

## INSTALLATION, OPERATION AND MAINTENANCE MANUAL

### Sanitary Pneumatic Actuator

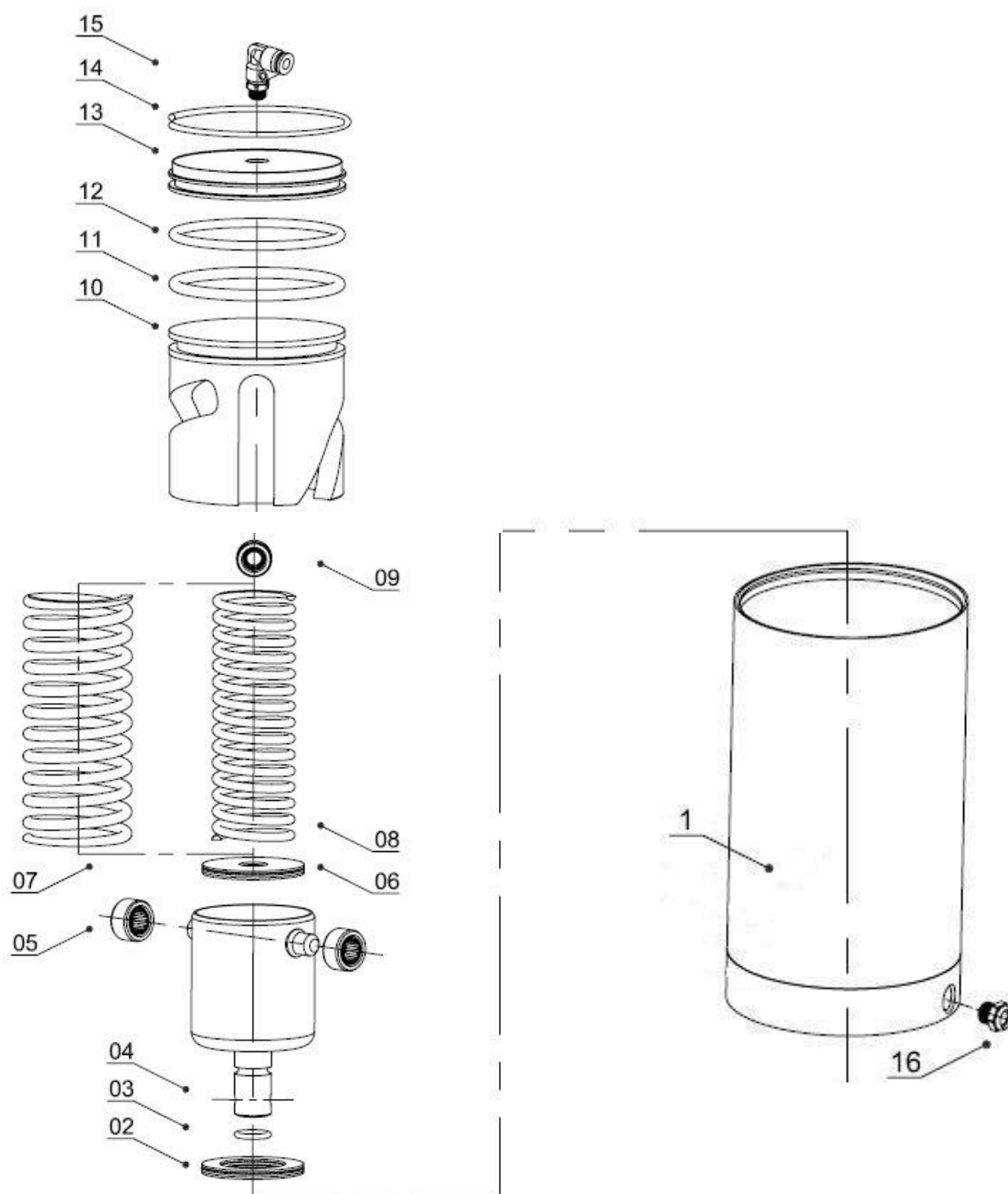


**GENEBRE Reference: 2944 – 2949**

## Installation, operation and maintenance instructions

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## 1) Breakdown drawing.



## 1.1) List of components:

Position	Name	Material
1	Body	Stainlees Steel 304
2	Bearing	-----
3	O'ring Stem	NBR
4	Stem	Stainlees Steel 304
5	Piston Bearing	-----
6	Bearing	-----
7*	Big Spring (*)	Spring Steel
8*	Small Spring (*)	Spring Steel
9	Guide	Stainlees Steel 304
10	Piston	Aluminium
11	O'ring Piston	NBR
12	O'ring Cover	NBR
13	Cover	Stainlees Steel 304
14	Clip	Spring Steel
15	Connector	Plastic
16*	Silencer (*)	Brass

(\*) Only for 2944

## 2) Storage

During storage it is recommended to keep the product in the included protective wrapping to avoid damages or dirt accumulation. The wrap must not be removed until element is to be installed. As much as possible, it must be stored in a dry and clean environment.



**Transport and storage of these devices must be done in their original wrapping.**

### VISUAL INSPECTION

Check whether during transport, unloading and placement, devices have suffered no damages.

### MECHANICAL INSPECTION

Check whether all mobile parts of the different devices, as well as the screws and other elements, are accomplishing their purpose.



If you notice any kind of anomaly during reception of the goods, contact immediately with GENE BRE in order to determine the possible responsibilities on the issue and make the devices fully operational.

## IMPORTANT NOTE:

Before installing and/or manipulating these pneumatical elements, READ CAREFULLY these instructions for use and OBSERVE all contained information. If you fail to understand any of their content, please contact GENE BRE, S.A.



User is responsible for the safe use of these devices, as established in present instructions for use and in the specific technical documentation of the device.

## 3) Installation instructions

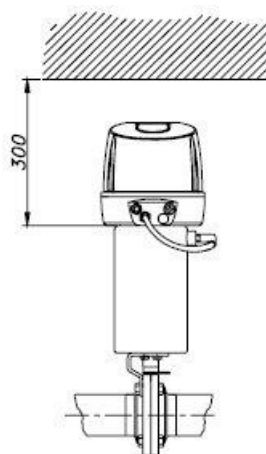
### 3.1) Preparation

Remove any remains of packaging from the actuator.

There might be serious problems caused by valves installed in a dirty pipe.

Make sure the pipe is free of dirt, welding particles, etc. before installation, since the valve might suffer irreparable damage when the equipment is turned on → *prepare a clean working area.*

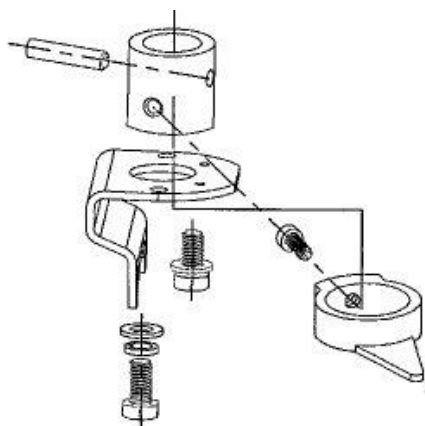
Plan enough space for future maintenance operations.



It is recommended to perform this task under qualified professional surveillance.

### 3.2) Installation on the valve

Use the appropriate supports and coupling elements to assemble the actuator and the head with the corresponding valve.



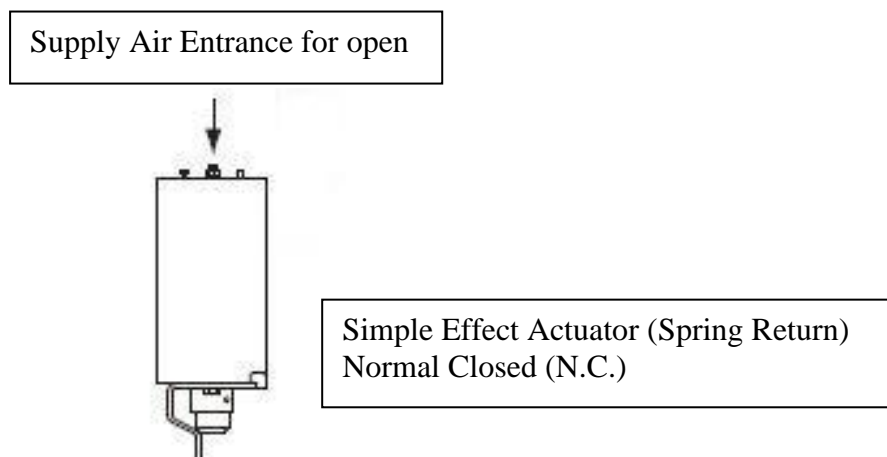
### 3.3) Pneumatic connection

All connectors for pneumatic installation are the "quick connector" kind, for a pipe Ø 8 mm.

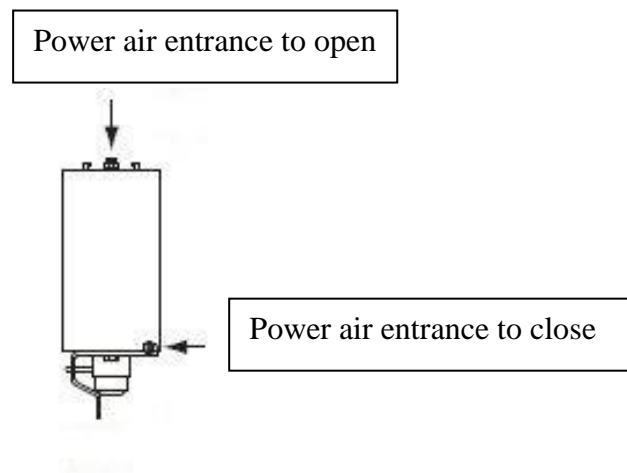
**IMPORTANT:** Power air has to be **CLEAN and DRY**.

Respect minimum and maximum power pressure (1,5 – 6 bar)

#### Art. 2944 (Spring Return Actuator – Normal Closed):



## Art. 2949 (Double Acting Actuator):



## 4) Operational instructions

### 4.1) Usage

Before starting the equipment you have to read the Technical Specifications and never exceed the Power limit values (electrical and air).

Never touch the valve and/or pipes in contact with surrounding fluid when the process is started; you can suffer from injuries such as burns.

### 4.2) Manual operation

Actuator and valve are composed by mobile parts, either rotary or sliding; do not approach your fingers to these areas as you can get seriously injured.

### 4.3) Special Conditions

- The operation of the actuator in extreme temperature conditions exceeding the design limits may damage internal and external parts, and it might be potentially hazardous for the operating or maintenance personnel.

- The operation of the actuator in extreme pressure conditions exceeding the design limits may cause a malfunction of the actuator and the spontaneous breakage of parts and, therefore, might be potentially hazardous for the operating or maintenance personnel.

## 5) Maintenance operations

The Actuator does not require maintenance.

If an internal component has been damaged, please contact Genebre S.A. to evaluate the possibility of repairing it.

## 6.) Reparation instructions

Genebre, S.A. will not be held responsible for an inappropriate operation of the element or its components.

Before starting to repair it, disconnect all pneumatic and electrical actuators.



**Note: Do not dismantle the actuator under any circumstances when it is under supply pressure.**



**Use only components/spare parts original or recommended by GENEBRE, S.A!**

### 6.1) Disassembling

*Prepare a clean working area and adequate tools to perform mechanical tasks.*



**Before removing the valve from the pipe for cleaning or substitution, make sure the line has been closed and depressurized, since the wrong handling might cause a serious accident as well as serious damage to the equipment**





**ATTENTION – PLEASE READ CAREFULLY:**

- **BEFORE PERFORMING ANY MAINTENANCE OPERATION ON THE ACTUATORS, IT IS ESSENTIAL THAT THEY ARE NOT UNDER PRESSURE AND FREE OF ANY ACCESSORIES.**
- **FOR YOUR OWN SAFETY IT IS NECESSARY TO CHECK THAT THE UNIT IS IN FAIL POSITION (EXTENDED AND UNCOMPRESSED SPRING) BEFORE DISMANTLING A SIMPLE EFFECT ACTUATOR (SPRING RETURN).**

Remove the actuator from the valve.

**Art. 2944 (Spring Return Actuator – Normal Closed):**



**The dismantling of the actuator must be performed with extreme care, since removing the seeger ring might eject the piston and might cause a serious accident as well as serious damage to the equipment**

With the help of a small press apply some pressure on the cover (part. 13) for compress the springs (part. 7 and 8) and then be able to remove the seeger ring (part 14) that holds the cover and piston (part.10). Slowly loosen the pressure in the cover until it is completely released from the pressure of the springs.

Remove the cover (part. 13) and the piston (part. 10) and then remove the springs (part. 7 and 8).

Replace the broken down part making (part. 3, 11 and 12) sure you are using the correct spare parts.

**Art. 2949 (Double Acting Actuator):**

With the help of a small press apply some pressure on the cover (part. 13) for remove the seeger ring (part 14) that holds the cover and piston (part.10), remove the additional seeger. Slowly loosen the pressure in the cover until it is completely released from the pressure.

Remove the cover (part. 13) and the piston (part. 10), then remove the stem (part. 4)

Replace the broken-down part making (part. 3, 11 and 12) sure you are using the correct spare parts.

## **6.2) Reassembling**

When it is assembled again, cleaning is essential for assuring a long service life.

### **Art. 2944 (Spring Return Actuator – Normal Closed):**

Put the Stem (part. 4) inside of body actuator (part. 1). Put the springs (part. 7 and 8) in the inside part and put the piston (part. 10), using some sort of lubricant to help perform the task.

Put the cover (part. 13) and then with the help of a small press apply some pressure on the cover for compress the springs (part. 7 and 8) and then be able to put the seeger ring (part 14). Slowly loosen the pressure between these two planes until you can make sure the seeger is properly placed.

### **Art. 2949 (Double Acting Actuator):**

Put the Stem (part. 4) inside of body actuator (part. 1), then put the piston (part. 10), using some sort of lubricant to help perform the task.

Put the cover (part. 13) and then with the help of a small press apply some pressure on the cover and then be able to put the seeger ring (part 14). Slowly loosen the pressure between these two planes until you can make sure the seeger is properly placed.

## **7) Hygiene and Safety Instructions:**

When operating any kind of element, you must follow the security instructions and it is recommended to use personal protection gadgets:

- 1) Protect your eyes.
- 2) Wear gloves and appropriate working clothes.
- 3) Wear safety footwear.
- 4) Wear a helmet.
- 5) Have running water at hand.