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# BALL VALVES



**ITE.**  
INDUSTRIAL TECHNICAL EQUIPMENT

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## INTRODUCTION



I.T.E. is an Italian company established in 1998 from the merge between 2 companies, one specialized in trading and one in machining activities, both operating in the Oil & Gas field since 1980. I.T.E. is one of the largest Italian and European manufacturers of valves and fittings for the installation of industrial instruments, mainly in O&G and Energy sectors, with a huge production of: **Needle Valves, Instrument Manifolds, Ball Valves, Pots & Siphons, Compression Fittings, Check Valves, Forged Globe Needle Valves, Adapters/Fittings, Fire Sensors, Sampling Systems, Protection Boxes.**

I.T.E. is specialized also on tailor-made solutions, on request complete packages can be provided to meet customer's needs.

I.T.E. is a flexible and customer oriented company, the manufacturing plant is equipped with different CNC machines, automatic welding machines and an automatic warehouse with different semi-finished standard products, this structure allows us to be reliable partner with a fast response to the customer needs.

**I.T.E. products are 100% engineered, manufactured, assembled and tested in Italy, all the products have the traceability system so that we are able to provide the best assistance to customers also specially during maintenance activities providing the right product/component.**



**FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

This document and other information from I.T.E. s.r.l., its authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by I.T.E. s.r.l. and its subsidiaries at any time without notice.

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# FEATURES

Across years of experience in instrumentation sector and increasing its know-how, today I.T.E. is able to offer a wide range of manual ball valves and accessories for several application and sector. All products shown on this catalogue are available with integral compression ends (performance system improved, safety factors, size and weight reduction). R&D dept. is constantly committed to refining and improving the quality of the products.

## STANDARD FEATURES

Manufactured from high integrity, certified barstock material.

Available in 2 configurations: Female x Female or Male x Female

Compact overall length, reduced weight.

Wetted parts according to NACE MR.0175/MR.0103 as standard.

Shell test and seat leakage test are performed according to API 598 and ASME B16.34 (1.5 of max rating pressure).

Certificate 3.1 certificate according to EN 10 204 on valve body material.

## DESIGN FEATURES

Bi-directional floating ball design to ensure leak-proof shut-off on pressure or vacuum.

Temperature rating -50°C to 230°C.

Anti-blow-out internally loaded stem for safety.

Smooth low torque 90° operation.

Handle indicates open / closed position at a glance.

Bore sizes from 10mm up to 25mm

## MATERIAL

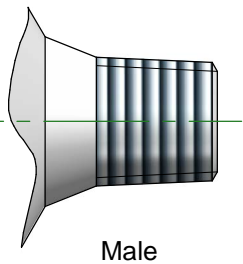
MATERIAL GROUP	I.T.E. DESIGNATION	ASTM	UNS	AVAILABILITY ON STOCK
Stainless Steel	316/316L	316/316L	S31600	YES
	6Mo		N08367	ON REQUEST
Ferritic Stainless Steel	Duplex	F51	S31803	YES
	Superduplex	F55	S32750	YES
Carbon Steel	LF2	LF2		ON REQUEST
	A105	A105		ON REQUEST
Alloy	Alloy 400		N04400	YES
	Alloy C276		N10276	ON REQUEST
	Alloy 625		N06625	ON REQUEST
	Alloy 825		N08825	ON REQUEST
Titanium	Ti Gr.2		R50400	ON REQUEST



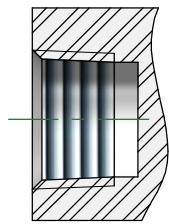
# CONNECTIONS

I.T.E. manufactures a lot of different connections and combinations. Below are some of the most used. If you don't find your option please contact us.

## TAPERED PIPE THREADS



Male

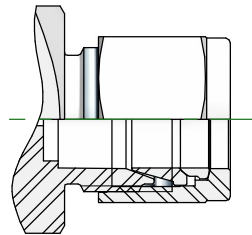


Female

NPT threads acc. to ASME B 1.20.1

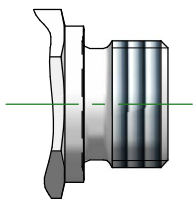
BSPT threads acc. to ISO 7/1

## TWIN FERRULE TUBE FITTINGS

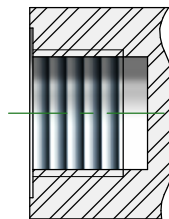


The direct pipe connection is available in both metric and inch sizes. All components are made by I.T.E. s.r.l.

## PARALLEL PIPE THREADS (1) (2)



Male

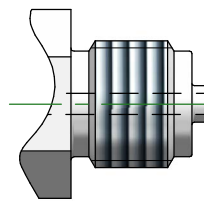


Female

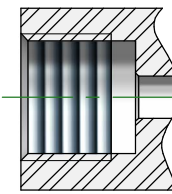
BSPP threads acc. to ISO 228-1  
ISO 1179-1

Metric threads acc. to ISO 261

## PARALLEL PIPE THREADS - GAUGE CONN. (1)



Male

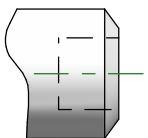


Female

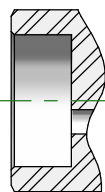
G Threads acc. to ISO 228-1  
EN 837-1

Metric threads acc. to ISO 261

## WELD ENDS



Male



Female

Butt weld (male) acc. to ASME B16.9

Socket Weld (female) acc. to ASME B16.11

## NOTE

(1) Cylindrical connection for fittings hydraulic or gas applications. The seal between male and female is made by metal to metal contact between two parallel surfaces.

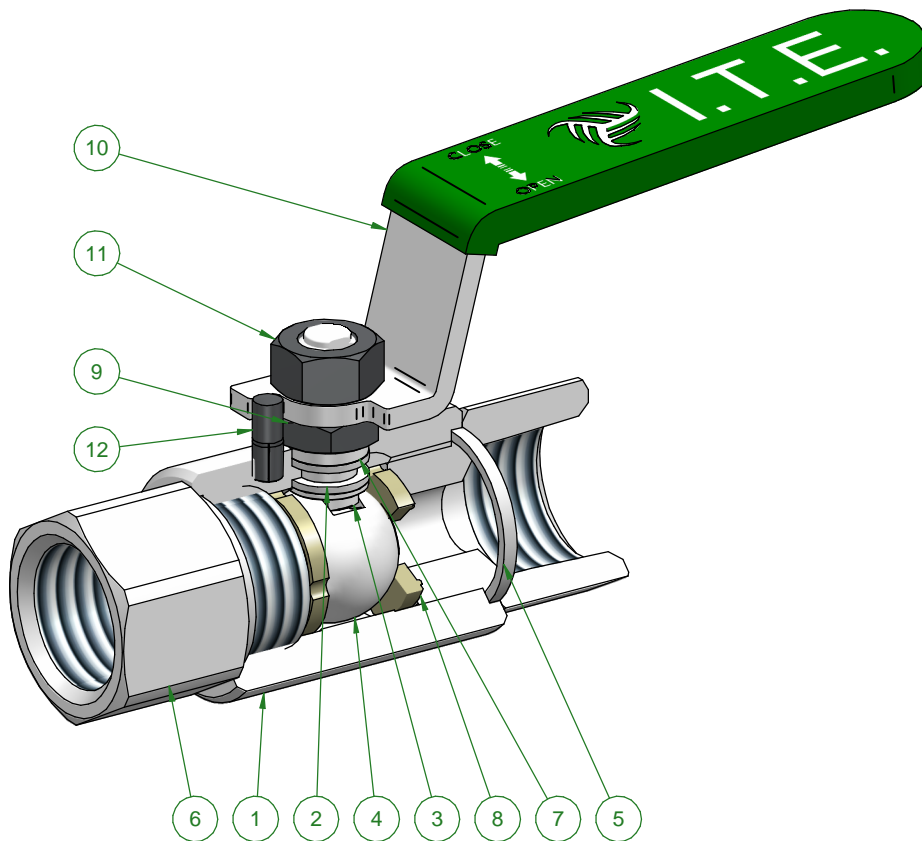
(2) Pressure connection for use with pressure gauges. The end can be fixed or rotatable according to the needs of use. The seal is carried out by means of a flat gasket placed at the bottom of the female thread.

Size from 1/8" to 1"  
Metric size: M20 x 1.5



# BVSB VALVE

BVSB is a bar-stock 3 pieces design ball valve. It has a flexible design available in many configurations and ratings (6.000 psi as standard, up to 10.000 psi) *We are showing on this page just the standard types.*



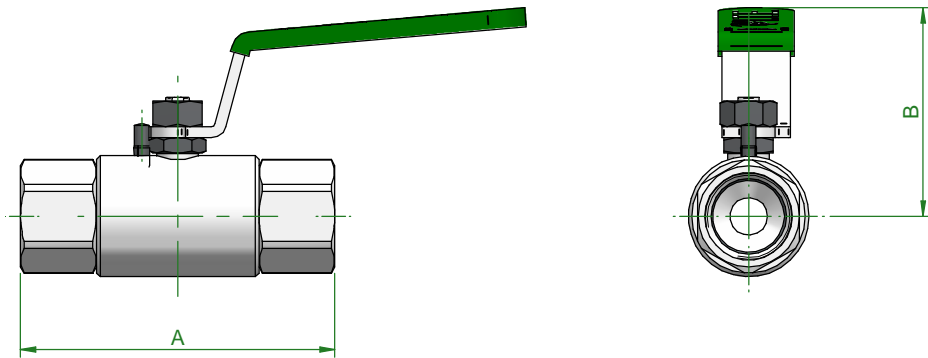
POS.	DESCRIPTION	MATERIAL	QTY
1	BODY	AISI 316L	1
2	STEM GASKET	PTFE	2
3	STEM	AISI 316L	1
4	BALL	AISI 316L	1
5	CLOSURE GASKET	PTFE	2
6	CLOSURE	AISI 316L	2
7	STEM WASHER	AISI 316L	1
8	BALL SEAT	PEEK	2
9	HEXAGONAL NUT	A2	1
10	HANDLE	AISI 304	1
11	HEXAGONAL NUT	A2	1
12	PIN	A2	1



# BVSB VALVE

VALVE FEATURES	
Series	BVSB
Bore Size mm (inch)	Ø 10 (0.39")
Basic Design	3 Piece Body Design
	Anti-Blow -Out Stem
	Floating Ball Design – Bi-Directional
	Low Operating Torque
Body Shape	Rounds
Seat Material / max. allowable (Working) Pressure (PS) bar (psi)	Reinforced PTFE 420 (6,092)
	PEEK 420 (6,092)
Stem Seat Material	PTFE or Graphite

VALVE MATERIAL								
COMPONENTS	CARBON STEEL	STAINLESS STEEL	EXOTIC ALLOYS					
Body	LF2 / A105	316 / 316L	Alloy 400	Alloy C-276	Duplex	Superduplex	Alloy 625	6Mo
Closure								
Ball	316 / 316L	316 / 316L	Alloy 400	Alloy C-276	Duplex	Superduplex	Alloy 625	6Mo
Stem								
Ball Seat	PEEK, Reinforced PTFE							
Closure Gasket	PTFE							
Stem Gasket	PTFE							
Stem Washer	316 / 316L							
Hexagonal Nut	A2							
Handle	304 / 316 / 316L							
Handle Grip	Vinyl							
Pin	A2							



VALVE DIMENSIONS					
DN	1/4"	3/8"	1/2"	3/4"	1"
A	77	77	77	135	135
B	71	71	71	102	102

**BALL VALVE OPTIONS:**

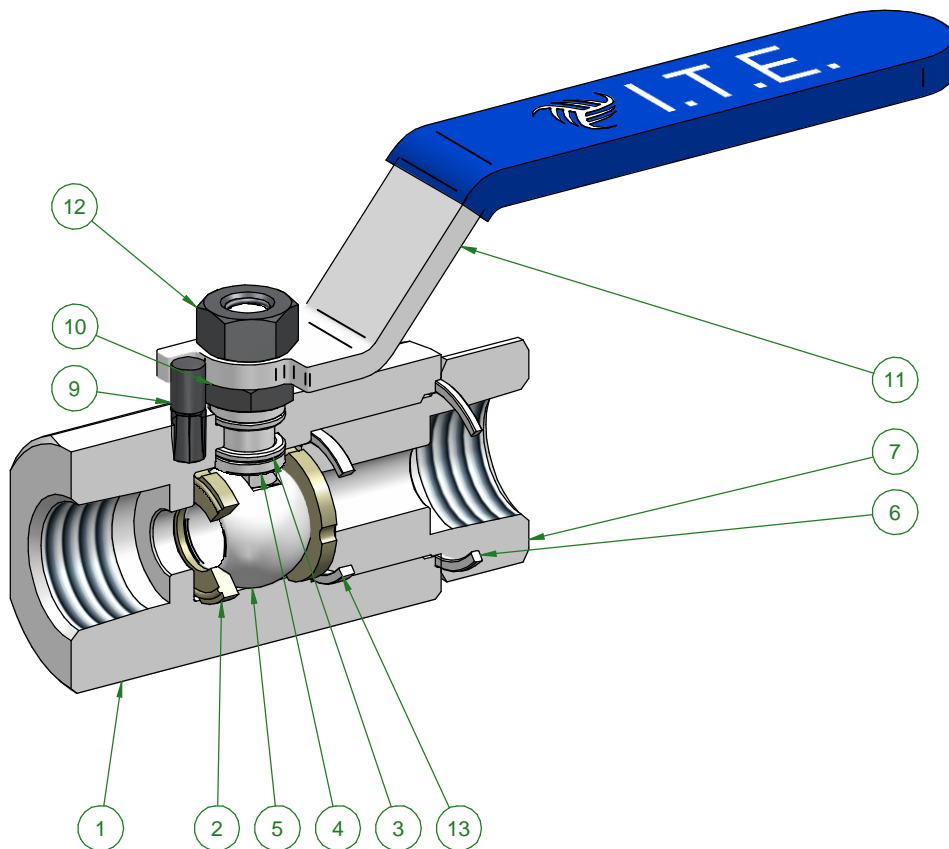
- Lockable Handle
- Male/Female





# B2C VALVE

B2C is two pieces design bi-directional ball valve suitable up to 10.000 psi. It guarantees 100% bubble tight shut off and it is used in various sector of applications such as oil and gas and process control instruments. **Two pieces body constructions offers body leakage paths reduced to a minimum.** It has a flexible design available in many configurations and ratings. *We are showing on this page just the standard types.*



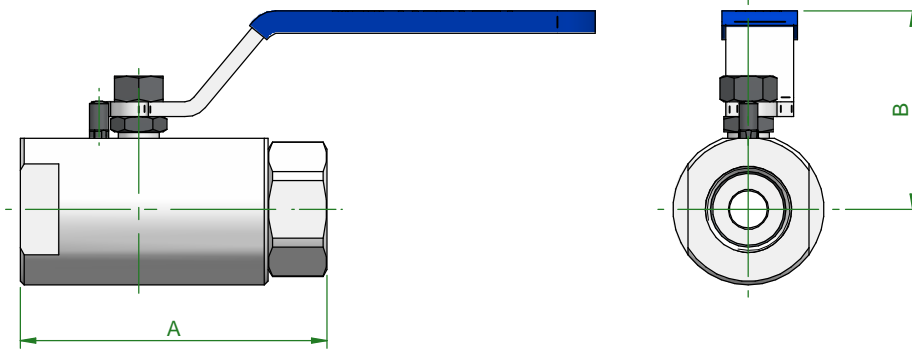
POS.	DESCRIPTION	MATERIAL	QTY
1	BODY	AISI 316L	1
2	BALL SEAT	PEEK	2
3	STEM GASKET	PEEK	2
4	STEM	AISI 316L	1
5	BALL	AISI 316L	1
6	CLOSURE GASKET	PTFE	1
7	CLOSURE	AISI 316L	1
8*	STEM WASHER	AISI 316L	1
9	PIN	A2	1
10	HEXAGONAL	A2	1
11	HANDLE	AISI 316L	1
12	HEXAGONAL	A4	1
13	GASKET	PTFE	1



# B2C VALVE

VALVE FEATURES	
Series	B2C
Bore Size mm (inch)	Ø 10 (0.39") Ø 14 (0.55") Ø 19 (0.74")
Basic Design	2 Piece Body Design
	Anti-Blow -Out Stem
	Floating Ball Design – Bi-Directional
	Low Operating Torque
Body Shape	Rounds
Seat Material / max. allowable (Working) Pressure (PS) bar (psi)	Reinforced PTFE 420 (6,092)
	PEEK 420 (6,092)
	PEEK 689 (10000)
Stem Seat Material	PTFE or Graphite

VALVE MATERIAL								
COMPONENTS	CARBON STEEL	STAINLESS STEEL	EXOTIC ALLOYS					
Body	LF2 / A105	316 / 316L	Alloy 400	Alloy C-276	Duplex	Superduplex	Alloy 625	6Mo
Closure								
Ball	316 / 316L	316 / 316L	Alloy 400	Alloy C-276	Duplex	Superduplex	Alloy 625	6Mo
Stem								
Ball Seat	PEEK, Reinforced PTFE							
Closure Gasket	PTFE							
Stem Gasket	PTFE							
Stem Washer	316 / 316L							
Hexagonal Nut	A2							
Handle	304 / 316 / 316L							
Handle Grip	Vinyl							
Pin	A2							



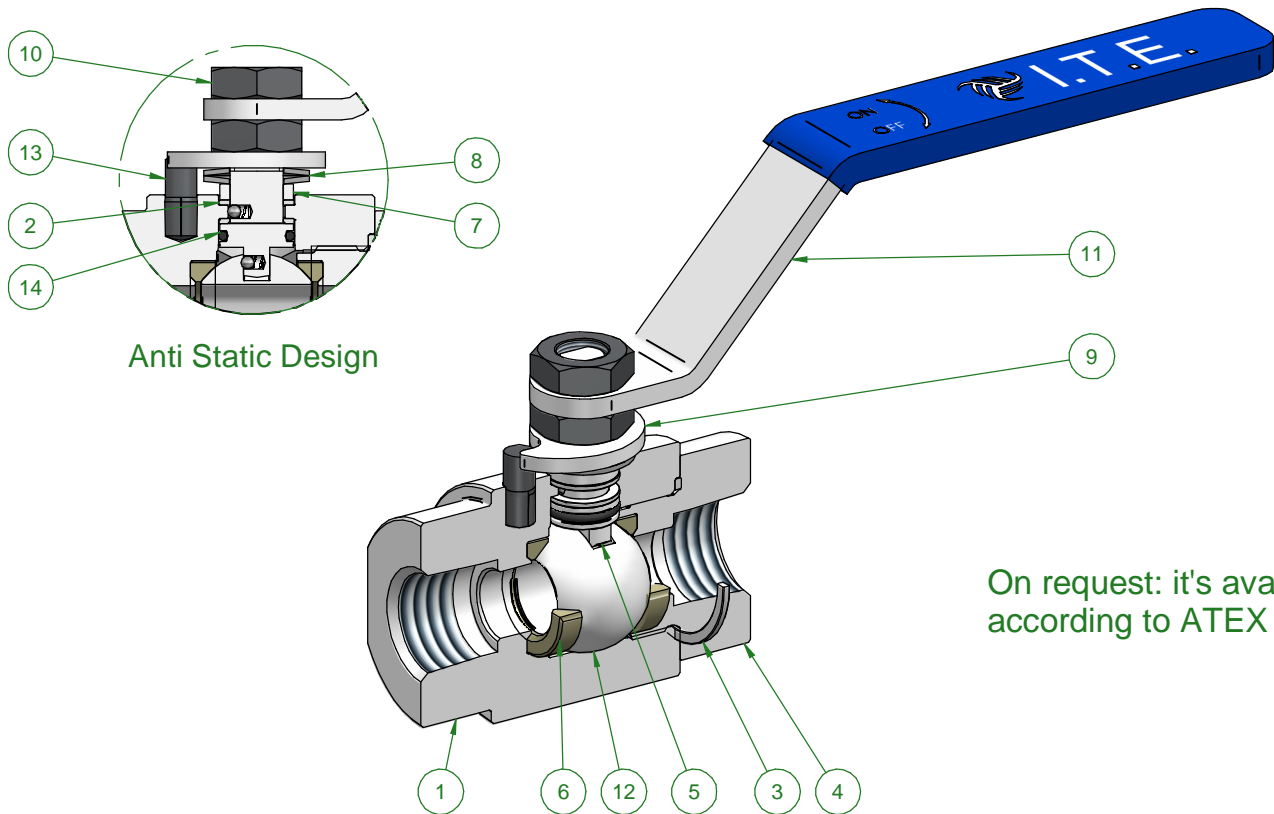
VALVE DIMENSIONS					
DN	1/4"	3/8"	1/2"	3/4"	1"
BORE	Ø 10 (0.39")	Ø 10 (0.39")	Ø 10 (0.39")	Ø 19 (0,74")	Ø 19 (0,74")
A	72	81	81	106	111
B	53	53	53	53	66

- BALL VALVE OPTIONS:**
- Lockable Handle
  - Male/Female



# BVS VALVE

BVS is two pieces design bi-directional ball valve suitable up to 10.000 psi. It guarantees 100% bubble tight shut off and it is used in various sector of applications such as oil and gas and process control instruments. **Two pieces body constructions offers body leakage paths reduced to a minimum.** It has a flexible design available in many configurations and ratings. *We are showing on this page just the standard types.*



On request: it's available according to ATEX

POS.	DESCRIPTION	MATERIAL	QTY
1	BODY	AISI 316L	1
2	STEM GASKET	PTFE 25% GLASS FILLED	2
3	CLOSURE GASKET	PTFE 25% GLASS FILLED	1
4	CLOSURE	AISI 316L	1
5	ANTI-STATIC STEM	AISI 316L	1
6	BALL SEAT	PTFE 25% GLASS FILLED	2
7	STEM WASHER	AISI 316L	1
8	DISC SPRING	AISI 301	2
9	POSITIONER	AISI 316L	1
10	HEXAGONAL NUT	A2	2
11	HANDLE	AISI 316L	1
12	BALL	AISI 316L	1
13	PIN	A2	1
14	O-RING	VITON	1



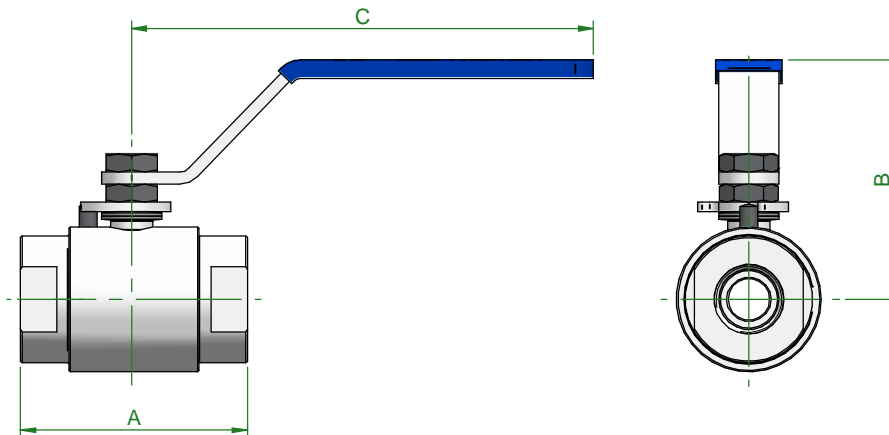
# BVS VALVES

## VALVE FEATURES

Series	BVS
Bore Size mm (inch)	Ø 10 (0.39") Ø 14 (0.55") Ø 19 (0.74") Ø 24 (0.94")
Basic Design	2 Piece Body Design
	Anti-Blow -Out / Anti-Static Stem
	Floating Ball Design – Bi-Directional
	Low Operating Torque
Body Shape	Rounds
Seat Material / max. allowable (Working) Pressure (PS) bar (psi)	Reinforced PTFE 420 (6,092)
	PEEK 420 (6,092)
	PEEK 689 (10000)
Stem Seat Material	PTFE or Graphite

## VALVE MATERIAL

COMPONENTS	CARBON STEEL	STAINLESS STEEL	EXOTIC ALLOYS					
Body	LF2 / A105	316 / 316L	Alloy 400	Alloy C-276	Duplex	Superduplex	Alloy 625	6Mo
Closure								
Ball	316 / 316L	316 / 316L	Alloy 400	Alloy C-276	Duplex	Superduplex	Alloy 625	6Mo
Stem								
Ball Seat	PEEK, Reinforced PTFE							
Closure Gasket	Reinforced PTFE							
Stem Gasket	Reinforced PTFE							
Stem Washer	316 / 316L							
Hexagonal Nut	A2							
Handle	304 / 316 / 316L							
Handle Grip	Vinyl							
Pin	A2							



## VALVE DIMENSIONS

DN	1/4"	3/8"	1/2"	3/4"	1"
<b>BORE</b>	Ø 10 (0.39")	Ø 10 (0.39")	Ø 14 (0.55")	Ø 19 (0.74")	Ø 24 (0.94")
<b>A</b>	75	75	75	85	95
<b>B</b>	75	75	75	80	85
<b>C</b>	145	145	145	180	180

### BALL VALVE OPTIONS:

- Lockable Handle
- Male/Female



# BALL VALVES - HOW TO ORDER

**B 2 C - 0 6 B S P 8 N**

## MODEL

BVSB 1/4" Turn Ball Valve - 3 Pieces  
 B2C 1/4" Turn Ball Valve - 2 Pieces  
 BVS 1/4" Turn Ball Valve - 2 Pieces

## RATING

03 Series 3.000 PSI  
 06 Series 6.000 PSI  
 10 Series 10.000 PSI

## BORE

A Full Bore  
 B Reduce Bore

## MATERIAL

S Aisi 316L	F Alloy 400
A A105	G Alloy C276
D Duplex F51	H 6 Mo/F44
E Super Duplex F55	I Alloy 625

## PACKING

T Teflon  
 P Peek  
 K Kel-F

## I/O CONNECTION

4 1/4"	12 3/4"
6 3/8"	16 1"
8 1/2"	

## THREAD

N NPT	K BSPT R/RC (ISO 7)
B Butt Weld	I BSPP GAS (ISO 1179)
S Socket Weld	R BSPP GAS (EN 837-1) - Gauge connection
T O.D. Compression	

## OPTIONS

/	
C Special testing	PM Panel mounting
D Custom marking	MF Male/Female
K Locking device with padlock	MM Male/Male
L Lox cleaning	

Attention - Above guideline shows all possible product configuration. Tailor-made solutions must be evaluated and approved by ITE technical dept before accepting and processing your order




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