



*Installation, Operation, and
Maintenance Manual*

*Welker[®] Liquid Eliminator
Model
LE-2HP*

*Drawing No.: AD691BI & AD691BJ
Manual No.: IOM-088*

The information in this manual has been carefully checked for accuracy and is intended to be used as a guide for the installation, operation, and maintenance of the Welker[®] equipment described above. Correct operating and / or installation techniques, however, are the responsibility of the end user. Welker[®] reserves the right to make changes to this and all products in order to improve performance and reliability.

This manual is intended to be used as a basic installation and operation guide for the Welker[®] Liquid Eliminator, *LE-2HP*. For comprehensive instructions, please refer to the IOM Manuals for each individual component. A list of relevant component IOM Manuals is given in the Appendix section of this manual.

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Section 1: SPECIFICATIONS

1.1 INTRODUCTION

We appreciate your business and your choice of Welker[®] products. The installation, operation, and maintenance liability for this product becomes that of the purchaser at the time of receipt. Reading the applicable *Installation, Operation, and Maintenance (IOM) Manual* prior to installation and operation of this equipment is required for a full understanding of its application and performance prior to use.*

If you have any questions, please call 1-800-776-7267 (USA) or 1-281-491-2331.

Notes, Cautions, and Warnings



Notes emphasize information and / or provide additional information to assist the user.



Caution messages appear before procedures that, if not observed, could result in damage to equipment.



Warning messages appear before procedures that, if not observed, could result in personal injury.

*The following procedures have been written for use with standard Welker[®] parts and equipment. Assemblies that have been modified may have additional requirements and specifications that are not listed in this manual.

1.2 PRODUCT DESCRIPTION

The Welker[®] *LE-2HP* Liquid Eliminator is designed to protect analyzers from damage and contamination by removing liquids from high pressure gas samples.

As gas samples enter the LE-2HP at a high pressure, any liquid present is separated from the gas stream by a replaceable filter and then drained through the bottom valve.

Welker[®] may custom design the LE-2HP to suit the particular application and specifications of each customer.

1.3 SPECIFICATIONS

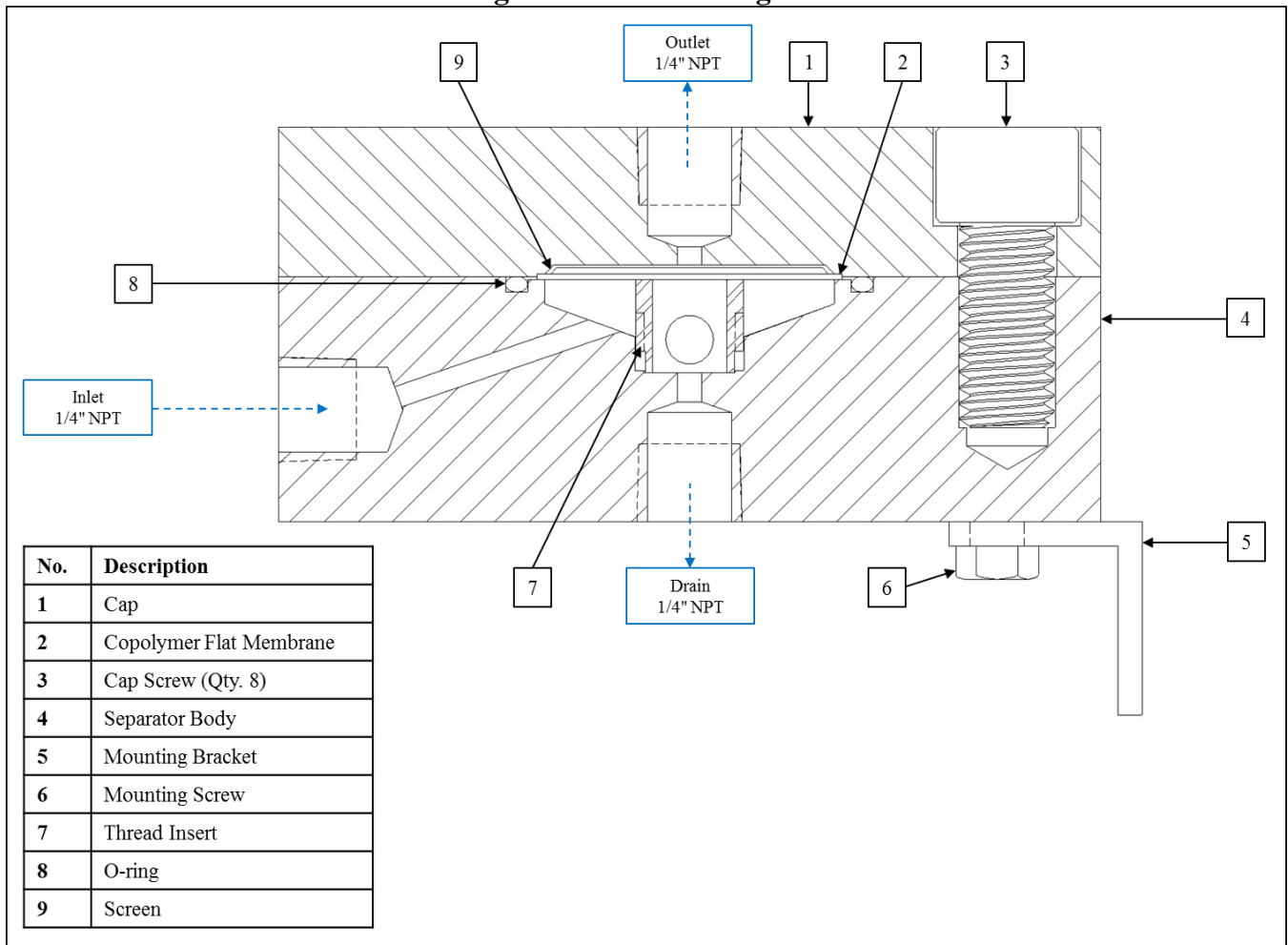


The specifications listed in this section are generalized for this equipment. Welker[®] can modify the equipment according to your company's needs. However, **please note that the specifications may vary depending on the customization of your product.**

Table 1: LE-2HP Specifications	
Products	Natural Gas
Materials of Construction	304 Stainless Steel, 316 / 316L Stainless Steel, PTFE, Viton [®] Others Available
Filter Element	25 Micron Copolymer Membrane 304 Stainless Steel Mesh Screen
Maximum Allowable Operating Pressure	2160 psig @ -20°F to 120°F (<i>148 barg @ -28°C to 48°C</i>) 3600 psig @ -20°F to 120°F (<i>248 barg @ -28°C to 48°C</i>)
Connections	1/4" NPT Others Available
Options	CE Compliance Chembar Coating Flow Meter on Outlet No Mounting Bracket Rotometer Mounted on Outlet & Metering Valve Mounted on Drain Sulfinert-Treated Sample Exposed Parts

1.4 SYSTEM DIAGRAM

Figure 1: LE-2HP Diagram



Section 2:

INSTALLATION & OPERATION

2.1 BEFORE YOU BEGIN



After unpacking the unit, check the equipment for compliance and for any damage that may have occurred during shipment. **Claims for damage caused during shipment must be initiated by the receiver and directed to the shipping carrier.** Welker[®] is not responsible for any damage caused by mishandling by the shipping carrier.



When sealing fittings with PTFE tape, refer to the proper sealing instructions for the tape used.

2.2 INSTALLATION

1. Ensure that all cap screws are tightened.
2. Using the provided mounting bracket and screws, mount the LE-2HP as close to the sample point as possible. The LE-2HP must be mounted with the outlet facing up and the drain facing down.
3. Using 1/4" tubing, connect from the product outlet of the sample probe to the inlet port on the LE-2HP.
4. Using 1/4" tubing, connect from the outlet port of the LE-2HP to the instrument to be supplied with the dry gas.
5. Using 1/4" tubing, connect a device to collect any liquid separated from the sample stream. This device should be compatible with the maximum allowable operating pressure of the LE-2HP.



If no collection device is connected to the drain port, thread a valve into the port.

Section 3:

MAINTENANCE

3.1 BEFORE YOU BEGIN

1. **Welker® recommends that the unit have regular maintenance under normal operating conditions every six (6) months.** In cases of severe service, dirty conditions, excessive usage, or other unique applications that may lead to excess wear on the unit, a more frequent maintenance schedule may be appropriate.
2. Prior to maintenance or disassembly of the unit, it is advisable to have a repair kit available for repairs of the system in case of unexpected wear or faulty seals.



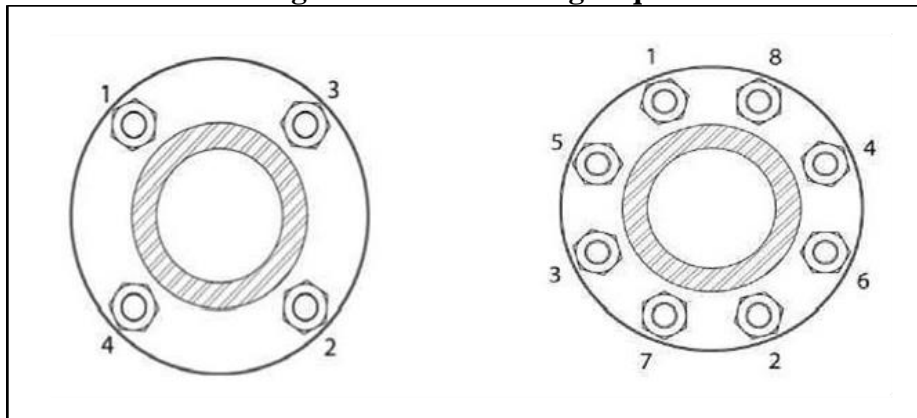
New seals supplied in spare parts kits are not lubricated. They should be lightly lubricated before installation. Welker® recommends Dow Corning® 111 (DC 111) or an equivalent lubricant for use with this unit.

3. All maintenance and cleaning of the unit should be performed on a smooth, clean surface.

3.2 MAINTENANCE

1. Close the valve from the customer-supplied gas supply to stop the supply to the inlet port of the LE-2HP.
2. Open the drain valve to drain any separated liquid and relieve any pressure within the LE-2HP.
3. Remove all tubing and fittings from the inlet, outlet, and drain ports.
4. Unscrew the cap screws and remove the cap.
5. Remove the screen and copolymer flat membrane.
6. Remove and replace the O-ring on the separator body.
7. Replace the copolymer flat membrane.
8. Replace the screen. The screen should be placed on top of the filter element.
9. Return the cap to the separator body. The cap screw holes on the cap should line up with the ports on the separator body.
10. Following a cross-bolting sequence, secure the cap to the separator body.

Figure 2: Cross-Bolting Sequence



APPENDIX

ATTACHED DOCUMENTS:

Welker[®] *Installation, Operation, and Maintenance (IOM) Manuals* suggested for use with this unit:

- None

Other *Installation, Operation, and Maintenance (IOM) Manuals* suggested for use with this unit:

- None

Welker[®] drawings and schematics suggested for use with this unit:

- Assembly Drawing (2160 psi): AD691BI
- Assembly Drawing (3600 psi): AD691BJ



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