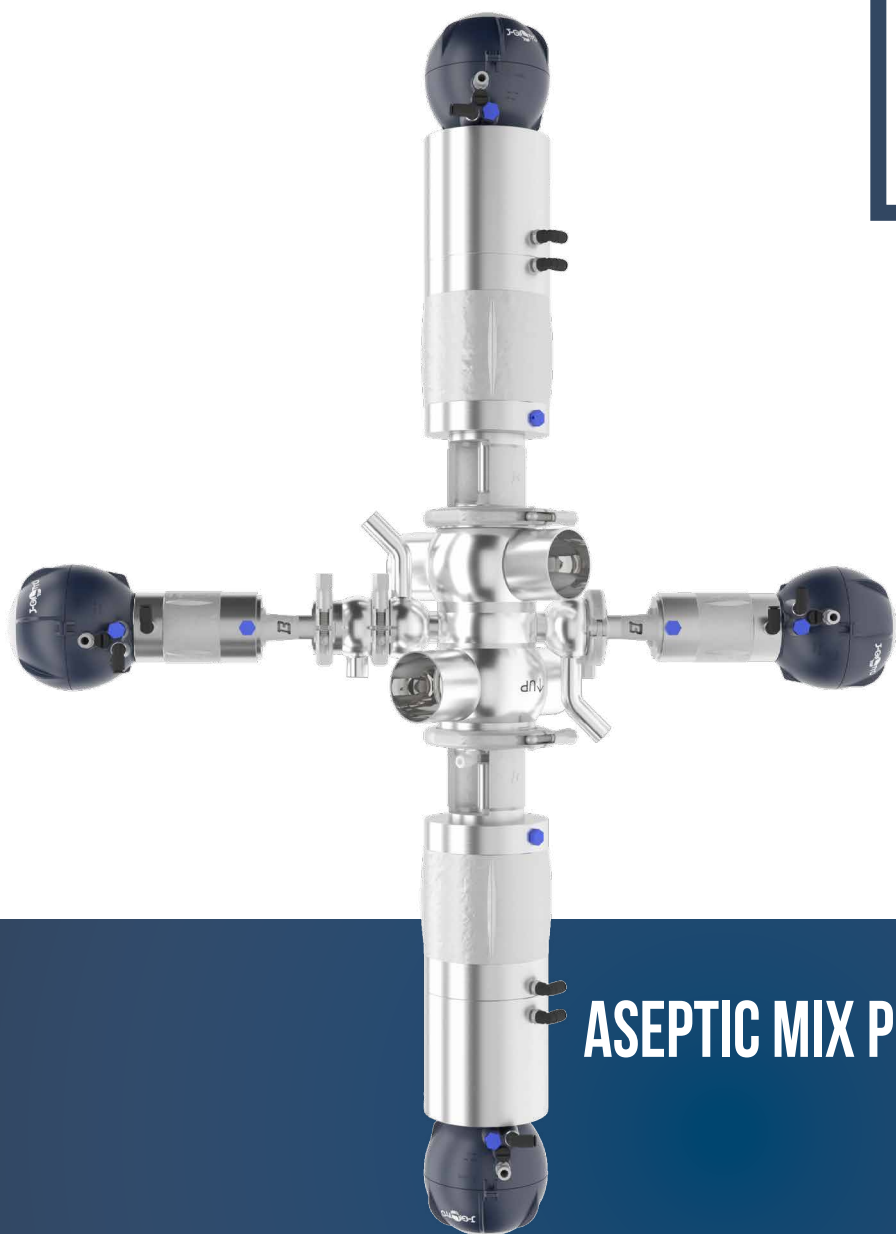


# TECHNICAL CATALOGUE

CAT-MIXASEPT-EN

10.2023



## ASEPTIC MIX PROOF VALVE

It includes: BZZWT1, BZZWP1, BZZYP, BZZYT

# QUALITY, INDUSTRIAL EFFICIENCY, PRODUCT RELIABILITY

The combination of technology, product customization and attention to details makes Bardiani Valvole an extraordinary supplier in its flexibility and ability to meet customer requests.

The standards achieved through experience and a process of continual improvement make it possible to reach maximum reliability. What is more, continual improvement allows Bardiani Valvole to take decisive steps forward also in offering increasingly competitive solutions.

## Valves designed for every kind of applications



## MIXPROOF ASEPTIC VALVES

### BZZWT1

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## UNIQUE FEATURES FOR QUALITY VALVES

### Certified hygienic standards

All parts in contact with the product are made from AISI 316L stainless steel.

<0.8  $\mu\text{m}$  surface finish on parts in contact with the product (0.4  $\mu\text{m}$  on request).

To guarantee greater resistance and long lasting life **valve bodies made from solid bar**. Sealing solutions are all certified: Bardiani Valvole selects only European suppliers able to provide **reliable seals**.



### Easy maintenance valves design

**No special tools** are required for maintenance, which saves time and **increase cost-effectiveness**.

Spare parts are guaranteed over time thanks to the Bardiani Care program.

**Bardiani care** is a flexible made-to-measure after-sales service program based on client needs which includes preventive maintenance, technical training and continual technical support.

### Valve clusters and customized solutions

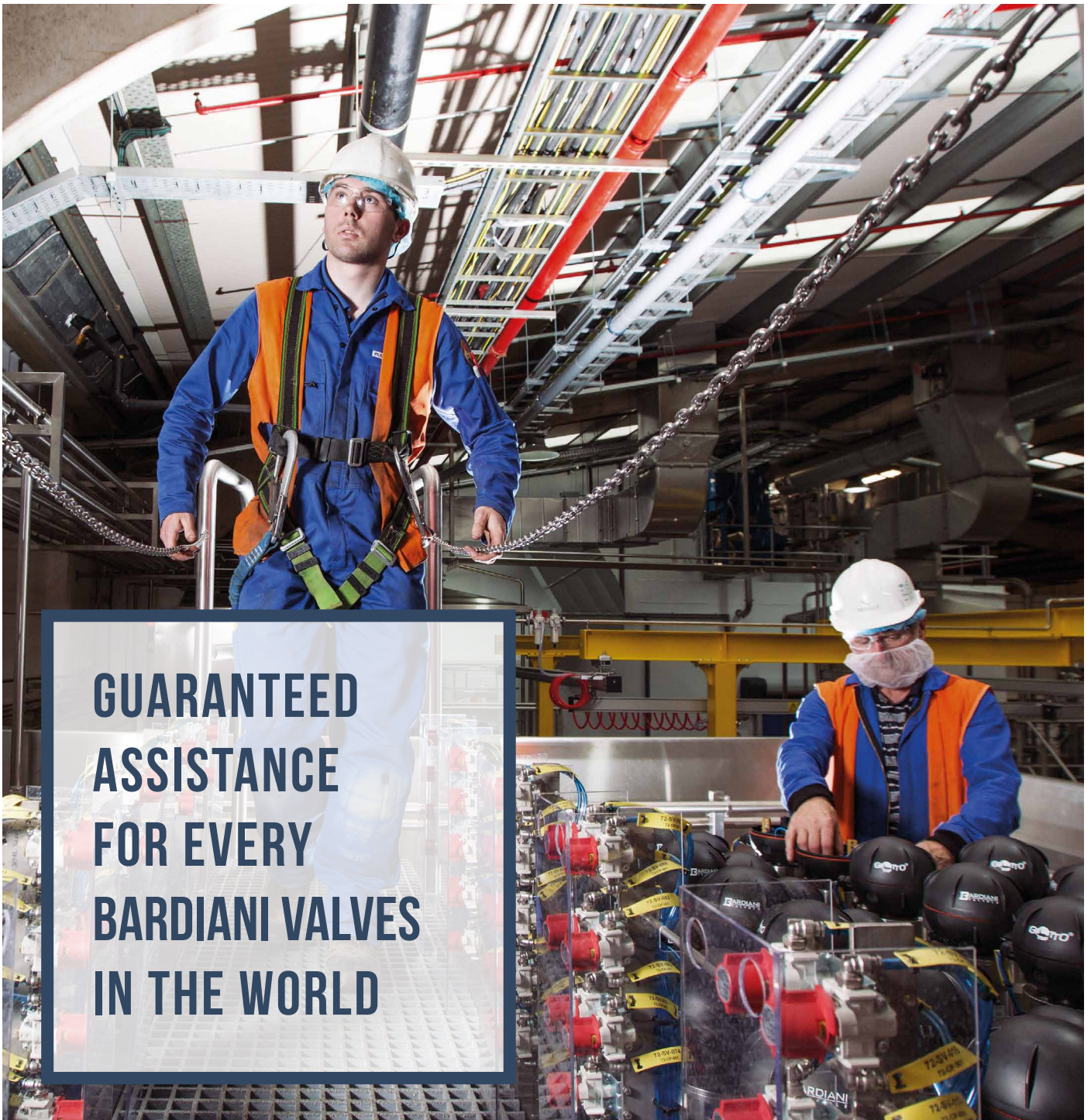
The combination of technology, product customization and attention to details makes Bardiani Valvole an extraordinary supplier in its **flexibility** and ability to meet customer requests.

Bardiani **clusters** are made according to the customer's specific design, orbital welded, passivated and tested.

Thanks to the excellent product quality and the maximum responsiveness to the customer's needs, the valve clusters are one of the strong points of the Bardiani Valvole production range.

### Social values

Respect for the founding values is also important from a business point of view. Being loyal to one's team and the commitments made means, amongst other things, being able to guarantee punctual delivery 97% of the time. On another level, focus on continuous improvement also allows us to establish enormously profitable and long-lasting collaboration with our customers because it promotes constant evolution. As well as the technical values, for Bardiani it is also essential to respect those values which have always distinguished the company's identity: honesty, respect, solidarity and social responsibility.



**GUARANTEED  
ASSISTANCE  
FOR EVERY  
BARDIANI VALVES  
IN THE WORLD**

**Sustainability for a better future**

Environmental sustainability, social sustainability and economic sustainability, the pillars on which the company develops and outlines its present and its future.



### DESCRIPTION

The aseptic double-seat mixproof valve BZZWT1 is designed to separate two different products or fluids without the risk of cross-contamination, ensuring the complete aseptic integrity of the process. It meets the highest process requirements and standards in terms of aseptic performance, washability, and safety.

BZZWT1 consists of four single-seat valves: two main valves for product passage, equipped with a single-layer PTFE diaphragm that creates a hermetic seal to ensure process asepticity; two auxiliary valves for leak detection and management of the steam circuit during the sterilization phase.

The aseptic double-seat mixproof valve is the optimal solution for use in aseptic process applications in the pharmaceutical, food, dairy, and beverage sectors. It is particularly suitable for use with viscous products or those containing solid particles.

### MAIN BENEFITS

- 1 Manages highly **viscous products**
- 2 Manages products containing **large particles**
- 3 **Safety** against pressure spikes
- 4 **Aseptic design** with single layer diaphragm
- 5 **No dead zone** inside valve body
- 6 **Easy maintenance and cleanability**

### CERTIFIED SEALING SOLUTIONS

In order to manufacture reliable and high quality products, Bardiani Valvole select only European partners able to supply certified, reliable and long-lasting seals.

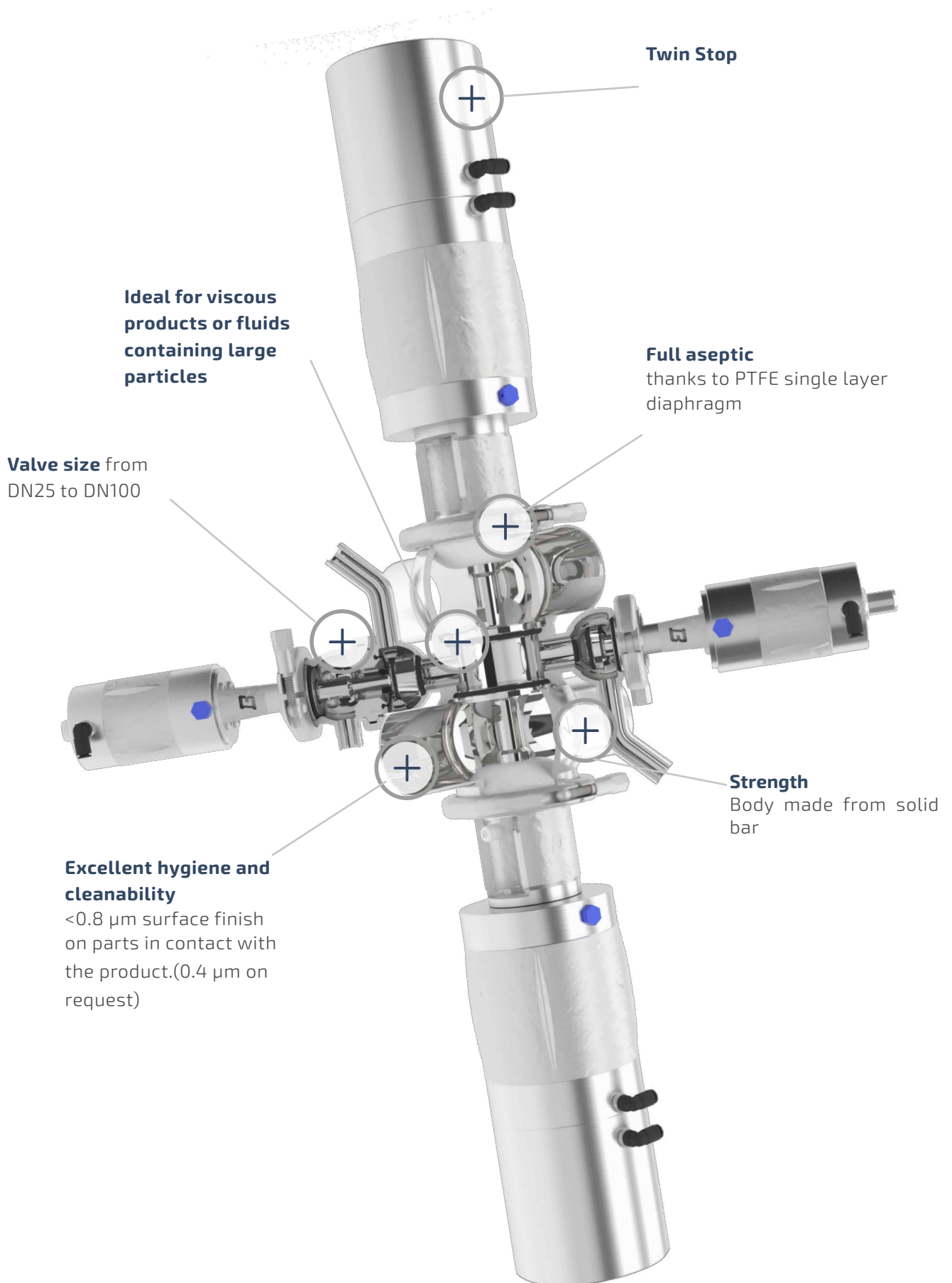
**EPDM** is a polymer composed of ethylene, propylene and a small percentage of a diene and is particularly well-suited for applications involving polar media. It has an outstanding resistance to water and aqueous systems.

**HNBR** is distinguished by its resistance to greases, waxes and oils and for this reason, it is used in systems in which these media are contained or controlled.

**FKM** is a fluorinated material with a monomer composition, thanks to its good swelling resistance towards aliphatic and aromatic hydrocarbons, oils and greases.

**PTFE** can be used in an extremely wide range of temperatures. It has high heat expansion and is hard but barely elastic. PTFE has a very low coefficient of friction with regard to most counterfacing materials.

# ASEPTIC MIXPROOF VALVE OVERVIEW



**Twin Stop**

**Ideal for viscous products or fluids containing large particles**

**Full aseptic**  
thanks to PTFE single layer diaphragm

**Valve size** from DN25 to DN100

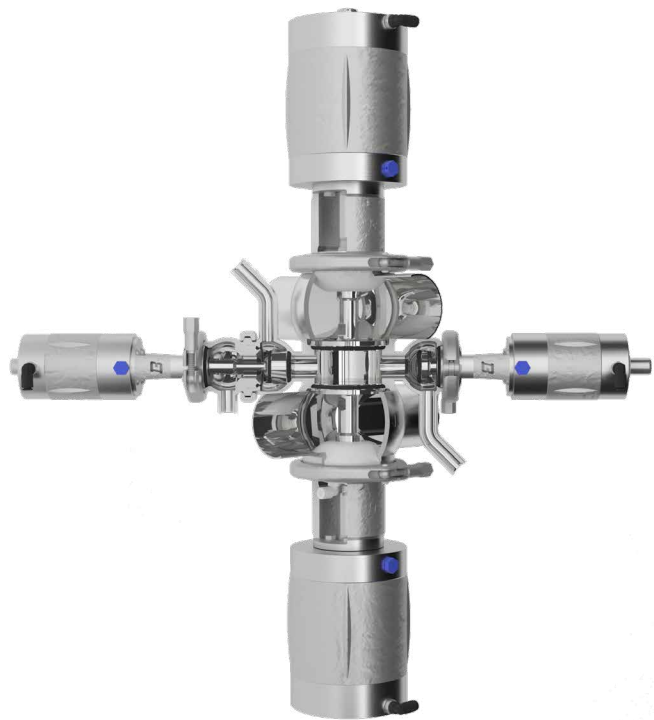
**Strength**  
Body made from solid bar

**Excellent hygiene and cleanability**  
<math><0.8 \mu\text{m}</math> surface finish on parts in contact with the product.(0.4  $\mu\text{m}$  on request)

# ASEPTIC MIXPROOF VALVE VARIANTS

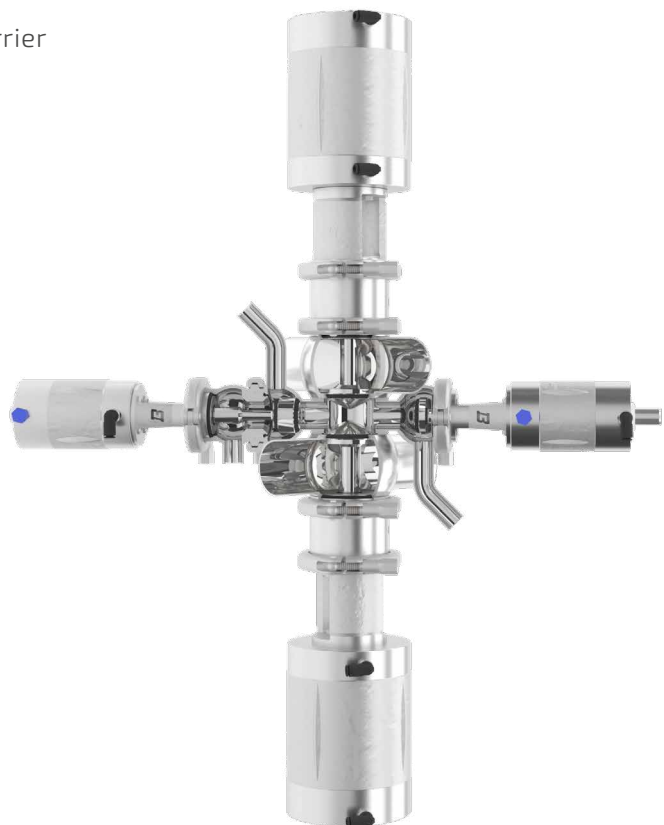
## BZZWP1

Main valves: single seat valves with diaphragm  
Auxiliary valves: single seats valves



## BZZYP

Main valves: single seat valves with steam barrier  
Auxiliary valves: single seats valves

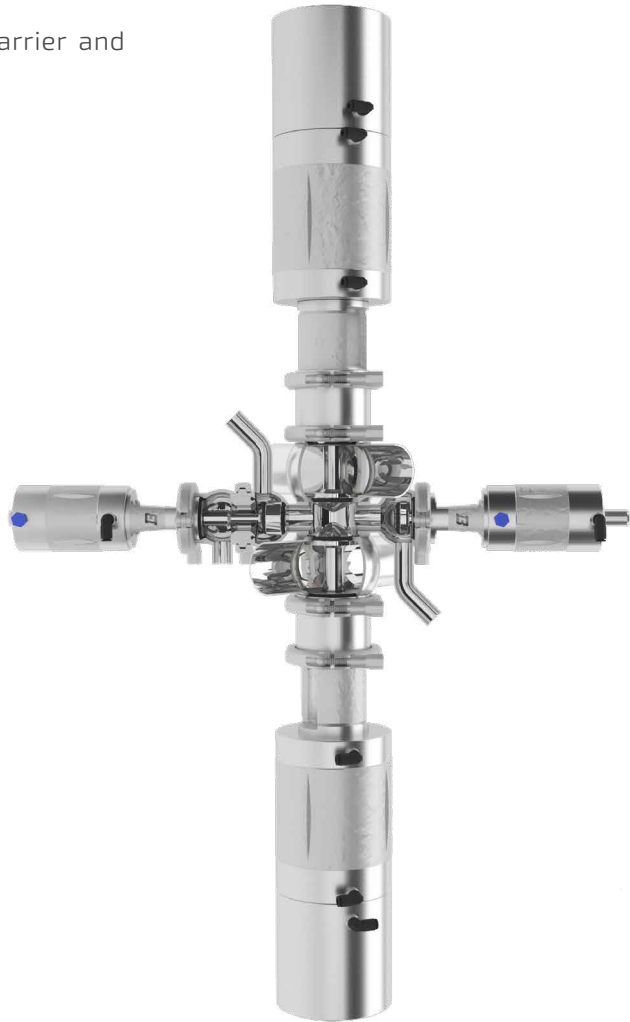




## BZZYT

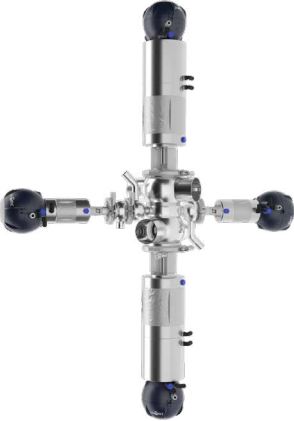
Main valves: single seat valves with steam barrier and twin stop

Auxiliary valves: single seats valves



# BZZWT1

## TECHNICAL DATA

BZZWT1	VALVE STRUCTURE		
	Connection from DN25 to DN100	DIN, SMS, IDF, BS (RJT), Clamp, Flangia	Other connections on request
	Material in contact with the product	AISI 316L (1.4404)	Other material on request
	Material gaskets in contact with the product (FDA homologation)	EPDM, FKM, HNBR, PTFE	
	Diaphragm material	P.T.F.E.	
	Max product temperature (EPDM applications with air)	140 °C (284 °F)	For other temperature, please ask Bardiani Valvole
	Min product temperature (EPDM applications with air)	-10 °C (14 °F)	
	Max product pressure	10 bar (145 psi)	
	Max working pressure	See table	
	Finish on surfaces in contact with the product	Ra 0.8 µm (other types of surface finish on request).	
	PNEUMATIC ACTUATOR STRUCTURE		
Air connectors	1/8" (BSP) for pipe 6 x 4 mm		
Air pressure	From 6 bar (87 psi) to 8 bar (116 psi)		
Cylinder material	AISI 304 (1.4301)		
Gasket material	NBR		

### CERTIFICATION






# WORKING PRINCIPLE BZZWT1

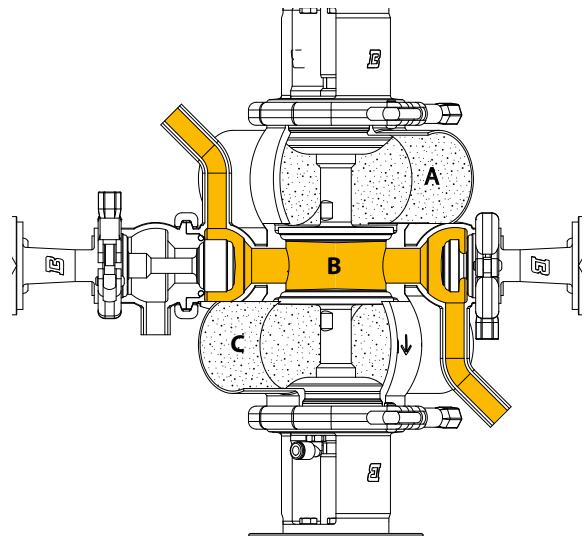
## DESCRIPTION AND WORKING PRINCIPLE

### Chamber sterilization from external

Auxiliary valves open, main valves closed

Leakage chamber sterilization before production.

- A  Product-fluid
- B  Steam
- C  Product-fluid

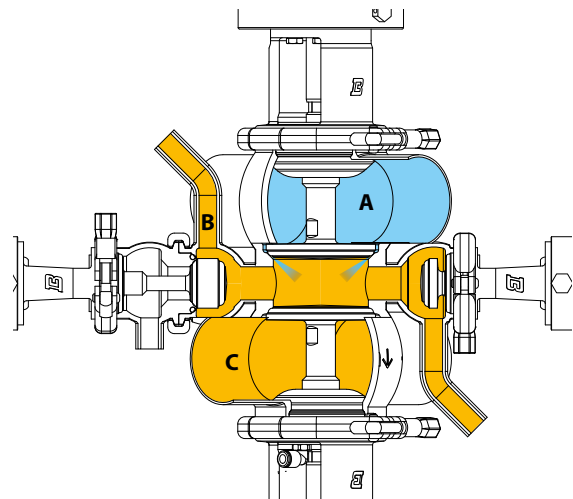


### Upper lift for seat sterilization

Auxiliary valves open, lower valve closed

Upper valve lift for sterilization of upper plug seat.


- A  Water at 135°C
- B,C  Steam

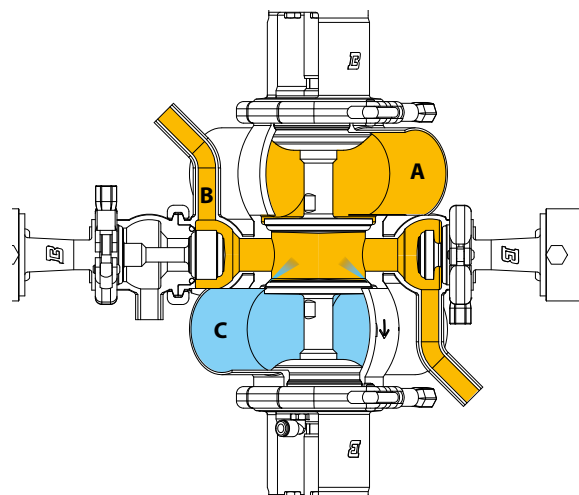


### Lower lift for seat sterilization

Auxiliary valves open, upper valve closed

Lower valve lift for sterilization of lower plug seat.

- C  Water at 135°C
- A,B  Steam



# WORKING PRINCIPLE BZZWT1

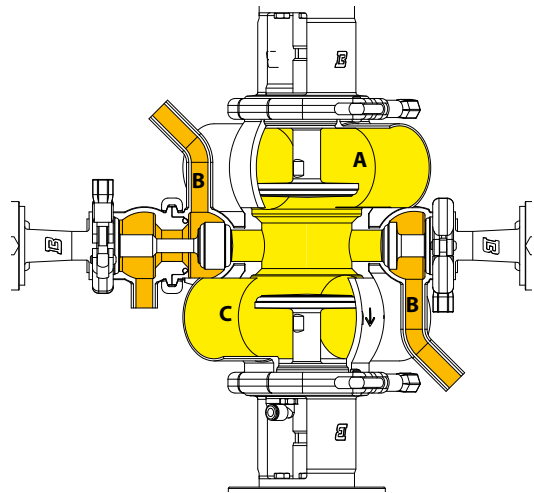
## DESCRIPTION AND WORKING PRINCIPLE

### Valve fully open

Main valves open, auxiliary valves closed

Maintaining steam flow behind the plug to avoid contamination.

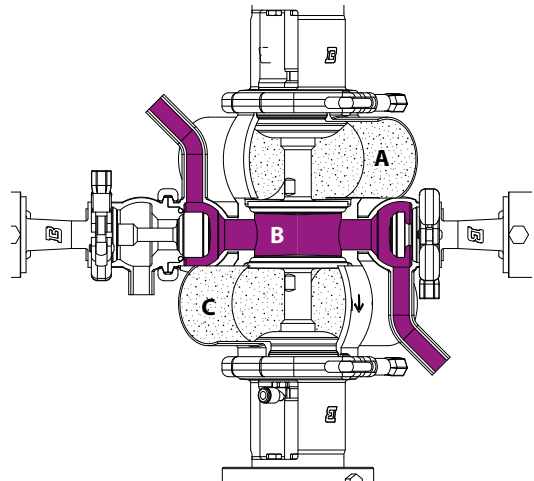
- A, C  Product
- B  Steam



### CIP cycle from external

Main valves closed, auxiliary valves to keep steam barrier

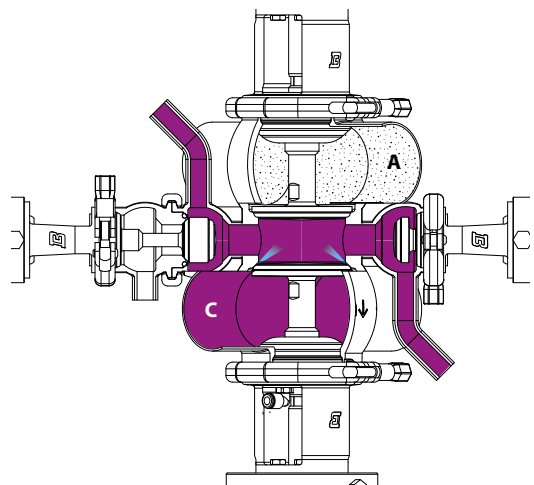
- A  Product/fluid
- B  CIP
- C  Product/fluid



### Seat cleaning with lower lift




Lower line washing with lower lift, auxiliary valves are open for line washing with CIP (auxiliary valves open, upper valve closed).

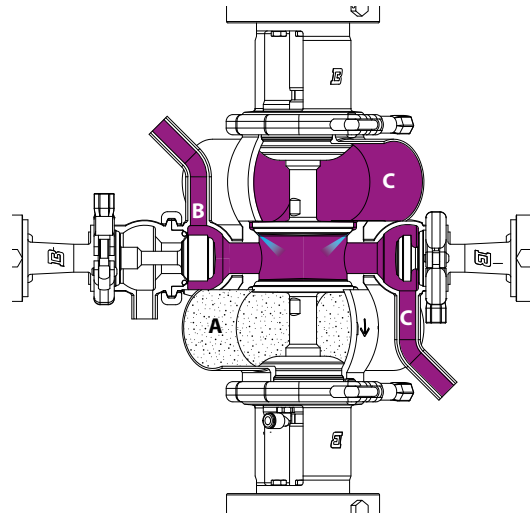
- A  Empty line
- C  CIP



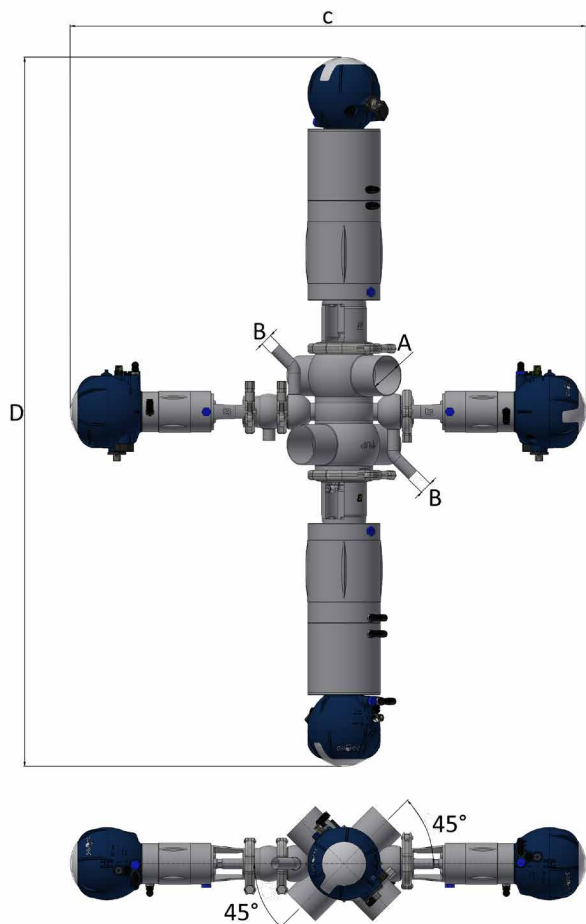
### Seat cleaning with upper lift

Upper line washing with upper lift, auxiliary valves are open for line washing with CIP (auxiliary valves open, lower valve closed).

- A  Empty line
- B  CIP
- C  CIP



# BZZWT1 DIMENSIONS



## Legenda

S/S

Welding

DN	S/S			
	A	B	C	D
25	29x1.5	19X1.5	768	680
40	41x1,5	19X1.5	775	708
50	53x1.5	19X1.5	787	852
65	70x2	19X1.5	800	878
80	85x2	19X1.5	820	1009
100	104x2	19X1.5	837	1044

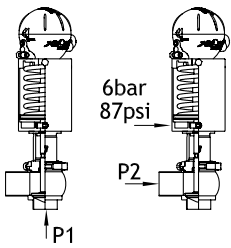
DN	S/S ASME-BPE			
	A	B	C	D
1"	25.4x1.65	19X1.5	768	680
1" 1/2	38.1x1.65	19X1.5	775	708
2"	50.8x1.65	19X1.5	787	852
2" 1/2	63.5x1.65	19X1.5	800	878
3"	76.2x1.65	19X1.5	820	1009
4"	101.6x2.11	19X1.5	837	1044

Other dimensions on request

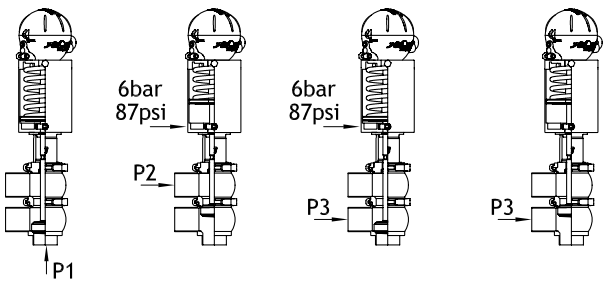
# BZZWT1 MAX. SEAL PRESSURES (BAR/PSI)

## Legenda

DN	WELDING
S.A.N.C.	Valve normally closed with single acting actuator (air opens/spring closes)
S.A.N.O.	Valve normally opened with single acting actuator (air closes/spring opens)



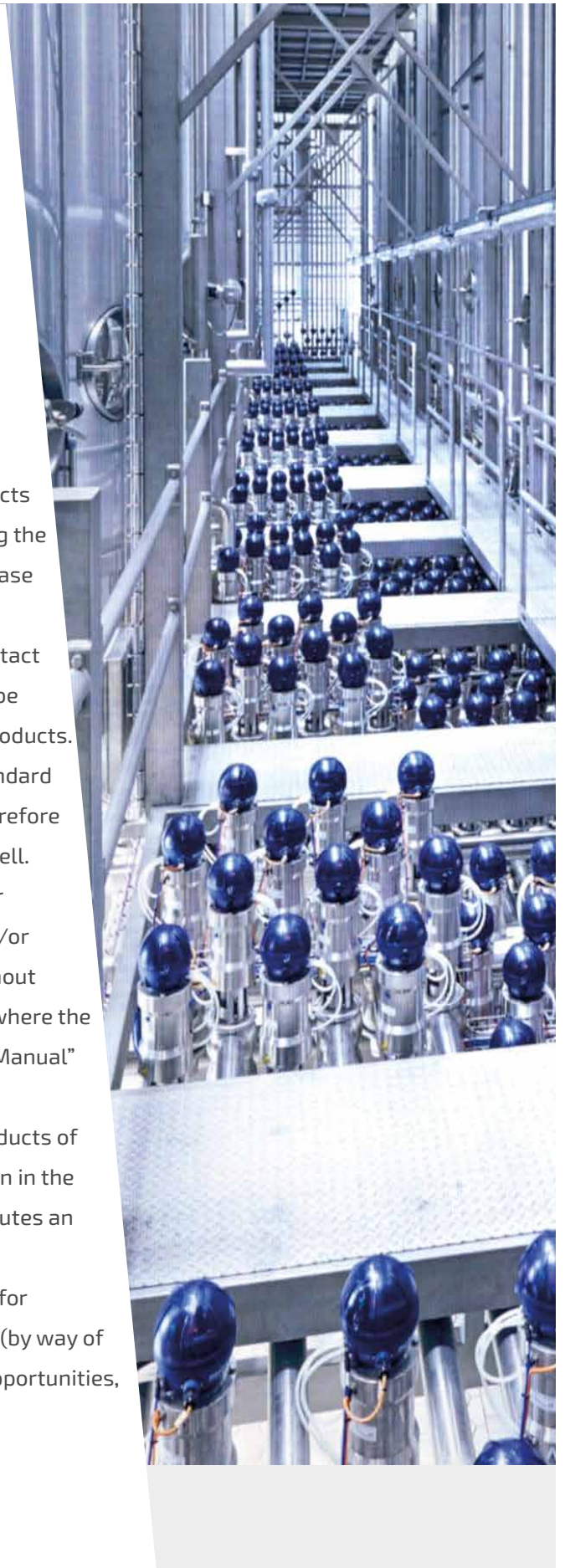
S.E. N.C. / S.A. N.C. (main valve)			
DN / DIN	DN / INCHES	P1 bar / psi	P2 bar / psi
25	1"	8/116	10/145
32-40	1 1/2"	9/130	10/145
50	2"	9/130	10/145
65	2 1/2"	5/72	6/87
80	3"	6/87	6/87
100	4"	4/58	4.5/65
100	4"	156	7.5/108



S.E. N.C. / S.A. N.C. (auxiliary valves)			
DN / DIN	DN / INCHES	P1 bar / psi	P2 bar / psi
15	3/4"	8/116	10/145

S.E. N.A. / S.A. N.O. (auxiliary valves)			
DN / DIN	DN / INCHES	P1 bar / psi	P2 bar / psi
15	3/4"	9/130	10/145

- Consultation of the “Instruction, Use and Maintenance Manual” is mandatory prior to the installation, use and maintenance of the products of all Products. All the information, indications, specifications, technical details provided herein are based on test data which the Manufacturer Bardiani Valvole S.p.A. holds to be reliable nevertheless the above is not deemed to be assumed as fully exhaustive inasmuch as not every possible use has been envisaged.
- All the illustrations and drawings provided are to be intended as indicative and therefore not binding, the illustrations being for presentation purposes only.
- It is the Buyer’s duty to assess the suitability of the Products for the use he intends to make of the same prior to placing the order as he/she will take the risks and accept liability in case of incorrect choice and use of the Products.
- The Manufacturer strongly recommends the Buyer to contact their sales team and request any information that might be needed in relation to the specifications and uses of the Products.
- The information provided in this manual refers to the standard products manufactured by Bardiani Valvole S.p.A. and therefore cannot be assumed to apply to customized products as well.
- Bardiani Valvole S.p.A. reserves the right to amend and/or integrate and/or update the data and/or information and/or technical details relative to Products at any time and without prior notice. Please visit the website [www.bardiani.com](http://www.bardiani.com), where the latest updated of the “Instruction, Use and Maintenance Manual” can be found”.
- The content and validity of the warranty covering the Products of Bardiani Valvole S.p.A are dealt with in the relevant section in the “Instruction, Use and Maintenance Manual” which constitutes an integral part of the Products themselves.
- Bardiani Valvole S.p.A., shall not in any way be held liable for immaterial, indirect and consequential damages, such as (by way of example only), damages or loss of business, contracts, opportunities, time, production, profits, goodwill, image etc..





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