



*Installation, Operation, and
Maintenance Manual*

*Welker[®] High Pressure
Liquid Eliminator
with Welker Probe*

*Model Number
LE2SS-KO-HP*

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.

13839 West Bellfort
Sugar Land, TX 77498-1671
(281) 491-2331 - Office
(800) 776-7267 - USA Only
(281) 491-8344 - Fax
<http://www.welkereng.com>

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SPECIFICATIONS

1. GENERAL

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 in the USA or 1-281-491-2331.

Notes, Cautions, and Warnings



Notes emphasize information or set it off from the surrounding text.



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



Warnings are alerts to a specific procedure or practice that, if not followed correctly, could cause 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 DESCRIPTION OF PRODUCT

The Welker Liquid Eliminator with Welker Probe is designed for use in a pipeline where it is desirable to provide a gas sample that is free of entrained liquid. As pipeline product enters the probe, the gas to be sampled passes through the liquid eliminator and into the outlet port, while all liquids are filtered out and then drained back into the pipeline.

This High Pressure model is designed to sustain pipeline pressures in excess of 3,000 psi without the use of pressure reducing/regulating equipment which could compromise the integrity of the sample.

SPECIFICATIONS

1.3 SPECIFICATIONS



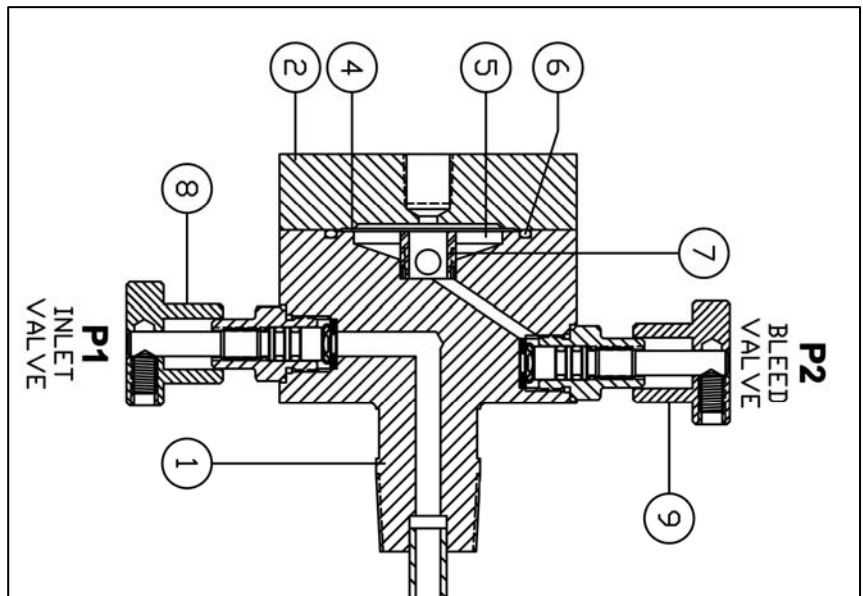
The specifications listed in this section are generalized for this equipment. Welker can modify the equipment according to your company's needs. However, please note that **the specifications may vary depending on the customization of your product.**

Table 1

Overall System Specifications	
Products Heated:	Gases
Materials of Construction:	316 stainless steel, aluminum, Viton [®] , and PTFE; others available.
Maximum Allowable Operating Pressure:	3,600 PSIG @ -20° F to 120° F (248.21 Bar @ -29° C to 48.9° C)
Sample Probe Pipeline Connection:	1/2", 3/4", or 1" MNPT; others available.
Insertion Length:	Customer specified
Outlet Connection:	1/4" or 1/2" FNPT
Auxiliary Connections:	1/4" FNPT

1.4 SYSTEM DIAGRAM

1. Probe Body
2. Top Cap
3. Hex Sock. Cap. Screw (Not shown, on top cap when viewed from above)
4. Screen
5. Copolymer Flat Membrane
6. O-ring
7. Thread Insert
8. Inlet Valve, NV-2
9. Bleed Valve, NV-1



Refer to above Figure throughout manual.

MAINTENANCE

2. INSTALLATION INSTRUCTIONS

2.1 GENERAL

After unpacking the unit, check it for compliance and for any damages that may have occurred during shipment.

Note Claims for damages caused during shipping must be initiated by the receiver and directed to the shipping carrier. Welker is not responsible for any damages caused from mishandling by the shipping company.

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

Note The equipment will ship from the manufacturer, Welker, mounted to the enclosure, "hard tube" connected and ready for mounting.

2.2 INSTALLATION INSTRUCTIONS

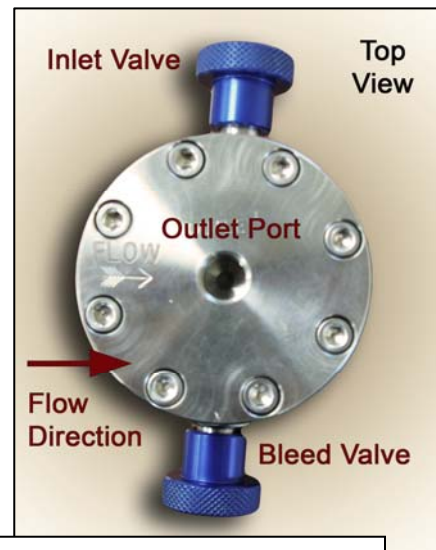
Recommended Tools

It would be advisable to have the following tools available for installation of the unit; however, tools used will vary depending on probe model.

- Measuring tape
- Allen wrench set
- 6" adjustable wrench
- Tubing cutters
- 316 stainless steel tubing and fittings



1. **Make sure that all valves on the unit are closed.**
2. Make sure all 8 cap screws are tightened on the device.
3. Depressurize the pipeline and connect LE probe to the appropriate pipeline isolation port. Be sure to face the probe in line with the pipeline flow.
4. Use the 316 stainless steel tubing to connect the output device to the appropriate outlet port on the liquid eliminator.
5. Pressurize the pipeline.
6. Open the inlet valve and bleed valve. Installation is now complete.



Note: Model pictured is a standard Liquid Eliminator. Products may vary according to model.

MAINTENANCE

3. MAINTENANCE

3.1 GENERAL

Prior to maintenance or disassembly of the unit, it is advisable to have a repair kit handy for the system in case of encountering wear or faulty seals. All maintenance and cleaning of the unit should be done on a smooth, clean surface.



We recommend that the unit have biannual maintenance under normal operating conditions. In the case of severe service, dirty conditions, excessive cycling usage, or other unique application that may subject the equipment to unpredictable circumstances, a more frequent maintenance schedule may be appropriate.



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

3.2 MAINTENANCE



Depressurize the pipeline and system, and close all valves.

Recommended Tools

It would be advisable to have the following tools available for maintenance of the unit; however, tools used will vary depending on probe model.

- 6" adjustable wrench
- Allen Wrench set



1. Close the inlet valve and the bleed valve on the device.
2. Remove all connected tubing and fittings.
3. Loosen the eight screws from the cap (Part 2).
4. Remove the cap (Part 2) and the screen (Part 4).
5. Use a brass pick or knife to remove the O-ring (Part 6).
6. Remove the PTFE element (Part 5).
7. Use a cleaning solution that will not affect the integrity of a sample analysis to wipe and clean the inside of the Liquid Eliminator.
8. Reposition the PTFE element onto the center of the inside of the Liquid Eliminator (Part 7).
9. Replace the O-ring (Part 6). Use Dow Corning 111 (DC 111) grease or an equivalent lubricant to lightly grease the O-ring.
10. Reposition the screen (Part 4) onto the center of the PTFE element.
11. Align the cap with the Liquid Eliminator body with the eight holes in the cap.
12. Cross-bolt the eight screws into the cap itself.



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Web Page: www.welkereng.com