

Refit the clamp« 7 ». When using for the first time, check the bottom connection and top connection(s) for leaks.

#### D- Fitting DCX4 automatic valves

Check that the seal bearing surfaces inside the bodies ( 1 ) and ( 5 ) are clean. Check the position of the top and bottom seals ( 4 ) on the actuator ( 6 ) and body ( 5 ). Position the body on the actuator and tighten the top clamp ( 7 ). Thread the piston ( 3 ) into the actuator taking care not to damage the seal ( 9 ) and ring ( 8 ), then screw in and tighten the piston with the flat parts of the piston and the actuator rod (use threadlocker). Put the valve in the “ open ” position. With an N.C. configuration, supply the actuator ( 6 ) with air. Position the body ( 1 ), paying attention to the seal, and tighten the bottom clamp ( 7 ). Put the actuator in the closed position and check that the piston is centered correctly through the bottom connection. Centre if necessary by tapping the clamps. When using for the first time, check the bottom connection in the down position then the top connection(s) and the lantern in the up position for leaks.

#### NOTE:

- We recommend the use of a **medium threadlocker** to lock the piston during its reassembly to the automatic actuator.
- During sawing operations, prevent chips or filings from entering the pipes and rinse the pipes thoroughly with the valve open to avoid damaging the seals when the valve is put into service.


#### 8) STORAGE

We recommend that our valves are stored away from site pollution (abrasive dust, shocks, acid or chlorinated products, U.V., etc.) for as long as possible and are assembled, where possible, to avoid mixing up of components.

#### 9) EEC CONFORMITY

A - Our valves comply with European regulations (EEC) within the limits of use described in paragraph B.

The CE mark on the valve indicates conformity to the following regulations :

 - 89/336 "Electromagnetic compatibility"  
- 97/23 "Pressurized equipment"  
- 73/23 "Low pressure"

B - Use limits :

Usage pressure must be lower than 10 bar for all products.

In case of dangerous gas<sup>(1)</sup> valve diameter (line) must be below 100 mm.

For use outside these limits, please contact our technical service.

<sup>(1)</sup>dangerous gas : group 1 gas, identified by a letter on the label and on the security card of the product :

E (for detonating gas), O (for fuel), F+, F and R10 (inflammable), T+ and T (toxic).

For additional information, please see regulation 67/548/EC "Labeling of dangerous products".

#### 10) SPARE PARTS AND ACTUATOR DISASSEMBLY

Note the index number on the valve and refer to the general documentation or contact us. Please contact us in the event of a malfunction.

Actuator disassembly is a simple but delicate operation requiring the use of the appropriate tools and reference to the valve disassembly instructions.

Please contact us for these instructions or to request maintenance operations at our premises or on site.

N.B.: The valve must be out of service prior to any intervention and disassembly of the components with the pretensioned spring must be performed in accordance with the instructions on the maintenance information sheet.



## INSTALLATION GUIDE

### DCX3 & DCX4 AUTOMATIC CHANGEOVER VALVE

[www.definox.com](http://www.definox.com)

DEFINOX SAS

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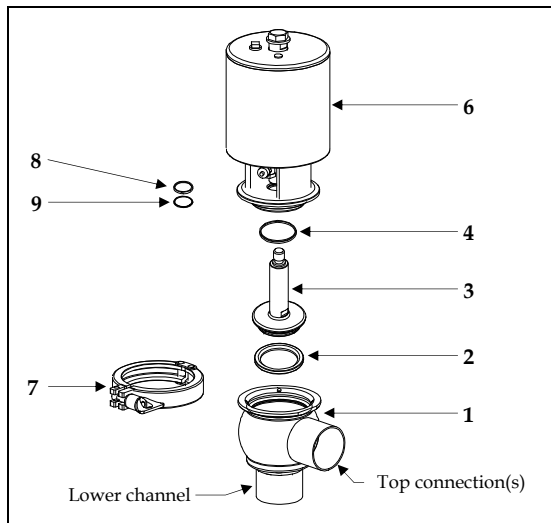
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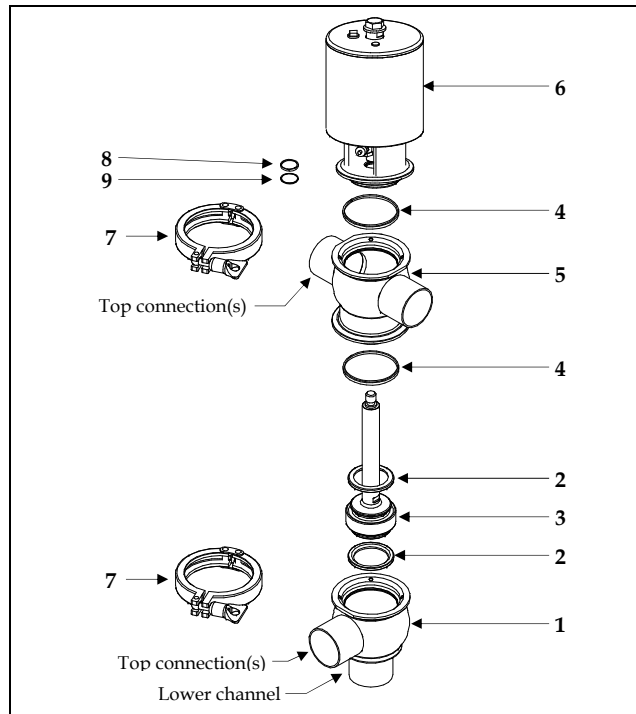
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### DCX3 AUTOMATIC VALVE – Single-body



- 1 : DCX3 valve body
- 2 : PFA seal (Qty 2 on DCX4)
- 3 : Piston
- 4 : Seal (Qty 2 on DCX4)
- 5 : DCX4 valve body
- 6 : Actuator cylinder
- 7 : Clamp (Qty 2 on DCX4)
- 8 : Ring
- 9 : Seal

### DCX4 AUTOMATIC VALVE – 2 bodies



PFA seals are supplied as standard for the piston seals (2), but elastomer seals may be fitted instead. If elastomer seals are used, the piston (3) must be replaced by two or three-part piston.

**IMPORTANT :** To change the actuator configuration, please refer to the disassembly instructions or contact our Technical Department.

For trouble-free installation of your DEFINOX DCX3/DCX4 valve, we recommend that you read these instructions, which describe the main steps required to put your valve into service and includes useful advice :

#### 1) VALVE IDENTIFICATION

DEFINOX changeover valves have an identification number. You will need this number in order to identify the spare parts you may request.

#### 2) SERVICE CONDITIONS

The working conditions of this valve (pressure, temperature, fluid transported, etc.) must comply with the general technical specifications described in the DEFINOX catalogue available on request.

**CAUTION :** DN125/150 valves **must** be mounted vertically.

#### 3) AIR SUPPLY CONDITIONS

The actuator is supplied with dry, filtered air at a pressure of 4.5 to 8 bar. The actuator air couplings are designed for a 4/6 diameter hose fitting. The valve has a max. working pressure of 6 bar, a max. temperature of 140°C and an acceptable vacuum of 0.4 bar.

#### 4) SEALS

Unless otherwise specified in the order, DCX3 / 4 valves are equipped with the following seals :

- PFA for the piston seals
- EPDM for the O-rings

Other types are also available :

- Silicone, EPDM, acid-resistant Viton, food grade Viton

Choosing the right type of seal is critical to correct valve operation. This is not always easy, as all characteristics of the fluids circulating through the valve must be taken into consideration. We can help you make this choice. Ensure that the grease used is compatible with the elastomere seals, particularly EPDM.

#### 5) N.C. – N.O. – AND D.A. CONFIGURATION

DCX3 / 4 valves are supplied as standard in an N.C. configuration and require an air supply to remove the piston.

The valves can be supplied in an N.O. or D.A. configuration on request.

**Important :** Before changing the configuration, consult the maintenance instructions (IT.DFX.036).

#### 6) PRECAUTIONS TO BE TAKEN WHEN CARRYING OUT WELDING OF THE BODIES

Adjust the pipes : check the straightness, the out-of-roundness and the offset (play < 0.5 mm), to limit the restrictions created by welding.

Any modification to the valve body for the purpose of welding must be carried out with the agreement of Definox.

Support the pipes at least 10D from the valve (valve nominal diameter).

#### 7) INSTALLING THE VALVE ON THE PROCESS LINE

To install the valve on the process line, **the weld-on body must be separated** from the rest of the valve to prevent seal damage.

To carry out this simple operation, proceed as follows while referring to the diagrams :

##### A- DCX3 (single-body valve)

Put the valve in the open position. With an N.C. configuration, the actuator (6) must be supplied with air. Remove the clamp (7) . Shut off the air and separate the body (1) from the rest of the valve. Weld the body to the pipes.

##### B- DCX4 (double-body valve)

Put the valve in the “ open ” position. With an N.C. configuration, the operator (6) must be supplied with air. Remove the bottom clamp (7) . Shut off the air and separate the lower body (1) from the rest of the valve. Unscrew the piston (3) using the flat parts of the actuator stem and the piston. Remove the top clamp (7) and separate the body (5) from the operator. Mount the bodies (1 and 5) on the pipes.

After welding, follow the instructions below to reassemble the valve :

**Important :** For subsequent actuator and piston disassembly, you will need to be able to remove one of the bodies (preferably the top one) from the line. Make sure this body is welded to a removable section or between fittings.

##### C- Assembling DCX3 automatic valves

Check that the seal-bearing surface inside the body (1) is clean. Check the position of the seal (4) on the actuator (6) . Put the valve in the “ open ” position. With an N.C. configuration, supply the actuator (6) with air and insert the shut-off assembly (2-3-4-6-8-9) in the body making sure the seals are not damaged around the ends of the parts.

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