C- Reassembling DCX3 diaphragm valves

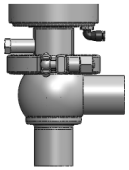
Check that the seal-bearing surface inside the body (1) is clean. Put the valve in the " open " position. With an N.C. configuration, supply the operator sub-assembly (6) with air and insert in the body, making sure the plug seal is not damaged around the part edges. Refit the clamp (9). When using for the first time, check the lower connection and top connection(s) for leaks.

D- Reassembling DCX4 diaphragm valves

Check that the seal bearing surfaces inside the bodies (1 and 3) are clean. Thread the piston (2) into the body (3), then insert the diaphragm (11), the spring (4), the spring washers (12) (see details on inside page) and the intermediate part (5). Check the position of the ring (13) in the operator lantern (7), screw and tighten the piston to the lantern using the flat areas of the stem and the operator rod (use a threadlocker). Put the valve in the " open " position. With an N.C. configuration, supply the operator (7) with air and position and tighten the top clamp (9). Check the position of the seal (8) on the body (1) and assemble with the body (3), making sure the piston seals are not damaged, then tighten the lower clamp (9). Put the operator in the closed position and check that the piston is centered correctly through the bottom connection. Center if necessary by tapping the clamps. When using for the first time, check the lower connection in the down position then the top connection(s) and the lantern in the up position for leaks.

NOTE :

- We recommend using a **medium threadlocker** to lock the plug during reassembly on the operator and retightening the diaphragm valve pistons after first use at temperature.
- 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.
- **CAUTION**: Please connect the **nozzle collector of leakage** of the lantern for channeling the possible projection of the product in case of rupture of the membrane.



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 mounted to prevent mixtures of components.

9) SPARE PARTS AND ACTUATOR DISASSEMBLY

We can provide you with the component references for your valve on request. You can also make a note of the valve identification number.
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.

10) 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 :

CE

- 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[(1)] valve diameter (line) must be below 100 mm.
For use outside these limits, please contact our technical service.

[(1)]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".

DEFINOX

INSTALLATION GUIDE

AUTOMATIC DCX3 & DCX4 CHANGEOVER AND DIAPHRAGM VALVES

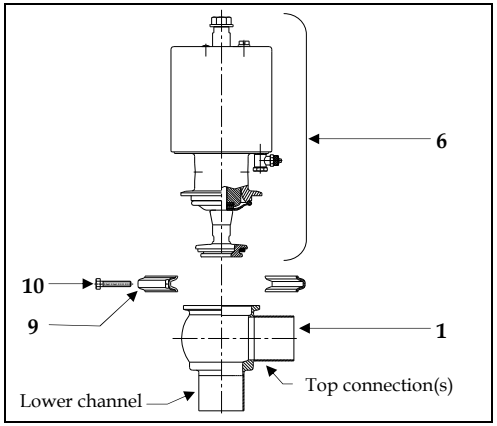
www.definox.com

DEFINOX SAS
3 Rue des Papetiers - Z.A.C. de Tabari 2
44190 Clisson - France
☎ : +33 (0)2 28 03 98 50
🗐 : +33 (0)2 28 03 88 00

E-mail : info@definox.com

NI-055 Rev. 6 ⇒ September 2010

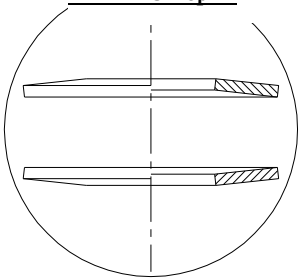
DCX3 AUTOMATIC DIAPHRAGM VALVE – Single-body

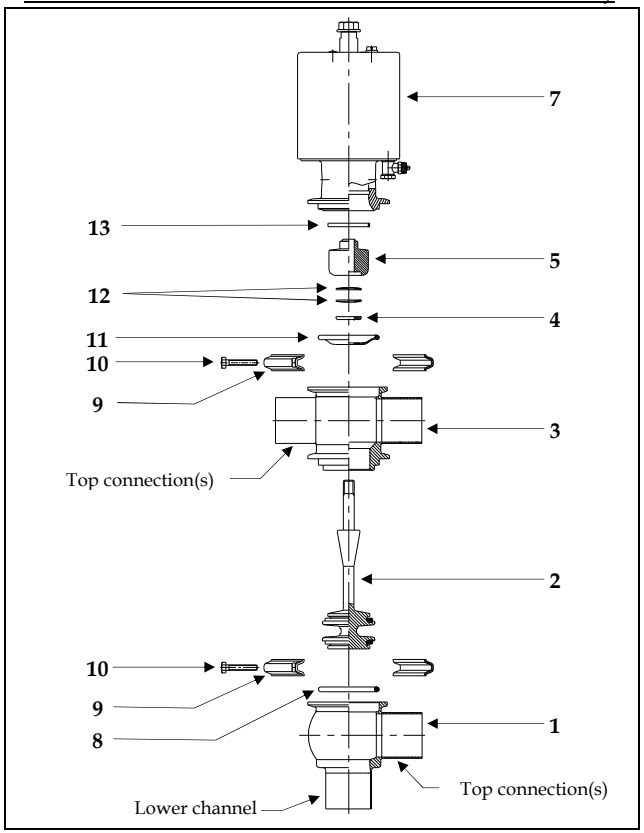


1 : DCX3 valve body
2 : DCX4 plug
3 : DCX4 valve body
4 : Diaphragm washer
5 : Intermediate part diaphragm
6 : Shut-off sub-assembly
7 : Actuator
8 : Seal
9 : Clamp
10 : Clamp screw
11 : Diaphragm
12 : Spring washers
13 : Ring

DCX4 AUTOMATIC DIAPHRAGM VALVE – Double-body

DETAILS Rep 12





IMPORTANT : To change the operator configuration, please refer to the maintenance instructions or contact our Technical Department.

For trouble-free installation of your DEFINOX DCX3 & DCX4 membrane valves, 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.
If you have any questions, please contact us.

3) AIR SUPPLY CONDITIONS

The operator is supplied with dry, filtered air at a pressure of 4.5 to 8 bar. The operator 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 a permissible 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
Ensure that the grease used is compatible with elastomer seals, particularly EPDM.
Choosing the right type of seal is very important for correct valve operation. This is not always easy as all the characteristics of the fluids circulating through the valve must be taken into consideration. We are available to provide you with assistance.

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

DCX3 / 4 diaphragm 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 - Disassembling DCX3 diaphragm valves (single-body valve).
Put the valve in the " open " position. With an N.C. configuration, the operator shut-off sub-assembly (6) must be supplied with air. Remove the clamp (9). Shut off the air and separate the body (1) from the rest of the valve. Weld the body to the pipes.

B - Disassembling DCX4 diaphragm valves (double-body valve).
Put the valve into the " open " position. For an N.C. configuration, supply air to the operator (7). It is **IMPERATIVE** that the two clamps (9) are disassembled (if not, there is a risk of the diaphragm tearing). Cut off the air and separate the lower body (1) from the rest of the valve. Unscrew the piston (2) using the flat areas of the operator rod and the piston rod. Separate the body (3) and the operator piston. Remove the diaphragm (11), the washer (4), the spring washers (12) and the intermediate part (5) of the piston. Separate the body from the piston. Fit the body (1 – 3) to the pipes.
After welding, follow the instructions below to reassemble the valve :
Important : For subsequent operator 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 couplings only.

.../...