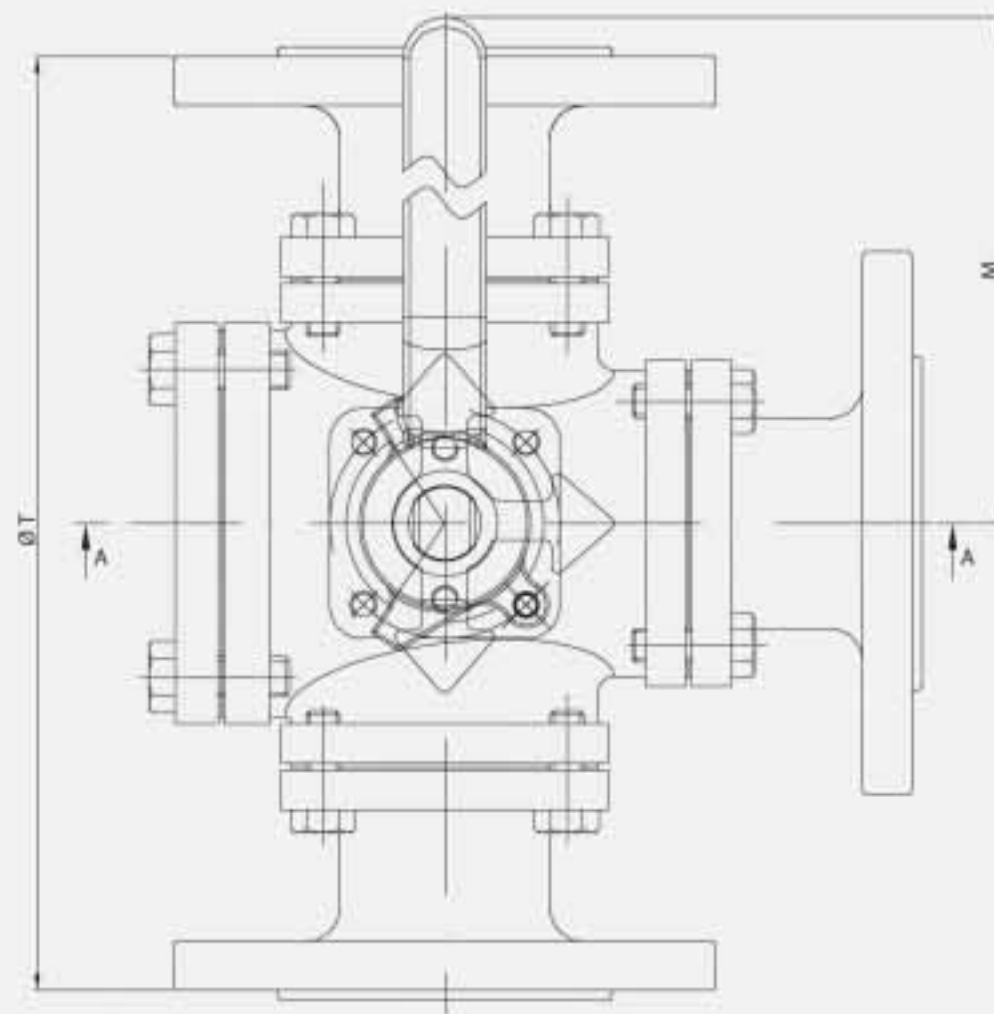
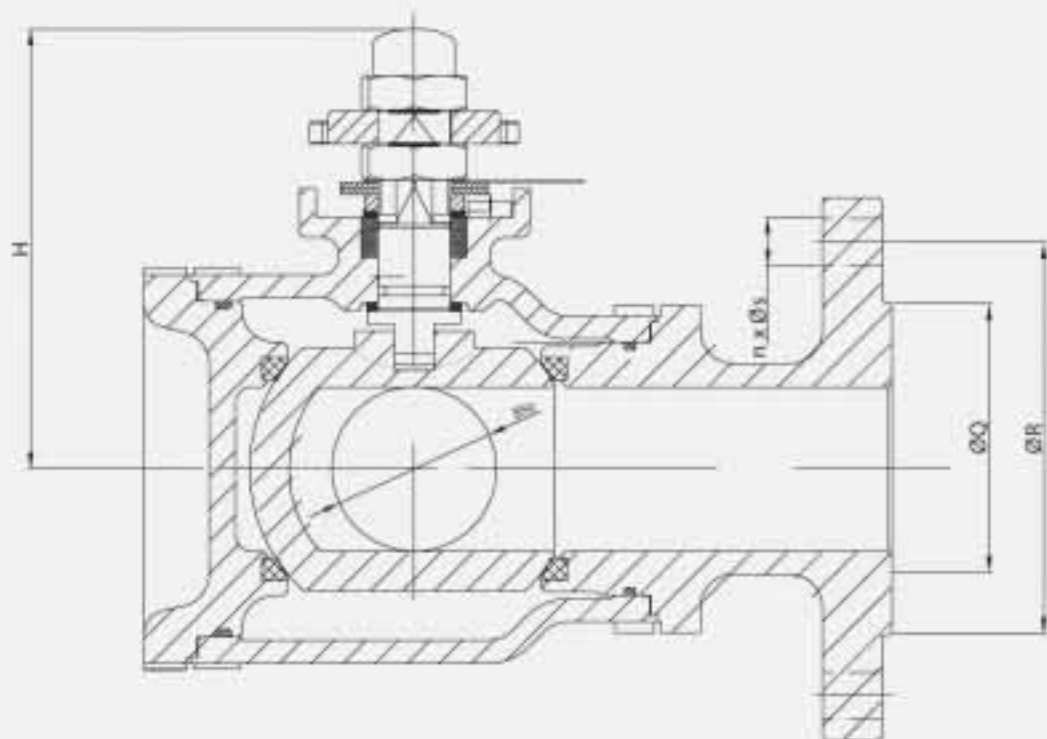
		EN-DIN		ASME	
		916 AIT	916 IIT	915 AIT	915 IIT
Item	Description	Material		Material	
1	Body	1.0619	1.4408	A216 Gr. WCB (C≤0,25%)	A351 Gr. CF8M
2	Body connector	1.0619	1.4408	A216 Gr. WCB (C≤0,25%)	A351 Gr. CF8M
2.1	Side Cover	1.0619	1.4408	A216 Gr. WCB (C≤0,25%)	A351 Gr. CF8M
3	Ball	A 351 Gr. CF8M		A 351 Gr. CF8M	
4	Seat ring	PTFE		PTFE	
5	Stem	A 479 Type 316		A 479 Type 316	
6	Stem thrust seal	25%GF. PTFE		25%GF. PTFE	
7	O'ring	FKM		FKM	
8	Stem packing	Graphite		Graphite	
9	Gland	AISI 303	AISI 316	AISI 303	AISI 316
9.1	Stop plate	F114	AISI 304	F114	AISI 304
10	Disk spring	E.N.P Carbon steel		E.N.P Carbon steel	
11	Look. Wash. Pointer	Rilsan coated Carbon St.		Rilsan coated Carbon St.	
12	Gland nut	Zinc plated carbon steel	AISI 303	Zinc plated carbon steel	AISI 303
13	Antifriction washer	25%GF. PTFE		25%GF. PTFE	
14	Wrench	Nodular iron		Nodular iron	
15	Bolt	DIN 933 A4 - 70		DIN 933 A4 - 70	
15.1	Bolt	DIN 933 A4 - 70		DIN 933 A4 - 70	
18	Stop bolt	A4-70		A4-70	
19	Body cover seal	PTFE		PTFE	
52	O'ring	FKM		FKM	
52.1	O'ring	FKM		FKM	
74	Body connector seal	PTFE		PTFE	
89	Identification plate	Stainless St.		Stainless St.	

EN-DIN 916

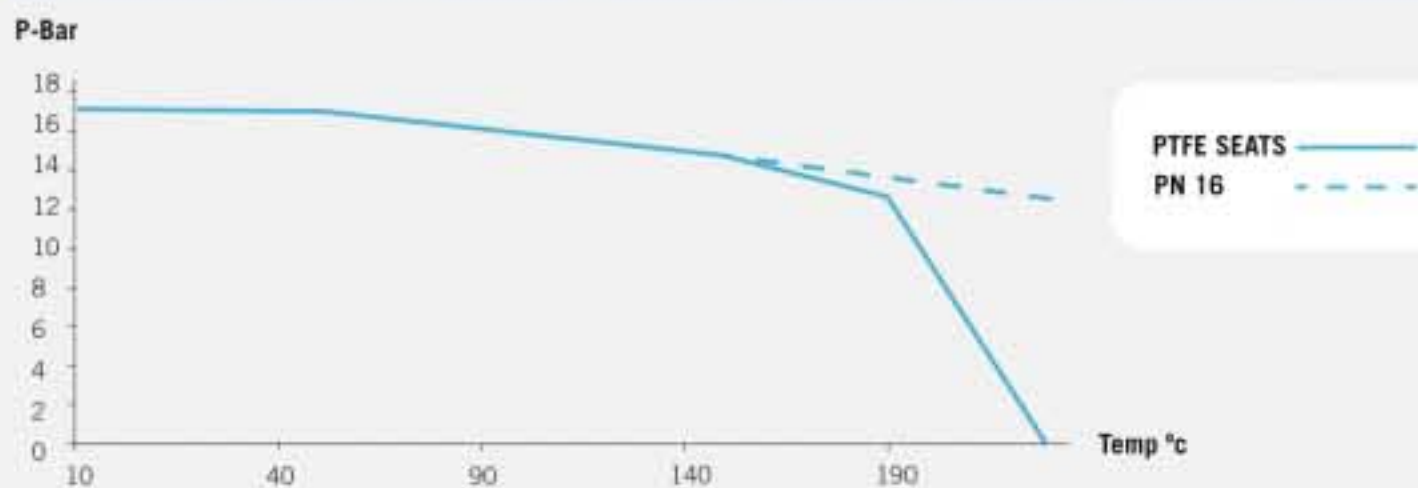
PN 16

Full Bore

PN 16



Pressure - Temperature



(*) Dimensions of diameters of drifts ISO 5211 refer to table from page 46.



Fig. 916 (PN 16)

DN	øP	L	A	A1	H	M	øT	øR	n x øS	ISO 5211	B	C	I	J	WEIGHT
25	25	212	106	70	96	170	115	85	4x14	F05	22	12,2	M12x1,5	8	8
40	40	262	131	80	121	200	150	110	4x18	F07	33	19,2	M18x1,5	12	17
50	50	290	145	90	134	350	165	125	4x18	F07	34	20,2	M22x1,5	15	25
65	65	325	162,5	107	180	350	185	145	8x18	F10	34	19,2	M22x1,5	15	34
80	80	370	185	117	189	465	200	160	8x18	F10	45	27,7	M28x1,5	19	51
100	100	430	215	148	230	475	220	180	8x18	F12	56	32,2	M36x1,5	24	77
150	150	500	250	194	280	855	285	240	8x22	F14	69	41	M48x3	32	138
200	200	600	300	270	325	855	340	295	12x22	F14	69	34	M48x3	32	

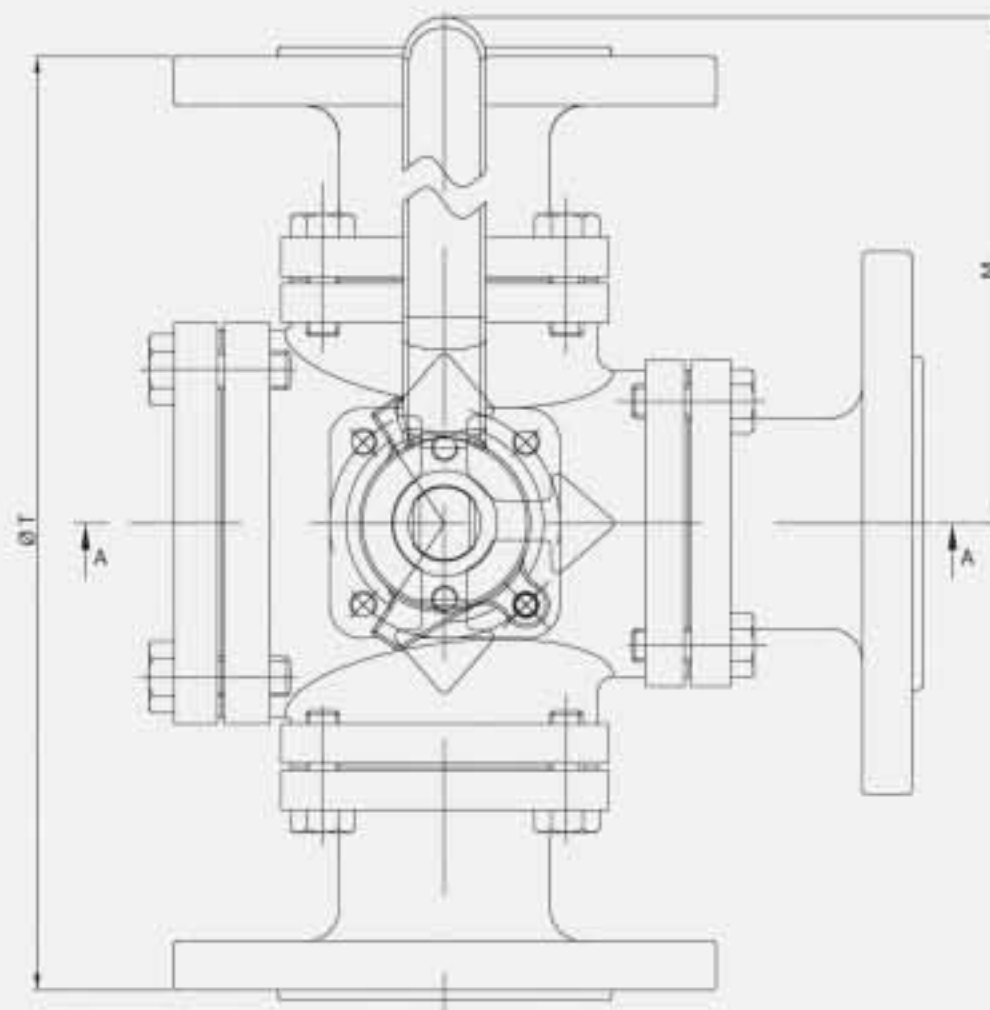
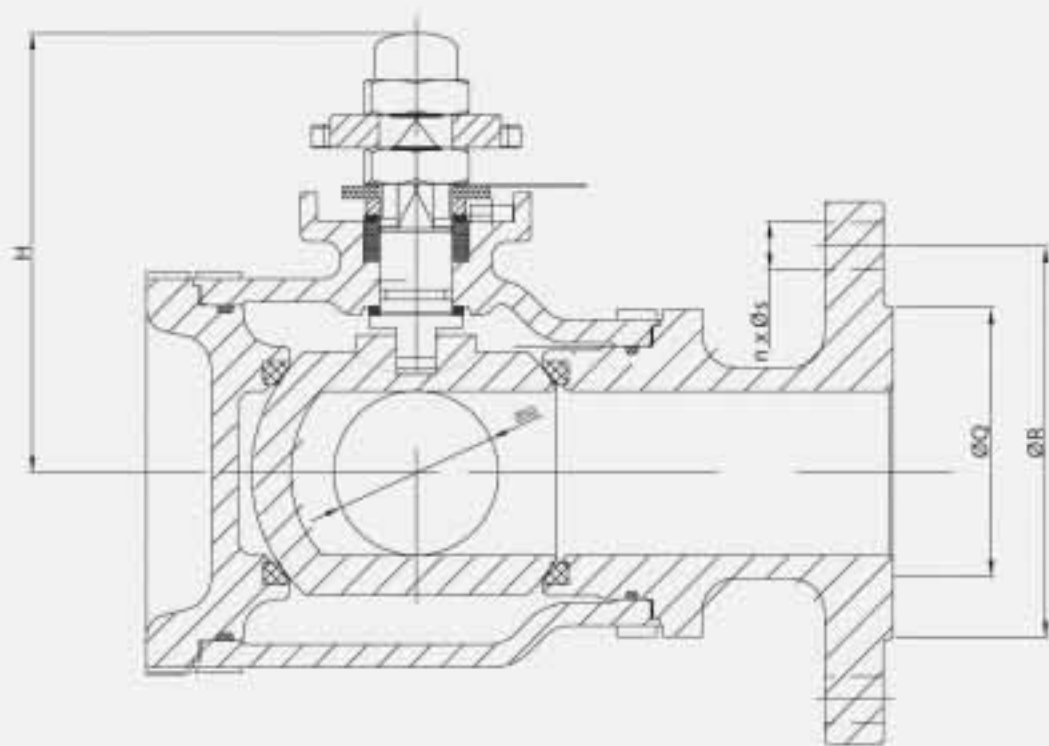
(*) Dimensions in mm and weight in kg.
(**) Weights and dimensions can be changed without notice.

ASME 915

CLASS 150

Full Bore

CLASS 150



(*) Dimensions of diameters of drills ISO 5211 refer to table from page 46.

Pressure - Temperature

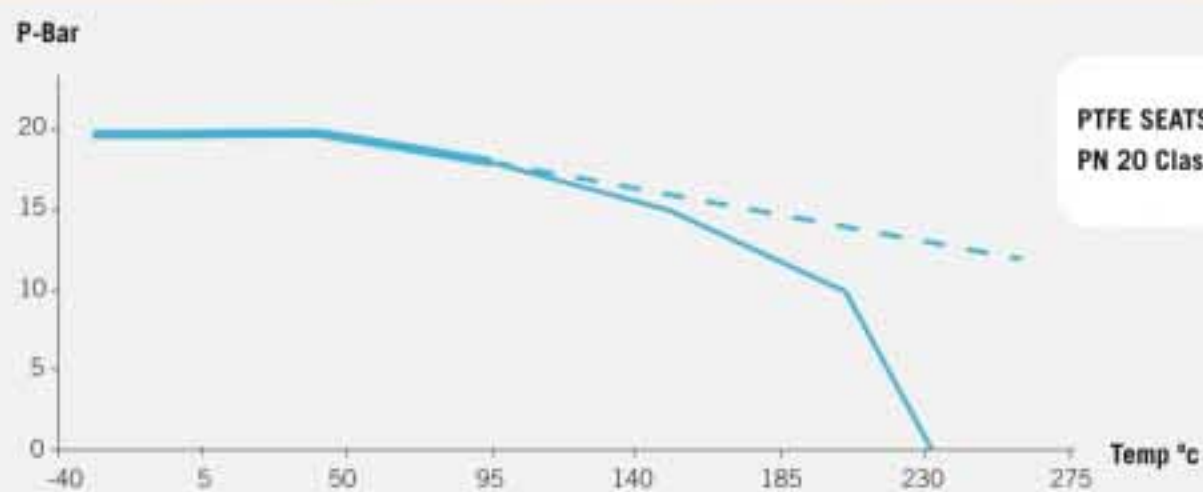


Fig. 915 (Class 150)

DN	øP	L	A	AI	H	M	øT	øR	n x øS	ISO 5211	B	C	I	J	WEIGHT
1"	25	212	106	70	96	170	110	79,4	4x15,8	F05	22	12,2	M12x1,5	8	8
1½"	40	262	131	80	121	200	125	98,4	4x15,8	F07	33	19,2	M18x1,5	12	17
2"	50	290	145	90	134	350	150	120,7	4x19	F07	34	20,2	M22x1,5	15	25
2½"	65	325	162,5	107	180	350	180	139,7	4x19	F10	34	19,2	M22x1,5	15	34
3"	80	370	185	117	189	465	190	152,4	4x19	F10	45	27,7	M28x1,5	19	51
4"	100	430	215	148	230	475	230	190,5	8x19	F12	56	32,2	M36x1,5	24	77
6"	150	500	250	194	280	855	280	241,3	8x22	F14	69	41	M48x3	32	138
8"	200	600	300	270	325	855	345	298,5	8x22	F14	69	34	M48x3	32	

(*) Dimensions in mm and weight in kg.
(**) Weights and dimensions can be changed without notice.

| BALL VALVES |

SPECIAL CONSTRUCTIONS

JC Ball Valves can be delivered in special constructions as following:

STEAM JACKET

When viscous materials are handled, JC steam jacketed ball valves are recommended to prevent valve to be blocked in closed position.

The maximum steam jacket pressure is 10 Bar (1.0 Mpa) and maximum temperature is 260°.



CAVITY FILLER

Some of the roughest process controls problems involve fluids than can polymerize in place. That means they can polymerize inside body cavities and could block the valve. Cavity-filler seats are available in PTFE, Stansit, TFM.

Applications: Styrene, Butadiene, Monomers, Pharmaceuticals, Food process, ...



DOUBLE PACKING

Today's concern for the containment of fugitive emissions has brought forth in the industry a wide range of stem sealing concepts and designs aimed to eliminating steam leakage. For these applications where it is imperative that fluid containment has to be assured, double packing can be adapted to any JC ball valve.



LOW TEMPERATURE OR CRYOGENIC SERVICE

JC ball valves have been widely used in low temperature and cryogenic applications, including some gas treatments processes (LNG, Methane, LPG...), requiring valves able to be operated and to assure helium leakage rates within specified limits at low temperatures. In these cases JC offers valves designed with special seats, bonnets and materials for low temperature or cryogenic service.



FULLY AUTOMATED BALL VALVES

JC Valves can be delivered with pneumatic, electric, hydraulic or gas-over-oil actuators as per customer requirements.



DIMENSIONS OF DRILLS ACCORDING TO ISO 5211

FLANGE TYPE	DIAMETER OF BOLTS CIRCLE	NUMBER SCREWS	DIAMETER OF DRILLS
F03	36	4	M5
F04	42	4	M5
F05	50	4	M6
F07	70	4	M8
F10	102	4	M10
F12	125	4	M12
F14	140	4	M16
F16	165	4	M20
F25	254	8	M16
F30	298	8	M20
F35	356	8	M30
F40	406	8	M36
F48	483	12	M36

NOTES



MORE PRODUCTS



GATE, GLOBE & CHECK VALVES - STRAINERS

ACCESSORIES



PNEUMATIC ACTUATOR - ELECTRIC ACTUATOR - HYDRAULIC ACTUATOR
GAS OVER OIL ACTUATOR - WORM GEAR - LOCKING DEVICES - STEM EXTENSIONS
