

**2 PIECES CARBON STEEL BALL VALVE PN16/40 FLANGED JC RANGE SHORT PATTERN
(DIN 3202-1 F4/F5) PTFE FILLED WITH GRAPHITE SEAT**

2 pieces split body ball valve JC with full bore for Chemical industries, petrochemical industries, hydraulic installation, heating, water distribution, compressed air.

Ball valve with firesafe certificate ISO 10497 and API 607 to reduce risks in case of fire.

Fugitive emission according to EN 15848-1 :2006 B Class and TA LUFT for an excellent tightness on the stem and to prevent external leakage.

PTFE filled with 20% graphite seat for a temperature up to +260°C.

Compatible with explosive atmosphere, ATEX Zone 1&21 and Zone 2&22 thanks to the double antistatic device.

Handling possible with locking device, lockable gearbox, oval handwheel or stem extension.

Thanks to the ISO 5211 plate, an actuator can be installed on the valve.



Certificate
3.1

NACE
MR01-75



JC
VALVES



Size : DN15 to DN300
Connection : Flanged PN16/40 RF
Min Temperature : -29°C
Max Temperature : +260°C
Max Pressure : 40 Bars for PN40, 16 bars for PN16
Specifications : PTFE filled with 20% graphite seat
ISO 5211 mounting pad
Anti blow-out stem, full bore
Fire safe ISO 10497 : 2004, API 607 5th, BS 6755 Part 2 and API 6FA

Materials : Carbon steel EN 1.0619

*the installation defects and wear defects are not covered by the guarantee

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SPECIFICATIONS :

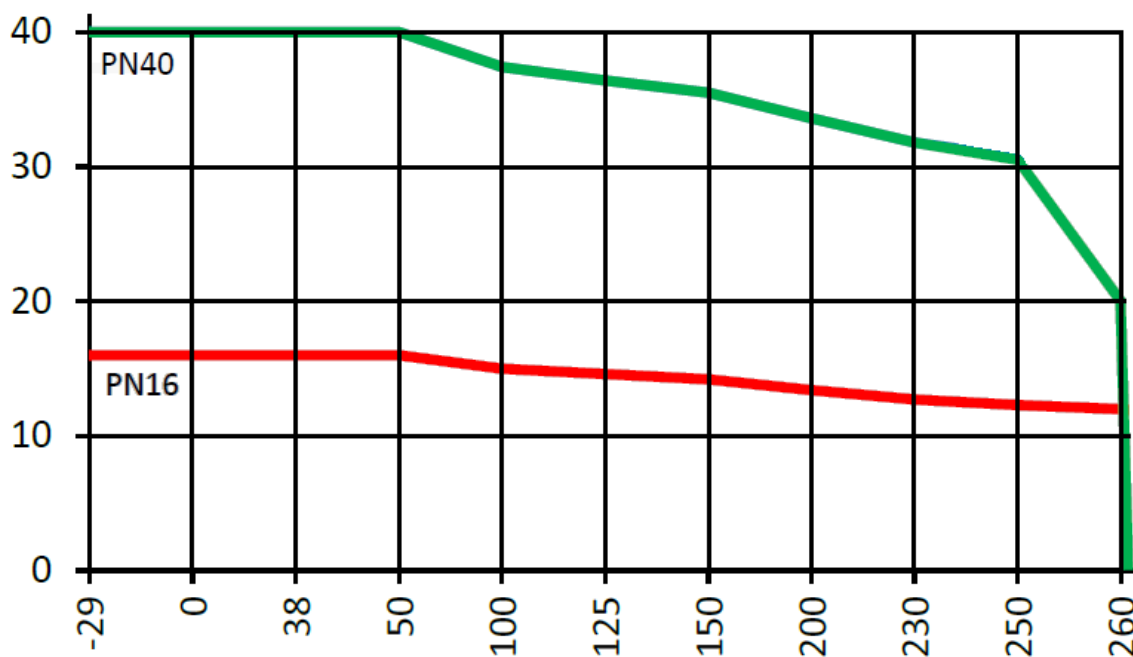
- Full bore
- Anti blow-out stem
- PTFE filled with 20% graphite seat
- Locking device on request
- ISO 5211 mounting pad
- 2 pieces type (Split body)
- PN40 Flanges R.F or PN16
- Antistatic device
- Fire safe ISO 10497 : 2004, API 607 5th, BS 6755 Part.2 and API 6FA
- Fugitive emissions EN 15848-1 : 2006 and TA LUFT VDI 2440
- Graphite packing + FKM O ring on stem
- With exhaust hole in the ball (located in the top of the ball to avoid overpressure in it)
- Trunnion mounted hollow ball over DN200
- Blue painting RAL 5009, 15-50μ thickness

USE :

- Chemical industries, petrochemical industries, hydraulic installation, heating, water distribution, compressed air
- Min and max Temperature Ts : -29°C to + 260°C
- Max Pressure Ps : 40 bars for PN40 types, 16 bars for PN16 types (see graph)
- Vacuum 10^{-2} torr
- Compressed air (ambient temperature) : 40 bars maximum for PN40 types, 16 bars for PN16 types
- Steam : 14 bars maximum for PN16 types, 27 bars maximum for PN40 types

PRESSURE / TEMPERATURE GRAPH (STEAM EXCLUDED) :

Pressure (Bar)



Temperature (°C)

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FLOW COEFFICIENT Kvs (in m³ / h) :

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kvs (m ³ / h)	20	40	75	130	170	270	550	1000	1650	3000	4200	9000	15000	20800

TORQUE VALUE (in Nm without safety coefficient) :

DN	BTO*	RTO	ETO	BTC	RTC	ETC*	MAST Stem A479 F316	MAST Stem A182 F51	Ps (bars)
15	13	7	8	10	7	10	26	57	40
20	17	9	10	13	9	14	26	57	40
25	23	12	14	17	12	18	26	57	40
32	30	15	18	23	15	24	69	151	40
40	46	23	28	35	23	37	85	185	40
50	75	38	45	56	38	60	85	185	40
65	94	47	56	71	47	75	176	386	16
	110	55	66	83	55	88	176	386	40
80	166	83	100	125	83	133	246	539	16
	183	92	110	137	92	146	246	539	40
100	173	87	104	130	87	138	305	668	16
	248	124	149	186	124	198	305	668	40
125	360	180	216	270	180	288	607	1329	16
	452	226	271	339	226	362	607	1329	40
150	430	215	258	323	215	344	974	2131	16
	795	398	477	596	398	636	974	2131	40
200	842	421	505	632	421	674	1387	3034	16
	1215						1387	3034	40
250	1344	672	806.4	1008	672	1075.2	1387	3034	16
300	1800	900	1080	1350	900	1440	2541	5559	16

BTO* : Break to open

ETC* : End Torque Close

RANGE :

- Carbon steel body ball valve with handle flanged PN40 **Ref. 540AICG** from DN 15 to DN 150
- Carbon steel body ball valve with handle flanged PN16 **Ref. 516AICG** from DN 65 to DN 150
- Carbon steel body ball valve with free stem PN16 **Ref. 516AICG** DN200 or PN40 **Ref. 540AICG** DN200
- Carbon steel body ball valve with free stem PN16 **Ref. 1516AICG** from DN250 to 300

CONNECTION :

- PN40 Flanges R.F. for Ref.540AICG and PN16 for Ref.516AICG

Sferaco 90 rue du Ruisseau 38297 St Quentin Fallavier Tel: + 33 (0) 474.94.15.90 Fax: + 33 (0) 474.95.62.08 Internet: www.sferaco.com E-mail : info@sferaco.fr

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ACCESSORIES :



- Reinforced locking device

DN	15	20	25	32	40	50	65	80	100	125	150	200
Ref.	9830120	9830121	9830122	9830123	9830124	9830125	9830126	9830127	9830128	9830129		



- Stainless steel handle

DN	15	20	25	32	40	50	65	80	100	125	150
Ref.	9830513	9830514	9830515	9830516	9830517	9830518	9830519	9830520			



- Stainless steel oval handwheel

DN	15	20	25	32	40	50
Ref.	9830575	9830578	9830576	9830577		



- Lockable gearbox

DN	125	150	200
Ref. 516	9830598	9830592	9830593
Ref. 540			983595



- Single stainless steel stem extension 100 mm (can't be used with oval handwheel)

DN	15	20	25	32	40	50	65	80	100	125	150
Ref. JC	9810615	9810616	9810617	9810618	9810619	9810620	9810621	9810622			

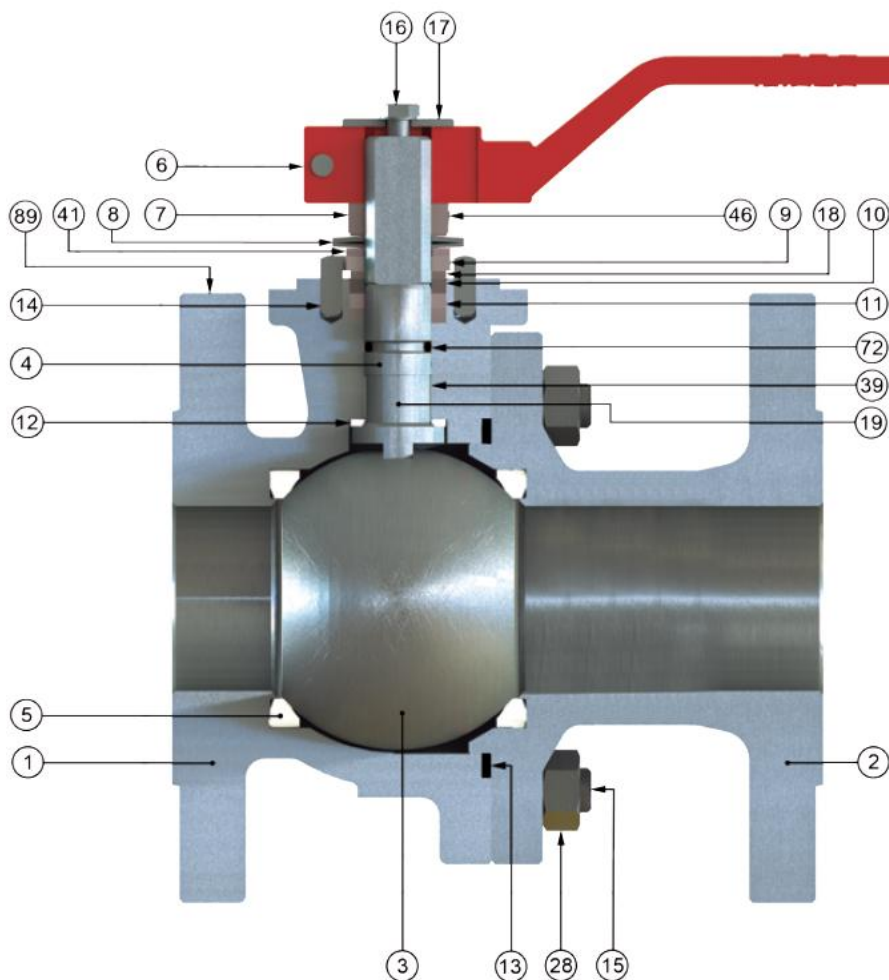


- Stainless steel stem extension 100 mm with ISO plate

DN	15	20	25	32	40	50	65	80	100	125	150	200
Ref. SF	JCRISO015020	JCRISO025	JCRISO032	JCRISO040050	JCRISO065	JCRISO080	JCRISO100	JCVSSBI125	JCVSSBI150	JCVSSBI200		

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VALVE MATERIALS DN15-200 :



Repairability :



***Gaskets kit
(Items 5, 11, 12, 13, 18, 46 and 72)**

DN	Ref. PN16	Ref. PN40
DN15	9804660	
DN20	9804661	
DN25	9804662	
DN32	9804663	
DN40	9804664	
DN50	9804665	
DN65	9804666	
DN80	9804667	
DN100	9804668	9804768
DN125	9804669	
DN150	9804670	9804730
DN200	9804671	-

(* : Included in gaskets kit)

Item	Designation	Materials
1	Body	EN 1.0619
2	Ends	
3	Ball DN15-25	ASTM A479 Tp.316
	Ball DN 32-200	Inox ASTM A 351 CF8M
4	Stem	ASTM A479 Tp.316 or Duplex ASTM A182 F51
5*	Seat	PTFE filled with 20% graphite
6	Handle	Carbon steel A216 WCB
7	Packing nut	Carbon Steel
8	Elastic ring	Carbon Steel
9	Stop washer	Carbon Steel
10	Packing gland	AISI 303
11*	Packing	Graphite
12*	Gasket	PTFE filled with 25% glass

Item	Designation	Materials
13*	Body spiral seat	AISI 316L + PTFE + Graphite
14	Pin	Carbon Steel
15	Screw (stud DN32-100)	DIN 933 8.8 zinc dichrom.
16	Handle screw	DIN 933 A4-70
17	Washer	Zinc plated carbon steel
18*	Thrust washer	PTFE filled with 25% glass
19	Antistatic device	Stainless steel
28	Nut (DN32-100)	DIN 934 8.8 zinc dichrom.
39	Stem bushing (DN25-200)	PTFE filled with 25% glass
41	Spacer (DN40-200)	Carbon Steel
46*	Washer	AISI 304
72*	O ring	FKM
89	ID plate	Stainless steel

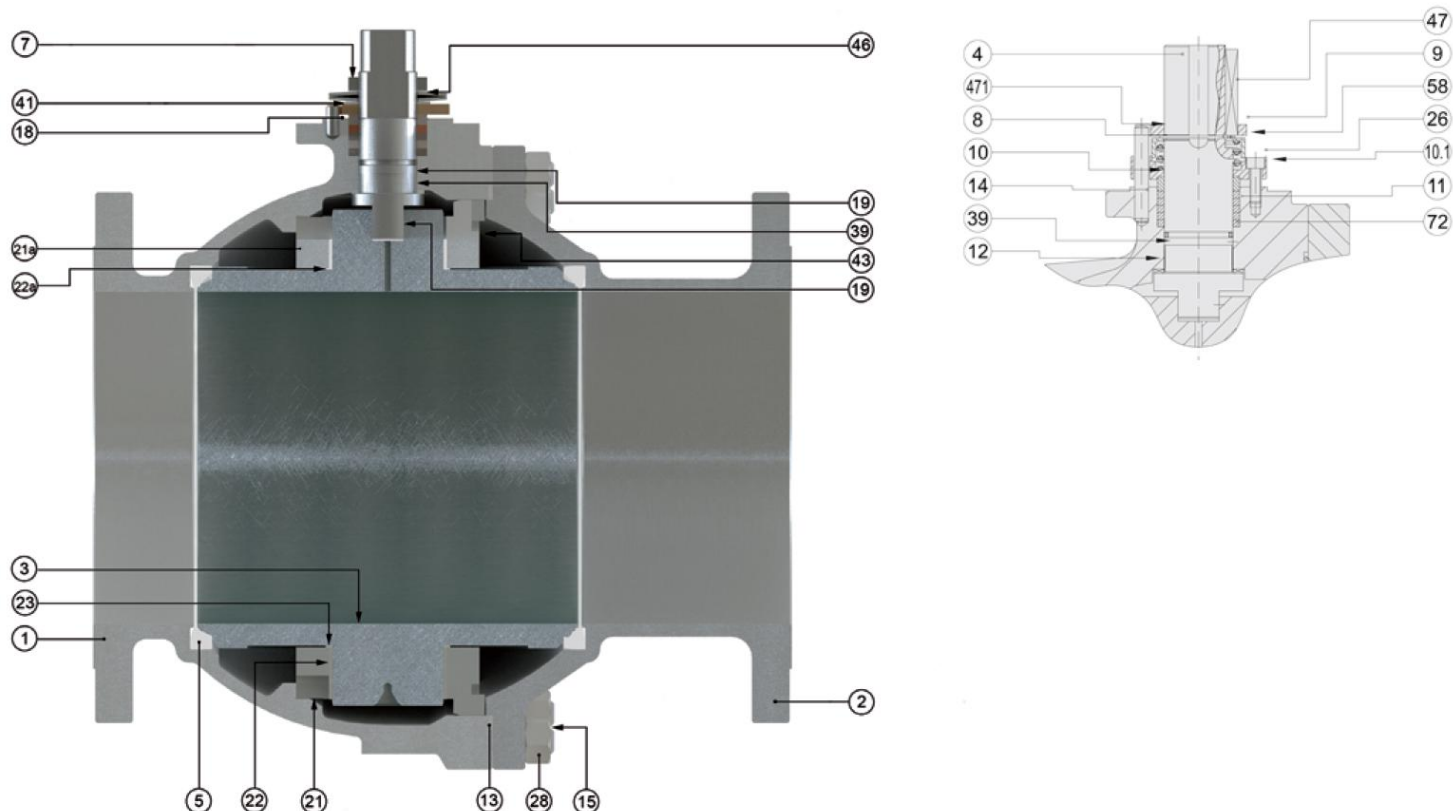
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Date : 12/25

Rev.05

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VALVE MATERIALS DN 250-300 :



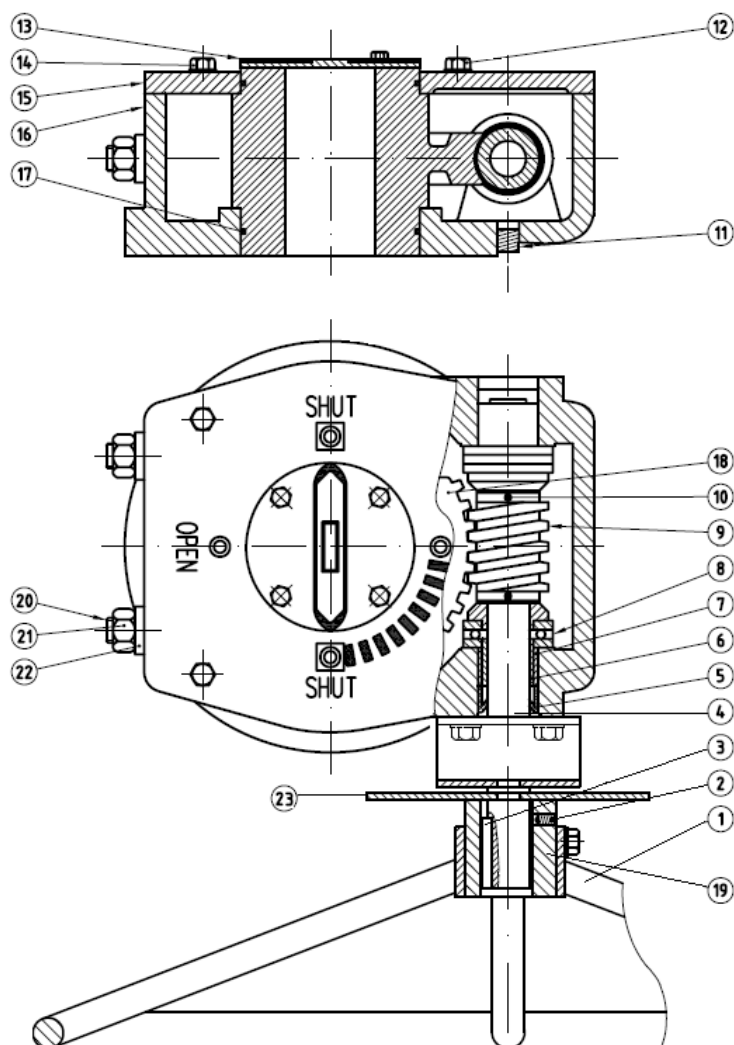
(* : Included in gaskets kit)

Item	Designation	Materials
1	Body	EN 1.0619
2	Ends	
3	Ball	ASTM A 351 CF8M
4	Stem	ASTM A479 Tp.316 or Duplex ASTM A182 F51
5*	Seat	PTFE filled with 20% graphite
7	Packing gland	Ductile iron
8	Elastic washer	Carbon steel
9	Pin	
10	Gland	
10.1	Ring	AISI 303
11*	Packing	Graphite
12*	Gasket	PTFE filled with 25% glass
13*	Body seat	AISI 316L + Graphite
14	Stop pin	Carbon steel
15	Stud	Carbon steel 8.8 zinc plated

Item	Designation	Materials
18*	Bushing	PTFE filled with 25% glass
19	Antistatic device	Stainless steel
21/21a	Ball trunnion	AISI 316
22/22a	Trunnion bearing	PTFE + 50% Stainless steel
23	Bearing	PTFE
26	Bolt	DIN 912 8.8 zinc plated
28	Nut (only for DN250)	DIN 934 8 Zinc plated
39	Stem bushing (DN250)	PTFE + 50% Stainless steel
39	Stem bushing (DN300)	AISI 316 + PTFE
41	Spacer	Carbon steel
43-47	Key	AISI 316
46*	Locking washer	AISI 304
58	Spring protection	Carbon steel
72*	O ring	FKM
89	ID plate	Stainless steel
471	Retainer	DIN 933 A2-70

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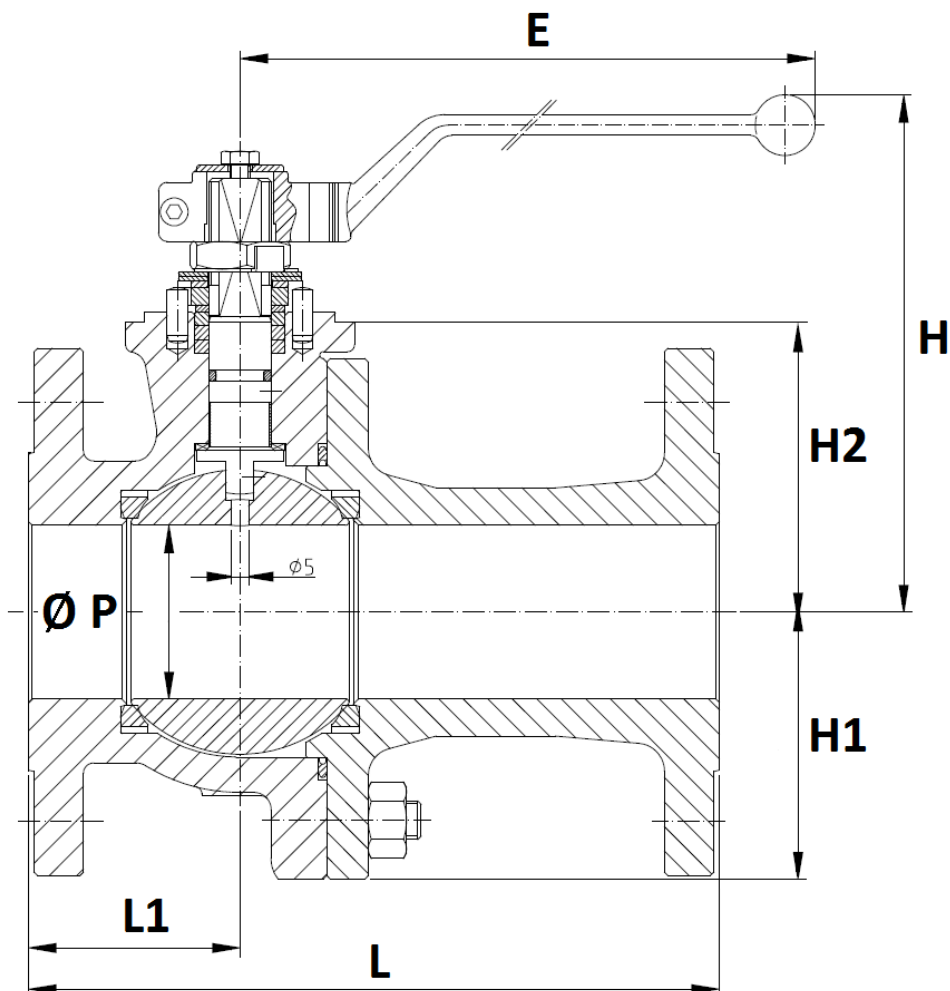
LOCKABLE GEARBOX MATERIALS :



Item	Designation	Materials
1	Handwheel	Carbon steel
2	Screw	
3	Stem key	
4	Input shaft	AISI 1045
5	Oil seal	Rubber
6	Bearing	Cu Base Alloy
7	Oil bearing	
8	Thrust bearing	Carbon steel
9	Worm	AISI 1045
10	Pin	Carbon steel
11	Plug	
12	Screw	Cast iron
13	Indicator plate	
14	Screw	Cast iron
15	Cover	
16	Housing	Rubber
17	O ring	
18	Worm gear	Ductile iron
19	Nut	Carbon steel
20	Stop screw	
21	Nut	
22	Washer	
23	Locking device	

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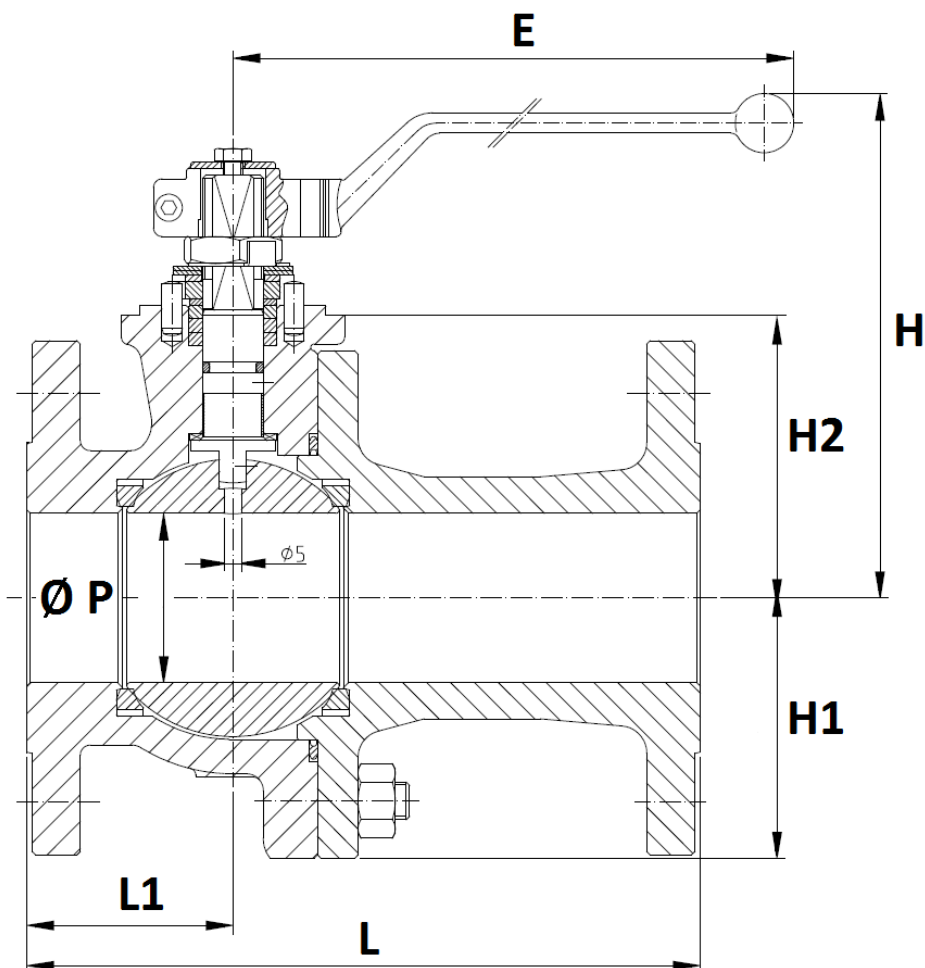
VALVES SIZE DN15-50 (in mm) :



PN	PN40					
DN	15	20	25	32	40	50
Ø P	15	20	25	32	40	50
L	115	120	125	130	140	150
L1	53	52	48.5	54	55	61
E	164	164	164	210	213	213
H	111	118	130	131	148	155
H1	-	-	-	-	-	-
H2	46	53	58	66.5	76	83.5
Weight (in Kg)	2.8	3.6	5	7	9	12
Ref.	540AICG015	540AICG020	540AICG025	540AICG032	540AICG040	540AICG050

**2 PIECES CARBON STEEL BALL VALVE PN16/40 FLANGED JC RANGE SHORT PATTERN
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VALVES SIZE DN65-200 (in mm) :



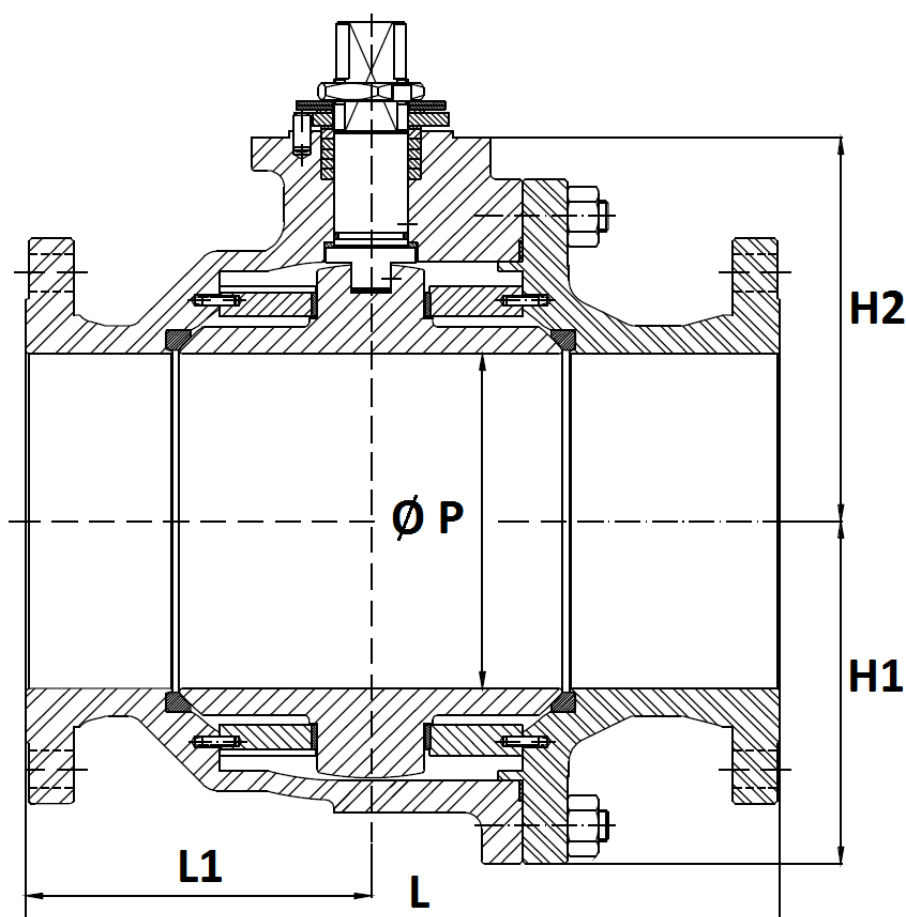
PN	PN16					
DN	65	80	100	125	150	200*
Ø P	65	80	100	125	151	203
L	170	180	190	325	350	400
L1	75.5	82	90.5	120	135	200
E	348	445	495	698	698	868
H	169	207	232	265	298	353
H1	-	-	118	138	160	208
H2	97	111	133	156	183	233
Weight (Kg)	16	22	32	52.5	76	111
Ref.	516AI CG065	516AI CG080	516AI CG100	516AI CG125	516AI CG150	516AI CG200

PN	PN40				
DN	65	80	100	125	150
Ø P	65	80	100	125	151
L	170	180	190	325	350
L1	75.5	74.5	91	120	135
E	348	445	495	698	698
H	169	207	232	265	298
H1	-	-	118	138	160
H2	97	111	133	156	183
Weight (Kg)	17	23	35	57	83.5
Ref.	540AI CG065	540AI CG080	540AI CG100	540AI CG125	540AI CG150

* Handle on request for DN200 (free stem in standard)

**2 PIECES CARBON STEEL BALL VALVE PN16/40 FLANGED JC RANGE SHORT PATTERN
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VALVES SIZE DN 200-300 (in mm) :

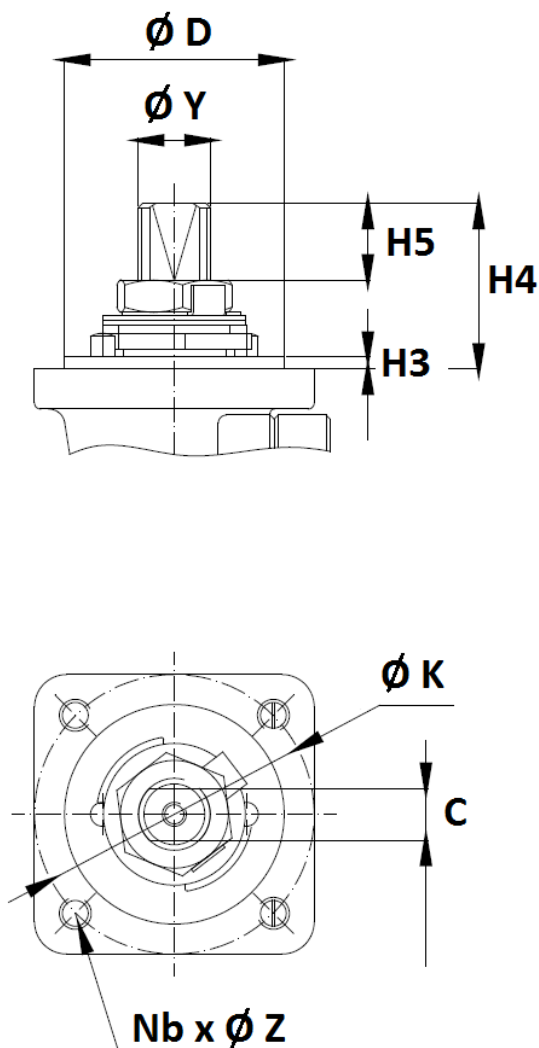


PN	PN16	
DN	250	300
Ø P	254	305
L	450	500
L1	225	245
H1	239	288
H2	256	297
Weight (Kg)	223	323
Ref.	516AICG250	516AICG300

PN	PN40		
DN	200	250	300
Ø P	203	254	305
L	400	450	500
L1	200	199	240
H1	208	253	300
H2	233	256	310
Weight (Kg)	162	264	440
Ref.	-	-	-

**2 PIECES CARBON STEEL BALL VALVE PN16/40 FLANGED JC RANGE SHORT PATTERN
(DIN 3202-1 F4/F5) PTFE FILLED WITH GRAPHITE SEAT**

ISO MOUNTING PAD AND STEM SIZE DN15-200 (in mm) :

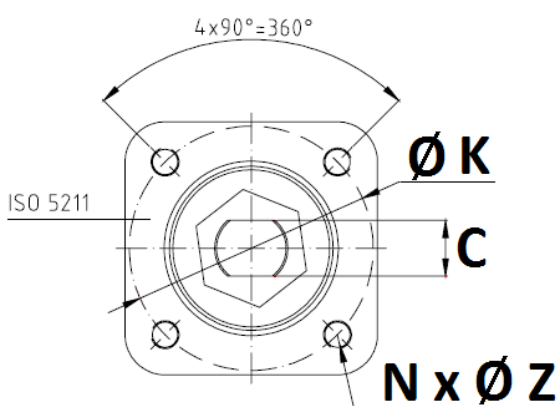
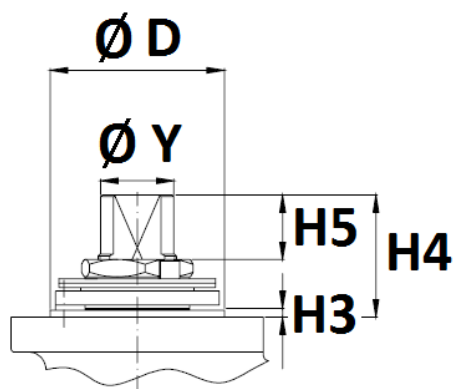


PN	PN16/40											
DN	15	20	25	32	40	50	65	80	100	125	150	200
H3	1.5				3							4
H4	11.2	14.7	22.7	32	41.5	41.5	44	44.5	56.5	56	68	72
H5	5	8.5	9.5	13	18.3	18.3	18.6	18.6	27.8	24.7	37.1	36.5
C	9	9	9	12	13	13	16	18	20	25	29	32
Ø Y	M12x1.5			M16x1.5	M18x1.5		M22x1.5	M25x1.5	M28x1.5	M35x2	M40x2	M45x2
Ø D	35				55			70		85		100
Ø K	50	50	50	50	70	70	70	102	102	125	125	140
ISO	F05	F05	F05	F05	F07	F07	F07	F10	F10	F12	F12	F14
N x Ø Z	4 x M6	4 x M6	4 x M6	4 x M6	4 x M8	4 x M8	4 x M8	4 x M10	4 x M10	4 x M12	4 x M12	4 x M16

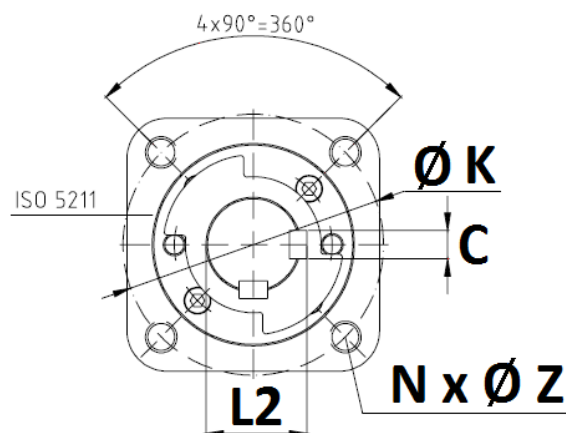
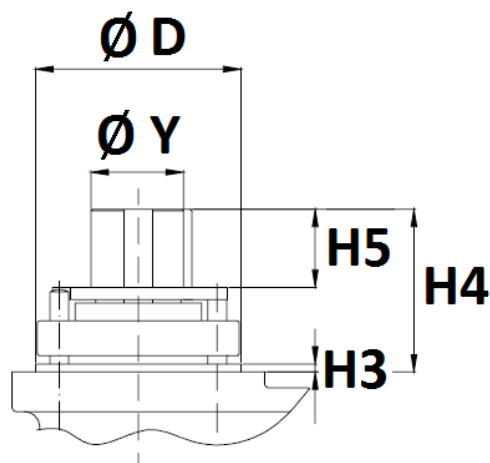
**2 PIECES CARBON STEEL BALL VALVE PN16/40 FLANGED JC RANGE SHORT PATTERN
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ISO MOUNTING PAD AND STEM SIZE DN250-300 (in mm) :

DN 250



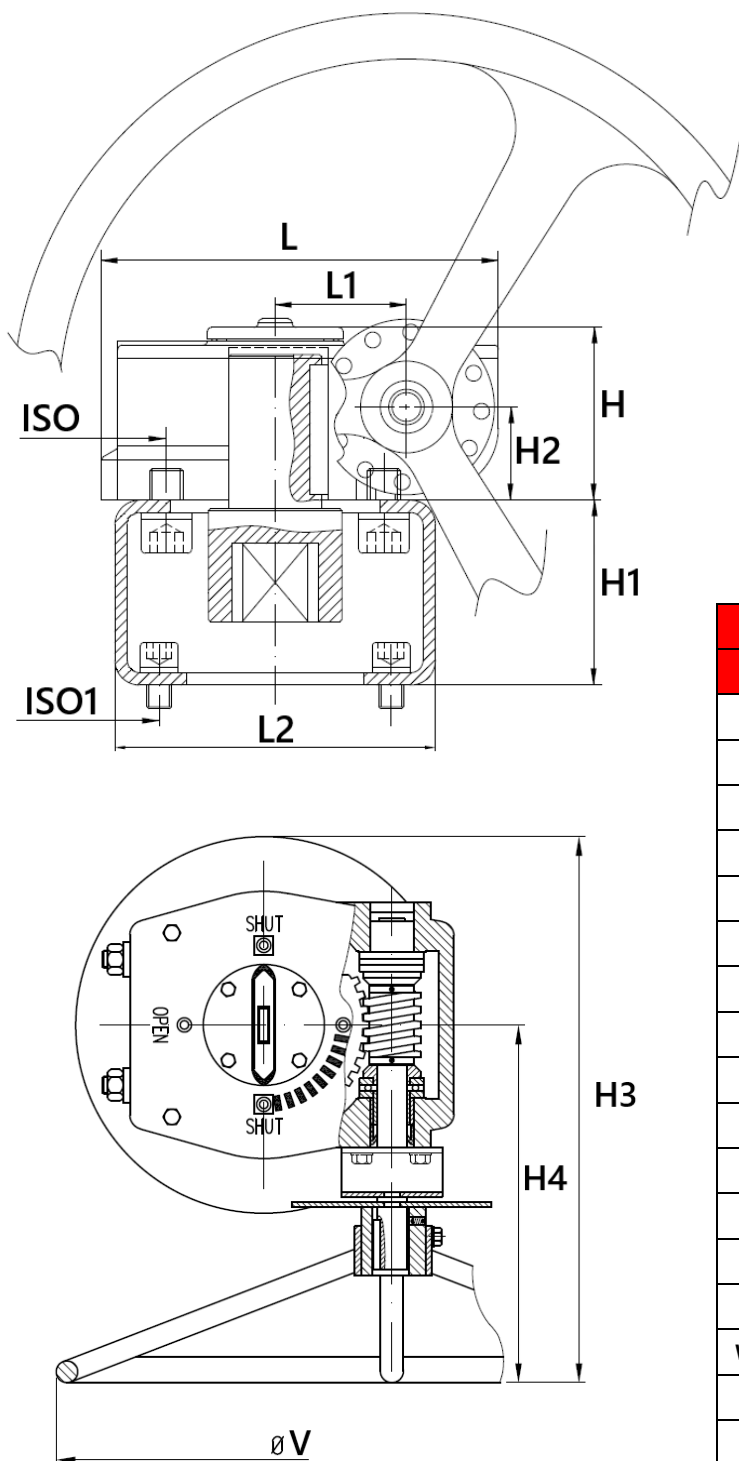
DN300



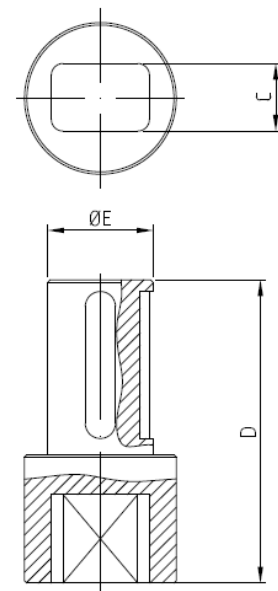
PN	PN16/40	PN16	PN40
DN	250	300	
H3	4	3	5
H4	72	106	103
H5	36.5	58	49.4
L2	-	53.5	64.2
C	32	14	18
Ø Y	M45x2	Ø 50	Ø 60
Ø D	100	100	130
Ø K	140	140	165
ISO	F14	F14	F16
N x Ø Z	4 x M16	4 x M16	4 x M20

**2 PIECES CARBON STEEL BALL VALVE PN16/40 FLANGED JC RANGE SHORT PATTERN
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LOCKABLE GEARBOX SIZE DN125-200 (in mm) :



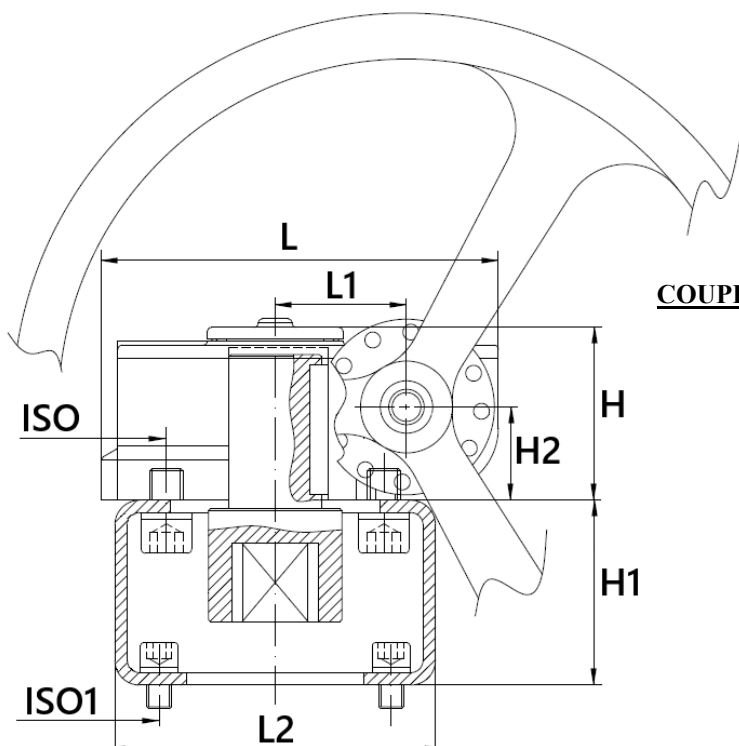
COUPLING :



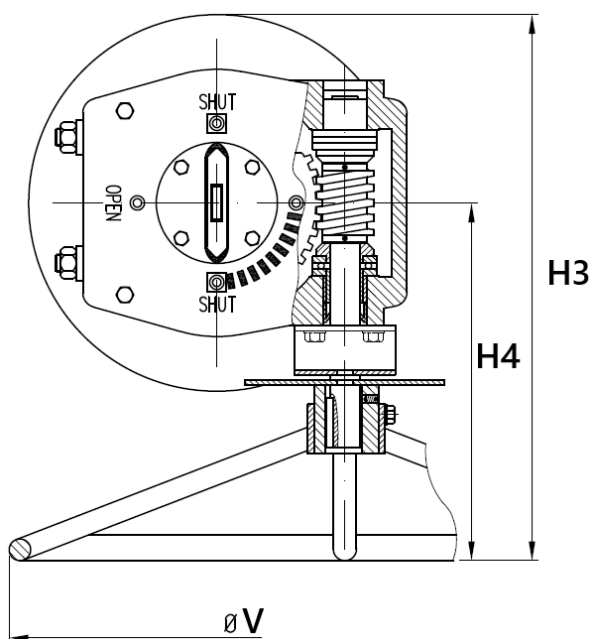
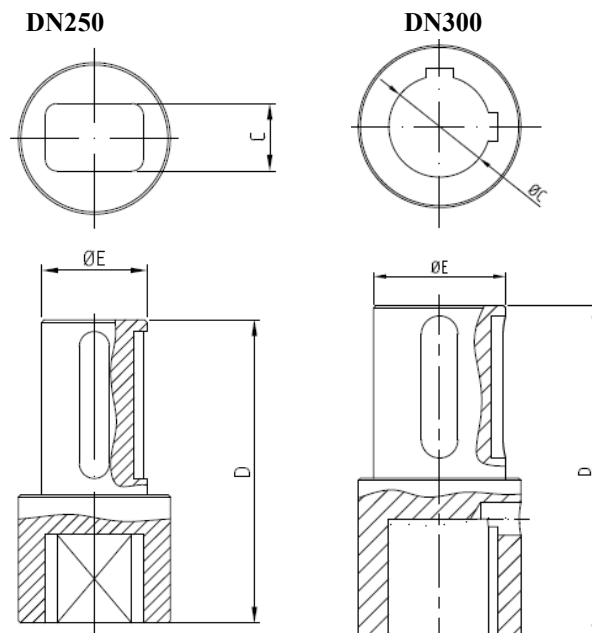
PN	PN16/40		PN16	PN40
DN	125	150	200	
H	102			105
H1	80	90		
H2	56			50
H3	365			480
H4	255			345
L	217			242
L1	77.5			90
L2	156			
Ø V	465			600
ISO	F14			
ISO1	F12		F14	
C	25	29	32	
D	114	130		127
Ø E	45			65
Weight (in Kg)	21.7	22.4	22.8	28.5
Torque (Nm)	1200			
Ref.	9830598	9830592	9830593	9830595

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LOCKABLE GEARBOX SIZE DN250-300 (in mm) :



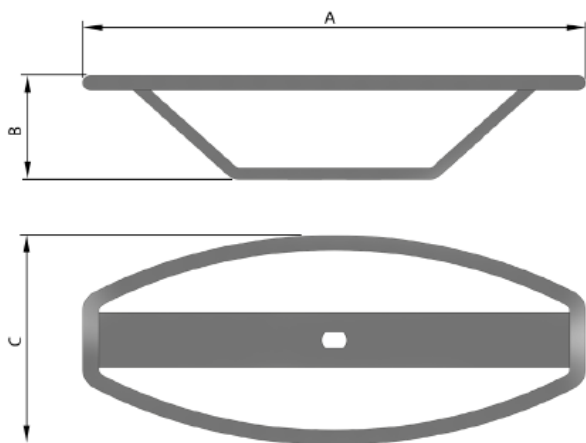
COUPLING :



PN	PN16/40	PN16	PN40
DN	250	300	
H	105	107	
H1	90	140	
H2	50	53	
H3	480	457	
H4	345	280	
L	242	308	
L1	90	126	
L2	156	200	
Ø V	600		
ISO	F14	F16	
ISO1	F14		F16
C	32	Ø 50	Ø 60
D	127	182	175
Ø E	65	80	
Weight (in Kg)	28.5	47.6	48.9
Torque (Nm)	2000	3300	
Ref.	9830596	9830599	9830597

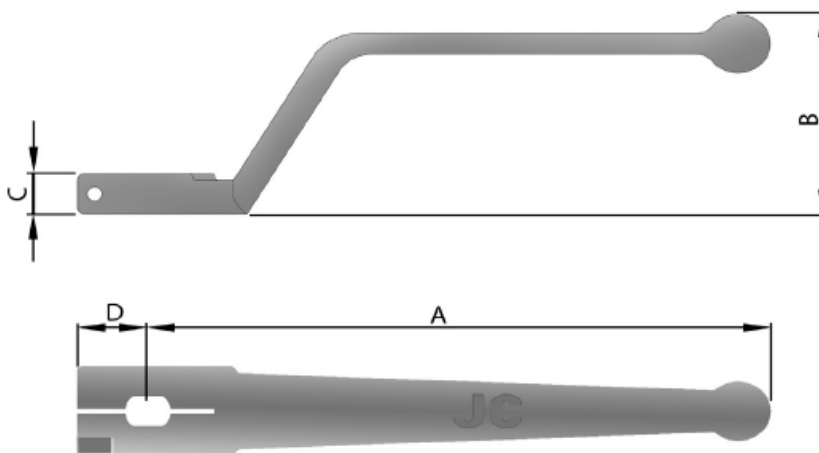
**2 PIECES CARBON STEEL BALL VALVE PN16/40 FLANGED JC RANGE SHORT PATTERN
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OVAL HANDWHEEL SIZE DN15-50 (in mm) :



DN	15	20	25	32	40	50
A	160	160	160	200	216	216
B	54	54	54	56	57	57
C	75	75	75	90	100	100
Weight (Kg)	0.25	0.25	0.25	0.5	0.55	0.55
Ref.	9830575	9830578		9830576	9830577	

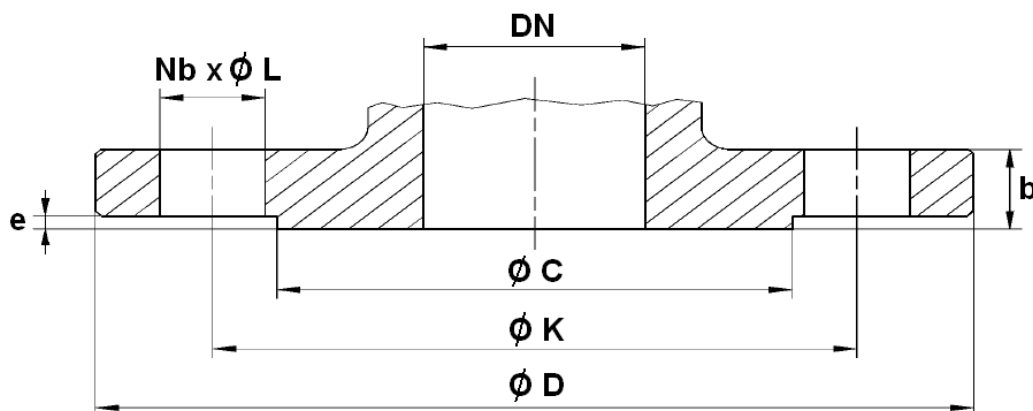
STAINLESS STEEL HANDLE SIZE DN15-200 (in mm) :



DN	15	20	25	32	40	50	65	80	100	125	150	200
A	163.5			300	212.5		347.5	445	495	697.5		867.5
B	58.5			45	48.5		46.5	70	70	77.5	84.5	84.5
C	12			16	21		20		29	30	40	
D	18.5			22	25.5			33		47		55
Weight (Kg)	0.2			0.3	0.53		0.63	1.52	1.85	2.95	3.4	4.6
Ref.	9830513			9830514	9830515		9830516	9830517	9830518	9830519	9830520	

**2 PIECES CARBON STEEL BALL VALVE PN16/40 FLANGED JC RANGE SHORT PATTERN
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FLANGES SIZE (in mm) :



PN	PN40						PN16							
DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Ø C	45	58	68	78	88	102	122	138	158	188	212	268	320	378
Ø D	95	105	115	140	150	165	185	200	220	250	285	340	405	460
Ø K	65	75	85	100	110	125	145	160	180	210	240	295	355	410
Nb x Ø L	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	4 x 18	4 x 18	8 x 18	8 x 18	8 x 18	8 x 18	8 x 22	12 x 22	12 x 26
b	16	18	18	18	18	20	18	20	20	22	22	24	26	28
e	2	2	2	2	3	3	3	3	3	3	3	3	3	4

PN	PN40							
DN	65	80	100	125	150	200	250	300
Ø C	122	138	162	188	218	285	345	410
Ø D	185	200	235	270	300	375	450	515
Ø K	145	160	190	220	250	320	385	450
Nb x Ø L	8 x 18	8 x 18	8 x 22	8 x 26	8 x 26	12 x 30	12 x 33	16 x 33
b	22	24	24	26	28	37	41	46
e	3	3	3	3	3	3	3	4

**2 PIECES CARBON STEEL BALL VALVE PN16/40 FLANGED JC RANGE SHORT PATTERN
(DIN 3202-1 F4/F5) PTFE FILLED WITH GRAPHITE SEAT**

STANDARDS :

- Manufacturer certified ISO 9001:2015 and ISO 14001 : 2015
- DIRECTIVE 2014/68/EU: For liquids or Gas of Group 1
 - DN15-25: Article 4, §3 (SEP), no CE marking
 - DN32: Risk category I, CE marking
 - DN40-50: Risk category II, CE 0056 marking
 - PN16 Types:
 - DN65-80: Risk category I, CE marking
 - DN100-200 : Risk category II, CE0056 marking
 - PN40 Types:
 - DN65-100: Risk category II, CE 0056 marking
 - DN125-300: Risk category III, CE 0056 marking
- Certificate 3.1 on request
- Valve designing according to EN 1983 – ISO 17292 and EN 12516
- Materials according to NACE MR 01-75
- Pressure Tests according to EN 12266-1, Rate A
- Marking according to EN 19
- Fire safe according to ISO 10497 : 2004, API 607 5th, BS6755 Part 2, and API 6FA 1994
- Fugitive Emissions according to EN 15848-1 : 2006 B Class and TA LUFT VDI 2440
- SIL2 according to IEC/EN 61508, SIL 3 possible according to the type of installation
- Flanges R.F. type B1 according to EN 1092-1 PN16/40
- Shell finishing quality MSS SP 55
- ISO 5211 mounting pad
- Length according to EN 558 series 27 (DIN 3357-2 ff, DINI 3202-1 F4 up to DN100, F5 over)
- ATEX Group II Category 2 G/2Dc Zone 1 & 21 Zone 2 & 22 (optional marking) up to DN200 according to directive 2014/34/EU
- Russian certificate TRCU 10, TRCU 12 and TRCU 32 (EAC marking and declaration **on request**)

ADVICE : Our opinion and our advice are not guaranteed and SFERACO shall not be liable for the consequences of damages.
The customer must check the right choice of the products with the real service conditions.