

REF. 703

FIRE SAFE 3 PIECES STAINLESS STEEL BALL VALVE PN 140/100 EXCELLENCE RANGE

3 pieces stainless steel ball valve fully encapsulated bolts 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.

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.



Size : DN8 to DN50 (NPS 1/4" to 2")

Connection : Female BSP or NPT, SW or BW

Min Temperature : -30°C

Max Temperature : +220°C

Max Pressure : 100 to 140 Bars

Specifications : Antistatic device, ATEX

ISO 5211 mounting pad

Anti blow-out stem, full bore

Fully encapsulated bolts

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

Materials : Stainless steel EN 1.4408

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SPECIFICATIONS :

- Full bore
- Anti blow-out stem
- Special gland pack with elastic washer
- Antistatic device from DN8 to 10, double antistatic device (ball between body-stem and ball-stem) from DN15 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
- Roughness Ra 2.8 for the ball and Ra 1.5 for SW the ends

USE :

- Chemical and pharmaceutical industries, petrochemical industries, hydraulic installation, compressed air
- Steam : 18 bars maximum
- Vacuum : 10⁻² torr
- Min and max Temperatures Ts : -30°C to + 220°C
- Max Pressure Ps : 140 bars up to DN25, 100 bars beyond (see graph)

FLOW COEFFICIENT Kvs (M3 / h) :

| DN (mm) | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|--------------|------|------|------|-------|-------|-------|-------|-------|
| NPS (") | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Kvs (m3/h) | 13 | 13.4 | 31.3 | 57.86 | 94.25 | 157.9 | 227.9 | 414.8 |

TORQUE VALUES (in Nm without safety coefficient) :

| DN (mm) | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|-----------------|------|------|------|------|------|-------|-------|----|
| NPS (") | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Pressure (bar) | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Breaking torque | 5 | 5.5 | 10 | 12 | 19.2 | 25 | 28.7 | 50 |
| 17 | 5 | 5.5 | 9.5 | 10 | 16 | 17 | 18 | 36 |
| 34 | 5 | 5.5 | 10 | 10 | 17 | 18 | 18 | 36 |
| 69 | 6 | 5.5 | 10 | 10.5 | 17.5 | 21 | 22 | 41 |
| 103 | 6 | 6 | 10 | 10.5 | 18 | 26 | 27.5 | 42 |
| 138 | 6 | 6.5 | 10 | 11.5 | 19 | | | |

MAXIMUM ALLOWABLE STEM TORQUE MAST (in Nm) :

| DN (mm) | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|-------------|------|------|------|------|----|-------|-------|-----|
| NPS (") | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Torque (Nm) | 23 | | | | 41 | | 77 | 157 |

BOLT TIGHTENING TABLE (in Nm) :

| DN (mm) | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|-------------|------|------|------|-------|-------|-------|-------|------|
| NPS (") | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Torque (Nm) | 9.8 | 9.8 | 9.8 | 22.07 | 22.07 | 39.2 | 39.2 | 58.8 |

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FIRE SAFE 3 PIECES STAINLESS STEEL BALL VALVE PN 140/100 EXCELLENCE RANGE

RANGE :

- 3 pieces fire safe stainless steel ball valve Ref. **703** DN 8 to DN 50

CONNECTION :

- Female / female threaded BSP
- Female / female threaded NPT
- Welding S.W.
- Welding B.W.

OPTIONS :



- AISI 304 oval lockable handwheel Ref. **9830440-9830475**

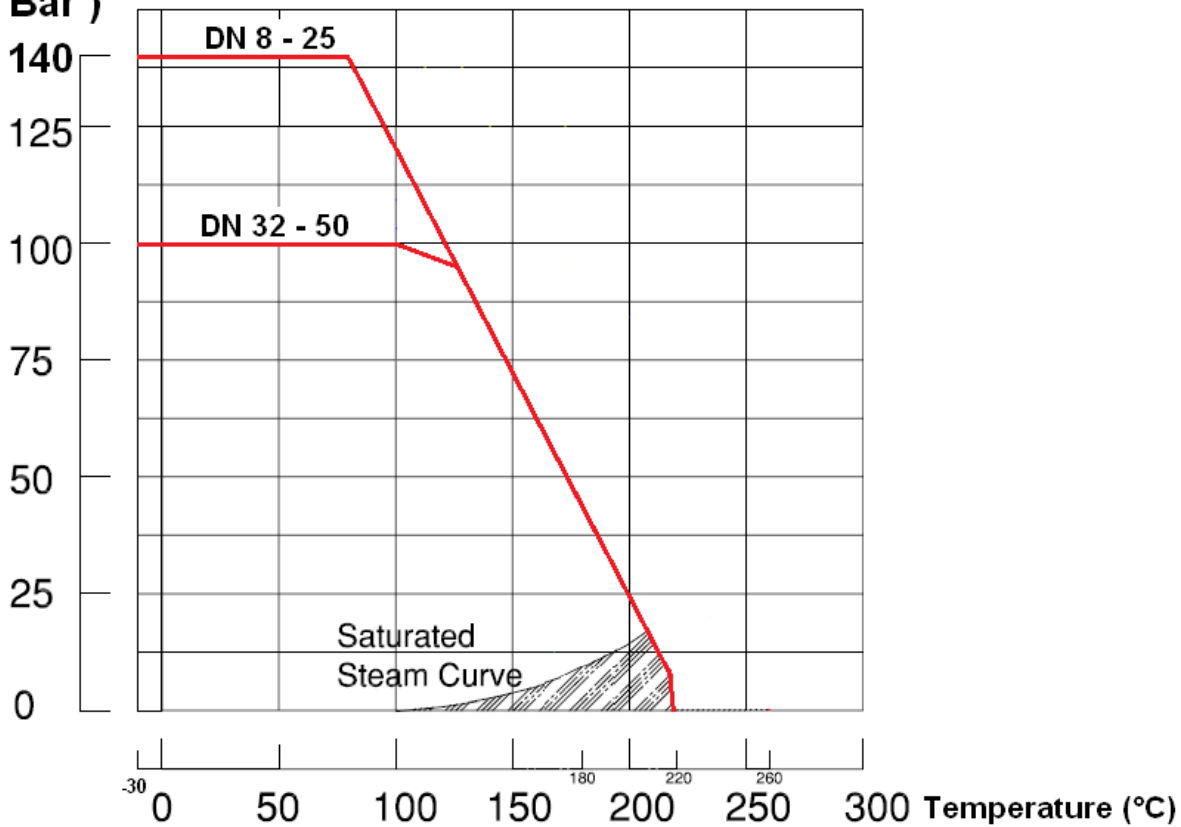


- AISI 304 stem extension Ref. **9830471-9830474**

PRESSURE / TEMPERATURE GRAPH :

PRESSURE

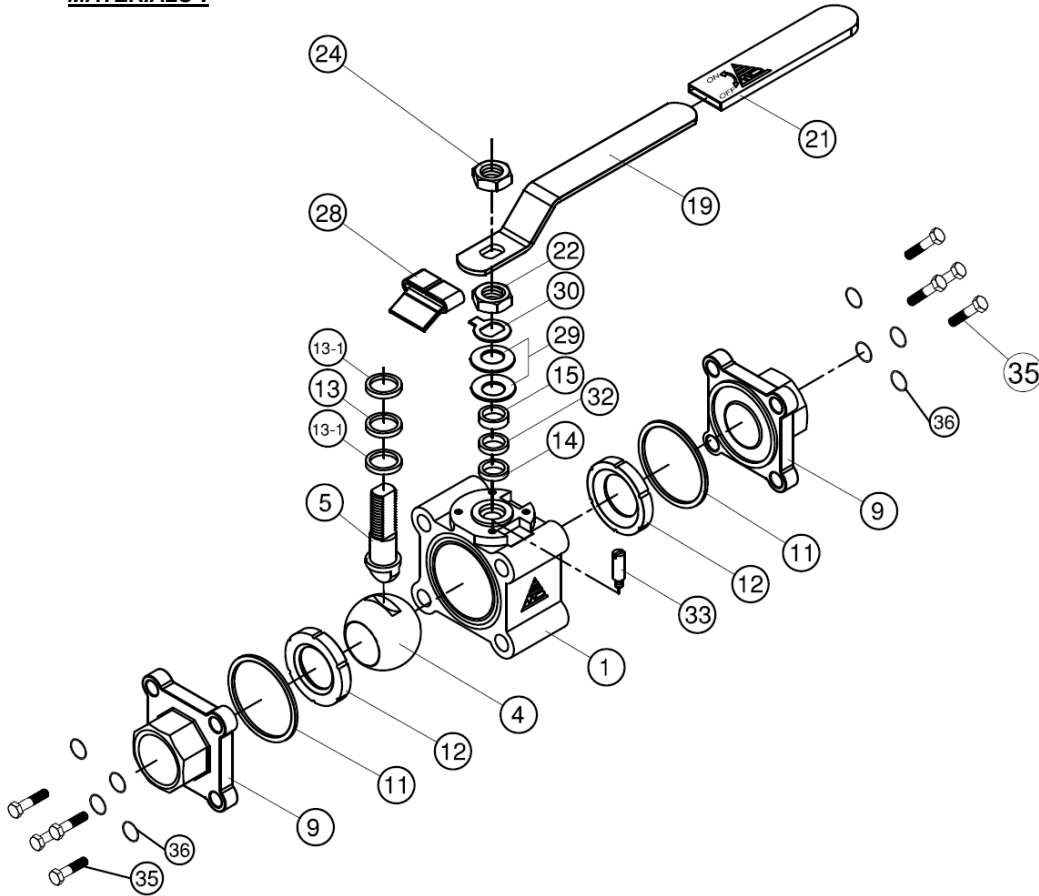
(Bar)



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FIRE SAFE 3 PIECES STAINLESS STEEL BALL VALVE PN 140/100 EXCELLENCE RANGE

MATERIALS :



Repairability :



| *Gaskets kit (Items 11, 12, 13, 13-1, 14 and 32) | |
|---|---------|
| DN | Ref. |
| DN8 | 9804171 |
| DN10 | 9804172 |
| DN15 | 9804173 |
| DN20 | 9804174 |
| DN25 | 9804175 |
| DN32 | 9804176 |
| DN40 | 9804177 |
| DN50 | 9804178 |

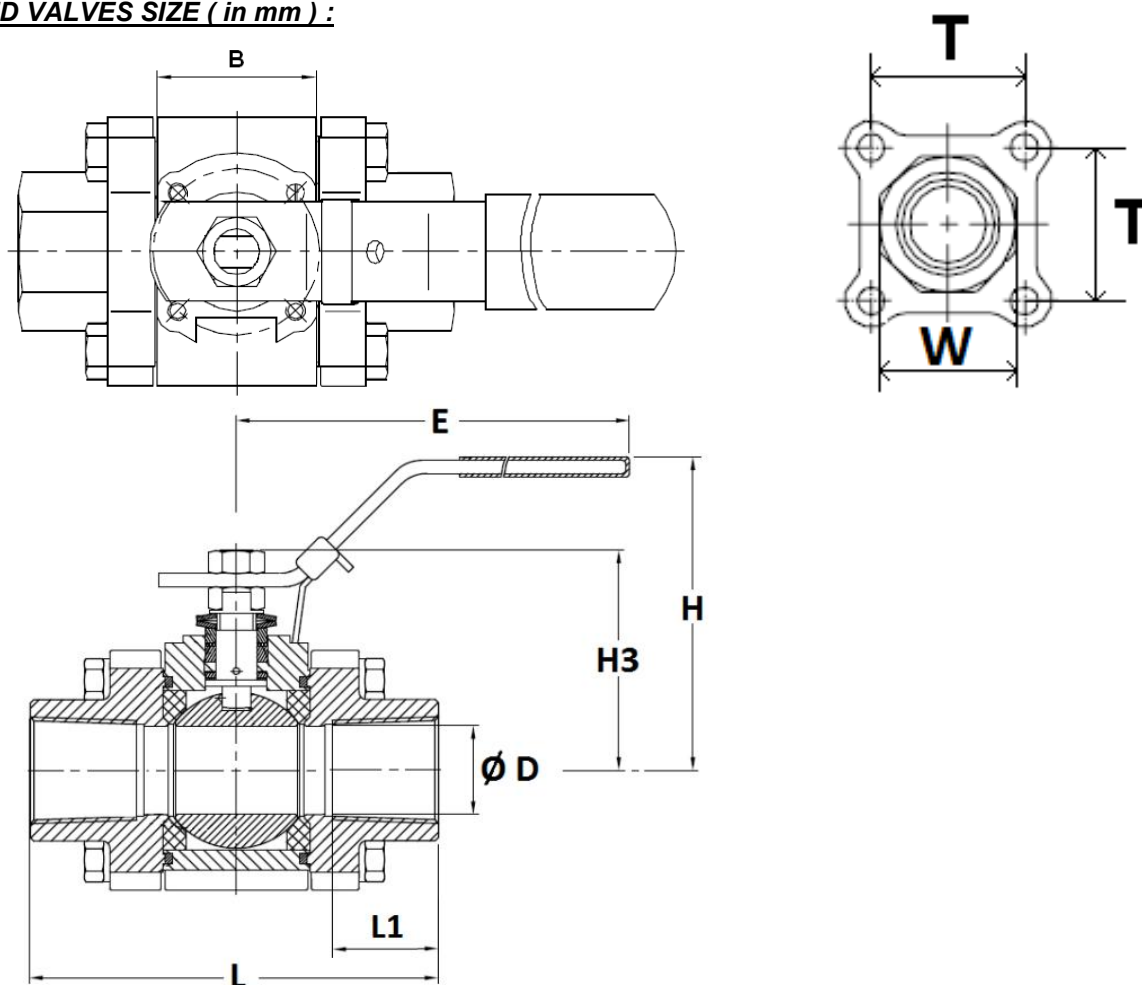
(* : included in gaskets kit)

| Item | Designation | Materials |
|-------|------------------|----------------------------------|
| 1 | Body | EN 1.4408 |
| 4 | Ball | ASTM A351 CF8M |
| 5 | Stem | AISI 316 |
| 9 | Ends | EN 1.4408 |
| 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 | AISI 304 |
| 21 | Handle cover | Plastic |
| 22 | Packing nut | AISI 304 |
| 24 | Handle nut | AISI 304 |
| 28 | Locking device | AISI 304 |
| 29 | Elastic washer | AISI 301 |
| 30 | Tab washer | AISI 304 |
| 32* | Packing follower | PTFE filled with 15% Glass fiber |
| 33 | Stop pin | AISI 304 |
| 35 | Screw | AISI 304 |
| 36 | Washer | AISI 304 |

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THREADED VALVES SIZE (in mm) :

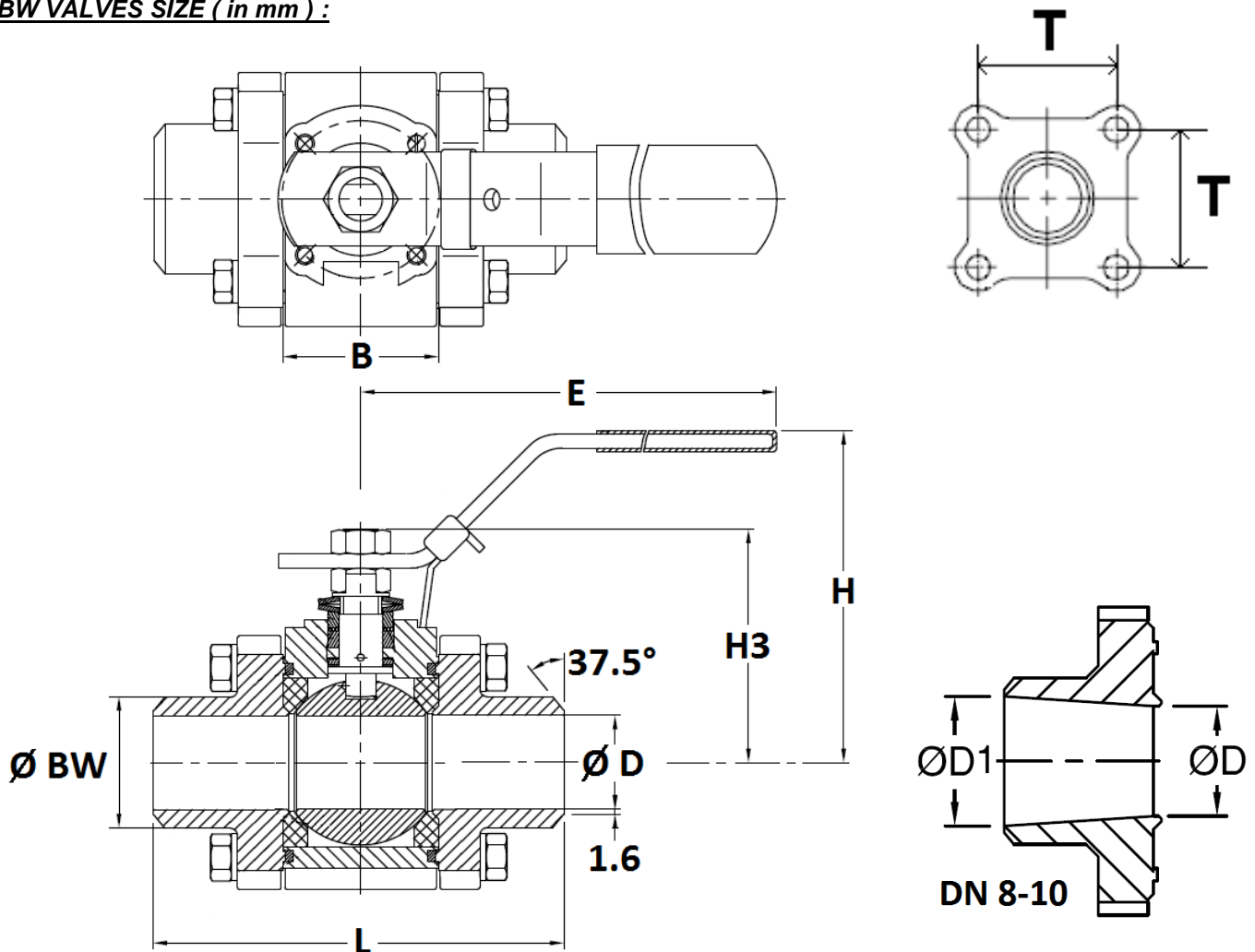


| DN | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Ø D | 10 | 10 | 15 | 20 | 25 | 32 | 38 | 50 |
| L | 64,8 | 64,8 | 72,5 | 84,2 | 105,3 | 111 | 127,3 | 153,4 |
| L1 | 14 | 14 | 14,8 | 15,6 | 18,6 | 19,6 | 22,6 | 25 |
| B | 20,5 | 20,5 | 24,5 | 31,4 | 41,3 | 48,4 | 56,3 | 72 |
| E | 132,8 | 132,8 | 132,8 | 132,8 | 171,8 | 171,8 | 204,2 | 211 |
| H | 63,7 | 63,7 | 65,1 | 73,2 | 83,1 | 87,6 | 98,4 | 130 |
| H3 | 37,1 | 37,1 | 46,1 | 50,9 | 61,4 | 66,8 | 80 | 99,4 |
| T | 32 | 32 | 35 | 41,3 | 48 | 56,2 | 63,6 | 79,2 |
| W (on flat) | 29,4 | 29,4 | 30,3 | 36,5 | 44,5 | 54,1 | 60 | 76 |
| Weight (in Kg) | 0,6 | 0,7 | 0,8 | 1,3 | 2 | 2,9 | 4,1 | 7,7 |
| Ref. BSP | 703002 | 703003 | 703004 | 703005 | 703006 | 703007 | 703008 | 703009 |
| Ref. NPT | 703302 | 703303 | 703304 | 703305 | 703306 | 703307 | 703308 | 703309 |

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BW VALVES SIZE (in mm) :

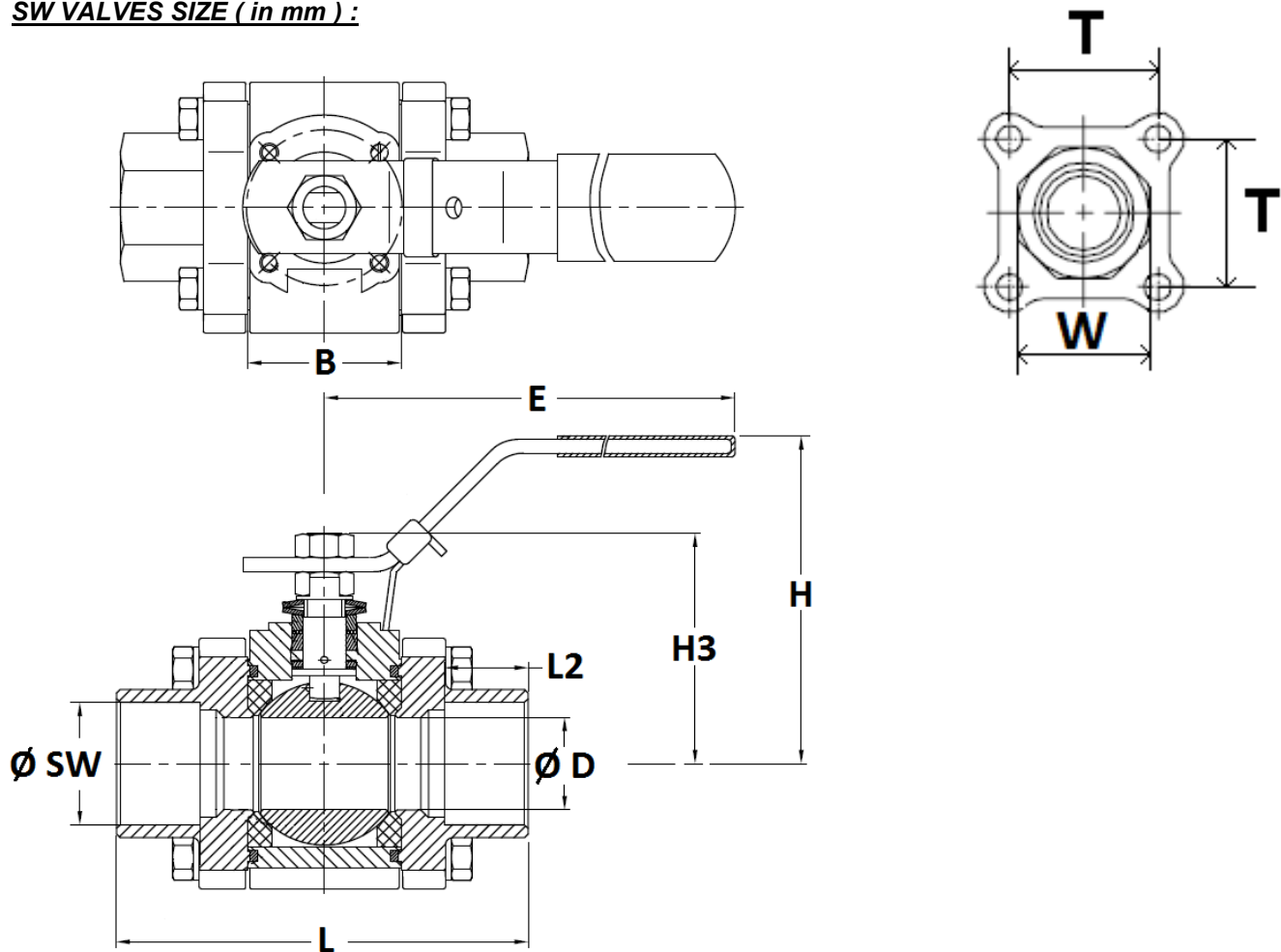


| DN | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Ø D | 10 | 10 | 15 | 20 | 25 | 32 | 38 | 50 |
| Ø D1 | 10 | 12.7 | - | - | - | - | - | - |
| L | 64,8 | 64,8 | 72.5 | 84.2 | 105.3 | 111 | 127.3 | 153.4 |
| B | 20.5 | 20.5 | 24.5 | 31.4 | 41.3 | 48.4 | 56.3 | 72 |
| E | 132.8 | 132.8 | 132.8 | 132.8 | 171.8 | 171.8 | 204.2 | 211 |
| H | 63.7 | 63.7 | 65.1 | 73.2 | 83.1 | 87.6 | 98.4 | 130 |
| H3 | 37.1 | 37.1 | 46.1 | 50.9 | 61.4 | 66.8 | 80 | 99.4 |
| T | 32 | 32 | 35 | 41.3 | 48 | 56.2 | 63.6 | 79.2 |
| Ø BW | 13.7 | 17.5 | 22.7 | 27.5 | 34 | 42.7 | 48.6 | 60.5 |
| Weight (in kg) | 0.6 | 0.58 | 0.74 | 1.21 | 1.85 | 2.67 | 3.9 | 7.33 |
| Ref. | 703108 | 703110 | 703115 | 703120 | 703125 | 703132 | 703140 | 703150 |

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SW VALVES SIZE (in mm) :

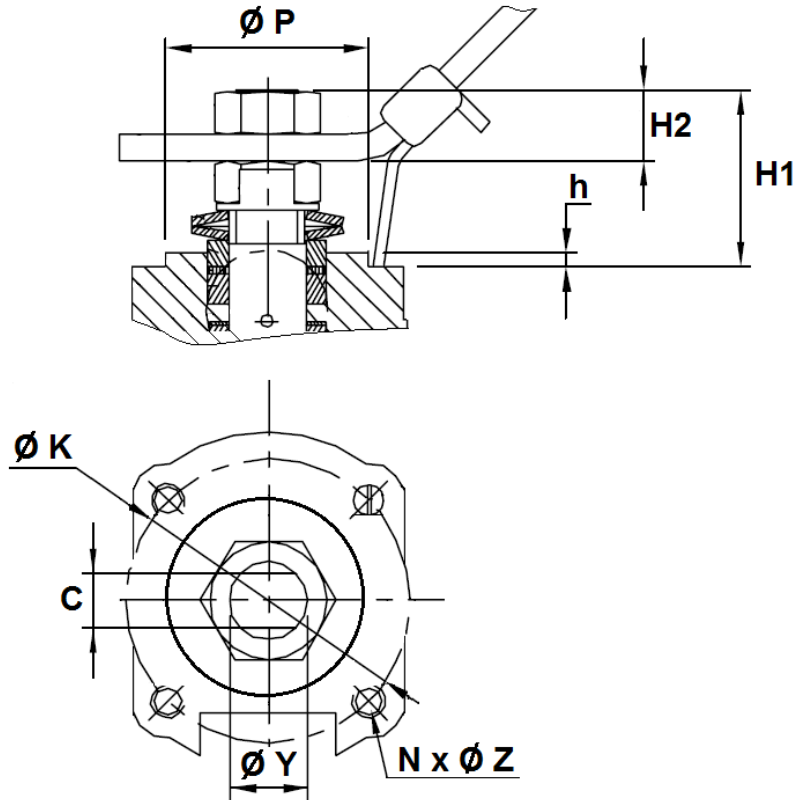


| DN | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Ø D | 10 | 10 | 15 | 20 | 25 | 32 | 38 | 50 |
| L | 64,8 | 64,8 | 72,5 | 84.2 | 105,3 | 111 | 127,3 | 153.4 |
| B | 20.5 | 20.5 | 24.5 | 31.4 | 41.3 | 48.4 | 56.3 | 72 |
| L2 | 10 | 10 | 10 | 13 | 13 | 13 | 13 | 16 |
| E | 132.8 | 132.8 | 132.8 | 132.8 | 171.8 | 171.8 | 204.2 | 211 |
| H | 63.7 | 63.7 | 65.1 | 73.2 | 83.1 | 87.6 | 98.4 | 130 |
| H3 | 37.1 | 37.1 | 46.1 | 50.9 | 61.4 | 66.8 | 80 | 99.4 |
| T | 32 | 32 | 35 | 41.3 | 48 | 56.2 | 63.6 | 79.2 |
| W (on flat) | 29.4 | 29.4 | 30.3 | 36.5 | 44.5 | 54.1 | 60 | 76 |
| Ø SW | 14.1 | 17,6 | 21.7 | 27,3 | 33,9 | 42,8 | 48.7 | 61.3 |
| Weight (in Kg) | 0.6 | 0.7 | 0.8 | 1.3 | 2 | 2.85 | 4.1 | 7.68 |
| Ref. | 703208 | 703210 | 703215 | 703220 | 703225 | 703232 | 703240 | 703250 |

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

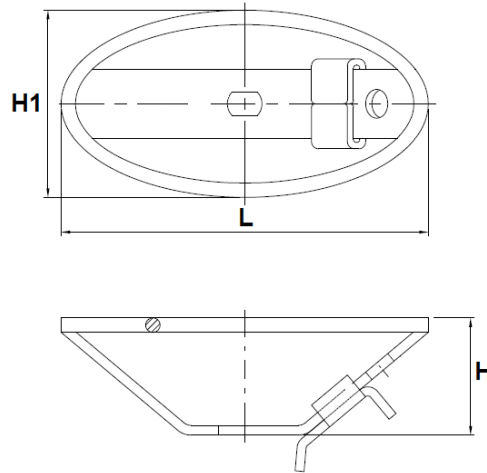


| DN | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
|---------------------|------------------|------|------|------|--------------------|-------|--------------------|-----------------|
| H1 | 7.5 | 7.5 | 17.1 | 18.1 | 25.4 | 26.2 | 32.4 | 28.5 |
| H2 | 6.6 | 6.6 | 11.1 | 9.1 | 13.1 | 12.6 | 14.9 | 15.5 |
| h | 0,5 | 0,5 | 2 | 2 | 2 | 2 | 2,2 | 1,5 |
| c | 6,5 | | | | 8 | | 9,7 | 12 |
| $\varnothing Y$ | 9,5 (3/8"-24UNF) | | | | 11,1 (7/16"-20UNF) | | 14.2 (9/16"-18UNF) | 19 (3/4"-16UNF) |
| $\varnothing P$ | 25 | | | | 30 | | 35 | 55 |
| $\varnothing K$ | 36 | | | | 42 | | 50 | 70 |
| ISO | F03 | | | | F04 | | F05 | F07 |
| N x $\varnothing Z$ | 4x M5 | | | | | | 4 x M6 | 4 x M8 |

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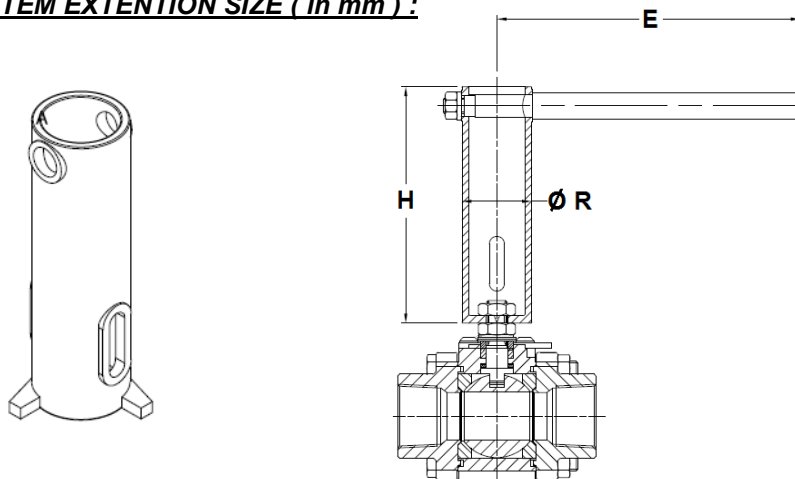
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AISI 304 OVAL LOCKABLE HANDWHEEL SIZE (in mm) :



| DN | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
|---------------|---------|---------|---------|---------|---------|---------|---------|---------|
| L | 102 | 102 | 116 | 116 | 130 | 130 | 147 | 194 |
| H | 32.5 | 32.5 | 35 | 35 | 40 | 40 | 43 | 51 |
| H1 | 52 | 52 | 62 | 62 | 82 | 82 | 87 | 98 |
| Weight (Kg) | 0.106 | 0.106 | 0.119 | 0.119 | 0.176 | 0.176 | 0.22 | 0.34 |
| Ref. | 9830440 | 9830440 | 9830441 | 9830441 | 9830442 | 9830442 | 9830443 | 9830475 |

AISI 304 STEM EXTENTION SIZE (in mm) :



| DN | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
|------|---------|---------|---------|---------|---------|---------|
| H | 125.5 | 125.5 | 125.5 | 125.5 | 127.5 | 127.5 |
| E | 126.5 | 126.5 | 161 | 161 | 194 | 198.5 |
| Ø R | 31 | 31 | 37 | 37 | 43 | 52 |
| Ref. | 9830471 | 9830471 | 9830472 | 9830472 | 9830473 | 9830474 |

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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
 - DN1/4"-1" : Article 4, §3 (SEP), no CE marking
 - DN1"1/4-2" : Risk Category II, CE 0038 or CE 0343 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

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