

## 1 Prior installation

### 1.1 General rules

#### 1.1.1 Storage

Principally, the goods must be stored protected from light, heat, dust, dirt and humidity. If the goods cannot be stored in a building until they can be installed, we recommend storing them under a shed or in the shadow and covered with a tarpaulin to protect them from weather. In case goods would be stored unprotected, valve body, liner and disc, as well as carter of actuators and accessories must be perfectly cleaned before installation in the plant.

#### 1.1.2 Pneumatic connections

All pneumatic actuators and accessories are supplied with plugs protecting the orifices from dust. These plugs must remain in any case until the supply air piping is been connected in order to assure that no impurity enters these products. This could cause later on a malfunction or leakage of the concerned goods.

#### 1.1.3 Handling

In order to validate the painting warrantee required, it is essential to handle the goods with care, avoiding damaging the painting during handling, storage, installation and adjustments. In fact, even if the painting procedures have been applied strictly, damage on the coating will compromise the painting warrantee.

### 1.2 Storage of the butterfly valves

#### 1.2.1 Position of the disc in general

The butterfly valve must be always stored (and later on installed between flanges) with the disc in a slightly opened position (5°-10°). All InterApp valves are delivered with disc in this position. They shall not be operated before being installed between the flanges. This position of the disc is essential to avoid deforming the liner permanently. Furthermore, closing the valve while the liner is not compressed between the flanges, and so kept in place, might dislodge the liner from its position, what could make the liner being torn apart during the first operation.

#### 1.2.2 Special case, valves with spring return pneumatic actuators

For butterfly valves supplied with pneumatic spring return actuators, **spring to close**, actuators should either be stored separately from the valves, valves to be opened between 5°-10°, or, if the actuator cannot be removed, use the right stroke limit screw (closed position) to put the disc in a slightly opened position (between 5°-10°), avoiding the disc closing completely. The stroke limit screw must be re-adjusted during commissioning of the plant to enable the valve to close completely.

Valves with function **spring to open** are delivered with dismantled actuator, this to avoid the disc being damaged during installation of the valve with open disc between flanges. The actuator must be mounted once the valve is properly installed in the piping.

### 1.3 Installation of valves in the piping

The installation instructions supplied with the goods and included in the technical documentation must be studied and followed carefully in order to assure a perfect installation of the valves. If attentively observed, any mal function of the products can be excluded during commissioning and start-up of the installation.

## 2 Maintenance prior start-up of the installation and in case of temporary shutdown of the plant

### 2.1 Butterfly valves

If once installed between flanges, the valves are put in the position "disc closed" and are not operated frequently before start-up of the plant, problems will most probably occur when opening the valves. It is therefore strongly recommended to keep the valves in the slightly opened position – as they have been supplied – in order to avoid the disc edge to mark the liner, what can happen if valve remains closed long. This will make the valve being hard to open at the beginning after the start-up of the installation.

In case it is impossible to keep the valves in the slightly opened position, it is essential to operate the valves frequently (at least 1-2 times per month), the piping being watered (if applicable), before the start-up of the installation.

### 2.2 Manual actuators (levers and gear boxes)

These parts do not need any special maintenance.

# Preservation and long term storage procedure

## 2.3 Pneumatic actuators

The actuators being operated automatically together with the valves during the operations as required under point 2.1, they do not need any additional maintenance.

Nevertheless, make sure before the start up of the installation that the sealing of the actuators are still perfectly tight and replace them if necessary.

After a storage period of 3 years without utilisation, we strongly recommend replacing all seals of the actuators.

## 2.4 Accessories

The accessories being operated automatically together with the valves during the operations as required under point 2.1, they do not need any additional maintenance.

Nevertheless, make sure before the start up of the installation that the sealing of the solenoid valves and positioners (if applicable) are still perfectly tight and replace them if necessary.

## 2.5 Electric actuators

Please refer to the installation and operation manuals of the electric actuators.

## Further documentation

**Installation guide, Maintenance guide, Flanges:** Please consult these guides for the installation and maintenance of our butterfly valves. **Pneumatic actuators, Electric actuators, Accessories** according separate data sheets.

### Bad examples:

