

**2 PIECES FLANGES BALL VALVE PN 16/40 FIRE SAFE
ADLER TYPE FN2 CARBON STEEL A105 DIN F1**



NACE

Certificate 3.1



Lloyd's
Register

ISO 9001 : 2015



Lloyd's
Register

PED/2014/68/UE



FIRE SAFE
ISO 10497

Size : DN 15 to 200 mm
Ends : Flanges PN16/40 R.F.
Min Temperature : - 28°C
Max Temperature : + 200°C
Max Pressure : 40 Bars up to DN100, 16 bars over
Specifications : With ISO 5211 mounting pad
Fire safe ISO 10497
Double tightness body / End
Atex

Materials : Forged carbon steel A105

**2 PIECES FLANGES BALL VALVE PN 16/40 FIRE SAFE
ADLER TYPE FN2 CARBON STEEL A105 DIN F1****SPECIFICATIONS :**

- Full bore
- Anti blow-out stem
- With ISO 5211 mounting pad
- 2 pieces type (Split body)
- Flanges R.F. PN40 up to DN100, PN16 over
- Double antistatic device
- Fire safe ISO 10497 (ISO-FT marking)
- Fugitive emissions according to ISO 15848-1 : 2003 Class A
- Double tightness body / end
- With exhaust hole in the ball from DN50 to DN200 (located in the top of the ball to avoid overpressure in it)
- Machining of the seat for pressure relief DN65 to DN200 (respect the flow direction indicated by the arrow)
- 3 PTFE filled with 15% graphite chevrons rings on stem
- Packing with elastic rings
- Forged carbon steel
- Polyamid epoxy painting blue color RAL5012, 35 µ thickness

USE :

- Chemical and pharmaceutical industries, petrochemical industries, hydraulic installation, compressed air
- Min and max Temperature Ts : - 28°C to + 200°C
- Max Pressure Ps : 40 bars up to DN100, 16 bars over
- Vacuum : 10⁻⁵ torr
- Compressed air (ambient temperature) : 10 bars up to DN50, 8 bars from DN65 to 100
- Steam : 8 bars up to DN50, 6 bars from DN65 to 100

RANGE :

- Carbon steel body PN16/40 **Ref. 754** from DN 15 to DN 200 (*)
- Possible with gear box IP67 **Ref. 9830260 to 263** from DN 15 to DN 200

(*) : PN16 on request

ACCESSORIES AND OPTIONS :

- Locking device **Ref. 9830140 to 9830148** from DN 15 to DN 200
- Stainless steel handle **Ref. 9830170 to 9830178** from DN 15 to DN 200
- Steel oval handwheel **Ref. 9830271 to 9830272** from DN 15 to DN 32
- Stainless steel oval handwheel
- Stainless steel bolting
- Carbon steel stem extension 100 mm **Ref. 9830273 to 9830280** from DN 15 to DN 200
- Stainless steel stem extension 100 mm **Ref. 9830193 to 9830200** from DN 15 to DN 200
- Deadman **Ref. 9830160 to 9830165** from DN 15 to DN 50
- Dry cleaned oxygen **Ref. 9830150 to 9830155** from DN 15 to DN 200
- Standard dry cleaned
- Seat PTFE filled with glass, graphite, stainless steel or metal
- Pocket less seat PTFE or PTFE filled with glass
- Heating jacket carbon or stainless steel
- Specials coated
- Hole in the ball for overpressure device
- Double o ring on stem

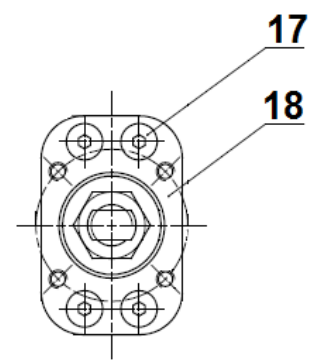
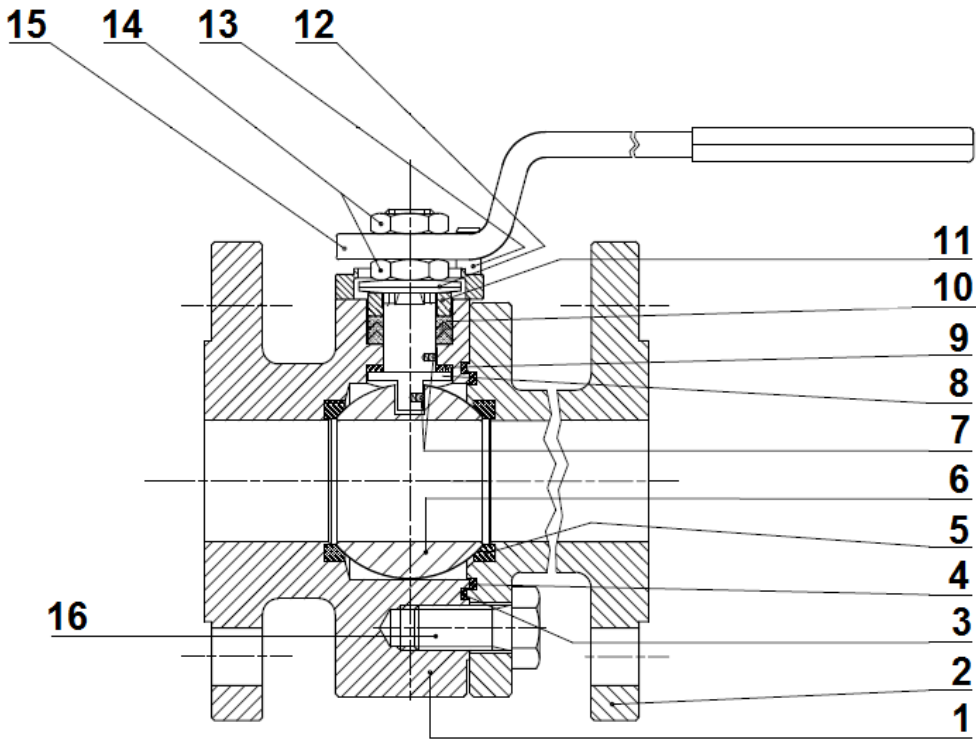
ENDS:

- Flanges R.F. PN40 up to DN100, PN16 over

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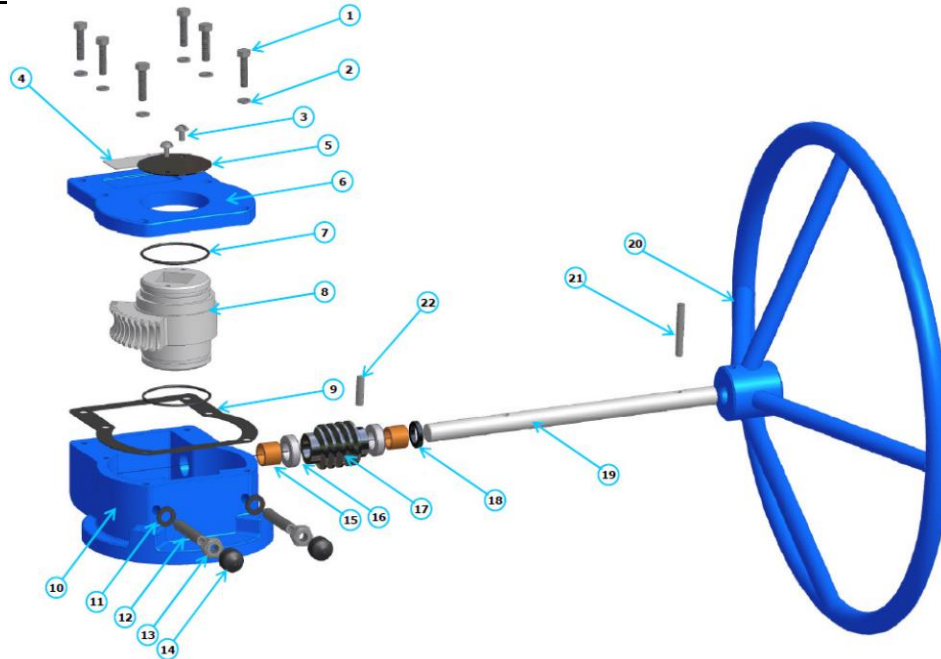
MATERIALS :

PACKING GASKETS :



(* : Included in gaskets kit)

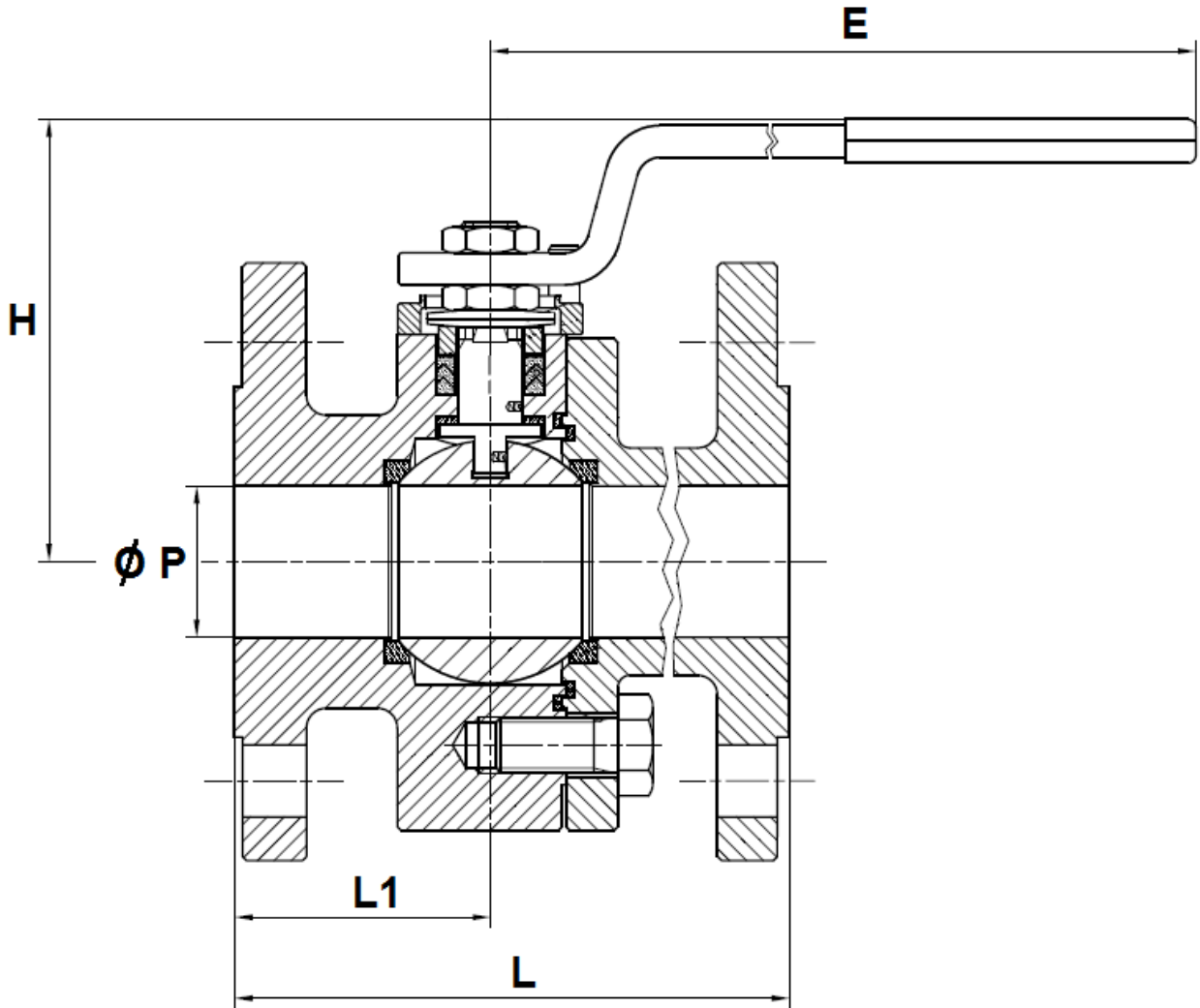
Item	Designation	Materials
1	Body	ASTM A105
2	Nipple	
3*	O ring	FKM
4*	Body gasket	PTFE
5*	Seat	PTFE
6	Ball	ASTM A351 CF3
7	Double antistatic device	ASTM A479 S31600
8	Stem DN 15 - 32	ASTM A182 F 316 L
8	Stem DN 40 - 300	ASTM A182 F 304 L
9*	Stem gasket	PTFE
10*	Chevron packing	PTFE filled with 15% graphite
11	Gland follower	ASTM A479 S31603
12	Elastic rings	C72 / 50 Cr V4
13	Pin	UNI A2-70
14	Nut	UNI 3740-6S galvanized
15	Handle	UNI 5946 Fe 37 galvanized
16	Screw	UNI 3740-8.8 galvanized
17	ISO 5211 screw (DN 15-80)	UNI 3740-10.9 galvanized
18	ISO 5211 mounting pad (DN15-80)	ASTM A351 CF8M

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MATERIALS GEAR BOX :


Item	Designation	Materials Ref. 9830260 to 9830263
1	Box screw	DIN 933 class 8.8
2	Washer	C72
3	Indicator screw	DIN 86 class A2
4	ID plate	Steel S235 JR
5	Indicator	Steel S235 JR
6	Cover	Ductile iron EN GJS-400-15
7	O ring	NBR 70 Shore A
8	Wheel	Ductile iron EN GJS-500-7
9	Cover gasket	SL509AT
10	Box	Ductile iron EN GJS-400-15
11	Gasket	NBR 70 Shore A
12	Adjusting bolt	DIN 915 class 12.9
13	Nut	DIN 934 class 8G
14	Bolt cap	NBR 70 Shore A
15	Bushing	G Cu Sn10
16	Axial ball bearing	-
17	Worm	C45 + NiP
18	Gasket	NBR 70 Shore A
19	Input shaft	C45 + NiP
20	Handwheel	Steel S235 JR
21	Dowell pin	DIN 7 Class A2
22	Dowell pin	DIN 7 Class A2

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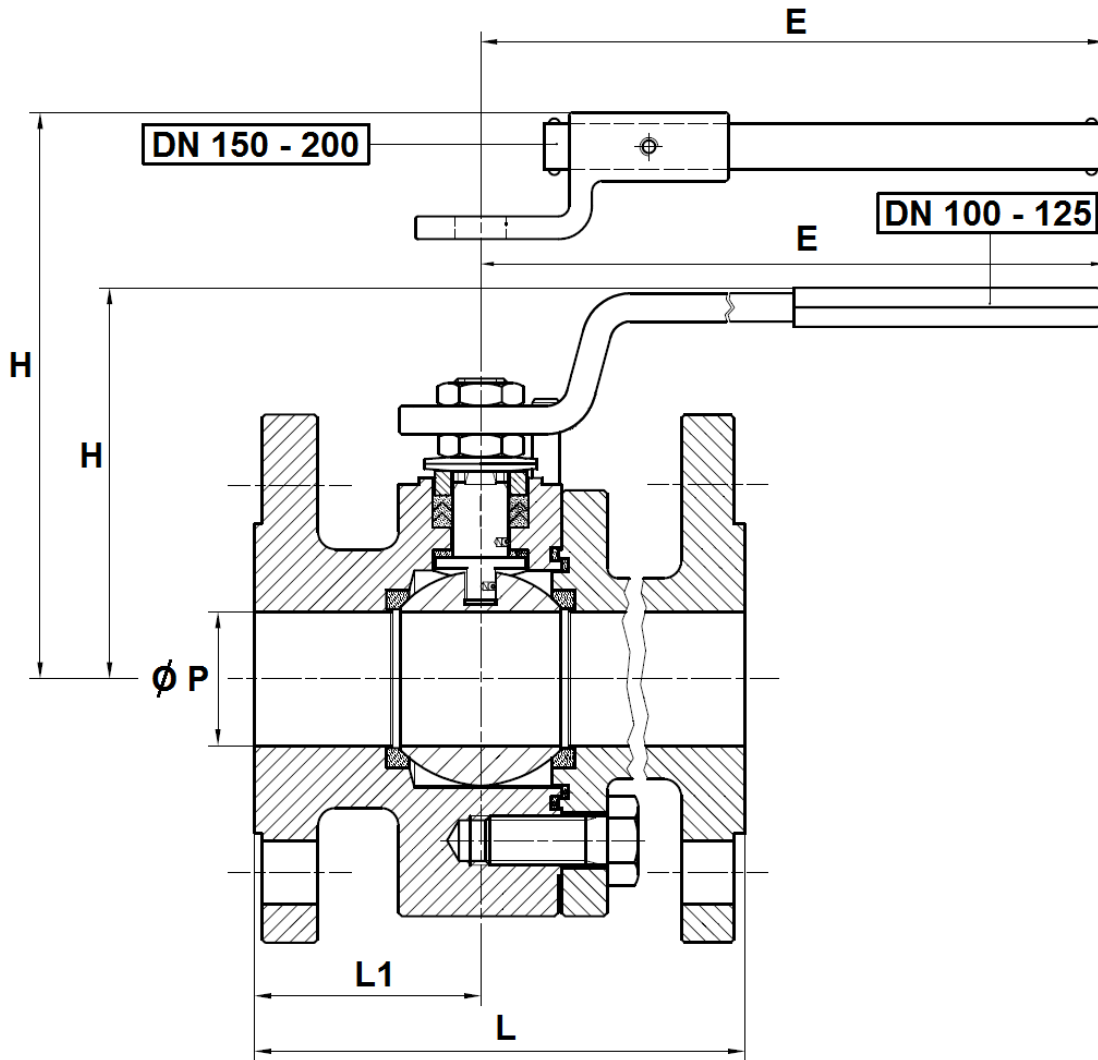
SIZE VALVES DN 15 - 80 (in mm) :



DN	15	20	25	32	40	50	65	80
Ø P	15	19	25	30	38	51	64	76
L	130	150	160	180	200	230	290	310
L1	49	51.5	50	51.5	59	61.5	70.5	73
E	145	145	185	185	280	280	370	370
H	86	88	113	119	110	120	144	152
Weight (Kg)	3.1	4.1	5.4	7.3	10.7	15.5	25.3	31.4

**2 PIECES FLANGES BALL VALVE PN 16/40 FIRE SAFE
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SIZE VALVES DN 100 - 200 (in mm) :

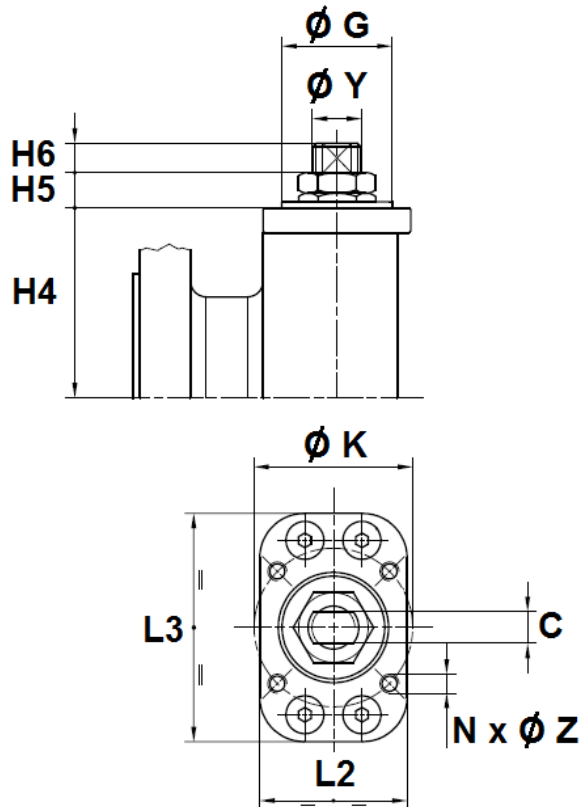


DN	100	125	150	200
Ø P	101	118	152	203
L	350	400	480	600
L1	85	100	144	180.5
E	470	650	750	900
H	174	188	256	294
Weight (Kg)	41	67	104	175

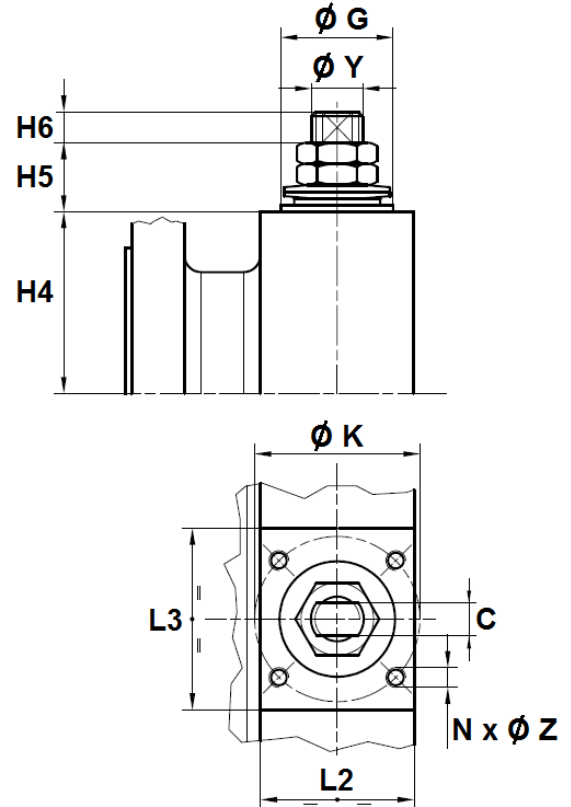
**2 PIECES FLANGES BALL VALVE PN 16/40 FIRE SAFE
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ISO 5211 MOUNTING PAD AND STEM SIZE (in mm) :

DN 15 – 80



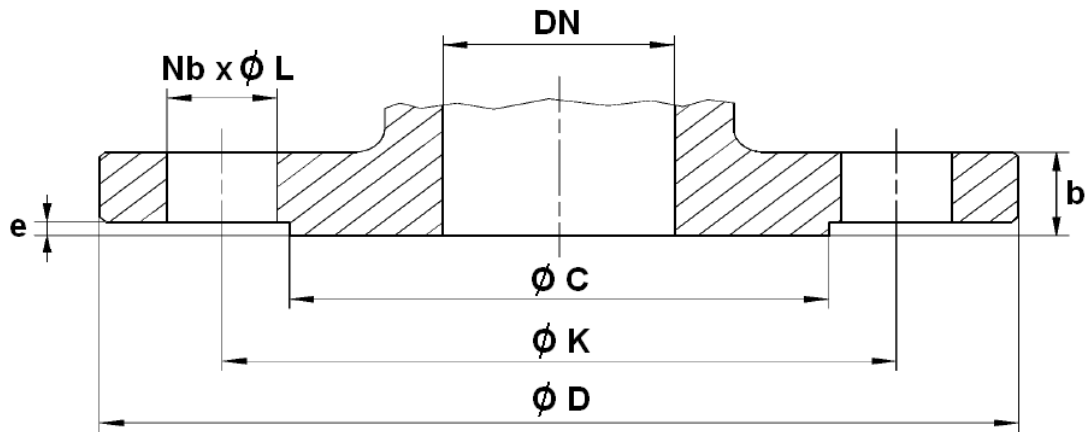
DN 100 - 200



DN	15	20	25	32	40	50	65	80	100	125	150	200
H4	33.7	36	49.3	54.8	64.8	74.8	93.5	102	99.5	119	144	183
H5	7	7	9	9	10	10	11	11	26	26	34	37
H6	7	7	10	10	10	10	12	12	16.5	16.5	19	20
C	6	6	8	8	10	10	14	14	18	18	28	32
Ø Y	10	10	12	12	16	16	22	22	30	30	42	48
Ø K	36	36	36	36	50	50	70	70	70	102	125	140
ISO	F03	F03	F03	F03	F05	F05	F07	F07	F07	F10	F12	F14
N x Ø Z	4 x M5	4 x M5	4 x M5	4 x M5	4 x M6	4 x M6	4 x M8	4 x M8	4 x M8	4 x M10	4 x M12	4 x M16
Ø G	25	25	25	25	35	35	55	55	55	70	85	100
L2	35	35	35	35	46.5	46.5	64.5	64.5	72	93	111	130
L3	58	58	58	58	72.5	72.5	90	90	70	97	108	126

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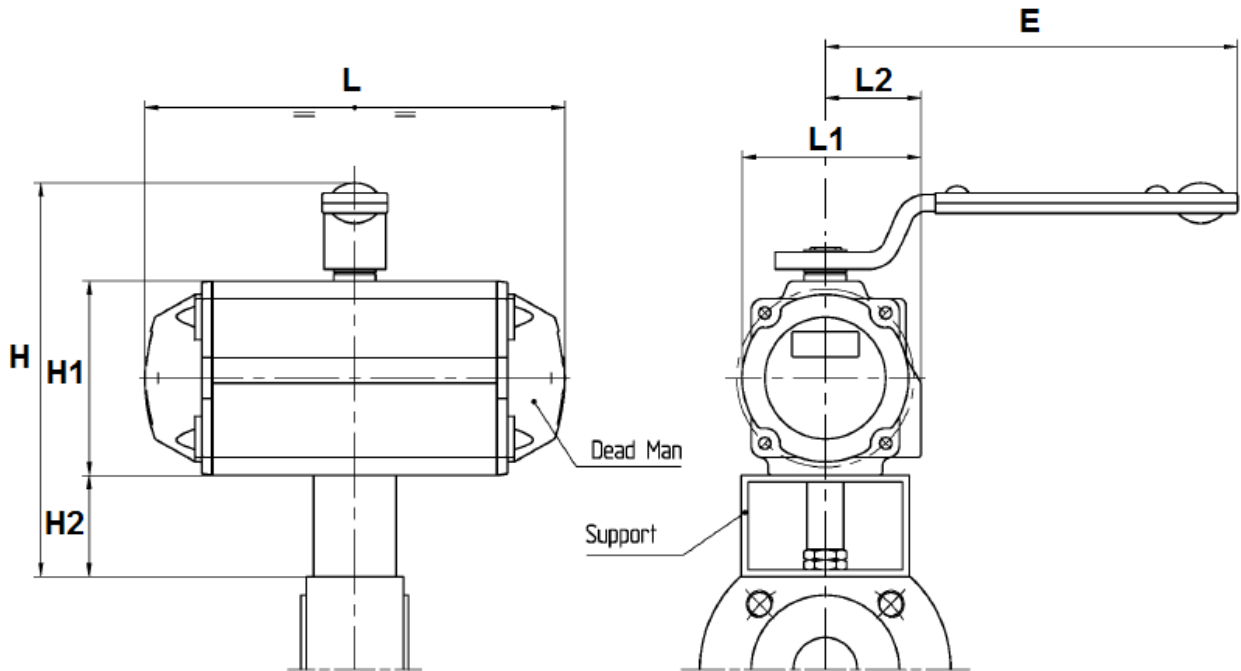
FLANGES SIZE (in mm) :



DN	15	20	25	32	40	50	65	65	80	100	125	150	200
PN	PN40							PN10/16	PN40		PN10/16		PN16
Ø C	45	58	68	78	88	102	122	122	138	162	188	212	268
Ø D	95	105	115	140	150	165	185	185	200	235	250	285	340
Ø K	65	75	85	100	110	125	145	145	160	190	210	240	295
Nb x Ø L	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	4 x 18	8 x 18	4 x 18	8 x 18	8 x 22	8 x 18	8 x 22	12 x 22
b	16	18	18	18	18	20	22	18	24	24	22	22	24
e	2	2	2	2	3	3	3	3	3	3	3	3	3
Ref.	754015	754020	754025	754032	754040	754050	754065	754066	754080	754100	754125	754150	754200

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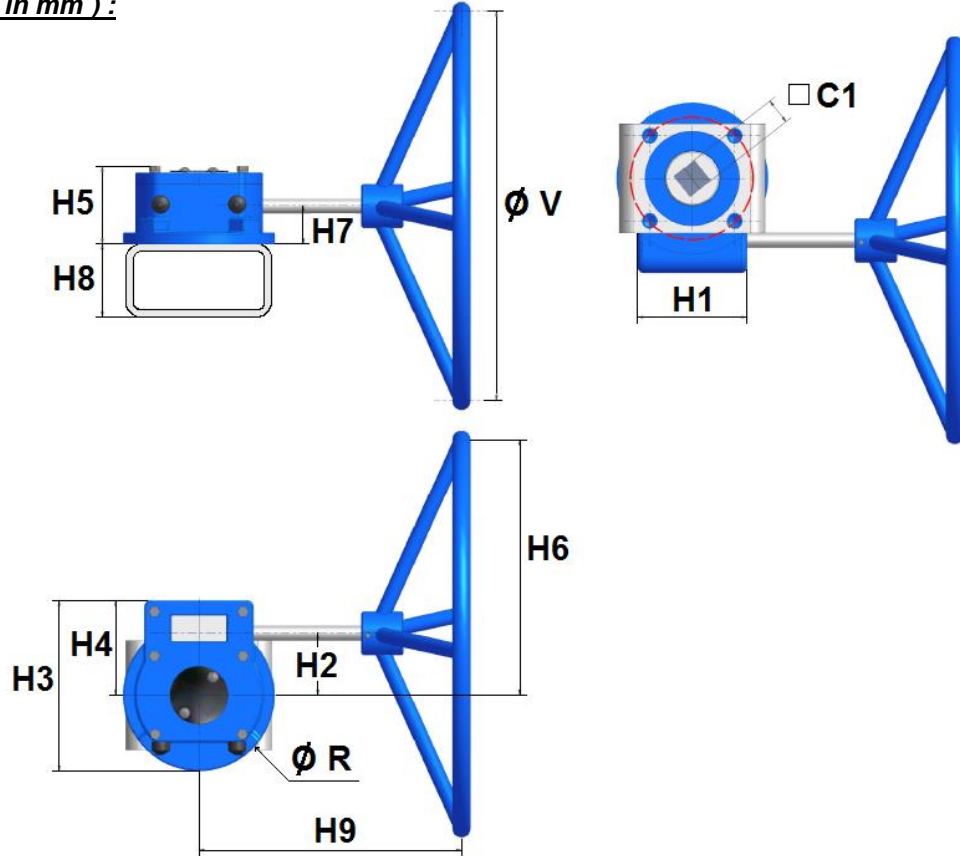
DEADMAN SIZE (in mm) :



DN	15	20	25	32	40	50
Ref.	9830160	9830161	9830162	9830163	9830164	9830165
L	142	142	161	161	214	252
L1	70.5	70.5	83.5	83.5	94	105
L2	41.5	41.5	47.5	47.5	51	55.5
E	185	185	185	185	280	370
H	157	157	169	169	215	233
H1	69	69	85	85	102	115
H2	40	40	40	40	60	60

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GEAR BOX SIZE (in mm) :



DN	15-50	65-80	100-150	200
C1	22	22	22	27
H1	57	57	100	120
H2	46	46	55	74
H3	98	98	143	188
H4	50.5	50.5	79.5	99
H5	56	56	73	97
H6	106	146	205	274
H7	34	34	35	48
H8	60	60	80	80
H9	117	131	250	274
Ø R	98	98	143	188
Ø V	120	200	300	400
Weight (Kg)	2.2	2.3	4.5	9.1
Ref.	9830260	9830261	9830262	9830263

2 PIECES FLANGES BALL VALVE PN 16/40 FIRE SAFE ADLER TYPE FN2 CARBON STEEL A105 DIN F1

GEAR BOX SPECIFICATIONS :

DN	15-50	65-80	100-150	200
Ref.	9830260	9830261	9830262	9830263
Ratio factor	40 :1	40 :1	37 :1	34 :1
Input torque (Nm)	35	34	43	83
Output torque (Nm)	100	150	500	1000

BOLT TIGHTENING TABLE (FOR FLANGES) (in Nm) :

DN	15	20	25	32	40	50	65	80	100	125	150	200
THREADED	M12	M12	M12	M16	M16	M16	M16	M16	M20	M24	M24	M24
Torque (Nm) for carbon steel bolting	84.8	84.8	84.8	205	205	205	205	205	400	691	691	691
Torque (Nm) for stainless steel bolting	53	53	53	128	128	128	128	128	250	432	432	432

TORQUE VALUES (in Nm without safety coefficient) :

DN	15	20	25	32	40	50	65	80	100	125	150	200
Torque (Nm) PN16	5.4	10.8	13.5	16	31	40	66	78	140	158	340	510
Torque (Nm) PN25	5.8	11.5	14	17	32	42	69	84	148	190	440	580
Torque (Nm) PN40	6.5	12.5	14.5	18	33	44	72	88	156	230	520	610

We recommend a safety coefficient of 2 to choose the actuator

**2 PIECES FLANGES BALL VALVE PN 16/40 FIRE SAFE
ADLER TYPE FN2 CARBON STEEL A105 DIN F1****STANDARDS :**

- Fabrication according to ISO 9001:2015
- DIRECTIVE 2014/68/EU : CE N° 0038
Risk category III module H
- Certificate 3.1 on request
- Designing according to BS EN 12516-2
- Construction according to ISO 14313
- 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
- Fugitive emissions according to ISO 15848-1 : 2003 Class A
- SIL3 according to IEC/EN 61508 (on request)
- Flanges R.F. according to EN 1092-1 PN16/25
- ISO 5211 mounting pad
- Length according to EN 558 series 1 (DIN 3202 F1)
- ATEX Group II Category 2 GDc TX Zone 1 & 21 Zone 2 & 22 (optional marking)
- On request, ATEX Group II Category 1G/Dc TX Zone 0 & 20

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.

**2 PIECES FLANGES BALL VALVE PN 16/40 FIRE SAFE
ADLER TYPE FN2 CARBON STEEL A105 DIN F1****INSTALLATION INSTRUCTIONS****GENERAL GUIDELINES :**

- Ensure that the valves to be used are appropriate for the conditions of the installation (type of fluid, pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves to be installed are of correct strength to be able to support the capacity of their usage.
- **Installation of all circuits should ensure that their function can be automatically tested on a regular basis (at least two times a year).**

INSTALLATION INSTRUCTIONS :

- **Before installing the valves, clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the valves.
- **Ensure that both connecting pipes either side of the valve (upstream and downstream) are aligned (if they're not, the valves may not work correctly).**
- **Make sure that the two sections of the pipe (upstream and downstream) match, the valve unit will not absorb any gaps. Any distortions in the pipes may affect the tightness of the connection, the working of the valve and can even cause a rupture. To be sure, place the kit in position to ensure the assembling will work.**
- **If sections of piping do not have their final support in place, they should be temporarily fixed. This is to avoid unnecessary strain on the valve.**
- Tighten the bolts in cross.
- It's recommended to operate the valve (open and close) 1 to 2 times per year