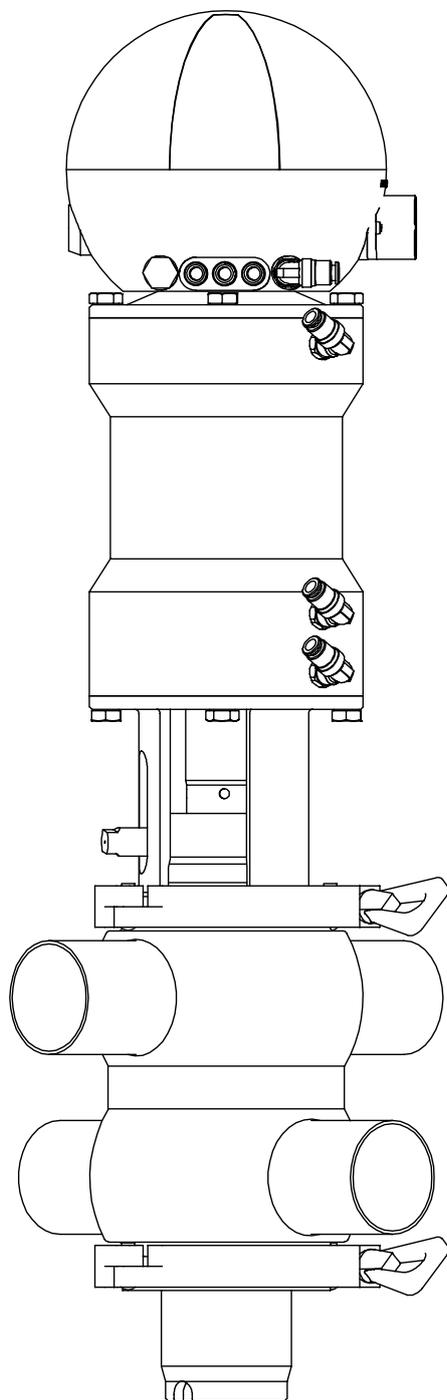


USE AND MAINTENANCE MANUAL

# MIXPROOF Valve B925 - B925B



**B**ARDIANI  
VALVOLE

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## Foreword

**This instruction manual is an integral part of the valve delivery.**

- **To use the Atex valve model is obligatory to consult the appropriate manual.**
- **Always read it carefully before using the valve.**
- **Always keep it for future reference.**

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This instruction manual is expressly intended for use by technicians. Therefore, some information which can easily be inferred by reading the text and examining the illustrations and drawings has not been further specified. The publisher is not responsible for any consequences of incorrect operations by the user.

The data and information in this instruction manual are subject to modifications or updates without any further notice or obligations on the part of the manufacturer.

## 1. Safety/Caution Signs

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General WARNING sign, which indicates that special instructions **MUST** be followed to avoid serious personal injuries.



General CAUTION sign, which indicates that special instructions **MUST** be followed to avoid damage of equipment and environment

### **NOTE!**

Indicates **IMPORTANT** information, which improves the understanding of the instructions.

---

## 2. General Safety Precautions



ALWAYS read the technical data before installation, operation and maintenance.

ALWAYS use authorised personal to install, operate and service the valve. The personal should know the valve and the instruction manual thoroughly.

ONLY use the valve for the designed purpose.

ALWAYS handle heavy valves carefully and use lifting tools where necessary.

ALWAYS pay attention to possible loose valve parts when unpacking the delivery.

ALWAYS connect air supply carefully and disconnect after use.

ALWAYS connect electrical supply carefully and disconnect after use.

NEVER touch moving valve parts.

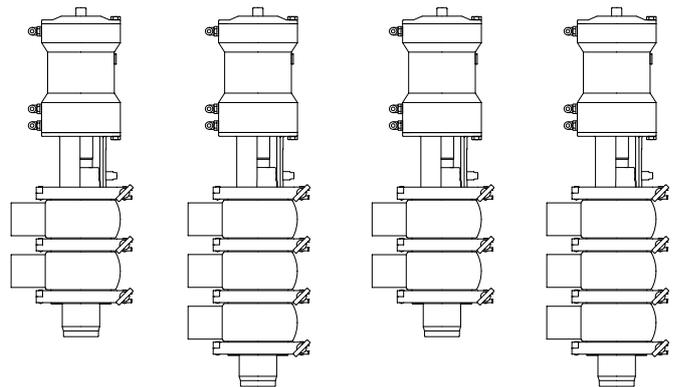
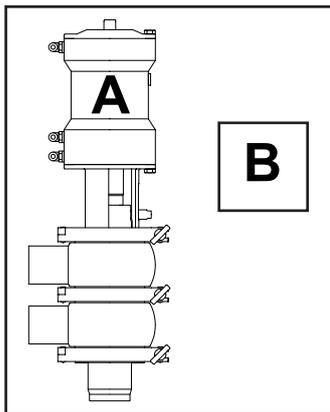
NEVER touch a hot valve.

ALWAYS handle cleaning agents carefully.

NEVER remove a valve from piping or disassemble it when the valve or piping are pressurised.

**We cannot be held responsible for incorrect  
installation, operation and maintenance!**

### 3. Receiving/Unpacking/Storage



**B925**

**B925  
DIVERT**

**B925B**

**B925B  
DIVERT**

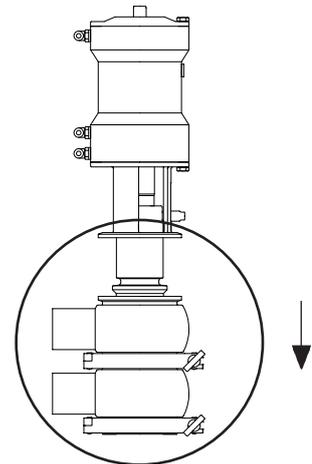
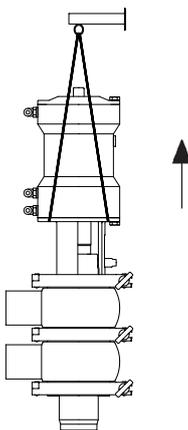
#### CAUTION!

##### 1. UNPACK AND CHECK VALVE DELIVERY:

- A. Complete valve
- B. Instruction manual

##### 2. IDENTIFY VALVE TYPE SUPPLIED:

- B925:** Valve Mixproof
- B925B:** Valve Mixproof



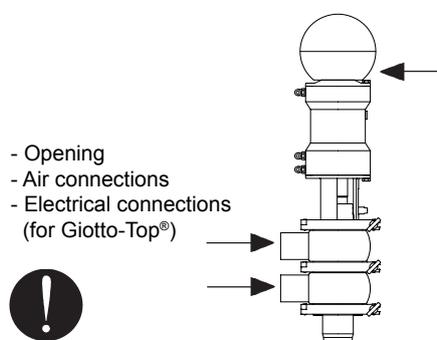
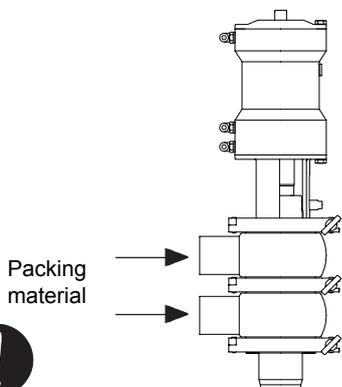
##### 3. LIFTING OF HEAVY VALVE:

- Use lifting tool, if necessary.
- Fix valve to lifting tool.

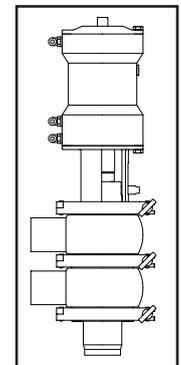


##### 4. HANDLING OF LOOSE VALVE PARTS:

- Avoid falling loose valve parts.
- Assemble and tighten loose parts.



Safety valve protection!



##### 5. PACKING MATERIAL:

- Inspect internal of valve.
- Remove material and dispose of according to current directives.



##### 6. INSPECTION/CLAIM:

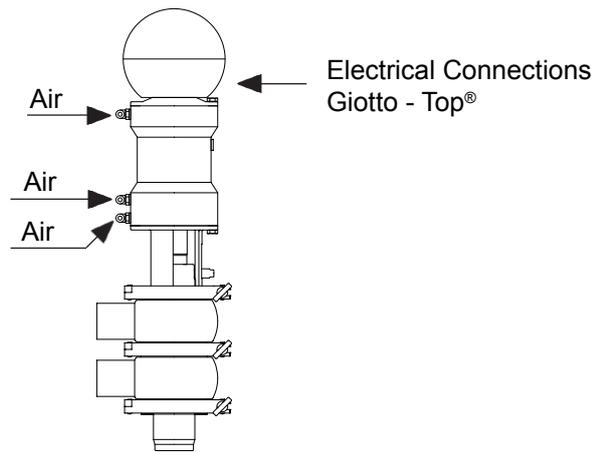
- Inspect valve connections.
- Document /verify damage, missing or wrong parts.
- Use current claim procedure if necessary.



##### 7. STORAGE/PROTECTION:

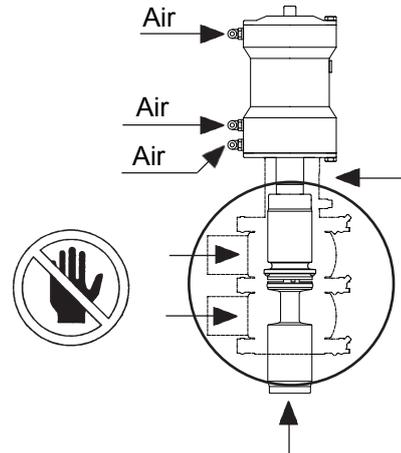
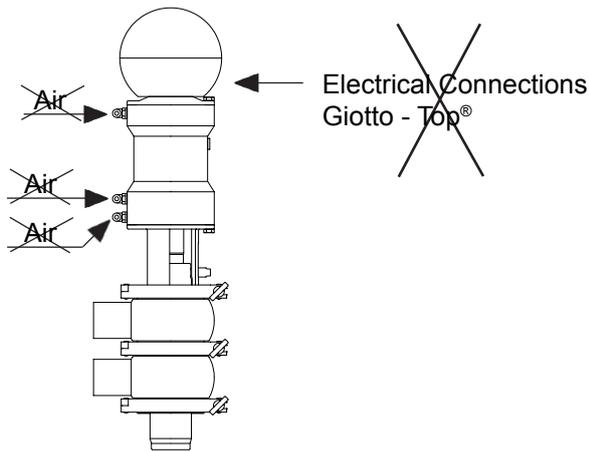
- Avoid dust, humidity, wet areas, heat and similar.
- Avoid vibration.
- Min.: - 10 °C
- Max.: + 50 °C

# 4. Installation



### 1. CONNECTION OF AIR AND ELECTRICITY SUPPLY:

- Use authorised personnel to install/connect the valve.
- Ensure correct air pressure and quality (see page 34).
- Ensure correct electrical supply for Giotto-Top® (see Giotto-Top® instruction manual).



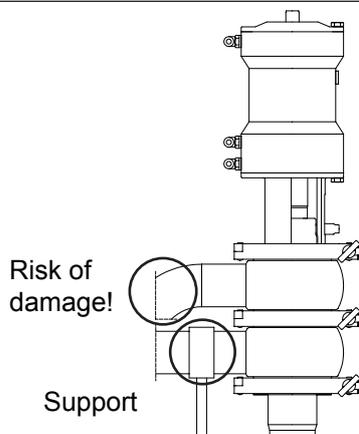
### 2. DISCONNECT SUPPLIES AFTER USE:

- Disconnect air supply.
- Disconnect electrical supply (for Giotto-Top®).



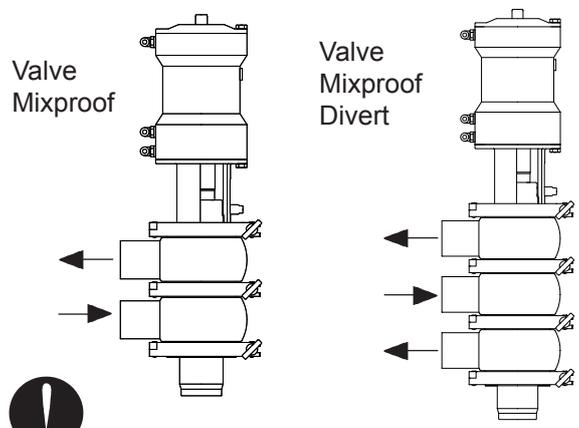
### 3. MOVING VALVE PARTS:

- Never stick fingers into valve ports.
- Never touch the shaft of the valve whilst it is working



### 4. AVOID VALVE OVERLOADING AND COMPENSATE FOR:

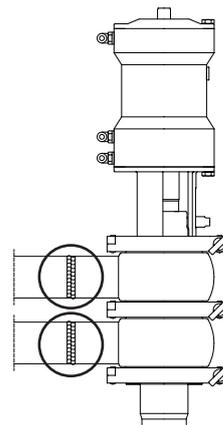
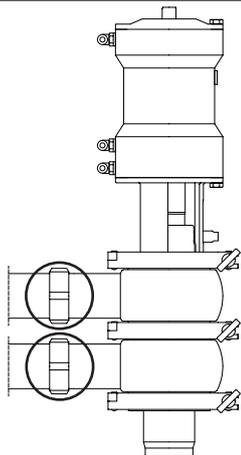
- Vibration
- Thermal expansion



### 5. CORRECT FLOW DIRECTION:

- If possible, have flow against valve closing direction to avoid or minimise water hammer.

## 4. Installation



### 6. VALVE CONNECTIONS/UNIONS:

- Ensure tight connections between valve and piping.
- Remember gaskets and fit correctly.
- Tighten unions firmly and carefully.

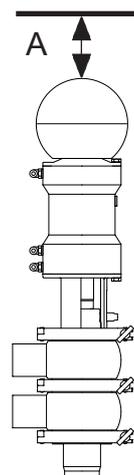


### 7. WELDING VALVE BODY INTO PIPING:

- Remove inner valve parts.
- Weld body carefully into piping.
- Fit valve.
- See fitting instructions.

### B925 (with Giotto-Top®)

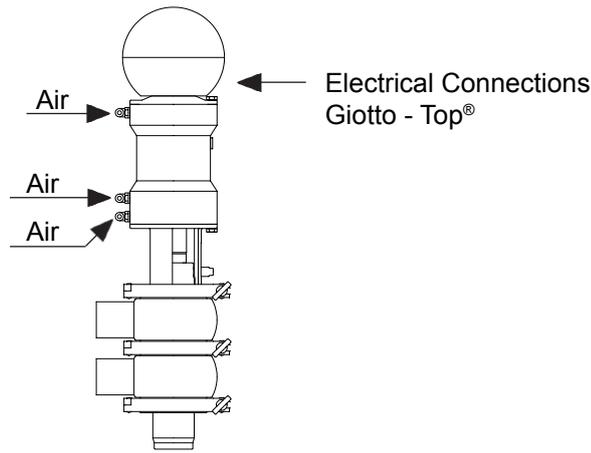
Valve Dimension	A (mm)
DN25--40	420
DN50	450
DN65	490
DN80	510
DN100	600



### 8. INSTALLING VALVE INTO PIPING:

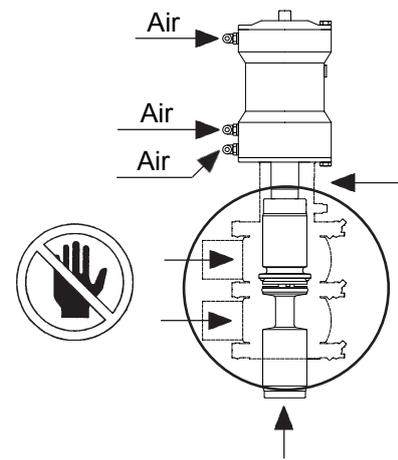
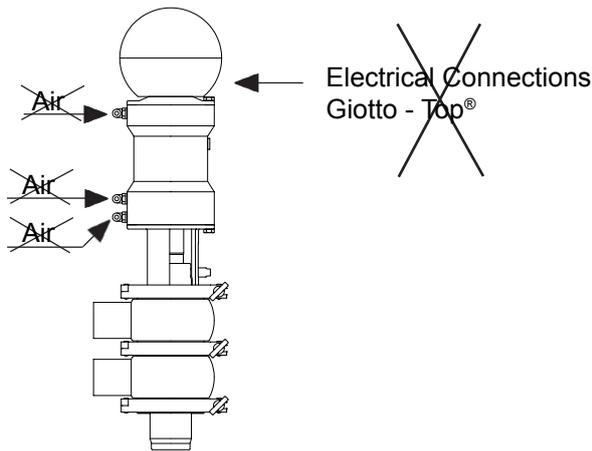
- Ensure sufficient clearance for valve disassembly.

# 5. Operation



### 1. SUPPLYING AIR AND ELECTRICITY TO THE VALVE:

- Use authorised personnel to operate the valve.
- Ensure correct air pressure and quality (see page 34).
- Ensure correct electrical supply for Giotto-Top® (see Giotto-Top® instruction manual).



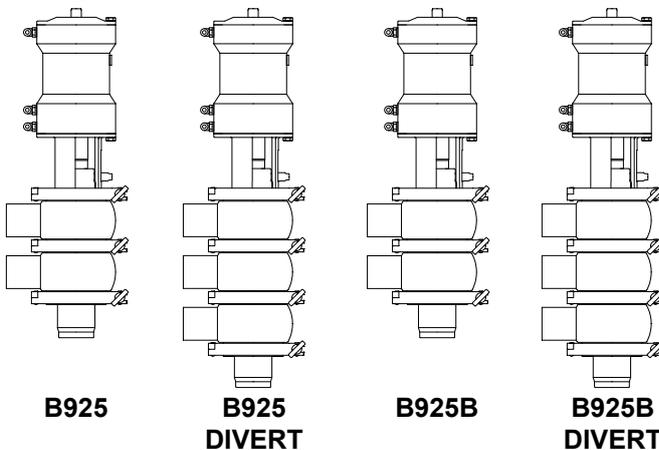
### 2. DISCONNECT SUPPLIES AFTER USE:

- Disconnect air supply.
- Disconnect electrical supply for Giotto-Top®.

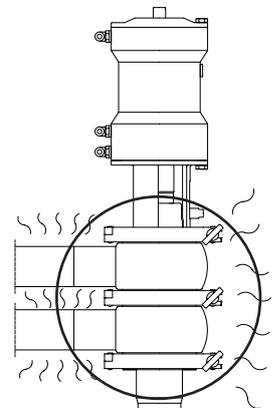


### 3. MOVING VALVE PARTS:

- Never stick fingers into valve ports.
- Never touch the shaft of the valve whilst it is working.



**BURN RISK**



### 4. USE THE VALVE EXCLUSIVELY FOR ITS INTENDED DESIGN USE.

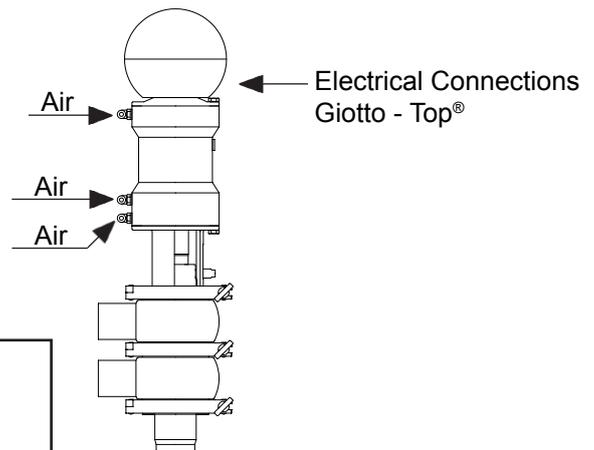
- B925: Valve Mixproof
- B925B: Valve Mixproof



### 5. HOT VALVE/PIPING:

- Never touch hot valve or piping, if possible.
- Alternatively use protective gloves.

## 5. Operation



### 6. PRE-USE CHECK VALVE BEFORE OPERATION:

- Supply air to the valve.
- Supply electricity to the valve (with Giotto top®).
- Open and close the valve several times.
- Check that the valve functions operate correctly and smoothly.

## 6. Troubleshooting



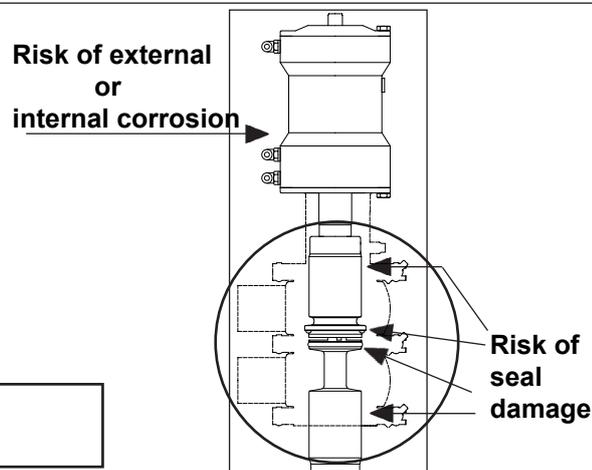
### 1. TROUBLESHOOTING VALVE:

Always study operation and maintenance instructions carefully before troubleshooting.



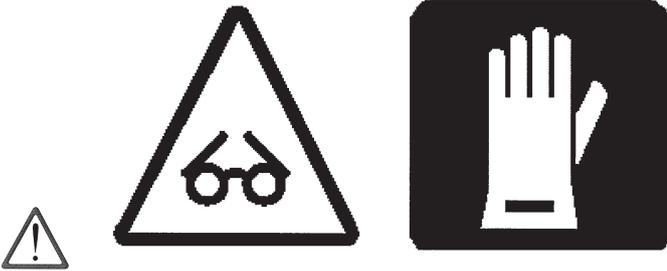
### 2. REPLACING WORN VALVE PARTS:

- See page 12 for spare parts ordering.



PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
External leakage		
Internal leakage with closed valve, caused by normal wear	Worn out seal	Replace seal
External leakage	Excessive pressure	Replace with seals of a different elastomer type
	Excessive temperature	
Internal leakage with closed valve occurring earlier than normal wear rate	Aggressive fluids	Modify operational conditions
	Too many controls active	
Difficulty opening and closing	Incorrect elastomer type of seal	Replace with seal of different elastomer type
	Incorrectly positioning of the actuator	Fit the actuator correctly
	Incorrect operation of actuator	Change from a normally open (NO) to normally closed (NC) or vice versa
	Dirt in the actuator	Carry out actuator maintenance
	Incorrect positioning of the valve body	Disassemble and reposition the valve body

# 7. Cleaning

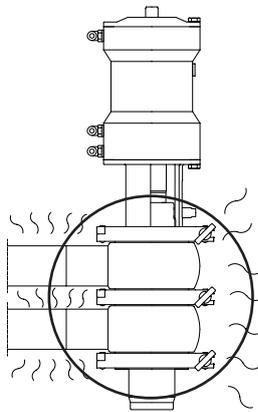


### 1. CLEANING VALVE WITH CLEANING AGENTS:

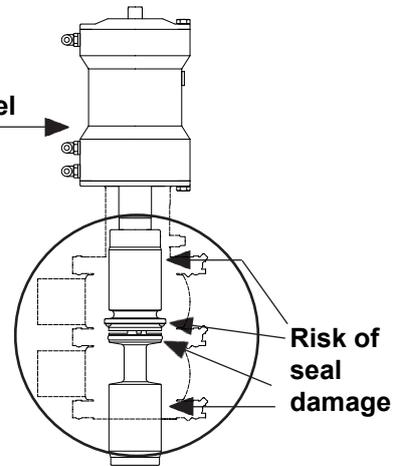
- Use authorised personnel to clean the valve.
- Observe concentrations of cleaning agents.
- Follow instructions of cleaning agent suppliers.
- Always use protective goggles and gloves.



**BURN RISK**



**Risk of corrosion stainless steel**



### 3. HANDLING OF CLEANING AGENTS:

- Dose cleaning agents regularly to avoid excessive concentration.
- Always rinse carefully with clean water after cleaning.
- Check compatibility of valve matter.



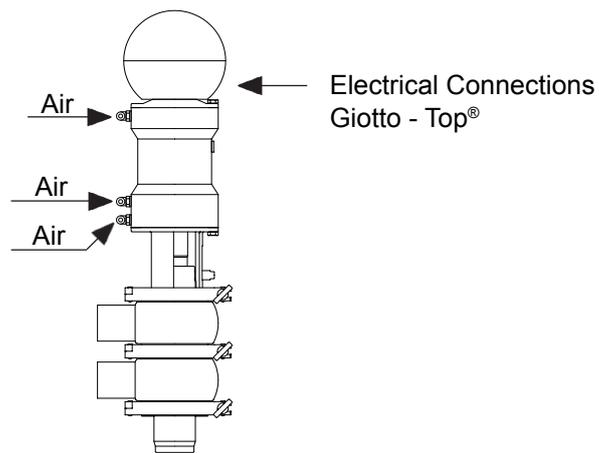
### 2. HOT VALVE/PIPING:

- Never touch hot valve or piping, if possible.
- Alternatively use protective gloves.

Example of suggested CIP		
Step	Temperature °C	Cip product
First rinsing	Atmosphere	Water without chlorine or chlorids
Washing	70°	Soda (NaOH) at 1%
Intermediate washing	Atmosphere	Water without chlorine or chlorids
Washing	70°	Nitric acid (HNO3) at 0,5%
Final rinsing	Atmosphere	Water without chlorine or chlorids

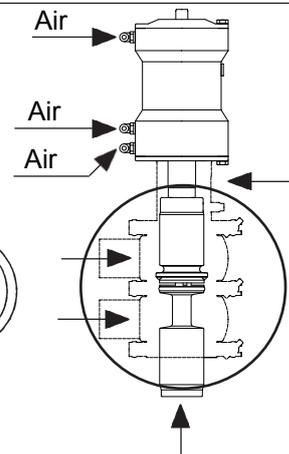
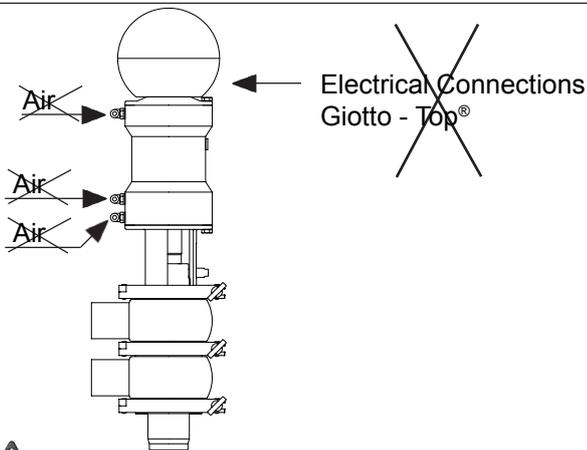
Recommended claning speed = 2 m/s

## 8. General Maintenance



### 1. SUPPLYING AIR AND ELECTRICITY TO VALVE:

- Use authorised personnel to service the valve.
- Ensure correct air electrical supply for Giotto-Top® (see Giotto-Top® instruction manual).
- Ensure correct air pressure and quality (see page 34).

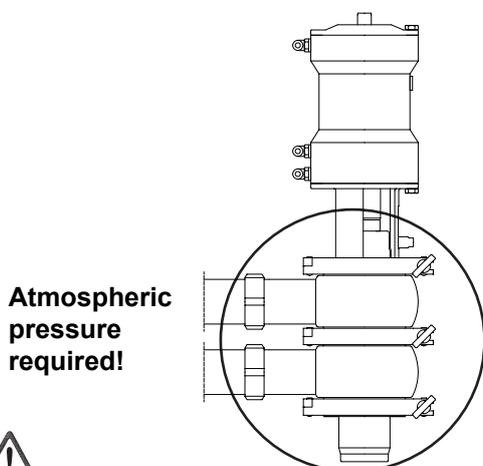


### 2. DISCONNECT SUPPLIES AFTER USE:

- Disconnect air supply.
- Disconnect electrical supply for Giotto-Top®

### 3. MOVING VALVE PARTS:

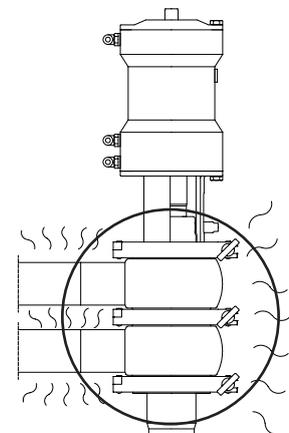
- Never stick fingers into valve ports.
- Never touch the shaft of the valve whilst it is working.



**Atmospheric pressure required!**



**BURN RISK**



### 4. PRESSURISED VALVE/PIPING:

Always release fluid pressure from valve and piping before disassembling the valve.

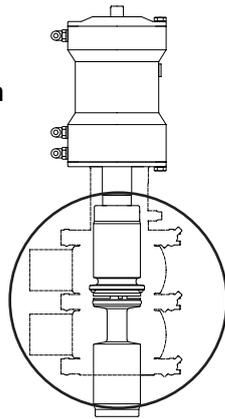


### 5. HOT VALVE/PIPING:

- Never touch hot valve or piping, if possible.
- Alternatively use protective gloves.

## 8. General Maintenance

Wash and clean thoroughly!



### 6. CLEANING OF DEPOSITS:

- Wash and clean all valve parts thoroughly before disassembly and assembly!
- Pay attention to possible deposits of cleaning agents and other aggressive fluids!
- Always use protective goggles and gloves, if necessary.



### 7. REPLACING WORN VALVE PARTS:

- Always use original spare parts.
- See page 12 for spare parts ordering.
- Dispose of worn parts according to current directives.

## 9. Planned Maintenance

Planned maintenance	Valve gaskets	Actuator gaskets
Preventive	Replace after 12 months	Replace after 24 months
In case of leakage	Replace at the end of the day	Replace in case of leakage
Periodical	Check for correct operation and absence of leakage	Check for correct operation and absence of leakage
	Record all actions taken	Record all actions taken

# 10. Spare Parts Ordering



**NOTE!**

Please copy this page, fill it out and fax it to below address.

À:  
BARDIANI VALVOLES S.P.A. – Ufficio Ricambi  
Fax: +3905253408

From:

Valve type:

Valve type:

Month/Year of purchase:

Shipping instructions:

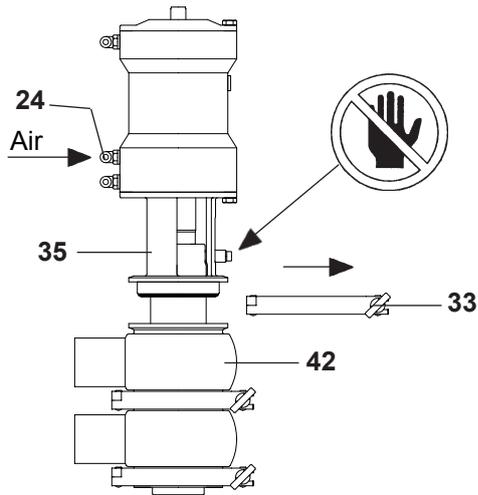
Quantity:		Position no.:	
Description:			

Quantity:		Position no.:	
Description:			

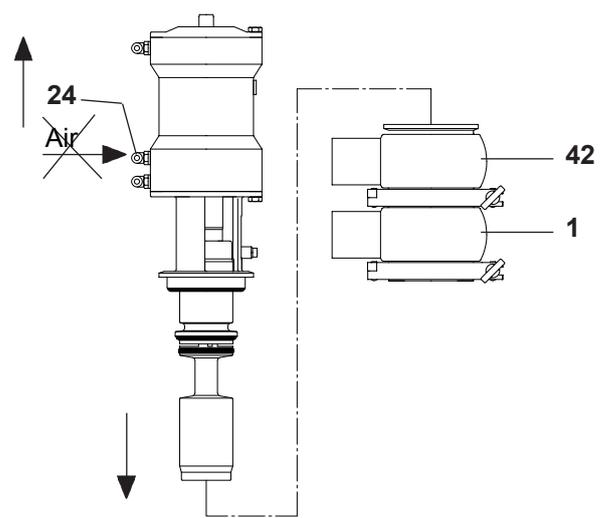
Quantity:		Position no.:	
Description:			

Quantity:		Position no.:	
Description:			

# 11. Disassembly of B925 - B925B

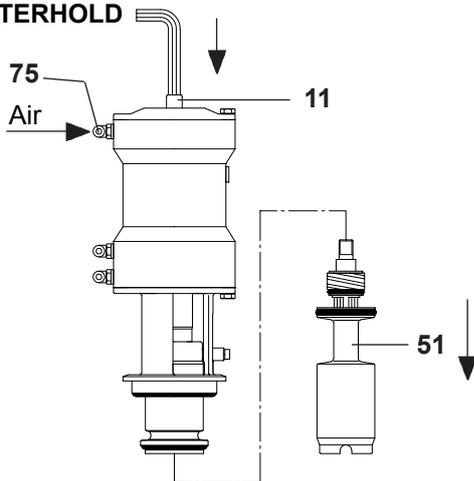


1. Supply air to the central air fitting (24). Remove the clamp (33) from the upper body (42) and the assembly (35).

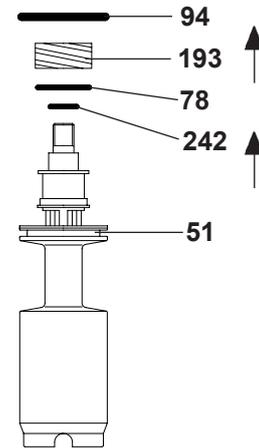


2. Remove air pressure from the central air fitting (24) and remove upper body (42) lower body (1).

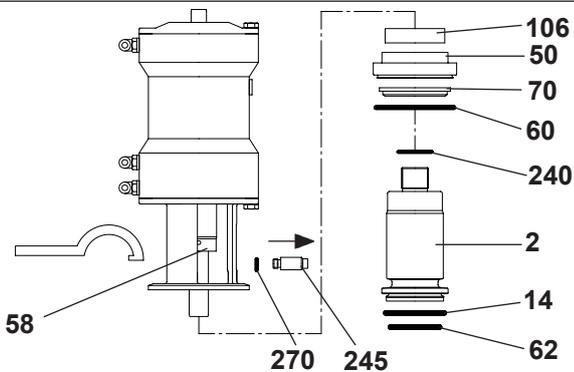
## COUNTERHOLD



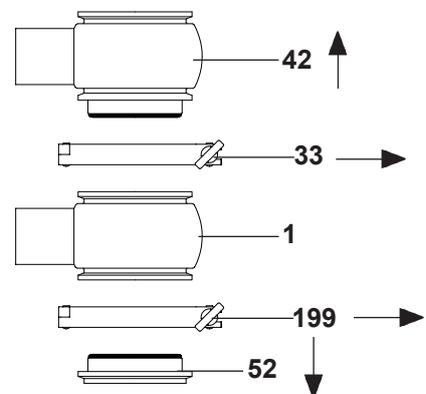
3. Supply air to the upper air fitting (75). Unscrew the lower shutter (51) sujetar the shaft (11) with an allen wrench.



4. Remove the seal ring (94), the guide bushing (193) and seal ring (78 not present in to B925B) and (242 present in to B925B) from the lower shutter (51).

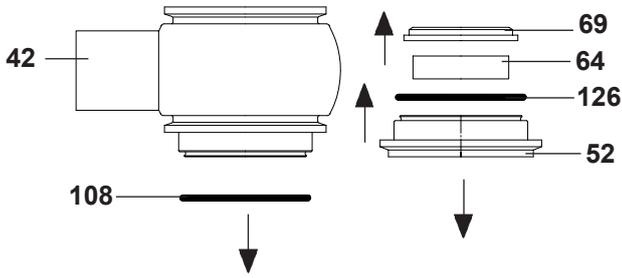


5. Unloose the adjusting sleeve (58) using an hand spanner, and unscrew pin guide (245) and remove the seal ring (270 present in to B925B) and then the upper shutter (2). Remove the sealing ring disc (50) and the seal rings (60 and 70) and the guide bushing (106). Remove also the seal rings (14, 62) and (240 present in to B925B) from the shutter (2).

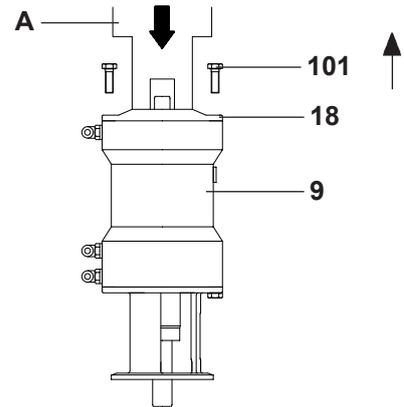


6. Remove the clamp (199) and the plug (52) from the body (1). Remove the clamp (33) between upper (42) and lower (1) body.

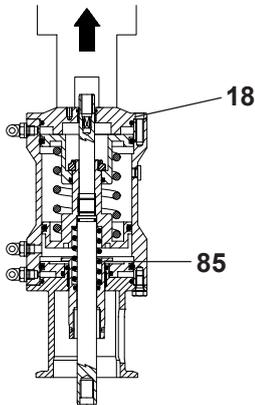
# 11. Disassembly of B925 - B925B



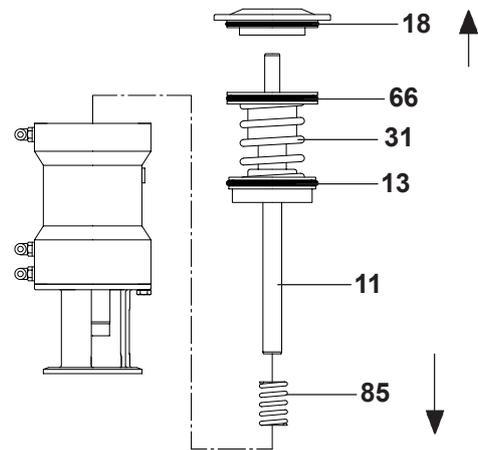
7. Remove the sealing ring (108) from the body (42).  
Remove the sealing ring (126 and 69) and the guide bushing (64) from the plug (52).



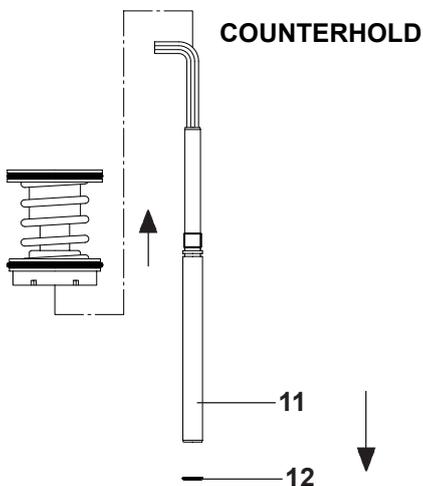
8. Using a press with a plug specially made for the operation (A) preload the stopper (18). Unscrew the socket screw (101) from the cylinder (9).  
**⚠ This operation must be carried out with great care by a specialised person.**



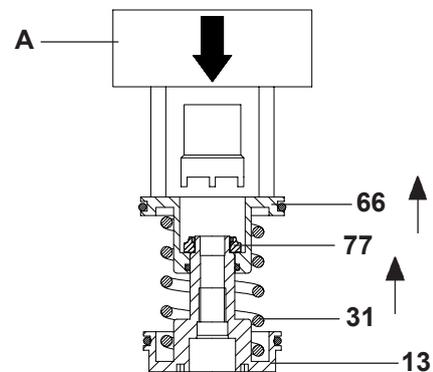
9. Gradually reduce the press force, matching the stopper (18) until the complete unloaded of the secondary spring (85).  
**⚠ This operation must be carried out with great care by a specialised person.**



10. Remove the stopper (18), unthread the shaft (11) together with piston block (66 and 13) and spring (31). Also remove the secondary spring (85).

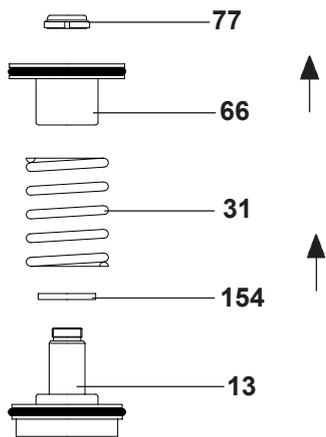


11. sujetar with an allen wrench the shaft (11) and unscrew the spring block. Also remove the seal ring (12).

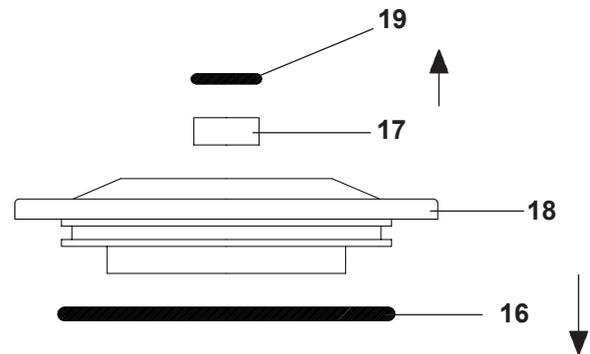


12. Using a press with a plug specially made for the operation (A) preload the upper piston (66). Unscrew the nut (77) using a wrench specially made and mach the piston (66) until the complete unloaded of the spring (31).  
**⚠ This operation must be carried out with great care by a specialised person.**

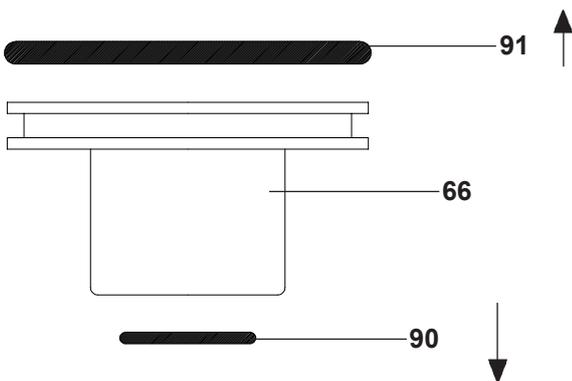
# 11. Disassembly of B925 - B925B



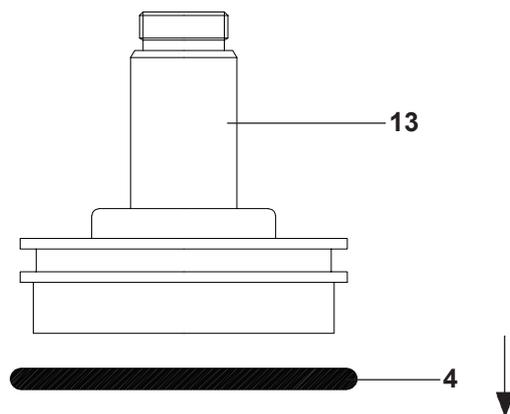
**13.** Unthread the upper piston (66), the spring (31), the nut (77) and gauge (154) [only DN25--40, 65] from the central piston (13).



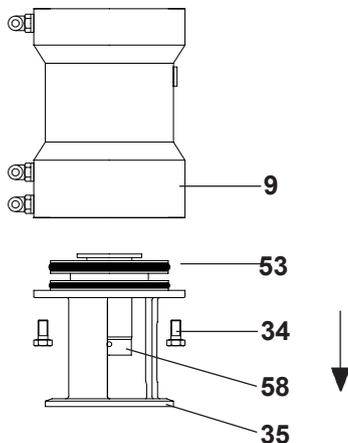
**14.** Remove the seal rings (16 and 19) and the guide bushing (17) from the stopper (18).



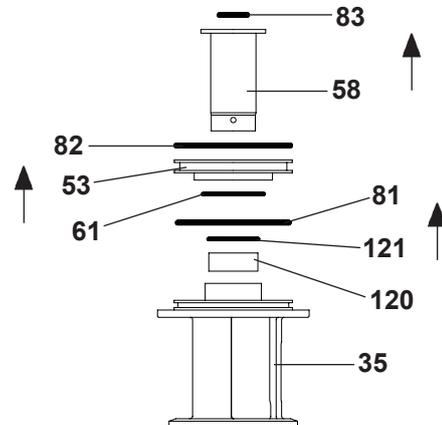
**15.** Remove the seal rings (91 and 90) from the upper piston (66).



**16.** Remove the seal rings (4) from the central piston (13).



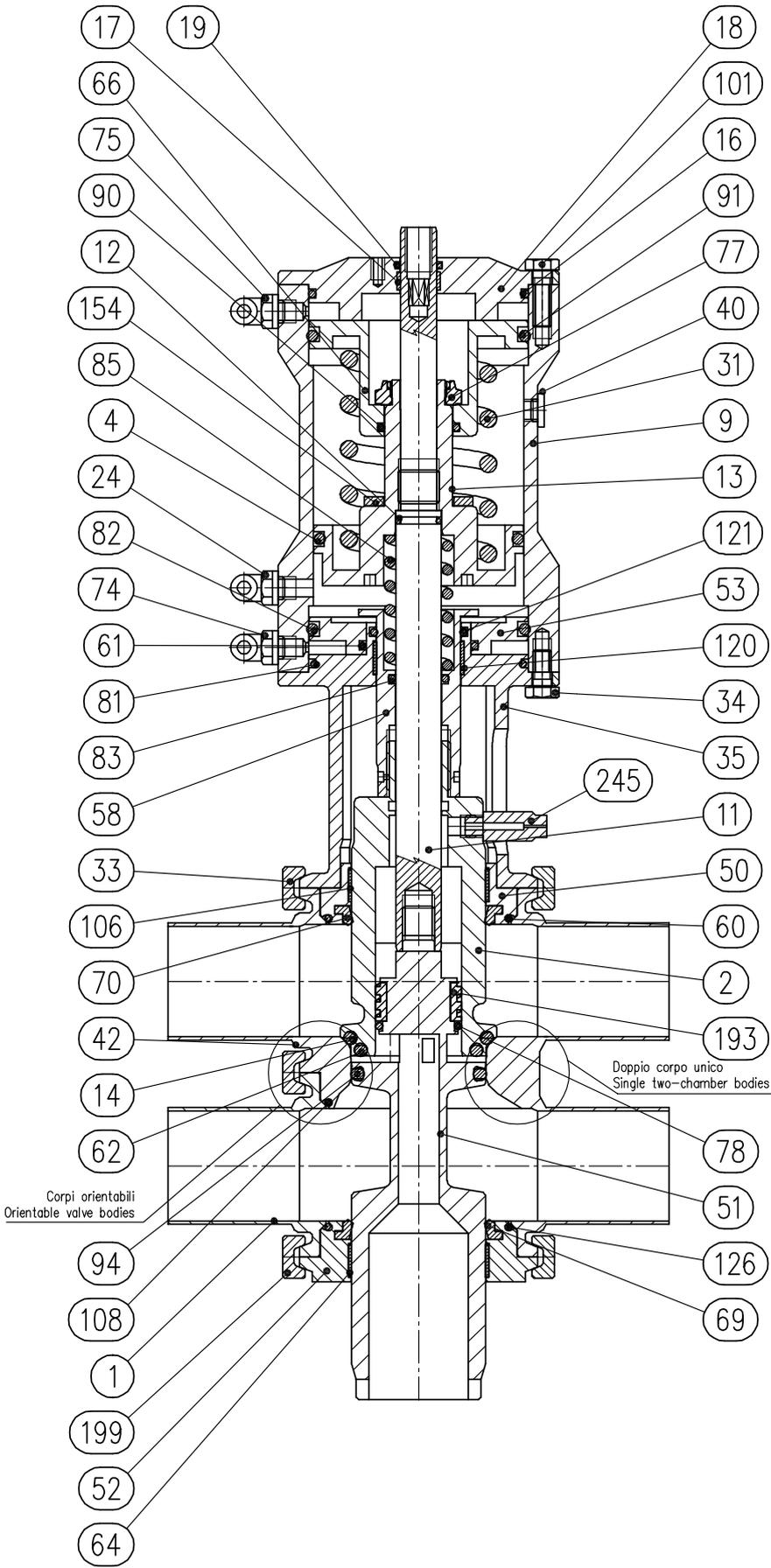
**17.** Unscrew the socket screw (34), disassemble the part assembly (35), the lower piston (53), the adjusting sleeve (58) from the cylinder (9).



**18.** Remove the seal ring (83) from the adjusting sleeve (58), seal rings (82 and 61) from the lower piston (53) and seal rings (81 and 121), the guide bushing (120) from the part assembly (35).

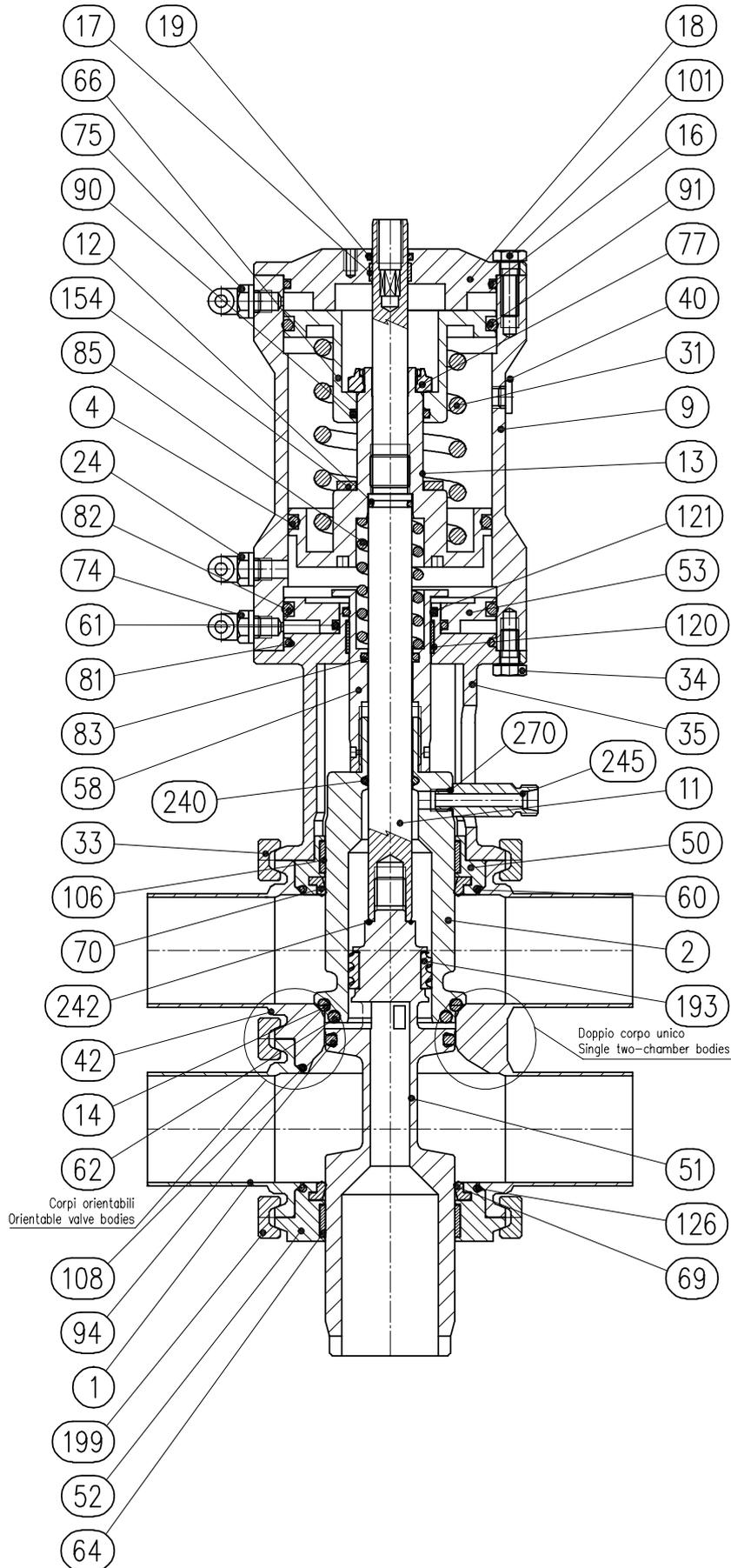
# 11. Disassembly of B925 - B925B

## B925

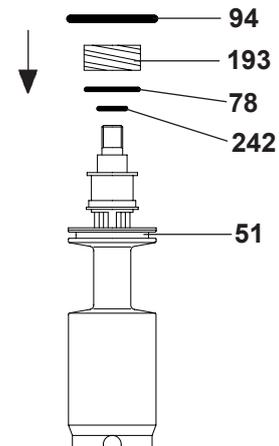
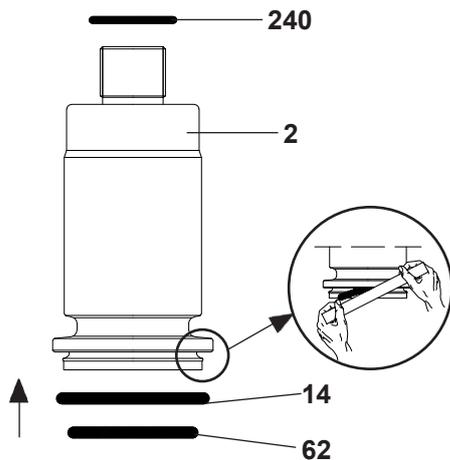


# 11. Disassembly of B925 - B925B

## B925B

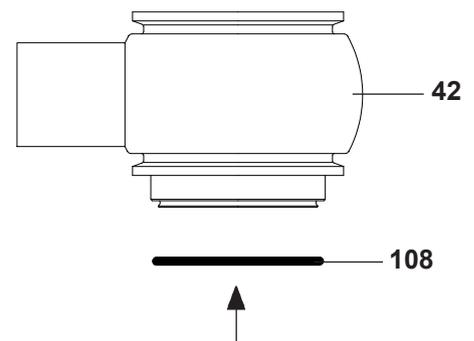
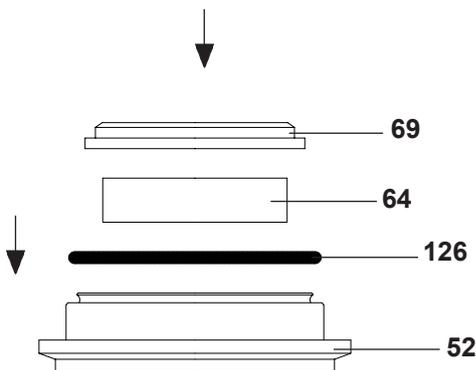


## 12. Assembly of B925 - B925B



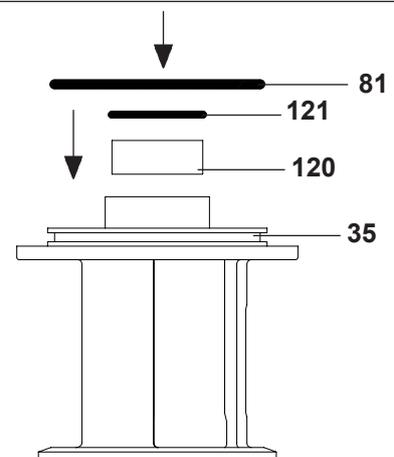
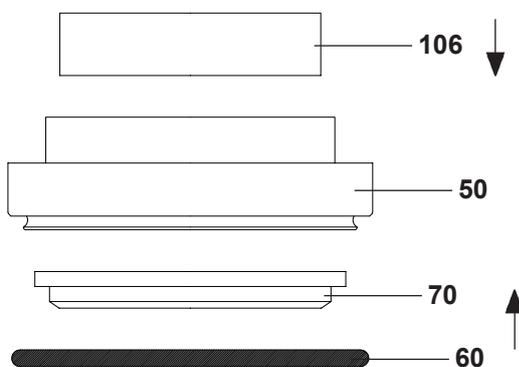
1. Heat up seal rings (14 and 62)\* in water to approx 85°C to soften them, insert this seal rings in the seat in the upper shutter (2), using a cylindrical object to push this rings in the cross way. Also insert the seal ring (240 **present only into the B925B**)\*.

2. Insert the seal ring (94)\* into the lower shutter (51) fitting as described in step 1. Also insert the seal ring (242 **present into the B925B**)\* and (78 **not present into the B925B**)\* and the guide bushing (193).



3. Insert the seal rings (69 and 126)\* and the guide bushing (64) in the lower plug (52).

4. Insert the seal ring (108)\* in the upper body (42).

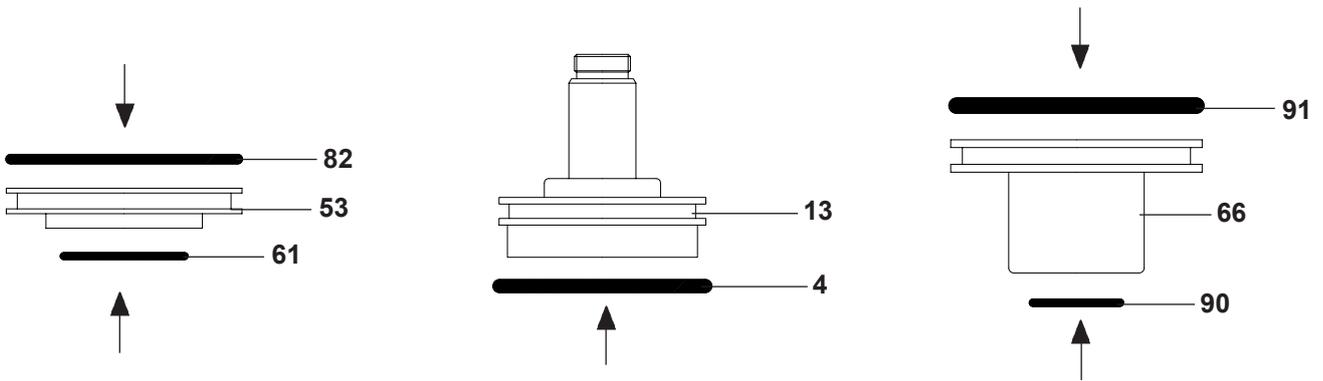


5. Insert the seal rings (60 and 70)\* and the guide bushing (106) in the sealing ring disc (50).

6. Insert the seal rings (121 and 81) and the guide bushing (120) in the part assembling (35).



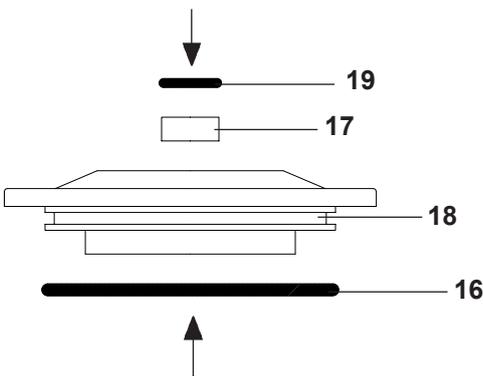
## 12. Assembly of B925 - B925B



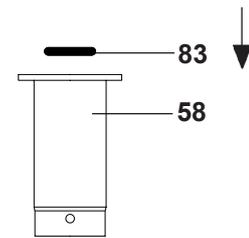
**7.** Insert the seal rings (61 and 82) in the lower piston (53).

**8.** Insert the seal rings (4) in the central piston (13).

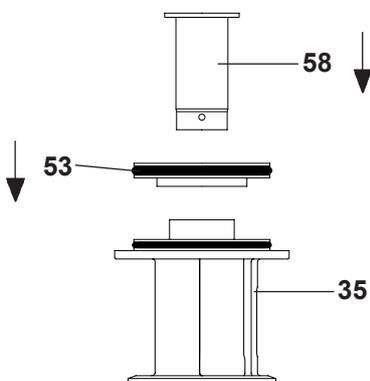
**9.** Insert the seal ring (90 and 91) in the upper piston (66).



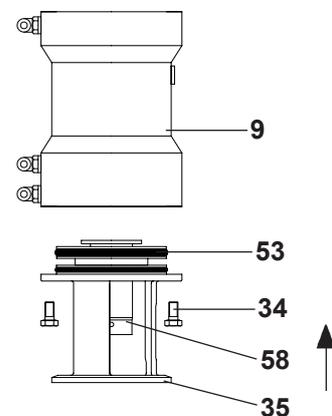
**10.** Insert the seal rings (16 and 19) and the guide bushing (17) in the stopper (18).



**11.** Insert the seal rings (83) in the adjusting sleeve (58).

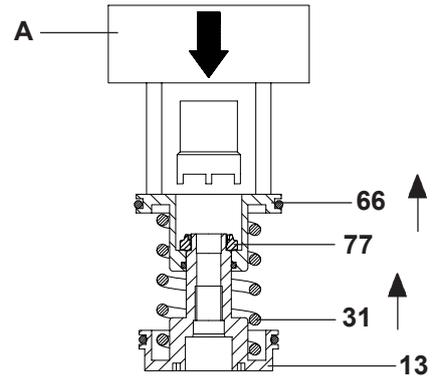
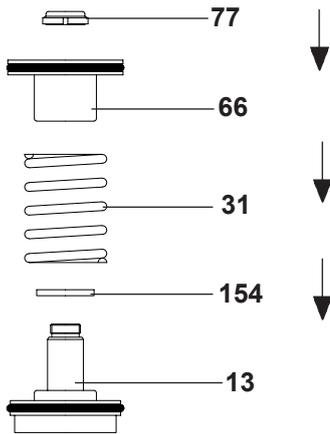


**12.** Insert the lower piston (53), the adjusting sleeve (58) into the part assembling (35).



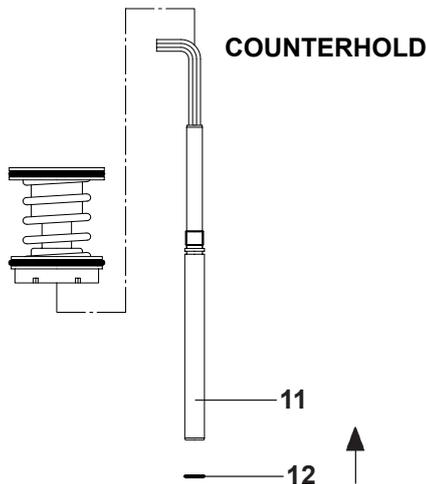
**13.** Fit the part assembling (35), the lower piston (53) and the adjusting sleeve (58) in the cylinder (9) using the socket screw (34). Orient the part assembling so that the tab with BARDIANI symbol was aligned with the air connections.

# 12. Assembly of B925 - B925B

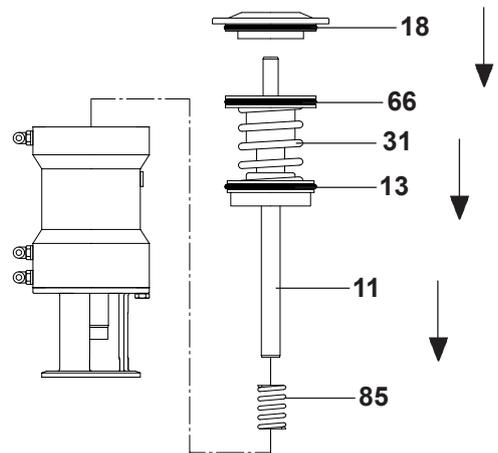


**14.** Prepare the spring block putting gauge (154) [only DN25--40, 65], the spring (31) and the upper piston (66) and the nut (77) on the central piston (13).

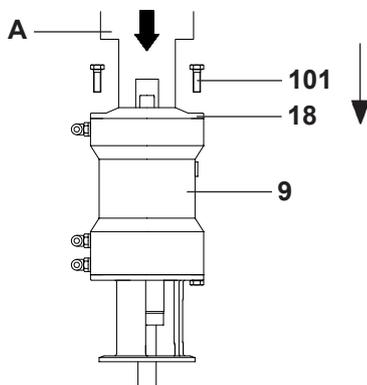
**15.** Using a press with a plug specially made for the operation (A) preload the upper piston (66). Screw the nut (77) using a wrench specially made and mach the piston (66) until the complete unloaded of the spring (31).  
**⚠ This operation must be carried out with great care by a specialised person.**



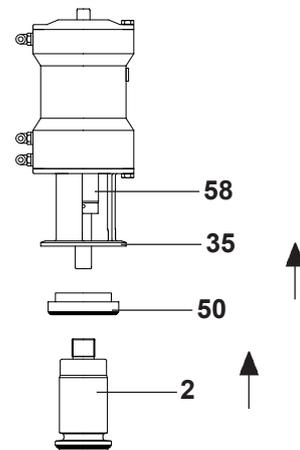
**16.** Insert the seal ring (12) on the shaft (11). sujetar with an allen wrench the shaft (11) and screw the spring block on it.



**17.** Insert the secondary spring (85) in to the cylinder (9), introduce the shaft (11) complete of the piston (66 and 13) and the spring (31) in to the cylinder (9). Closed it with the stopper (18).

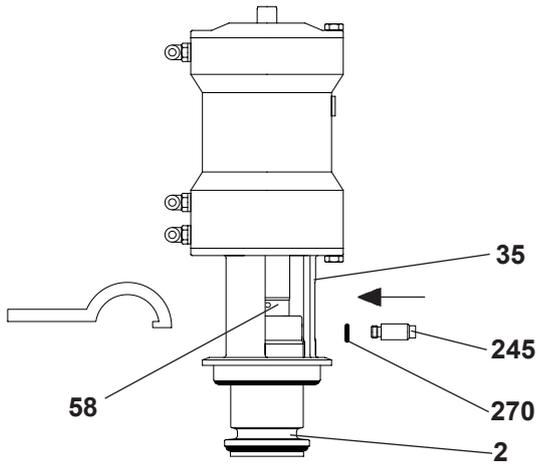


**18.** Using a press with a plug specially made for the operation (A) preload the stopper (18). Screw the socket screw (101) in the cylinder (9).  
**⚠ This operation must be carried out with great care by a specialised person.**

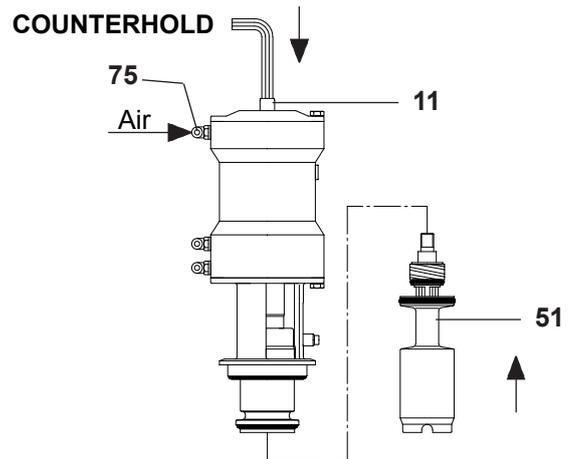


**19.** Introduce the sealing ring disc (50) in to the part assembling (35) and screw the upper shutter (2) in the adjustin sleeve (58).

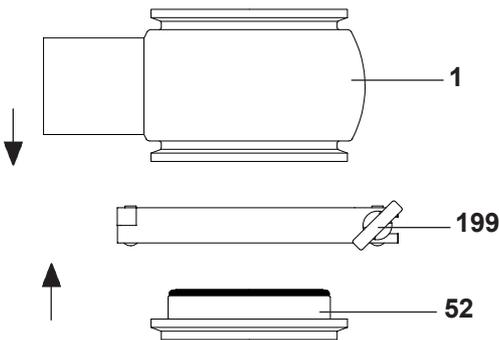
# 12. Assembly of B925 - B925B



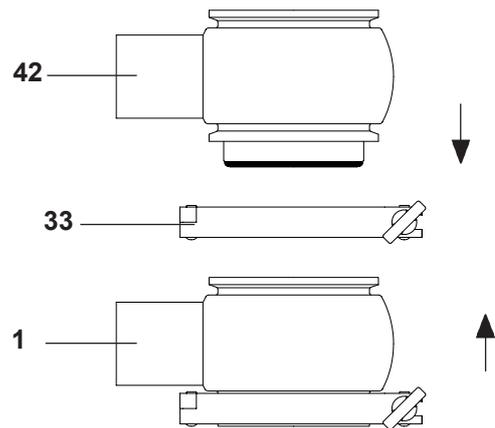
**20.** Insert the seal ring (270 present into the B925B)\* into the pin guide (245), screw the pin guide (245), through the slotted hole on the part assembling (35), on the upper shutter (2). Tighten adjusting sleeve (58) using an hand key.



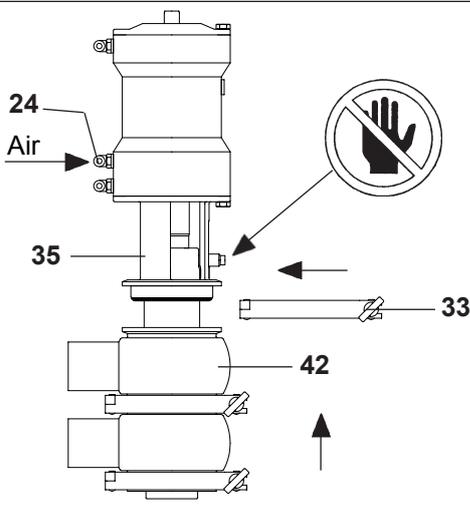
**21.** Supply air to the upper air fitting (75). Screw lower shutter (51) counterhold the shaft (11) with an allen wrench.



**22.** Fit the lower plug (52) to the lower body (1) with the clamp (199).

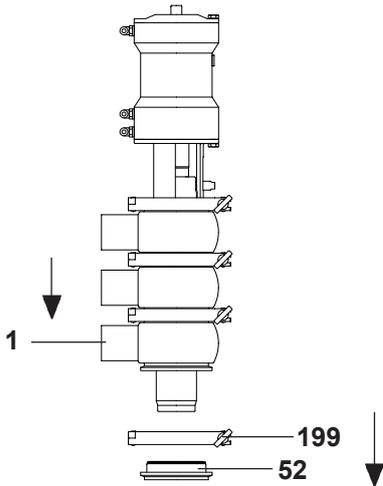


**23.** Close the lower body (1) and the upper body (42) with the clamp (33).

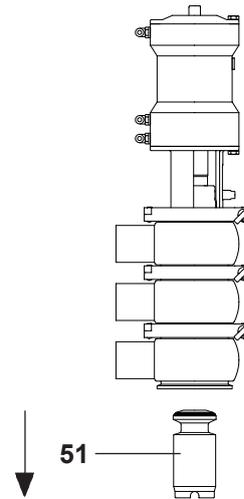


**24.** Supply air to the central air fitting (24). Assemble the cylinder and shutters on the valve body (42) with the clamp (33).

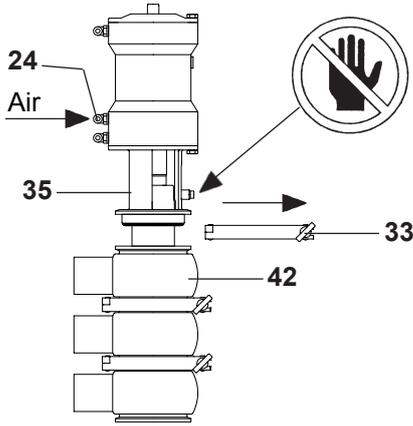
# 13. Disassembly of B925 - B925B divert



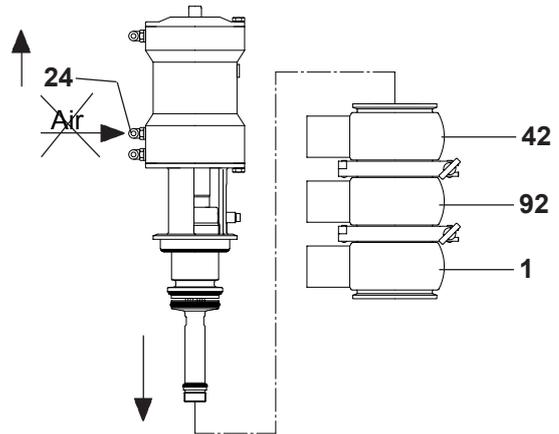
1. Remove the clamp (199) between the lower body (1) and the plug (52).



2. Unscrew the shutter (51).

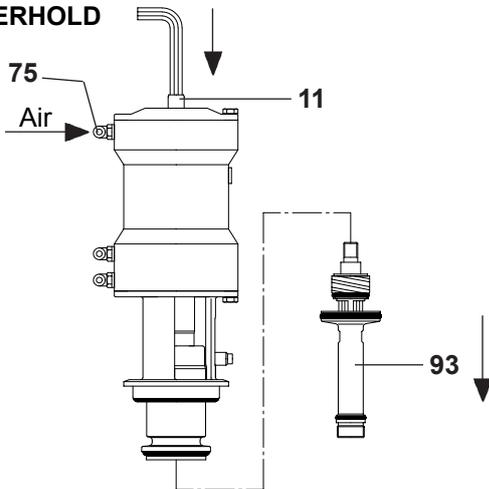


3. Supply air to the central air fitting (24). Remove the clamp (33) between upper body (42) and part assembly (35).

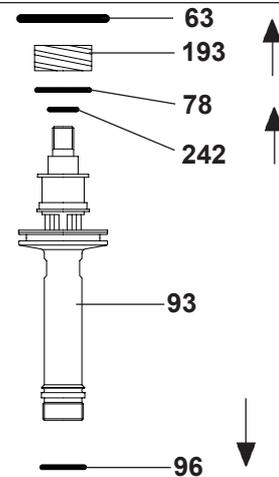


4. Remove air pressure from the central air fitting (24) and remove bodies (42, 92, 1).

## COUNTERHOLD

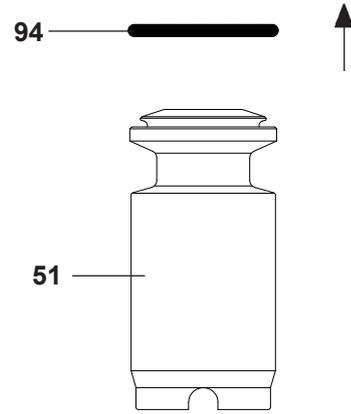
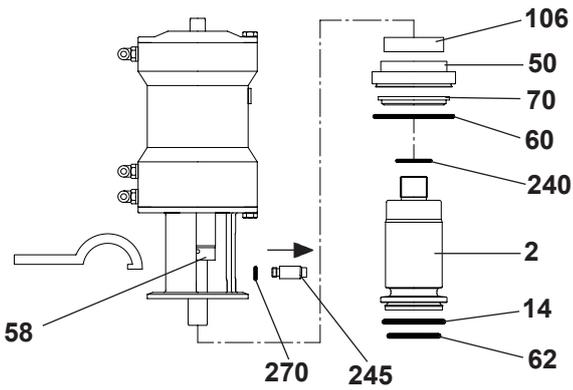


5. Supply air to the upper air fitting (75). Unscrew the middle shutter (93) sujetar the shaft (11) with an allen wrench.



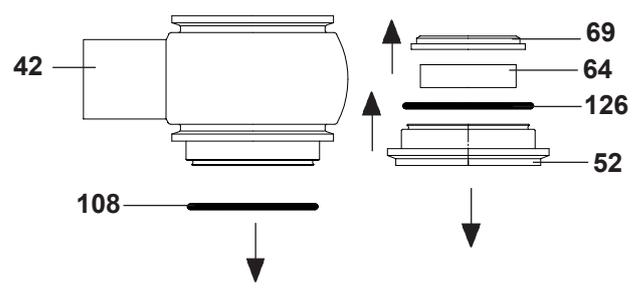
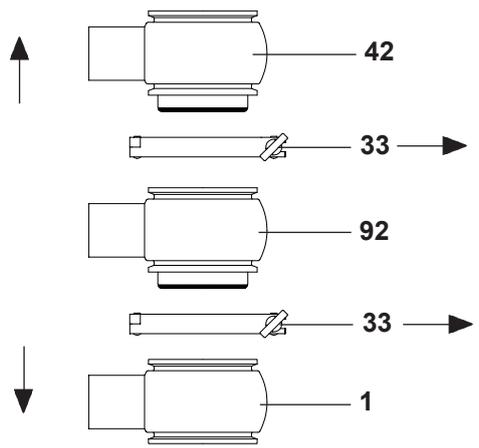
6. Remove the seal ring (63), the guide bushing (193), the seal ring (96) and (78 not present in to B925B) and (242 present into the B925B) from the middle shutter (93).

# 13. Disassembly of B925 - B925B divert



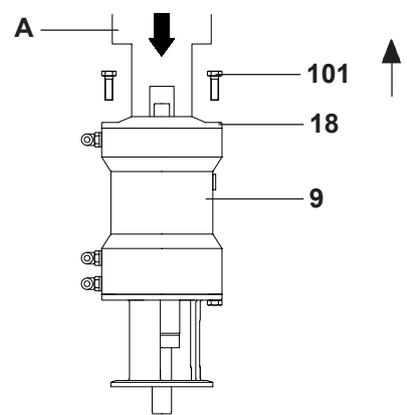
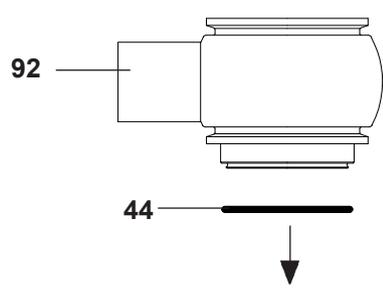
7. Unloose the adjusting sleeve (58) using an hand spanner, and unscrew pin guide (245) and remove the seal ring (270 **present in to B925B**) and then the upper shutter (2). Remove the sealing ring disc (50) and the seal rings (60 and 70) and the guide bushing (106). Remove also the seal rings (14, 62) and (240 **present in to B925B**) from the shutter (2).

8. Remove the seal ring (94) from the lower shutter (51).



9. Remove the clamp (33) between upper (42), middle (92) and lower (1) body.

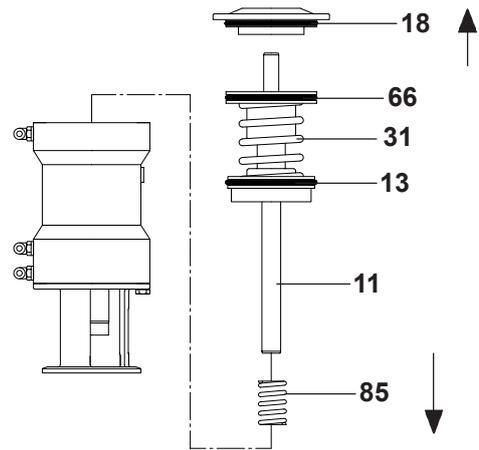
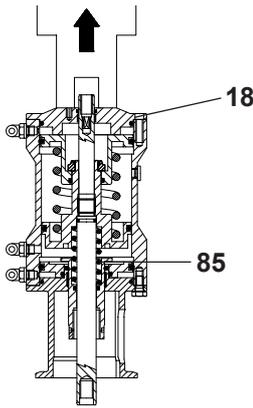
10. Remove the sealing ring (108) from the upper body (42). Remove the sealing ring (126 and 69) and the guide bushing (64) from the plug (52).



11. Remove the sealing ring (44) from the middle body (92).

12. Using a press with a plug specially made for the operation (A) preload the stopper (18). Unscrew the socket screw (101) from the cylinder (9).  
**This operation must be carried out with great care by a specialised person.**

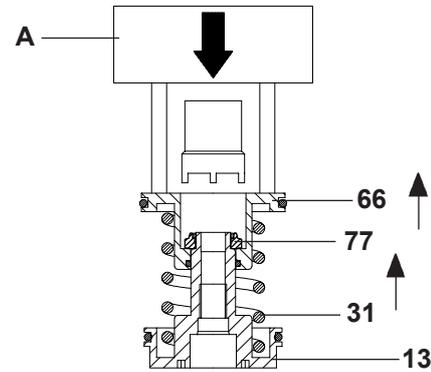
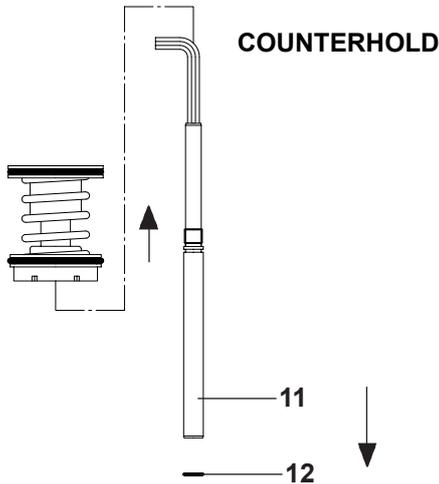
# 13. Disassembly of B925 - B925B divert



**13.** Gradually reduce the press force, matching the stopper (18) until the complete unloaded of the secondary spring (85).

**This operation must be carried out with great care by a specialised person.**

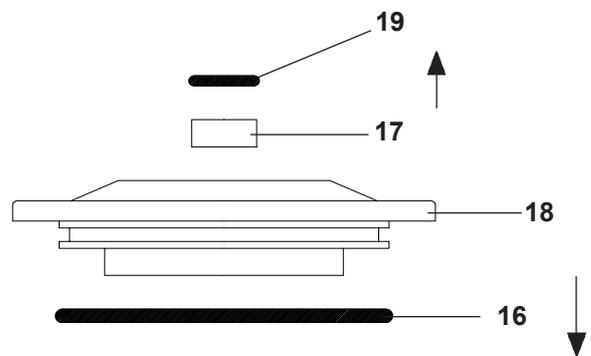
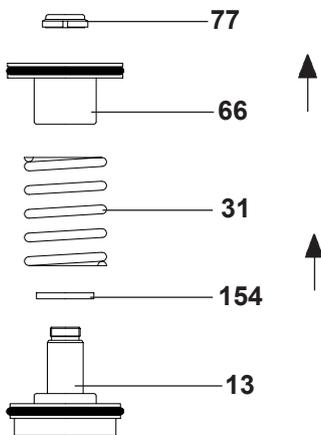
**14.** Remove the stopper (18), unthread the shaft (11) together with piston block (66 and 13) and spring (31). Also remove the secondary spring (85).



**15.** sujetar with an allen wrench the shaft (11) and unscrew the spring block. Also remove the seal ring (12).

**16.** Using a press with a plug specially made for the operation (A) preload the upper piston (66). Unscrew the nut (77) using a wrench specially made and mach the piston (66) until the complete unloaded of the spring (31).

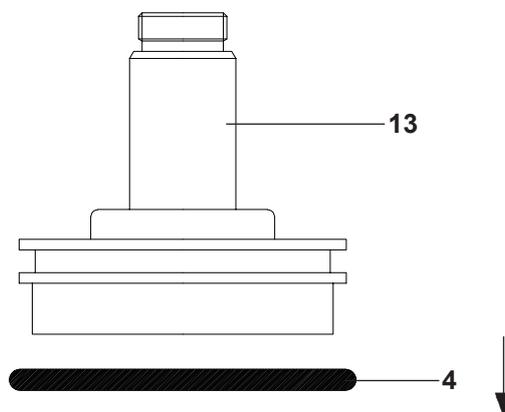
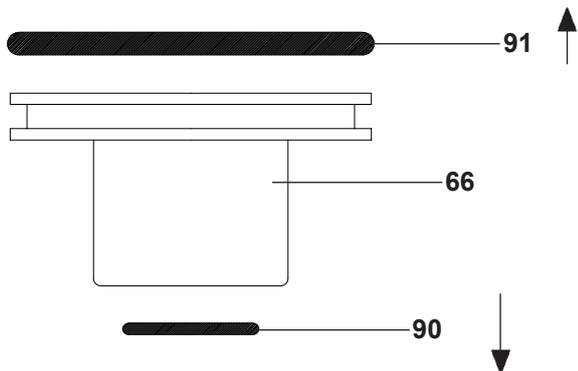
**This operation must be carried out with great care by a specialised person.**



**17.** Unthread the upper piston (66), the spring (31), the nut (77) and gauge (154) [only DN25--40, 65] from the central piston (13).

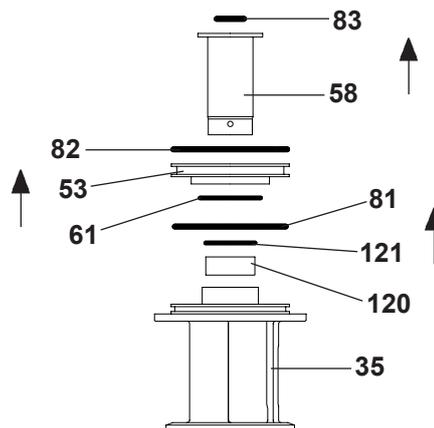
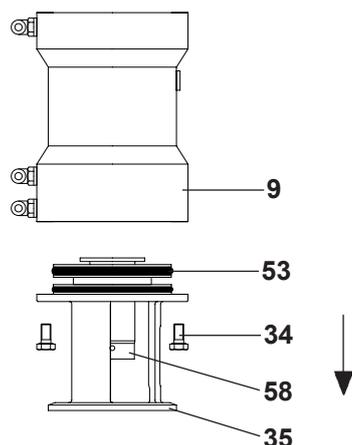
**18.** Remove the seal rings (16 and 19) and the guide bushing (17) from the stopper (18).

# 13. Disassembly of B925 - B925B divert



**19.** Remove the seal rings (91 and 90) from the upper piston (66).

**20.** Remove the seal rings (4) from the central piston (13).

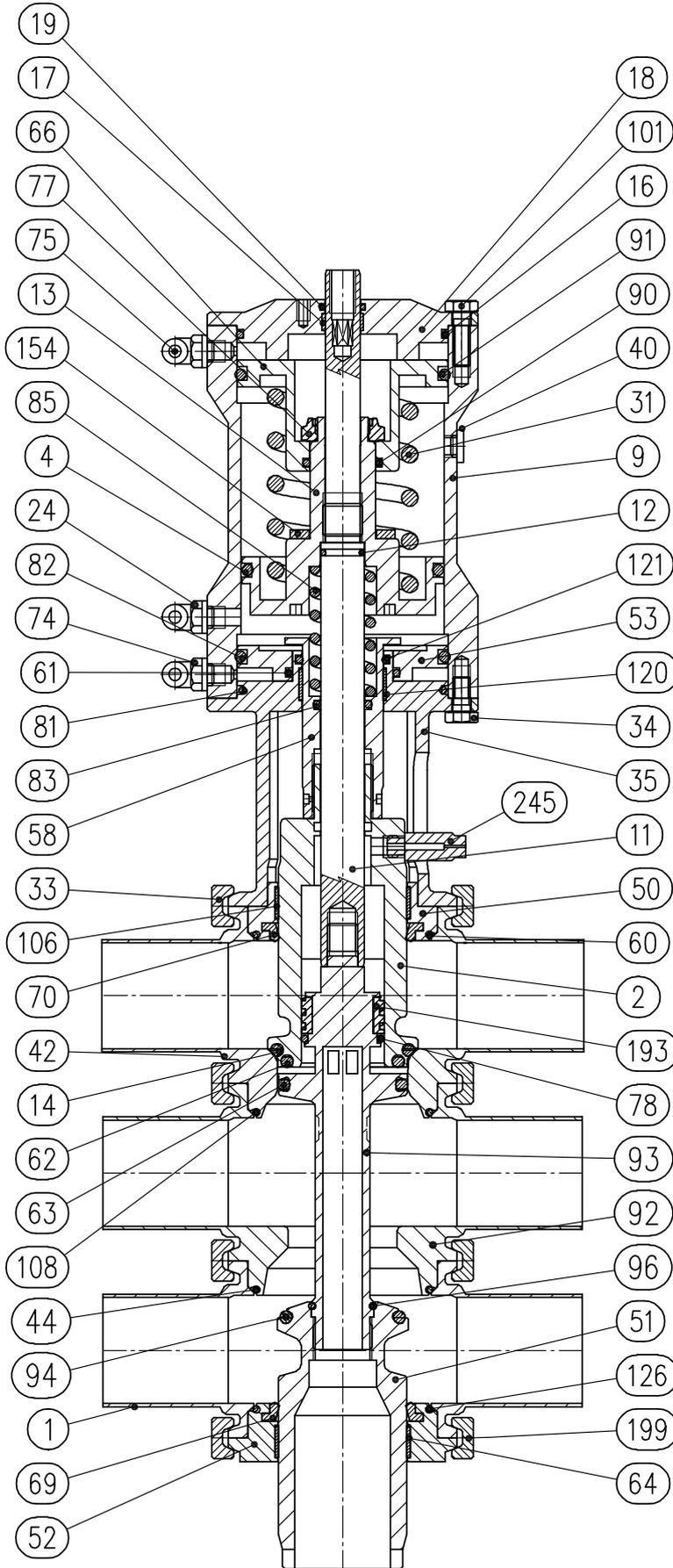


**21.** Unscrew the socket screw (34), disassemble the part assembly (35), the lower piston (53), the adjusting sleeve (58) from the cylinder (9).

**22.** Remove the seal ring (83) from the adjusting sleeve (58), seal rings (82 and 61) from the lower piston (53) and seal rings (81 and 121), the guide bushing (120) from the part assembly (35).

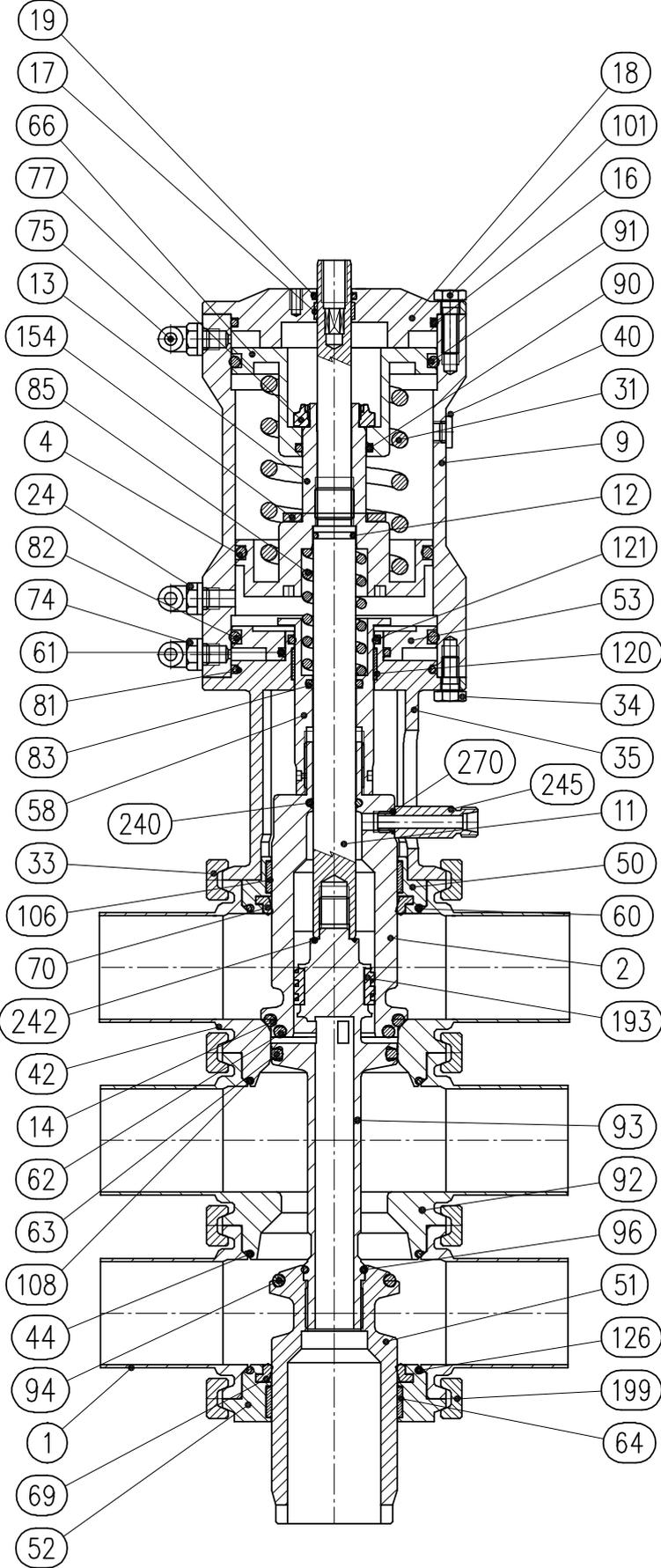
# 13. Disassembly of B925 - B925B divert

## B925 DIVERT

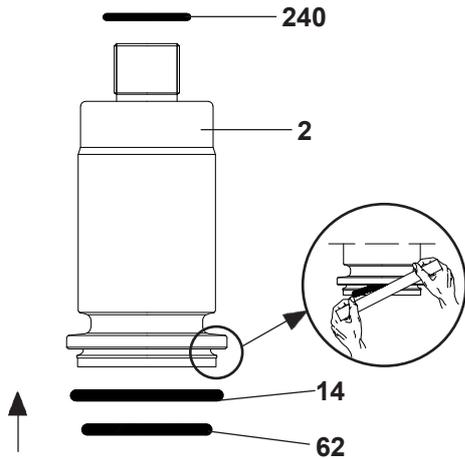


# 13. Disassembly of B925 - B925B divert

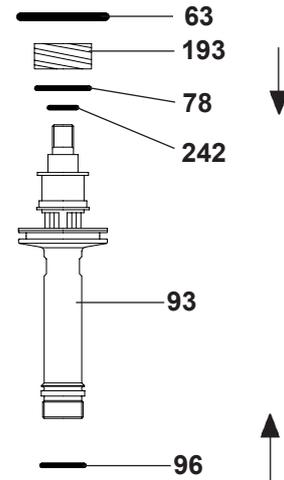
## B925B DIVERT



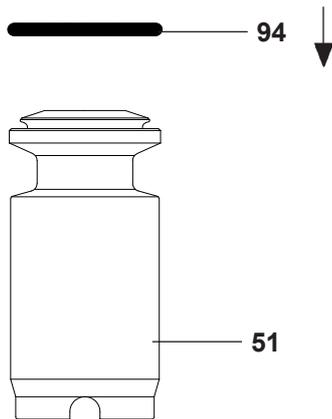
# 14. Assembly of B925 - B925B divert



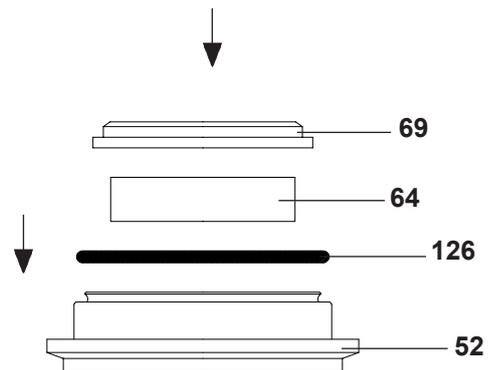
1. Heat up seal rings (14 and 62)\* in water to approx 85°C to soften them, insert this seal rings in the seat in the upper shutter (2), using a cylindrical object to push this rings in the cross way. Also insert the seal ring (240 **present only into the B925B**)\*.



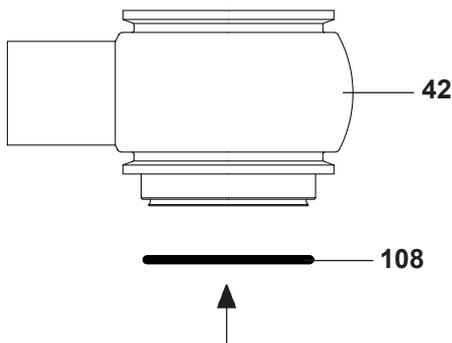
2. Insert the seal ring (63)\* into the middle shutter (93) fitting as described in step 1. Also insert the seal rings (96)\* and (242 **present into the B925B**)\* and (78 **not present into the B925B**)\* and the guide bushing (193).



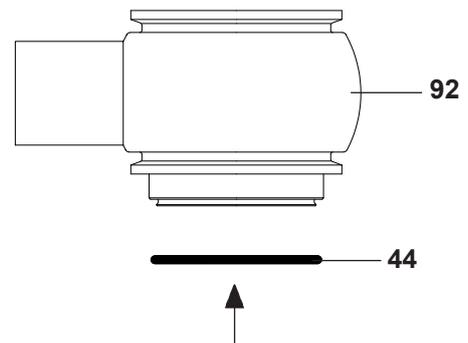
3. Insert the seal ring (94)\* into the lower shutter (51) fitting as described in step 1.



4. Insert the seal rings (69 and 126)\* and the guide bushing (64) in the lower plug (52).

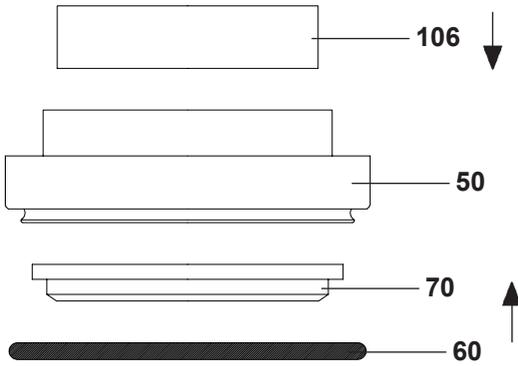


5. Insert the seal ring (108)\* in the upper body (42).

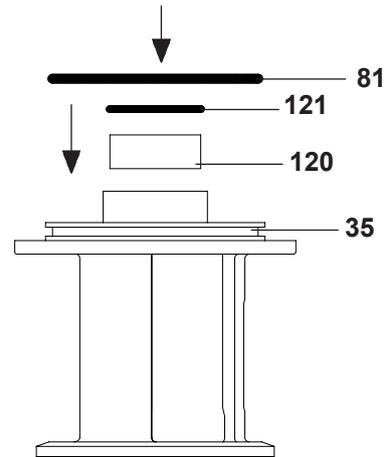


6. Insert the seal ring (44)\* in the middle body (92).

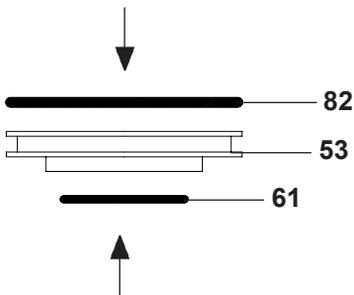
# 14. Assembly of B925 - B925B divert



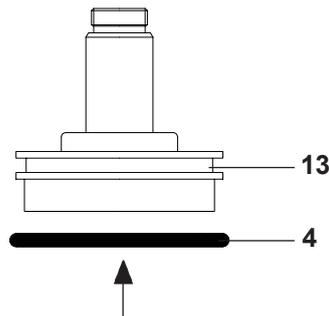
**7.** Insert the seal rings (60 and 70)\* and the guide bushing (106) in the sealing ring disc (50).



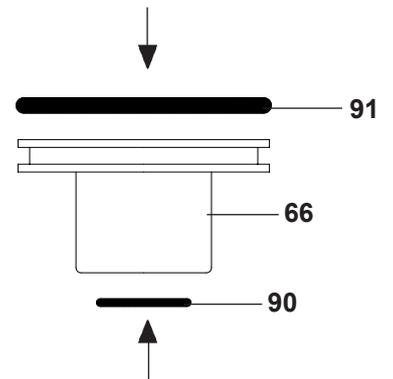
**8.** Insert the seal rings (121 and 81) and the guide bushing (120) in the part assembling (35).



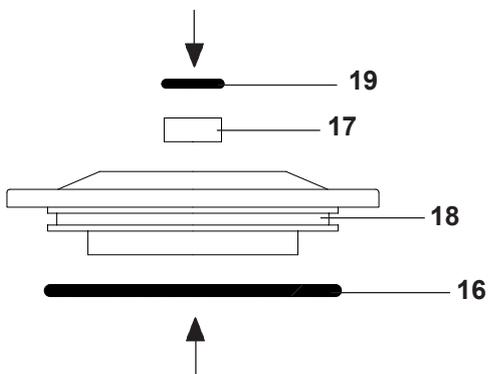
**9.** Insert the seal rings (61 and 82) in the lower piston (53).



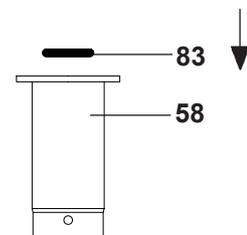
**10.** Insert the seal rings (4) in the central piston (13).



**11.** Insert the seal ring (90 and 91) in the upper piston (66).



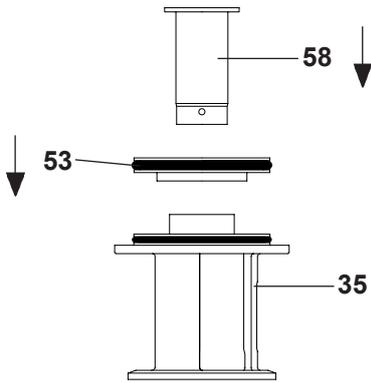
**12.** Insert the seal rings (16 and 19) and the guide bushing (17) in the stopper (18).



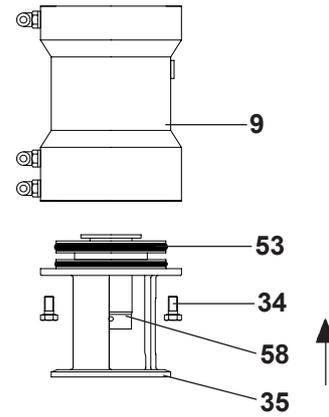
**13.** Insert the seal rings (83) in the adjusting sleeve (58).



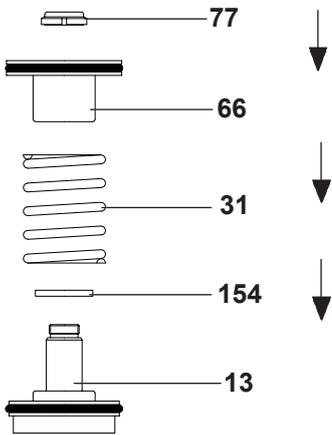
# 14. Assembly of B925 - B925B divert



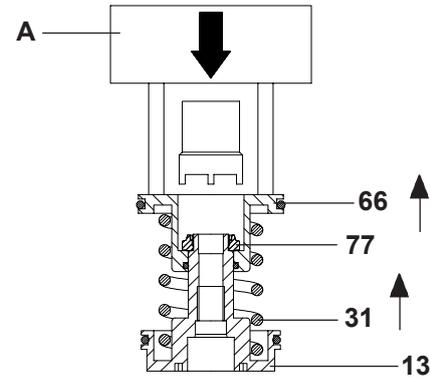
**14.** Insert the lower piston (53), the adjusting sleeve (58) into the part assembling (35).



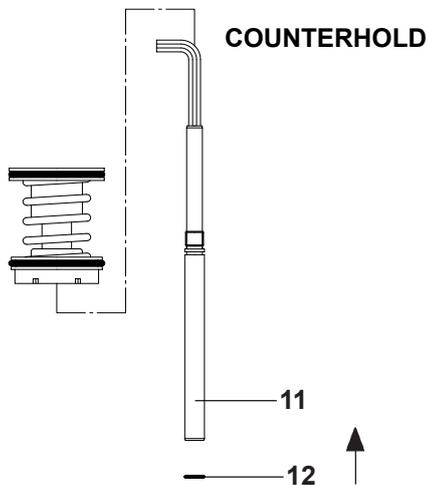
**15.** Fit the part assembling (35), the lower piston (53) and the adjusting sleeve (58) in the cylinder (9) using the socket screw (34). Orient the part assembling so that the tab with BARDIANI symbol was aligned with the air connections.



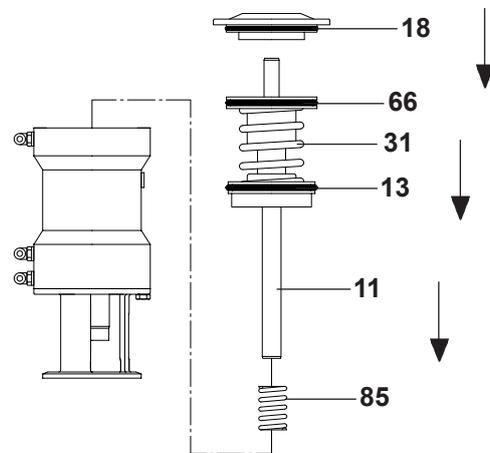
**16.** Prepare the spring block putting gauge (154) [only DN25--40, 65], the spring (31) and the upper piston (66) and the nut (77) on the central piston (13).



**17.** Using a press with a plug specially made for the operation (A) preload the upper piston (66). Screw the nut (77) using a wrench specially made and mach the piston (66) until the complete unloaded of the spring (31).  
**⚠ This operation must be carried out with great care by a specialised person.**

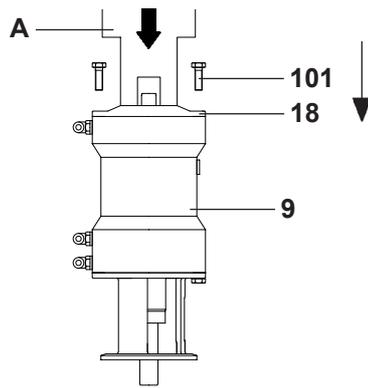


**18.** Insert the seal ring (12) on the shaft (11). sujetar with an allen wrench the shaft (11) and screw the spring block on it.



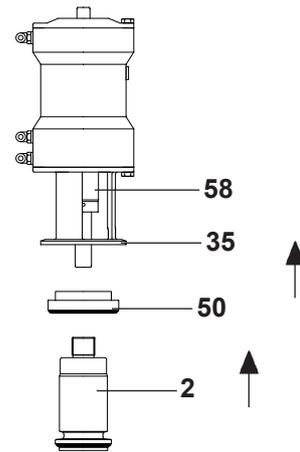
**19.** Insert the secondary spring (85) in to the cylinder (9), introduce the shaft (11) complete of the piston (66 and 13) and the spring (31) in to the cylinder (9). Closed it with the stopper (18).

# 14. Assembly of B925 - B925B divert

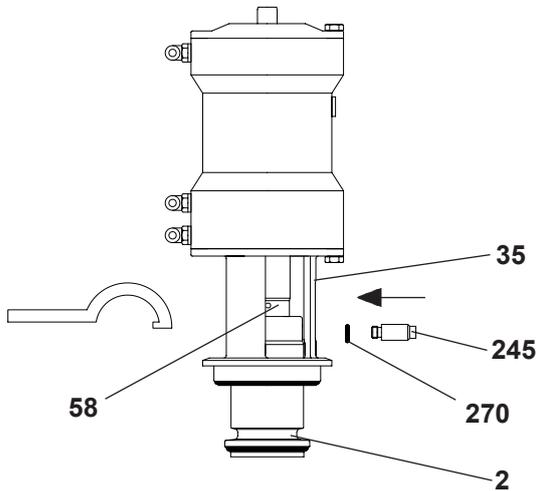


**20.** Using a press with a plug specially made for the operation (A) preload the stopper (18). Screw the socket screw (101) in the cylinder (9).

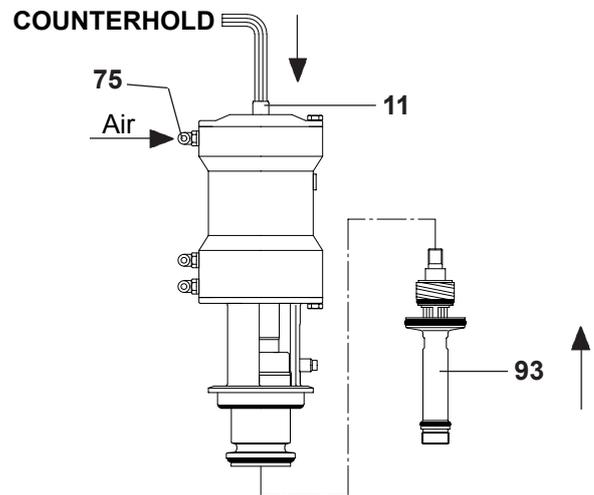
**This operation must be carried out with great care by a specialised person.**



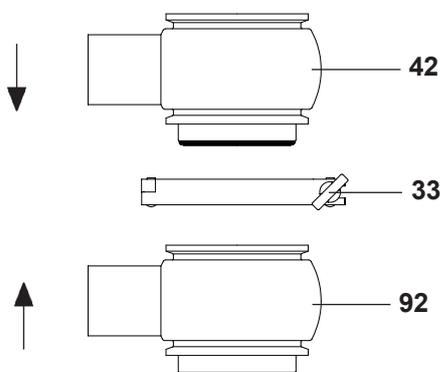
**21.** Introduce the sealing ring disc (50) in to the part assembling (35) and screw the upper shutter (2) in the adjusting sleeve (58).



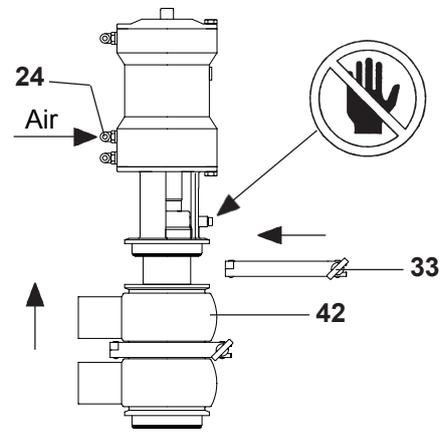
**22.** Insert the seal ring (270 present into the B925B) into the pin guide (245)\*, screw the pin guide (245)\*, through the slotted hole on the part assembling (35), on the upper shutter (2). Tighten adjusting sleeve (58) using an hand spanner.



**23.** Supply air to the upper air fitting (75). Screw lower shutter (93) counterhold the shaft (11) with an allen wrench.



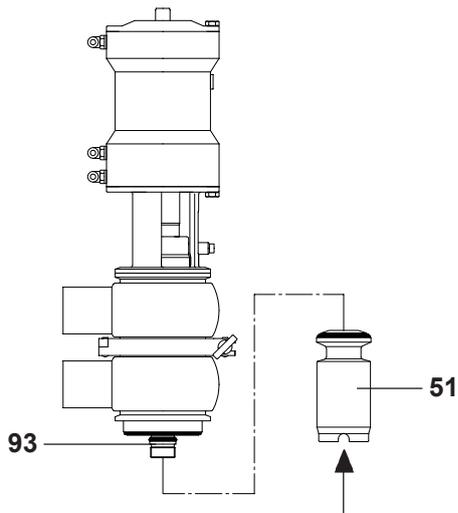
**24.** Close the middle body (92) and the upper body (42) with the clamp (33).



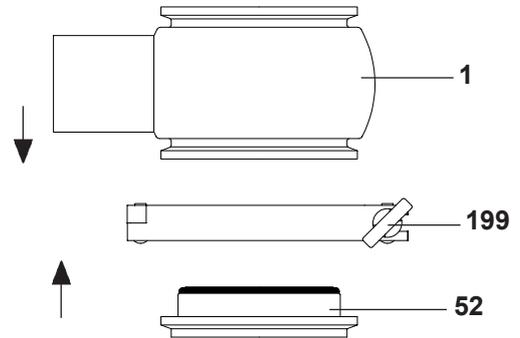
**25.** Supply air to the central air fitting (24). Assemble the cylinder and shutters on the valve body (42) with the clamp (33).



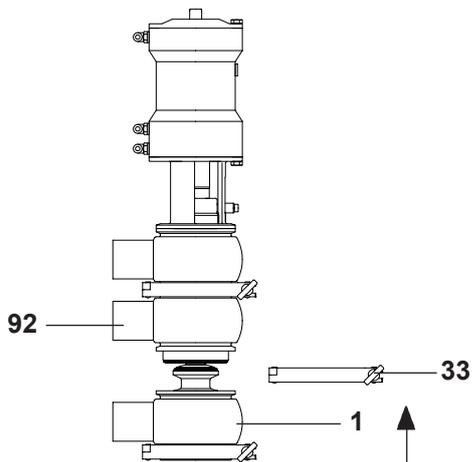
## 14. Assembly of B925 - B925B divert



**26.** Screw the lower shutter (51) in the middle shutter (93).



**27.** Fit the lower plug (52) to the lower body (1) with the clamp (199).



**28.** Close the lower body (1) and the middle body (92) with the clamp (33).

## 15. Parts list

N°	Description	N°	Description
1	Lower body / Double body	66	Upper piston
2	Shutter upper	69	Seal ring
4	Seal ring	70	Seal ring
9	Cylinder	74	Lower connection
11	Shaft	75	Lower connection
12	Seal ring	77	Nut
13	Central piston	78	Seal ring
14	Seal ring	81	Seal ring
16	Seal ring	82	Seal ring
17	Guide bushing	83	Seal ring
18	Stopper	85	Secondary spring
19	Seal ring	90	Seal ring
24	Lower connection	91	Seal ring
31	Spring	92	Middle body
33	Clamp	93	Middle shutter
34	Bolt	94	Seal ring
35	Assembly	96	Seal ring
40	Breather plug	101	Bolt
42	Upper body	106	Guide bushing
44	Seal ring	108	Seal ring
50	Sealing ring disc	120	Guide bushing
51	Lower shutter	121	Seal ring
52	Plug	126	Seal ring
53	Lower piston	154	Spacer
58	Adjusting sleeve	193	Guide bushing
60	Seal ring	199	Clamp
61	Seal ring	240	Seal ring
62	Seal ring	242	Seal ring
63	Seal ring	245	Pin guide
64	Guide bushing	270	Seal ring

## 16. Technical data

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### Valve technical specifications:

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Max. working pressure: 10 bar (145 psi)

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Min. working pressure: Full vacuum

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Max. product temperature: 140° C (284° F)

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Min. product temperature: -10° C (14°F)

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Material in contact with the product: AISI 316L (1.4404)

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Seals in contact with the product (FDA homologation): EPDM, FKM, MVQ (silicon), HNBR  
(other seals available upon request).

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Finish on surfaces in contact with the product: Ra 0.8 µm (other types of surface finish on request).

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### Pneumatic Actuator Specifications:

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Connectors: 1/8" (BSP)

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Air pressure: from 6bar (87psi) to 8bar (116psi)

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Material: AISI 304L (1.4307)

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Seal / gasket material: NBR

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Power supply (Giotto-Top®): See Giotto-Top® Instruction manual

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### **PED Directive 97/23/EEC, with special reference to Annex III, Module A regarding internal production control as Conformity Assessment Procedure in force**

Valve sizes DN15--25 are not included in accordance with Article 3 paragraph 1.3:

Valves intended for gases, liquified gases, gases dissolved under pressure, vapours and those liquids whose vapour pressure at the maximum allowable temperature is greater than 0,5 bar above normal atmospheric pressure (1,013 mbar) within the following limits:

for flows belonging to group 1 from DN 25 up to DN 100

for flows belonging to group 2 for higher DN, included DN 125

## Foreword

**This "Instruction, Use and Maintenance Manual" forms an integral part of the valve.**

**Before proceeding with installation, use or maintenance of each type of valve it is compulsory to read and understand this manual.**

**Keep this manual for future reference.**

**When using valves which comply with ATEX Directive 94/9/EC (ATEX) it is compulsory to read the relative manual.**

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

It being understood that the essential characteristics of the valve type described herein shall remain the same, the manufacturer reserves the right to amend and/or integrate and/or update the data and/or information relative to use of the valve provided in the "Instruction, Use and Maintenance Manual", at any time and without prior notice.

The latest, updated version of the "Instruction, Use and Maintenance Manual" is always available at [www.bardiani.com](http://www.bardiani.com).

The manufacturer shall not in any way be held liable for any consequences resulting from failure to observe all the prescriptions provided in the relative manual concerning installation, use, maintenance and care of the product.

All rights are reserved. It is forbidden, without due written authorization from the manufacturer, to copy totally and/or partially and /or transfer and/or record any part of this "Instruction, Use and Maintenance Manual" using any means and/or support, including IT and/or electronic and/or mechanical and/or paper form or any other means or system for recording and/or reusing the information contained herein for any purposes other than for the purchaser's personal use.

## Warranty

### 1. VALIDITY

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 of coming to light, providing adequate documentation of the defect/fault encountered can be provided as evidence.

Any repairs made during the warranty period do not extend said period over the stipulated 12 (twelve) months which remains definite.

### 2. CONTENTS OF THE WARRANTY

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 be at the expense of 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 Bardini Valvole S.p.A. is authorized to make any amendments and/or integrations and/or extensions to this warranty.

### 3. EXCLUSIONS FROM THE WARRANTY

All purchaser rights, as established and recognized by law being understood and unaffected, elastomers and electrical components are expressly excluded from this warranty.

This warranty does not cover design faults whenever a product is built by Bardiani Valvole S.p.A. based on designs and/or technical specifications provided by the purchaser.

This warranty also does not cover:

- faults and/or defects resulting from incorrect and/or unsuitable and/or improper transport,
- faults and/or defects resulting from installation of the product which fails to observe the indications provided in the "Instruction, Use and Maintenance Manual" or in any case caused by incorrect and/or unsuitable and/or improper installation,
- faults and/or defects resulting from use and/or maintenance operations and/or storage of the products which fail to observe the prescriptions provided in the "Instruction, Use and Maintenance Manual" or in any case which are incorrect and/or unsuitable and/or improper,
- faults and/or defects ascribable 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 whenever interventions and/or repairs have been performed by persons not authorized by Bardini Valvole S.p.A. and/or who are not suitably qualified,
- faults and/or defects in the product and/or its parts and/or its components ascribable to it being dropped and/or banged and/or dented and/or misuse and/or tampering and/or breakage and/or accidents caused by negligence and/or lack of care by the purchaser 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 ascribable to negligence and/or carelessness and/or lack of care by the purchaser,
- faults and/or defects in the product and/or its parts and/or its components caused by other events outside the control of Bardiani Valvole S.p.A. or determined by force majeure **or mishap**.

## Recommendations

**1. All the information, indications, statements and technical details provided herein are based on test data which Bardiani Valvole S.p.A. holds to be reliable but which cannot be expected to cover every possible use of the product.**

**2. The illustrations and drawings provided are all indicative and are not binding, consequently they may not fully match the real appearance of the products.**

**3. Being as the conditions of product use and applications cannot be controlled by Bardiani Valvole S.p.A., the purchaser must ascertain suitability of the use he intends to make of the product beforehand and assume all risks and liabilities which may result from the same.**

**4. Customers are strongly advised to consult Bardiani Valvole S.p.A.'s technical-commercial collaborators to request any specific information concerning the technical characteristics of the products.**

**5. The information provided in this document refers to standard production Bardiani Valvole S.p.A. products and therefore cannot be considered a basic reference for products built to meet specific requirements.**