



**REF. 731**

**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

## PRODUCT EVOLUTION



**Be careful, our valves Ref.731 are changing**

**We currently have 2 different types available (according to DN)  
with different dimensions (but same face to face)  
and non-commutable gaskets**

**Old marking :**



**New marking :**



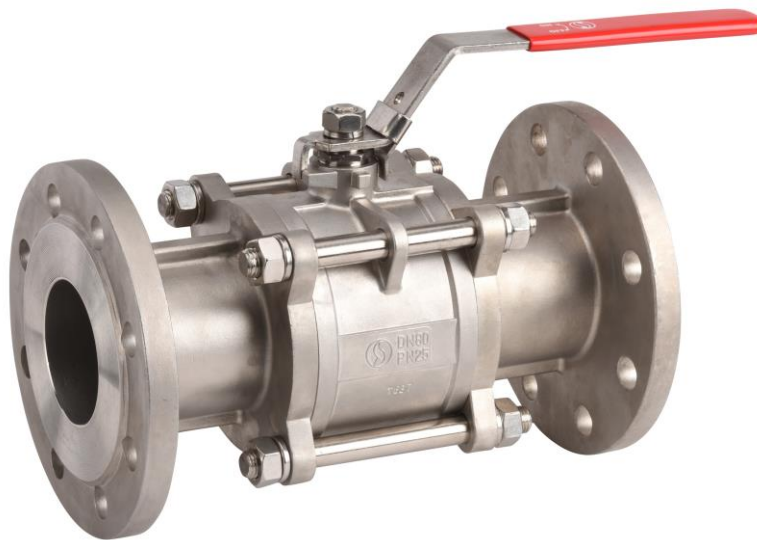
**At the end, only the new type will be available (from page 2 to 10)**



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**NEW**



Lloyd's  
Register  
ISO 9001 : 2015



Lloyd's  
Register  
PED/2014/68/EU



**Certificate 3.1**

**Size :** DN 15 to 100 mm  
**Ends :** Flanges R.F. PN40  
**Min Temperature :** - 20°C  
**Max Temperature :** + 180°C  
**Max Pressure :** 40 Bars  
**Specifications :** 3 pieces type  
PTFE filled with 15% glass fiber seat  
Anti blow-out stem  
Full bore

**Materials :** Stainless steel ASTM A351 CF8M



**REF. 731**

**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

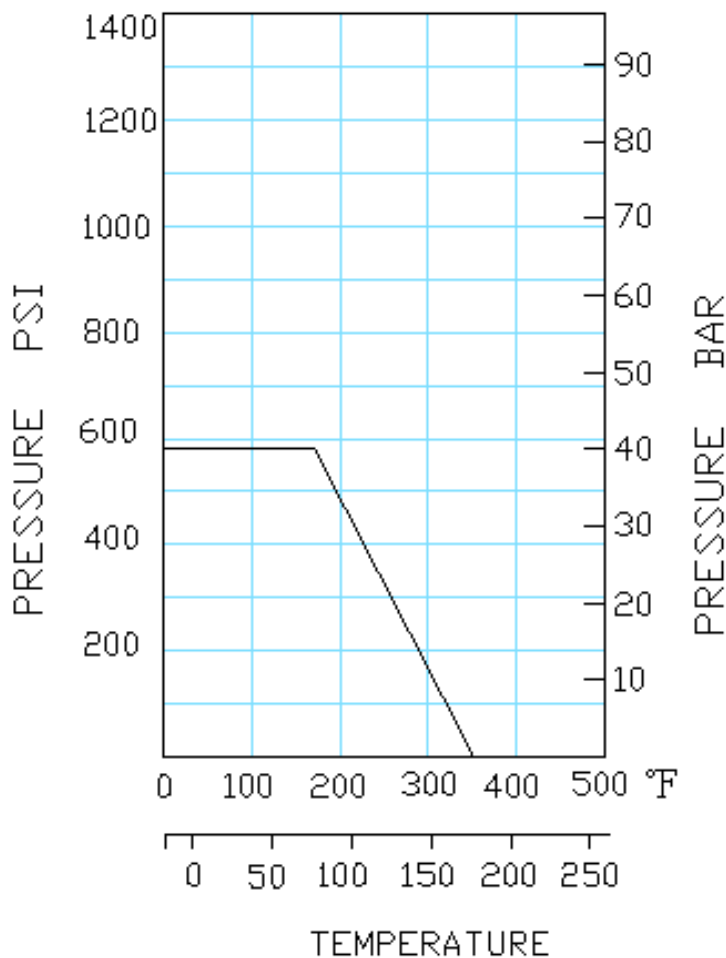
**SPECIFICATIONS :**

- Full bore
- Anti blow-out stem
- PTFE packing
- PTFE filled with 15% glass fiber seat
- Locking device
- 3 pieces type
- PN40 R.F. flanges
- Black phosphated finish, thickness 5 µm

**USE :**

- Compatible with Common fluids of 2<sup>nd</sup> group
- Min and max Temperature Ts : -20°C to + 180°C
- Max Pressure Ps : 40 bars ( see graph )

**PRESSURE / TEMPERATURE GRAPH ( STEAM EXCLUDED ) :**





**REF. 731**

**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

**RANGE :**



- 3 pieces stainless steel ball valve with flanges **Ref. 731** from DN 15 to DN 100



- AISI 304 stem extension **Ref.9810612-9810614** from DN15 to DN50

**ENDS :**

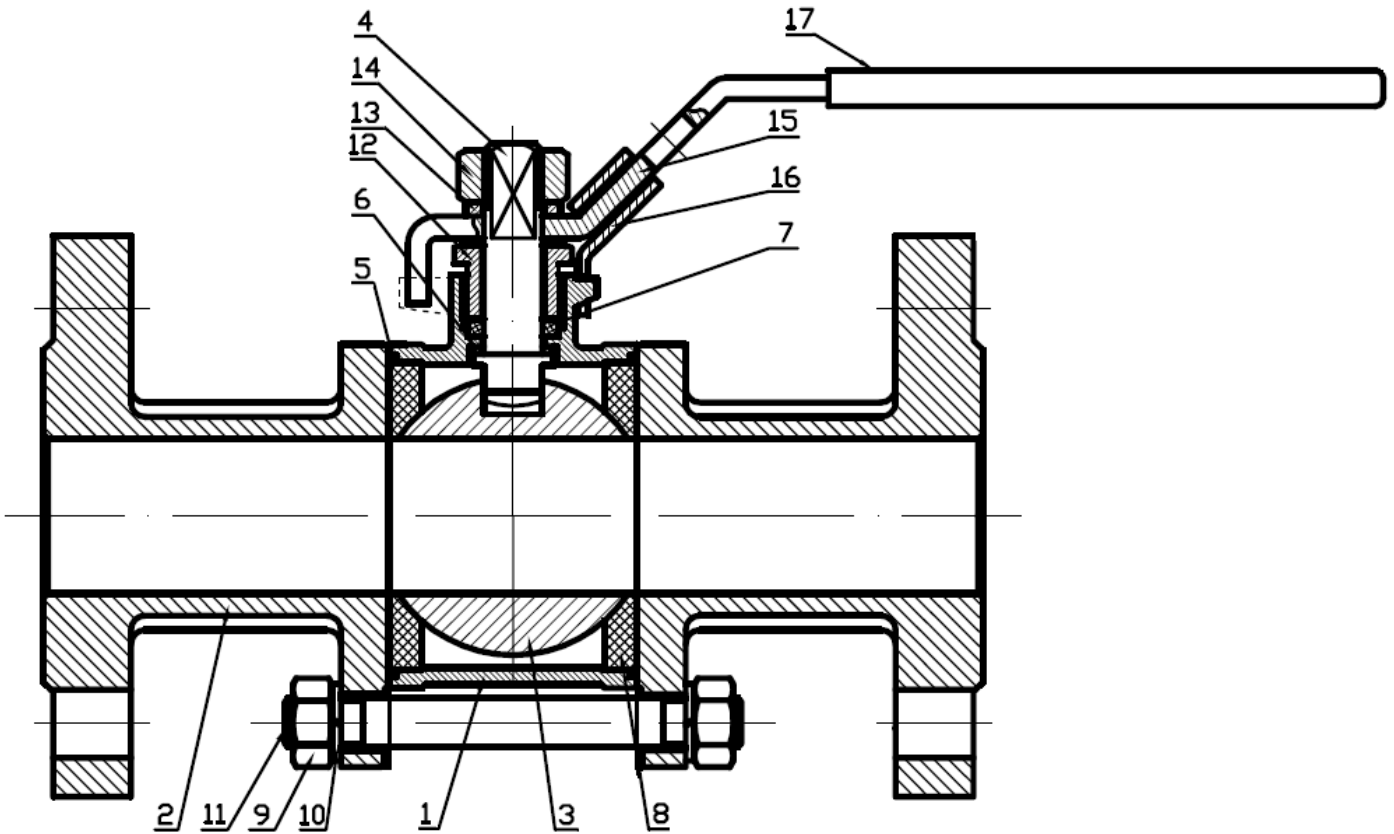
- Flanges R.F. PN40



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**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

**MATERIALS :**



(\* : Included in gaskets kit )

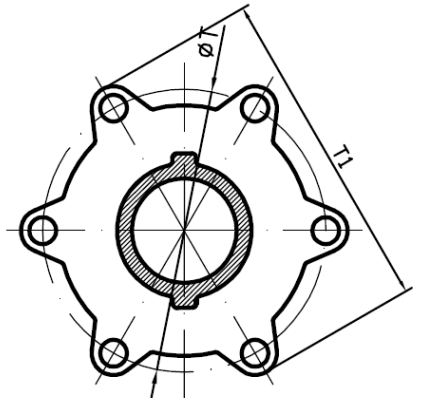
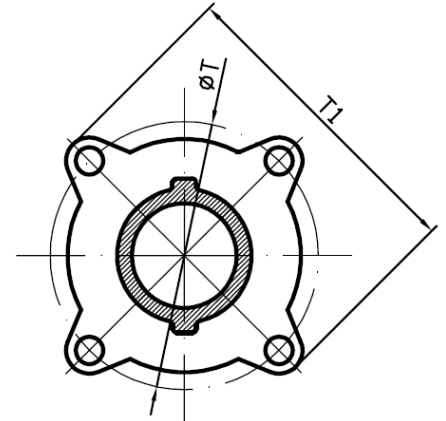
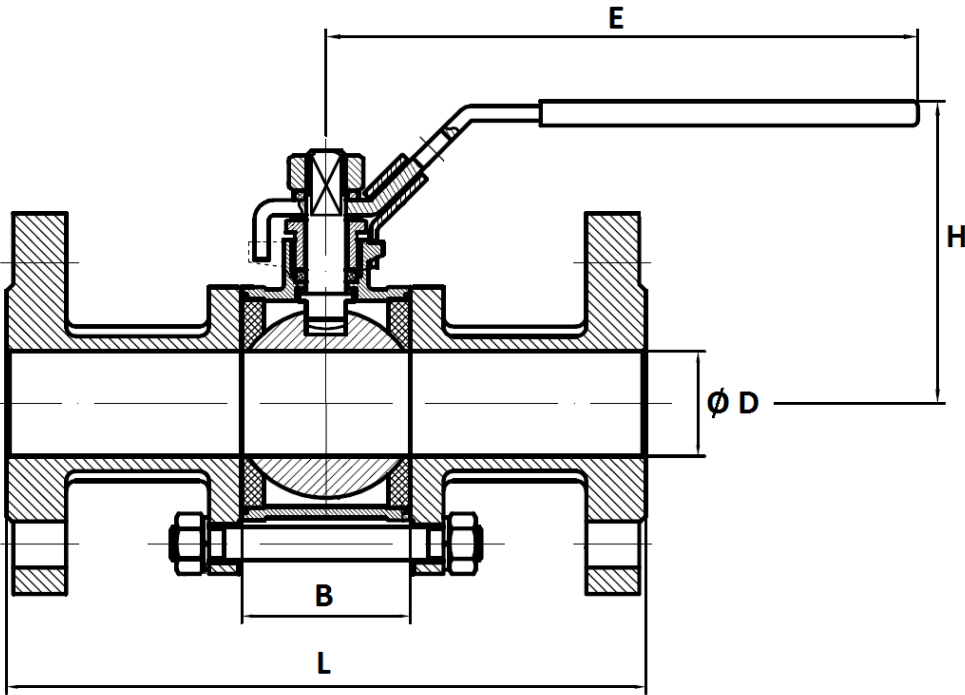
Item	Designation	Materials
1	Body	ASTM A351 CF8M
2	Ends	
3	Ball	
4	Stem	AISI 316
5*	Body gasket	PTFE
6*	Stem gasket	
7*	Packing	
8*	Seat	PTFE filled with 15% glass fiber
9	Nut	AISI 304
10	Washer	
11	Stud	
12	Packing nut	
13	Washer	
14	Handle nut	
15	Handle	
16	Locking device	
17	Handle cover	Plastic



**REF. 731**

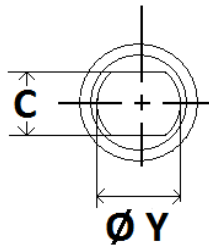
**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

SIZE ( in mm ) :



DN100

Stem size :



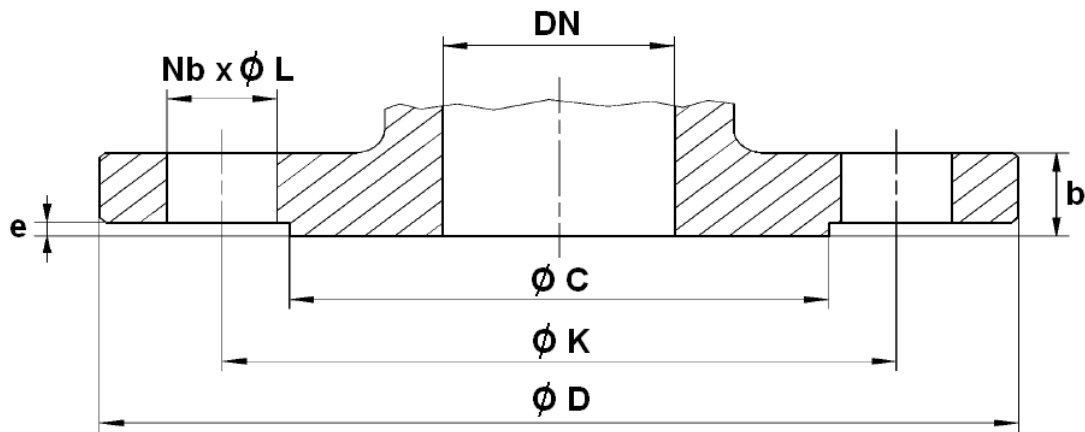
Ref.	DN	15	20	25	32	40	50	65	80	100
731	Ø P	15	20	25	32	38	50	64	76	100
	L	130	150	160	180	200	230	290	310	350
	B	23.3	28.6	34	44	51	63	84.3	94.7	119.2
	E	129	129	143	143	170	170	254	254	320
	H	77	82	92	98	109	120	142	152	176
	C	5	5	6.5	6.5	8.5	8.5	9.8	9.8	16
	Ø Y	M8	M8	M10	M10	M12	M12	M14	M14	M20
	Ø T	43	51.5	58	70	81.5	101	136	157	195.5
	T1	57.5	66	74.5	86.5	100.5	121.5	161	185	226.5
	Weight (Kg)	1.9	2.78	3.51	5.17	6.4	9.22	14.13	20.6	30.71



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**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

FLANGES SIZE ( in mm ):



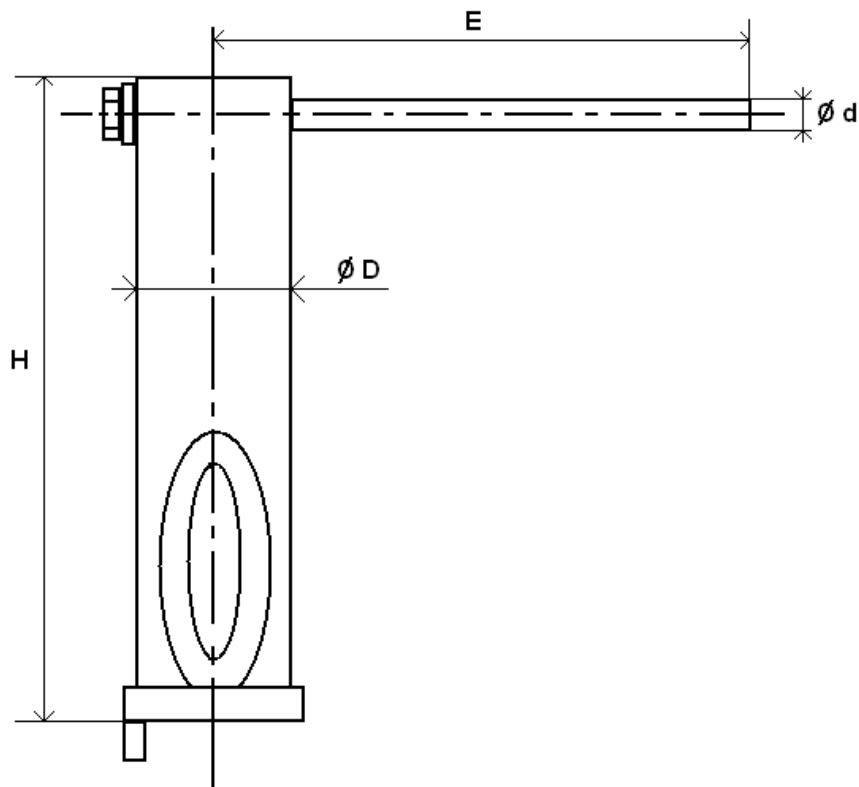
DN	15	20	25	32	40	50	65	80	100
Ø C	45	58	68	78	88	102	122	138	162
Ø D	95	105	115	140	150	165	185	200	235
Ø K	65	75	85	100	110	125	145	160	190
Nb x Ø L	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	4 x 18	8 x 18	8 x 18	8 x 22
b	16	18	18	18	18	20	22	24	24
e	2	2	2	2	2	3	3	3	3



**REF. 731**

**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

STEM EXTENSION SIZE ( in mm ) :



DN	15	20	25	32	40	50
H	126.3		126.3		128	
E	124		157.8		188.5	
Ø D	28		32		36.5	
Ø d	12		14		14	
Poids (en Kg)	0.34		0.48		0.62	
Ref.	9810612		9810613		9810614	





**REF. 731**

**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

**TORQUE VALUES ( in Nm without safety coefficient ) :**

DN	15	20	25	32	40	50	65	80	100
Torque ( Nm )	2.5	3.5	6	7	12	16	40	50	70

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

DN	15	20	25	32	40	50	65	80	100
Torque ( Nm )	15	18	20	20	28	28	35	45	65

**FLOW COEFFICIENT Kvs ( in m3 / h ) :**

DN	15	20	25	32	40	50	65	80	100
Kvs ( m3 / h )	20.7	30.2	40.6	70	90.8	208.4	275.9	501.6	865

**STANDARDS :**

- Fabrication according to ISO 9001 : 2015
- DIRECTIVE 2014/68/EU : CE N° 0038  
Risk category III Module H
- Certificate 3.1 on request
- Pressure tests according to API 598, table 6
- R.F. flanges according to EN 1092-1 PN40
- Length according to EN 558 series 1 ( NF 29355 DIN 3202 F1 )

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



**REF. 731**

## **3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

### **INSTALLATION AND MAINTENANCE**

#### **BEFORE INSTALLATION :**

Pipe-line must be cleaned and free from residual of weldings, rubbish, shaving and every kind of extraneous materials.  
Pipe-line must be perfectly aligned and their support properly dimensioned so that there's no external constraint.

To tighten the ends, use the appropriate tool.  
Use the right bolt tightening so that the ends won't be damaged.

#### **INSTALLATION OF THE CENTRAL PART**

During the installation of the central part, tighten bolts according to the table below. Tighten bolts in cross.

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

DN	15	20	25	32	40	50	65	80	100
Torque ( Nm )	15	18	20	20	28	28	35	45	65

#### **CLEANING AND TESTS**

Keep closed the valves during the cleaning operation so that there's no impurities between the ball and the body.

Tests under pressure must be done with a cleaned pipe-line.

Open partially the valve for tests. Pressure test do not exceed the valve specifications according to API 598.

#### **MAINTENANCE**

It's recommended to operate the valve ( open and close ) 1 to 2 times per year.

When intervention on the valve, be sure there's no pressure in the pipe-line, there's no fluid in it, and that it is isolated.  
The temperature must be low enough to operate without risks.  
If there's a corrosive fluid, inert installation before intervention.

When the valve is under pressure :  
If there's a leakage between the body and the ends, tighten bolts according to the above table

If there's a leakage at the packing, tighten it slightly so that the leakage disappears.

#### **MAINTENANCE OPERATION IN WORKSHOP**

##### **REPLACEMENT OF SEAT GASKETS AND PACKING.**

The central part must be removed.

Turn the ball at 45° and removed the seat gaskets.

Operate the valve in closed position to removed the ball. Verify the surface of the ball has no impacts and no scores.

If there are important scores or impacts, replace the ball.

Clean inside the body valve and remove the impurities.

To replace the packing, remove the handle, unscrew the gland nut, extract the stem by the inside of the valve.

Clean the packing seat.

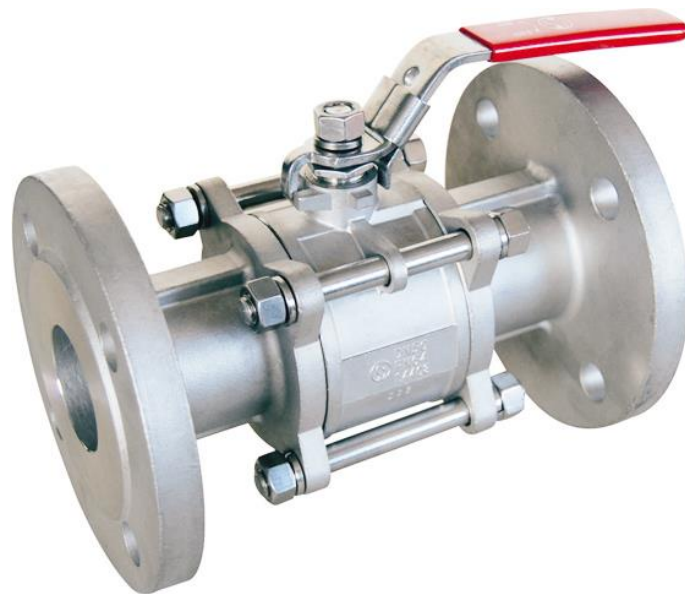
Reassemble thrust washer on stem, introduce stem by the inside of the valve, reassemble packing with packing nut, reassemble hand washer, hand nut and the handle.

Turn stem in closed position and insert the ball.

Then turn the ball in opened position and reassemble the seat.

Place the valve on the installation, tighten bolts according to the above table.

Then proceed to the tests in the same way that the first installation.

**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

**Size :** DN 15 to 100 mm  
**Ends :** Flanges R.F. PN40  
**Min Temperature :** - 20°C  
**Max Temperature :** + 180°C  
**Max Pressure :** 40 Bars  
**Specifications :** 3 pieces type  
PTFE filled with 15% glass fiber seat  
Anti blow-out stem  
Full bore

**Materials :** Stainless steel ASTM A351 CF8M



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**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

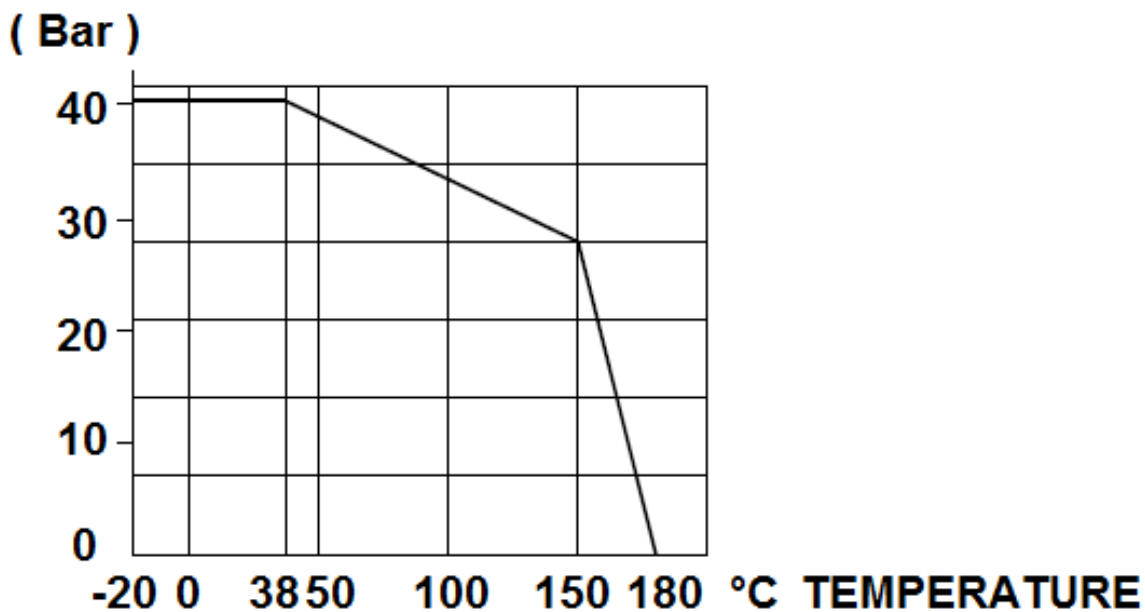
**SPECIFICATIONS :**

- Full bore
- Anti blow-out stem
- PTFE packing
- PTFE filled with 15% glass fiber seat
- Locking device
- 3 pieces type
- PN40 R.F. flanges

**USE :**

- Chemical and pharmaceutical industries, petrochemical industries, hydraulic installation, compressed air
- Min and max Temperature Ts : -20°C to + 180°C
- Max Pressure Ps : 40 bars ( see graph )

**PRESSURE / TEMPERATURE GRAPH ( STEAM EXCLUDED ) :**





**REF. 731**

**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

**RANGE :**



- 3 pieces stainless steel ball valve with flanges **Ref. 731** from DN 15 to DN 100



- SS304 stem extension **Ref.9810601-9810604** from DN15 to DN50



- Blue handle cover **Ref. 9830444-9830448** from DN15 to DN100

**ENDS :**

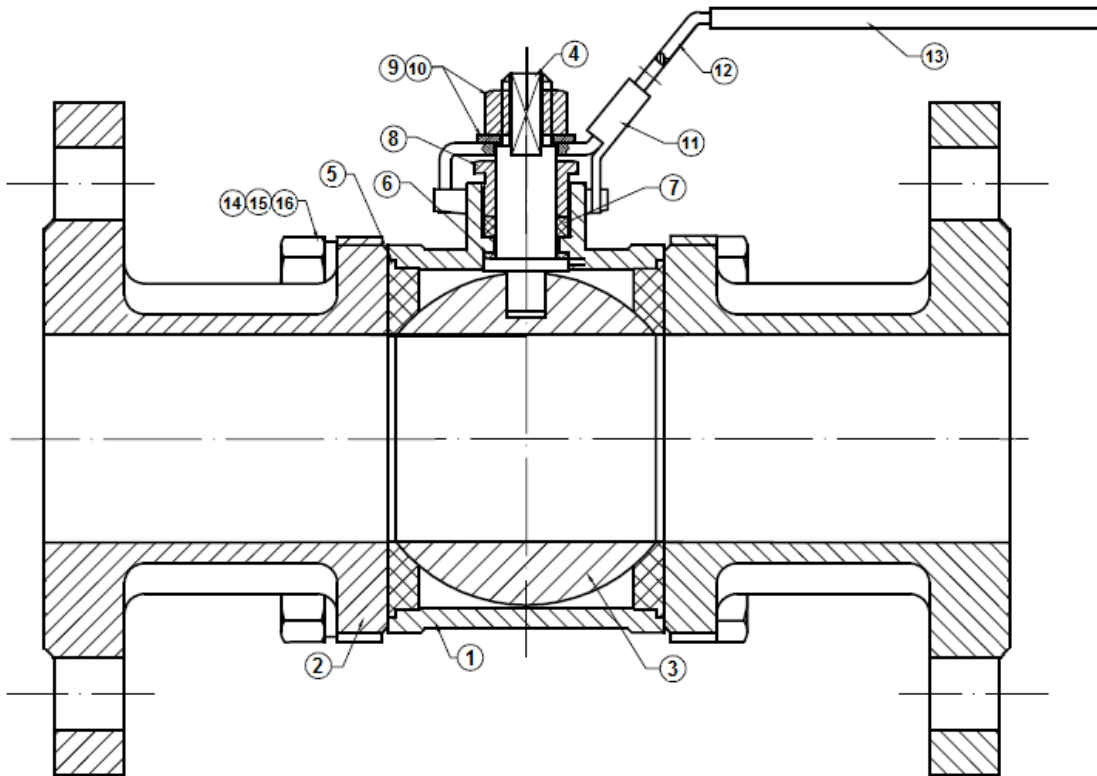
- Flanges R.F. PN40



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**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

**MATERIALS :**



( \* : Included in gaskets kit )

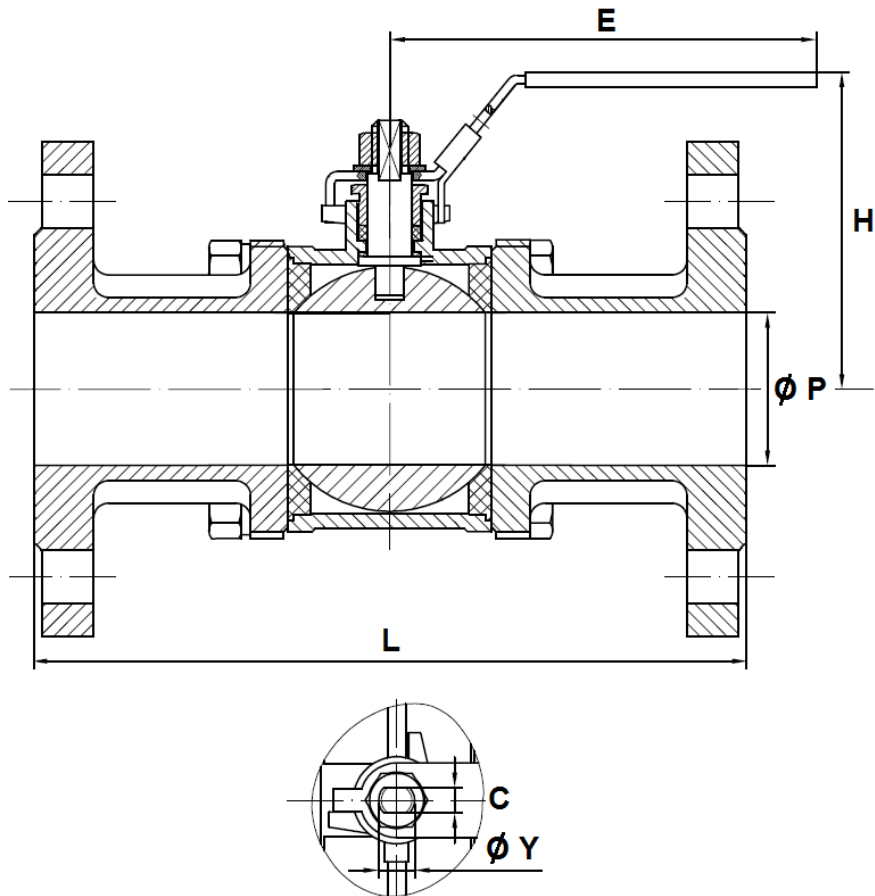
Item	Designation	Materials
1	Body	ASTM A351 CF8M
2	Ends	
3	Ball	
4	Stem	SS 316
5*	Seat	PTFE filled with 15% glass fiber
6*	Ring	PTFE
7*	Packing	PTFE
8	Packing gland	SS 304
9	Handle nut	SS 304
10	Handle washer	SS 304
11	Locking device	SS 304
12	Handle	SS 304
13	Handle cover	PVC
14	Bolt	SS 304
15	Nut	SS 304
16	Washer	SS 304



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**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

SIZE ( in mm ) :



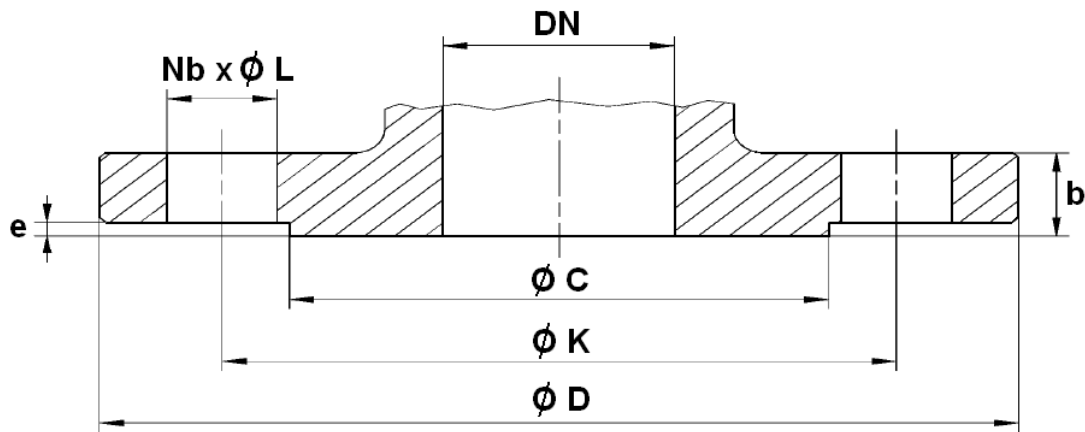
DN	15	20	25	32	40	50	65	80	100
Ø P	15	20	25	32	38	50	65	80	100
L	130	150	160	180	200	230	290	310	350
E	129	129	143	143	170	170	254	254	335
H	83	88	89	98	109	120	152	164	170
C	5	5	6.5	6.5	8.5	8.5	9.8	9.8	16
Ø Y	M8	M8	M10	M10	M12	M12	M14	M14	M20
Weight ( Kg )	2	2.76	3.58	5.23	6.55	9.62	15.40	20.35	34.20



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**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

FLANGES SIZE ( in mm ) :



DN	15	20	25	32	40	50	65	80	100
Ø C	45	58	68	78	88	102	122	138	162
Ø D	95	105	115	140	150	165	185	200	235
Ø K	65	75	85	100	110	125	145	160	190
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	8 x 18	8 x 22
b	16	18	18	18	18	20	22	24	24
e	2	2	2	2	3	3	3	3	3

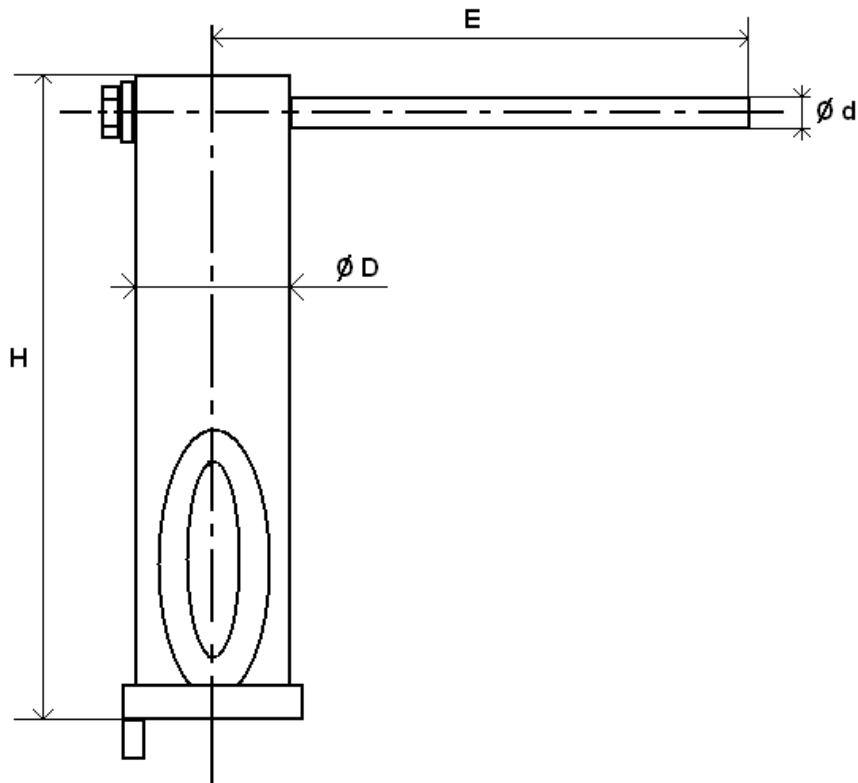




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**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

STEM EXTENSION SIZE ( in mm ) :



DN	15	20	25	32	40	50
H	125.5	125.5	125.5	125.5	127.5	127.5
E	125	125	158	158	190	190
Ø D	28	28	32	32	36	36
Ø d	12	12	14	14	14	14
Weight (Kg)	0.3	0.3	0.4	0.4	0.6	0.6
Ref.	9810602	9810602	9810603	9810603	9810604	9810604



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**3 PIECES STAINLESS STEEL BALL VALVE FLANGED PN40 INITIAL RANGE**

**FLOW COEFFICIENT Kvs ( in m<sup>3</sup> / h ) :**

DN	15	20	25	32	40	50	65	80	100
Kvs ( m <sup>3</sup> / h )	28.46	50.70	79.20	128	183	316.6	535.60	811	1267.70

**TORQUE VALUES ( in Nm without safety coefficient ) :**

DN	15	20	25	32	40	50	65	80	100
Torque ( Nm )	5	8	12.5	17	21	30	45	70	100

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

DN	15	20	25	32	40	50	65	80	100
Torque ( Nm )	8	8	10	13	20	20	35	45	65

**STANDARDS :**

- Fabrication according to ISO 9001 : 2008
- DIRECTIVE 97/23/CE : CE N° 0035  
Risk category III Module H
- Pressure tests according to API 598-04, table 6
- R.F. flanges according to EN 1092-1 PN40
- Length according to EN 558 series 1 ( NF 29355 DIN 3202 F1 )

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### **INSTALLATION AND MAINTENANCE**

#### **BEFORE INSTALLATION :**

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Pipe-line must be perfectly aligned and their support properly dimensioned so that there's no external constraint.

To tighten the ends, use the appropriate tool.  
Use the right bolt tightening so that the ends won't be damaged.

#### **INSTALLATION OF THE CENTRAL PART**

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

DN	15	20	25	32	40	50	65	80	100
Torque ( Nm )	8	8	10	13	20	20	35	45	65

#### **CLEANING AND TESTS**

Keep closed the valves during the cleaning operation so that there's no impurities between the ball and the body.

Tests under pressure must be done with a cleaned pipe-line.

Open partially the valve for tests. Pressure test do not exceed the valve specifications according to API 598.

#### **MAINTENANCE**

It's recommended to operate the valve ( open and close ) 1 to 2 times per year.

When intervention on the valve, be sure there's no pressure in the pipe-line, there's no fluid in it, and that it is isolated.  
The temperature must be low enough to operate without risks.  
If there's a corrosive fluid, inert installation before intervention.

When the valve is under pressure :  
If there's a leakage between the body and the ends, tighten bolts according to the above table

If there's a leakage at the packing, tighten it slightly so that the leakage disappears.

#### **MAINTENANCE OPERATION IN WORKSHOP**

##### **REPLACEMENT OF SEAT GASKETS AND PACKING.**

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Turn the ball at 45° and removed the seat gaskets.

Operate the valve in closed position to removed the ball. Verify the surface of the ball has no impacts and no scores.

If there are important scores or impacts, replace the ball.

Clean inside the body valve and remove the impurities.

To replace the packing, remove the handle, unscrew the gland nut, extract the stem by the inside of the valve.

Clean the packing seat.

Reassemble thrust washer on stem, introduce stem by the inside of the valve, reassemble packing with packing nut, reassemble hand washer, hand nut and the handle.

Turn stem in closed position and insert the ball.

Then turn the ball in opened position and reassemble the seat.

Place the valve on the installation, tighten bolts according to the above table.

Then proceed to the tests in the same way that the first installation.