

PRODUCT DESCRIPTION

- The Welker® F-9 Filter is designed to filter particulate matter from gas or liquid products to protect downstream equipment.
- As gas or liquid flows through the F-9, particulate matter is separated out by the filter media.
- The clean gas or liquid is now ready for use by downstream equipment.

SPECIFICATIONS

Products

Gases and Liquids Compatible With the Materials of Construction

Materials of Construction

316/316L Stainless Steel, FKM, and PTFE Others Available

Maximum Allowable Operating Pressure

4000 psig (275.79 barg) @ -20 °F to 100 °F (-28.8 °C to 37.7 °C)

Others Available

Connections

¼" FNPT (Standard)
½" FNPT

Flow Rate

Up to 50 scfm

Nominal Filter Rating

Polyethylene (Gas Only): 10 Microns or 35 Microns

Stainless Steel: 5 Microns, 25 Microns, or 65 Microns
Others Available

Approximate Dimensions

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

Approximate Weight

5 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-9 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-9 FILTER
IOM-299 | 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-299 prior to installation and operation of this equipment is required for a full understanding of its application and performance prior to use.

F-9: 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-9 Filter.

1. As necessary, mount the F-9 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 supply source to the F-9 inlet (*Figure 1 and Figure 2*).
5. Using customer-supplied tubing, connect from the F-9 outlet (*Figure 1 and Figure 2*) to the instrument to be supplied with the filtered product.
6. SLOWLY open the outlet valve on the supply source. Check for leaks and repair or replace as necessary.
7. If a valve is installed between the F-9 and the instrument to be supplied with the filtered product, open that valve to allow the supply to reach the instrument.
8. The F-9 is now operational.

F-9: MAINTENANCE

1. If the F-9 is filtering gas, drain the F-9 frequently to determine how quickly condensation or free liquids accumulate in the F-9.
2. Isolate the F-9. If the F-9 is not equipped with the optional bypass, close the outlet valve on the supply source and shut down any instrumentation connected to the F-9.
3. If the F-9 is equipped with the optional bypass, open the bypass valve. Then close the F-9 inlet and outlet valves on the F-9 (*Figure 1 and Figure 2*).
4. Drain the F-9 to vent any pressure remaining in the body (*Figure 1*).
5. Unscrew the top cap and base from the body (*Figure 1 and Figure 2*).
6. Remove the O-rings from the top cap and base.
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.

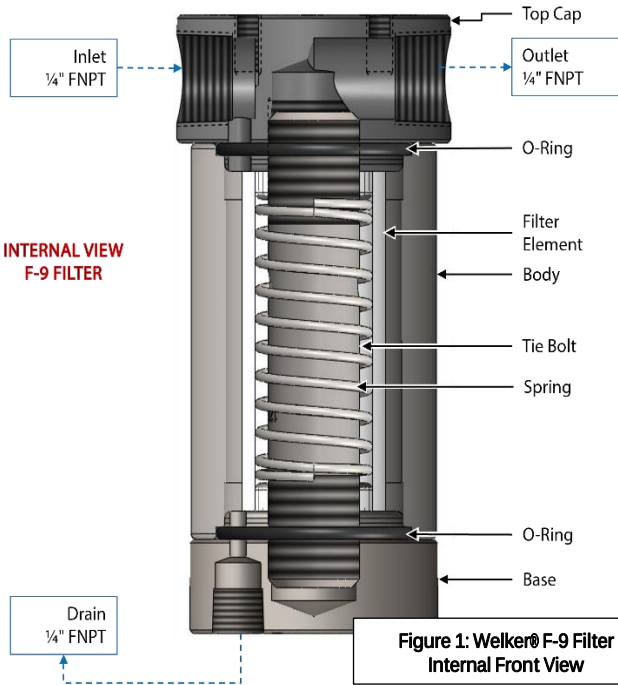


Figure 1: Welker® F-9 Filter Internal Front View



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-9 uses a stainless steel filter element, clean the filter element with an appropriate solvent, then reinstall it to the F-9.
14. If the Welker® F-9 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-9 Filter to operation.

Table 1: F-9 Filter Troubleshooting Guidelines		
Issue	Possible Cause	Solution
Supply pressure from the F-9 has dropped.	The filter is clogged or filled with liquid.	Drain the F-9 to remove any accumulated free liquids. See <i>Maintenance</i> for instructions on maintaining the F-9.

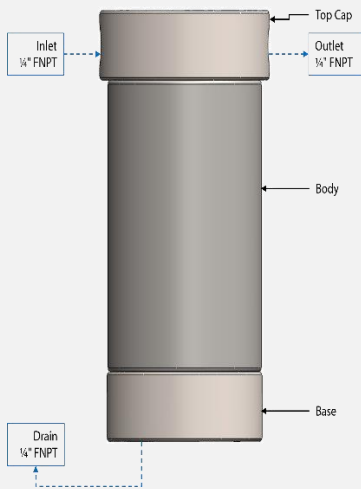
PRODUCT DESCRIPTION

- The Welker® F-9 Filter is designed to filter particulate matter from gas or liquid products to protect downstream equipment.
- As gas or liquid flows through the F-9, particulate matter is separated out by the filter media.
- The clean gas or liquid is now ready for use by downstream equipment.

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-299 prior to installation and operation of this equipment is required for a full understanding of its application and performance prior to use.

Figure 2:
Welker® F-9 Filter
External Front View



If you received a damaged F-9 Filter, please contact a Welker® representative immediately.

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



IMPORTANT SAFETY INSTRUCTIONS

WELKER® F-9 FILTER

IOM-299 | 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-299 are intended to be used as basic setup and installation guidelines for the Welker® Filter, Model F-9. The information in IOM-299 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-299. Correct setup, installation, and operation, however, are the responsibility of the end user. Welker® reserves the right to make changes to IOM-299 and all products in order to improve performance and reliability.

SAVE INSTRUCTIONS

Save these Safety instructions and the instructions that comprise IOM-299 for local inspectors' use.

OBSERVE

Observe all governing codes and ordinances.

NOTE TO INSTALLER

Leave these Safety instructions and the instructions that comprise IOM-299 with the end user.

NOTE TO END USER

Keep these Safety instructions and the instructions that comprise IOM-299 for future reference.

NATURE OF INSTALLATION

Installation of this F-9 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.



13839 West Bellfort Street
Sugar Land, Texas 77498 -1671
281.491.2331 | welker.com
Copyright © 1997–2025, Welker, Inc.
All Rights Reserved.

Welker®, W Welker®, W logo, WelkerScope®, WelkerJet®, and OdorEyes® are registered trademarks of Welker, Inc.