Ball Valves PN 16/40
AIT & IIT Construction
(Carbon Steel and Stainless Steel)

Fig. 154 / 156

Manufacturing program:

CE Ex II 2 G D

Quality & Environmental Management:

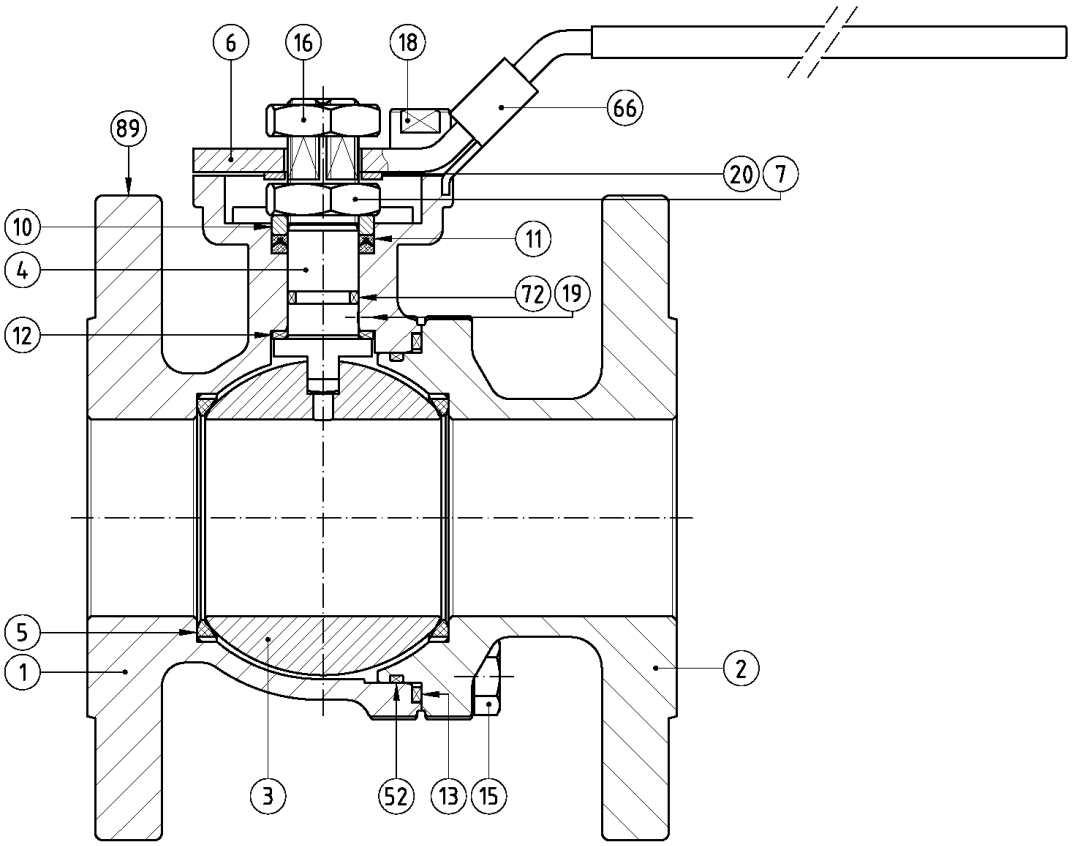
TÜV

Ball Valves PN 16/40

DN 15 - 50 PN 40

DN 65 - 200 PN 16

Parts and materials



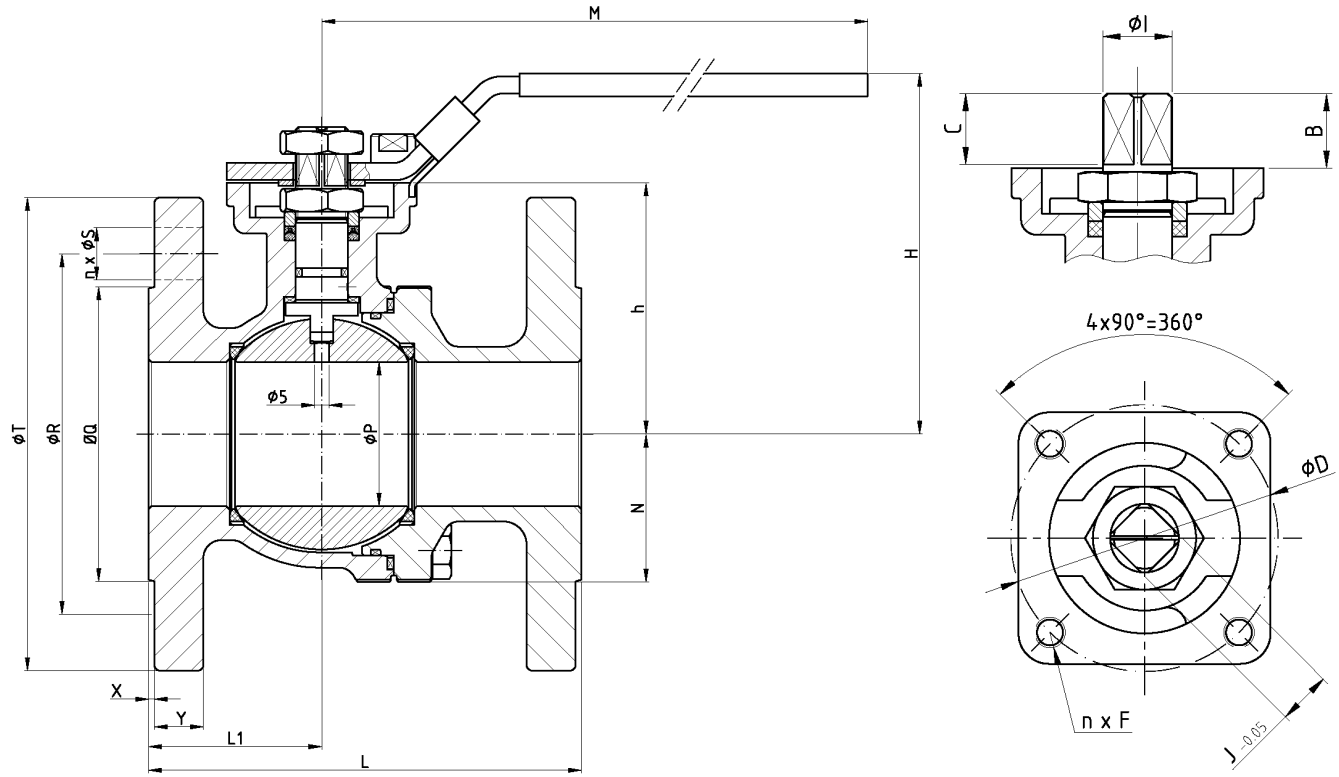
Item	Description	Material	
		AIT	IIT
1	BODY	1.0619	1.4408
2	BODY CONNECTOR	1.0619	1.4408
3	BALL	A 351 Gr. CF8M / A 479 Tp.316	
4	STEM	A 479 Tp.316	
5	SEAT RING	PTFE	
6	WRENCH	AISI 304	
7	GLAND NUT	A2	
10	GLAND RING	AISI 304	
11	GLAND PACKING	PTFE	
12	STEM THRUST SEAL	PTFE + 25% GF	
13	BODY CONNECTOR SEAL	PTFE	
15	BOLT	8.8	A2
16	WRENCH NUT	A2	
18	STOP PIN	AISI 304	
19	ANTISTATIC DEVICE	STAINLESS STEEL	
20	SPACER	AISI 304	
52	"O" RING	FKM	
66	LOOCKING DEVICE	AISI 304	
72	"O" RING	FKM	
89	IDENTIFICATION PLATE	AISI 304	
	PLASTIC CAP	PLASTIC	

Ball Valves PN 16/40

DN 15 - 50 PN 40

DN 65 - 200 PN 16

Dimensions



Series 154 (PN 40)

DN	ØP	L	L1	ØQ	ØR	n x ØS	ØT	X	Y	h	N	H	M	Weight
15	13	115	48	45	65	4 x 14	95	2	16	40	-	78	171	2
20	17	120	52	58	75	4 x 14	105	2	18	44,5	-	82	171	3
25	24	125	46	68	85	4 x 14	115	2	18	60	-	88	171	4
32	31	130	47	78	100	4 x 18	140	2	18	72	-	100	171	6
40	38	140	54	88	110	4 x 18	150	3	18	79,5	-	118	301	7
50	50	150	60	102	125	4 x 18	165	3	20	87	-	125	301	10

(*) Dimensions in mm

Series 156 (PN 16)

DN	ØP	L	L1	ØQ	ØR	n x ØS	ØT	X	Y	h	N	H	M	Weight
65	65	170	69	122	145	4 x 18	185	3	18	98,5	-	137	336	13
80	80	180	68	138	160	8 x 18	200	3	20	109,5	-	148	336	17
100	100	190	83	158	180	8 x 18	220	3	20	125	-	165	336	26
125	125	325	120,5	188	210	8 x 18	250	3	22	152	262	192	336	43
150	150	350	145	212	240	8 x 22	285	3	22	173	305	217	500	61
200	200	400	180	268	295	12 x 22	340	3	24	215	389	265	500	111

(*) Dimensions in mm

Actuator connection

DN	ISO 5211	B	C	ØD	n x F	I	J
15	F 05	11	10,5	50	4 x M6	M10x1,5	8
20	F 05	11,5	11	50	4 x M6	M10x1,5	8
25	F 05	13,2	14	50	4 x M6	M12x1,5	9
32	F 05	13,2	14	50	4 x M6	M12x1,5	9
40	F 07	19,5	20,5	70	4 x M8	M18x1,5	14
50	F 07	19,5	20,5	70	4 x M8	M18x1,5	14
65	F 07	20	21	70	4 x M8	M22x1,5	17
80	F07	20	21	70	4 x M8	M22x1,5	17
100	F 10	23,5	24,5	102	4 x M10	M22x1,5	17
125	F10	24,5	25,5	102	4 x M10	M22x1,5	17
150	F10	28,5	29,5	102	4 x M10	M28x1,5	22
200	F12	34	31	125	4 x M12	M35x2	27

(*) Dimensions in mm

Ball Valves PN 16/40

DN 15 - 50 PN 40

DN 65 - 200 PN 16

General Characteristics, Torque & KV, P&T Rating

GENERAL CHARACTERISTICS	Fig.156/154 Series SFF	Split Body	Floating Ball	Full Bore
DESIGN STANDARDS				
Valves design	EN 12516-2			
Body design	EN 12516-2			
Shell thickness	ISO 17292			
Flanges	EN 1092-1			
Face to face dimensions	EN 558-1 Series 27			
Actuator mounting flange	ISO 5211	DIN 3337	EN 15081	
Shell finishing quality	MSS SP 55			
Marking	EN 19	CE - PED		
TESTS AND CERTIFICATES				
Quality Assurance	ISO 9001			
Pressure testing	ISO 17292	EN 12266		

Torque Values in Nm

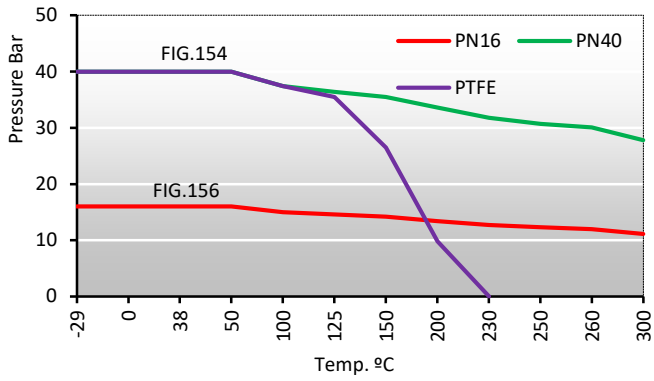
VALVE SIZE	AT DIFFERENTIAL PRESSURE		VALVE SIZE	AT DIFFERENTIAL PRESSURE	
	16 bar	40 bar		16 bar	40 bar
DN 15		8	DN 65	41	
DN 20		12	DN 80	71	
DN 25		14	DN 100	119	
DN 32		22	DN 125	190	
DN 40		27	DN 150	220	
DN 50		50	DN 200	450	

Kv Values in m^3/h

DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
20	40	75	130	170	270
DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
550	1000	1650	3000	4200	9000

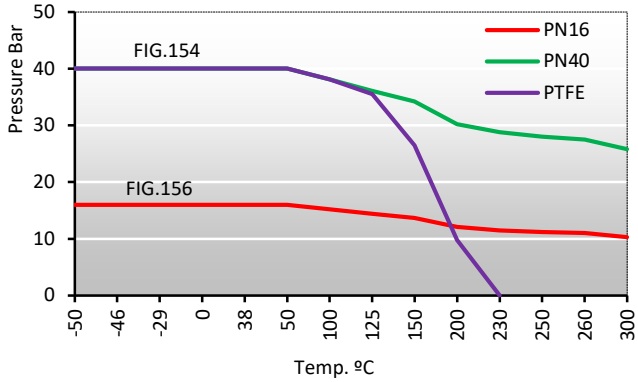
PTFE SEATS

Pressure-Temperature



For 1.0619 only.

Pressure-Temperature



For 1.4408 only.

For other materials consult EN 1092-1

Suministros Industriales

Ball Valves PN 16/40
AIT & IIT Construction
(Carbon Steel and Stainless Steel)

ICP VALVES S.A.

Fig. 256/254

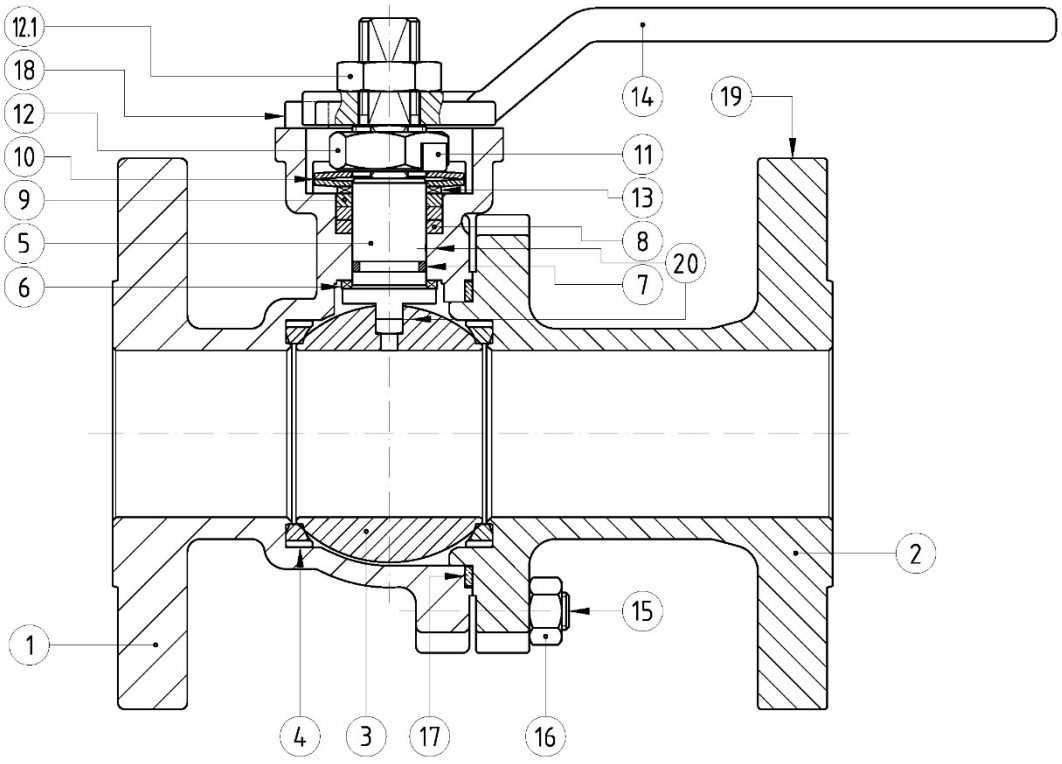
Manufacturing program:

Ex II 2 G D c CE

Quality & Environmental Management:

Ball Valves PN 16/40

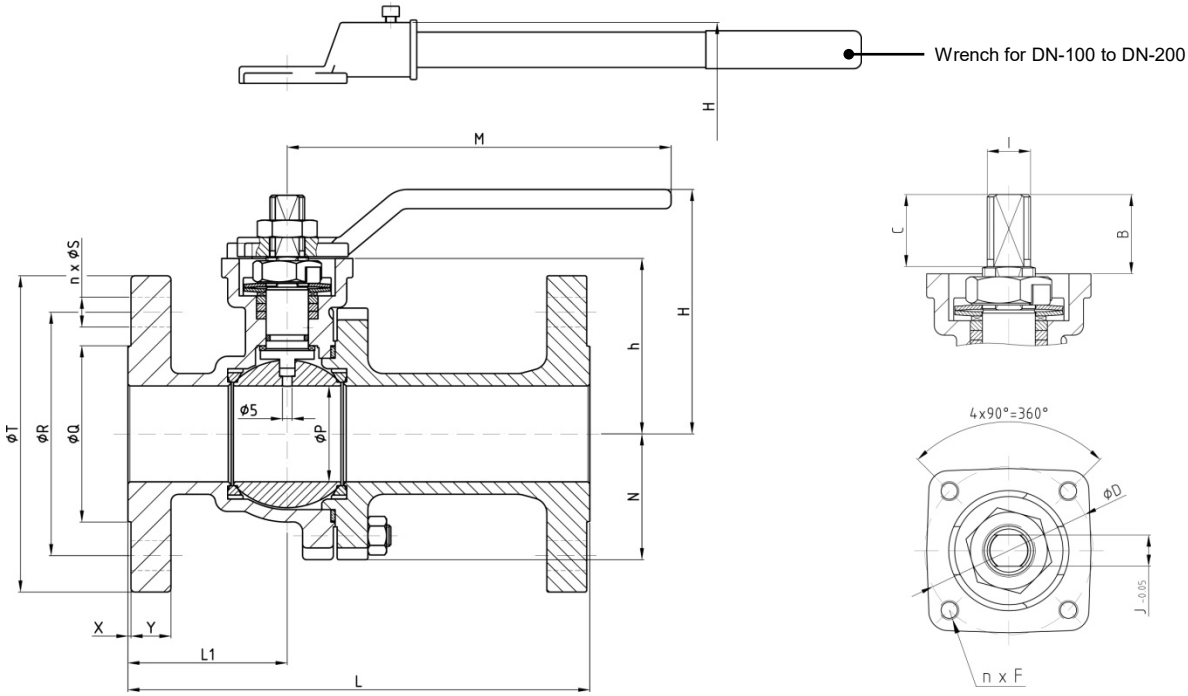
DN 65 - 200 PN 16
DN 15 - 150 PN 40
Parts and materials



Item	Description	Material	
		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	Seat ring	PTFE	
5	Stem	A 479 Tp.316	
6	Stem thrust seal	25% G.F. PTFE	
7	"O" Ring	FKM	
8	Gland packing	Graphite	
9	Gland	AISI 303	
10	Disk spring	Inconel - 718	
11	Locking w asher	AISI 304	
12	Gland nut	AISI 303	
12.1	Nut	AISI 303	
13	Antifriction w asher	25% G.F. PTFE	
14	Wrench	A 216 Gr. WCB	
15	Stud	A 193 Gr. B7M	A 193 Gr. B8M
16	Nut	A 194 Gr. 2HM	A 194 Gr. 8M
17	Spiralw ound gasket	AISI 316L + PTFE + Graphite	
18	Bolt	A2	
19	Identification plate	Stainless St.	
20	Antistatic Device	Stainless St.	

Ball Valves PN 16/40

DN 65 - 200 PN 16
DN 15 - 150 PN 40
Dimensions



Series 256 (PN 16)

DN	ØP	L	L1	ØQ	ØR	n x ØS	ØT	X	Y	h	N	H	M	Weight
65	65	170	72	122	145	4 x 18	185	2	16	104	78	140	350	13,3
80	78	180	73	138	160	8 x 18	200	2	18	118,5	87	190	450	19,1
100	100	190	83	158	180	8 x 18	220	2	18	144	108	192,5	466	25,6
125	125	325	120	188	210	8 x 18	250	2	20	184	134	240	775	47,6
150	151	350	135	212	240	8 x 22	285	2	20	203	152	259	775	63,5
200	203	400	200	268	295	12 x 22	340	2	21	250	202	319	845	115,3

(*) Dimensions in mm

Series 254 (PN 40)

DN	ØP	L	L1	ØQ	ØR	n x ØS	ØT	X	Y	h	N	H	M	Weight
15	15	115	53	45	65	4 x 14	95	2	14	41	31	68	170	2,4
20	20	120	52	58	75	4 x 14	105	2	16	43	33	70	170	3,2
25	25	125	52	68	85	4 x 14	115	2	16	58,5	39	86	170	4,1
32	32	130	54	78	100	4 x 18	140	2	16	63,5	43	89,5	170	5,8
40	40	140	55	88	110	4 x 18	150	2	16	86,5	48	122,5	215	8,1
50	50	150	61	102	125	4 x 18	165	2	18	91,5	63	127,5	215	10,6
65	65	170	72	122	145	8 x 18	185	2	20	104	78	140	350	14,8
80	78	180	73	138	160	8 x 18	200	2	22	118,5	87	190	450	20,6
100	100	190	83	158	190	8 x 22	235	2	22	144	108	192,5	466	29,2
125	125	325	120	188	220	8 x 26	270	2	24	184	134	240	775	53,6
150	151	350	135	212	250	8 x 26	300	2	26	203	152	259	775	74,7

(*) Dimensions in mm

Actuator connection

DN	ISO 5211	B	C	ØD	n x F	I	J
15	F 05	18	11	50	4 x M6	M10	7
20	F 05	18	11	50	4 x M6	M10	7
25	F 05	22	21	50	4 x M6	M12	8
32	F 05	22	21	50	4 x M6	M12	8
40	F 07	33	32	70	4 x M8	M18	12
50	F 07	33	32	70	4 x M8	M18	12
65	F 07	34	33	70	4 x M8	M22	15
80	F 10	34	33	102	4 x M10	M22	15
100	F 10	45	43,5	102	4 x M10	M28	19
125	F 12	56	54,5	125	4 x M12	M36	24
150	F 12	56	54,5	125	4 x M12	M36	24
200	F 14	69	67	140	4 x M16	M48	32

(*) Dimensions in mm

Ball Valves PN 16/40

DN 65 - 200 PN 16

DN 15 - 150 PN 40

General Characteristics, Torque & KV, P&T Rating

GENERAL CHARACTERISTICS	Fig.256/254 Series SFF	Split Body	Floating Ball	Full Bore
DESIGN STANDARDS				
Valves design	EN 1983	ISO 17292		
Body design	EN 12516			
Shell thickness	ISO 17292			
Flanges	EN 1092-1			
Face to face dimensions	EN 558-1 Series 27			
Actuator mounting flange	ISO 5211	DIN 3337	EN 15081	
Shell finishing quality	MSS SP 55			
Marking	EN 19	CE - PED		
TESTS AND CERTIFICATES				
Quality Assurance	ISO 9001	CE-PED		
Fire Safe certification	ISO 10497: 2004			
Pressure testing	ISO 17292	EN 12266		
Other	ISO 14001	ATEX		

Torque Values in Nm

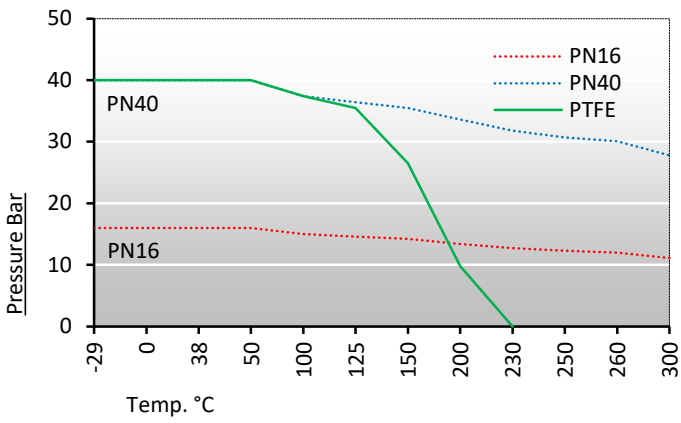
VALVE SIZE	AT DIFFERENTIAL PRESSURE						VALVE SIZE	AT DIFFERENTIAL PRESSURE					
	16 bar			40 bar				16 bar			40 bar		
	PTFE	PTFE + CG	PTFE + GF	PTFE	PTFE + CG	PTFE + GF		PTFE	PTFE + CG	PTFE + GF	PTFE	PTFE + CG	PTFE + GF
DN 15	--	--	--	8	10	9	DN 65	51	103	68	74	100	110
DN 20	--	--	--	12	18	16	DN 80	77	171	156	118	170	190
DN 25	--	--	--	14	24	22	DN 100	116	190	176	136	290	330
DN 32	--	--	--	22	31	28	DN 125	159	710	660	204	500	610
DN 40	--	--	--	27	48	45	DN 150	215	850	830	408	750	920
DN 50	--	--	--	50	73	72	DN 200	493	1200	1200	--	--	--

Kv Values in m^3/h

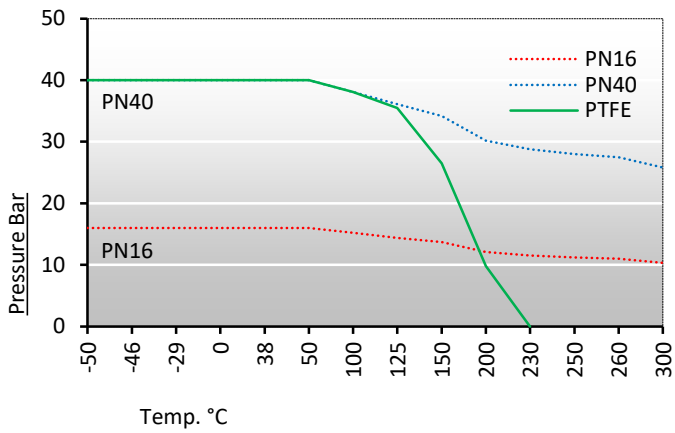
DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
20	40	75	130	170	270
DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
550	1000	1650	3000	4200	9000

Pressure-Temperature chart

1.0619



1.4408



Suministros Industriales

Ball Valves Class 150/300
AIT & IIT Construction
(Carbon Steel and Stainless Steel)

ICP VALVES S.A.

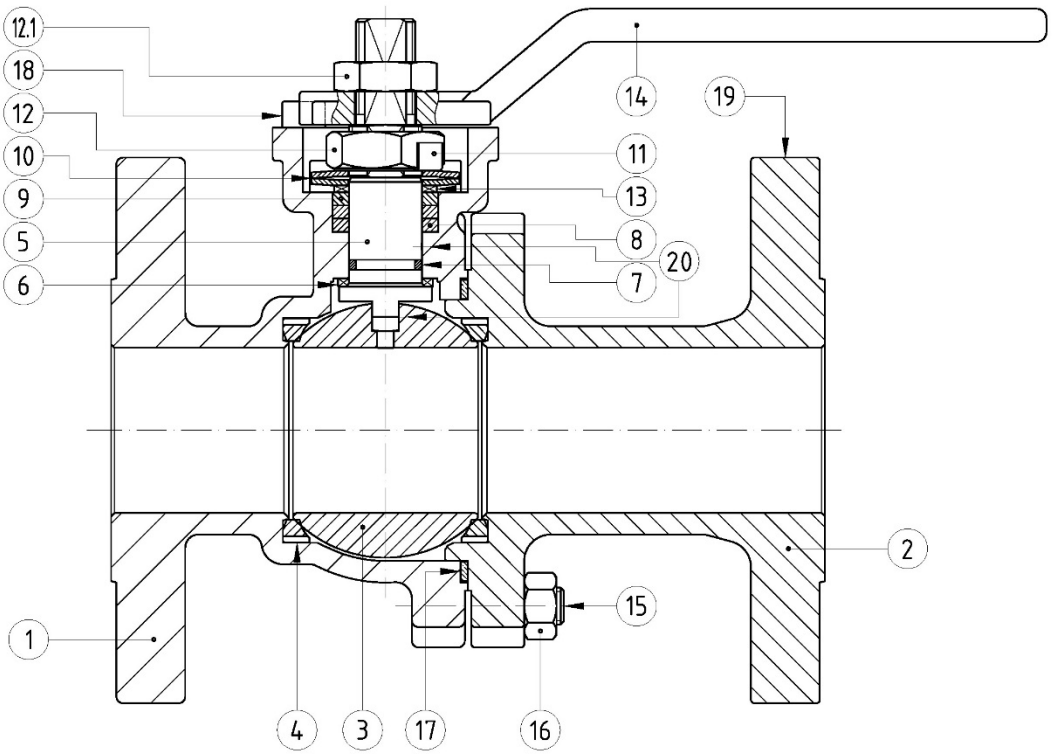
Fig. 315 / 330
Fig. 415 / 430

Manufacturing program:

Ex II 2 G D c CE

Quality & Environmental Management:

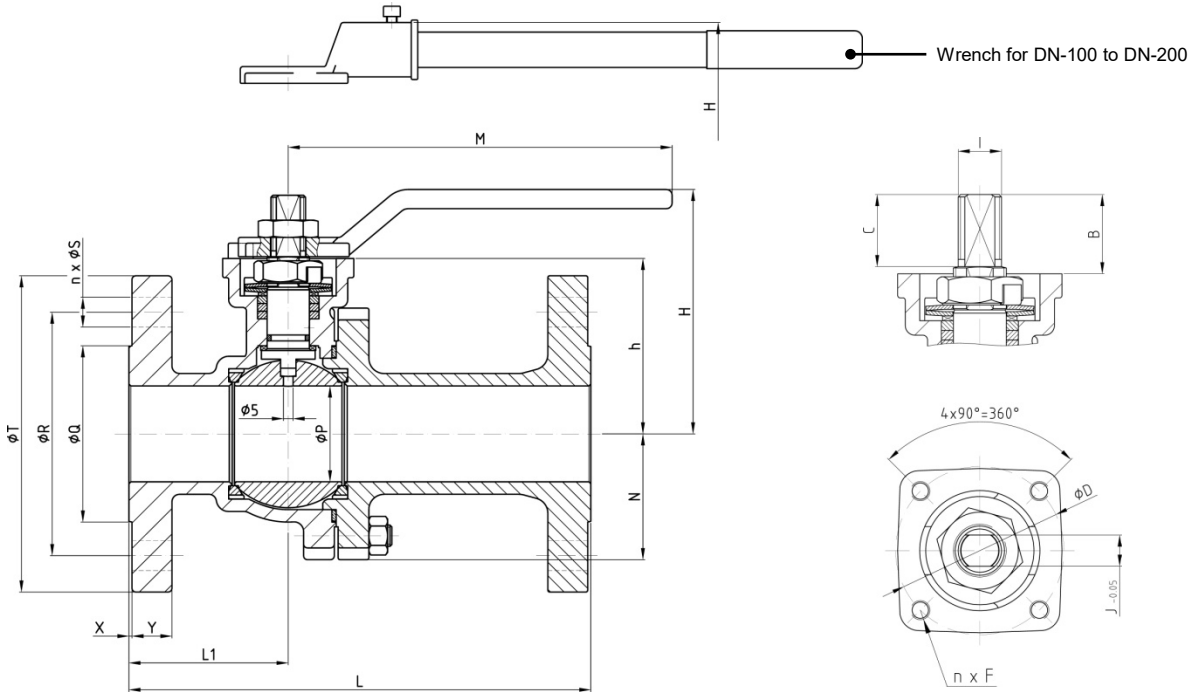
93 699 46 04 pedidos@suministrosrado.com www.suministrosrado.com



Item	Description	Material	
		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 (DN-15 ~ 25 A 479 Tp.316)	
4	Seat ring	PTFE	
5	Stem	A 479 Tp.316	
6	Stem thrust seal	25% G.F. PTFE	
7	"O" Ring	FKM	
8	Gland packing	Graphite	
9	Gland	AISI 303	
10	Disk spring	Inconel - 718	
11	Locking w asher	AISI 304	
12	Gland nut	AISI 303	
12.1	Nut	AISI 303	
13	Antifriction w asher	25% G.F. PTFE	
14	Wrench	A 216 Gr. WCB	
15	Stud	A 193 Gr. B7M	A 193 Gr. B8M
16	Nut	A 194 Gr. 2HM	A 194 Gr. 8M
17	Spiralw ound gasket	AISI 316L + PTFE + Graphite	
18	Bolt	A2	
19	Identification plate	Stainless St.	
20	Antistatic Device	Stainless St.	

Ball Valves Class 150/300

DN ½" – 8" Class 150
DN ½" – 8" Class 300
Dimensions



Series 315/415 (Class 150)

DN	ØP	L	L1	ØQ	ØR	n x ØS	ØT	X	Y	h	N	H	M	Weight
15 (½")	15	108	47	35	60,45	4 x 15,74	88,9	1,6	9,6	41	31	68	170	1,7
20 (¾")	20	117	50	43	69,8	4 x 15,74	98,5	1,6	9,6	43	33	70	170	2,2
25 (1")	25	127	52	51	79,24	4 x 15,74	108	1,6	9,6	58,5	39	86	170	2,9
40 (1½")	40	165	65	73	98,55	4 x 15,74	127	1,6	12,7	86,5	48	122,5	215	6
50 (2")	50	178	61	92	120,65	4 x 19	152	1,6	14,2	91,5	63	127,5	215	8,5
65 (2½")	65	190	75	105	139,7	4 x 19	178	1,6	16	104	78	140	350	13,3
80 (3")	78	203	78,5	127	152,4	4 x 19	191	1,6	17,4	118,5	87	190	450	18,5
100 (4")	100	229	90	157	190,5	8 x 19	229	1,6	22,3	144	108	192,5	466	29,3
150 (6")	151	394	174	216	241,3	8 x 22,2	279,5	1,6	23,9	203	152	259	775	64,5
200 (8")	203	457	209	270	298,45	8 x 22,2	343	1,6	26,9	250	202	319	845	123,2

(*) Dimensions in mm

Series 330/430 (Class 300)

DN	ØP	L	L1	ØQ	ØR	n x ØS	ØT	X	Y	h	N	H	M	Weight
15 (½")	15	140	60	35	66,55	4 x 15,74	95	1,6	12,7	41	31	68	170	2,4
20 (¾")	20	152	65	43	82,55	4 x 19	117,5	1,6	14,2	43	33	70	170	3,5
25 (1")	25	165	70	51	88,9	4 x 19	124	1,6	16	58,5	39	86	170	4,6
40 (1½")	40	190	80	73	114,3	4 x 22,2	155,5	1,6	19	86,5	48	122,5	215	9,2
50 (2")	50	216	83	92	127	8 x 19	165	1,6	20,8	91,5	63	127,5	215	11,5
80 (3")	78	283	118	127	168,1	8 x 22,2	210	1,6	26,9	118,5	87	190	450	25
100 (4")	100	305	133	157	200,15	8 x 22,2	254	1,6	30,2	144	108	192,5	466	39,5
150 (6")	151	403	160	216	169,75	12 x 22,2	318	1,6	35	203	152	259	775	88,1
200 (8")	203	502	239	270	330,2	12 x 25,43	381	1,6	39,6	250	202	319	845	160,5

(*) Dimensions in mm

Actuator connection

DN	ISO 5211	B	C	ØD	n x F	I	J
15 (½")	F 05	18	11	50	4 x M6	M10	7
20 (¾")	F 05	18	11	50	4 x M6	M10	7
25 (1")	F 05	22	21	50	4 x M6	M12	8
40 (1½")	F 07	33	32	70	4 x M8	M18	12
50 (2")	F 07	33	32	70	4 x M8	M18	12
65 (2½")	F 07	34	33	70	4 x M8	M22	15
80 (3")	F 10	34	33	102	4 x M10	M22	15
100 (4")	F 10	45	43,5	102	4 x M10	M28	19
150 (6")	F 12	56	54,5	125	4 x M12	M36	24
200 (8")	F 14	69	67	140	4 x M16	M48	32

(*) Dimensions in mm

Ball Valves Class 150/300

DN ½" – 8" Class 150
DN ½" – 8" Class 300

General Characteristics, Torque & KV, P&T Rating

GENERAL CHARACTERISTICS	Fig.LCV Series SFF	Split Body	Floating Ball	Full Bore	
DESIGN STANDARDS					
Valves design	ISO 17292	ASME B16.34	EN 1983		
Body design	ISO 17292				
Shell thickness	ASME B16.34				
Flanges	ASME B16.5 Raised face				
Face to face dimensions	ASME B16.10 Long pattern	EN 558-2 Series 3, 4 & 12			
Actuator mounting flange	ISO 5211	EN 15081			
Wetted parts materials and bolting	NACE MR.01.75				
Shell finishing quality	MSS SP 55				
Marking	ISO 17292	CE - PED	EN 19		
TESTS AND CERTIFICATES					
Quality Assurance	ISO 9001	CE - PED			
Fire Safe certification	ISO 10497: 2004				
Pressure testing	API 598	EN 12266			
Other	ISO 14001	ATEX			

Torque Values in Nm

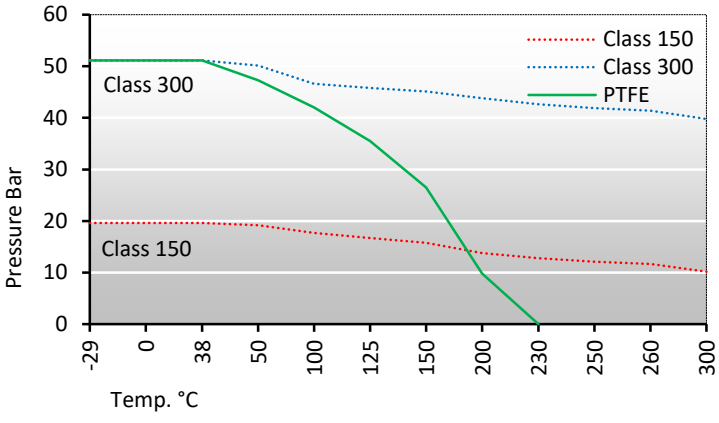
VALVE SIZE	AT DIFFERENTIAL PRESSURE						VALVE SIZE	AT DIFFERENTIAL PRESSURE					
	20 bar (Class 150)			50 bar (Class 300)				20 bar (Class 150)			50 bar (Class 300)		
	PTFE	PTFE + CG	PTFE + GF	PTFE	PTFE + CG	PTFE + GF		PTFE	PTFE + CG	PTFE + GF	PTFE	PTFE + CG	PTFE + GF
DN 15 (½")	6	7	6	10	10	11	DN 65 (2½")	50	65	68	--	--	--
DN 20 (3/4")	8	8	7	13	18	17	DN 80 (3")	79	107	99	135	201	233
DN 25 (1")	12	16	11	17	23	25	DN 100 (4")	130	175	180	170	221	226
DN 40 (1½")	22	27	22	30	39	33	DN 150 (6")	220	290	289	308	410	619
DN 50 (2")	36	52	48	49	77	70	DN 200 (8")	630	754	759	780	1038	1568

Kv Values in m^3/h

DN 15 (½")	DN 20 (¾")	DN 25 (1")	DN 40 (1½")	DN 50 (2")
20	40	75	170	270
DN 65 (2½")	**DN 80 (3")**	**DN 100 (4")**	**DN 150 (6")**	**DN 200 (8")**
550	1000	1650	4200	9000

Pressure-Temperature chart

A216 Gr. WCB



A351 Gr. CF8M