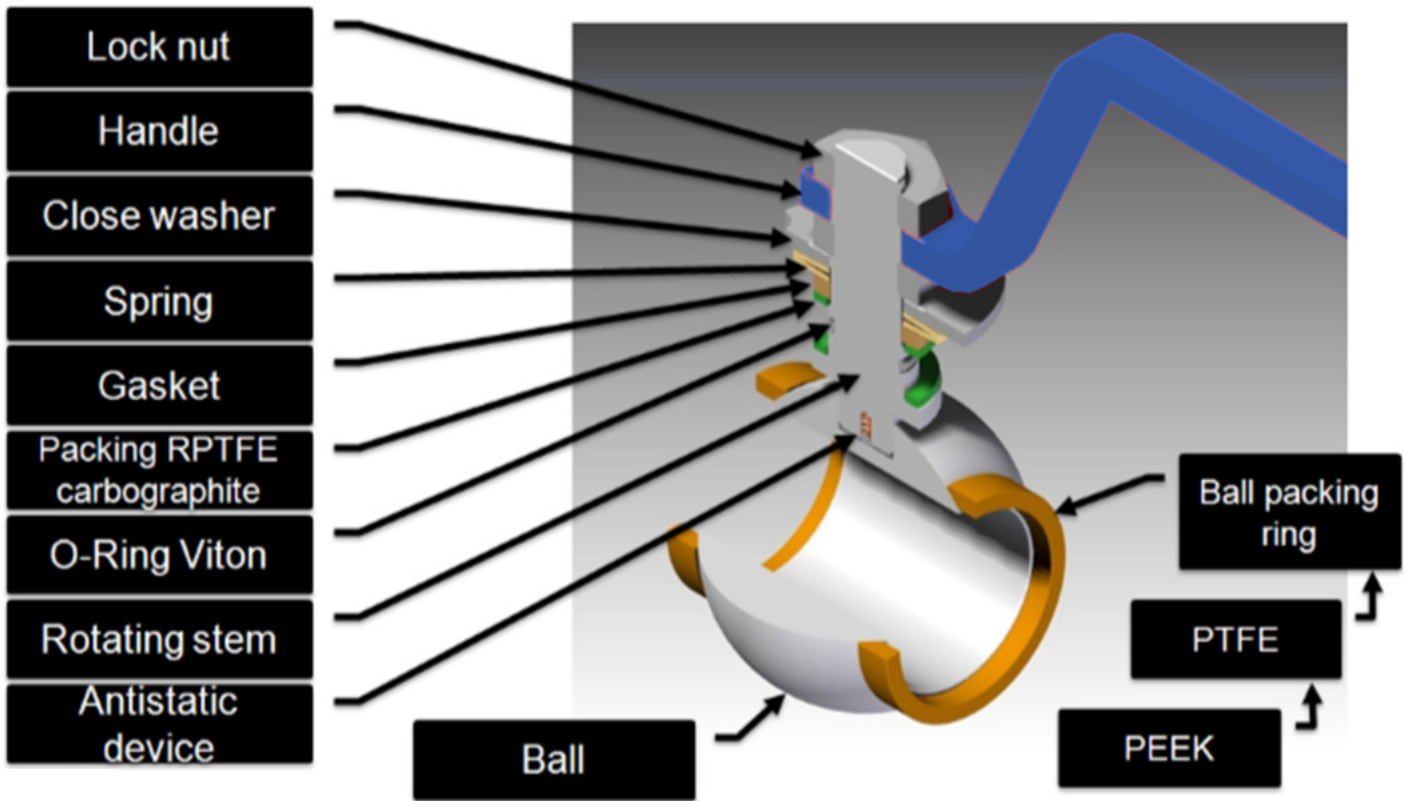


# Piping Ball Valves



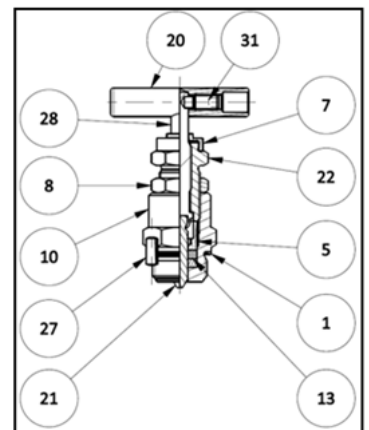
# Ball Valve



## Features

- AISI 316 handle and stop pin as standard for corrosion resistance
- Blowout proof one-piece stem spindle
- Fugitive Emissions to ISO 15848-1
- Super finished ball for low operating torque and long life
- Firesafe to BS 6755 PART. 2
- Standard temperature range:
  - ⇒ High temperature: -29°C/+325°C (-20°F/+617°F)
  - ⇒ Low temperature: -46°C/+120°F (-50°F/+248°F)
  - ⇒ Room temperature: -29°C/+180°C (-20°F/+356°F)

## Vent (Needle)



## Antitamper Bonnet (optional)



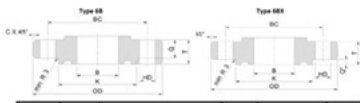
# Standards

## Standards applicable to our Monoblock DBB valves

<b>API 6D</b>	Specification for Pipeline Valves (Gate, Plug, Ball and Check Valves)
<b>API 6A</b>	Specification for Wellhead and Christmas Tree Equipment
<b>ASME B16.34</b>	Steel Valves - Flanged & Butt welding Ends
<b>ASME B16.10</b>	Face-to-Face Dimensions of Ferrous Valves
<b>API 598</b>	Valve Inspection & Testing
<b>EN ISO 10497 Ed. 2010</b> <b>API 607 Ed. 2010</b>	Firesafe

## Flange sizes of Sami DBB comply with ASME and API standards

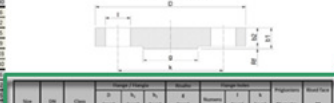
API - ISO 10423



Size (in)	Class	Flange / Flangia					Rised face (in)	Diameter (in)
		S	T	Q	C	BC		
1 1/2	150 LB	55,1	205	50,4	25,4	205	20	127,0
2		81,3	205	50,4	25,4	205	20	146,2
2 1/2	150 LB	81,3	205	50,4	25,4	205	20	146,2
3		110,0	205	50,4	25,4	205	20	165,4
3 1/2	150 LB	110,0	205	50,4	25,4	205	20	165,4
4		139,7	205	50,4	25,4	205	20	184,6
4 1/2	150 LB	139,7	205	50,4	25,4	205	20	184,6
5		169,4	205	50,4	25,4	205	20	203,8
5 1/2	150 LB	169,4	205	50,4	25,4	205	20	203,8
6		199,1	205	50,4	25,4	205	20	223,0
6 1/2	150 LB	199,1	205	50,4	25,4	205	20	223,0
7		228,8	205	50,4	25,4	205	20	242,2
7 1/2	150 LB	228,8	205	50,4	25,4	205	20	242,2
8		258,5	205	50,4	25,4	205	20	261,4
8 1/2	150 LB	258,5	205	50,4	25,4	205	20	261,4
9		288,2	205	50,4	25,4	205	20	280,6
9 1/2	150 LB	288,2	205	50,4	25,4	205	20	280,6
10		317,9	205	50,4	25,4	205	20	300,0

Size	DN	Class	Flange / Flangia			Risalto (mm)	Flange holes			Prigioniero (in)	Rised face (mm)			
			D (mm)	b <sub>1</sub> (mm)	b <sub>2</sub> (mm)		Numero	l (mm)	k (mm)					
1/2"	15	150 LB	89,9	11,1	-	34,9	4	15,9	60,3	1/2"	1,6			
3/4"	20		98,4	12,7	-	42,9								
1"	25		107,9	14,3	-	50,8								
1 1/4"	32		117,5	15,9	-	63,5								
1 1/2"	40		127,0	17,5	-	73,0								
2"	50		152,4	19,05	-	92,1						19,05	120,6	5/8"

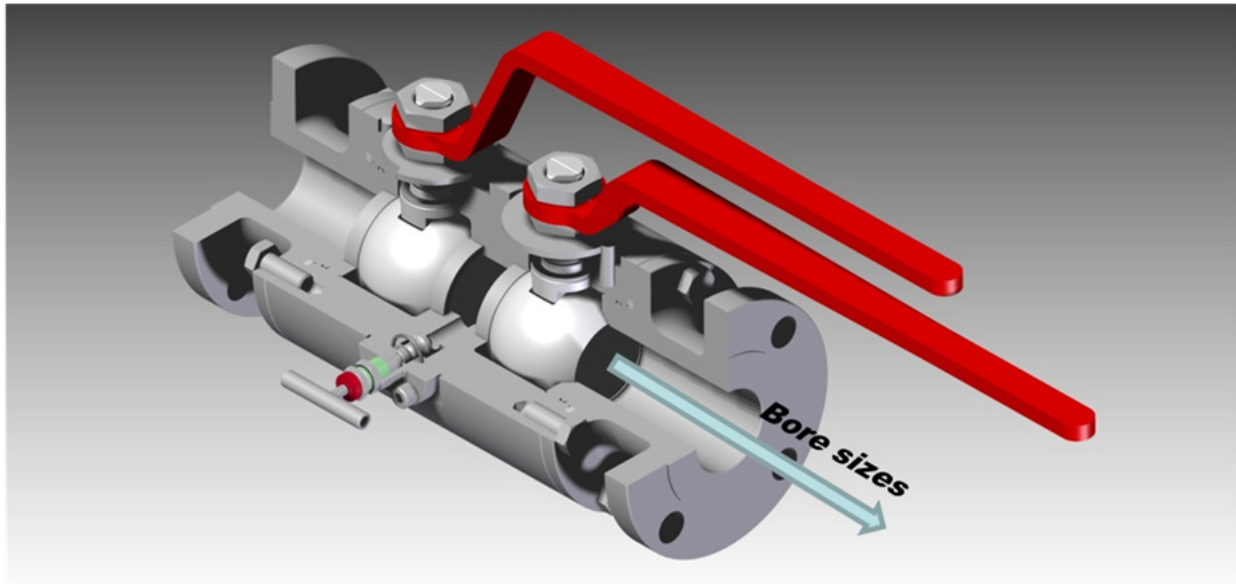
ANSI B16.5



Size (in)	Class	Flange / Flangia					Rised face (in)	Diameter (in)
		S	T	Q	C	BC		
1 1/2	150 LB	55,1	205	50,4	25,4	205	20	127,0
2		81,3	205	50,4	25,4	205	20	146,2
2 1/2	150 LB	81,3	205	50,4	25,4	205	20	146,2
3		110,0	205	50,4	25,4	205	20	165,4
3 1/2	150 LB	110,0	205	50,4	25,4	205	20	165,4
4		139,7	205	50,4	25,4	205	20	184,6
4 1/2	150 LB	139,7	205	50,4	25,4	205	20	184,6
5		169,4	205	50,4	25,4	205	20	203,8
5 1/2	150 LB	169,4	205	50,4	25,4	205	20	203,8
6		199,1	205	50,4	25,4	205	20	223,0
6 1/2	150 LB	199,1	205	50,4	25,4	205	20	223,0
7		228,8	205	50,4	25,4	205	20	242,2
7 1/2	150 LB	228,8	205	50,4	25,4	205	20	242,2
8		258,5	205	50,4	25,4	205	20	261,4
8 1/2	150 LB	258,5	205	50,4	25,4	205	20	261,4
9		288,2	205	50,4	25,4	205	20	280,6
9 1/2	150 LB	288,2	205	50,4	25,4	205	20	280,6
10		317,9	205	50,4	25,4	205	20	300,0

**Flange Finish**  
 Our standard flange finish is RF Smooth Finish.  
 Other flange ends and finishes are also available upon request.

## Bore Sizes



Nominal size		Full Bore	Reduced Bore	ANSI Rating
DN 15	1/2"	13 mm		150÷2500 Lbs
DN 20	3/4"	19 mm	13 mm	150÷2500 Lbs
DN 25	1"	25 mm	19 mm	150÷2500 Lbs
DN 40	1 1/2"	38 mm	25 mm	150÷2500 Lbs
DN 50	2"	49 mm	38 mm	150÷1500 Lbs
	2"	42 mm		2500 Lbs
DN 75	3"	74 mm	42 mm	150÷1500 Lbs
		62 mm	49 mm	2500 Lbs

### **FULL BORE**

The diameter of the ball bore is equal to the diameter of the flange bore.

### **REDUCED BORE**

The diameter of the ball bore is REDUCED compared to the one of the flanged bore.

### **Example**

A valve 1" Full Bore has a bore size of 25 mm.

A valve 1" Reduced Bore has a bore size of 19 mm.

# How to order: Piping Ball Valves

Version	Bore	Trim	Configuration	Rating	Inlet Size	End Type	Outlet Size	Material	Options
<b>R</b>	<b>M</b>	<b>1</b>	<b>A</b>	<b>1</b>	<b>E</b>	<b>B</b>	<b>E</b>	<b>A</b>	<b>A</b>

Version	
<b>R</b>	Reduced Bore
<b>F</b>	Full Bore

Bore			
<b>A</b>	BALL Ø 13 Flanged/Threaded	<b>I</b>	BALL Ø 25 Threaded/Threaded
<b>B</b>	BALL Ø 13 Flanged/Flanged	<b>L</b>	BALL Ø 38 Flanged/Threaded
<b>C</b>	BALL Ø 13 Threaded/Threaded	<b>M</b>	BALL Ø 38 Flanged/Flanged
<b>D</b>	BALL Ø 19 Flanged/Threaded	<b>N</b>	BALL Ø 42 Flanged/Flanged
<b>E</b>	BALL Ø 19 Flanged/Flanged	<b>O</b>	BALL Ø 42 Threaded/Threaded
<b>F</b>	BALL Ø 19 Threaded/Threaded	<b>P</b>	BALL Ø 49 Flanged/Threaded
<b>G</b>	BALL Ø 25 Flanged/Threaded	<b>Q</b>	BALL Ø 49 Flanged/Flanged
<b>H</b>	BALL Ø 25 Flanged/Flanged		

Trim	
<b>1</b>	Block - Bleed - Block
<b>3</b>	Block - Block - Bleed
<b>5</b>	Block - Bleed
<b>7</b>	Block - Block
<b>9</b>	Block

Configuration	
<b>A</b>	BALL, NEEDLE, BALL
<b>E</b>	BALL, NEEDLE
<b>F</b>	BALL, BALL
<b>O</b>	BALL
<b>R</b>	BALL, BALL, BALL

Rating	
<b>1</b>	150 lbs
<b>2</b>	300 lbs
<b>3</b>	600 lbs
<b>4</b>	900 lbs
<b>5</b>	1500 lbs
<b>6</b>	2500 lbs
<b>7</b>	6,000 psi
<b>8</b>	10,000 psi
<b>A</b>	API 5K
<b>B</b>	API 10K
<b>C</b>	API 15K

Inlet Size	
<b>A</b>	1/2"
<b>B</b>	3/4"
<b>C</b>	1"
<b>D</b>	1 1/2"
<b>E</b>	2"
<b>F</b>	3"
<b>1</b>	1 13/16"
<b>2</b>	2 9/16"

End Type	
<b>A</b>	RF Stock Finish
<b>B</b>	RF Smooth Finish
<b>C</b>	RF Concentric
<b>D</b>	RF Spiral
<b>E</b>	RTJ Ring Joint
<b>F</b>	FF Stock Finish
<b>G</b>	FF Smooth Finish
<b>H</b>	FF Concentric
<b>I</b>	FF Spiral
<b>J</b>	NPT-F
<b>L</b>	BSP
<b>M</b>	BSPT
<b>N</b>	S.W.
<b>O</b>	B.W.

Outlet Size	
<b>1</b>	1/4" NPT
<b>2</b>	1/2" NPT
<b>3</b>	3/4" NPT
<b>4</b>	1" NPT
<b>5</b>	1 1/2" NPT
<b>A</b>	1/2"
<b>B</b>	3/4"
<b>C</b>	1"
<b>D</b>	1 1/2"
<b>E</b>	2"
<b>F</b>	3"
<b>P</b>	1 13/16"
<b>Q</b>	2 9/16"

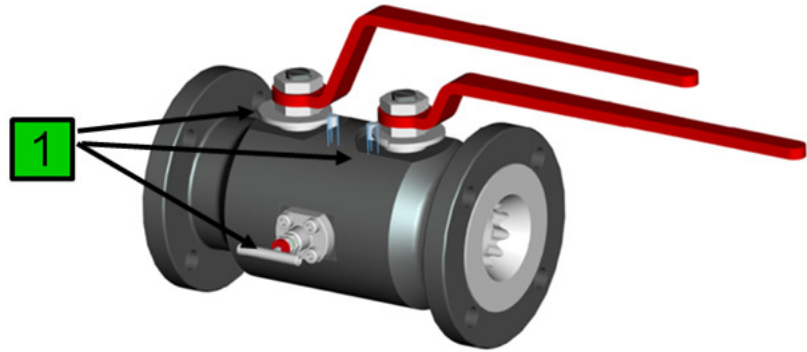
Material	
<b>A</b>	Aisi 316L
<b>C</b>	Aisi 316 Ti
<b>D</b>	Monel 400
<b>E</b>	Duplex F51
<b>G</b>	Super Duplex F55
<b>H</b>	Hastelloy C276
<b>I</b>	Inconel 625
<b>J</b>	Incolloy 825
<b>L</b>	Titanium
<b>M</b>	A350-LF2
<b>N</b>	F44
<b>S</b>	Aisi 321

Options			
<b>A</b>	Drain / Vent 1/4"	<b>Q</b>	Male/Female
<b>B</b>	Drain / Vent 3/4"	<b>R</b>	Female/Male
<b>C</b>	Locking Device on balls	<b>S</b>	Male/Male
<b>D</b>	Locking Device on needles	<b>T</b>	Double Outlet Threaded
<b>E</b>	Drain/Vent Anti-Tamper	<b>X</b>	100% 316L
<b>L</b>	Explosion Proof O-Ring	<b>Z</b>	Zinc-Bicromated Bolts and Nuts
<b>O</b>	2 Piece design	<b>1</b>	Low Temperature resistant
<b>P</b>	3 Piece design	<b>2</b>	High Temperature resistant

# Piping Ball Valves: main features

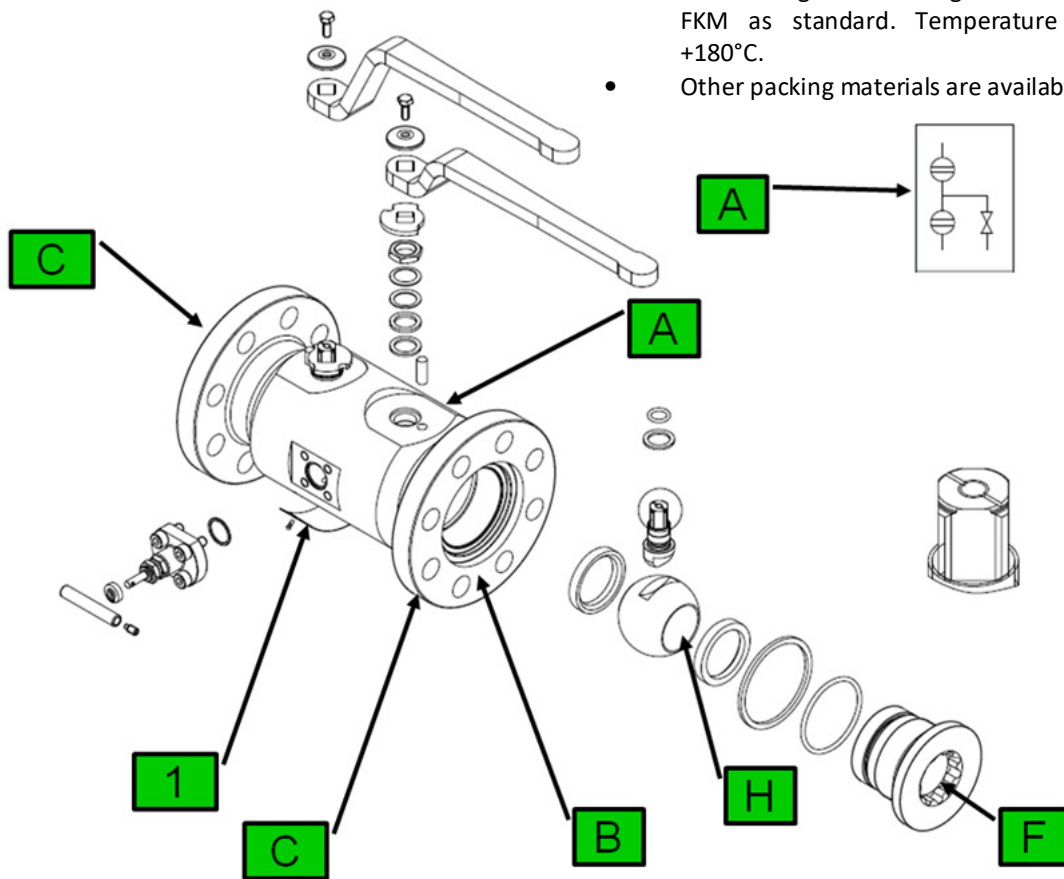
Code: FH1A1BCA

<b>F</b>	<b>FULL BORE</b>
<b>H</b>	<b>BALL ø 25 mm Flanged/threaded</b>
<b>1</b>	<b>Block-Bleed-Block</b>
<b>A</b>	<b>Ball-Needle-Ball</b>
<b>1</b>	<b>Rating 150 lbs</b>
<b>C</b>	<b>Inlet 1"</b>
<b>B</b>	<b>Flange end RF</b>
<b>C</b>	<b>Outlet 1"</b>
<b>A</b>	<b>Material AISI 316 L</b>



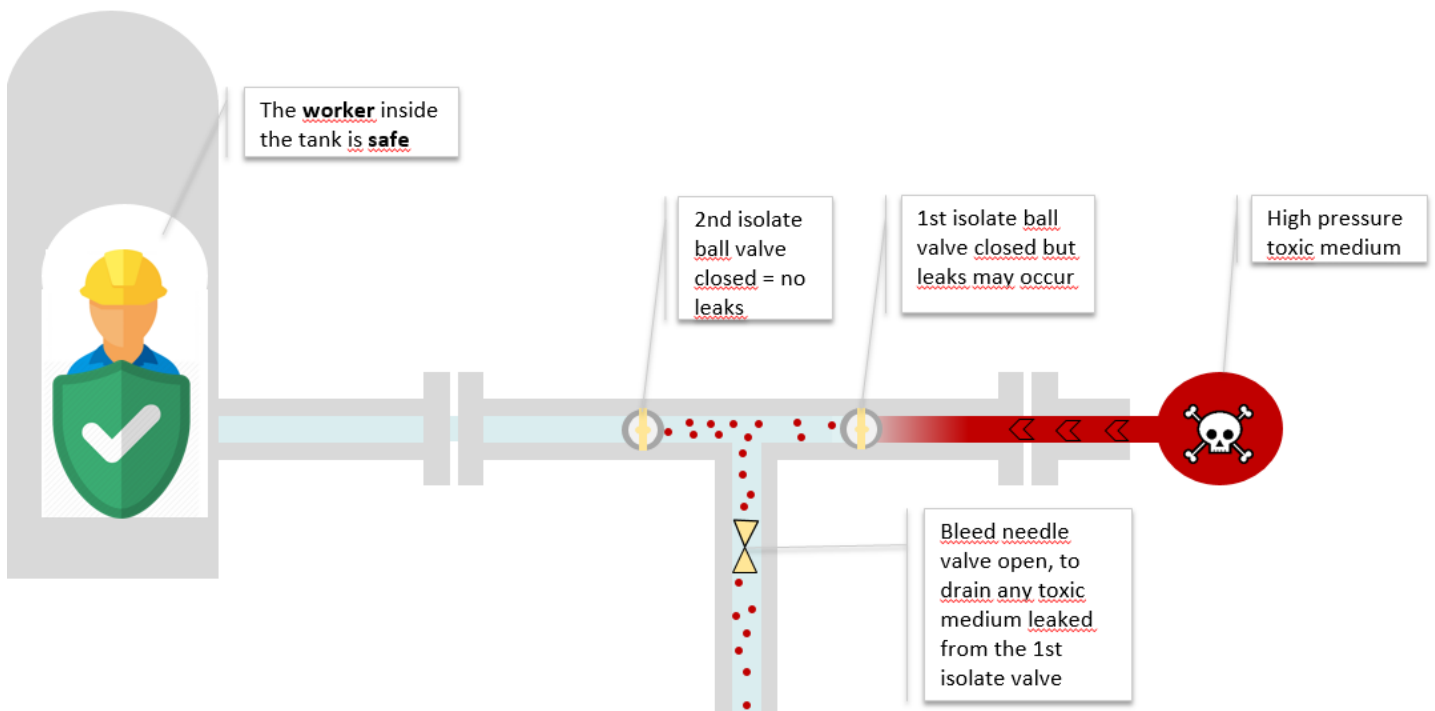
### Standard Ball Packing for full and reduced bore:

- From rating 150 to 600: PTFE Carbographe + O-Ring in FKM as standard. Temperature range: -29°C +180°C
- From rating 900 to rating 2500: PEEK + O-Ring in FKM as standard. Temperature range: -29°C +180°C.
- Other packing materials are available on demand.



# Double Block & Bleed Configuration

Double Block&Bleed valves provide more safety than a single block and bleed or single block configuration: the 2 block valves prevent the fluid from passing and getting in contact with the maintenance team, while the vent, allows the fluid to be safely drained from the flow.



Sami piping single and double block & bleed valves are certified for **Fugitive Emissions to EN ISO 15848-1**.

Certified temperatures:

- -29°C + 40°C
- -29°C + 80°C
- -46°C + 40°C

**FUGITIVE EMISSIONS TEST CERTIFICATE**  
 ISO 15848-1:2008  
 CERTIFICATE NUMBER: EG-062698-280

**FUGITIVE EMISSIONS TEST CERTIFICATE**  
 ISO 15848-1:2008  
 CERTIFICATE NUMBER: EG-062698-336

**FUGITIVE EMISSIONS TEST CERTIFICATE**  
 ISO 15848-1:2008  
 CERTIFICATE NUMBER: EG-062698-335

## Customized Piping DBB

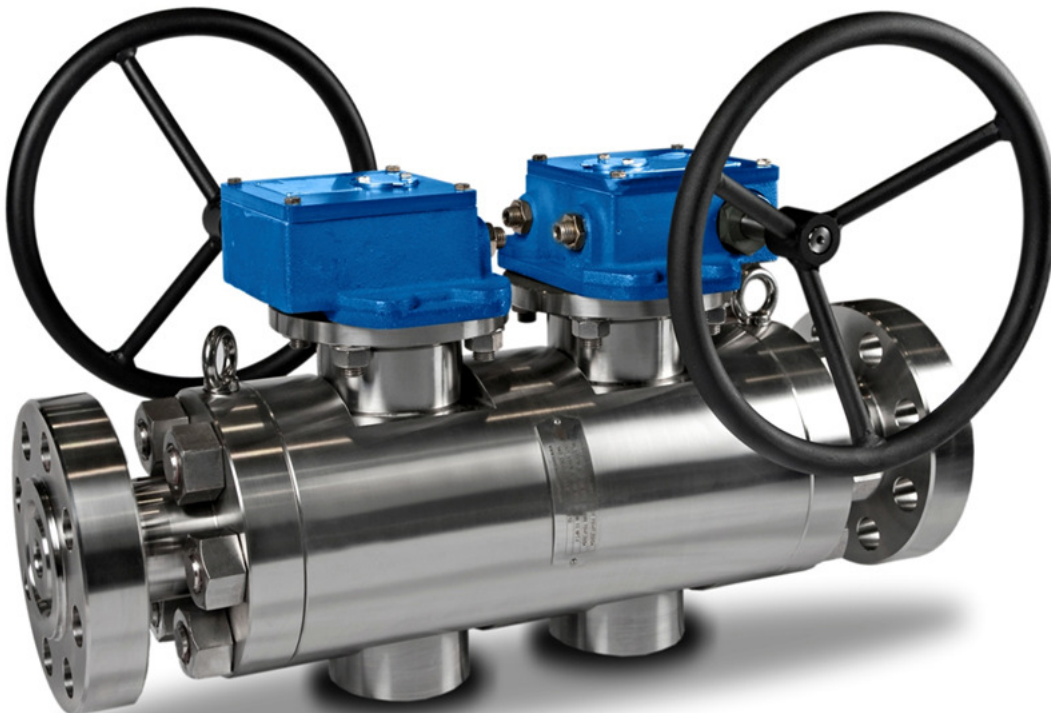
**API 5K -10K -15K**

Manual DBB valve trunnion mounted for high pressure application



### *Actuated DBB valve*

Manual actuated DBB valve trunnion mounted for high pressure application





## Customized Projects



DBB - O.S.&Y./NEEDLE/NEEDLE  
 API 10K  
 Inlet: 1 13/16"  
 Outlet: 1/2" NPT-F  
 Material: DUPLEX F51  
 Painted



SBB - BALL/NEEDLE  
 Rating: ANSI 1500 RTJ  
 Inlet: 1 1/2"  
 Outlet: 1 1/2"  
 Material: A305 LF2  
 Painted



DBB - BALL/NEEDLE/BALL  
 API 10K  
 Inlet: 2 1/16"  
 Outlet: 2 1/16"  
 Material: DUPLEX F51  
 Painted

**SAMI INSTRUMENTS S.r.l. — A division of the WIKA group**

Via Botte, 8 - 35011 Reschigliano di Campodarsego (PD) - Italy

Tel: (+39) 049 9201939

Fax: (+39) 049 9217549

E-mail: [info@samivalves.com](mailto:info@samivalves.com)

Website: [www.samivalves.com](http://www.samivalves.com)



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