

**EDWARDS**



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# BYPASS VALVE KIT

## INSTRUCTION MANUAL

A73001860\_A

Original Instructions

## Official Distributor in Australia



**EZZI VISION**

***Vacuum and Thin Film Technology***

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You must use the bypass valve kit as described in this manual. Read this manual before you install, operate and maintain the bypass valve kit.

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# Safety precautions

Read this manual before you install the bypass valve kit. Important safety information is highlighted as CAUTION instructions; you must obey these instructions. The use of CAUTIONS is defined below.



## CAUTION:

**Cautions are given where failure to observe the instruction could result in damage to the equipment, associated equipment and process.**

## General precautions

- Vacuum pumps are potentially dangerous if incorrectly used, repaired or maintained.
- Any incorrectly fitted spare parts could damage your pump and could be a potential hazard.
- Never allow unqualified personnel to attempt to remove or replace any part of the pump.
- If you have any doubts about the servicing procedures or the products capabilities please contact Edwards.
- Before returning equipment to Edwards for repair, obey the Edwards HS1 procedure and complete an HS2 declaration form to warn of danger from substances used in or produced from the equipment. The procedure and forms are included with the pump instruction manuals and can be down-loaded together with Edwards local contact details from [www.edwardsvacuum.com](http://www.edwardsvacuum.com)
- Always conform to service schedules unless adverse conditions necessitate more frequent servicing.
- Report any defect before an accident or consequential damage can occur.
- Observe local and country specific regulations, norms and guidelines.
- Never allow anyone to remove large or heavy components without adequate lifting equipment.
- Before maintenance work is begun, ensure the pump is switched off and isolated from the mains.
- The pump may have been exposed to processes which use hazardous substances or produces by-products which are dangerous to human health and safety, for example, chemically active, biologically active or radioactive substances.
- Before working on a pump, ensure that the correct personal protective equipment is available and being used. Always wear safety goggles. Wear a breather mask with positive air pressure and take other precautions if you believe the pump may be contaminated with hazardous substances and dusts.
- When applying sealants and lubricants, prevent contact with the skin by wearing suitable gloves.
- Seals may contain fluoroelastomer, which when properly handled is not dangerous but which may produce a toxic and corrosive residue (hydrogen fluoride or

hydrofluoric acid) in the event of excessive heat or fire depending on the circumstances of degradation and other materials involved.

- On completion of maintenance, check the pump functions correctly and that all guards and protection devices are fitted and working correctly and that the pump is electrically safe.
- If the pump is used for handling hazardous substances check the pump for leak-tightness before use.
- Dispose of waste oil and any process by-products in accordance with local and national safety and environmental requirements. It is usually illegal to dispose of waste oil into drains or water courses, or to bury it.

## Return the equipment or components for service

Before you send your equipment to us for service or for any other reason, you must send us a completed Declaration of Contamination of Vacuum Equipment and Components – Form HS2. The HS2 form tells us if any substances found in the equipment are hazardous, which is important for the safety of our employees and all other people involved in the service of your equipment. The hazard information also lets us select the correct procedures to service your equipment.

We provide instructions for completing the form in the Declaration of Contamination of Vacuum equipment and Components – Procedure HS1.

Download the latest documents from [www.edwardsvacuum.com/HSForms/](http://www.edwardsvacuum.com/HSForms/), follow the procedure in HS1, fill in the electronic HS2 form, print it, sign it, and return the signed copy to Edwards.

 **Note:**

*If we do not receive a completed HS2 form, your equipment cannot be serviced.*

# Ordering information

**Table 1** Kit ordering information

Description	Item number
Bypass valve kit 35iE	A73003804
Bybypasspass valve kit 35iCE Chemraz	A73008804

# Bypass and backup valve replacement

This instruction is applicable to the XDS35iE replacement 2x bypass and backup valve, code numbers A73003804 and A73008804.

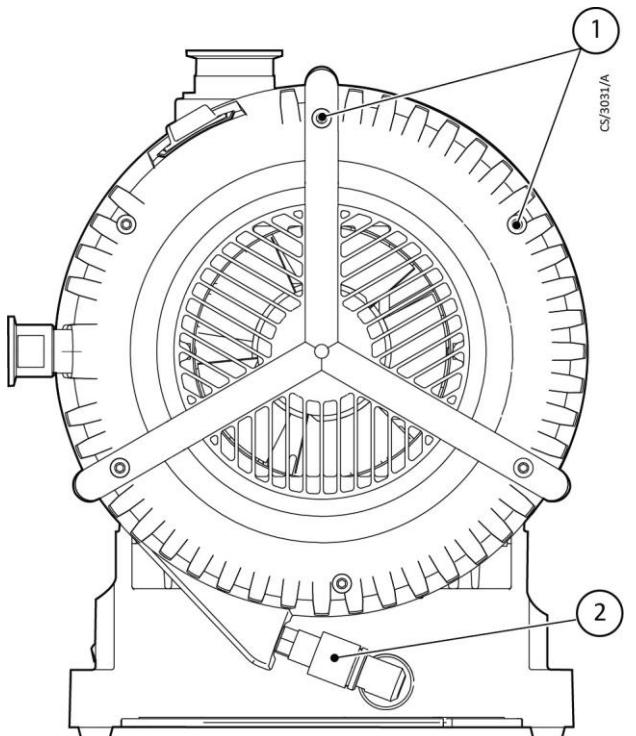


## CAUTION:

**Risk of minor injury or damage to equipment. Be careful not to drop the fixed scroll assembly when you remove it from the motor body.**

1. Stop the pump, isolate the electrical supply and allow it to cool. Use the gas ballast push out and control set to position 2 to vent the pump.
2. Disconnect the fan connector and release the six retaining screws to the fixed scroll, as shown in *Figure 1* on page 12.

**Figure 1** The fan end view



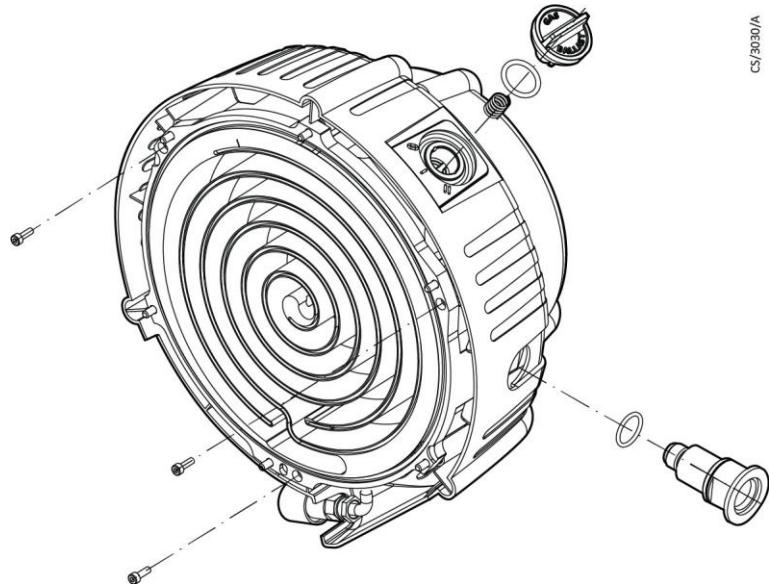
1. Retaining screw for the fixed scroll (6)

2. Fan connector

3. Carefully remove the fixed scroll assembly. Use a lever in the slot provided to ease it from the motor body.
4. Place the fixed scroll assembly away from the work in a position that the fan connector can be accessed. It is fitted on the underside of the fan cowl and must be disconnected in order to remove the fixed scroll completely.
5. Place the fixed scroll assembly on a flat surface so that the scroll is facing upwards.
6. Dispose of all waste materials in accordance with local and national environmental safety requirements.

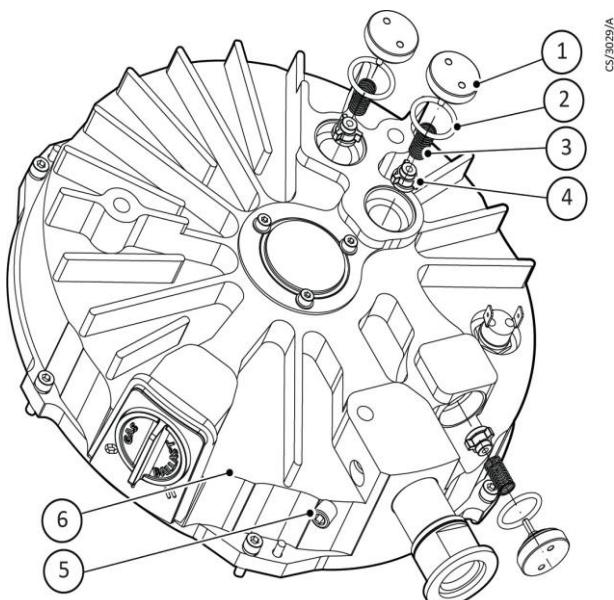
7. Remove the three screws that secure the fixed scroll into the fan cowl. Remove the gas ballast control knob, if fitted, and the spring. Use a 24 mm A/F spanner and remove the exhaust flange. Separate the fixed scroll from the fan cowl. Disconnect the wires to the thermal snap switch.

**Figure 2** The assembled fixed scroll



8. Place the fixed scroll face down and make sure you do not damage the tops of the tip seal walls.
9. Use a pin wrench to remove the bypass and backup valve cover. Replace the three springs (PN A27102057), valve pads (PN A26501066 or PN A26501076 for Chemraz version) and O-rings (PN H02122041).

**Figure 3** The fixed scroll pump parts (enhanced variants only)



1. Valve cover (3)	4. Valve pad (3)
2. O-ring (3)	5. Pressure plug
3. Spring (3)	6. Fixed scroll

10. After the individual parts are replaced, re-assemble and reconnect the thermal switch. Use a pin wrench and assemble the three screws on the each side of the scroll. Re-assemble the gas ballast control knob, if fitted, and the spring.
11. Make sure the tip seals does not fall out and re-assemble the pump. Reconnect the fan connector then re-fit the scroll assembly. Make sure that the six screws are tightened progressively and evenly.
12. Make sure there is no debris visible on the inside of the scrolls, especially in the tip seal slot. Wipe with a soft, dry, lint free cloth to remove any dust, and so forth.
13. To get optimum performance, you may need a run-in period.

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