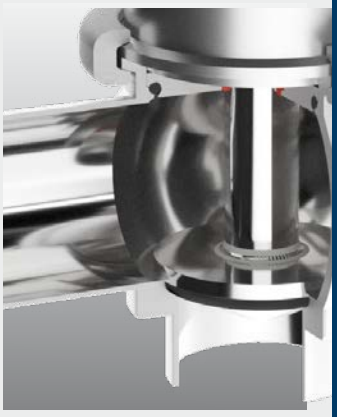
BARDIANI VALVOLE

Instruction, Use and Maintenance Manual



BY-PASS VALVE

BBZS1EX - BBWS11EX

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(Translation of the Original Instructions) EN-IST-BBZS1EX-1022

MANUAL REVISION	DATE

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INTRODUCTION

This “Instruction, Use and Maintenance Manual” has been prepared to provide guidance and recommendations to assist qualified skilled technicians in the understanding, running and maintenance orf the Products supplied.

It forms an integral part of the Products supplied and must be read prior to any installation, operation and/or maintenance of all types of valves provided.

This manual must be saved for future reference and be kept readily available at the unit.

The essential characteristics of all types of valves described herein being consistent, the Manufacturer reserves the right to alter and or complement and or update at any time and with no obligation to notify so in writing, the data and or information relevant to the use of the valves described in this "Instruction, Use and Maintenance Manual".

A constantly updated version of this "Instruction, Use and Maintenance Manual" is available at the Manufacturer's website www.bardianivalvole.it.

Under no circumstance shall the Manufacturer be held liable for consequences resulting from failure and or improper use of the instructions contained in this Manual and relating to the installation, operating, maintenance and storage of the products.

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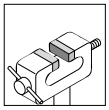
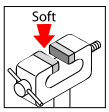
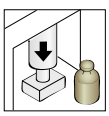
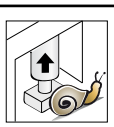
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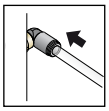
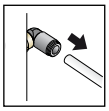
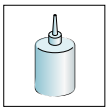
1 Safety,Warning and Mandatory Signs

WARNING SIGNS		
Pictogram	**Description**	**Notes**
	**WARNING** **General**	This tells the person in question that the operation described involves (when not performed in accordance with the relative safety regulations) the risk of personal injury.
	**WARNING** **Hand crushing**	Exercise caution in executing the procedure Hand crushing hazard Never touch the moving parts if the actuator is supplied with compressed air.
	**WARNING** **Heavy loads**	Exercise caution in executing the procedure Heavy suspended loads.
	**WARNING** **Severe burns**	Heat emission hazard Very hot surface, risk of severe burns
	**WARNING** **Risk of explosions**	Take Care, risk of explosions

MANDATORY SIGNS (FOR THE OPERATOR IN CHARGE OF ASSEMBLY/DISASSEMBLY)		
Pictogram	**Description**	**Notes**
	**OBLIGATION** **General**	Special instructions must be followed to avoid injury to persons.
	**PROTECTIVE GLOVES**	Safety gloves must be available for handling objects which could cause hand injuries.
	**HARD HAT**	A hard hat must be worn during machine lifting operations to protect against hazards generated by suspended loads.
	**FOOTWEAR**	Use safety footwear to protect against the risks of falling objects during operations to transport the machine.
	**SUITABLE CLOTHING**	Suitable clothing such as overalls. It is strictly prohibited to wear clothes with large flapping sleeves and/or other loose items which could easily get caught up in machine parts.

MANDATORY SIGNS (FOR THE OPERATOR IN CHARGE OF MECHANICAL MAINTENANCE)		
Pictogram	**Description**	**Notes**
	**OBLIGATION General**	Special instructions must be followed to avoid injury to persons.
	**PROTECTIVE GLOVES**	Protective gloves must be available for handling objects which could cause hand injuries or when there is the possibility of coming into contact with harmful substances..
	**HARD HAT**	Hard hats must be available when lifting heavy parts.
	**FOOTWEAR**	Use safety footwear to protect against injuries caused by falling objects during maintenance operations (particularly when dismantling parts).
	**SUITABLE CLOTHING**	Suitable clothing such as overalls. It is strictly prohibited to wear clothes with large flapping sleeves and/or other loose items which could easily get caught up in machine parts.
	**SAFETY GLASSES**	Protective glasses must be available when there is the possibility of contact which harmful substances which could cause eye injuries.

OPERATING SIGNS		
Pictogram	**Description**	**Notes**
	**SKILLED PERSONNEL**	Dismantling/Assembling and maintenance operations must be carried out by expert technicians only.
	**NOTE**	Follow the indicated note with care
	**ENVIRONMENTAL NOTE**	Follow the regulations in force in the country of used governing waste disposal.
	**CLAMP**	Use of a clamp
	**CLAMP WITH SOFT JAWS**	Use of a clamp with jaws made from soft material
	**PRESS**	Use of a press
	**PRESS (release)**	Use of a press Gradual release of the pressure force

OPERATING SIGNS		
Pictogram	**Description**	**Notes**
	**ELECTRICAL CONNECTION**	Electrical connection to the control unit (consult the relative instruction manual).
	**ELECTRICAL DISCONNECTION**	Electrical disconnection from the control unit (consult the relative instruction manual).
	**PNEUMATIC CONNECTION**	Connection of the air to the valve.
	**PNEUMATIC DISCONNECTION**	Disconnection of the air from the valve
	**APPLICATION OF FOODSAFE GREASE**	Use FOODLUBE HI-TEMP 2 15254 grease or similar.
	**APPLICATION OF FOODSAFE GREASE**	Use FOODLUBE Multi-paste 15756 grease or similar.
	**APPLICATION OF MULTIPURPOSE GREASE**	Use AGIP GREASE MU EP 2 SE 463754 or similar.
	**THREADLOCK APPLICATION**	Use SPEED BOND M500 threadlock or similar.
	**ASSEMBLY / DISASSEMBLY SEQUENCE**	Sequence of assembly disassembly operations
	**USE HANDS**	In all those phases in which this symbol is present, they can use only your hands to unscrew / screw the indicated devices.
	**DO NOT USE TOOLS**	In all those phases in which this symbol is present, they cann't use the tools.
	**OPTIONAL**	



Check that all greases used have a minimum autoignition temperature over 135°C.

1.1 Operator training



All persons who have to work on the valve must be qualified to carry out the relative maintenance tasks. They must be informed as to the possible hazards involved and must observe all the safety instructions set out in this manual. Allow expert personnel only to work on the electrical components.

2 General safety warnings

2.1 General safety warnings



Intended use
Bardiani valves have been designed exclusively for moving fluids.

Prohibited use
The valve must not be used:
- for any operations different to those described under the heading "Intended Use",
- for handling fluids different to the type specified by the manufacturer;
- for moving fluids at different pressures to those envisaged by the manufacturer and indicated in the valve's technical data.

Limitations on valve use
It is forbidden to:
- use the valve in a construction configuration different to the one envisaged by the manufacturer.
- integrate other systems and/or equipment which were not considered by the manufacturer during the executive design phase,
- use the valve for purposes other than those specifically envisaged by the manufacturer.
- use the equipment in explosion and/or fire hazard areas classified as follows:
  a) zone 0 and zone 20;
  a) zone 21 if the GIOTTO TOP control unit contains solenoid valves;
- Never connect the equipment to power sources different to those stipulated by the manufacturer;



BARDIANI VALVOLE S.p.A. declines all liability for installation, use or maintenance which fails to comply with the indications provided in this manual!

2.2 Instructions for safe use in explosion hazard areas

Use in compliance with Directive 2014/34/EC
Use of ATEX valves in explosion hazard zones in compliance with classification:

II 2G Ex h IIB T6 Gb X
II 2D Ex h IIIC T85°C Db X
T environmet -10°..+40°C

X: T Product Max +85°C

In the event of the presence of electrical components, for correct classification, refer to the use and maintenance manual of the control unit.

Example: if the valve is used to move fluids with a temperature of 80°C, the external temperature of the valve will also reach 80°C. It is therefore necessary to check that the
auto-ignition temperature of the explosive atmosphere where the valve is installed is higher than the temperature reached by the valve (80°).

Filed with the Notified Body: TUV IT 19 ATEX 085 AR



If the valve operates with potentially explosive products, the end user must classify the operating areas in accordance with Directive 1999/92/EC as the valve may release potentially explosive emissions in the event of malfunctions or breakages.



The end user is responsible for assessing the risk of explosion and classification of the unit and zone of application in accordance with Directive 1999/92/EC.



Check, based on the relative classification, that the valve is suitable for the application in question.



The system on which the valve is installed must comply with standard EN 60079-14.



The valves must be assembled and put into service by expert personnel only.
The expert personnel must have adequate knowledge of types of explosion protection, standards and regulations for means of production in explosion hazard zones.



All maintenance, assembling and installation operations must be carried out in a potentially non-explosive atmosphere.



It is mandatory to strictly observe the plant's fire-fighting plan or fire prevention assessment: fire extinguishers must be available in the area where the valve is installed.



Permitted ambient temperature in the place of use: -10°C...+40°C.



The valve body may be subject to overheating.
The temperature of the outer surfaces of the valve depends on the fluid which flows through it. The maximum permitted temperature for transiting fluids is 85°C and is such that it does not reduce the level of protection.



Installation and assembly instructions: adhere to the relative directives and regulations in force.



Mechanical damage, in most cases, results in blocked operation; consequently there are no direct risks of ignition.



In the event of dropping/hitting the valve, it is compulsory to check correct operation as any friction caused by component deformation may cause malfunctions and sources of ignition.



The valve must be installed away from systems and/or places which generate stray electric currents.



The valve must not be directly exposed to lightning or any electrical current generated by lightning: install the valve under cover or with a lightning protection system.



The valve must never be exposed to direct sunlight.



During assembly take care to ensure foreign bodies are not left inside.



During assembly take care to prevent the formation of sparks caused by rubbing oxidizable substances such as iron or steel.



Keep the valve clear of any potentially explosive dust deposits. Do not allow dust to build up to over 5 mm in depth.



All electrical components installed on the valve must be EX marked and must belong to the same ATEX certification category as the valve: Group II, Cat. 2 for Zone 1 and 21.

2.3 Safety Devices:

(see the control unit manual)

3 Technical Data

VALVE DATA	
Maximum pressure	PN10
Storage temperature	From -10°C to 25°C
Material in contact with the product	AISI 316L (1.4404). Check the resistance to corrosion in relation to products and detergents
Gasket material in contact with the product	EPDM, FKM, HNBR, P.T.F.E. and other gaskets on request. Check compatibility with products and detergents
Surface finish in contact with the product	Ra 0.8 µm. Other finishes available on request

GASKET MATERIALS COMPATIBILITY				
Product	**EPDM**	**FKM**	**HNBR**	**MVQ**
Temperature (applications with air)	From -10 to +140°C	From -10 to +200°C	From -10 to +130°C	From -70 to +230°C
Caustic soda 2%	60°C	30°C	To be checked	Unsuitable
Nitric Acid 2%	60°C	80°C	To be checked	Unsuitable
Saturated steam 125°C	Suitable	To be checked	Suitable	Unsuitable
Greases	Unsuitable	Suitable	Suitable	Unsuitable
Alcohols	Suitable	Unsuitable	Suitable	Suitable

The valve complies with PED 2014/68/EU directive, with special reference to Annex III, Module A, concerning internal manufacturing checks as indicated in the Conformity Assessment Procedures.

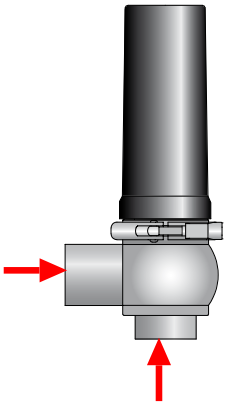
Valves with DN equal or smaller than DN25 are not included in compliance with Article 4, paragraph 3.

Valves designed for use with gases, liquefied gases, gases dissolved under pressure, vapours and also those liquids whose vapour pressure at the maximum allowable temperature is greater than 0,5 bar above normal atmospheric pressure (1 013 mbar) are included within the following limits:
- valves with DN between DN32 and DN100 (included) with group 1 fluids;
- valves with DN125 or bigger with group 2 fluids.

The end user is asked to carry out the acoustic emission tests once the valve has been installed in the destination plant.

In the event of any doubt, please contact Bardiani Valvole S.p.A.

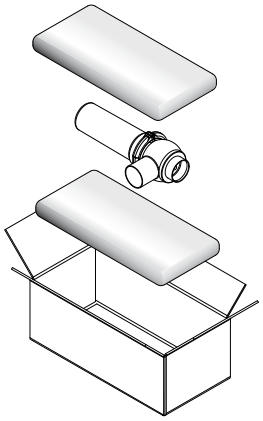
4 Checking / Unpacking / Lifting



1. CHECK:
- Check the valve show no signs of damage caused during transport and that it corresponds with the order;
- Check the inside of the valve.

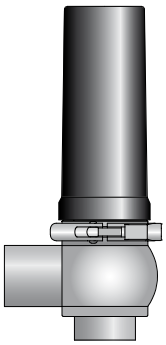


2. UNPACKING:
The valve packaging is made up of cardboard, wood and plastic.
The valve is mainly made up of metal materials. The gaskets are usually made from elastomers. The handle in the DN15 - DN100 sizes is made from plastic (POM-C). Disposal must be in compliance with local legislation.





3. VALVE LIFTING:
Take care as to the type of valve you are handling.



DN10 and DN150
Weight up to 25 kg



CAUTION!
Before lifting the valve, make sure there are no disassembled or separate valve parts which could fall off causing injury to persons and damage to the valve.



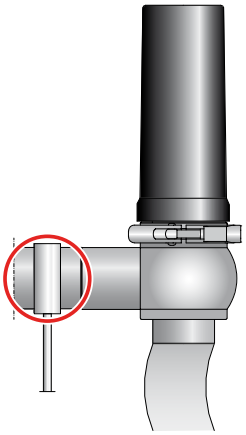
CAUTION!
The figures above are used purely to represent the methods and procedures for hoisting the valves. Bardiani Valvole S.p.A. declines all liability for any damage to things and/or injuries to persons caused by improper and/or incorrect hoisting of the valve.

5 Installation



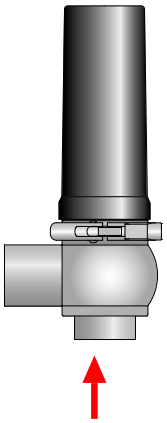
1. PNEUMATIC SUPPLY:
- Use expert personnel for installation/uninstallation operations.

2. REDUCING THE STRESS TO WHICH THE VALVE IS SUBJECTED:
- Vibrations;
- Thermal expansion of the piping;
- Excessive welding;
- Overload.



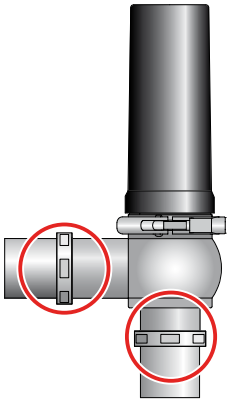
CAUTION!
The seal seats may become deformed or cause valve malfunctioning.

3. CORRECT DIRECTION OF FLOW:
Flow in the opposite direction to valve closure minimizes water hammer.

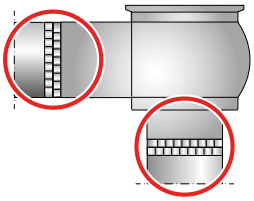


CAUTION!
Bardiani Valvole S.p.A. declines all liability for any damage to things and/or injuries to persons caused by any failure to correctly follow the installation procedures.

4. VALVE CONNECTIONS/CONNECTORS:
If the valve is fitted with connectors, you may proceed with installation. Correctly insert the gaskets and tighten the connectors.

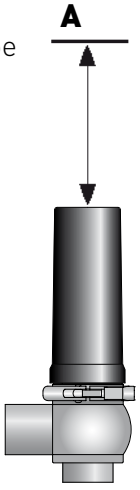


5. WELDING THE VALVE BODY ONTO PIPING:
Remove the body from the rest of the valve before proceeding with welding operations. Please refer to the following pages in this manual.



6. MINIMUM MAINTENANCE CLEARANCES:
Make sure there is enough room around the valve for it to be disassembled.

DN	BBZS1 A (mm)
10-25	245
32-40	265
50	280
65	295
80	310
100	330



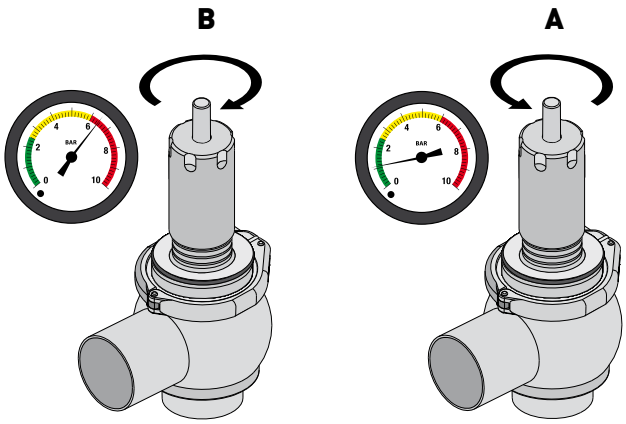
6 Operation



1. PNEUMATIC SUPPLY:

- Use expert personnel for installation/uninstallation operations.

A = Spring compression decrease (lower sealing pressure)
B = Spring compression increase (higher sealing pressure)





CAUTION!

Bardiani Valvole S.p.A. declines all liability for any damage to things and/or injuries to persons caused by any failure to correctly follow the installation procedures.

7 Troubleshooting



PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
External leak	Worn gasket	Replace the seal
Leaks inside the closed valve caused by normal wear		
External leak	Excessive pressure	Replace with a gasket of a different type of elastomer
	Excessive temperature	
Premature leaks inside the closed valve	Aggressive fluids	Modify the operating conditions
	Operating conditions	
Difficulty opening and closing	Incorrect valve body positioning. Disassemble and correctly reposition the valve body.	Disassemble and correctly reposition the valve body

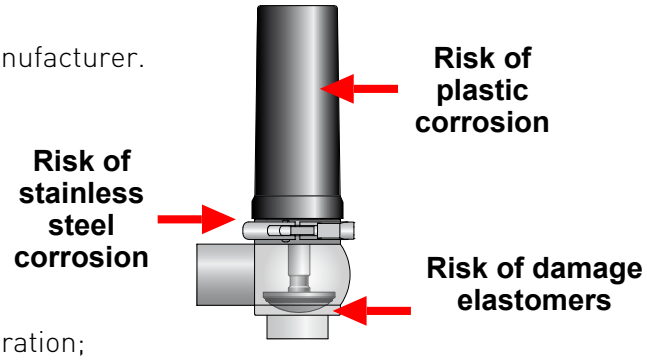
8 Cleaning



1. VALVE CLEANING WITH DETERGENTS:

The system in which the valve is installed must be cleaned by expert personnel in observance of the following:

- Abide by the indicated detergent concentration values;
- Observe the instructions provided by the detergent manufacturer.
- Always wear protective safety glasses and gloves.

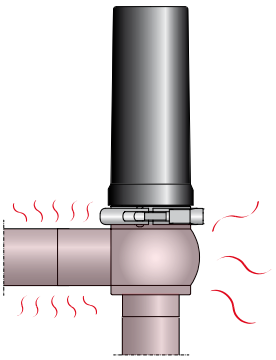


IMPORTANT!

- Accurately dose detergents to avoid excessive concentration;
- Always rinse thoroughly with clean water after washing.
- Check compatibility of valve materials.

CAUTION!

Burns hazard. The valves and piping may be very hot. Wear protective gloves



WARNING

After installing a new or serviced valve, perform an internal washing cycle before using the piping for food liquids. If it there has been any welding work, passivation treatment must be carried out.

EXAMPLE OF INTERNAL WASHING CYCLE (CIP)		
Phases	**Temperature °C**	**Washing product**
Initial rinse	Environment	Chlorine- and chloride-free water
Washing	70 °C	Caustic soda (NaOH) at 1%
Intermediate rinse	Environment	Chlorine- and chloride-free water
Washing	70 °C	Nitric acid (HNO3) at 0.5%
End rinse	Environment	Chlorine- and chloride-free water

Recommended washing product velocity = 2m/s

9 Disposal



At the end of its service life, the device must be recycled in accordance with the legislation in force in the country of valve use.
Any hazardous residues must be taken into consideration and adequately handled.
The valve is made of AISI 316L and AISI 304 stainless steel, elastomers (gaskets), plastic (control unit) and electrical components (terminal boards, solenoid valves, sensors).

Adhere to the following steps before disconnecting the valve and refer to the heading "General Maintenance".

- make sure the line on which the valve is installed in is not in use
- empty the line on which the valve is installed and clean if necessary
- disconnect the air supply if it is not required during dismantling
- disconnect the valve from the power supply
- remove the valve from the system
- move the valve in observance of the rules set out in the heading "Lifting"
- to dismantle the valve, refer to the heading "Disassembly"

10 Maintenance

10.1 General maintenance



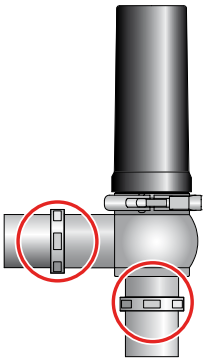

1. MAINTENANCE PRECAUTIONS

Maintenance operations must be carried out by expert technicians only.



CAUTION!

Maintenance operations must be carried out with the line stopped and all utilities (electricity, compressed air) disconnected.





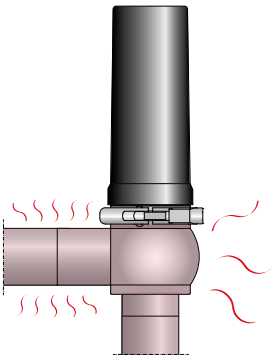
CAUTION!

Always discharge the fluid pressure in the valve and piping before disassembling the valve.

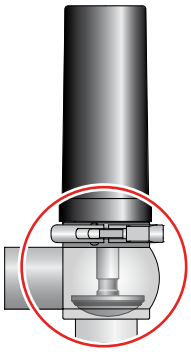


CAUTION!

Burns hazard. The valves and piping may be very hot. Wear protective gloves







2. CLEANING AWAY DEPOSITS:
- Thoroughly wash and clean all the valve parts before disassembly;
- Pay attention to any possible detergent or other aggressive fluid deposits (see "Cleaning");
- Always use protective safety glasses and gloves when required.

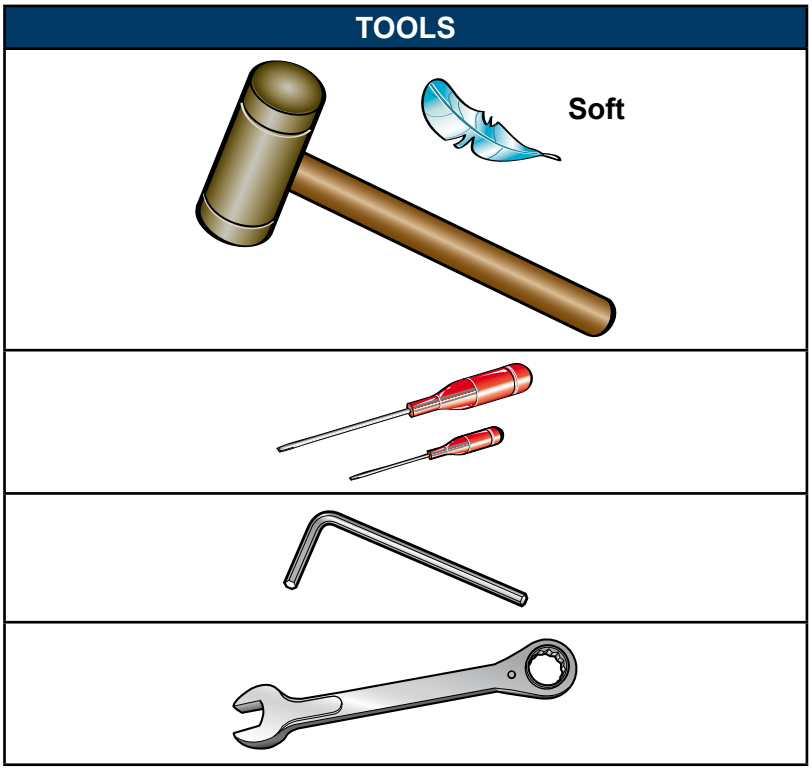


3. SOSTITUZIONE PARTI USURATE DELLA VALVOLA:
Utilizzare sempre ricambi originali.

10.2 Scheduled maintenance

SCHEDULED MAINTENANCE	VALVE GASKETS
Preventive	Replace after 12 months
In the event of leaks	Replace at the end of the day
Periodical	Check correct operation and that there are no leaks
	Record the actions carried out

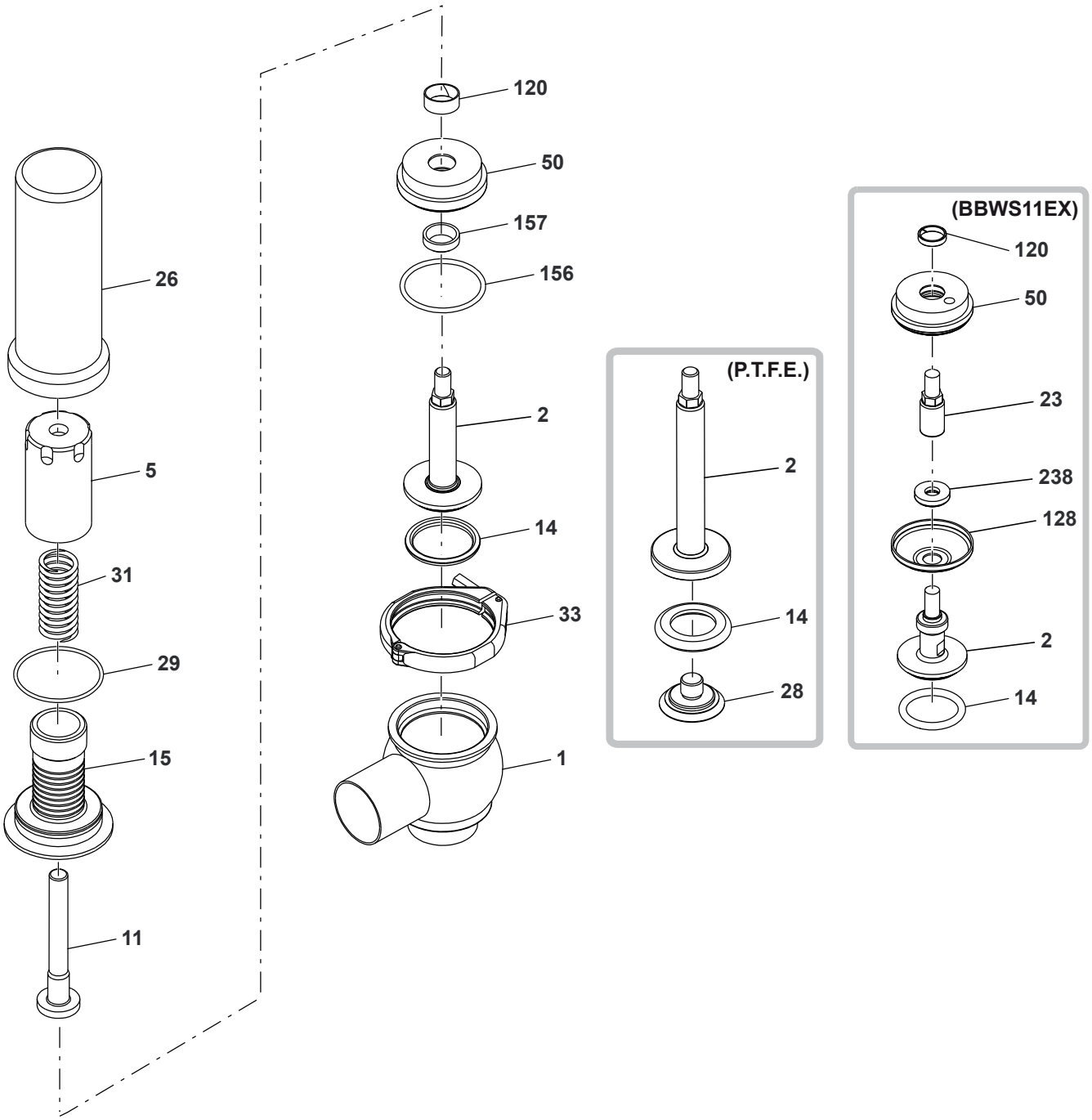
10.3 Tools useful for Disassembly/Reassembly



[A BBZS1EX]

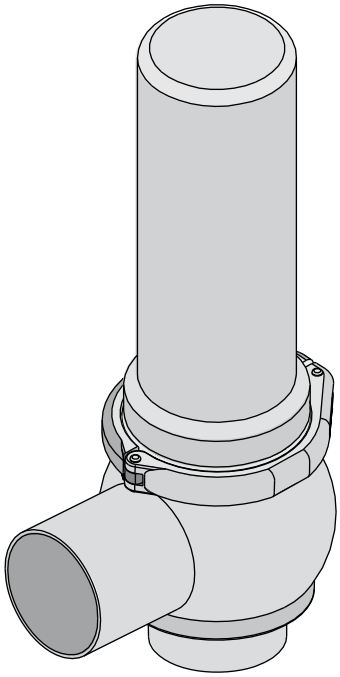
10.4 Manual valve BBZS1EX

NO.	DESCRIPTION	NO.	DESCRIPTION
1	Lower body		
2	Shutter		
5	Spring presser		
11	Pin		
14	Sealing ring		
15	Yoke		
23	Pin		
26	Casing		
28	Shutter nut		
29	Sealing ring		
31	Spring		
33	Clamp		
45	Steam barrier		
47	Sealing ring		
50	Gasket holder disc		
57	Sealing ring		
120	Bush		
128	Diaphragm		
156	Sealing ring		
157	Sealing ring		
168	Bush		
238	Nut Diaphragm		


120
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156
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11
(P.T.F.E.)
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28
(BBWS11EX)
120
50
23
238
128
2
14

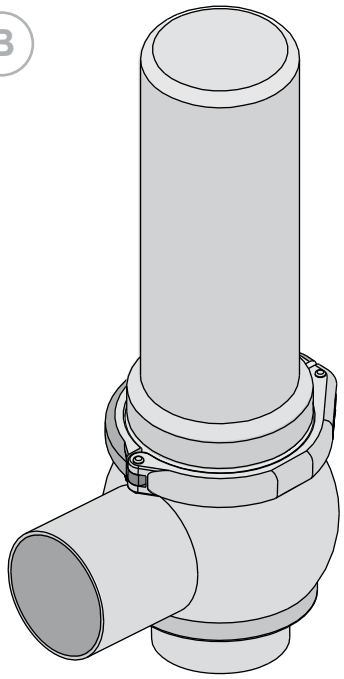
10.5 Disassembly of the BBZS1EX - BBWS11EX

A



[A S BBZS1EX]

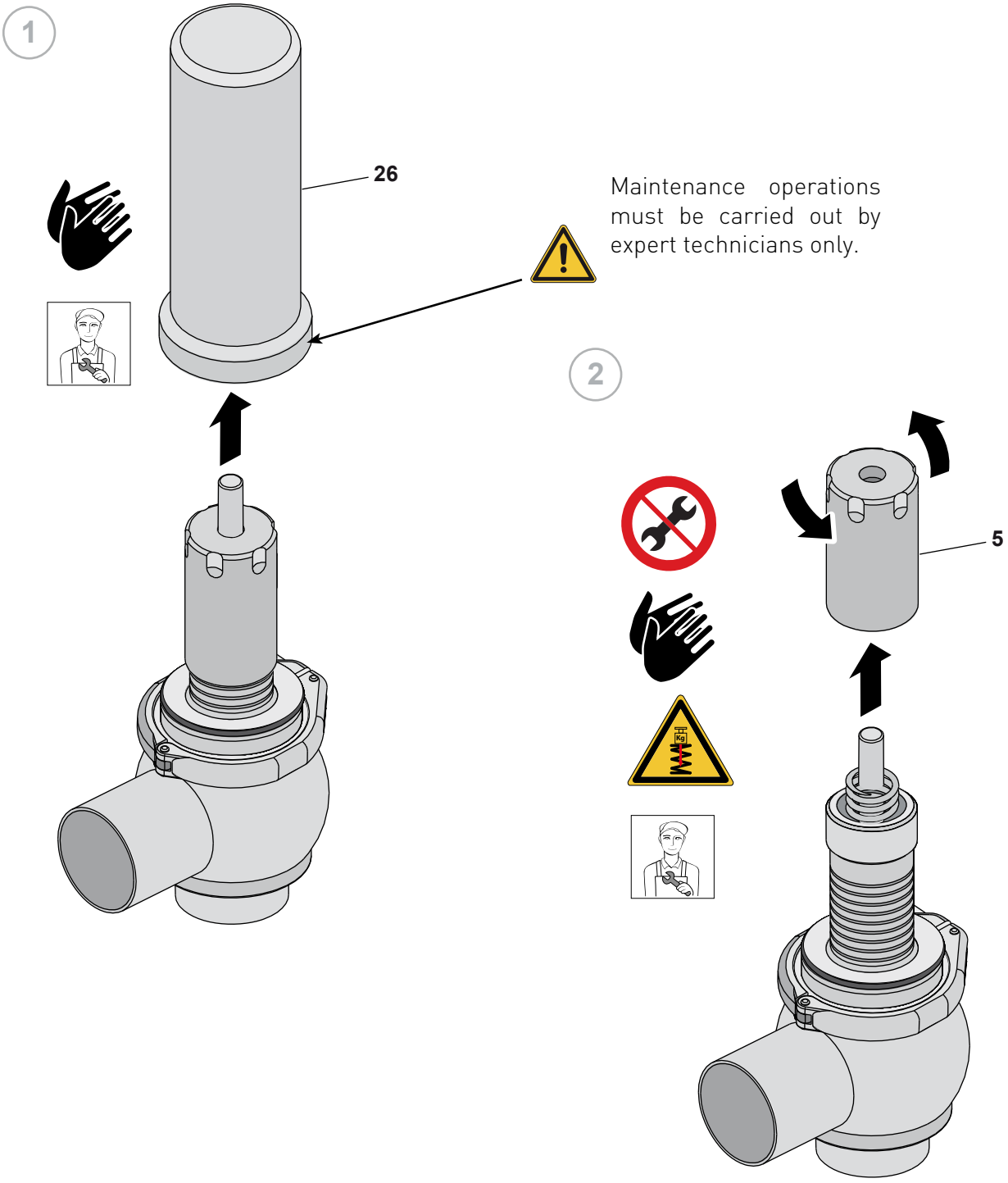
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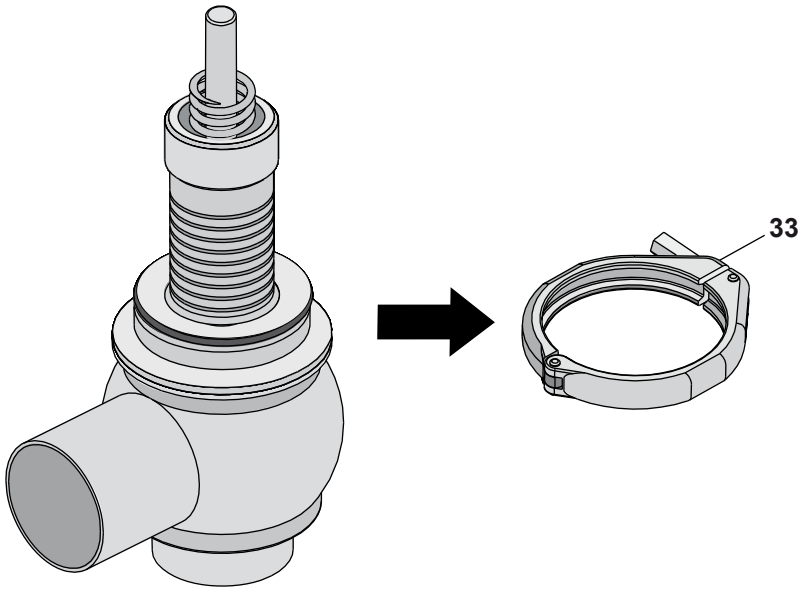
[B S BBWS11EX]

[A S BBZS1EX]

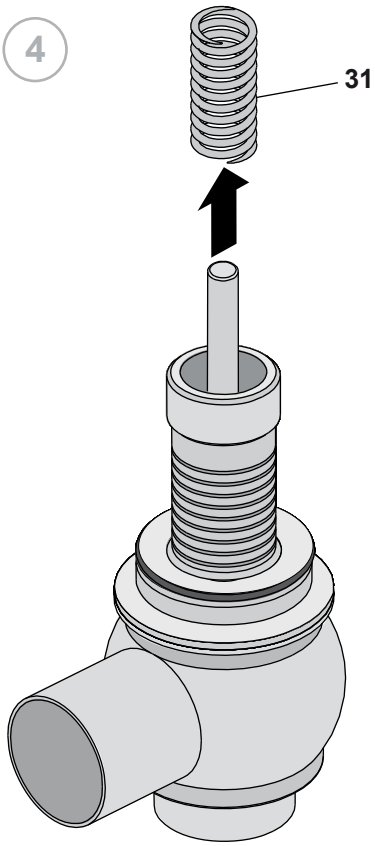
A Disassembly of the BBZS1EX



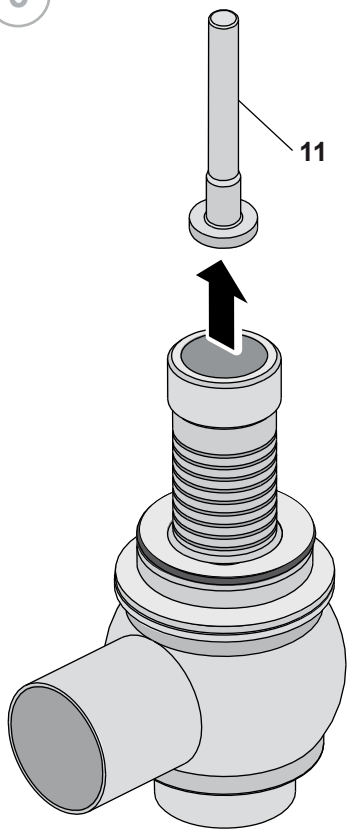
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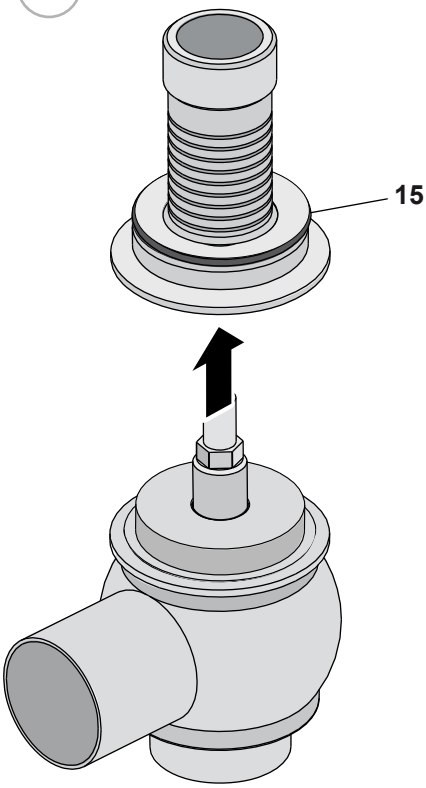
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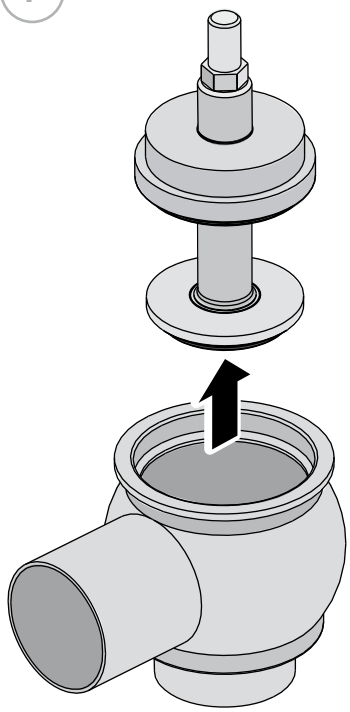
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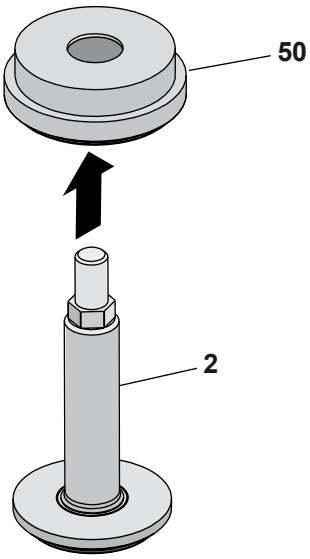
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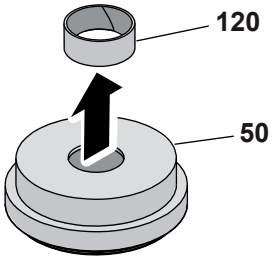
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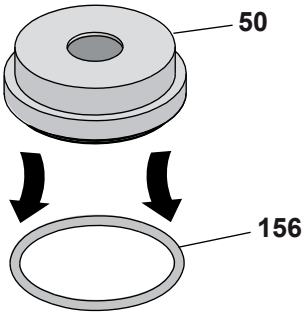
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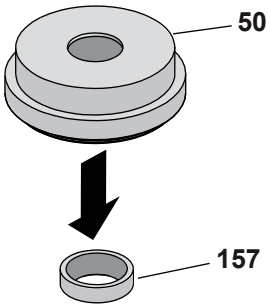
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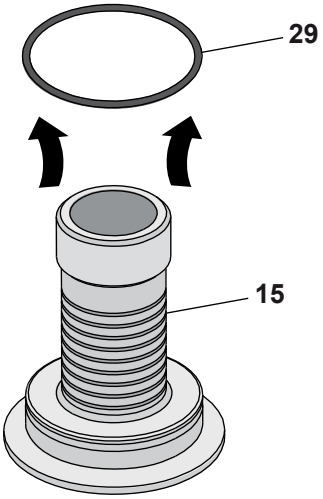
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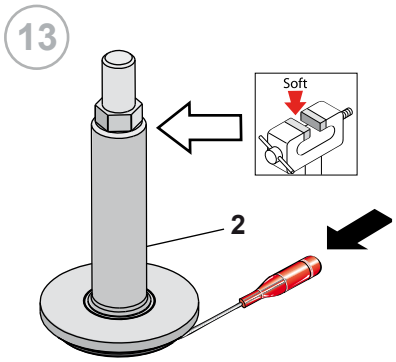


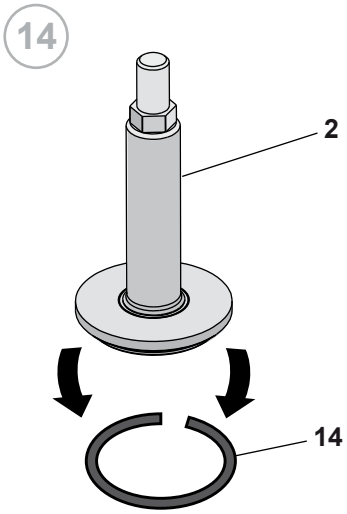
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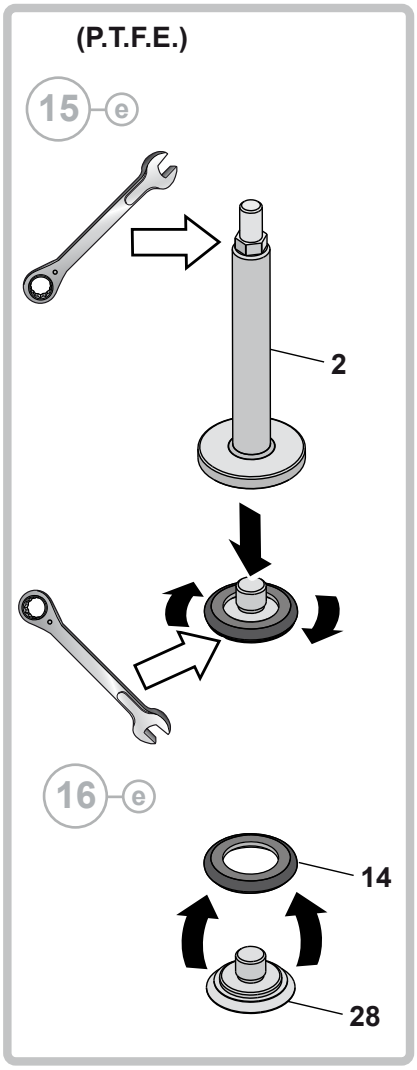


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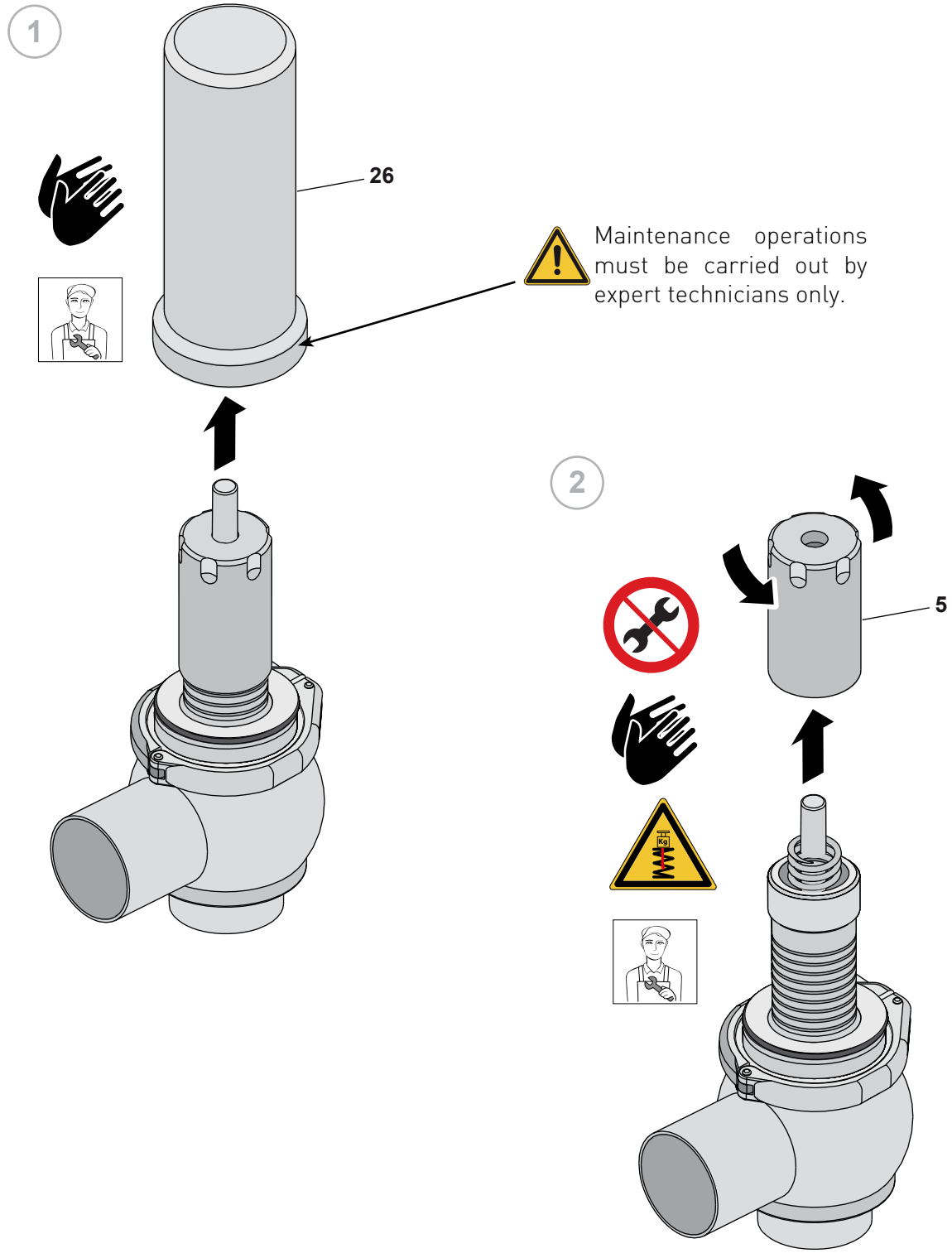



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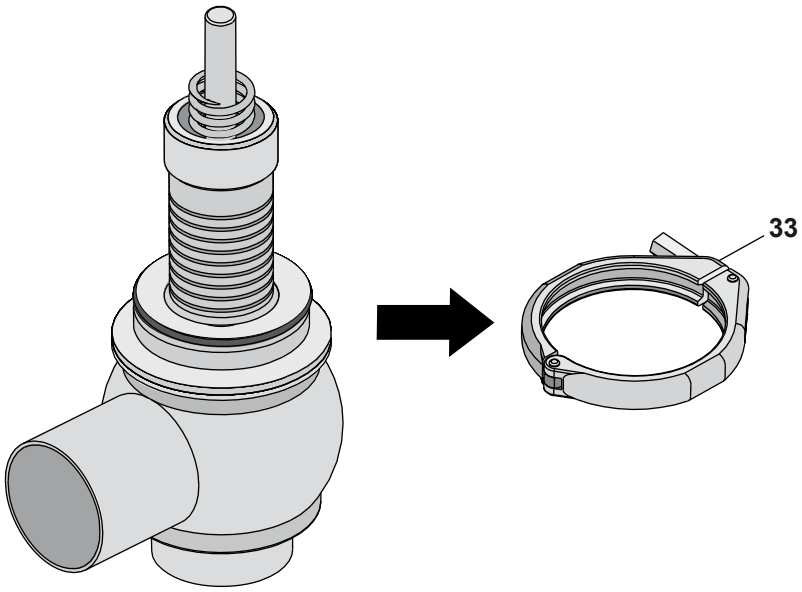

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(P.T.F.E.)
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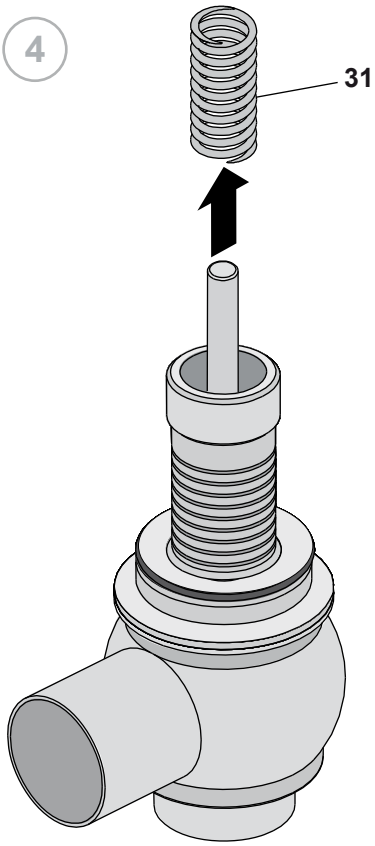
B Disassembly of the BBWS11EX



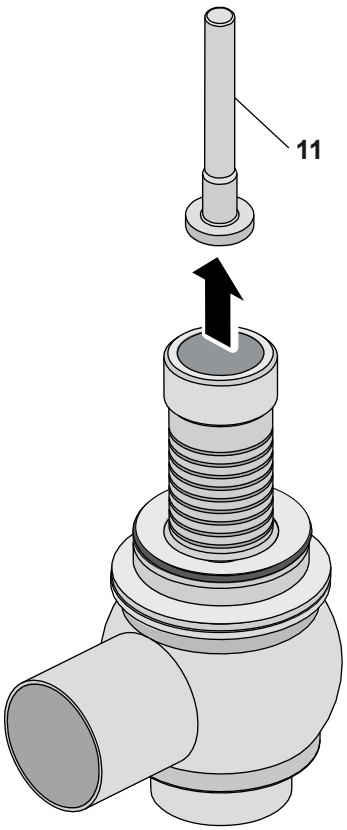
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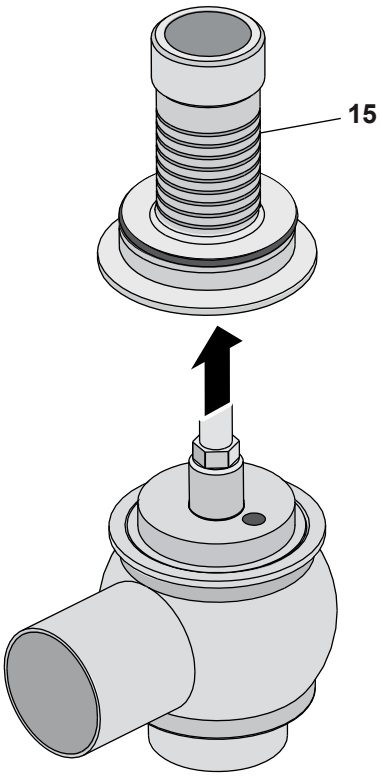
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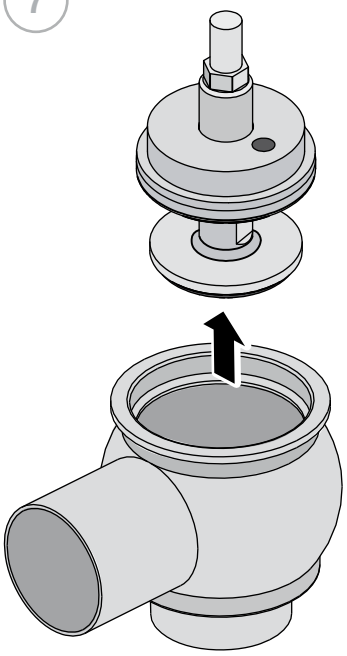
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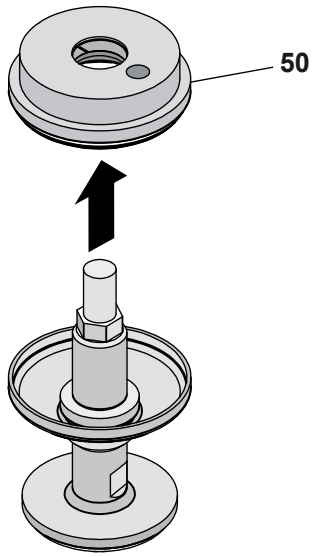
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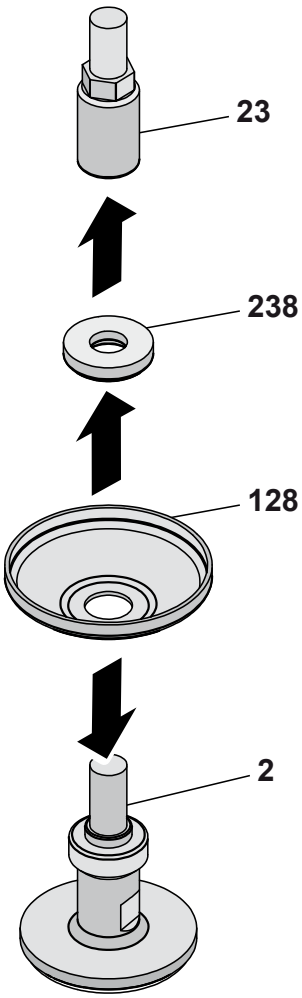
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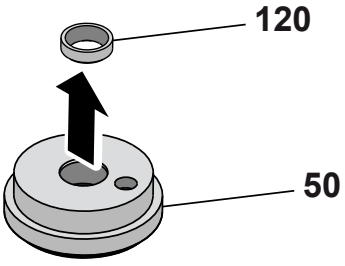
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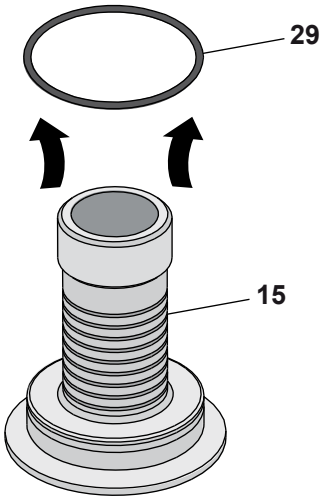
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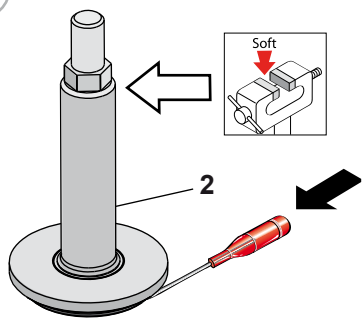
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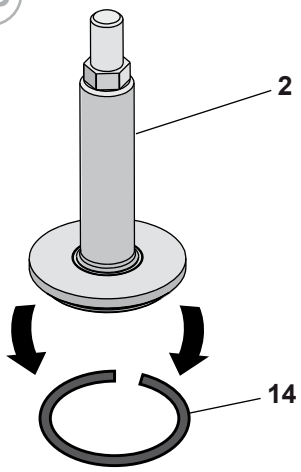
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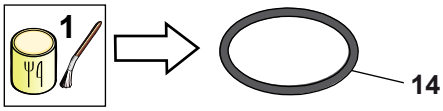
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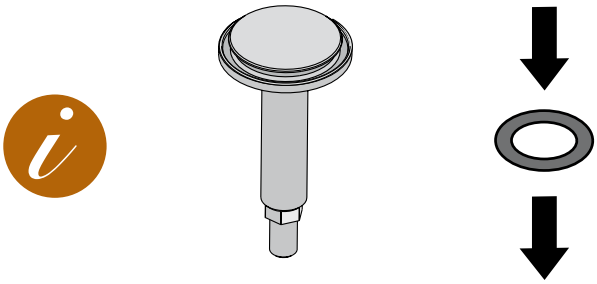


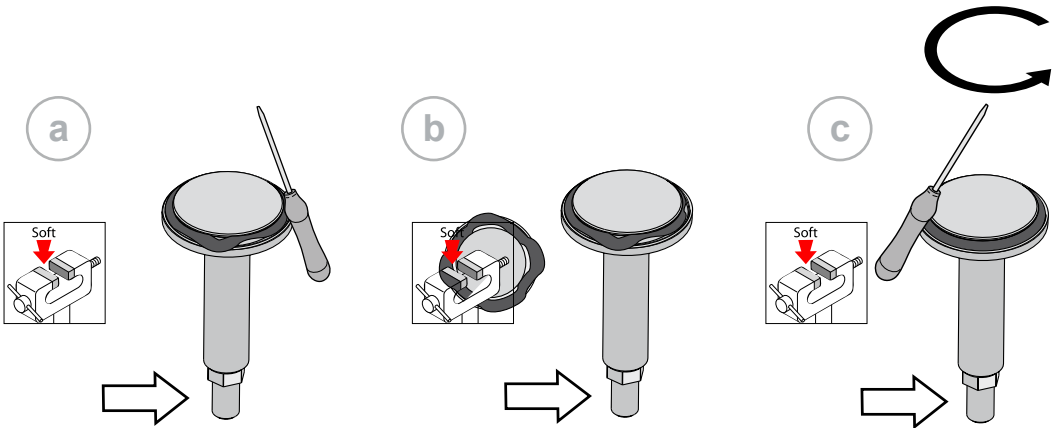
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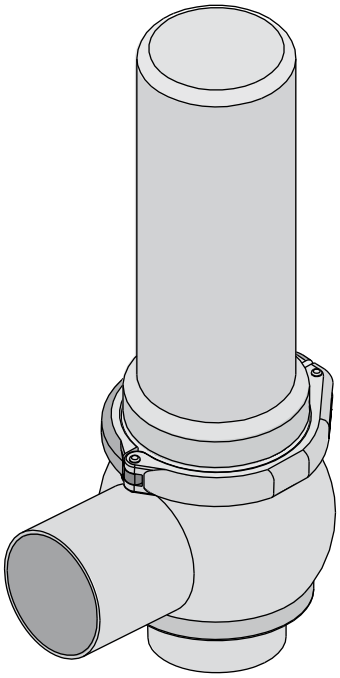
10.6 Assembly of the BBZS1EX - BBWS11EX





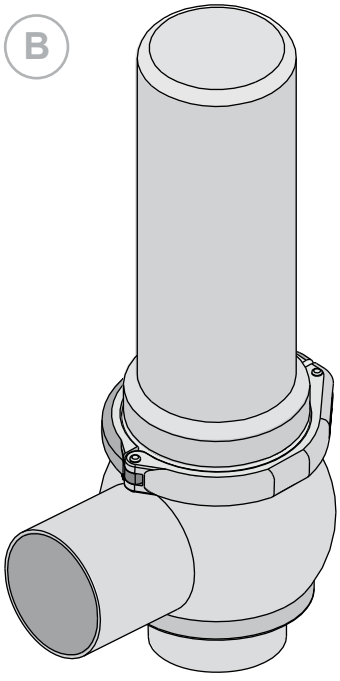


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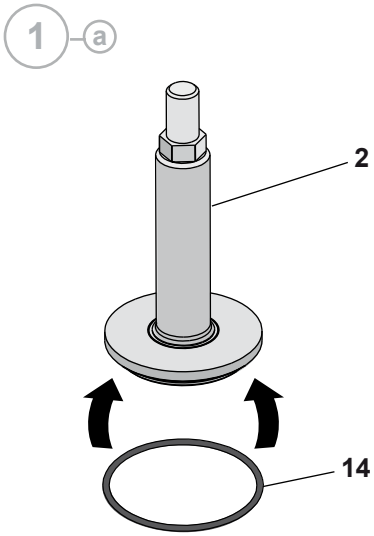
[A M BBZS1EX]

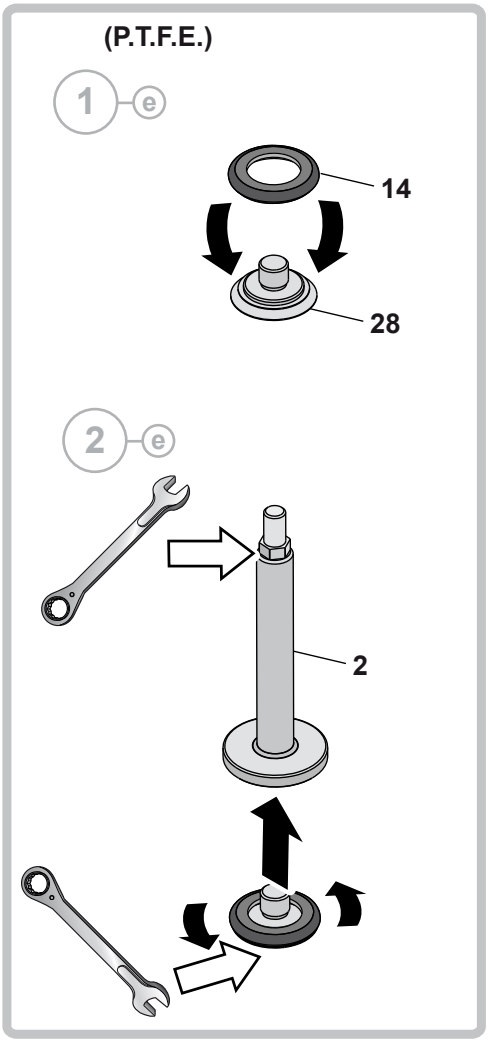
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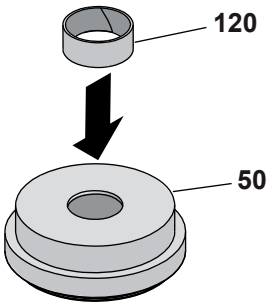
[B M BBWS11EX]

A Assembly of the BBZS1EX

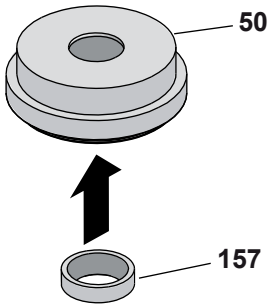




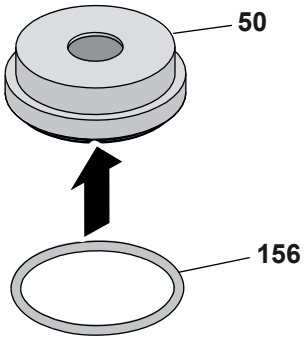
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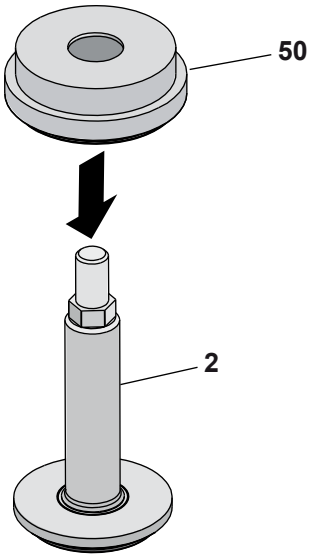
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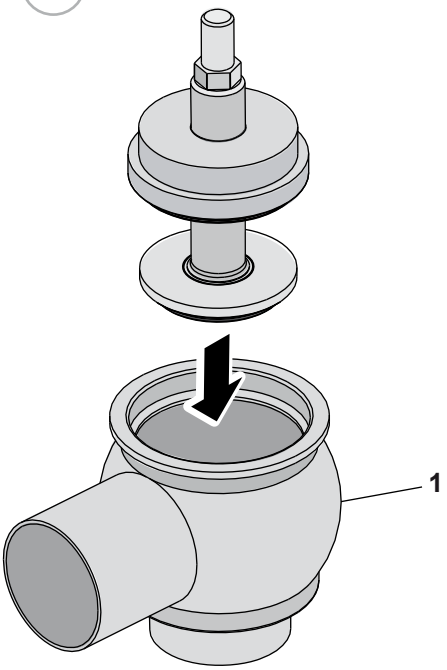
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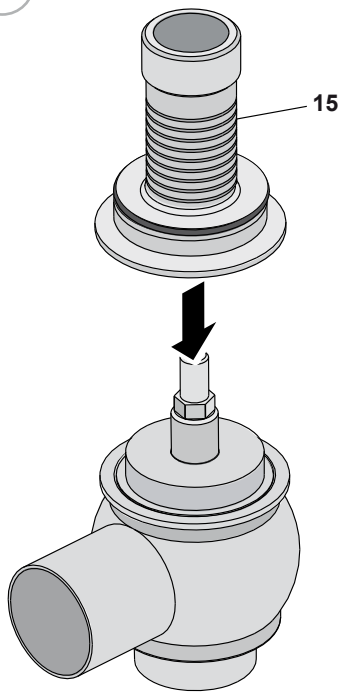
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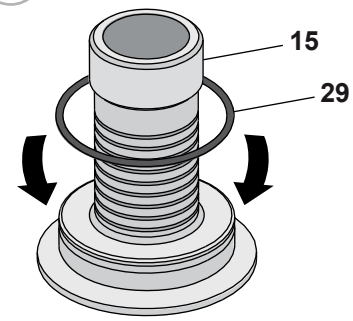
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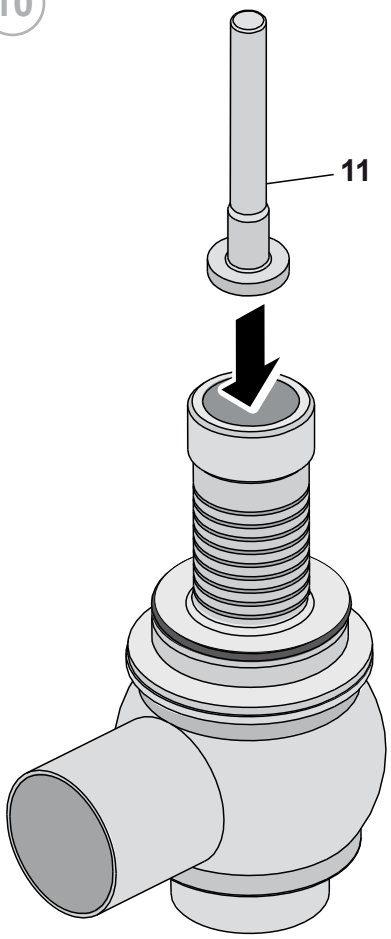
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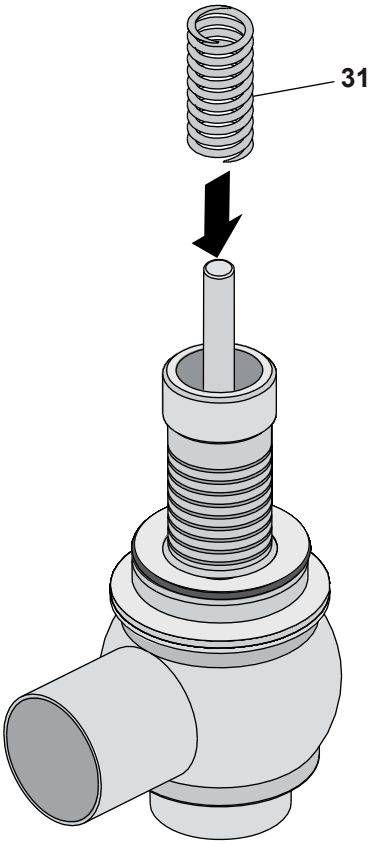
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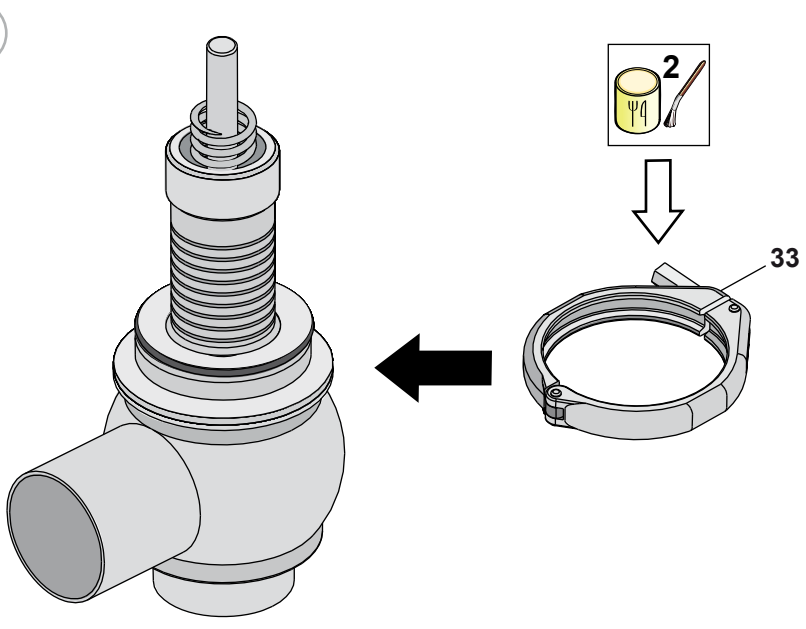
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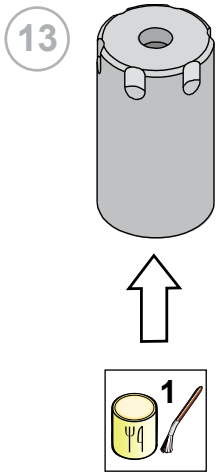


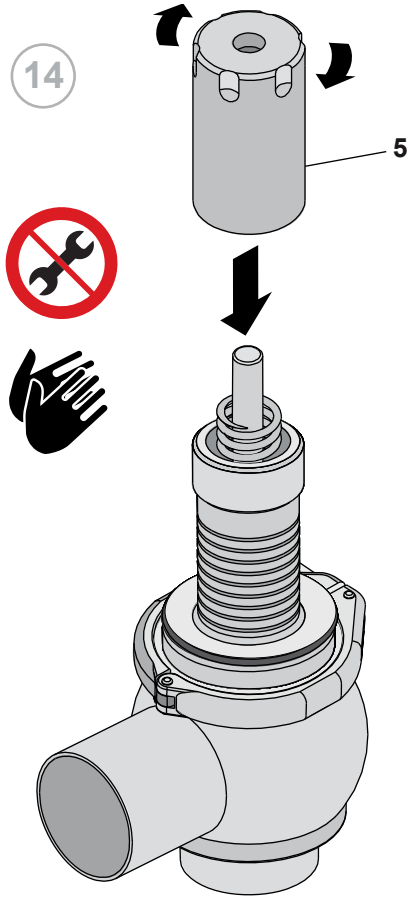
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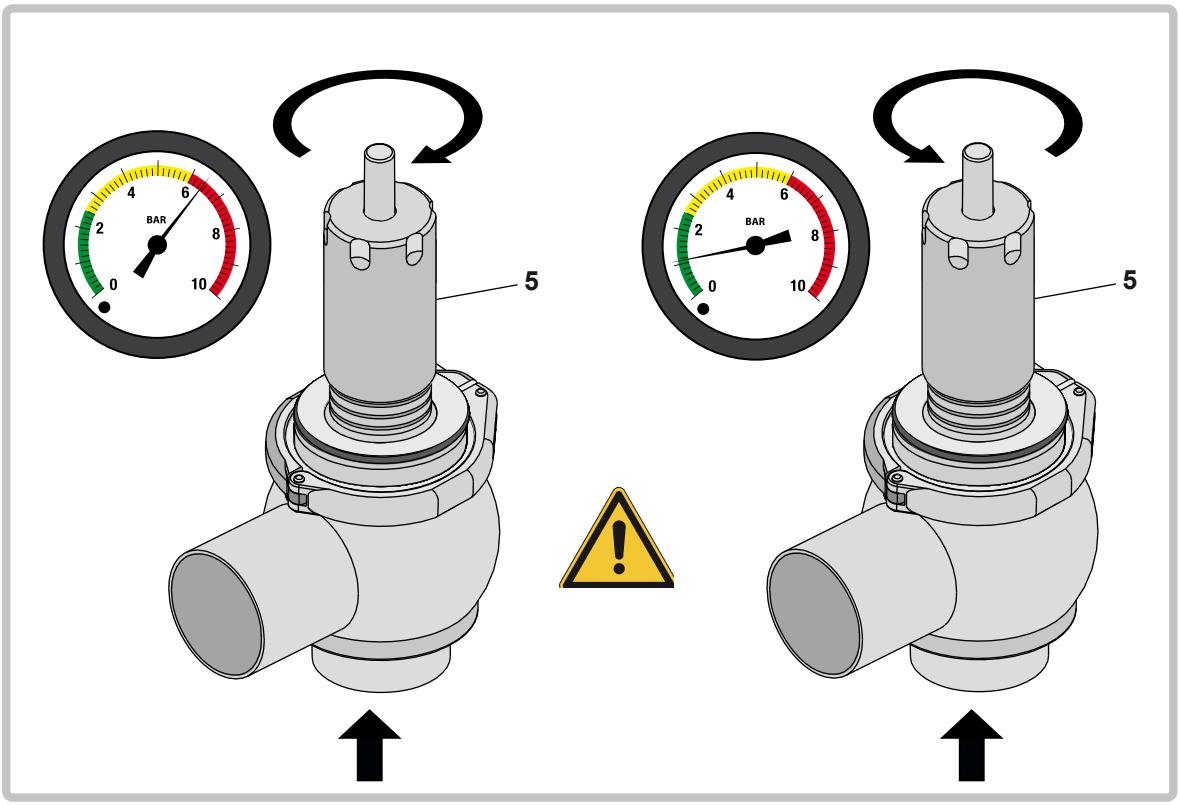


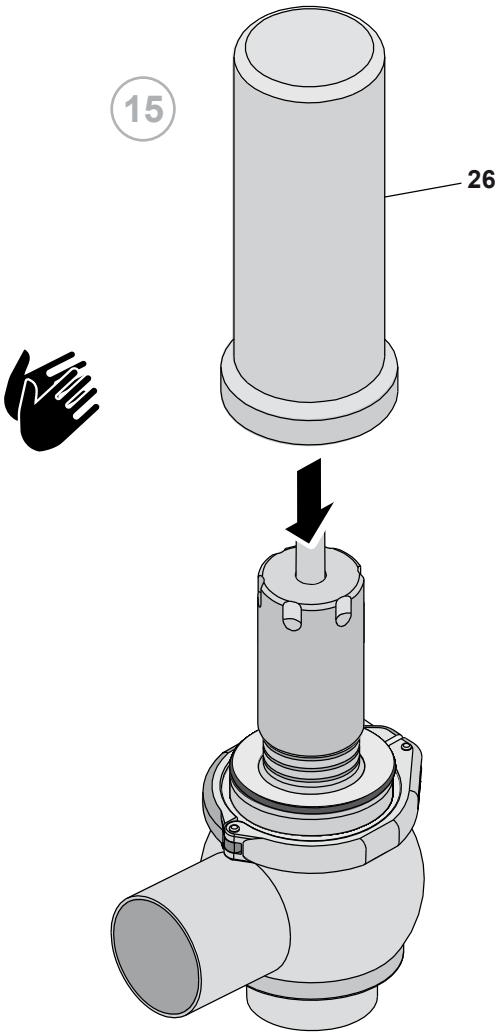
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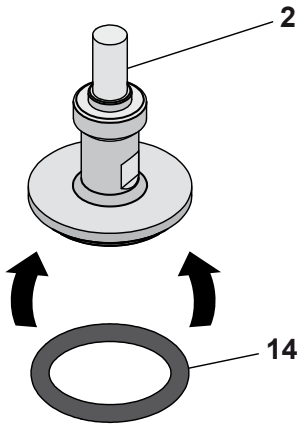

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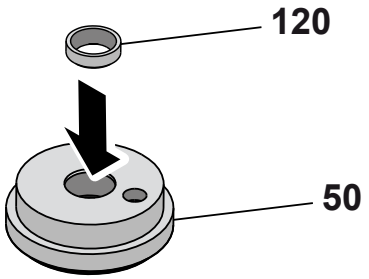
[B M BBWS11EX]

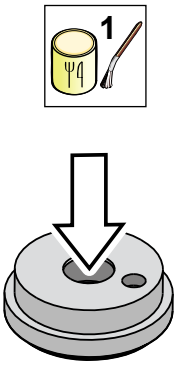
B Assembly of the BBWS11EX

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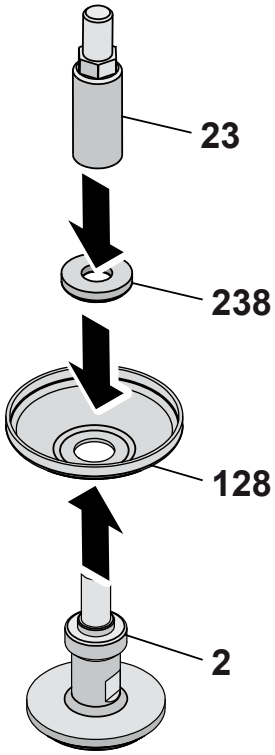


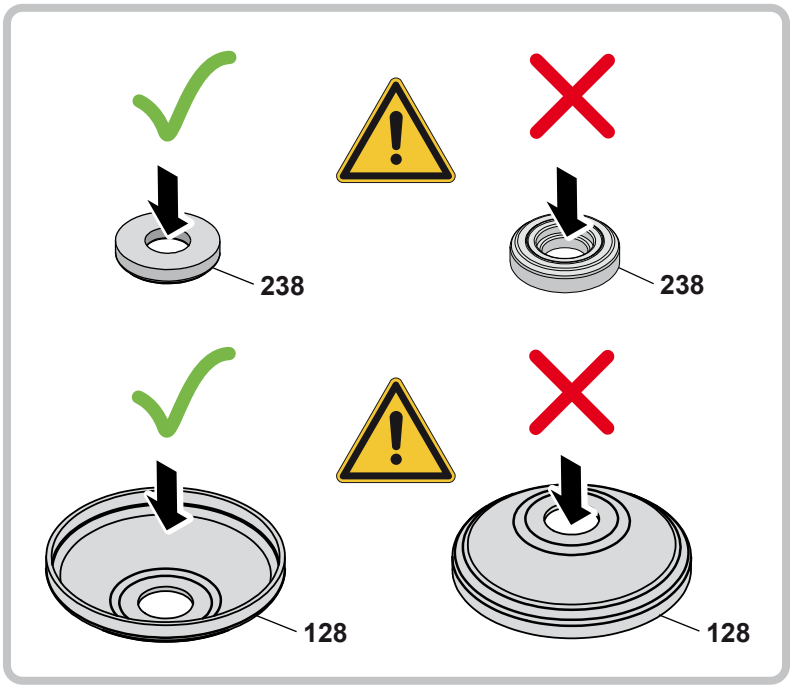
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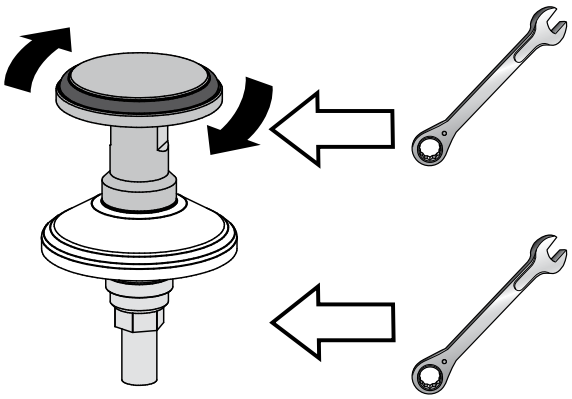


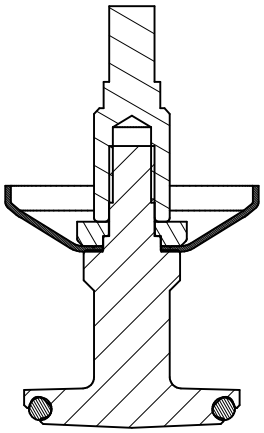
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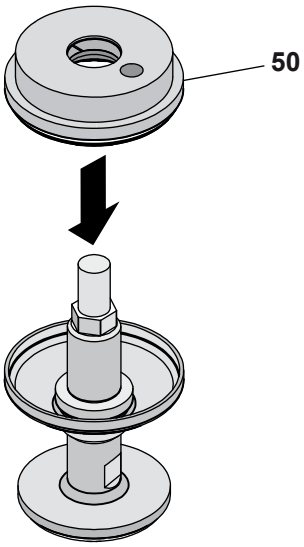


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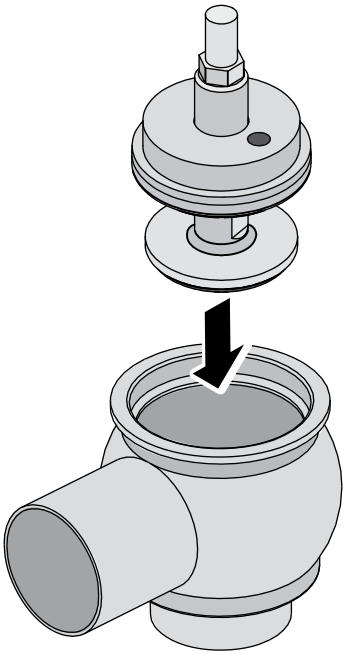




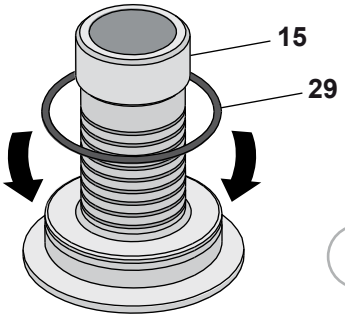
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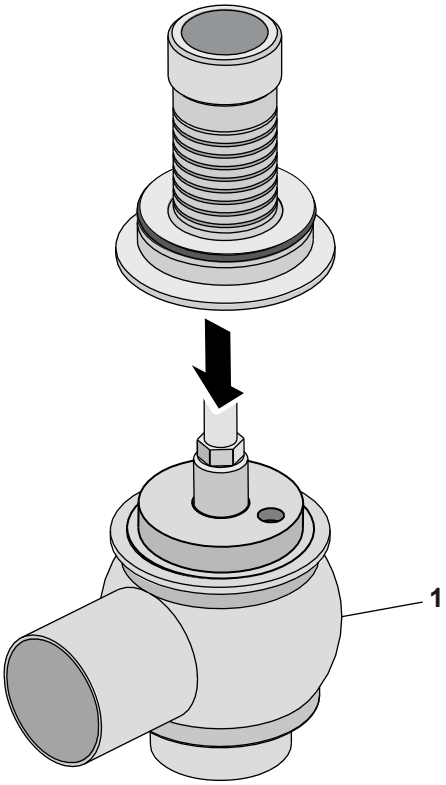
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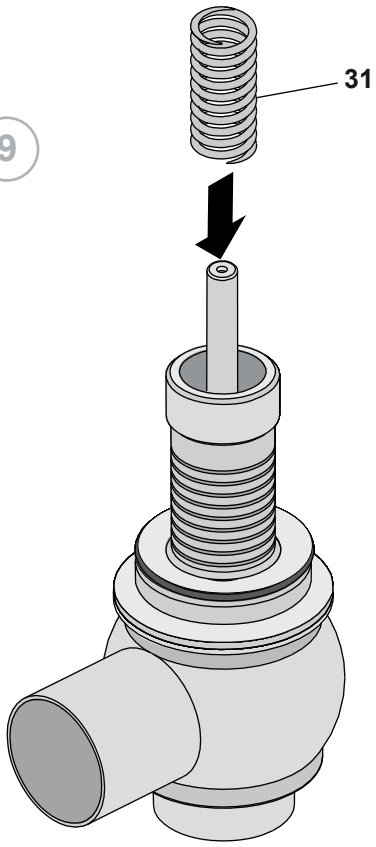
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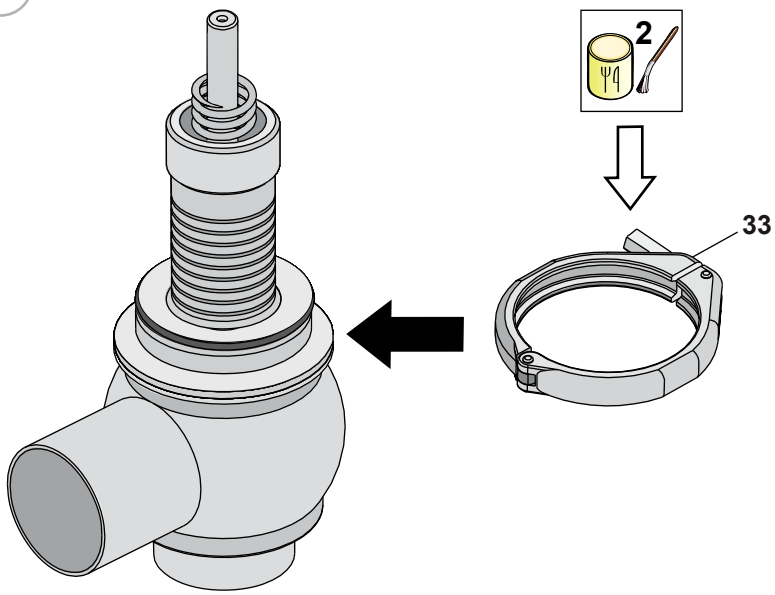
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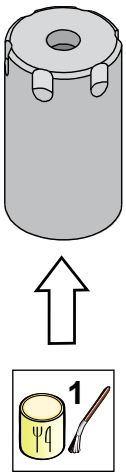
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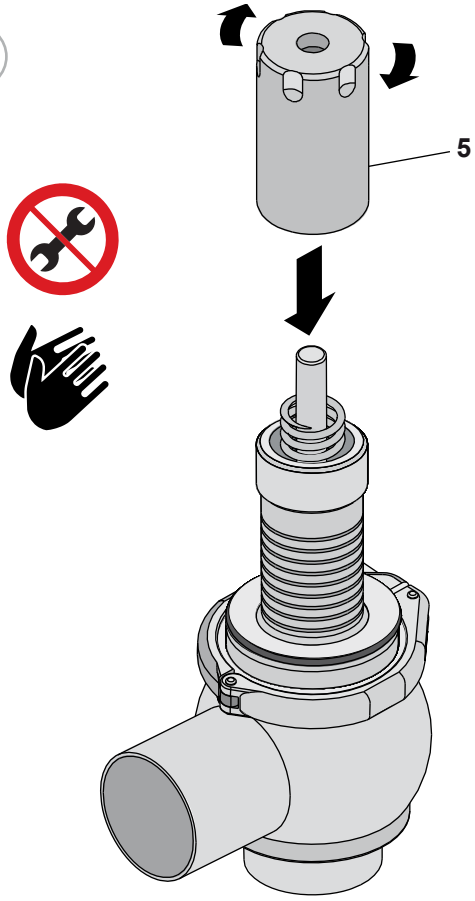
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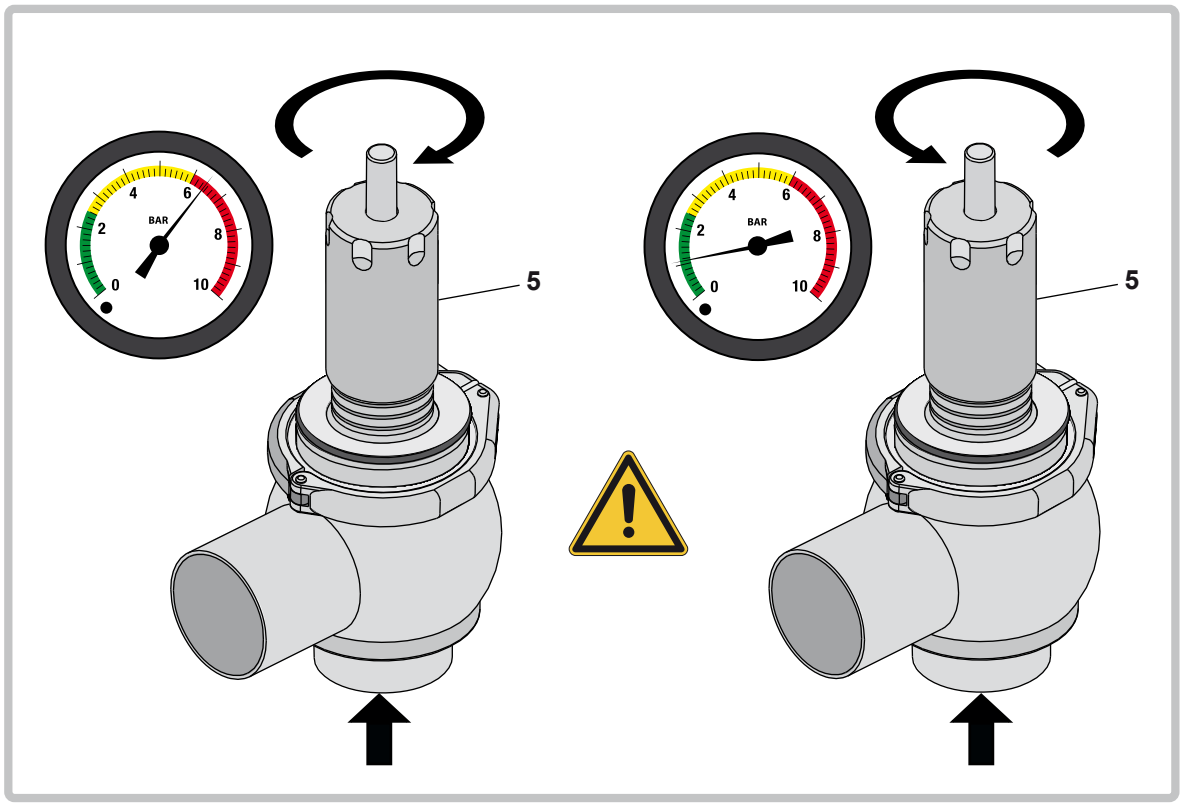


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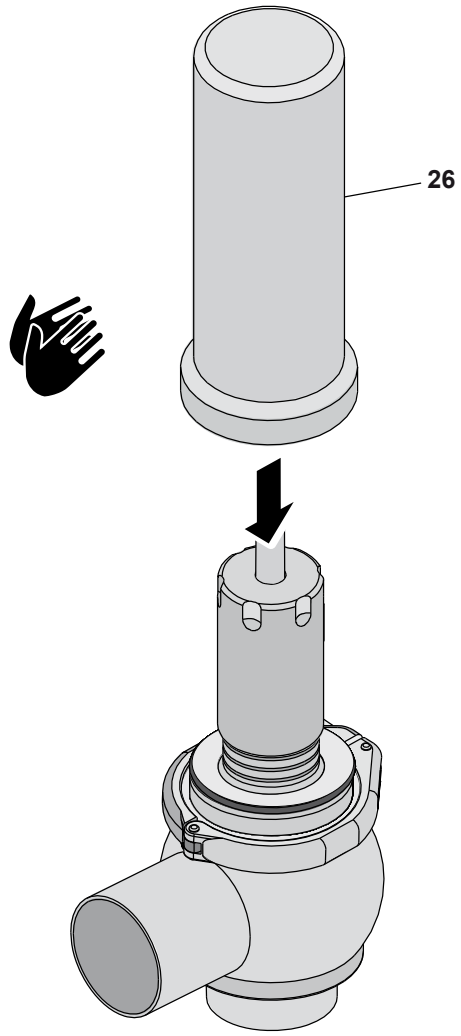


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13



11 Annexes

EC Declaration of Conformity
ATEX

EC DECLARATION OF CONFORMITY

(EC) 2006/42, Annex II, p. 1, let. A
(EU) 2014/34, Annex X

BARDIANI VALVOLE S.p.A.
Via G. di Vittorio 50/52 – 43045 Fornovo di Taro (Pr) – Italia

Declares
under its own responsibility that the machine:

Type:	**Pneumatic valve**
Model:	######
Serial number:	####
Function:	**Fluid handling**
Year of construction:	####
Tech. Ref. File	**Fascicolo Tecnico valvole_Atex 2014-34_01_02**
Deposited on N.B.	**TUV IT 19 ATEX 085 AR**
Reference	Our reference #### dated ######
	Your PO ###### dated ######

DRAFT

complies with all relevant provisions of the following EU directives:

- **2006/42/EC** (machinery)
- **2014/34/EU** (potentially explosive atmospheres, ATEX)

and also complies with the following EU Regulations:

- **(EC) 2023/2006** and subsequent amendments and additions with regard on good manufacturing practices of materials and articles intended to come into contact with food
- **(EC) 1935/2004** and subsequent amendments and additions with regard to steel and elastomers in contact with the product.

and with the following harmonized standards, rules and/or technical specifications applied:

- **EN ISO 12100:2010**
- **EN 1127-1:2019**
- **EN ISO 80079-36:2016**
- **EN ISO 80079-37:2016**

The equipment is classified as follows:

II 2G Ex h IIB T6 Gb X
II 2D Ex h IIIC T90°C Db X
T_{amb} -10 ..+40°C
X: $T_{max\ product}$ +85°C

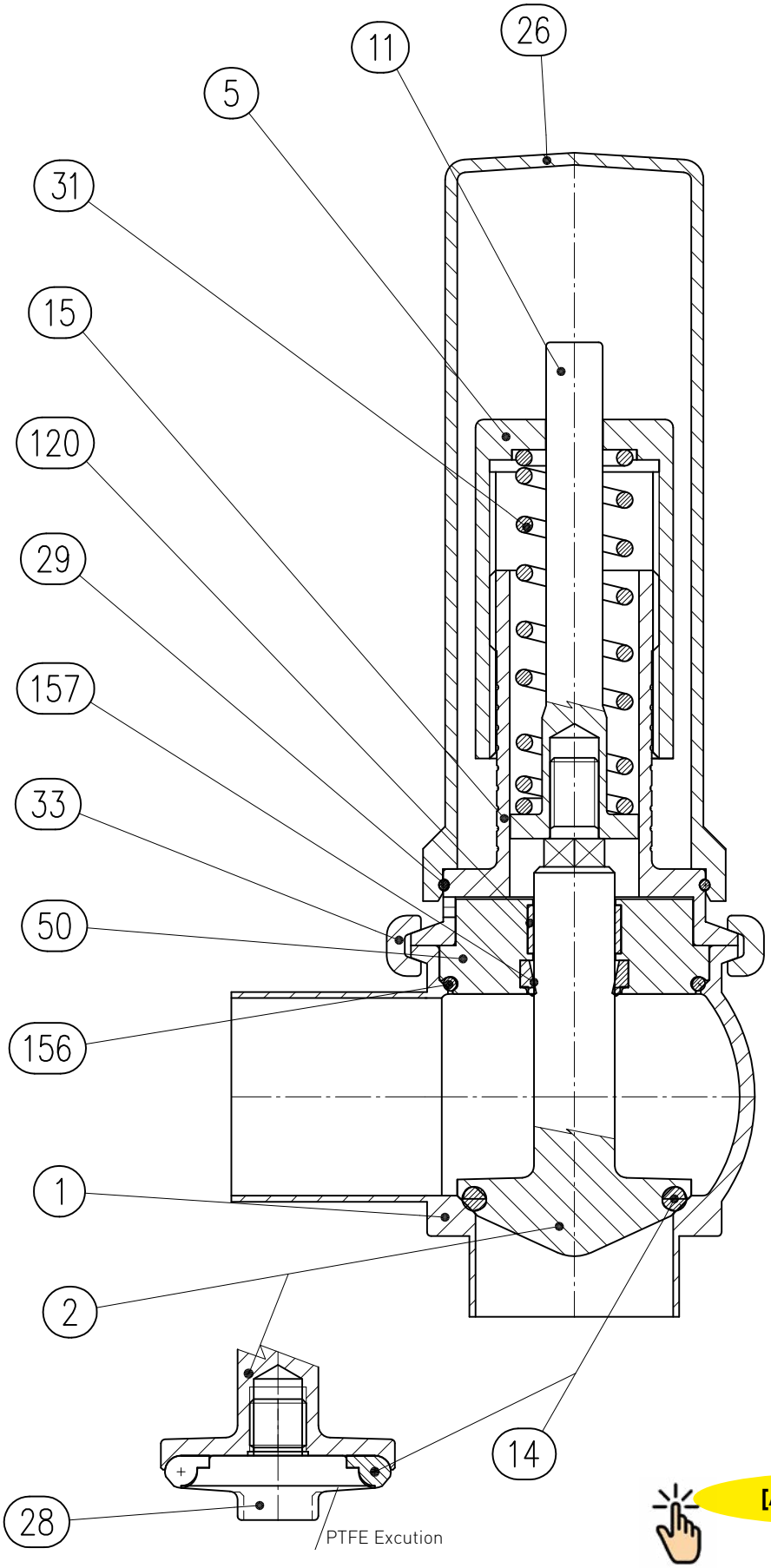
BARDIANI VALVOLE S.p.a.
Amministratore Delegato

Fornovo di Taro
######

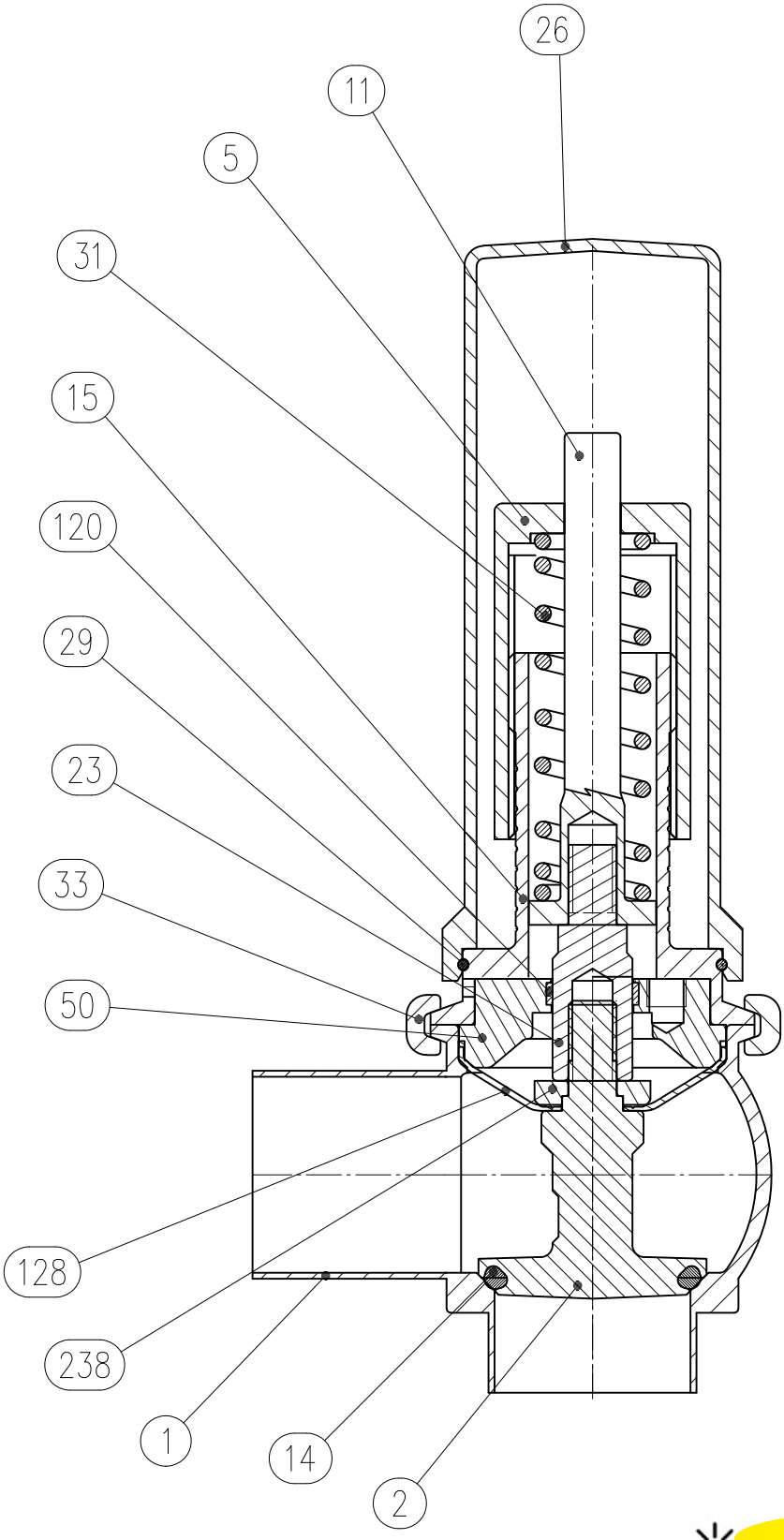
Emanuela Bardiani

BARDIANI VALVOLE S.p.A.
Via G. di Vittorio 50/52
43045 Fornovo di Taro (Pr) ITALY
Reg. Impr. Parma, C.F.- P.I.V.A. n. 01511810341
R.E.A. Parma n. 159144 • Cap. Soc. € 1.186.800 i.v.

12 2D diagram BBZS1EX



13 2D diagram BBWS11EX



[B S BBWS11EX]

14 Warranty

1. VALIDITY

Bardiani Valvole's Products are manufactured in compliance with the technical specifications laid out in their "Instruction, Use and Maintenance Manual" and are fully compliant with the directives specifically mentioned in these manuals.
Bardiani Valvole S.p.A. guarantees its own Products against any design and/or construction and/or material defects and/or faults for a period of 12 (twelve) months from the date of delivery.
Notification of any Product defects and/or faults must be sent in writing to Bardiani Valvole S.p.A. within 8 (eight) days from their detection, providing adequate documentation of the defect/fault encountered as evidence.
Services provided in the warranty period shall not result in an extension of the warranty beyond the stipulated 12 (twelve)-month period, as this warranty validity period is to be considered mandatory.

2. CONTENTS OF THE WARRANTY

Notwithstanding and without prejudice to the rights of the Buyer, which may be acknowledged by applicable law, this warranty it to be intended as limited, at the discretion of Bardiani Valvole S.p.A., to the repair and/or replacement of the Product and/or part of the Product and/or its components which is/are found to be defective due to design and/or manufacturing and/or material faults.

- In the event of repair and/or replacement of the Product and/or any one of its parts and/or components, any returned item/s shall become the property of Bardiani Valvole S.p.A. and the relative shipping costs shall charged to Bardiani Valvole S.p.A.
- Bardiani Valvole S.p.A., shall be under no obligation to compensate for any immaterial and/or indirect damages and shall in no way be held liable for consequential damages and/or losses, such as (by way of example only), damages due to loss of business, contracts, opportunities, time, production, profits, goodwill, image etc.
- No retailer or distributor or dealer or agent or representative or employee or person appointed by Bardiani Valvole S.p.A. is authorized to make any amendments and/or integrations and/or extensions to this warranty.

3. WARRANTY EXCLUSIONS

Elastomers and electrical components are expressly excluded from this warranty.
This warranty does not cover design faults emerging whenever a Product is manufactured by Bardiani Valvole S.p.A. based on designs and/or technical specifications provided by the Buyer.
Moreover this warranty excludes the following:

- faults and/or defects resulting from incorrect and/or unsuitable and/or inadequate transportation of the Product;
- faults and/or defects resulting from failure to comply with the indications laid out in the "Instruction, Use and Maintenance Manual" with regards to installation of the Product or in any event caused by incorrect and/or unsuitable and/or improper installation;
- faults and/or defects resulting from failure to comply with indications laid out in the "Instruction, Use and Maintenance Manual" with regards to use and/or maintenance operations and/or storage of the Product or in any event caused by incorrect and/or unsuitable and/or improper use and/or maintenance operations and/or storage;
- faults and/or defects due to normal wear and tear of the Product and/or its parts and/or its components;
- faults and/or defects in the Product and/or its parts and/or its components for work and/or repairs being carried out by unskilled staff or staff that has not been authorised by Bardiani Valvole S.p.A.;
- faults and/or defects in the Product and/or its parts and/or its components due to it/them being dropped and/or banged and/or dented and/or misused and/or tampering and/or breakage and/or accidents or in any event due to negligence and/or carelessness and/or neglect by the Buyer and in general for any causes not attributable to design and/or manufacturing and/or material defects;
- faults and/or defects in the Product and/or its parts and/or its components caused by other events beyond the control of Bardiani Valvole S.p.A., such as force majeure or unforseeable circumstances.

15 Recommendations

1. 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.
2. All the illustrations and drawings provided are to be intended as indicative and therefore not binding, the illustrations being for presentation purposes only.
3. 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.
4. 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.
5. 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.
6. 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".
7. 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.
8. 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..

NOTES

Bardiani Valvole S.p.A.
via G. di Vittorio, 50/52 - 43045 Fornovo di Taro (PR) - Italy
tel. +39 0525 400044 - fax +39 0525 3408
bardiani@bardiani.com - www.bardiani.com