

**FIRE SAFE 3 PIECES CARBON STEEL BALL VALVE PN100 DIRECT MOUNTING  
ISO 5211 EXCELLENCE RANGE**

3 pieces carbon steel direct mounting ISO 5211 ball valve 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, PTFE filled with glass gaskets and FKM o ring on stem and PTFE filled with carbon seat.

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

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



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

**Connection :** Socket Welding

**Min Temperature :** -20°C

**Max Temperature :** +220°C

**Max Pressure :** 100 to 140 Bars

**Specifications :** Antistatic device, ATEX

ISO 5211 mounting pad, direct mounting

Anti blow-out stem, full bore

Fire safe ISO 10497 : 2010, API 607 6<sup>th</sup>

Fully encapsulated bolts

**Materials :** Carbon steel EN 1.0619

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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
- ISO 5211 mounting pad with direct mounting
- Fully encapsulated bolts
- Pressure class 600 lbs

**USE :**

- Chemical and pharmaceutical industries, petrochemical industries, hydraulic installation, compressed air
- Steam : 18 bars maximum
- Vacuum : 10<sup>-2</sup> torr
- Min and max Temperatures Ts : -20°C to + 220°C
- Max Pressure Ps : 100 to 140 bars ( see graph )

**FLOW COEFFICIENT Kvs ( M3 / h ) :**

DN	8	10	15	20	25	32	40	50
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	8	10	15	20	25	32	40	50
Pressure (bar)								
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			

**BOLT TIGHTENING TABLE ( in Nm ) :**

DN	8	10	15	20	25	32	40	50
Torque ( Nm )	9.8	9.8	9.8	22.07	22.07	39.2	39.2	58.8

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**RANGE :**

- 3 pieces fire safe carbon steel ball valve with direct mounting ISO 5211 Ref. **702DM** from DN 8 to DN 50

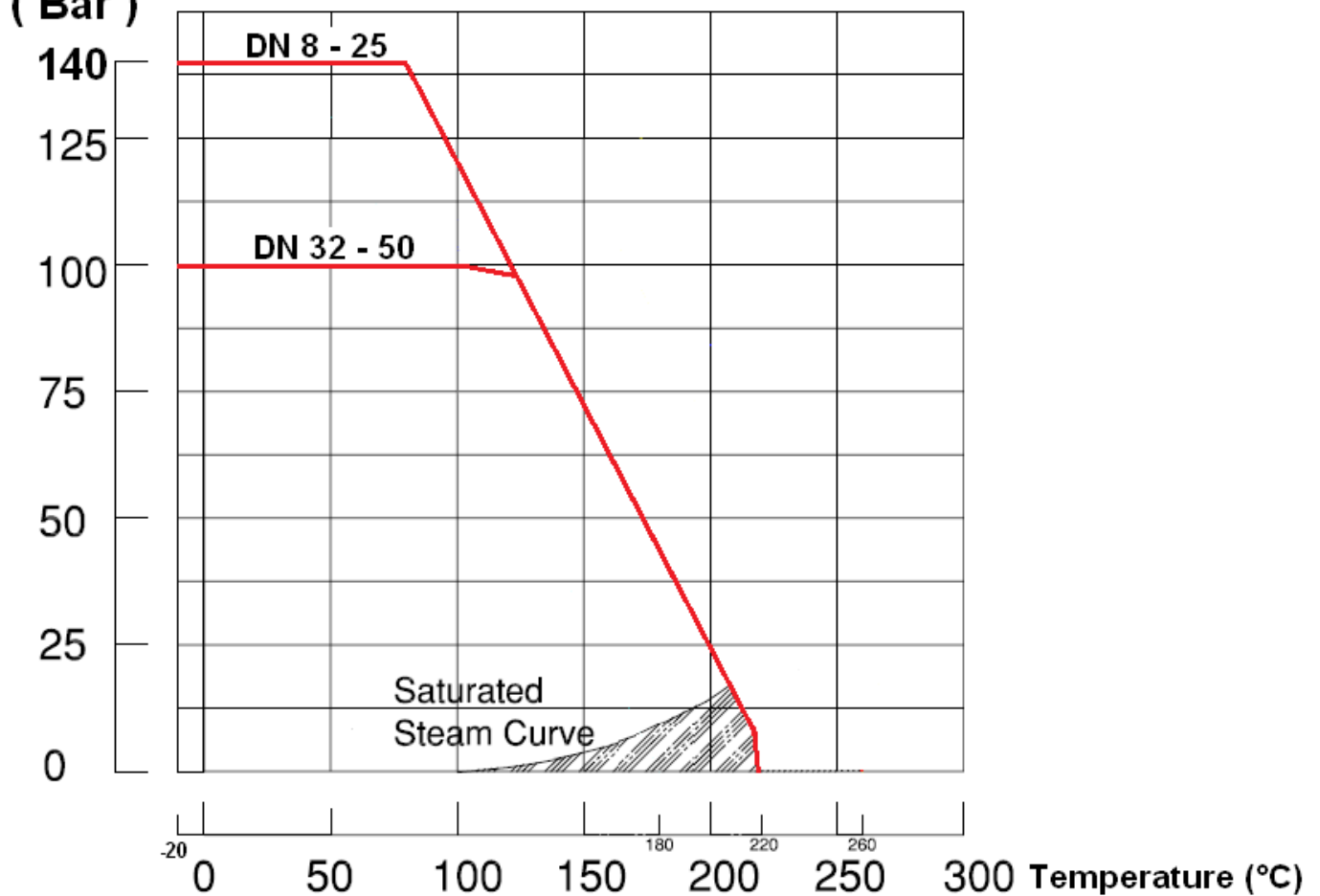
**CONNECTION :**

- Socket Welding

**PRESSURE / TEMPERATURE GRAPH :**

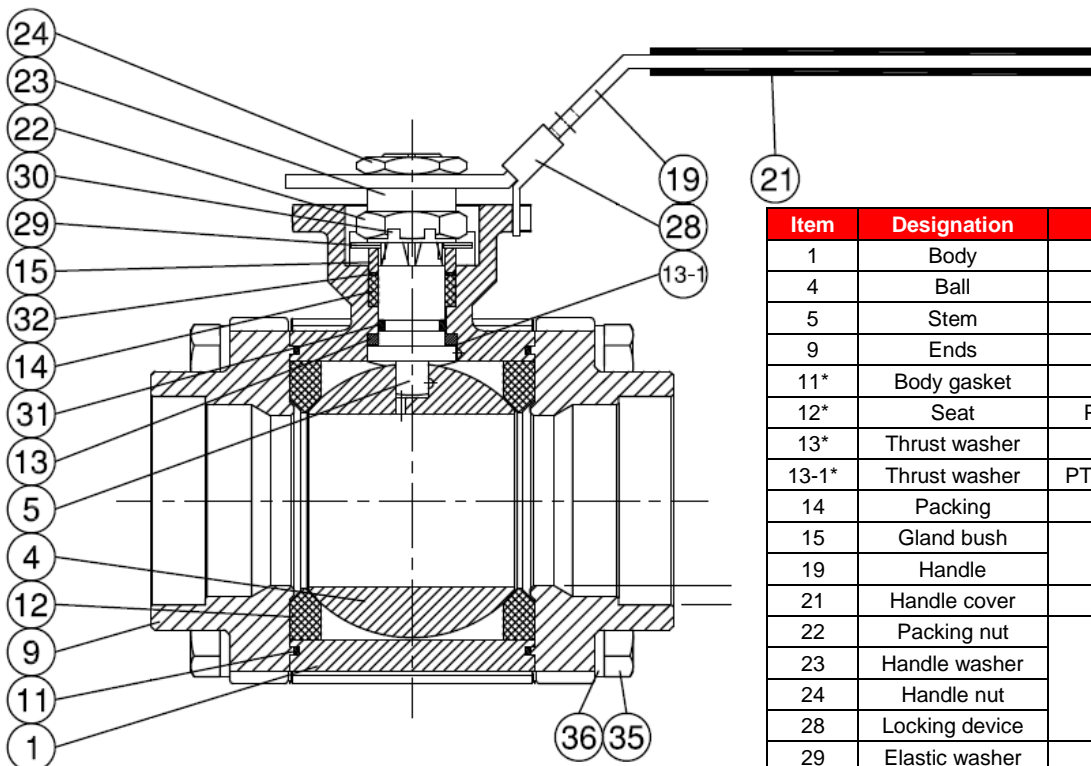
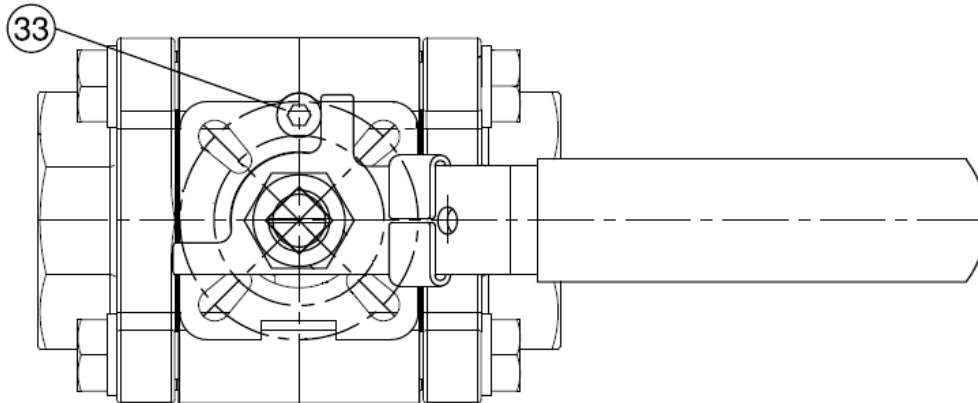
**PRESSURE**

**( Bar )**



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**MATERIALS :**

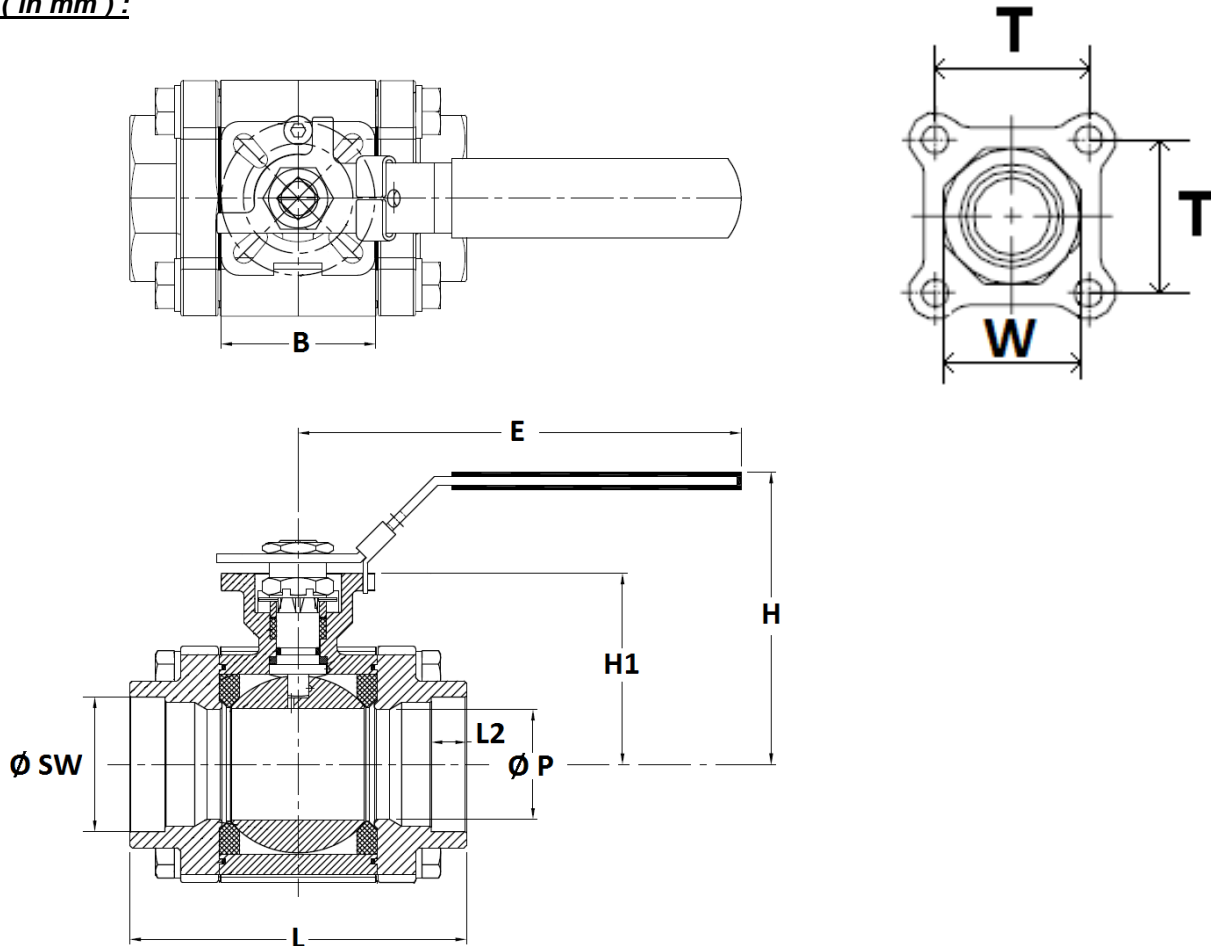


(\* : included in gaskets kit )

Item	Designation	Materials
1	Body	EN 1.0619
4	Ball	ASTM A351 CF8M
5	Stem	AISI 316
9	Ends	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	Plastic
22	Packing nut	AISI 304
23	Handle washer	
24	Handle nut	
28	Locking device	
29	Elastic washer	AISI 301
30	Tab washer	AISI 304
31	O ring	VITON®
32*	Packing follower	PTFE filled with 15% Glass fiber
33	Stop pin	AISI 304
35	Screw	
36	Washer	

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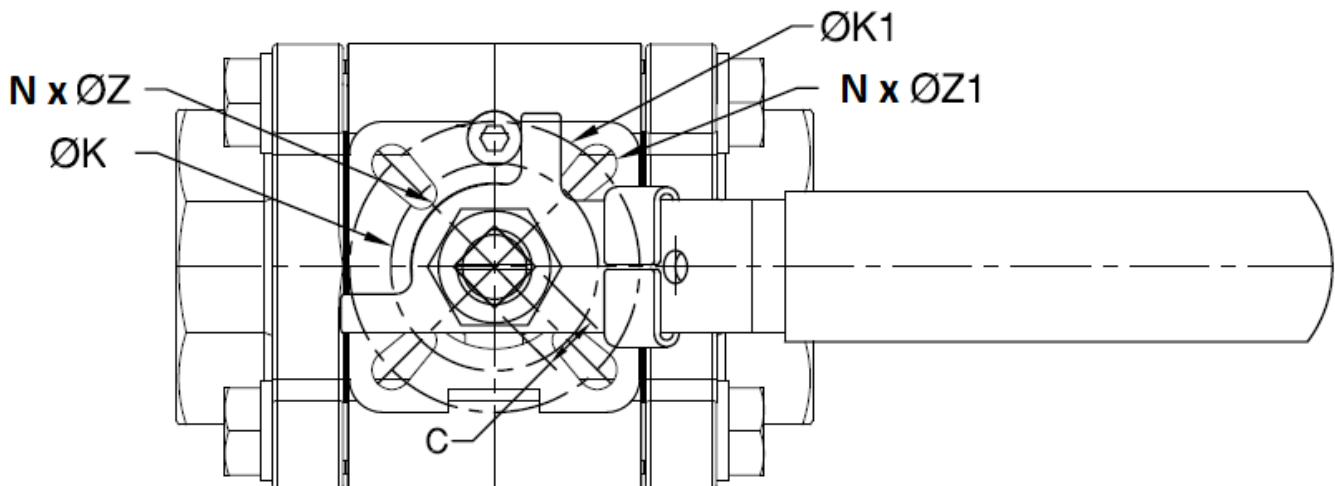
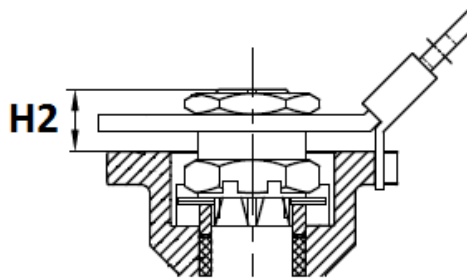
**SIZE ( in mm ) :**



DN	8	10	15	20	25	32	40	50
Ø P	10	10	15	20	25	32	38	50
L	68.8	68.8	72.5	84.2	105,3	111	127,3	153.4
B	24.5	24.5	24.5	31.4	41.3	48.4	56.3	72
L2	10	10	10	13	13	13	13	16
E	131	131	131	131	165	165	200	200
H	71	71	71	74	95	99	124	133
H1	41	41	41	44	58	62.5	78	87
T	35	35	35	41.3	48	56.2	63.6	79.2
W ( on flat )	29.5	29.5	30	36	44.5	54	60	76
Ø SW	14.1	17,6	21.7	27,3	33,9	42,8	48.7	61.3
Weight (in Kg)	0.85	0.85	0.8	1.25	2.1	2.9	4.3	7.9
Ref.	702DM208	702DM210	702DM215	702DM2220	702DM225	702DM232	702DM240	702DM250

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



DN	8	10	15	20	25	32	40	50
H2		9.5			12		14	
C		9			11		14	
Ø K		36			42		50	
ISO		F03			F04		F05	
N x Ø Z		4 x 6			4 x 6		4 x 7.5	
Ø K1		42			50		70	
ISO1		F04			F05		F07	
N x Ø Z1		4 x 6			4 x 7		4 x 9.5	



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**STANDARDS :**

- Manufacturer certified ISO 9001 : 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, CE 0038 or CE 0343 marking
- Certificate 3.1 on request
- Construction according to EN 12516-1 Class 600
- Designing according to ASME B16.34
- Pressure tests according to EN12266-1, rate A
- Fire safe according to ISO 10497:2010 and API 607 6<sup>th</sup>
- S.W. ends according to ASME B16.11 Schedule 40
- ISO 5211 direct 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.