WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

2 pieces carbon steel ball valve between flanges (wafer) with full bore for Chemical industries, petrochemical industries, hydraulic installation, heating, water distribution, compressed air.
Ball valve with firesafe certificate ISO 10497 to reduce risks in case of fire.
Fugitive emission according to EN 15848-1 :2003 A Class for an excellent tightness on the stem and to prevent external leakage.
3 PTFE filled with 15% graphite chevrons rings on stem, PTFE seat.
Compatible with explosive atmosphere, ATEX Zone 1&21 and Zone 2&22 thanks to the double antistatic device.
Handling possible with locking device, gearbox, oval handwheel or stem extension.
Thanks to the ISO 5211 plate, an actuator can be installed on the valve.

FIRE SAFE ISO 10497

SIL3

Certificate 3.1

PED/2014/68/UE

NACE MR01-75





Size :	DN15 to DN250
Connection :	Between flanges PN16/40
Min Temperature :	-28°C
Max Temperature :	+200°C
Max Pressure :	40 Bars up to DN80, 16 over
Specifications :	Double antistatic device, ATEX ISO 5211 mounting pad Anti blow-out stem, full bore Fugitive emissions ISO 15848-1 Fire safe ISO 10497
Materials :	Forged carbon steel ASTM A105N body

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

SPECIFICATIONS :

- Full bore
- Anti blow-out stem
- With ISO 5211 mounting pad
- Wafer type
- Between flanges R.F. PN40 up to DN80, PN16 over
- Double antistatic device
- Fire safe according to ISO 10497 (ISO-FT marking)
- Contents ball with removable body
- With exhaust hole in the ball from DN50 to DN250 (located in the top of the ball to avoid overpressure in it)
- Machining of the seat for pressure relief DN65 to DN250 (respect the flow direction indicated by the arrow)
- Threaded flanges holes
- Fugitive emissions according to ISO 15848-1 : 2003 Class A
- 3 PTFE filled with graphite chevrons rings on stem
- Packing with elastic rings
- 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 DN80 , 16 bars over
- Vacuum : 10^{-5} torr (without upstream pressure)
- 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

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

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

TORQUE VALUES (in Nm without safety coefficient) :

DN	15	20	25	32	40	50	65	80	100	125	150	200	250
Torque (Nm) PN16	5.4	10.8	13.5	16	31	40	66	78	140	158	340	510	800
Torque (Nm) PN40	6.5	12.5	14.5	18	33	44	72	88	156	230	520	610	1060

We recommend a safety coefficient of 2 to choose the actuator

RANGE :

- Forged carbon steel body PN40 up to DN80 and PN16 over from DN 15 to DN 250 (*)
  Gearbox recommended from DN150 to DN250
- Possible with gear box IP67 from DN 15 to DN 250

(*) : PN40 on request

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

ACCESSORIES AND OPTIONS :

- Locking device from DN 15 to DN 200
- Stainless teel handle from DN 15 to DN 200
- Steel oval handle from DN 15 to DN 32
- Stainless steel oval handle
- Stainless steel bolting
- Carbon steel stem extension 100 mm from DN 15 to DN 200
- Stainless steel stem extension 100 mm from DN 15 to DN 200
- Deadman from DN 15 to DN 50
- Dry cleaned oxygen 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 :

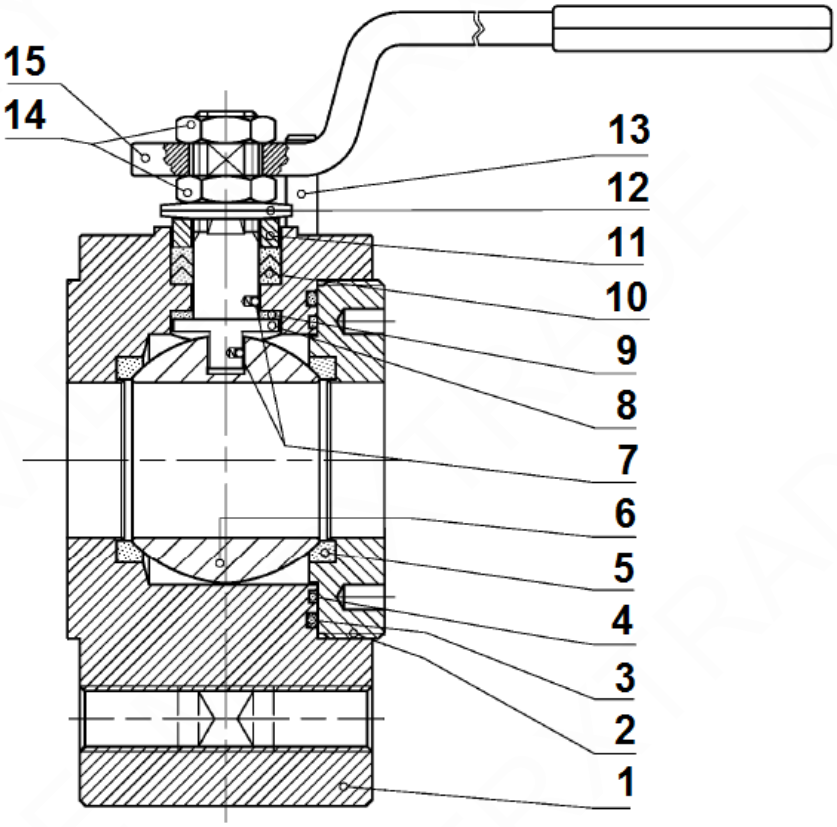
- Between flanges PN40 up to DN80, PN16 over

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

MATERIALS DN 15-40 (ADLER FA1 TYPE) :

PACKING GASKETS :





Repairability :



*Gaskets kit (items 3, 4, 5, 9 and 10)	
DN15	MXT-119830204
DN20	MXT-119830205
DN25	MXT-119830206
DN32	MXT-119830207
DN40	MXT-119830208

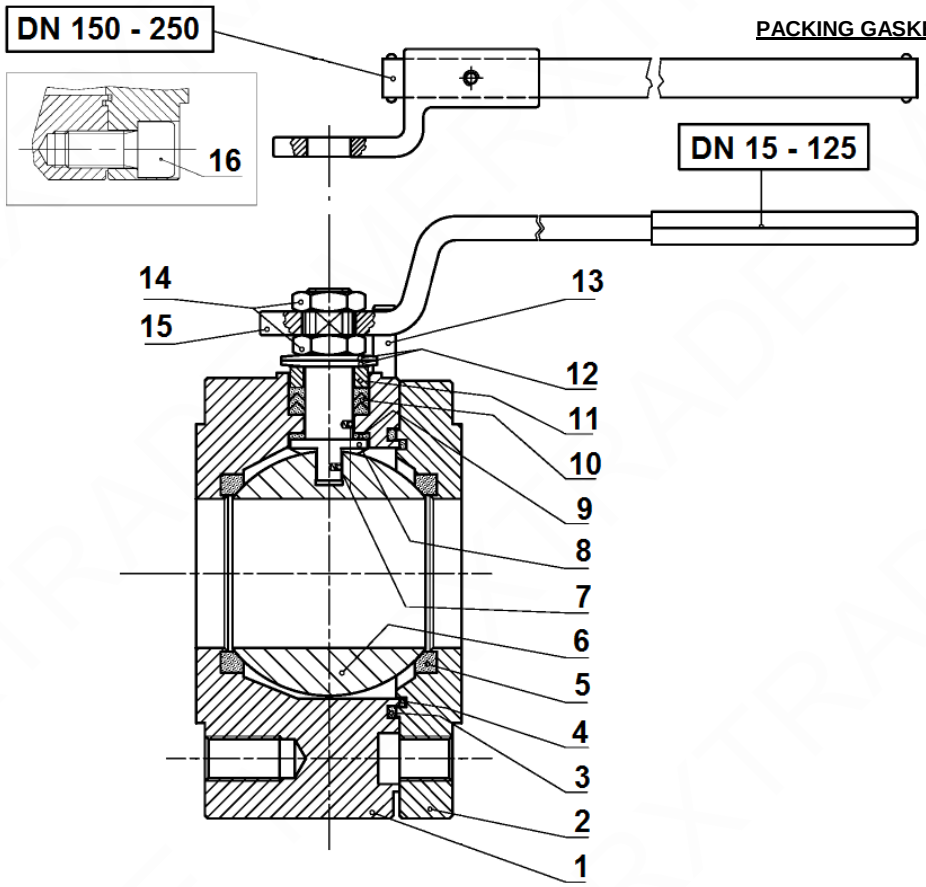
(* : Included in gaskets kit)

Item	Designation	Materials DN15-40
1	Body	ASTM A105
2	Ends	
3*	O ring	FKM
4*	Body gasket	PTFE
5*	Seat	PTFE
6	Ball	ASTM A479 304L
7	Double antistatic device	ASTM A479 316
8	Stem	ASTM A479 304L
9*	Stem gasket	PTFE
10*	Chevron packing	PTFE filled with 15% graphite
11	Gland follower	ASTM A479 304
12	Elastic ring	C72 / 50 Cr V4 galvanized
13	Pin	UNI 3740 8.8 galvanized
14	Nut	UNI 3740-6S galvanized
15	Handle	AISI 1010 galvanized

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

MATERIALS DN 50-250 (ADLER FA2 TYPE) :



PACKING GASKETS :



Repairability :



*Gaskets kit (items 3, 4, 5, 9 and 10)	
DN50	MXT-119830209
DN65	MXT-119830210
DN80	MXT-119830211
DN100	MXT-119830212
DN125	MXT-119830213
DN150	MXT-119830214
DN200	MXT-119830215

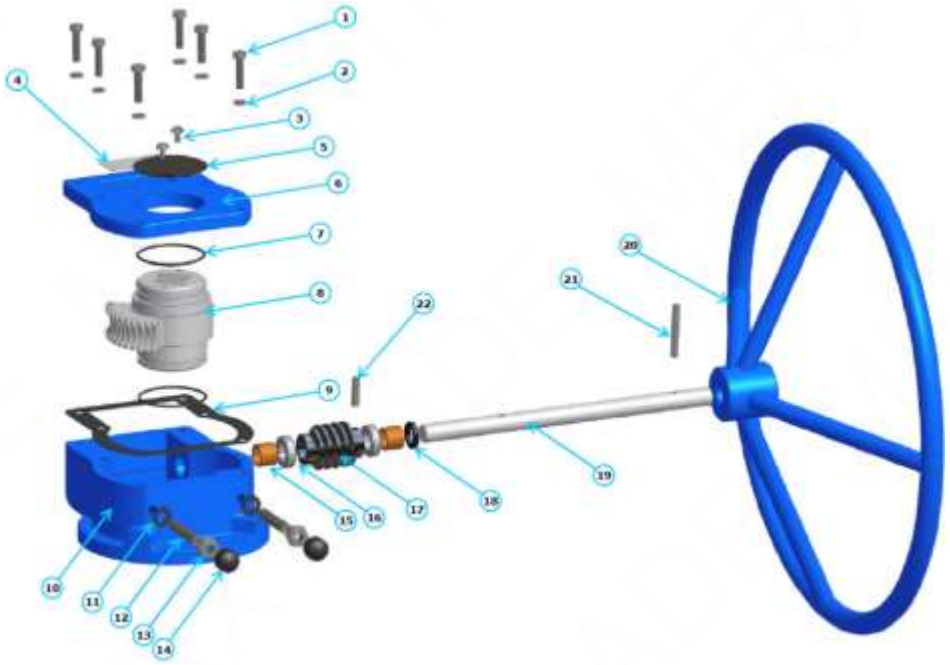
(* : Included in gaskets kit)

Item	Designation	Materials DN50-250
1	Body	ASTM A105
2	Ends	
3*	O ring	FKM
4*	Body gasket	PTFE
5*	Seat	PTFE
6	Ball	ASTM A479 304L
7	Double antistatic device	ASTM A479 316
8	Stem	ASTM A479 304L
9*	Stem gasket	PTFE
10*	Chevron packing	PTFE filled with 15% graphite
11	Gland follower	ASTM A479 304
12	Elastic ring	C72 / 50 Cr V4 galvanized
13	Pin	UNI 3740 8.8 galvanized
14	Nut	UNI 3740-6S galvanized
15	Handle	AISI 1010 galvanized
16	Screw	UNI 3740 8.8 galvanized

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

GEARBOX MATERIALS :

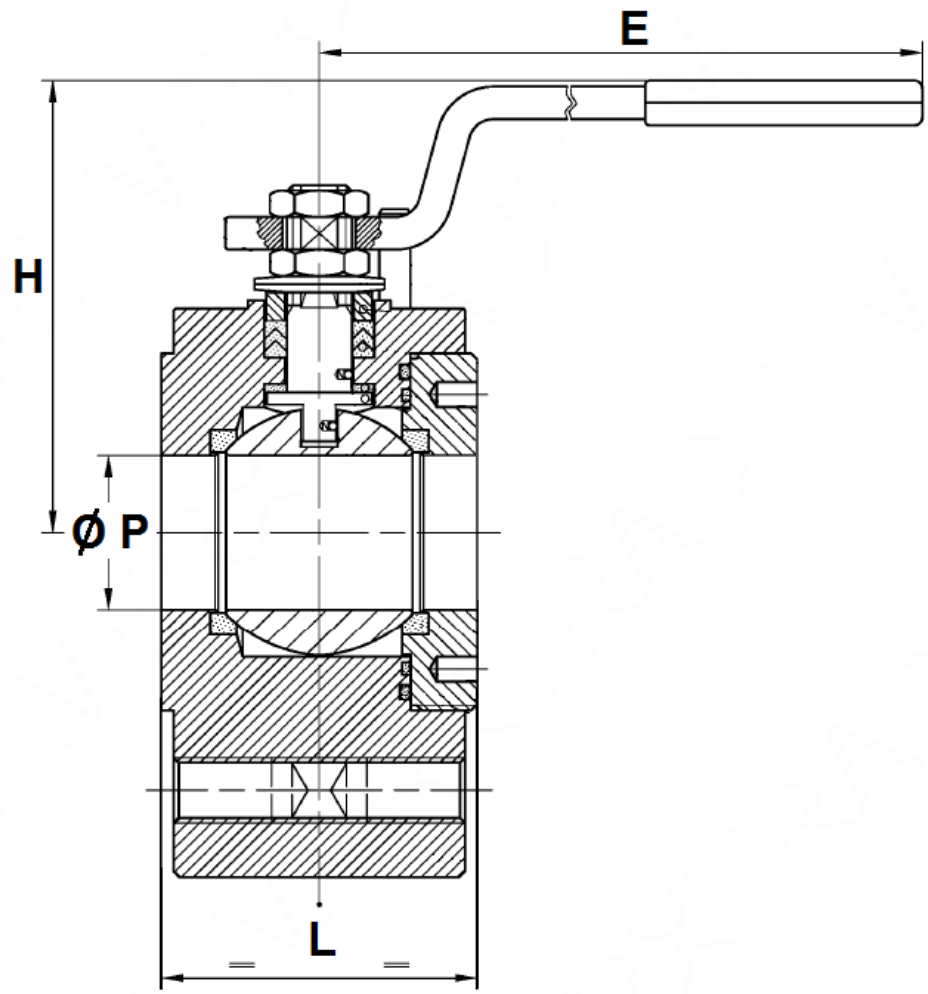


Item	Designation	Materials Ref. 9830260 to 9830264
1	Box screw	DIN 933 class 8.8
2	Washer	C72
3	Indicator screw	DIN 86 class A2
4	ID plate	Steel S235 JR
5	Indicator	Steel S235 JR
6	Cover	Ductile iron EN GJS-400-15
7	O ring	NBR 70 Shore A
8	Wheel	Ductile iron EN GJS-500-7
9	Cover gasket	SL509AT
10	Box	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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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

SIZE DN 15 – 40 FA1 TYPE (in mm) :

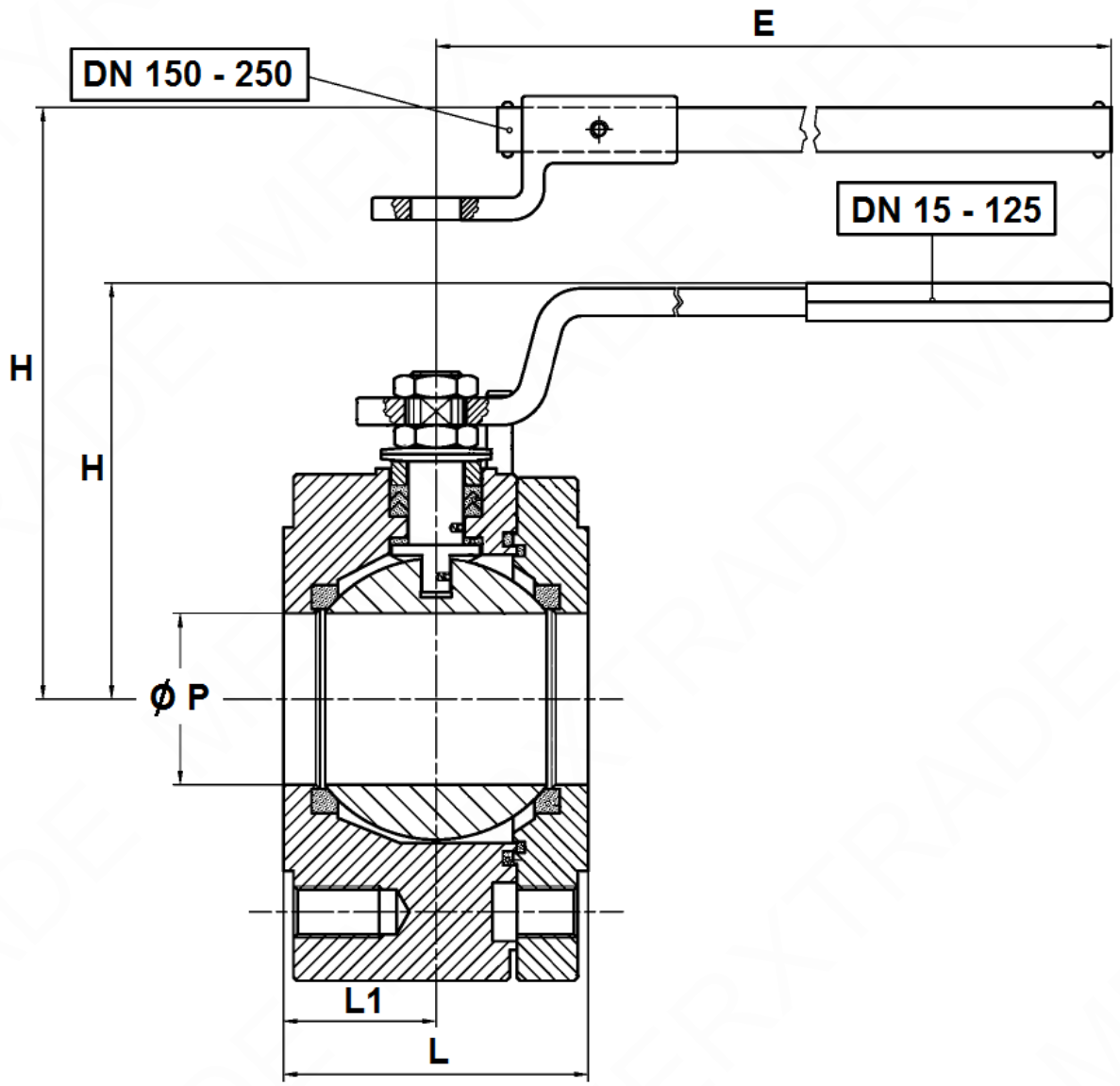


Type	DN	15	20	25	32	40
FA1	Ø P	15	19	25	30	38
	L	35	35	43	51	64
	E	145	145	185	185	280
	H	66	68	85	91	110
	Weight (in Kg)	1.6	1.9	2.8	4.8	7.2

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

SIZE DN 50 - 250 FA2 TYPE (in mm) :



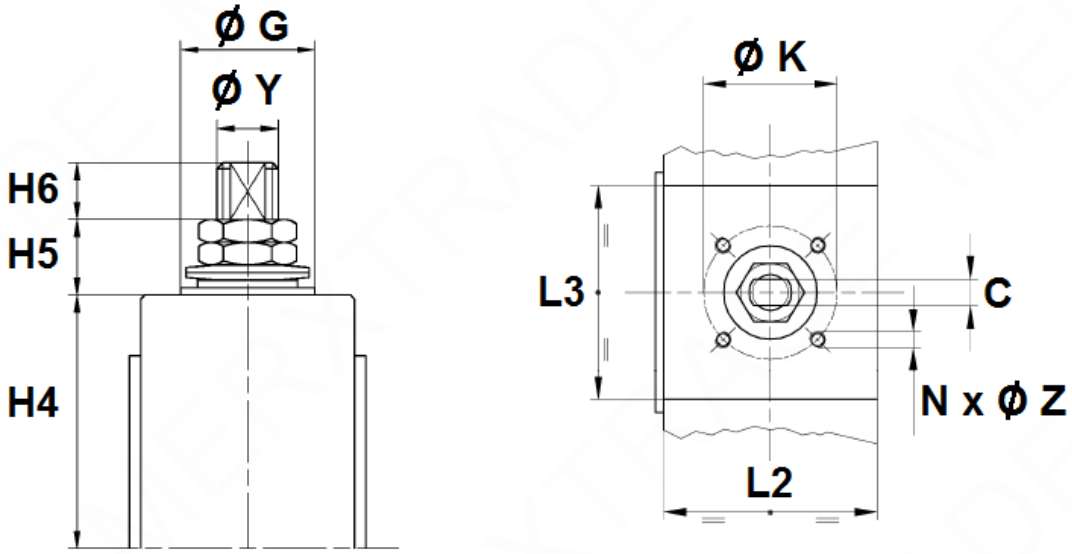
Type	DN	50	65	80	100	125	150	200	250
FA2	Ø P	51	64	76	101	118	152	203	254
	L	84	103	120	154	182	234	310	314
	L1	42.5	51.5	60	77.5	91	117	155	157
	E	280	370	370	470	650	750	900	1000
	H	120	144	152	174	188	256	294	343
	Weight (Kg)	11.5	18	23.5	35	51	90	121	180

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

STEM AND ISO MOUTNING PAD SIZE DN 15 – 40 FA1 TYPE (in mm) :

DN 15 – 40 (FA1 TYPE)



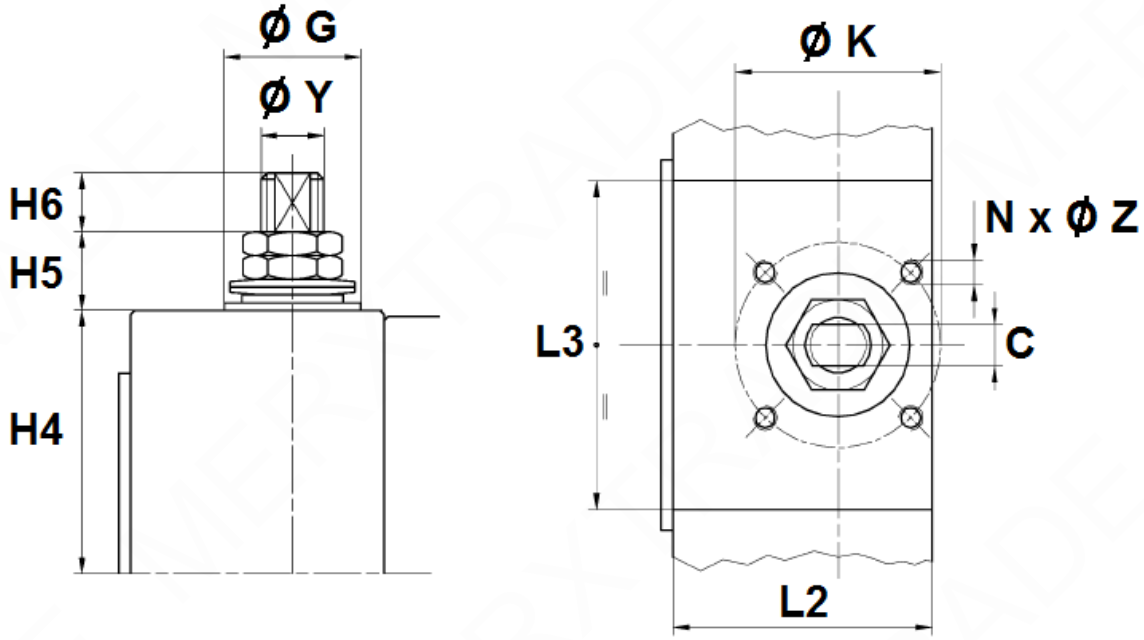
DN	15	20	25	32	40
H4	32.5	35	41	46.5	55
H5	7.5	7.5	16.5	16.5	19.5
H6	7	7	10	10	10
C	6	6	8	8	10
Ø Y	10	10	12	12	16
Ø K	36	36	36	36	50
ISO	F03	F03	F03	F03	F05
N x Ø Z	4 x M5	4 x M5	4 x M5	4 x M5	4 x M6
Ø G	25	25	25	25	35
L2	33	33	40	48	58
L3	69	78	81	105	102

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

STEM AND ISO MOUTNING PAD SIZE DN50–250 FA2 TYPE (in mm) :

DN 50 – 250 (FA2 TYPE)

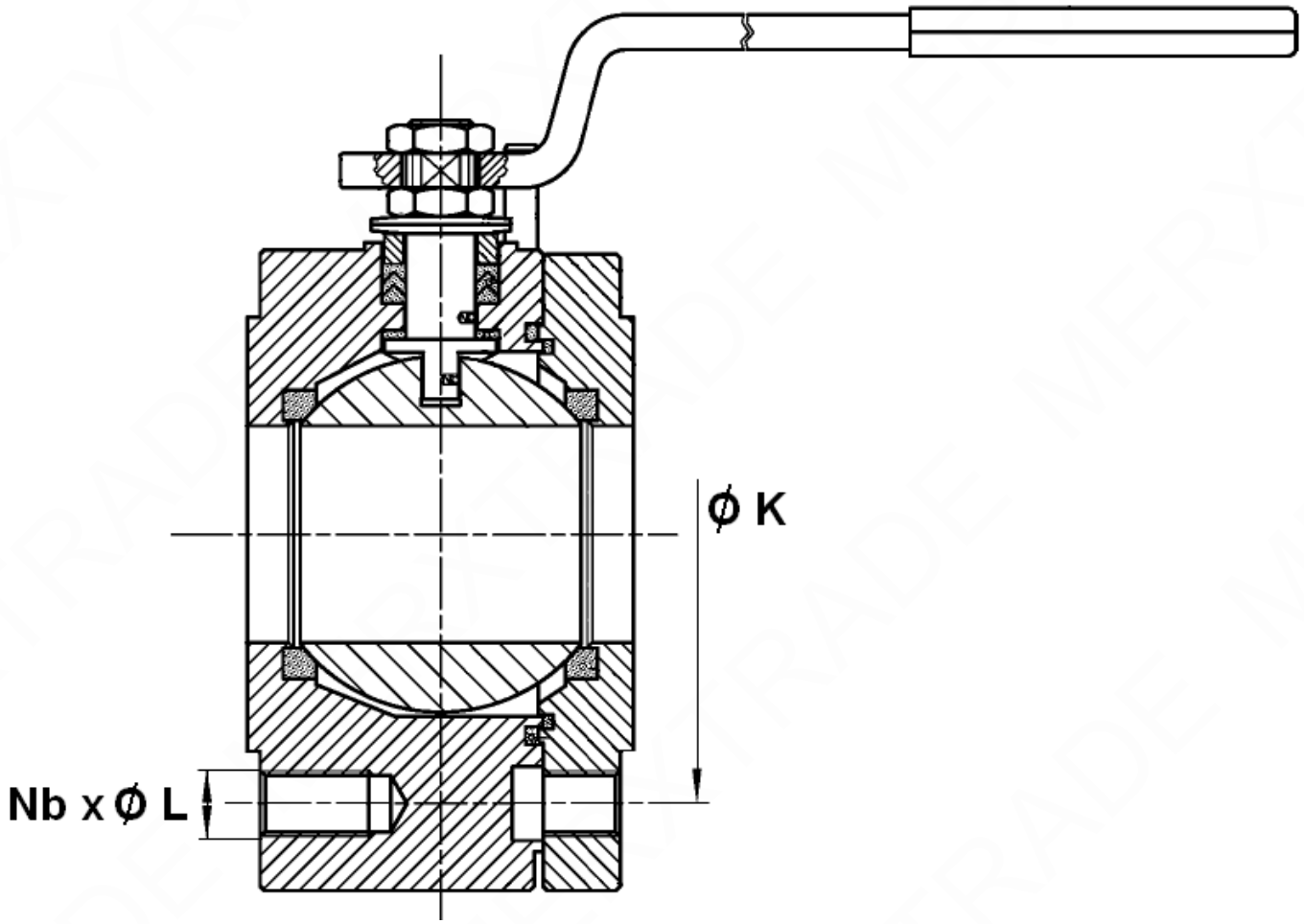


DN	50	65	80	100	125	150	200	250
H4	65	82	90.5	99.5	114	144	182	225.5
H5	21	24	24	27	26	34	37	40
H6	10	12	12	17	18	19	20	20
C	10	14	14	18	18	28	32	36
Ø Y	16	22	22	30	30	42	48	56
Ø K	50	70	70	70	102	125	140	165
ISO	F05	F07	F07	F07	F10	F12	F14	F16
N x Ø Z	4 x M6	4 x M8	4 x M8	4 xM8	4 xM10	4 xM12	4 xM16	4 xM20
Ø G	35	55	55	55	70	85	100	130
L2	62	79	88	105	133	150	228	257
L3	102	85	80	86	112	110	95	150

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

FLANGES THREADED HOLES SIZE (in mm) :

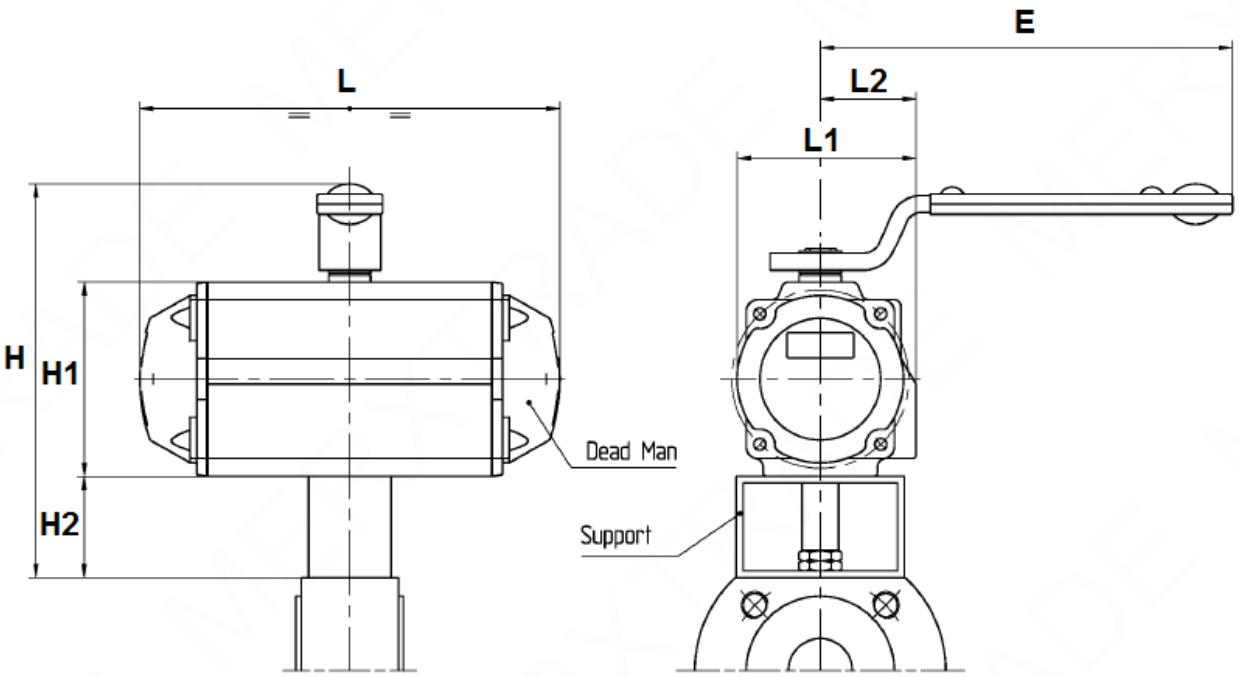


DN	15 (PN40)	20 (PN40)	25 (PN40)	32 (PN40)	40 (PN40)	50 (PN40)	65 (PN16)	65 (PN40)	80 (PN40)	100 (PN16)	125 (PN16)	150 (PN16)	200 (PN16)	250 (PN16)
Ø K	65	75	85	100	110	125	145	145	160	180	210	240	295	355
Nb x Ø L	4 x M12	4 x M12	4 x M12	4 x M16	4 x M16	4 x M16	4 x M16	8 x M16	8 x M16	8 x M16	8 x M16	8 x M20	12xM20	12xM24
Suggested screw length	30	35	35	40	40	40	40	45	45	40	45	45	50	65

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DEADMAN SIZE (in mm) :

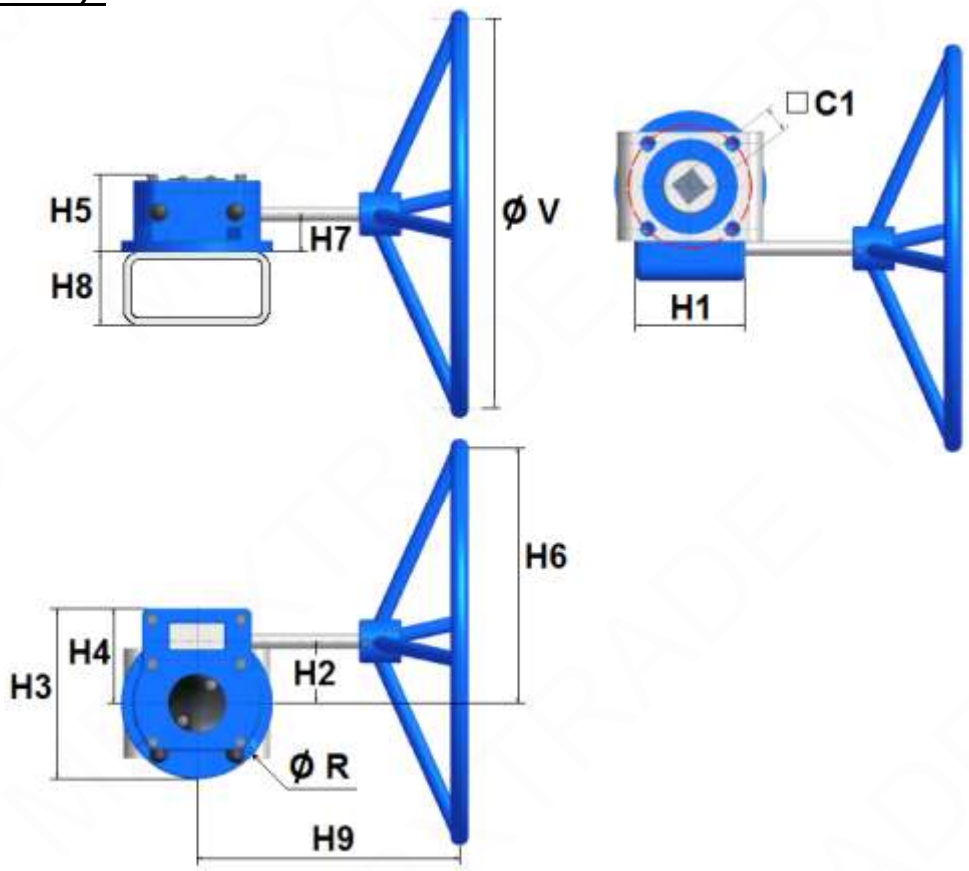


DN	15	20	25	32	40	50
Ref.	9830160	9830161	9830162	9830163	9830164	9830165
L	142	142	161	161	214	252
L1	70.5	70.5	83.5	83.5	94	105
L2	41.5	41.5	47.5	47.5	51	55.5
E	185	185	185	185	280	370
H	157	157	169	169	215	233
H1	69	69	85	85	102	115
H2	40	40	40	40	60	60

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

GEARBOX SIZE (in mm) :



DN	15-50	65-80	100-150	200	250
C1	22	22	22	27	36
H1	57	57	100	120	150
H2	46	46	55	74	96
H3	98	98	143	188	237
H4	50.5	50.5	79.5	99	129.5
H5	56	56	73	97	106
H6	106	146	205	274	396
H7	34	34	35	48	55
H8	60	60	80	80	100
H9	117	131	250	274	365
Ø R	98	98	143	188	237
Ø V	120	200	300	400	600
Weight (Kg)	2.2	2.3	4.5	9.1	18.2

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WAFER BALL VALVE CARBON STEEL ADLER TYPES FA1/FA2 PN16/40

GEARBOX SPECIFICATIONS :

DN	15-50	65-80	100-150	200	250
Ref.	9830260	9830261	9830262	9830263	9830264
Ratio factor	40 :1	40 :1	37 :1	34 :1	38 :1
Input torque (Nm)	35	34	43	83	152
Output torque (Nm)	100	150	500	1000	2000

STANDARDS :

- Manufacturer certified ISO 9001:2015
- DIRECTIVE 2014/68/EU : For liquids and gas of Group 1
    - DN15-25 : Article 4, §3 (SEP), no CE marking
    - DN32-200 : Risk Category II, CE0094 or CE0038 marking
    - DN250 : Risk Category III, CE0094 or CE0038 marking
- 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 A Class
- SIL3 according to IEC/EN 61508 (on request)
- ISO 5211 mounting pad
- Flanges according to EN 1092-1 PN16/40
- Length according to EN 558-6 series 100
- 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

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