BARDIANI VALVOLE

Instruction, Use and Maintenance Manual




MIXPROOF VALVE

B915PMO

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(Translation of the Original Instructions in the italian Language) EN-IST-B915PMO-0123

MANUAL REVISION	DATE

INDEX

INTRODUCTION

This "Instruction, Use and Maintenance Manual" has been drawn up expressly for expert technical personnel. Consequently any information which can easily be deducted from reading the text and/or examining the illustrations and/or drawings provided herein shall not be the object of further explanation.

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".

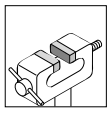
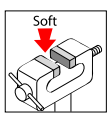
A constantly updated version of this "Instruction, Use and Maintenance Manual" is available at the Manufacturer's website www.bardianivalvole.it.

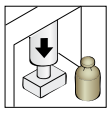
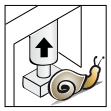
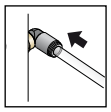
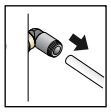
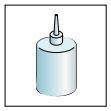
Under no circumstance shall the Manufacturer be held liable for consequences resulting from failure and or improper use of the instructions contained in this Manual and relating to the installation, operating, maintenance and storage of the products.

1 Safety, Warning and Mandatory Signs

WARNING SIGNS		
Pictogram	Description	Notes
	**CAUTION** **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.
	**CAUTION** **Hand crushing**	Exercise caution in executing the procedure Hand crushing hazard Never touch the moving parts if the actuator is supplied with compressed air.
	**CAUTION** **Heavy loads**	Exercise caution in executing the procedure Heavy suspended loads.
	**CAUTION** **Severe burns**	Heat emission hazard Very hot surface, risk of severe burns
	**CAUTION** **Risk of explosions**	Take Care, risk of explosions
	**WARNING** **Loaded Spring Hazard**	Pay attention to the loaded spring during disassembly operations

MANDATORY SIGNS (FOR THE OPERATOR IN CHARGE OF MECHANICAL MAINTENANCE AND THE OPERATOR IN CHARGE OF ASSEMBLY/DISASSEMBLY)		
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

OPERATING SIGNS		
Pictogram	Description	Notes
	**PRESS**	Use of a press
	**PRESS (release)**	Use of a press Gradual release of the pressure force
	**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 grease or similar
	**APPLICATION OF FOODSAFE GREASE**	Use FOODLUBE Multi-paste grease or similar
	**APPLICATION OF MULTIPURPOSE FOODSAFE GREASE**	Use GIP GREASE MU EP 2 SE or similar
	**THREADLOCK APPLICATION**	Use SPEED BOND M500 threadlock or similar
	**FRAGILE**	Handle with care. Risk of component damage.
	**ASSEMBLY / DISASSEMBLY SEQUENCE**	Sequence of assembly disassembly operations
	**OPTIONAL**	

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 Safety

2.1 General safety warnings

Intended use
Bardiani valves have been 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.
- use the valve where there is a risk of explosion and/or fire, unless envisaged by the manufacturer (if the valves are certified in accordance with Directive 2014/34/EU, please refer to the ATEX Manual)-;
- 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.

CAUTION
The machine may not he used inside premises where there is a potentially explosive atmosphere or risk of fire unless otherwise stated by the manufacturer (in the case of valves certified in accordance with Directive 2014/34/EU please refer to the ATEX Manual).

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 Electrical connections

(see the control unit manual)

3 Technical data

VALVE STRUCTURE DATA	
Maximum pressure	PN10
Maximum seal pressure	10 bar (145 psi)
Product minimum - maximum temperature	EPDM from -10°C to 140°C for applications with air. Depending on the material used for the gaskets and the product
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 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

PNEUMATIC ACTUATOR STRUCTURE DATA	
Connectors	1/8" BSP
Pipe dimensions	6 mm external diameter, 4 mm internal diameter
Air pressure	from 6 bar (87 psi) to 8 bar (116 psi)
Air quality	Class 2, 4, 3 ISO8573-1
External material	AISI 304L (1.4307)
Seals	NBR
Noise levels	76 dB

GASKET MATERIALS COMPATIBILITY			
Product	EPDM	FKM	HNBR
Temperature (applications with air)	from -10°C to +140°C	from -10°C to +200°C	from -10°C to +130°C
Caustic soda 2%	60°C	30°C	To be checked
Nitric Acid 2%	60°C	80°C	To be checked
Greases	Unsuitable	Suitable	Suitable
Alcohols	Suitable	Unsuitable	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.

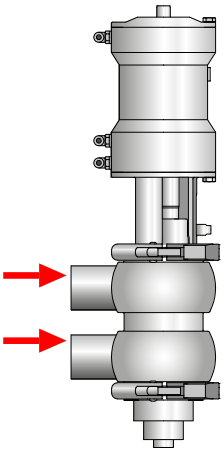
Valves with DN equal or smaller than DN25 are not included in compliance with Article 4, paragraph 3.

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 must carry out noise assessment testing once the valve has been installed in the plant.

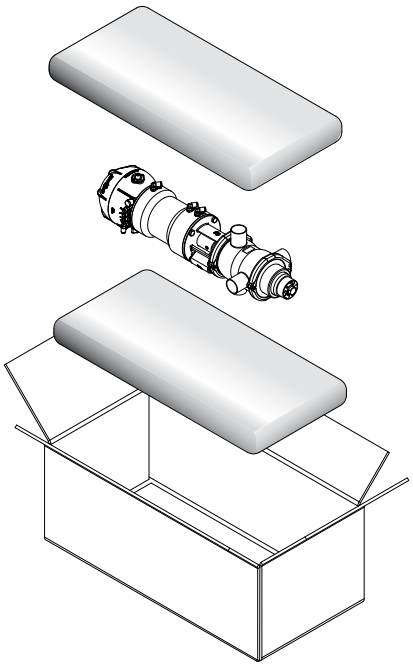
In the event of any doubt, please contact Bardiani Valvole S.p.A.

4 Checking / Unpacking / Lifting



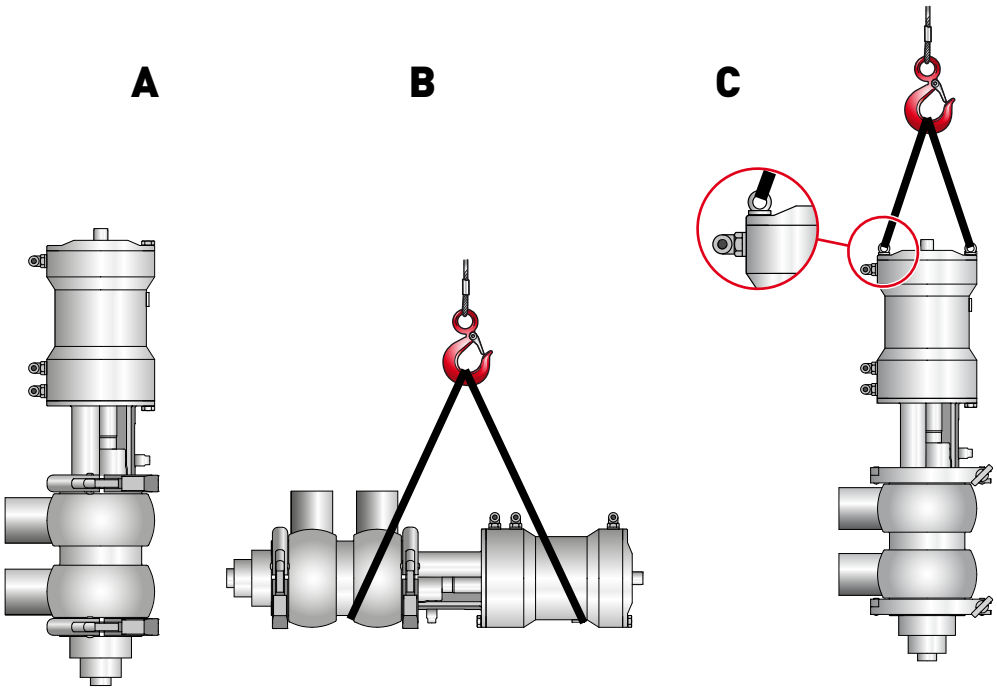
1. CHECK:
- Check the valve show no signs of damage caused during transport and that it corresponds with the order;
- Check the inside of the valve.

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. Disposal must be in compliance with local legislation.



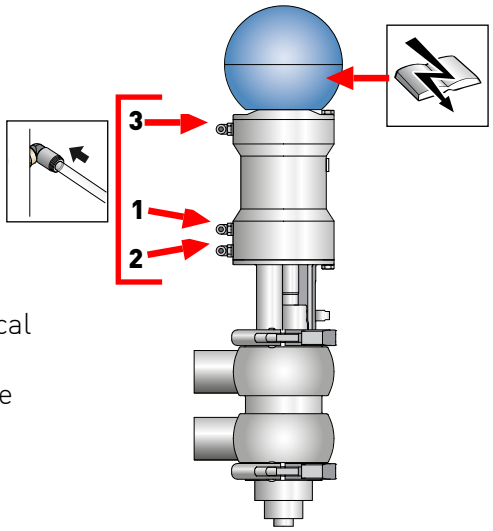
3. VALVE LIFTING:
Take care as to the type of valve you are handling. Based on the size there are different lifting procedures.

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. Handle the device according to the regulations in force in the country of use.
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



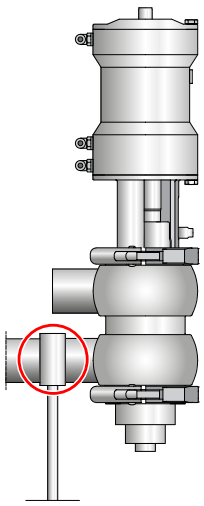
1. ELECTRICAL AND PNEUMATIC ENERGY SUPPLY

- Use expert personnel for installation/uninstallation operations;
- Check that the air pressure and quality are correct (see "Technical Data");
- Check the power supply to the control unit is correct (consult the relative instruction manual).

1 = Opening
2 = Top lift
3 = Bottom lift

2. REDUCING THE STRESS TO WHICH THE VALVE IS SUBJECTED:

- Vibrations;
- Thermal expansion of the piping;
- Excessive welding;
- Overload.

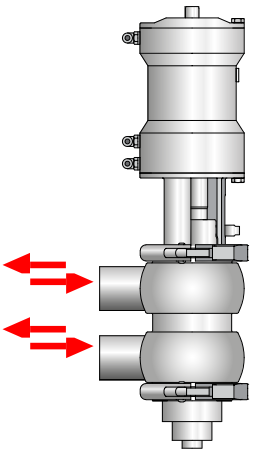


CAUTION!

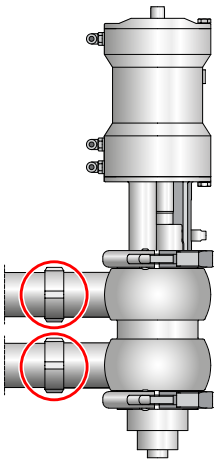
The seal seats may become deformed or cause valve malfunctioning.

3. CORRECT DIRECTION OF FLOW:

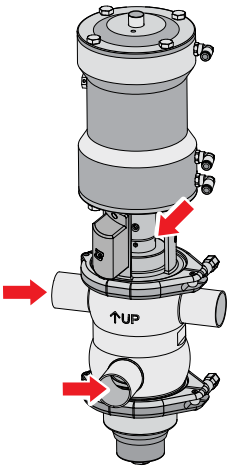
Flow in the opposite direction to valve closure minimizes water hammer.



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

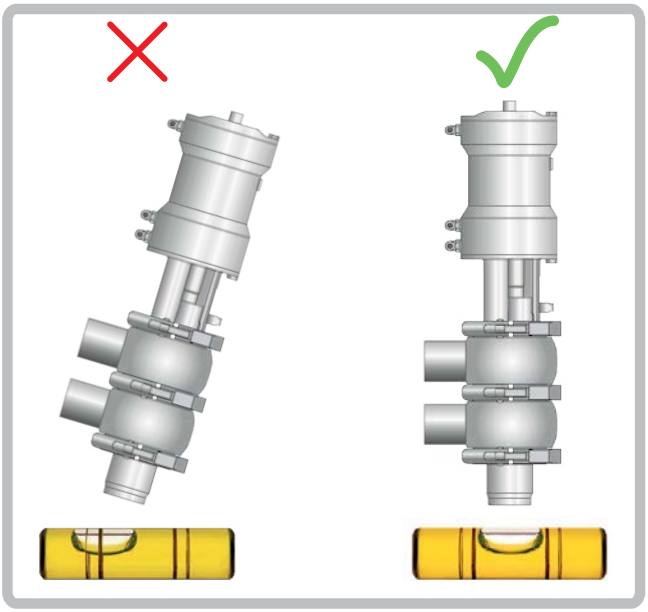


5. WALDING THE VALVE BODY ONTO PIPING:
1. Blow air into the central union
2. Remove the body from the rest of the valve before proceeding with welding operations.



CAUTION!
Hand crushing hazard. During operation there is a crushing hazard caused by the washing pin or the guide pin (when present).

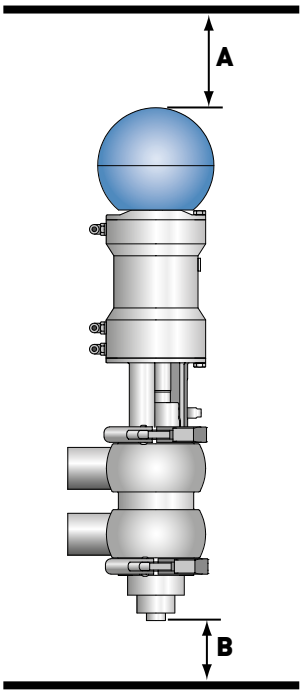
6. VALVE RIGHT INSTALLATION:
To guarantee its drainability, make sure the valve is in a vertical position



6. MINIMUM MAINTENANCE CLEARANCES:

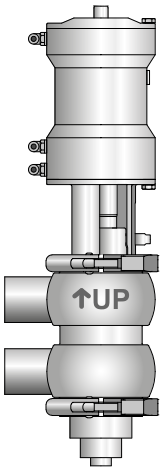
Make sure there is enough room around the valve for it to be disassembled (with the control unit installed).

DN	B915PM0	
	A (mm)	B (mm)
15÷40	370	130
50	400	165
65	420	180
80	450	195
100	570	235
125	670	280
150	670	280



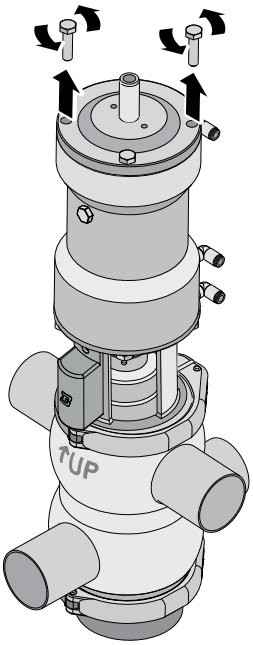
7. ORIENTATION OF THE DOUBLE BODY:

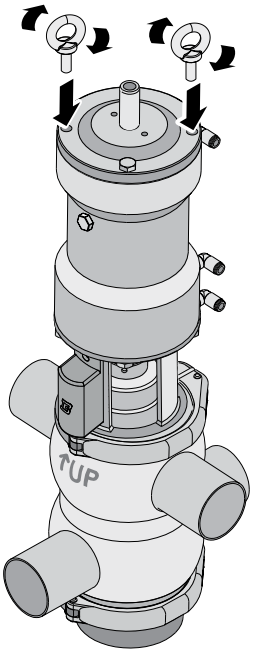
Pay attention to body orientation. In the double body, the UP arrows indicates the valve actuator position.



9.PREPARING THE VALVE FOR INSTALLATION:

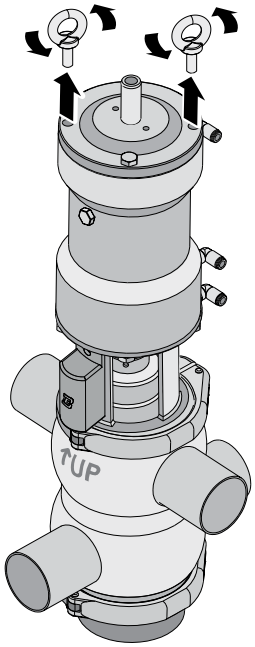
To move the valve, first screw in the eye bolts.

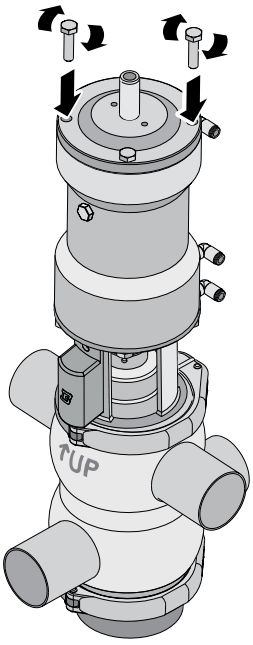




Once valve installation has been completed, remove the eyebolts and put the screws back in

.

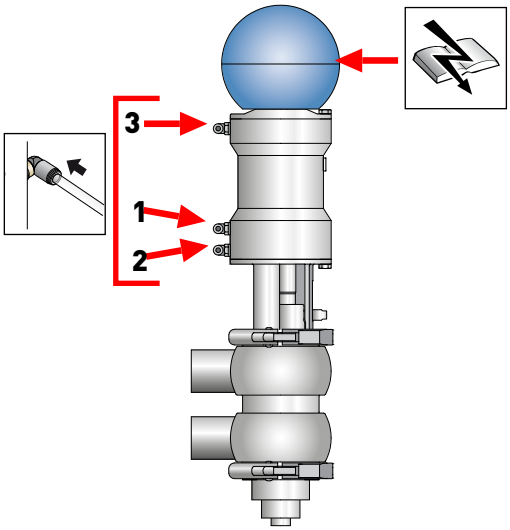




6 Operation

2. VALVE INSPECTION BEFORE OPERATION:

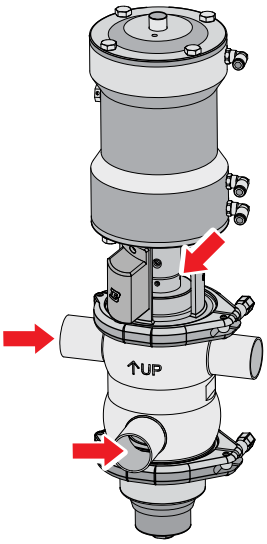
- Supply air to the actuator;
- Power the valve (via the control unit);
- Open and close the valve several times;
- Check that the valve works correctly and accurately.



1 = Opening
2 = Top lift
3 = Bottom lift

CAUTION!

Hand crushing hazard. During operation there is a crushing hazard caused by the washing pin or the guide pin (when present).



7 Troubleshooting

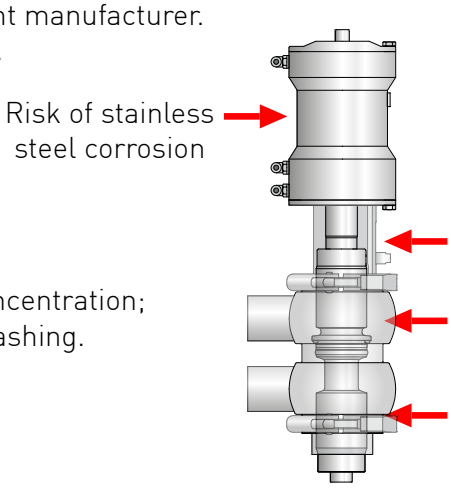
PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
External leak	Worn gasket	Replace the seal
Leaks inside the closed valve caused by normal wear		
External leak	Excessive pressure	Replace with a gasket of a different type of elastomer
	Excessive temperature	
Premature leaks inside the closed valve	Aggressive fluids	Modify the operating conditions
	Too many commands active	
Difficulty opening and closing	Incorrect type of elastomer used for the gaskets	Replace with a gasket of a different type of elastomer
	Incorrect positioning of the actuator	Install the actuator correctly
	Impurities in the actuator	Actuator inspection and maintenance
	Incorrect valve body positioning	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.

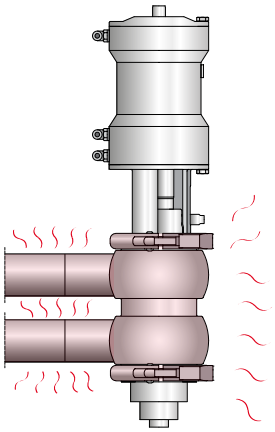


IMPORTANT!

- 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

	EPDM	FKM
Product		
Massima temperatura	95°C	95°C
Minima temperatura	-20 °C	-5 °C

	EPDM	FKM
Steam		
Massima temperatura (continuata)	130°C	120°C
Massima temperatura (per un periodo 15-20 min)	150 °C	140 °C

	EPDM	FKM
Soda caustica		
Soluzione di pulizia diluita	←5%	←5%
Temperatura minima	1 °C	1° C
Temperatura massima	80 °C	80 °C

	EPDM	FKM
Acido (Nitrico / Fosforico / Acido peracetico)		
Soluzione di pulizia diluita	←2%	←2%
Temperatura minima	1 °C	1° C
Temperatura massima	40 °C	65 °C

	EPDM	FKM
Disinfezione		
Disinfettante diluito (a base di acido peracetico)	←0,7%	←0,7%
Temperatura minima	1 °C	1° C
Temperatura massima	30 °C	30 °C

LENGHT OF A SEAT LIFT	RECOMMENDED NUMBER OF SEAT LIFTS PER CIP STEP	PRODUCT
1-2 seconds	1-2	Milk
3-5 seconds	3-5	Yogurt
2-5 seconds	2.5	Beer
5-10 seconds	5-10	Cold wort

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

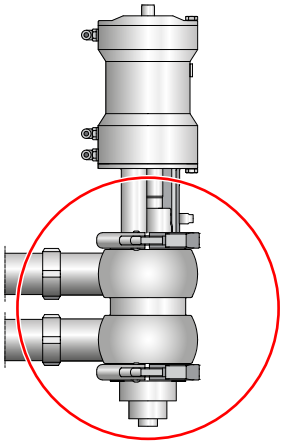
10.1 General maintenance

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.

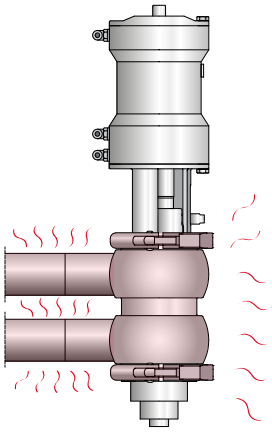


CAUTION!

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

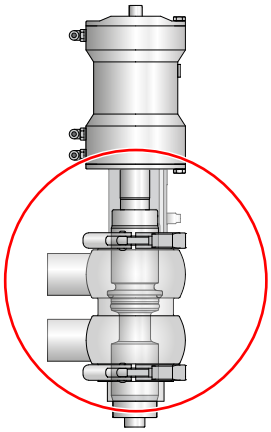
CAUTION!

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



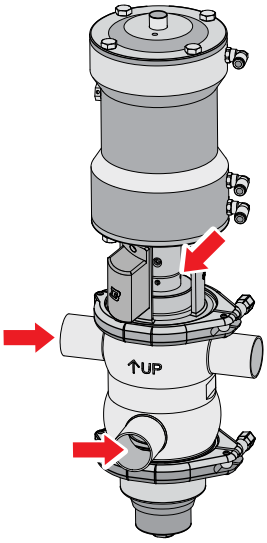
2. CLEANING AWAY DEPOSITS:

- 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.



CAUTION!

Hand crushing hazard. During operation there is a crushing hazard caused by the washing pin or the guide pin (when present).
Never put hands in the valve openings.



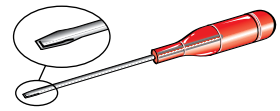
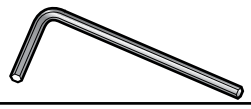
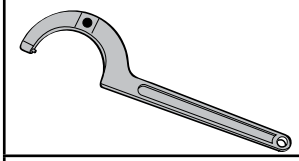
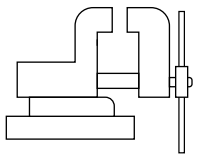
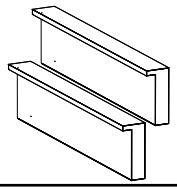
3. REPLACEMENT OF WORN VALVE PARTS:

Always use original spare parts

10.2 Scheduled maintenance

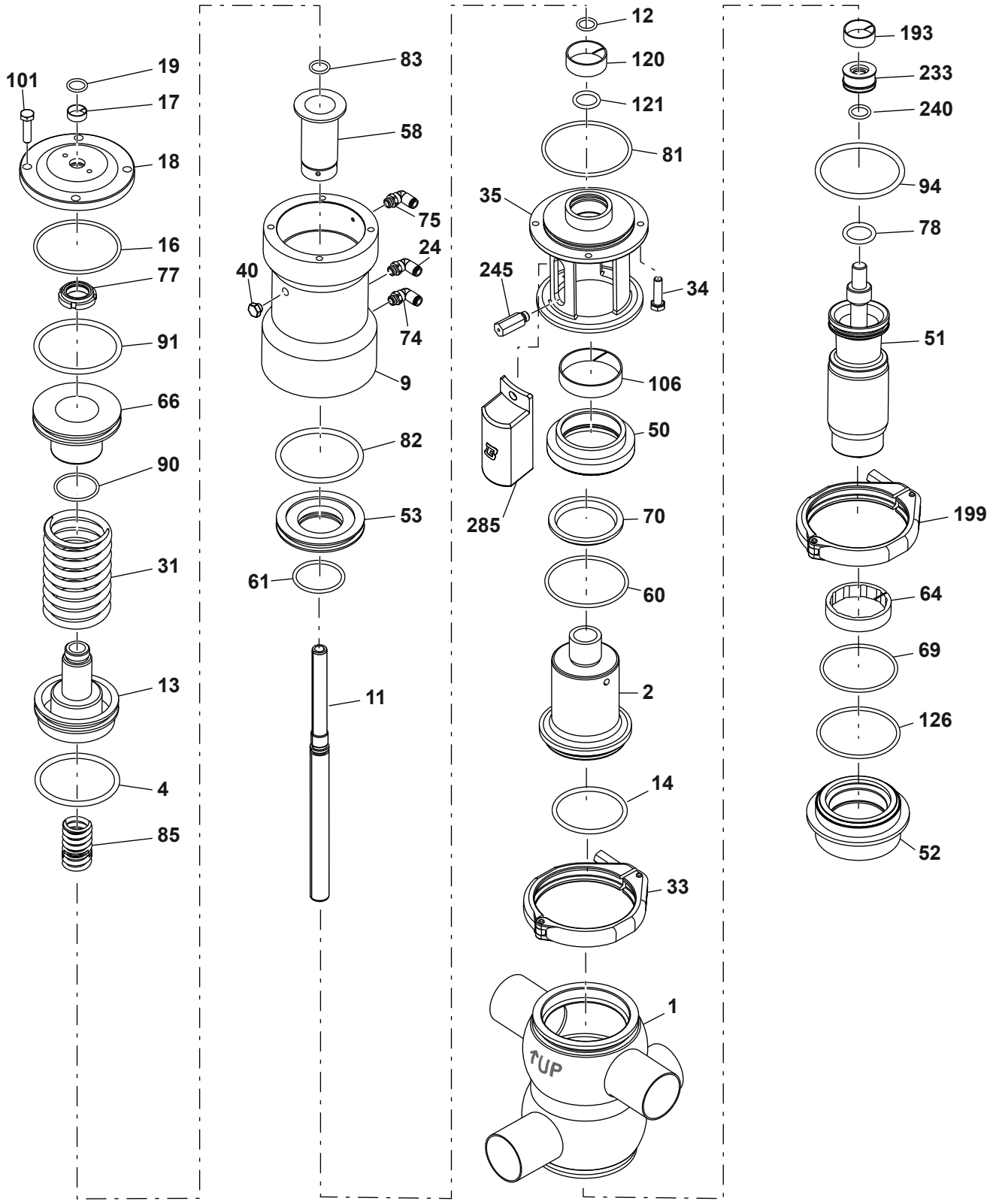
SCHEDULED MAINTENANCE	VALVE GASKETS	ACTUATOR GASKETS
Preventive	Replace after 12 months	Replace after 24 months
In the event of leaks	Replace at the end of the day	Replace in the event of leaks
Periodical	Check correct operation and that there are no leaks	Check correct operation and that there are no leaks
	Record the actions carried out	Record the actions carried out

10.3 Tools useful for Disassembly/Reassembly

TOOLS	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150
	✓								
	2.5 - 4 - 5 - 6 - 8								
	13							13-17	
	99ST 15-35				99ST 35-50			99ST 50-80	
	✓								
	✓								

10.4 Mixproof valve B915PM0

NO.	DESCRIPTION	NO.	DESCRIPTION
1	Valve body	74	Air coupling
2	Upper shutter	75	Air coupling
4	Seal ring	77	Threaded locking nuts
9	Cylinder	78	Seal ring
11	Shaft	81	Seal ring
12	Seal ring	82	Seal ring
13	Central piston	83	Seal ring
14	Seal ring	85	Secondary spring
16	Seal ring	90	Seal ring
17	Guide bushing	91	Seal ring
18	Plug	94	Seal ring
19	Seal ring	101	Screw
24	Air fitting	106	Guide bushing
31	Main Spring	120	Guide bushing
33	Clamp	121	Seal ring
34	Screw	126	Seal ring
35	Assembly part	193	Guide bushing
38	Guide bushing	199	Clamp
40	Breather cap	233	Spindler liner
41	Seal ring	240	Seal ring
46	Screw	244	inductive sensor
50	Sear ring disc	245	Guide pin
51	Lower shutter	285	Pin protection
52	Lower plug		
53	Lower piston		
58	Adjusting sleeve		
60	Seal ring		
61	Seal ring		
64	Seal ring		
66	Upper piston		
69	Lip seal		
70	Lip seal		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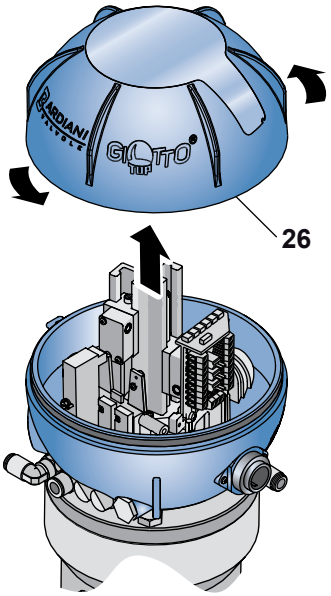
10.5 Disassembly of the B915PMO

1



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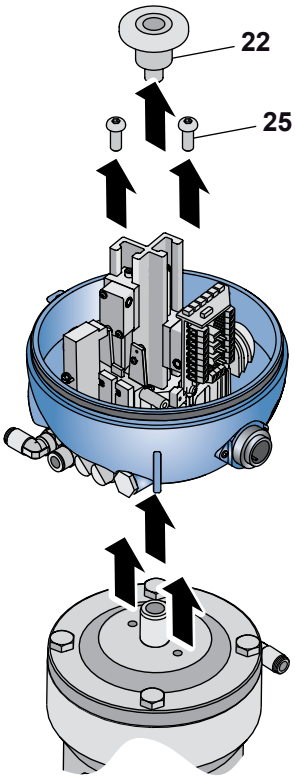

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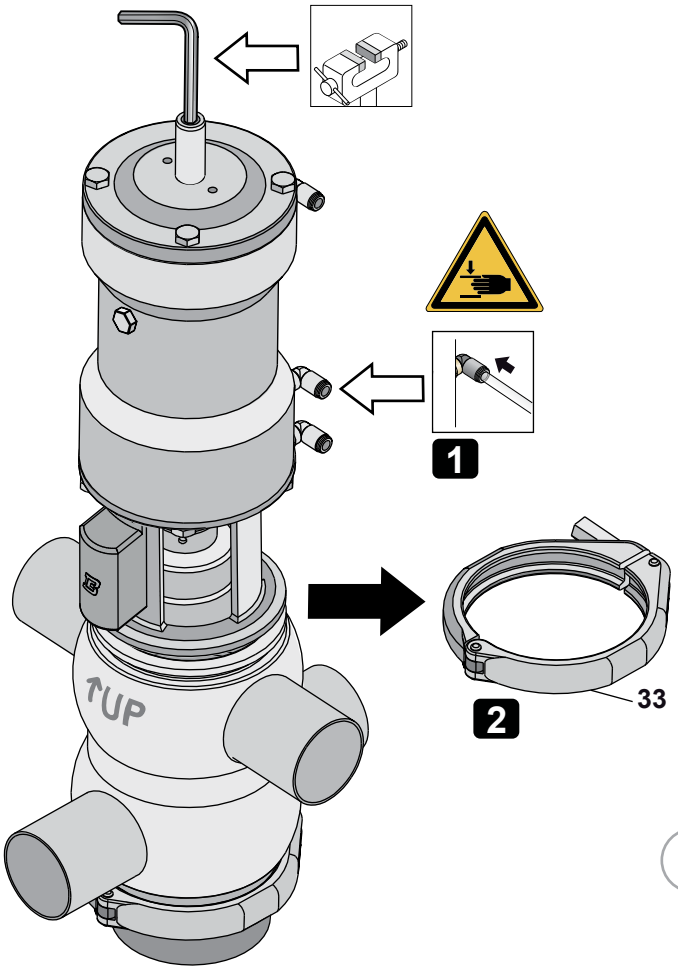

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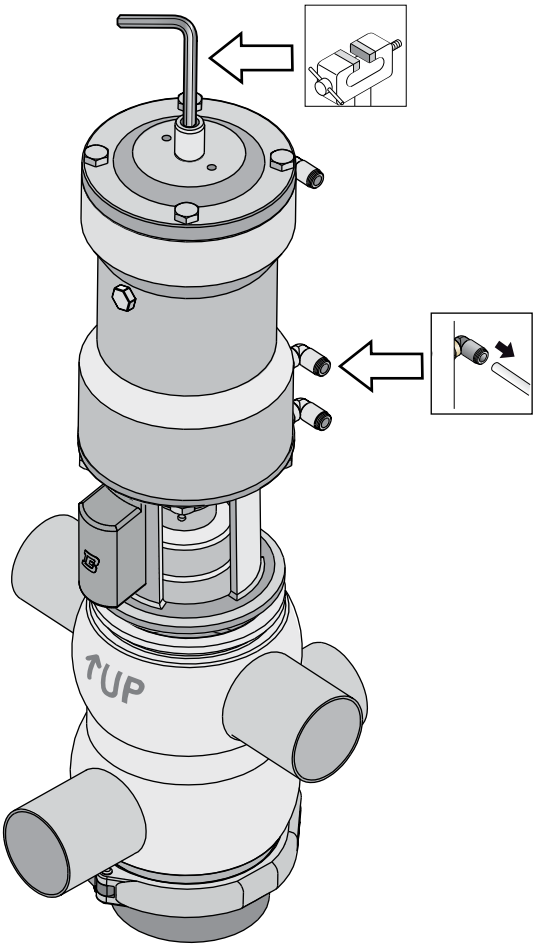

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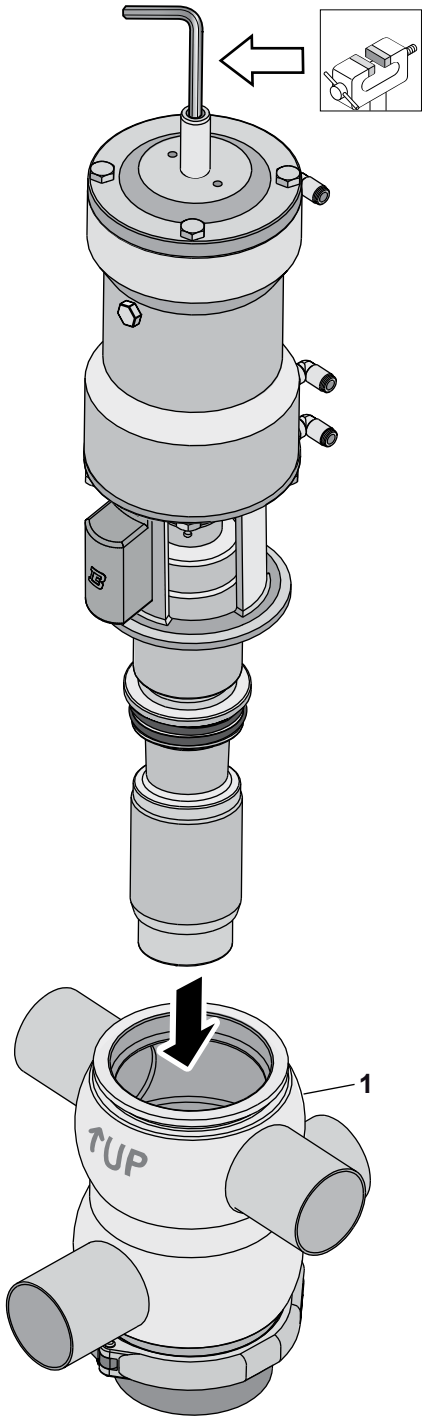

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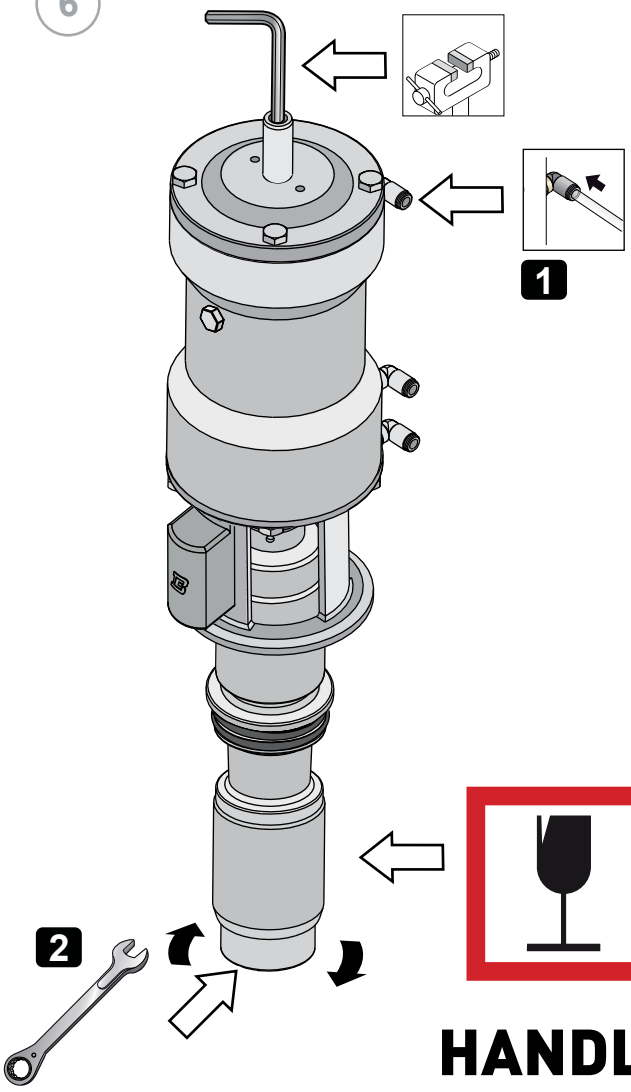
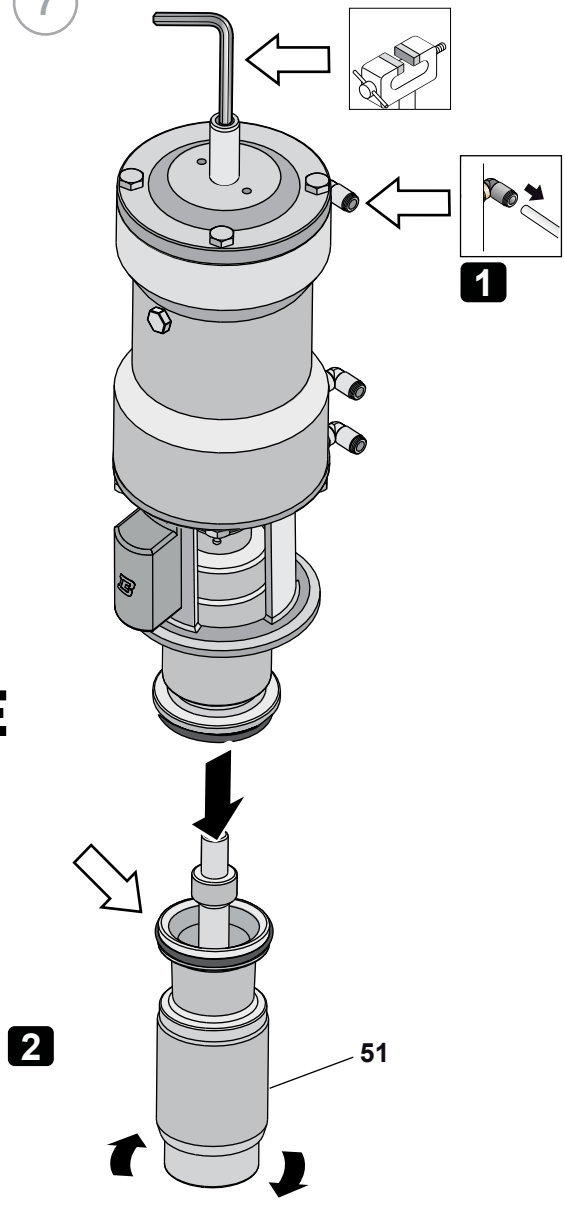


Never touch the moving parts if the actuator is supplied with complessed air

HANDLE WITH CARE

7



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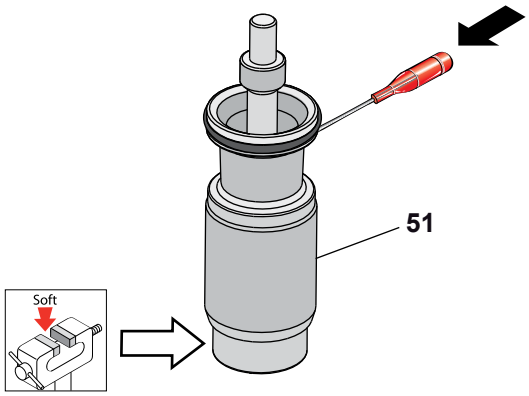

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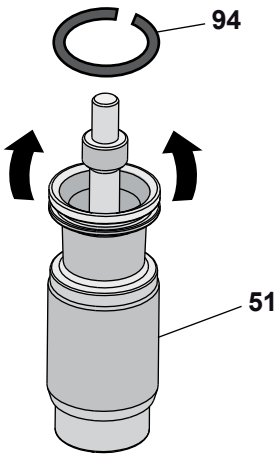

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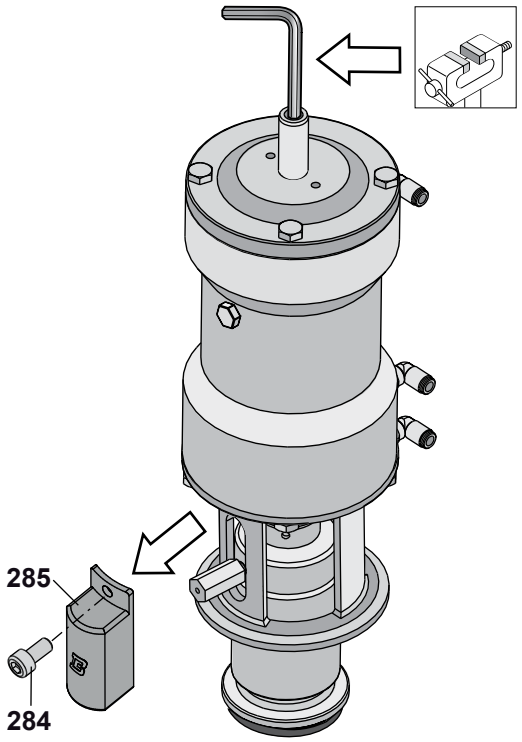

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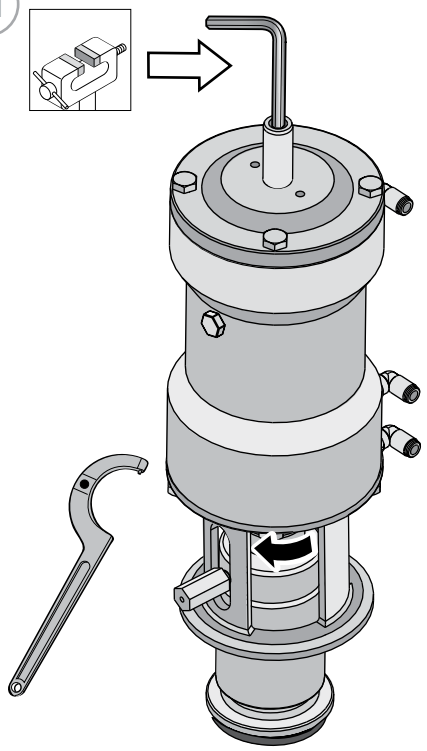

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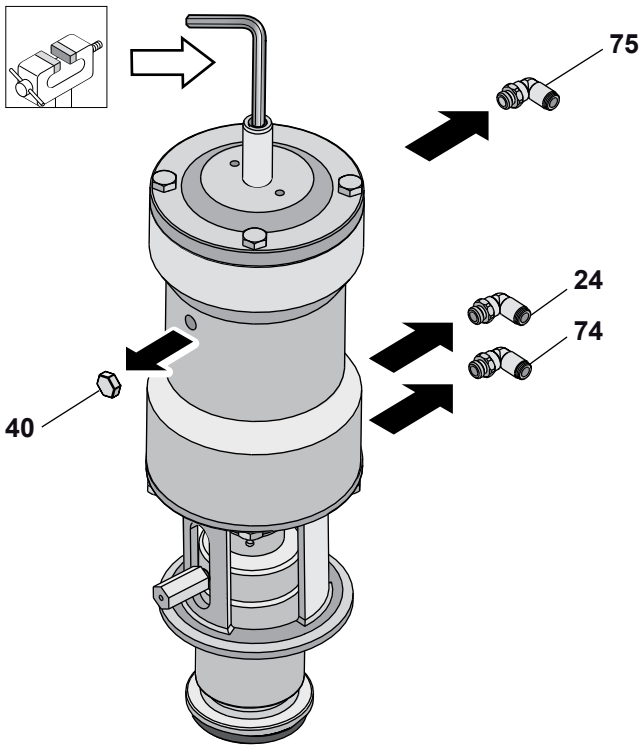

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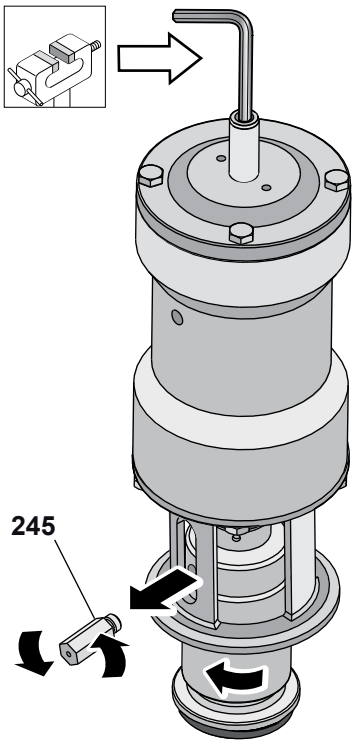

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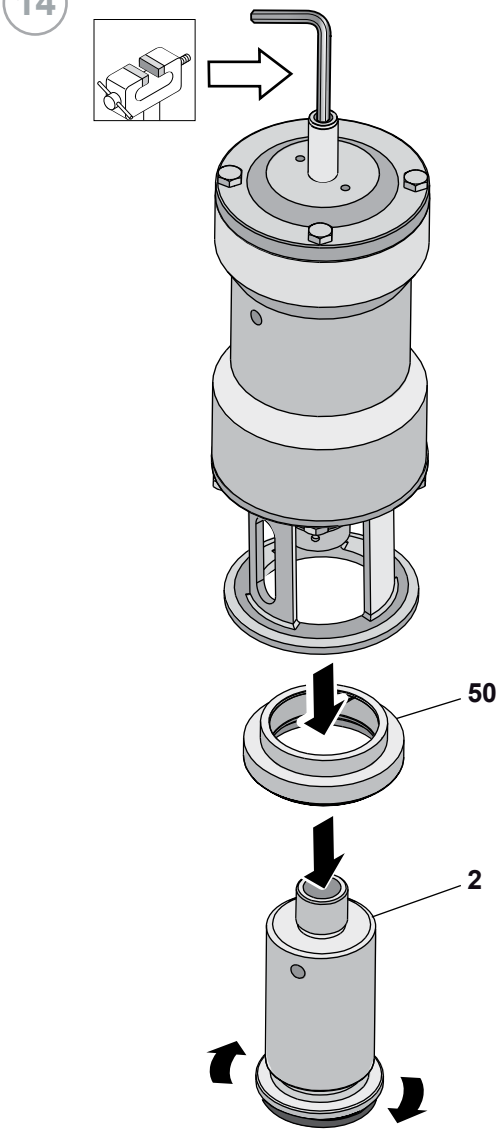

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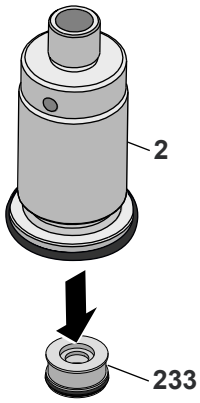

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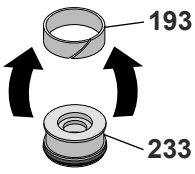

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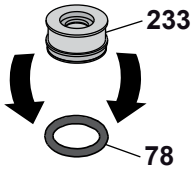

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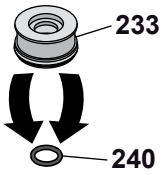

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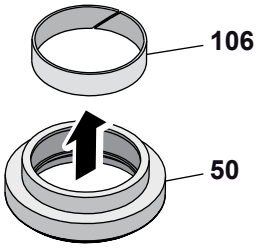

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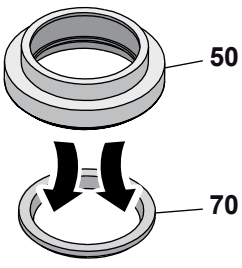

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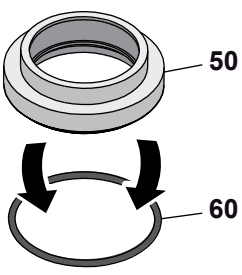

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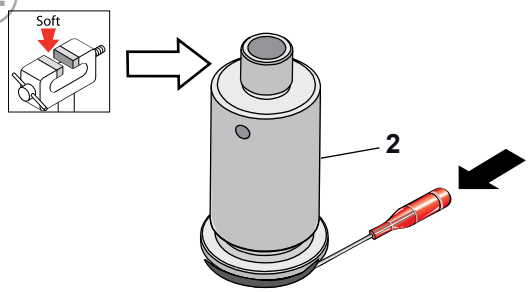

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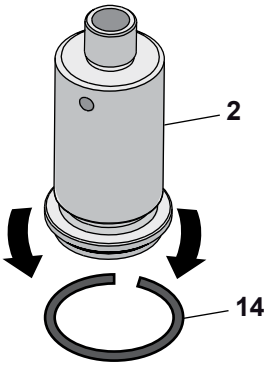

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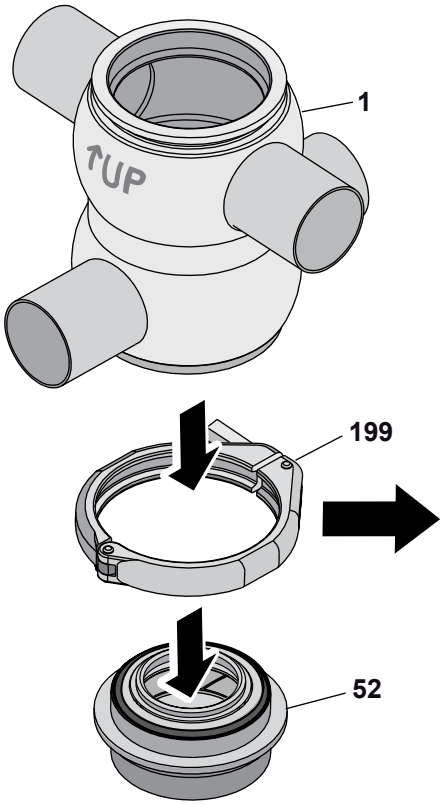

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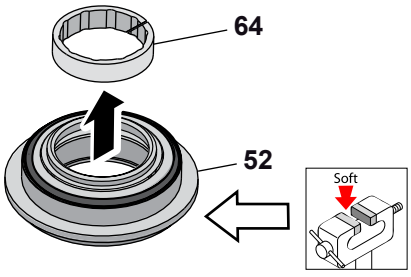

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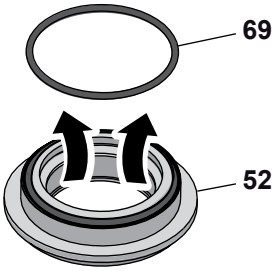

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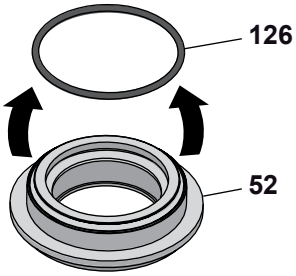

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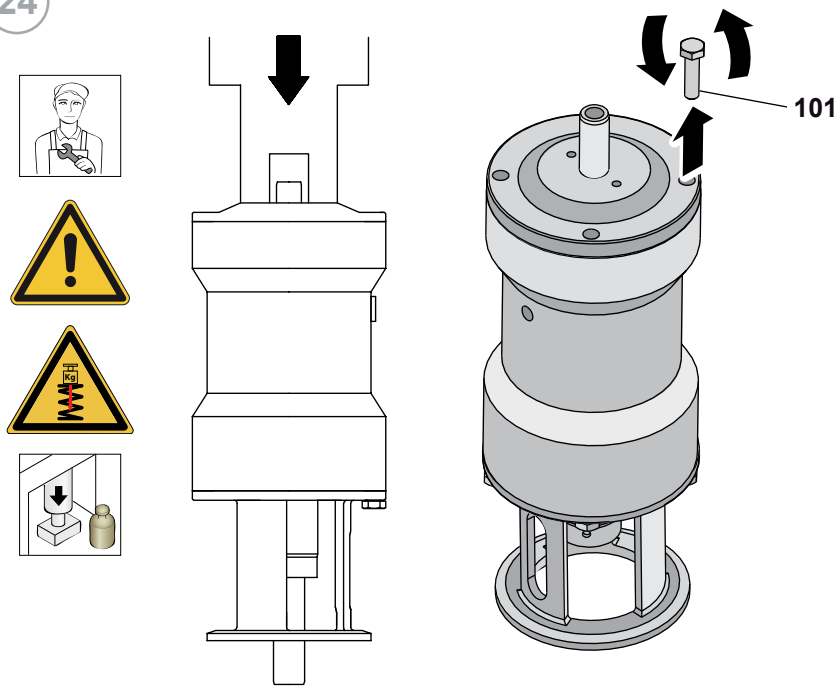

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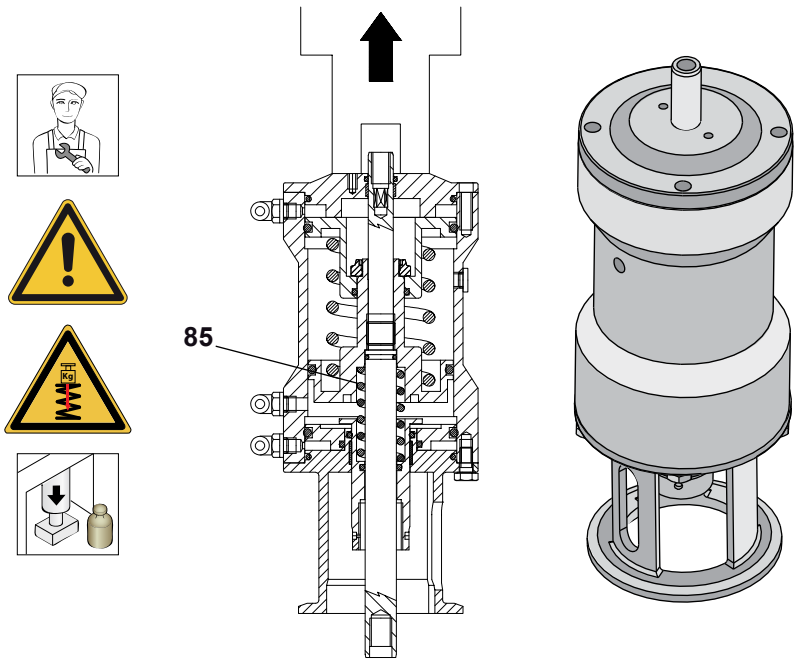

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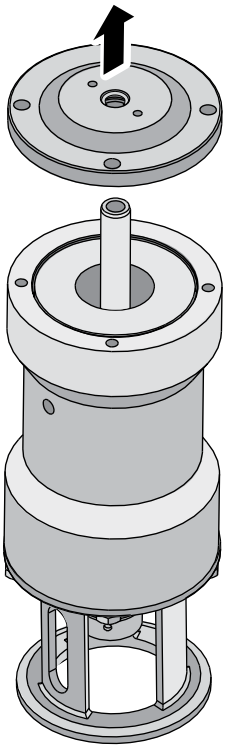

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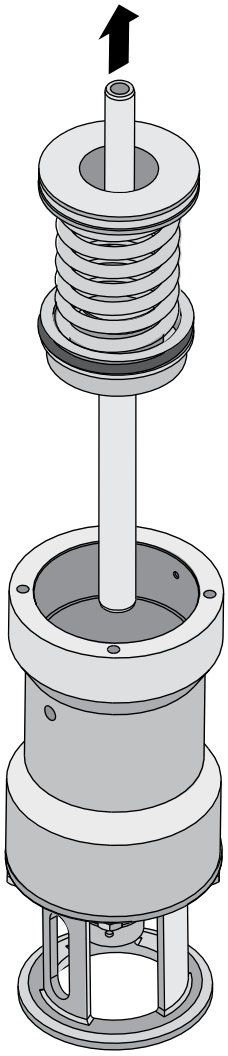

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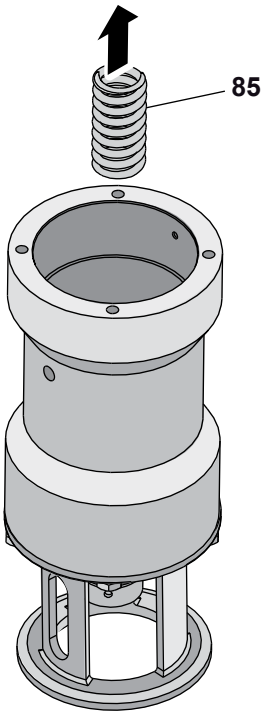

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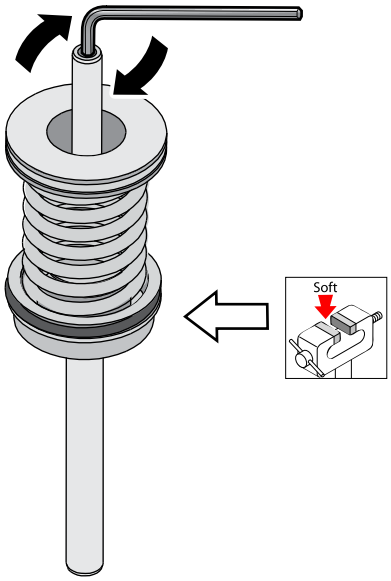

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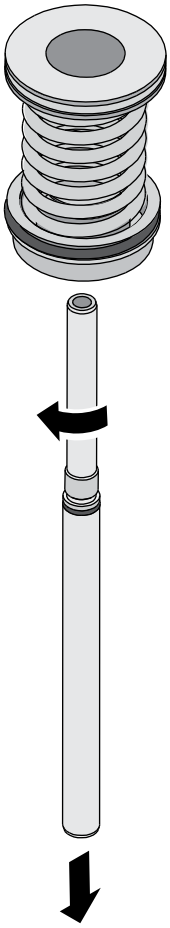

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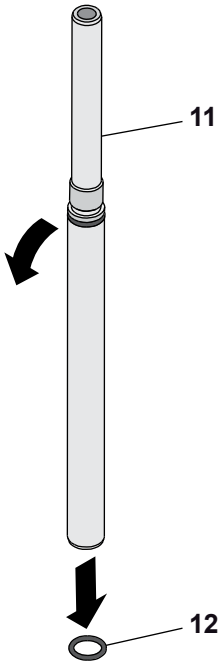

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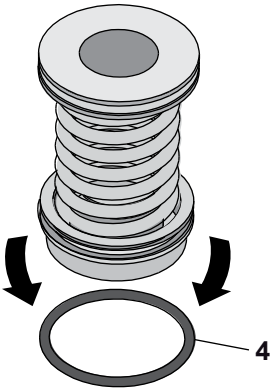

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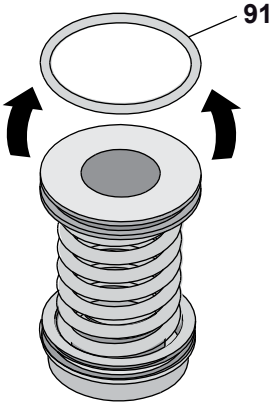

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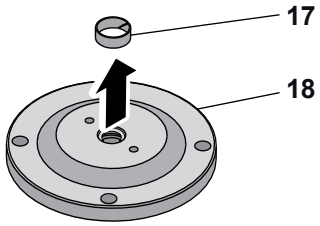

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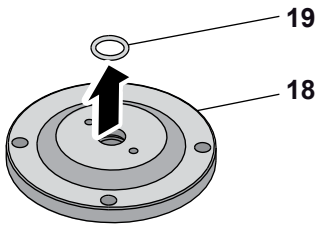

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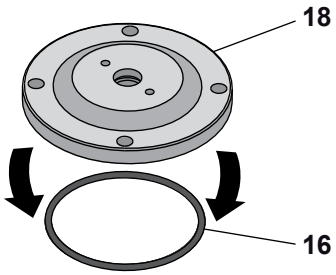

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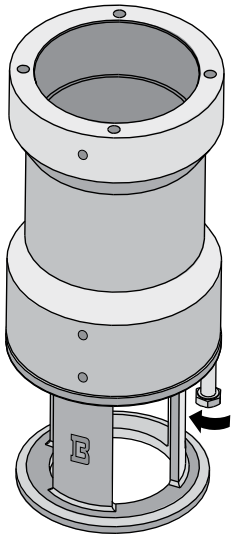

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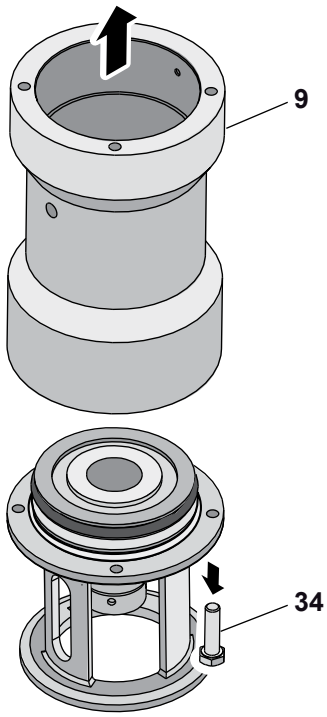

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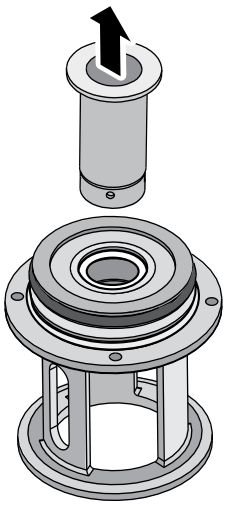

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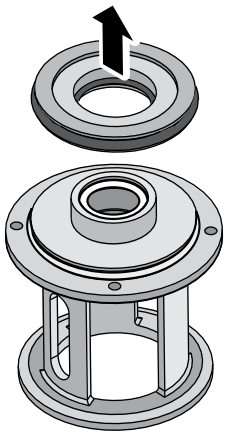

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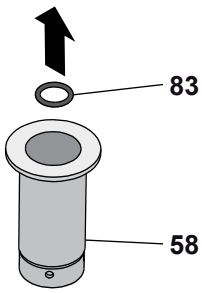

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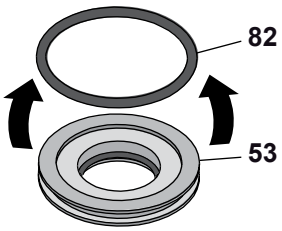

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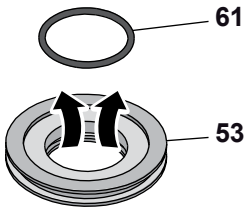

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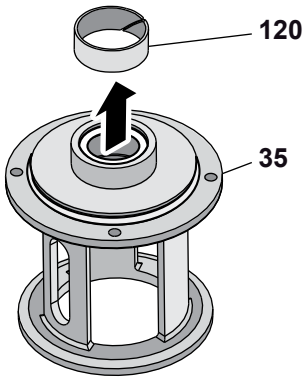

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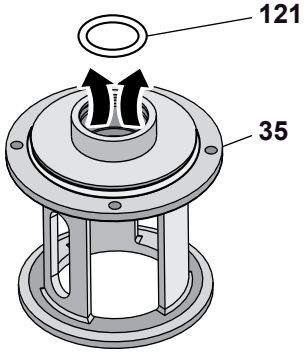

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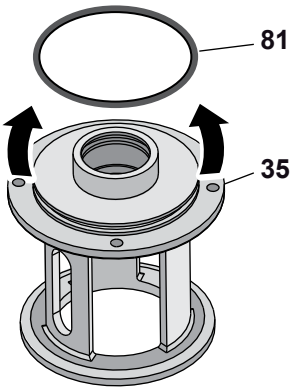
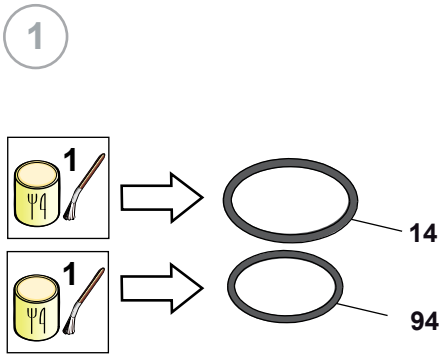
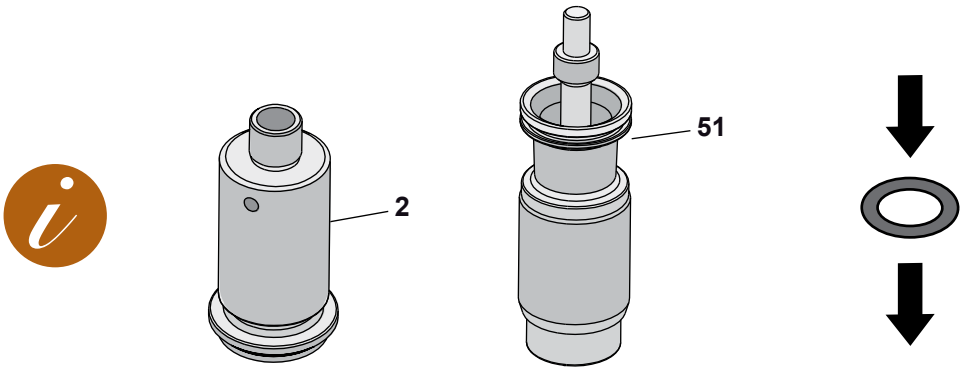
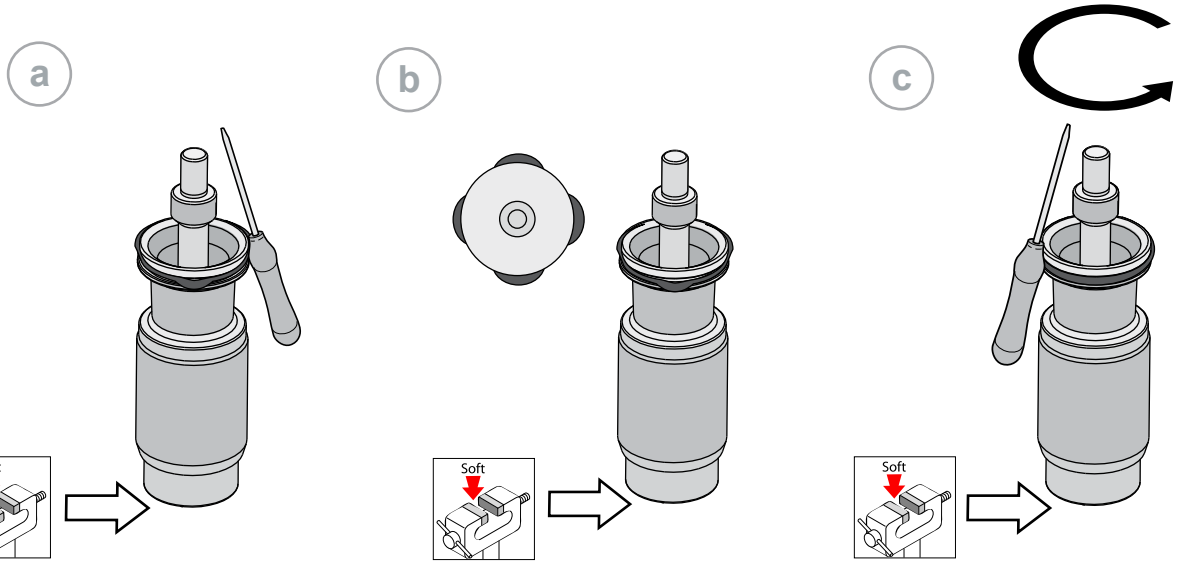
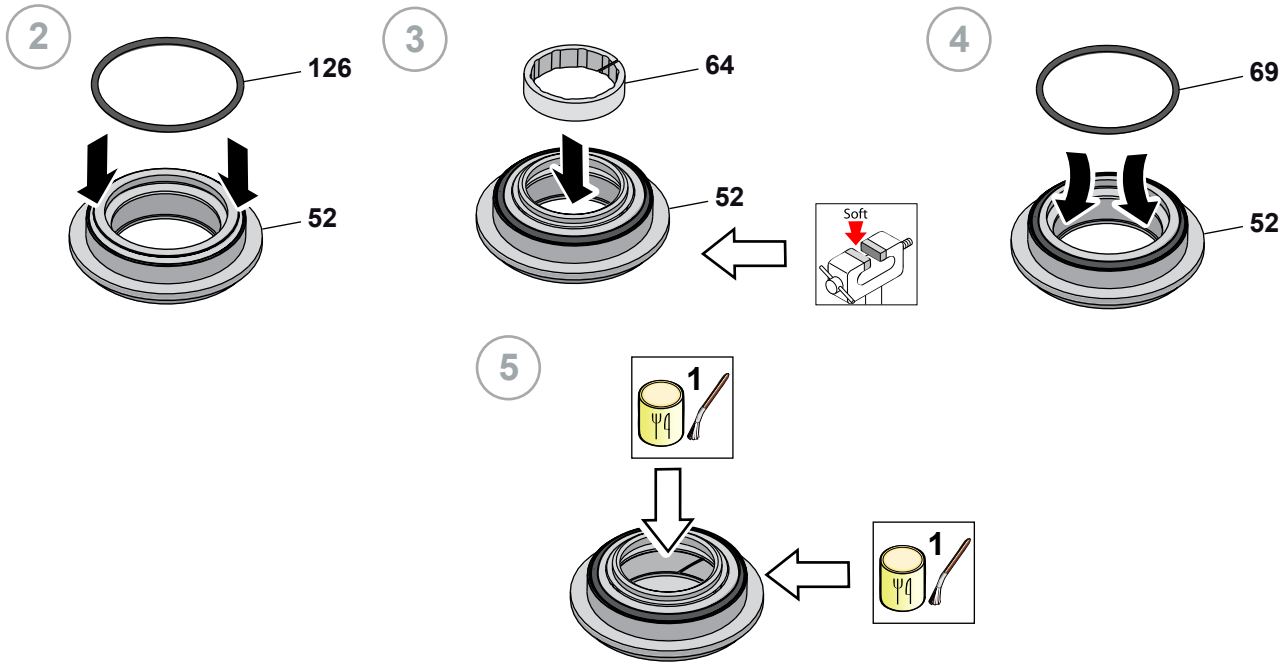


10.6 Assembly of the B915PMO





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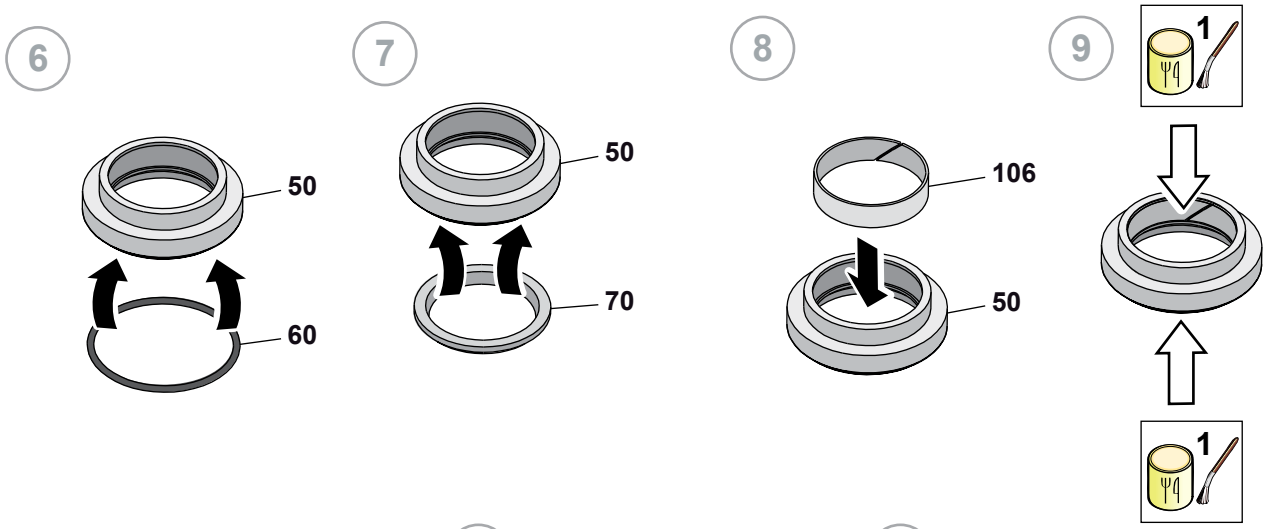
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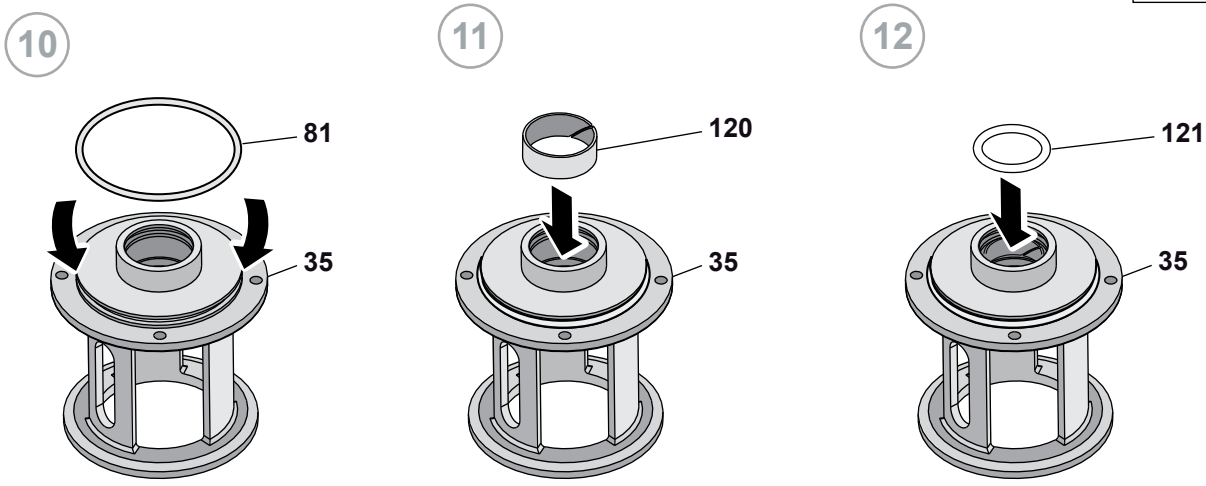
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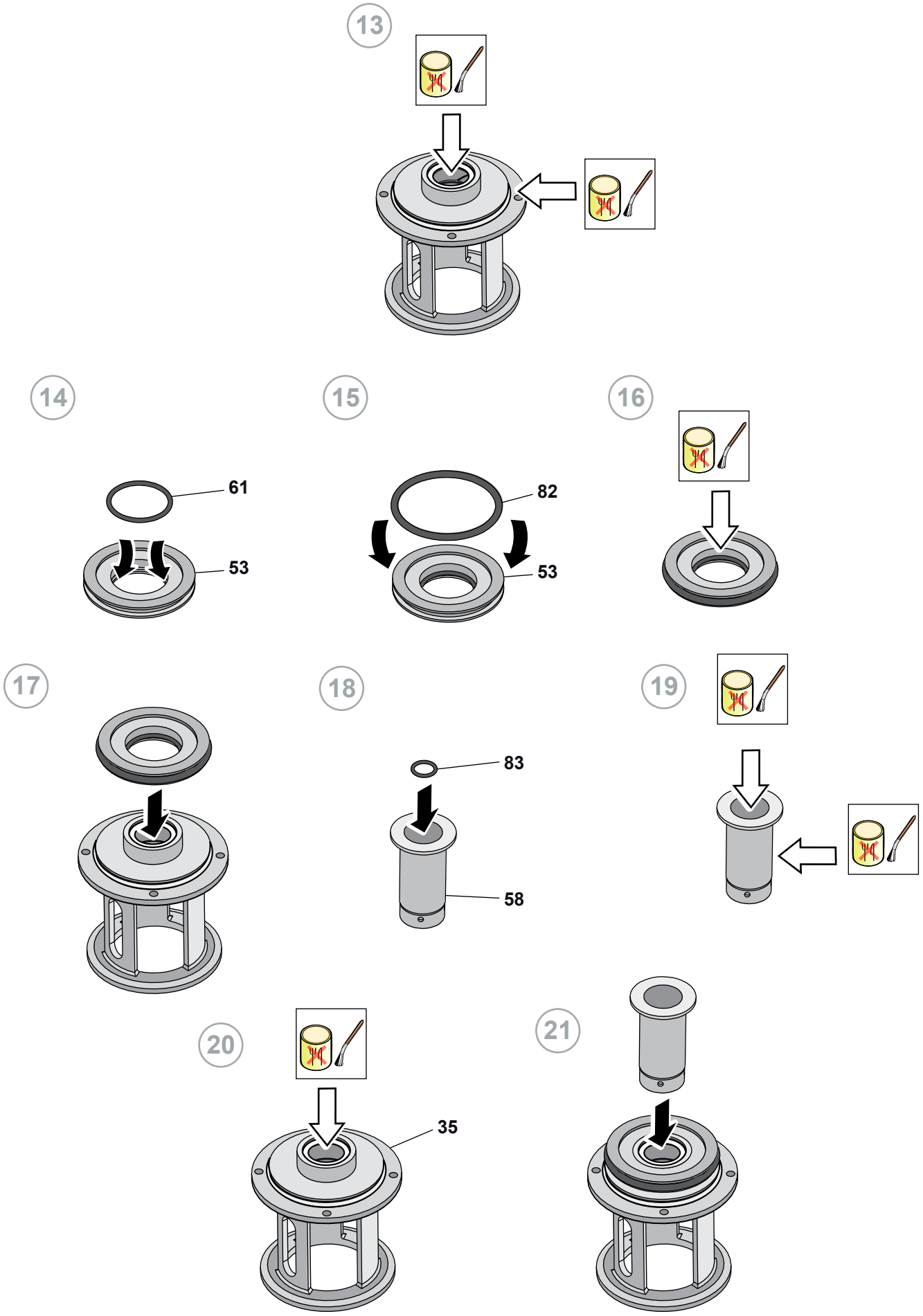
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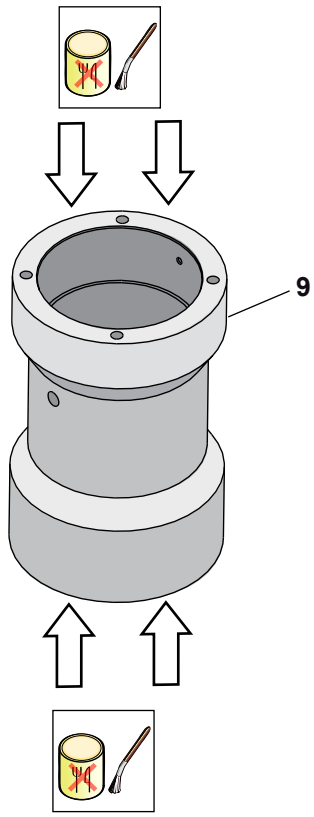

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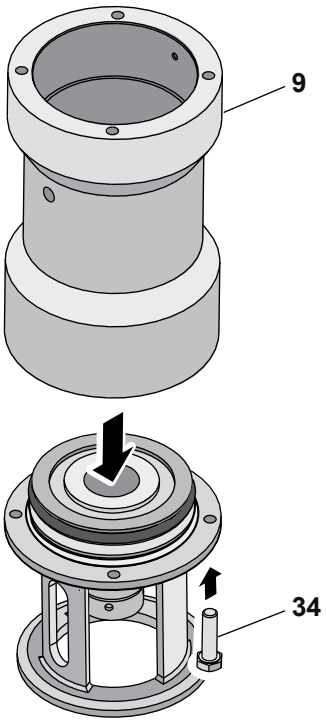

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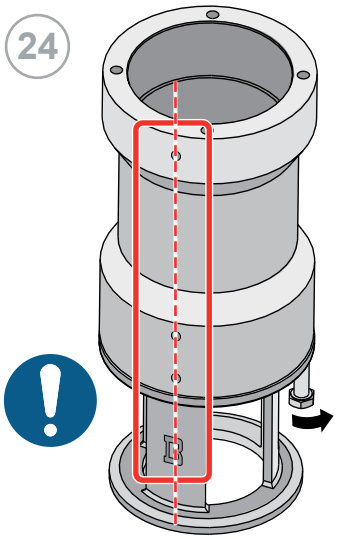

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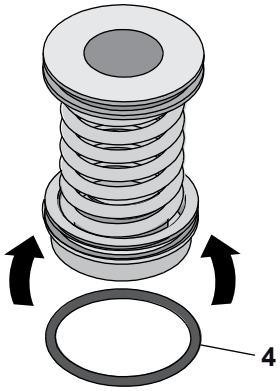

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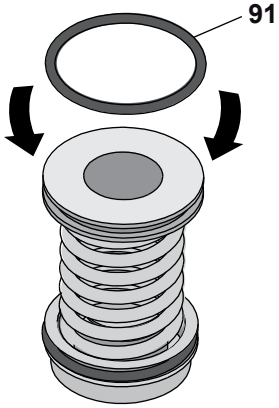

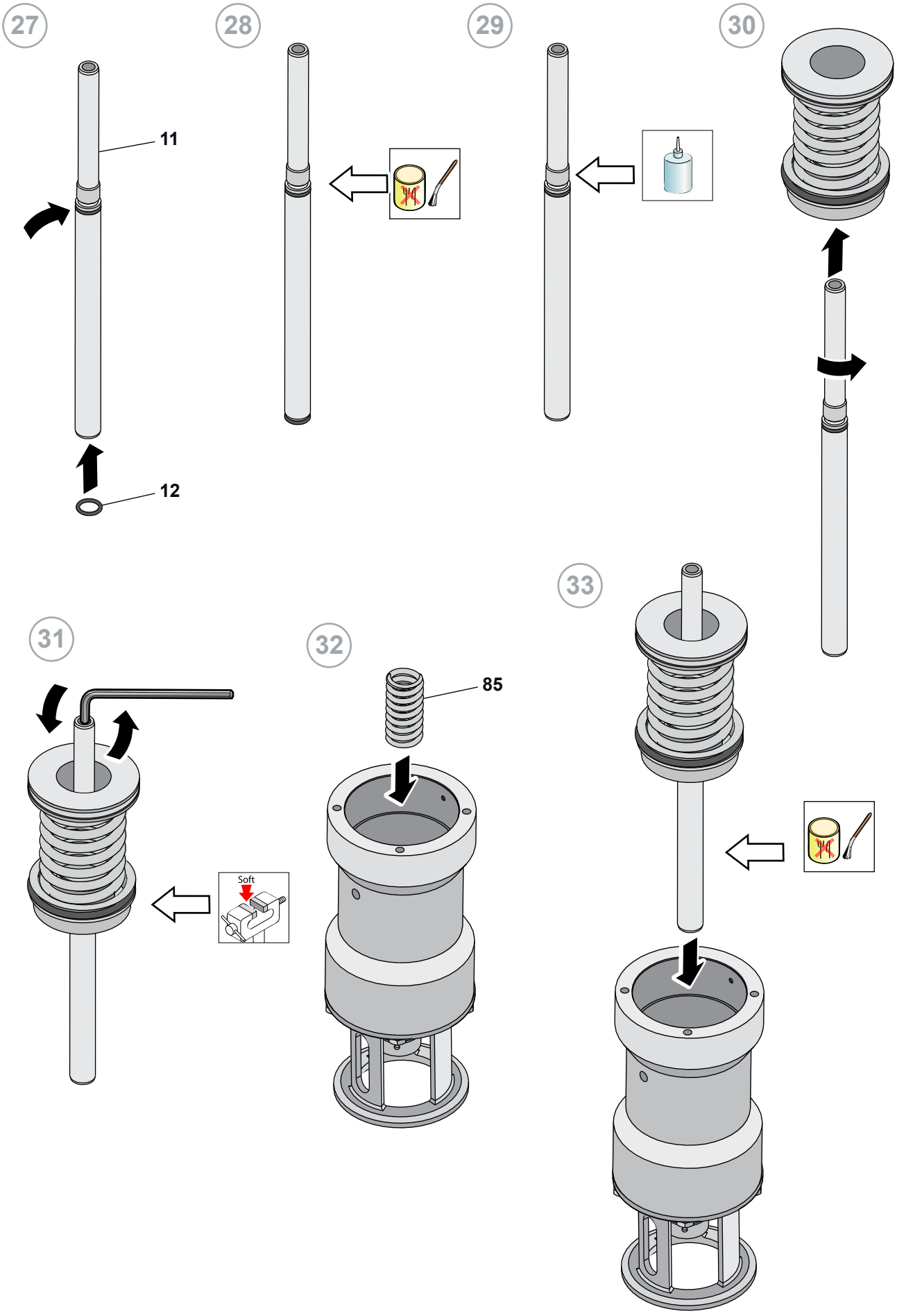
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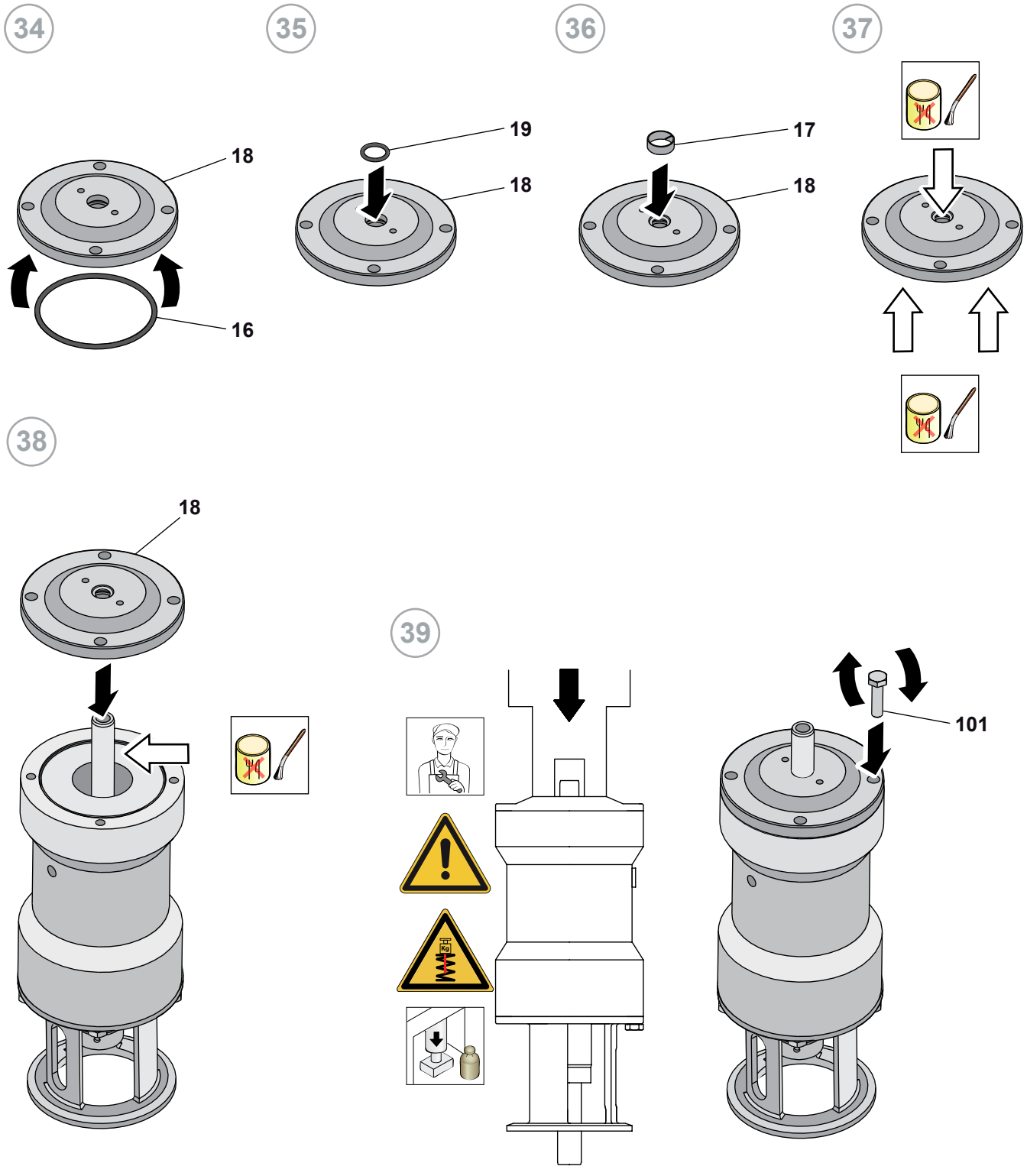
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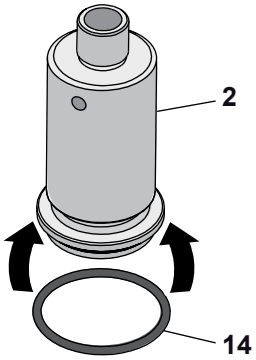

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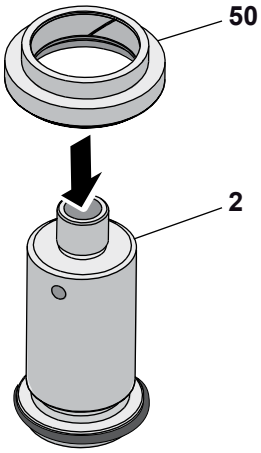

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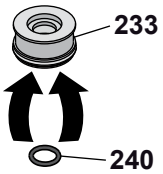

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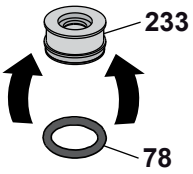

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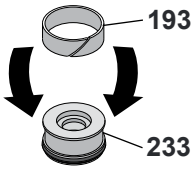

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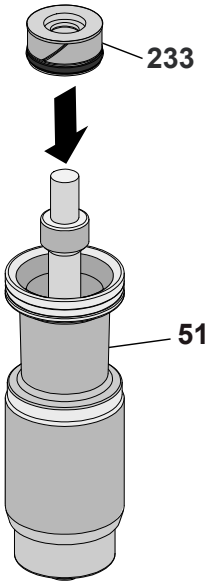

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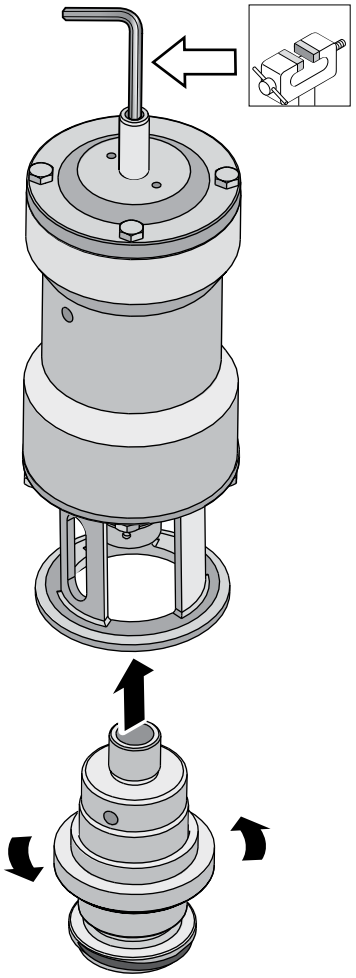

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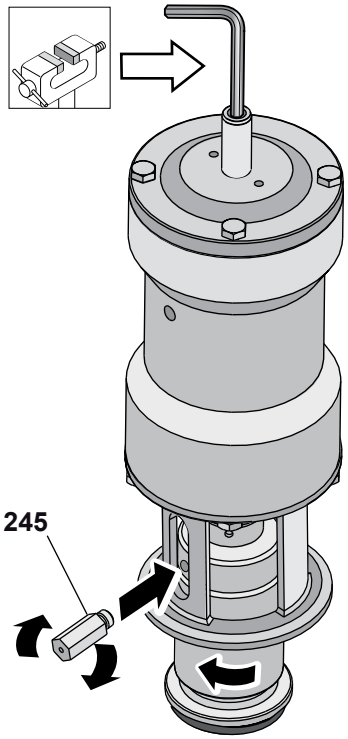

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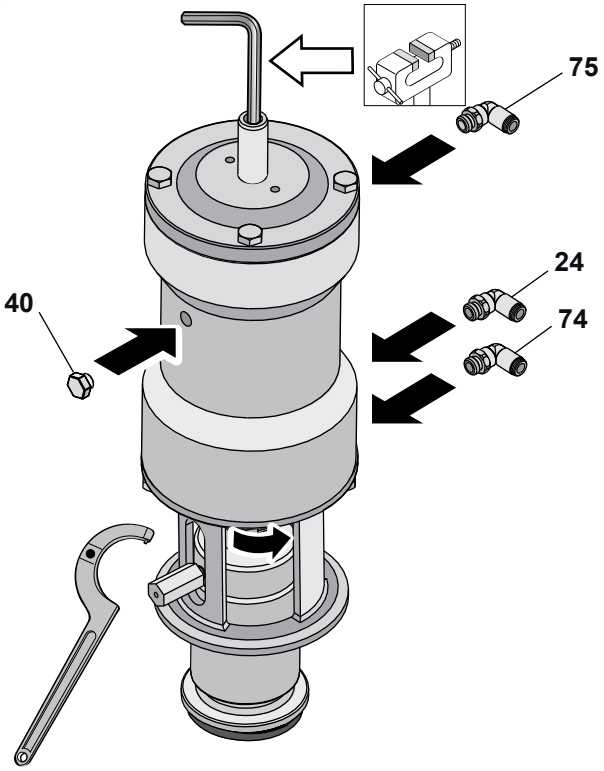

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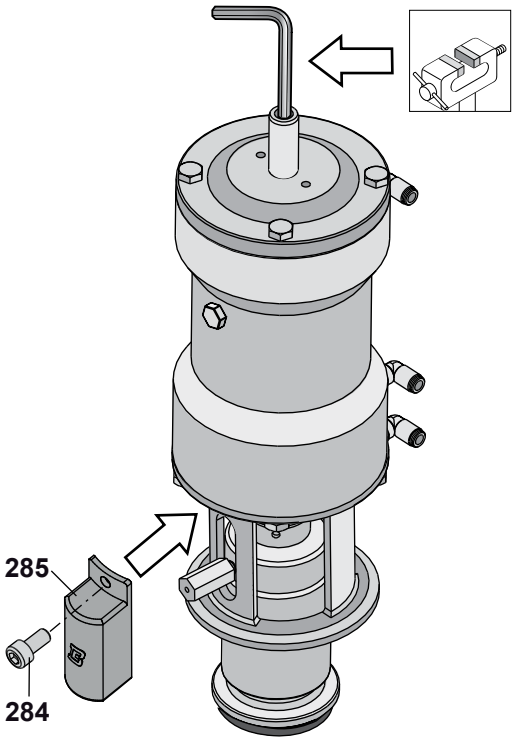

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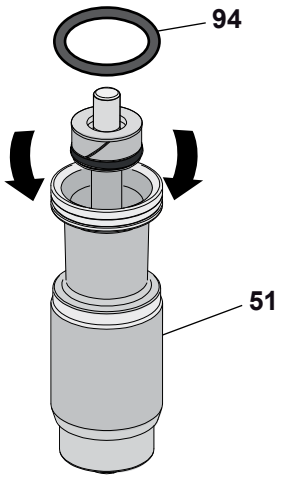

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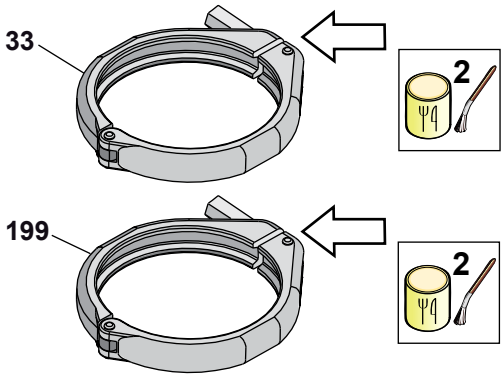

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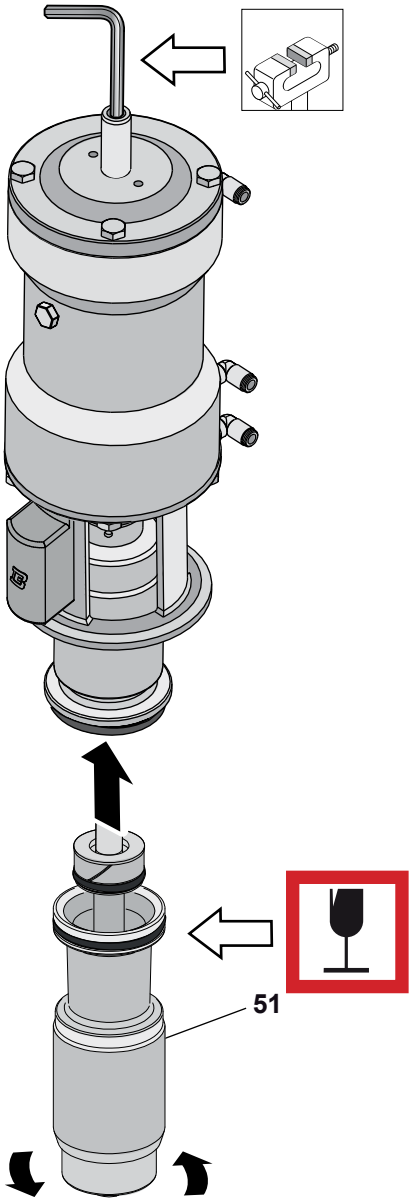

HANDLE WITH CARE

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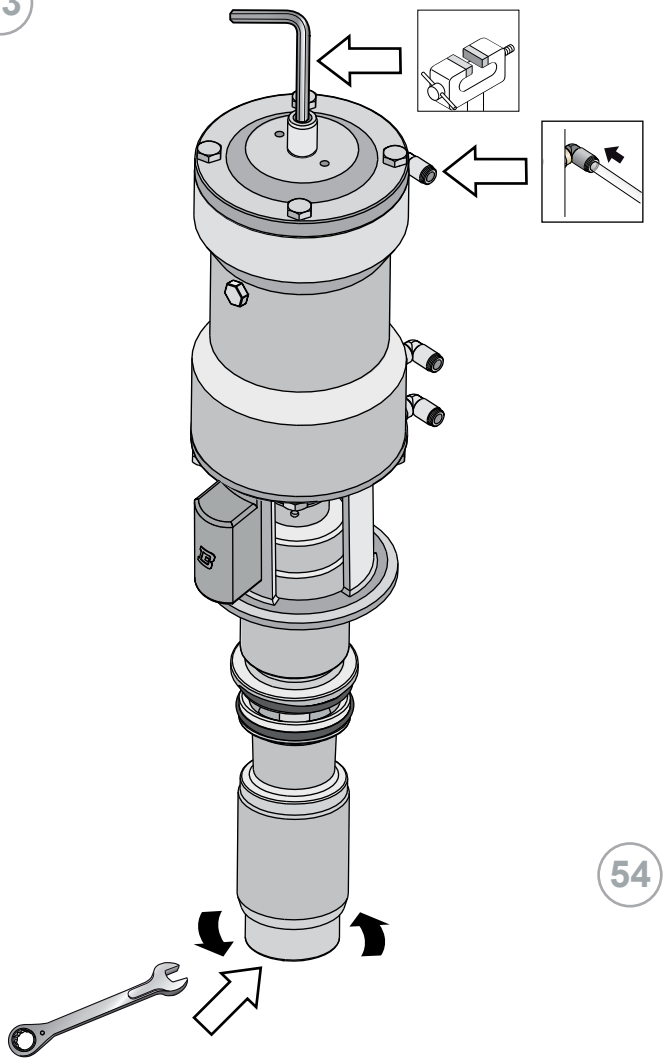
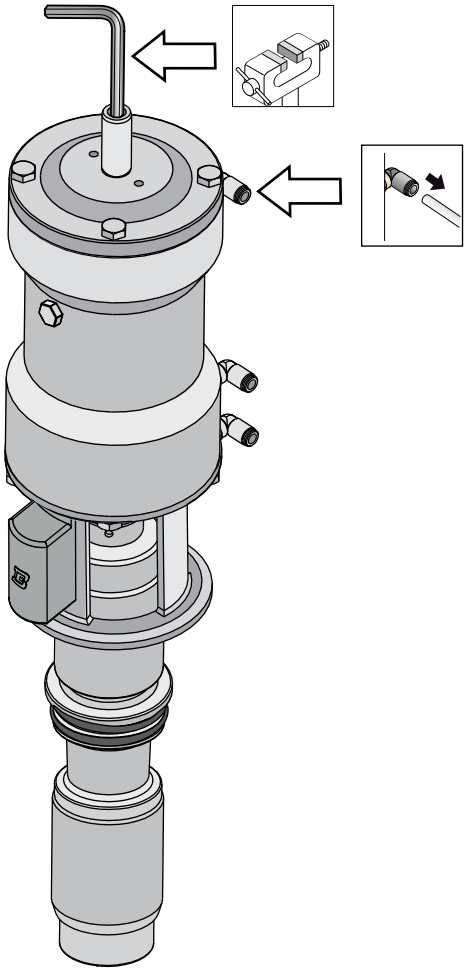
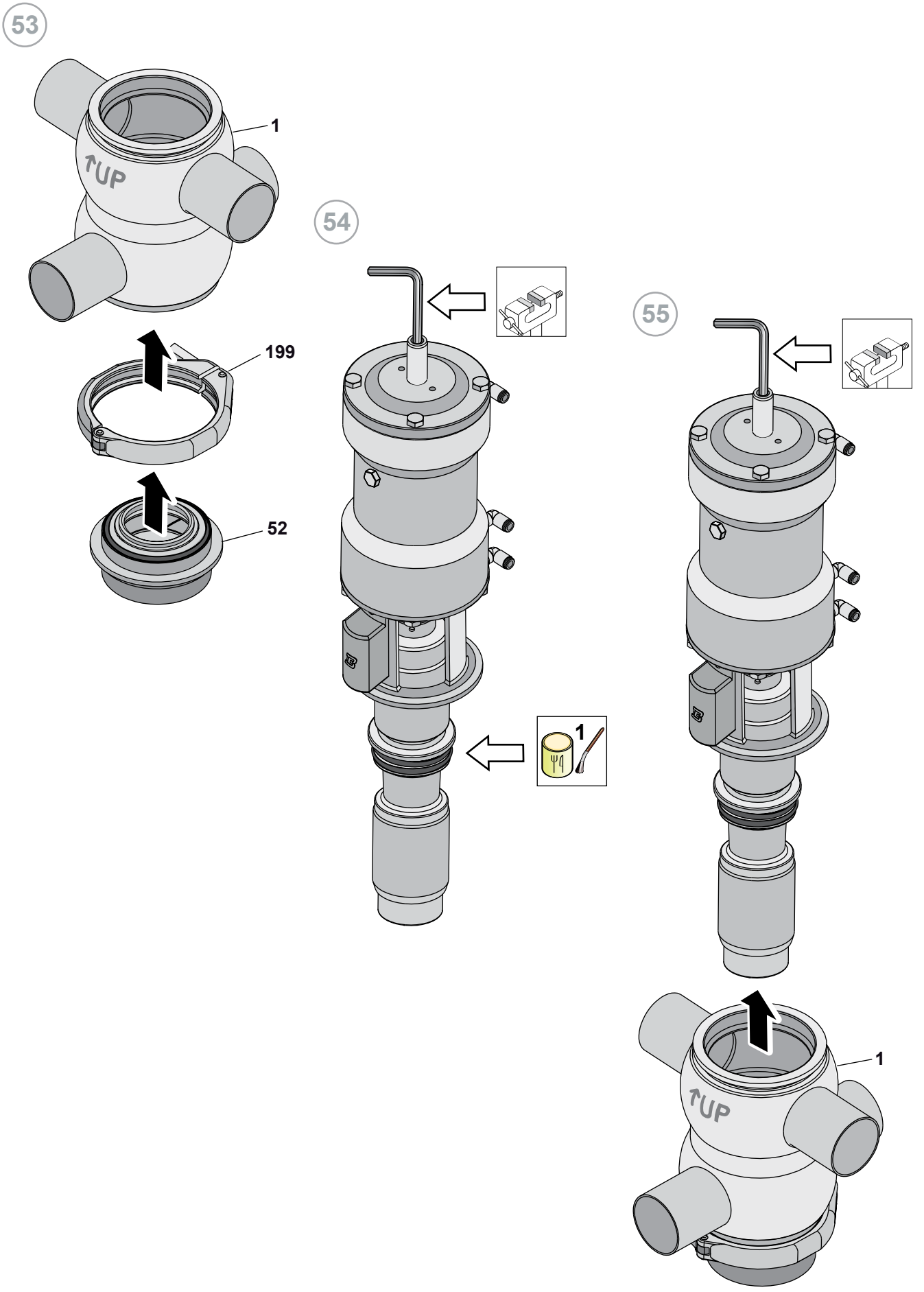


Never touch the moving parts if the actuator is supplied with complessed air

54

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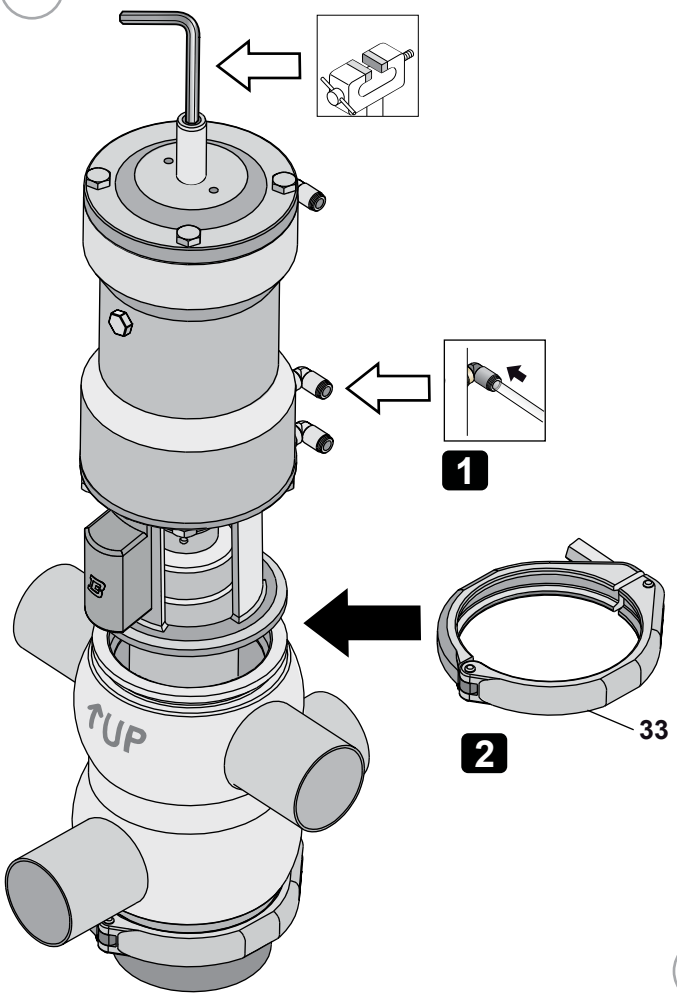
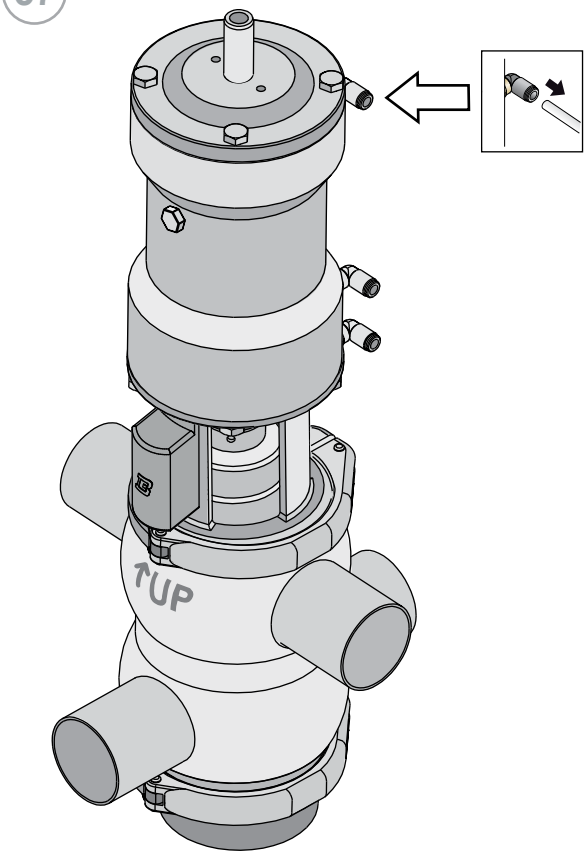


Never touch the moving parts if the actuator is supplied with complessed air

57



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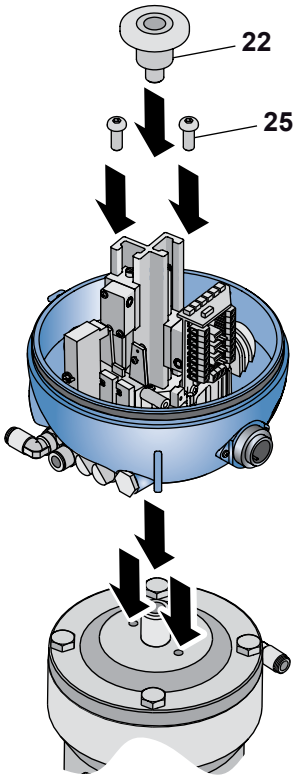

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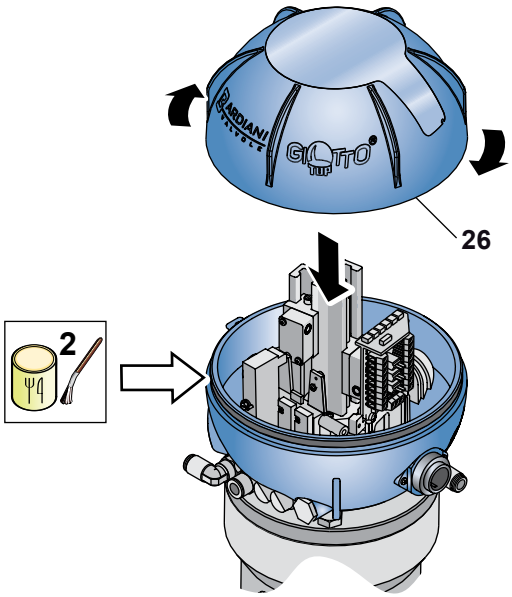

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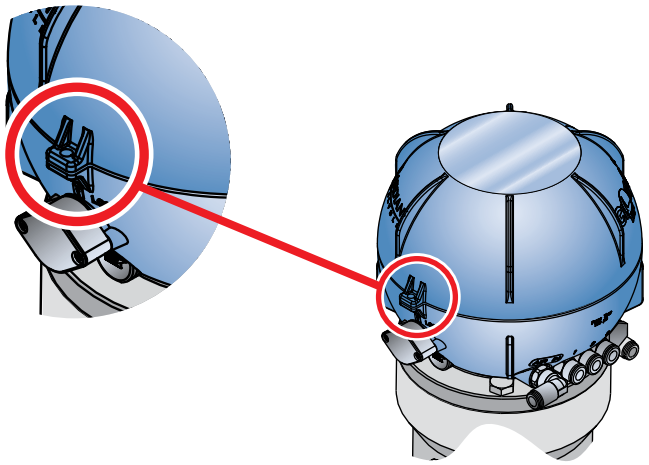
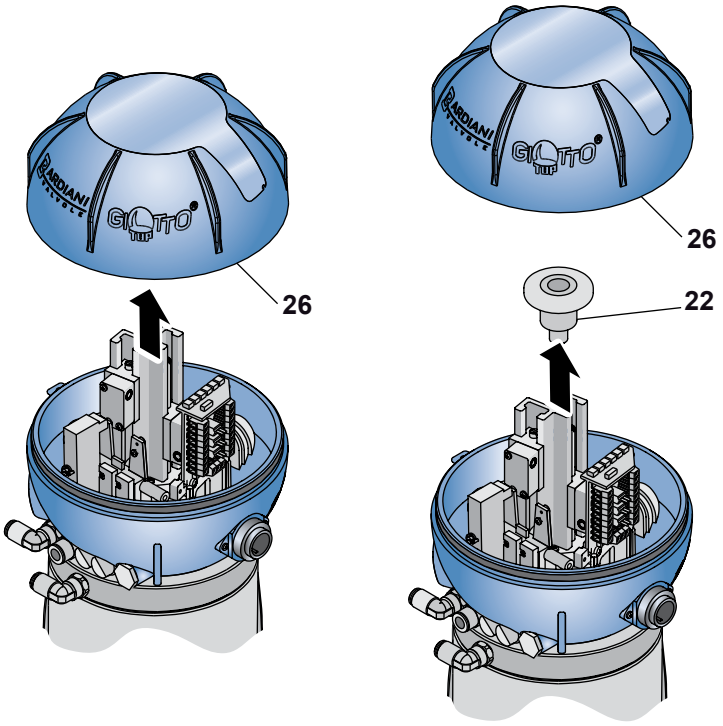


10.7 Lower seatlift sensor adjustment

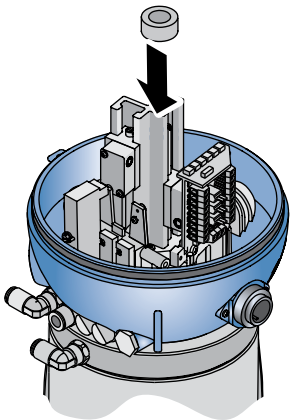
To comply with PMO Section 7, Item 15p(B) compliant including Part 6 exception for (seat-lifting), carry out the following steps to position and adjust the proximity sensor to detect a 1.59 mm seat lift movement. Lower seat lift downward stroke: 7.5 mm.

Carry out the following steps :

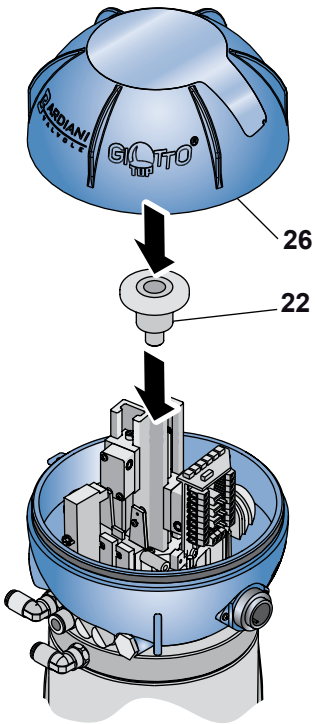
1 Open the control unit and remove the cam from the shaft.



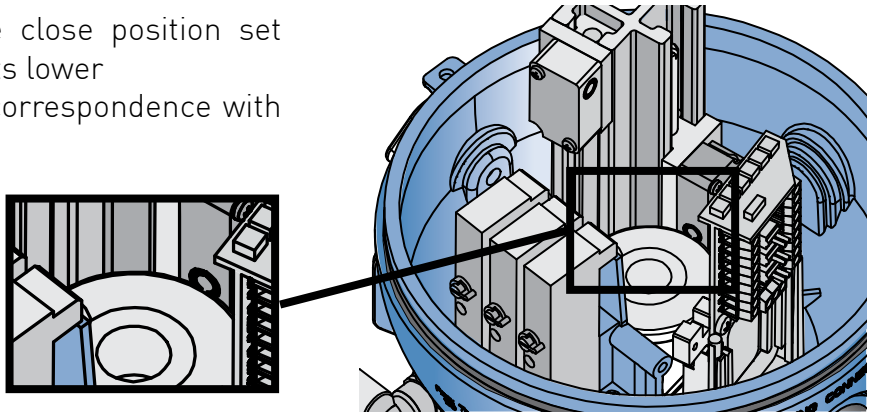
2 Install the annular ring spacer for the corresponding DN, spacer to be aligned and located on top of the actuator shaft at the top cylinder.



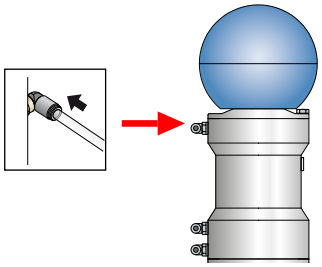
3 Screw the cam on the shaft, spacer will limit the lower lift downward stroke, when seat lift is actuated.



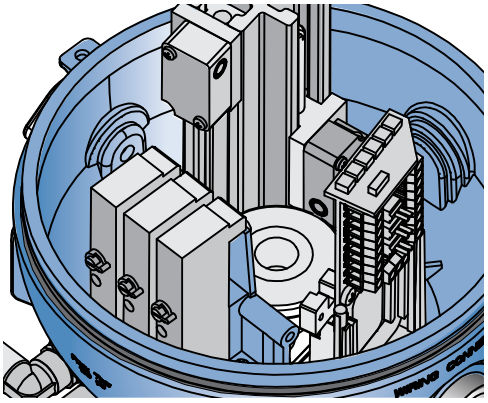
4 When the valve is in the close position set the proximity switch to have the its lower quarter active sensing zone in correspondence with the upper part of the cam.



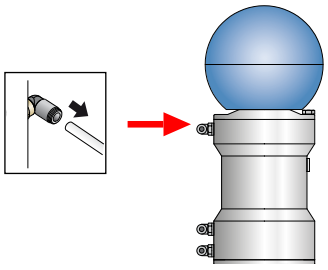
5 Activate the lower lift with regulated air at 6 bar in the upper air connection in the actuator.



6 If the Proximity switch is correctly calibrated (screw positioning), it must NOT send a feedback signal, and its LED should be OFF. Lower seat is now consider open with the 1.59 mm downward movement offset set by the spacer.



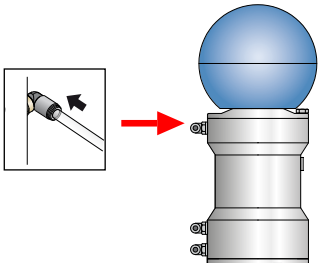
7 Deactivate the lower lift by removing air from upper air connection in the actuator.



8 Seat Lift and Cam should return to its closed position, proximity Switch LED must now be light in operating mode, and send a feedback signal.

9 unscrew the cam and remove the spacer. screw the cam again.

10 Activate the lower seat lift with regulated air at 6 bar in the upper air connection in the actuator.



11 Seat lift lower shutter will open.

12 The LED on the Proximity switch must now be light ON.

10.8 Upper seatlift external adjustment

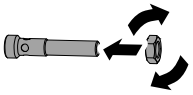
To comply with PMO Section 7, Item 15p(B) compliant including Part 6 exception for (seat-lifting), carry out the following steps to position and adjust the proximity sensor to detect a 1.59 mm seat lift movement. Upper seat lift upward stroke: 2mm.

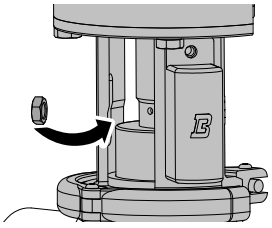
Carry out the following steps :

1 Valve must be in its closed position,

2 Assemble the proximity switch, two nuts are required to position the threaded switch at the valve actuator support.

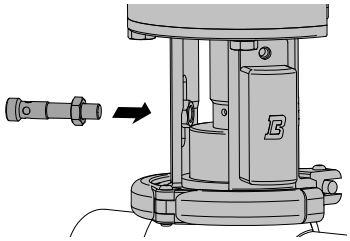
3 Screw in half way the first nut.



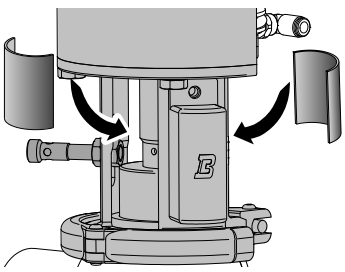


4 Position by hand second nut against the slot from the inside of the assembly part.

5 Insert the proximity switch in to the slot.

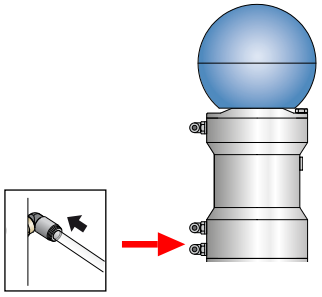


6 Screw inwards the proximity switch and adjust to a distance from 0.5 to 1.0 mm betwe en proximity sensor sensing zone and the upper shutter circular edge.

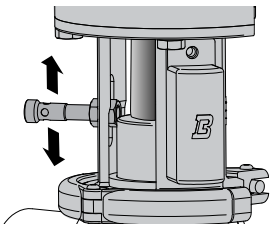


7 Install the annular ring spacer for the corresponding DN, spacer is split, annular ring will limit the stroke of the seat lift to 1.59 mm.

8 Activate the upper seat lift with regulated air at 6 bar in the lower air connection in the actuator.

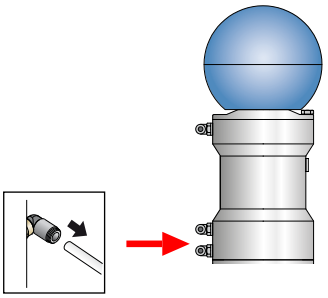


9 Adjust and regulate the proximity switch position until the lower middle section of the sensitive area is in correspondence with the upper edge of the upper shutter.



10 Fix the proximity switch in position with the external nut.

11 The LED on the Proximity switch must now be lit ON, with NO feedback signal to the control system.

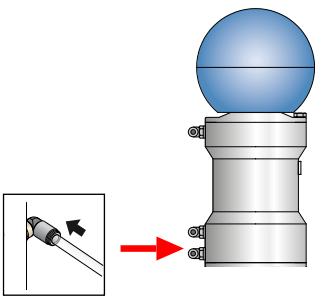


12 Deactivate the upper lift by removing air from lower air connection in the actuator,

13 Remove the split annular ring spacer.

14 Proximity switch LED must now be lit OFF with feedback signal to the control system.

15 Activate the upper seat lift with regulated air at 6 bar in the lower air connection in the actuator.

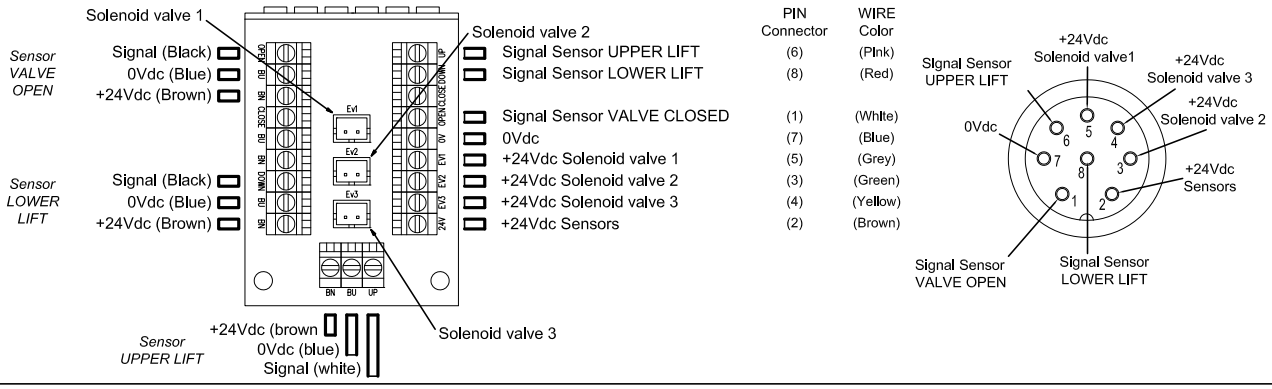


16 Seat lift upper shutter will open, with a stroke of 2mm

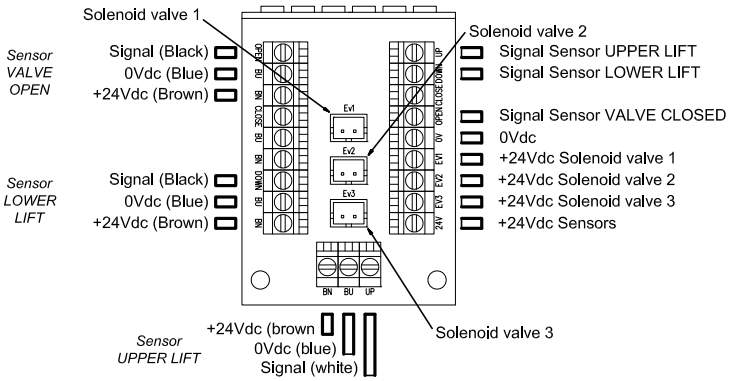
17 The LED on the Proximity switch must now be lit ON, with NO feedback signal to the control system.

10.9 External sensor electrical connections

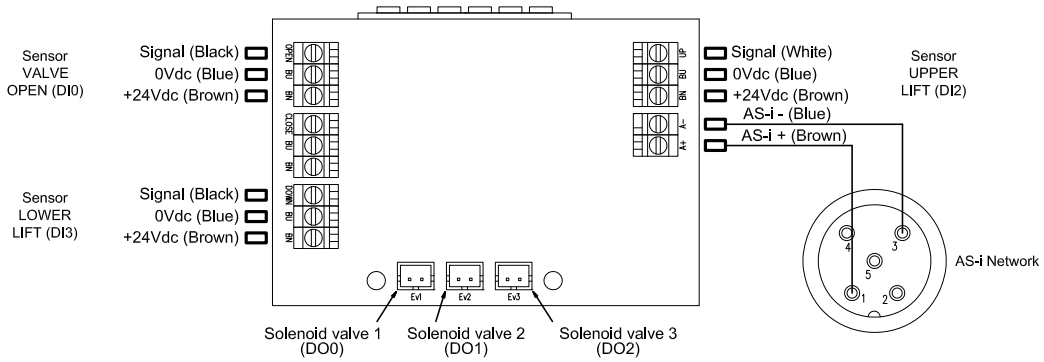
3 PNP sensors with 3 solenoid valves normally closed and 8-pins wiring connector (PMO 1 cam)



3 PNP sensors with 3 solenoid valves normally closed (PMO 1 cam)



AS-i card 360° with 3 PNP sensors and 3 normally closed solenoid valves (PMO 1 cam)



11 Annexes

GB - EC Declaration of conformity - A3-P-PRG-GB

EC DECLARATION OF CONFORMITY OF THE MACHINERY

(EC) 2006/42, Annex. II, p. 1 A

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

Declares
under its own responsibility that the machine:

Type:	**PNEUMATIC VALVES**
Model:	**################**
Serial number:	**################**
Function:	**Fluid handling**
Year of construction:	**2018**
Reference	**################**

complies with all relevant provisions of the following EC directives:
(EC) 2006/42 MACHINERY
and also comply with the following EC Directives and Regulations:
(EU) 2014/30 ELECTROMAGNETIC COMPATIBILITY DIRECTIVE (EMC)
and the following harmonized standards, rules and / or technical specifications applied:
EN ISO 12100:2010
REGULATION (EC) 1935/2004 and subsequent amendments and additions with regard to steel and elastomers in contact with the product

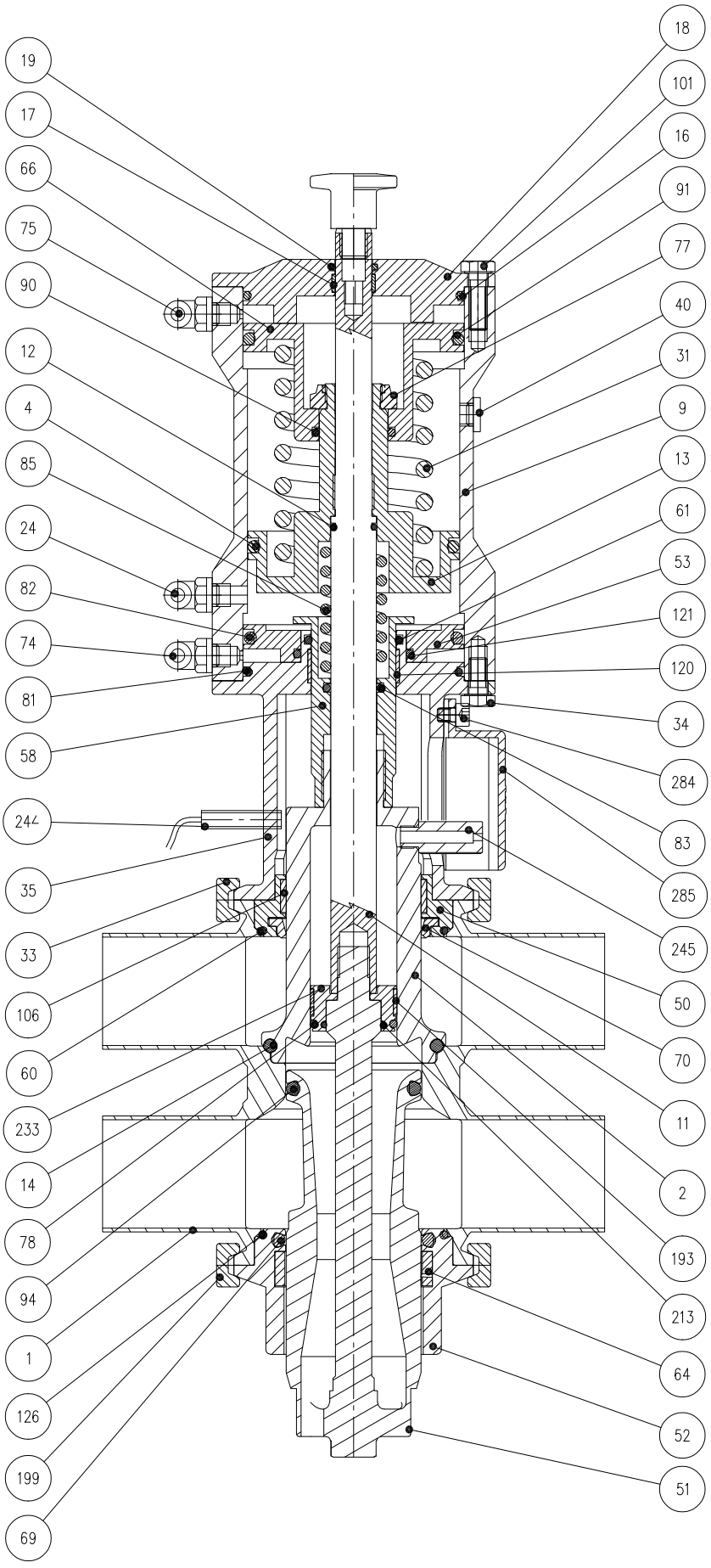
Fornovo di Taro
20/09/2018

_____
Legal representative

A3-P-PRG-GB Ed. 1. Rev. 0

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

12 2D diagram B915PMO



"[A S B915PMO]"

13 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 caused by its being dropped and/or banged and/or dented and/or misused and/or tampering and/or breakage and/or accidents and/or any other event caused by negligence and/or carelessness and/or neglect by the Buyer and in general for any causes not ascribable 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.

14 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 Products 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

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bardiani@bardiani.com - www.bardiani.com