

FIRE SAFE 3 PIECES CARBON STEEL BALL VALVE PN140/100 REDUCED BORE EXCELLENCE RANGE

3 pieces carbon steel ball valve fully encapsulated bolts with reduced 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.

Graphite packing and PTFE filled with glass seat gasket on stem, PTFE filled with carbon seat.

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

Handling with locking device, on request possible with handwheel or stem extension.

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



Certificate
3.1



LRQA
PED/2014/68/UE



Size : DN 15 to 50 (NPS 1/2" to 2")

Connection : Female BSP or NPT, SW or BW

Min Temperature : -20°C

Max Temperature : +220°C

Max Pressure : 100 to 140 Bars

Specifications : Antistatic device, ATEX

ISO 5211 mounting pad

Anti blow-out stem, bore

Fully encapsulated bolts

Fire safe ISO 10497 : 2010 and API 607 V.6

Materials : Carbon steel EN 1.0619

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SPECIFICATIONS :

- Reduced bore
- Anti blow-out stem
- Special gland pack with elastic washer
- Antistatic device in DN15, double antistatic device (ball between body-stem and ball-stem) from DN20 to 50
- Fire safe according to ISO 10497:2010 and API 607 V.6
- Locking device
- Handwheel and stem extension (optional)
- ISO 5211 mounting pad
- Fully encapsulated bolts
- Pressure class 800 lbs up to DN25, 600 lbs from DN32
- Phosphate coating

USE :

- Chemical and pharmaceutical industries, petrochemical industries, hydraulic installation, compressed air
- Steam : 18 bars maximum
- Vacuum : 10^{-2} torr
- Min and max Temperatures Ts : -20°C to + 220°C
- Max Pressure Ps : 140 bars up to DN25, 100 bars beyond (see graph)

FLOW COEFFICIENT Kvs (M3 / h) :

DN (mm)	15	20	25	32	40	50
NPS (")	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Kvs (m3/h)	13.4	31.3	57.86	94.25	157.9	227.9

TORQUE VALUES (in Nm without safety coefficient) :

DN (mm)	15	20	25	32	40	50
NPS (")	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Pressure (bar)						
Breaking torque	10	12	19.2	25	28.7	50
17	9.5	10	16	17	18	36
34	10	10	17	18	18	36
69	10	10.5	17.5	21	22	41
103	10	10.5	18	26	27.5	42
138	10	11.5	19			

MAXIMUM ALLOWABLE STEM TORQUE MAST (in Nm) :

DN (mm)	15	20	25	32	40	50
NPS (")	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Torque (Nm)	23			41		77

BOLT TIGHTENING TABLE (in Nm) :

DN (mm)	15	20	25	32	40	50
NPS (")	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Torque (Nm)	9.8	22.07	22.07	39.2	39.2	58.8

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RANGE :

- 3 pieces fire safe reduced bore carbon steel ball valve Ref. **702R** from DN 15 to DN 50

CONNECTION :

- Female / female threaded BSP Ref. **702R00**
- Female / female threaded NPT Ref. **702R30**
- Welding S.W. Ref. **702R2**
- Welding B.W. Ref. **702R1**

OPTIONS :



- Oval lockable handwheel AISI 304
Ref. **9830440-9830443**

DN	15	20	25	32	40	50
NPS	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Ref.	9830440	9830441	9830441	9830442	9830442	9830443

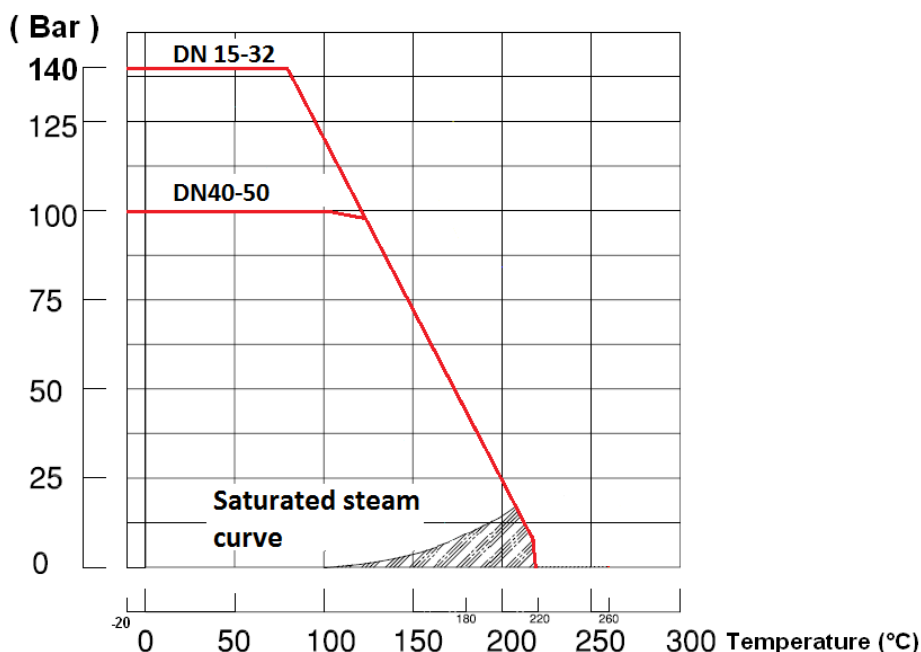


- AISI 304 stem extension Ref. **9830471-9830473**

DN	20	25	32	40	50
NPS	3/4"	1"	1"1/4	1"1/2	2"
Ref.	9830471	9830471	9830472	9830472	9830473

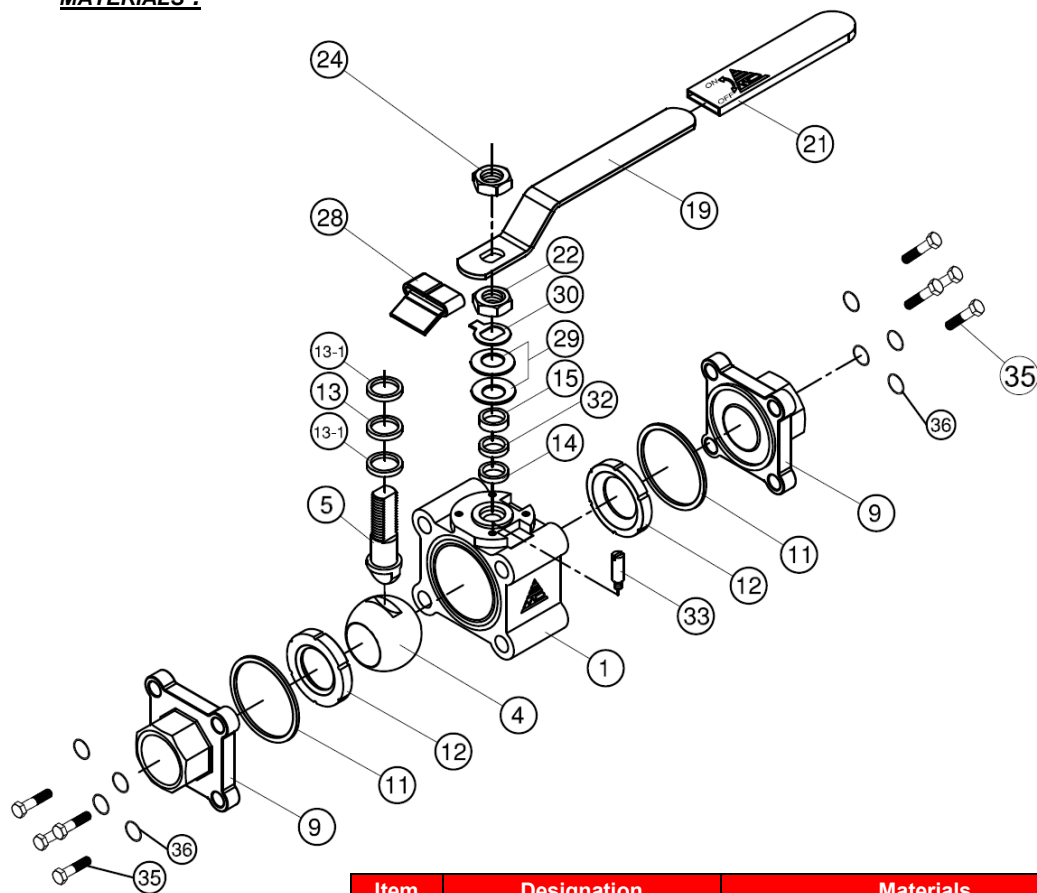
PRESSURE / TEMPERATURE GRAPH :

PRESSURE



**FIRE SAFE 3 PIECES CARBON STEEL BALL VALVE PN140/100 REDUCED BORE
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MATERIALS :



Repairability :



***Gaskets kit
(Items 11, 12, 13, 13-1, 14 and 32)**

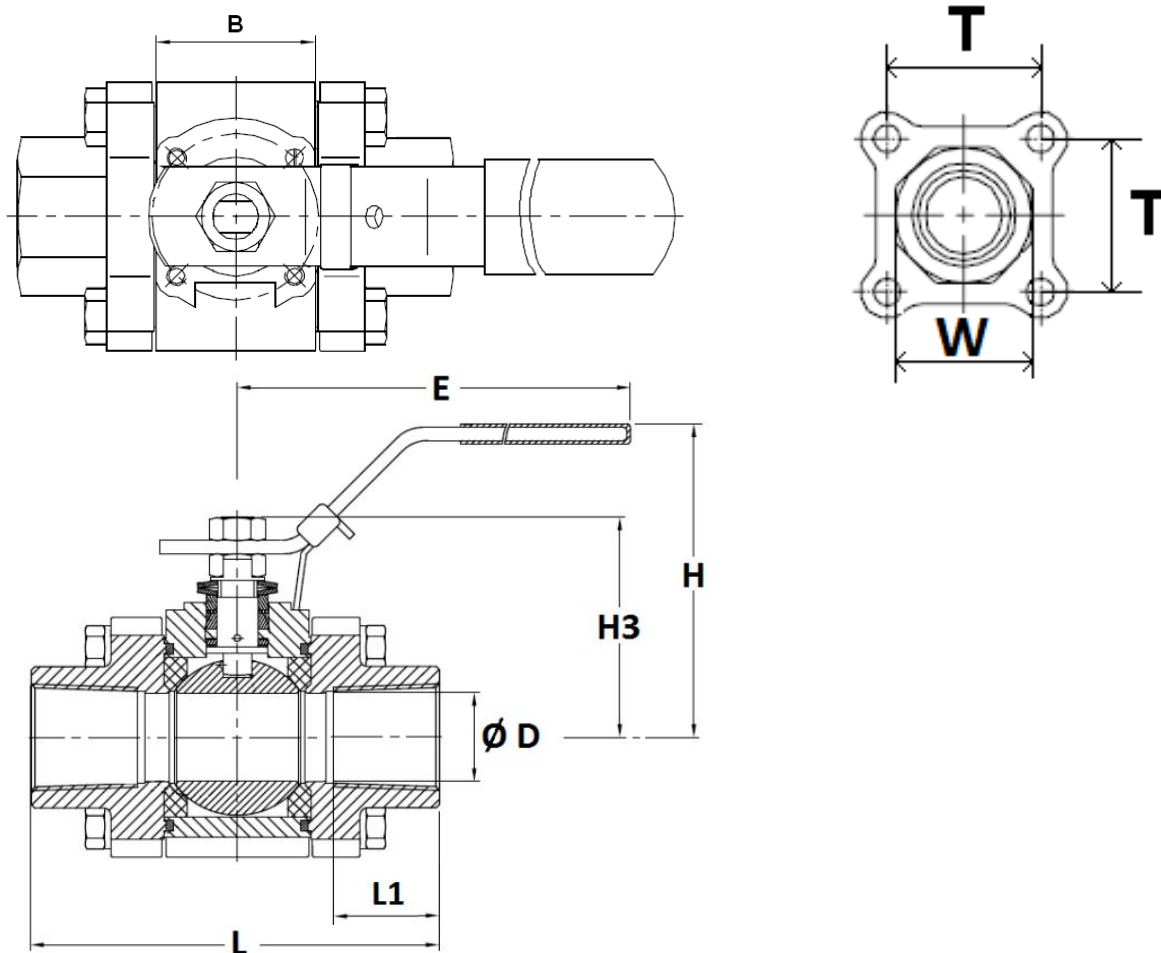
DN	Ref.
DN15	9804172
DN20	9804173
DN25	9804174
DN32	9804175
DN40	9804176
DN50	9804177

(* : included in gaskets kit)

Item	Designation	Materials
1	Body	Carbon Steel EN 1.0619
4	Ball	ASTM A351 CF8M
5	Stem	AISI 316
9	Ends	Carbon Steel EN 1.0619
11*	Body gasket	Graphite
12*	Seat	PTFE filled with 25% carbon
13*	Thrust washer	Graphite
13-1*	Thrust washer	PTFE filled with 15% Glass fiber
14*	Packing	Graphite
15	Gland bush	AISI 304
19	Handle	
21	Handle cover	
22	Packing nut	
24	Handle nut	AISI 304
28	Locking device	
29	Elastic washer	
30	Tab washer	AISI 304
32*	Packing follower	PTFE filled with 15% Glass fiber
33	Stop pin	AISI 304
35	Screw	
36	Washer	

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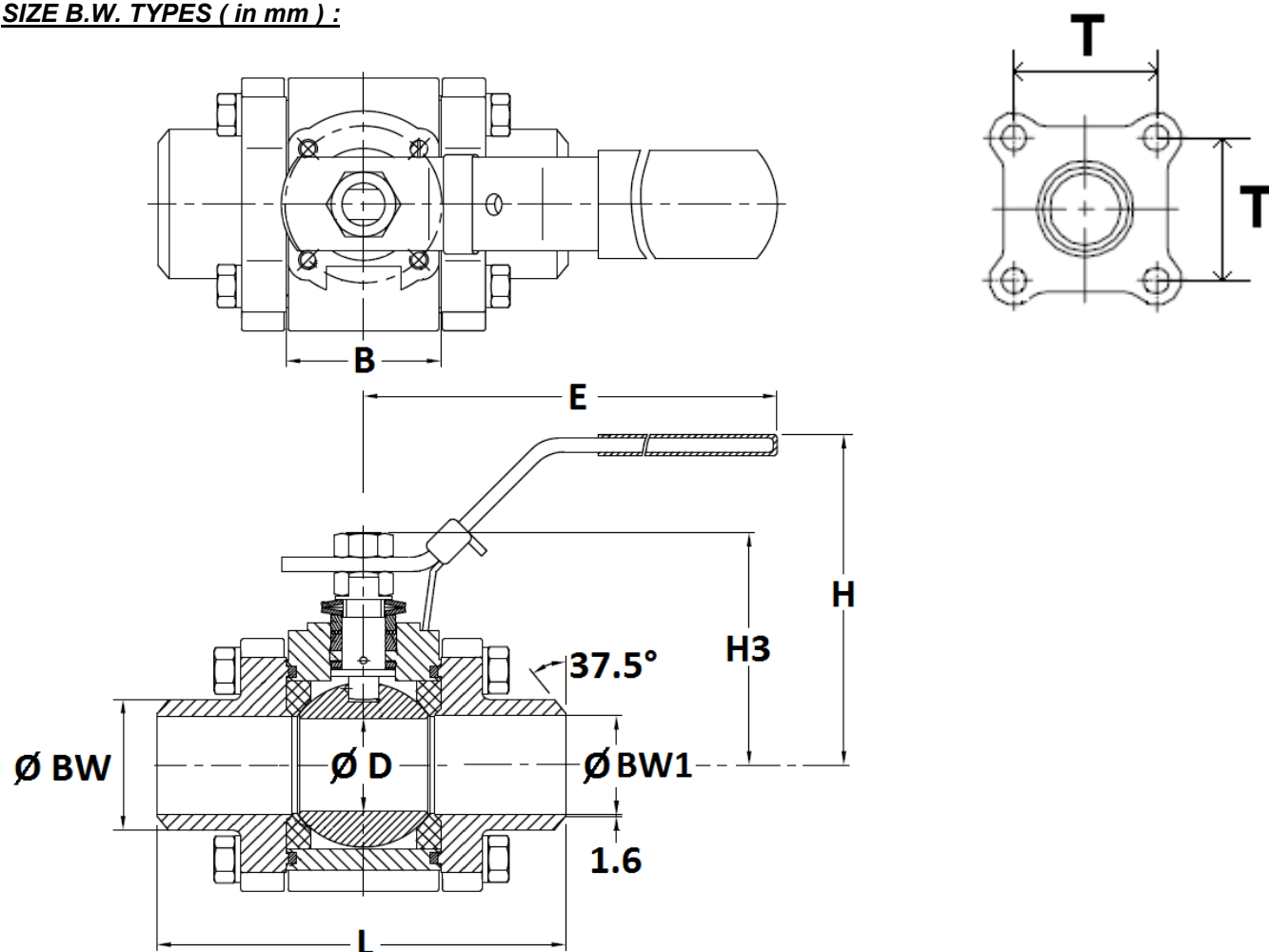
SIZE THREADED TYPES (in mm) :



NPS	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Ø D	10	15	20	25	32	38
L	64,8	72,5	84,2	105,3	111	127,3
L1	15,2	15,6	18,6	19,6	22,6	25
B	20,5	24,5	31,4	41,3	48,4	56,3
E	132,8	132,8	132,8	171,8	171,8	204,2
H	63,7	65,1	73,2	83,1	87,6	98,4
H3	37,1	46,1	50,9	61,4	66,8	80
T	32	35	41,3	48	56,2	63,6
W (on flat)	30,3	36,5	44,5	54,1	60	73
Weight (in Kg)	0,7	0,8	1,3	2	2,9	4,1
Ref. BSP	702R004	702R005	702R006	702R007	702R008	702R009
Ref. NPT	702R304	702R305	702R306	702R307	702R308	702R309

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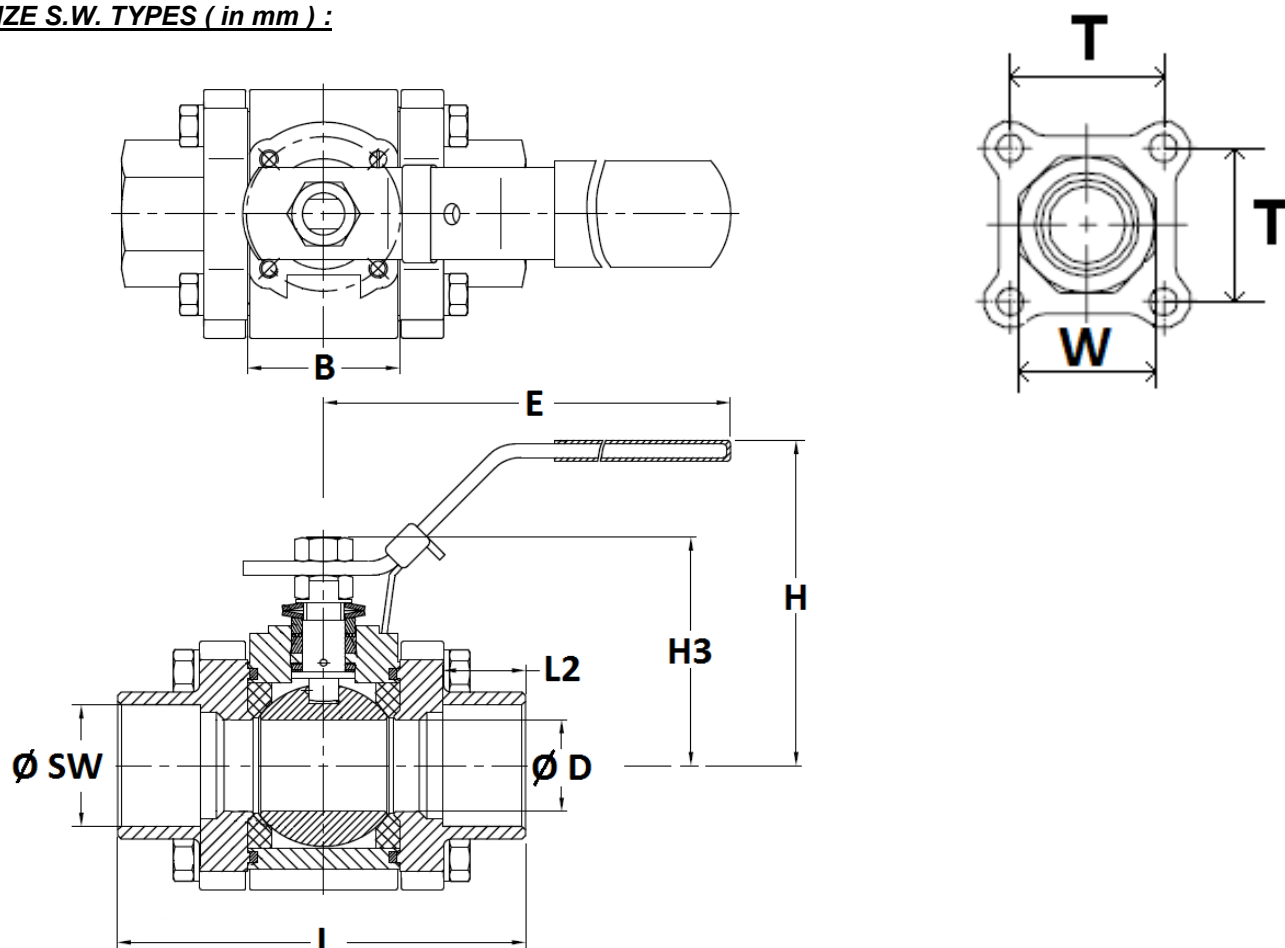
SIZE B.W. TYPES (in mm) :



DN	15	20	25	32	40	50
Ø D	10	15	20	25	32	38
Ø BW1	15	20	25	32	38	50
L	64,8	72.5	84.2	105.3	111	127.3
B	20.5	24.5	31.4	41.3	48.4	56.3
E	132.8	132.8	132.8	171.8	171.8	204.2
H	63.7	65.1	73.2	83.1	87.6	98.4
H3	37.1	46.1	50.9	61.4	66.8	80
T	32	35	41.3	48	56.2	63.6
Ø BW	21.9	27.3	34.7	42.8	49.1	60.9
Weight (in Kg)	0.58	0.74	1.21	1.85	2.67	3.9
Ref.	702R115	702R120	702R125	702R132	702R140	702R150

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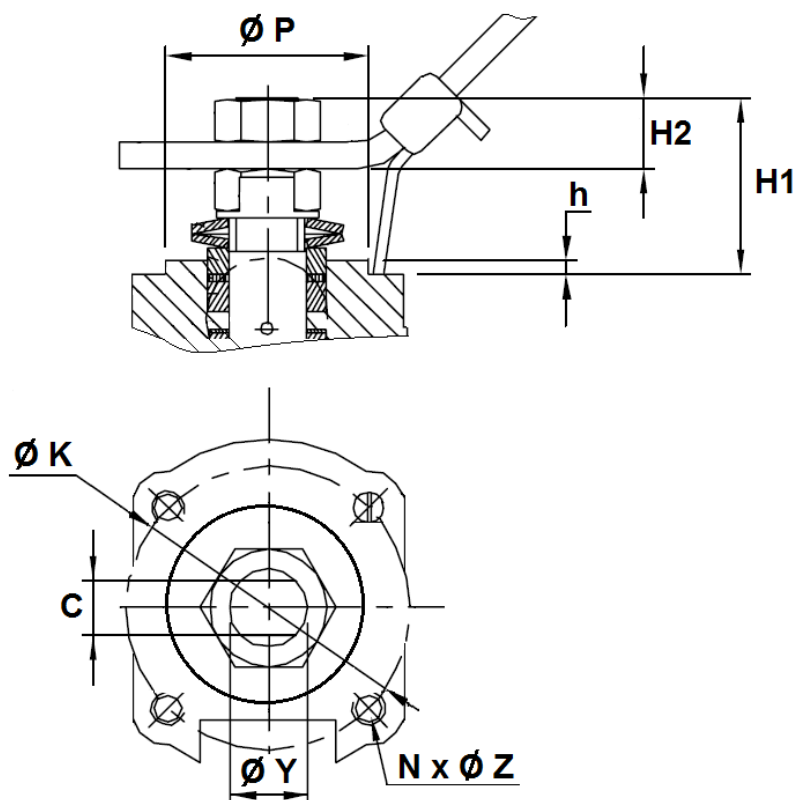
SIZE S.W. TYPES (in mm) :



DN	15	20	25	32	40	50
Ø D	10	15	20	25	32	38
L	64,8	72,5	84.2	105,3	111	127,3
B	20.5	24.5	31.4	41.3	48.4	56.3
L2	10	13	13	13	13	16
E	132.8	132.8	132.8	171.8	171.8	204.2
H	63.7	65.1	73.2	83.1	87.6	98.4
H3	37.1	46.1	50.9	61.4	66.8	80
T	32	35	41.3	48	56.2	63.6
W (on flat)	29.4	30.3	36.5	44.5	54.1	60
Ø SW	21.7	27,3	33,9	42,8	48.7	61.3
Weight (in Kg)	0.7	0.8	1.3	2	2.85	4.1
Ref.	702R215	702R220	702R225	702R232	702R240	702R250

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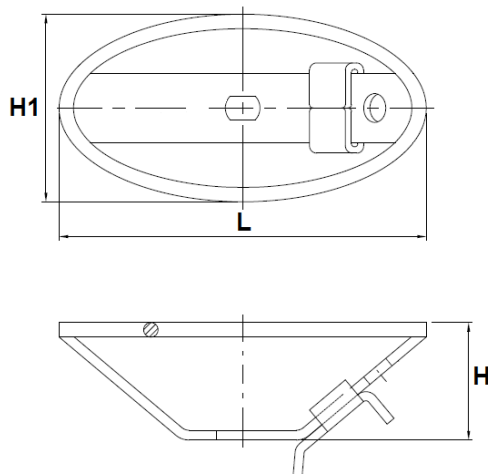
ISO 5211 MOUNTING PAD AND STEM SIZE (in mm) :



DN	15	20	25	32	40	50
NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
H1	7.5	17.1	18.1	25.4	26.2	32.4
H2	6.6	11.1	9.1	13.1	12.6	14.9
h	0,5	2	2	2	2	2,2
C	6,5			8		9,7
Ø Y	9,5 (3/8"-24UNF)			11,1 (7/16"-20UNF)		14.2 (9/16"-18UNF)
Ø P	25	25	25	30	30	35
Ø K	36	36	36	42	42	50
ISO	F03	F03	F03	F04	F04	F05
N x Ø Z	4x M5	4x M5	4x M5	4x M5	4x M5	4 x M6

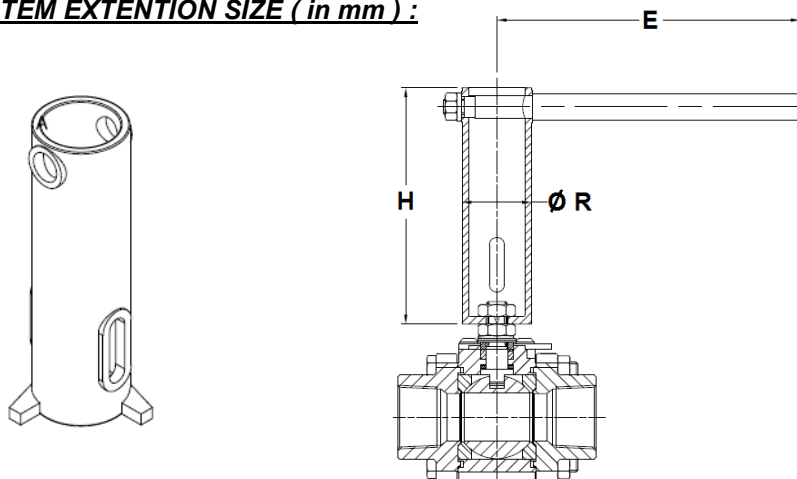
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OVAL LOCKABLE HANDWHEEL AISI 304 SIZE (in mm) :



DN	15	20	25	32	40	50
NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	102	116	116	130	130	147
H	32.5	35	35	40	40	43
H1	52	62	62	82	82	87
Weight (Kg)	0.106	0.119	0.119	0.176	0.176	0.22
Ref.	9830440	9830441	9830441	9830442	9830442	9830443

AISI 304 STEM EXTENTION SIZE (in mm) :



DN	20	25	32	40	50
NPS	3/4"	1"	1 1/4"	1 1/2"	2"
H	125.5	125.5	125.5	125.5	127.5
E	126.5	126.5	161	161	194
Ø R	31	31	37	37	43
Ref.	9830471	9830471	9830472	9830472	9830473



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STANDARDS :

- Manufacturer certified ISO 9001 : 2015 and ISO 14001 : 2015
- DIRECTIVE 2014/68/EU : For liquids and gas of Group 1
 - DN8-25 : Article 4, §3 (SEP), no CE marking
 - DN32-50 : Risk Category II, CE0038 or CE0343 marking
- Certificate 3.1 on request
- Construction according to EN 12516-1 Class 800 or Class 600 (depending on DN)
- Designing according to ASME B16.34
- Pressure tests according to EN12266-1, rate A
- Fire safe according to ISO 10497:2010 and API 607 6th
- ABS type Approval Marine certificate
- Threaded cylindrical BSPP ends according to ISO 228-1
- Threaded NPT ends according to ANSI B1.20.1
- S.W. ends according to ASME B16.11 Schedule 40
- B.W. ends according to ASME B36.10 Schedule 40
- ISO 5211 mounting pad
- ATEX Group II Category 2 G/2D Zone 1 & 21 Zone 2 & 22 (optional marking) according directive 2014/34/EU

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The customer must check the right choice of the products with the real service conditions.