

HYGIENIC VALVES FOR PIGGING SYSTEMS

Technical catalogue



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



HYGIENIC VALVES FOR PIGGING SYSTEMS

BBZPPG Single seat valve

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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 µm surface finish on parts in contact with the product (0.4 µm 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.



SPECIALIST VALVES FOR HYGIENIC AND SANITARY PIGGING

Liquid product recovery (pigging system) is used after a product transfer to **remove or recover residual liquid product** remaining in the pipeline of a process system.

Process pigging technology has been widely adopted by **food, beverage, homecare, paint, personal care, and pet food plants** throughout the world.

It's an extremely effective way to **increase product yields, cut waste, speed up changeover times, improve profits and boost environmental sustainability.**

Hygienic (sanitary) pigging systems are made up of variety of different parts and components: valves are an important aspect that enable the **safe and effective running of a pigging system.**

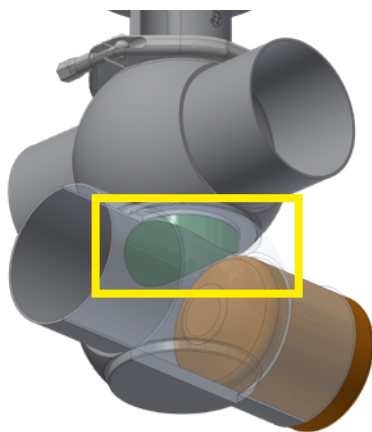
Bardiani solution

Piggable valves enable the smooth passage of the hygienic plug ('pig') thanks to special design of solid bodies and shutter.

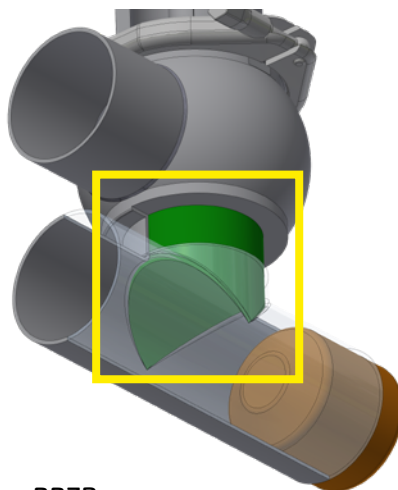
The valves have a bore the same as that of the pipe and have no obstructions in closed position, too. This enables the pig, when propelled through the pipeline to easily fit through the valves.

Minimal dead-space valve to maximize product recovery

Specially designed valve body allows maximum product recovery from 30% up to 60% more, compared to standard single seat valve.



BBZPPG
Single seat valve for pigging system - internal view



BBZP
Single seat valve with T butt weld fitting



Sustainability of production processes

The pigging systems recover massive amounts of product residue from the main transfer paths which increases product yields and reduces waste significantly.

The pigging and liquid transfer equipment includes various specialist valves such as the unique minimal dead-space valve.

Valves are key components to ensure maximum recovery.

BARDIANI
VALVOLE

ZERO WASTE

**REDUCE
REUSE
RECYCLE**

bardiani.com

VALVES TO MAXIMIZE PRODUCT RECOVERY

Bardiani unique minimal dead-space valves ensure:

- **Maximization of product recovery.**
- **Easily changeable seals** without the need for special tool.
- By **reducing waste, water use, cleaning chemical use** and subsequent disposal costs, it also helps towards the company's environmental sustainability goals.

Main benefits

- 1 Designed and **precision-engineered** for pigging systems
- 2 Minimal dead-space valve to maximize **product recovery**
- 3 **Sturdiness** thanks to valve body and shutter made from stainless steel **solid bar**
- 4 **Maximum flexibility** thanks to different DN sizes
- 5 **Minimum number of seals** in contact with the product
- 6 **Easy maintenance** without use of special tools



Wide range of applications

- Beverage
- Food
- Confectionery
- Paint and coatings
- Pet food
- Homecare & household
- Personal care & beauty
- Chemicals & lubricants
- Any many others...



BBZPPG

SINGLE SEAT VALVES FOR PIGGING SYSTEMS

360° Visibility

Efficient monitoring of valves status.

Giotto Top

Giotto Top control unit made with quality and high resistance materials and observance of the highest safety standards.

Certified safety

ATEX version available for use in potentially explosive atmospheres.

Sturdiness

Valve body and shutter made from stainless steel solid bar

Minimum numbers of gaskets

in contact with the product for fast maintenance.

Excellent hygiene and cleanability

<0.8 µm surface finish on parts in contact with the product.(0.4 µm on request).

Precision-engineered bodies allow maximum product recovery.

Valves dimensions

from DN40 to DN100.

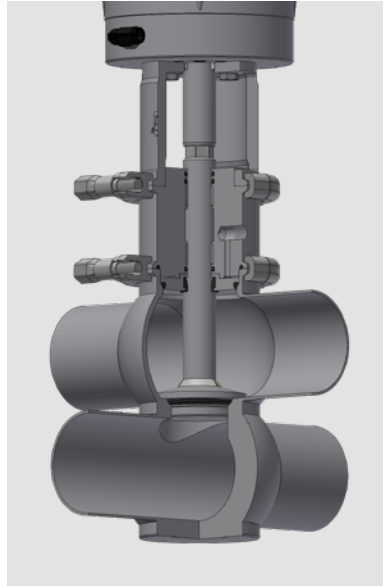
CERTIFICATIONS



BBZPPG single seat valve enables simple, fast, and effective cleaning and product recovery. Unlike standard valves, it features minimal dead-space which ensures maximum product recovery. It has been specially designed and engineered for applications with extremely high cleaning, sanitising and hygiene requirements. Fully piggable, the valve offers high levels of performance, reliability and effectiveness.

OPTIONAL

- Steam barrier

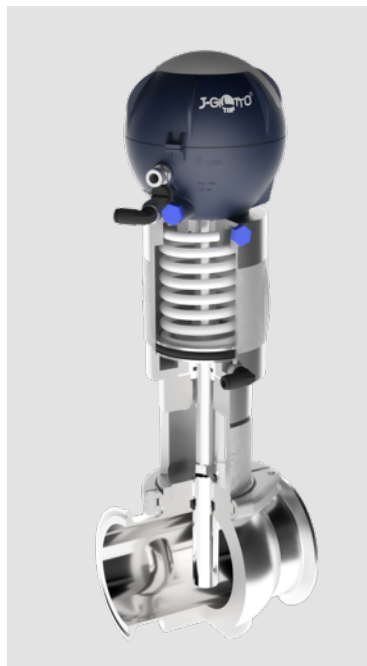


Steam barrier

A steam barrier is recommended for very hygiene applications such as sterile, aseptic processing or high temperature sterilization. The steam barrier, placed between the valve body and the pneumatic actuator, minimises the risk of the product coming into contact with the external atmosphere.

VARIANTS

- Pig Stopper



PIG Stopper

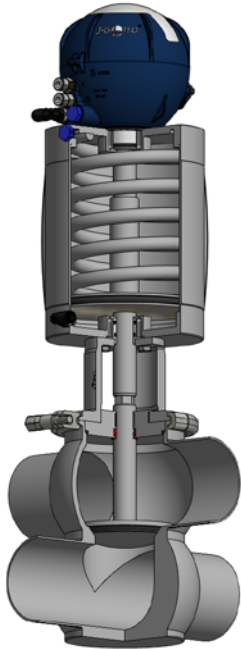
Pig stopper valve is necessary to prevent the progress of the pig in the launching or departing station, and allow the cleaning; or to place the PIG in the correct position before the product change phases.

BBZPPG SINGLE SEAT VALVES FOR PIGGING SYSTEMS

TECHNICAL DATA

BBZPPG

VALVE STRUCTURE



Connections from DN40 to DN100	DIN, SMS, IDF, BS (RJT), Clamp, Flange	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 and PTFE	Other material on request
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

CERTIFICATIONS



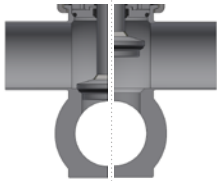





Certified sealing solutions

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

These are sealing solutions provided:

- **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.

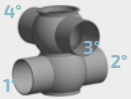
BBZPPG SINGLE SEAT VALVES FOR PIGGING SYSTEMS VALVE BODIES CONFIGURATIONS

VALVE BODIES CONFIGURATIONS				CLOSED	OPEN
M8-0° TL	M8-90° TL	M8-0° TT	M8-90° TT		
					

Legenda

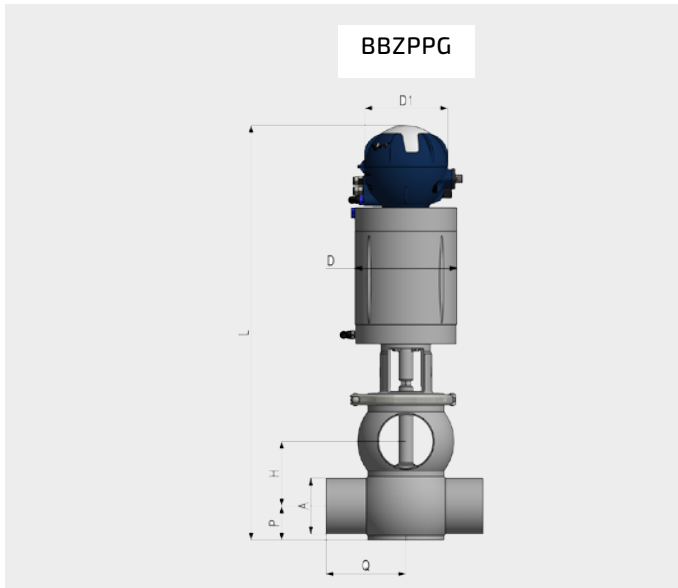


Reccomended flow direction



1° - 2° - 3° examples of ends connections readings with different types and/or dimensions

BBZPPG SINGLE SEAT VALVES FOR PIGGING SYSTEMS DIMENSIONS



Legenda

S/S DIN	Welding
F/F DIN	Male
M/G DIN	Liner + nut
S/S DIN 11850/2	Welding Din 11850/2
CLAMP	Clamp
F/F SMS	Male SMS
F/F IDF	Male IDF
F/F BS	Male BS
-	On request

DN	S/S DIN 11850-2							F/F DIN	M/G DIN	S/S other dimensions
	A	D	D1	H	L	P	Q	Z	Z	A
40	41x1,5	89.5	114	49.5	402	29	70	33	26	40x1.5
50	53x1.5	89.5	114	61.5	426	35	85	35	28	52x1.5
65	70x2	114.5	114	77.5	508.5	43	95	40	32	
80	85x2	114.5	114	92.5	538.5	50.5	105	45	37	
100	104x2	140	145	111.5	624	60	120	54	44	

DN	S/S INCHES							F/F SMS	F/F IDF	F/F BS
	A	D	D1	H	L	P	Q	Z	Z	Z
1" 1/2	38.1x1.5	89.5	114	46.7	402.5	30.4	85	20	21.5	26.5
2"	50.8x1.5	89.5	114	59.3	426	36	85	20	21.5	26.5
2" 1/2	63.5x1.5	114.5	114	71.2	503	41	95	24	21.5	26.5
3"	76.1x2	114.5	114	83.6	530	47	105	24	21.5	26.5
4"	101.6x2	140	145	109.1	624	61	120	25	21.5	26.5

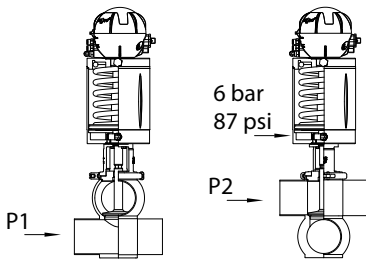
DN	S/S ASME-BPE							CLAMP
	A	D	D1	H	L	P	Q	Z
1" 1/2	38.1x1.65	89.5	114	46.7	402.5	30.4	85	12.7
2"	50.8x1.65	89.5	114	59.1	426	36	85	12.7
2" 1/2	63.5x1.65	114.5	114	71.7	503	41	95	12.7
3"	76.2x1.65	114.5	114	84.5	530	47	105	12.7
4"	101.6x2.11	140	145	108.9	624	61	120	15.8

Other dimensions on request

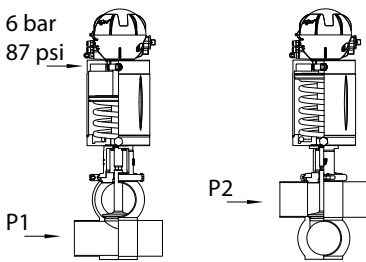
BBZPPG SINGLE SEAT VALVES FOR PIGGING SYSTEMS MAX. SEAL PRESSURES (Bar/Psi)

Legenda

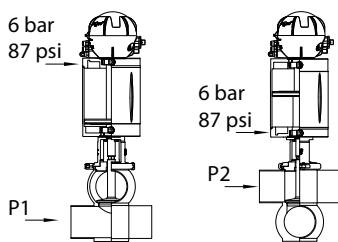
DN	WELDING
S.A.N.C.	Valve normally closed with single acting actuator (air opens/spring closes)
S.A.N.O.	Valve normally opened with single acting actuator (air closes/spring opens)
D.A.	Valve with double acting actuator (air opens/air closes)
-	Cylinder size



S.A.N.C.				
DIN/DN	INCHES/DN	ci. / cyl.	P1 bar/psi	P2 bar/psi
40	1" 1/2	83	10/145	10/145
50	2"	108	9/130	10/145
65	2" 1/2	108	9/130	10/145
80	3"	134	5/72	6/87
100	4"	134	6/87	6/87



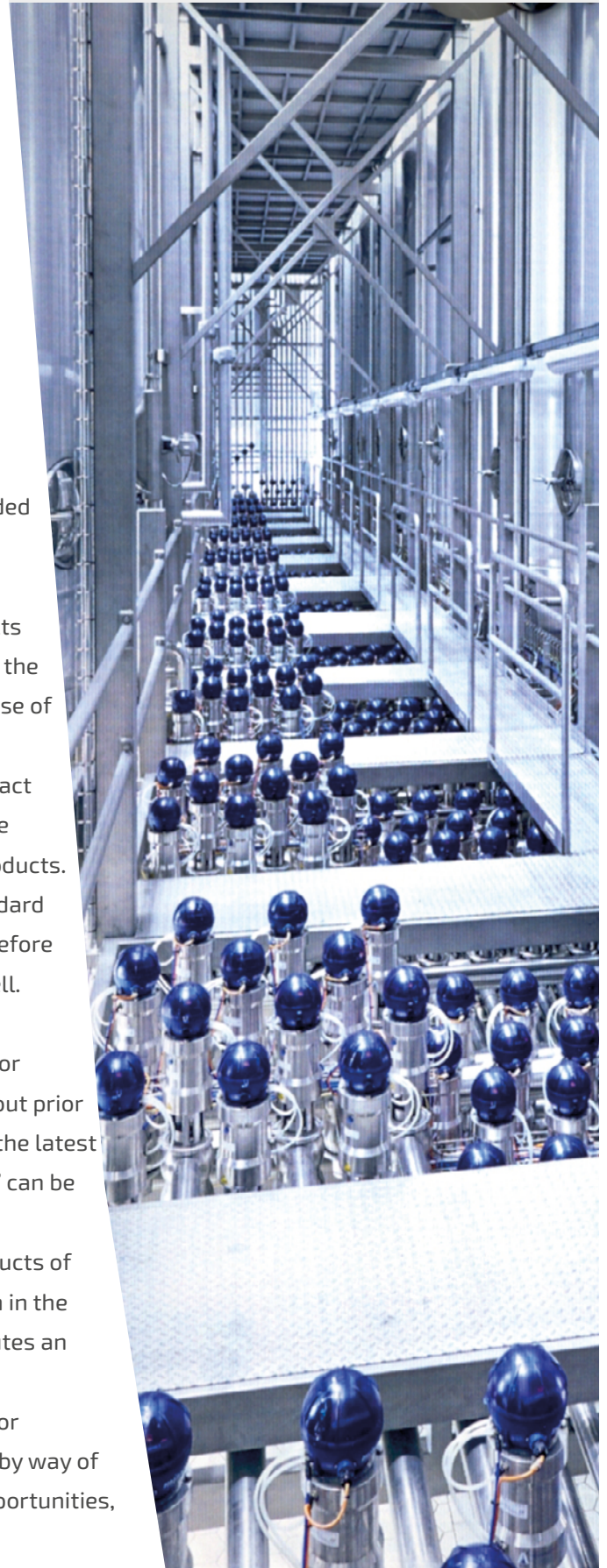
S.A.N.O.				
DIN/DN	INCHES/DN	ci. / cyl.	P1 bar/psi	P2 bar/psi
40	1" 1/2	83	10/145	10/145
50	2"	108	9/130	10/145
65	2" 1/2	108	9/130	10/145
80	3"	134	4.5/65	6.5/94
100	4"	134	4.5/65	8/115



D.A.				
DIN/DN	INCHES/DN	ci. / cyl.	P1 bar/psi	P2 bar/psi
40	1" 1/2	83	10/145	10/145
50	2"	108	10/145	10/145
65	2" 1/2	108	10/145	10/145
80	3"	134	10/145	10/145
100	4"	134	10/145	10/145

RECOMMENDATIONS

- 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, 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..



BARDIANI CARE

Flexible made-to-measure services based on client needs. And it is here, in its capacity to build a made-to-measure post-sales service for each customer that Bardiani Valvole makes the difference.



Preventive maintenance

- Customer-specific production schedules
- Life cycle analysis and in-person valve maintenance
- Maintenance costs monitoring



Technical trainings

- Hands-on trainings
- On site or at customer plants
- Video tutorials



Guaranteeing parts availability

- Original spare parts
- Prompt deliveries
- Availability over time



Continual technical support

- Dedicated and made by experienced technicians
- Quick claims resolution



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