PRODUCT DESCRIPTION

- The Welker® F-8 Filter is designed to filter particulate matter from dry gas to prepare it for use as an instrument supply.
- As gas flows through the F-8, particulate matter is removed by the filter media.
- The F-8 also sheds liquids, which accumulate and are released out the drain.
- The clean gas is now ready for use by downstream pneumatic controllers or other instruments.

SPECIFICATIONS

Products

Gases Compatible With the Materials of Construction

Materials of Construction

Carbon Steel, NBR, and PTFE, Zinc-Plated (Standard)
High-Pressure Model Available
Others Available

Maximum Allowable Operating Pressure

3000 psig (*206.84 barg*) @ -20 °F to 100 °F (*-28.8 °C to 37.7 °C*)
Others Available

Connections

¼" FNPT (Standard)
Others Available

Flow Rate

Up to 50 scfm

Nominal Filter Rating

Polyethylene: 10 Microns or 35 Microns (Standard)
Stainless Steel: 25 Microns or 65 Microns
Others Available

Approximate Dimensions

5¼" x 2⅝" x 2⅝" (L x W x H) (Standard)

Approximate Weight

6 lb

Option

Bypass

Maintenance Schedule

Welker® recommends that the unit have standard maintenance every six (6) months under normal operating conditions. In cases of severe service, dirty conditions, excessive usage, or other unique applications that might lead to excess wear on the unit, a more frequent maintenance schedule might be appropriate.

The following procedures have been written for use with standard Welker® parts and equipment. Assemblies that have been modified might have additional requirements and specifications not listed in this document.

If you received a damaged F-8 Filter, please contact a Welker® representative immediately.

For all product inquiries, please contact our Service Department: 281.207.1887

INSTALLATION, OPERATION, AND MAINTENANCE MANUAL
WELKER® F-8 FILTER
IOM-292 | REV. 0 | 10/01/2025

The installation, operation, and maintenance liability for this equipment becomes that of the purchaser at the time of receipt. Reading the instructions that comprise IOM-292 prior to installation and operation of this equipment is required for a full understanding of its application and performance prior to use.

F-8: INSTALLATION AND OPERATION

Welker® recommends installing a Welker® NV-1 Instrument Valve to the drain port to ease draining and safe depressurization of the Welker® F-8 Filter.

1. As necessary, mount the F-8 vertically to the desired location.
2. As necessary, either plug the drain port or install a valve to the drain port (*Figure 1* and *Figure 2*).
3. As necessary, connect from the drain valve to a safe and environmentally responsible drainage location.
4. Using customer-supplied tubing, connect from the pneumatic supply source to the F-8 inlet (*Figure 1* and *Figure 2*).
5. Using customer-supplied tubing, connect from the F-8 outlet (*Figure 1* and *Figure 2*) to the instrument to be supplied with the filtered product.
6. SLOWLY open the outlet valve on the pneumatic supply source. Check for leaks and repair or replace as necessary.
7. If a valve is installed between the F-8 and the instrument to be supplied with the filtered product, open that valve to allow the pneumatic supply to reach the instrument.
8. The F-8 is now operational.

F-8: MAINTENANCE

1. Drain the F-8 frequently to determine how quickly condensation or free liquids accumulate in the F-8.
2. Isolate the F-8. If the F-8 is not equipped with the optional bypass, close the outlet valve on the pneumatic supply source and shut down any instrumentation connected to the F-8.
3. If the F-8 is equipped with the optional bypass, open the bypass valve. Then close the F-8 inlet and outlet valves (*Figure 1* and *Figure 2*).
4. Drain the F-8 to vent pressure remaining in the body (*Figure 1*).
5. Unscrew the top cap and base from the body.
6. Remove the O-rings from the top cap and base (*Figure 1*).
7. Set aside the filter element.
8. If applicable, remove the spring from the tie bolt and clean the spring (*Figure 1*).
9. Clean the top cap, base, and body (*Figure 1*).
10. Replace the O-rings on the top cap and base with new O-rings (*Figure 1*).
11. If applicable, return the spring to the tie bolt.

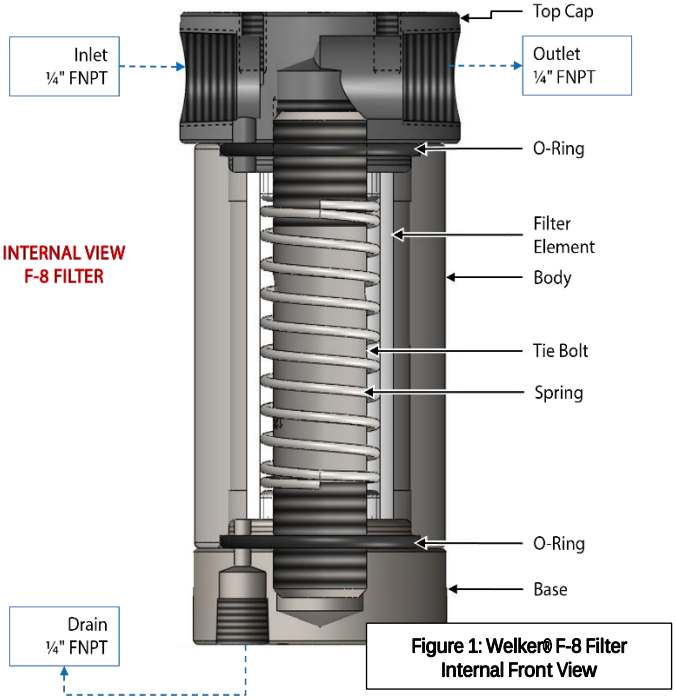

Figure 1: Welker® F-8 Filter Internal Front View

New seals should be ***LIGHTLY*** lubricated beforehand to ease their installation and reduce damage risk when positioning them on parts. Wipe excess lubricant from the seals, because it might adversely affect analytical results.

For sample-exposed seals, Welker® recommends non-hydrocarbon-based lubricants, such as Krytox®.
For non-sample-exposed seals, Welker® recommends either non-hydrocarbon-based lubricants or silicone-based lubricants, such as Molykote® 111.

12. Reinstall the base to the body.
13. If the F-8 uses a stainless steel filter element, clean the filter element with an appropriate solvent, then reinstall it to the F-8.
14. If the Welker® F-8 Filter uses a polyethylene filter element, install a replacement filter element.
15. Reinstall the top cap to the body.
16. Maintenance is now complete. See the *Installation and Operation* section above for instructions on returning the Welker® F-8 Filter to operation.

Table 1: F-8 Filter Troubleshooting Guidelines

Issue	Possible Cause	Solution
Supply pressure from the F-8 has dropped.	The filter is clogged or filled with liquid.	Drain the F-8 to remove any accumulated free liquids. See *Maintenance* for instructions on maintaining the F-8.

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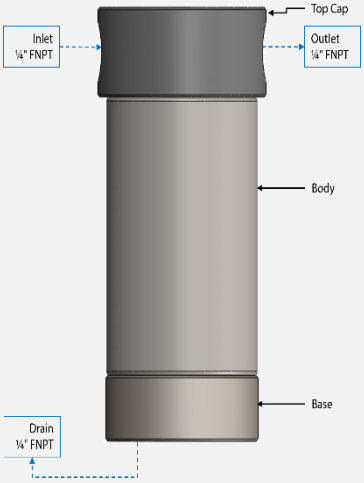
Figure 2:
Welker® F-8 Filter
External Front View



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281.207.1887

IMPORTANT SAFETY INSTRUCTIONS
WELKER® F-8 FILTER
IOM-292 | REV. 0 | 10/01/2025

BEFORE YOU BEGIN
Read These Instructions Completely and Carefully

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

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

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

The instructions that comprise IOM-292 are intended to be used as basic setup and installation guidelines for the Welker® Filter, Model F-8. The information in IOM-292 has been carefully checked for accuracy and is intended to be used as guidelines for the setup and installation of the Welker® equipment described in IOM-292. Correct setup, installation, and operation, however, are the responsibility of the end user. Welker® reserves the right to make changes to IOM-292 and all products in order to improve performance and reliability.

SAVE INSTRUCTIONS
Save these Safety instructions and the instructions that comprise IOM-292 for local inspectors' use.

OBSERVE
Observe all governing codes and ordinances.

NOTE TO INSTALLER
Leave these Safety instructions and the instructions that comprise IOM-292 with the end user.

NOTE TO END USER
Keep these Safety instructions and the instructions that comprise IOM-292 for future reference.

NATURE OF INSTALLATION
Installation of this F-8 Filter is of a mechanical nature.

INSTALLATION RESPONSIBILITY
Proper installation is the responsibility of the installer. Product failure due to improper installation is not covered under the warranty.

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