



*Installation, Operation, and
Maintenance Manual*

*Welker[®] Filter / Dryer
Models
F-5XHP & F-5XXHP*

*Drawing No.: AD613BO & AD044BC
Manual No.: IOM-169*

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[®] Filter / Dryer, *F-5XHP and F-5XXHP*. 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® *Filter / Dryer* is designed to filter and dry high pressure natural gas to prepare it for use as an instrument supply for equipment with pneumatic controllers or other pneumatic instruments. As natural gas flows through the filter, water and other contaminants are removed by filter media.

Welker® may custom design the F-5XHP or F-5XXHP to suit the particular application and specifications of each customer.

1.3 SPECIFICATIONS

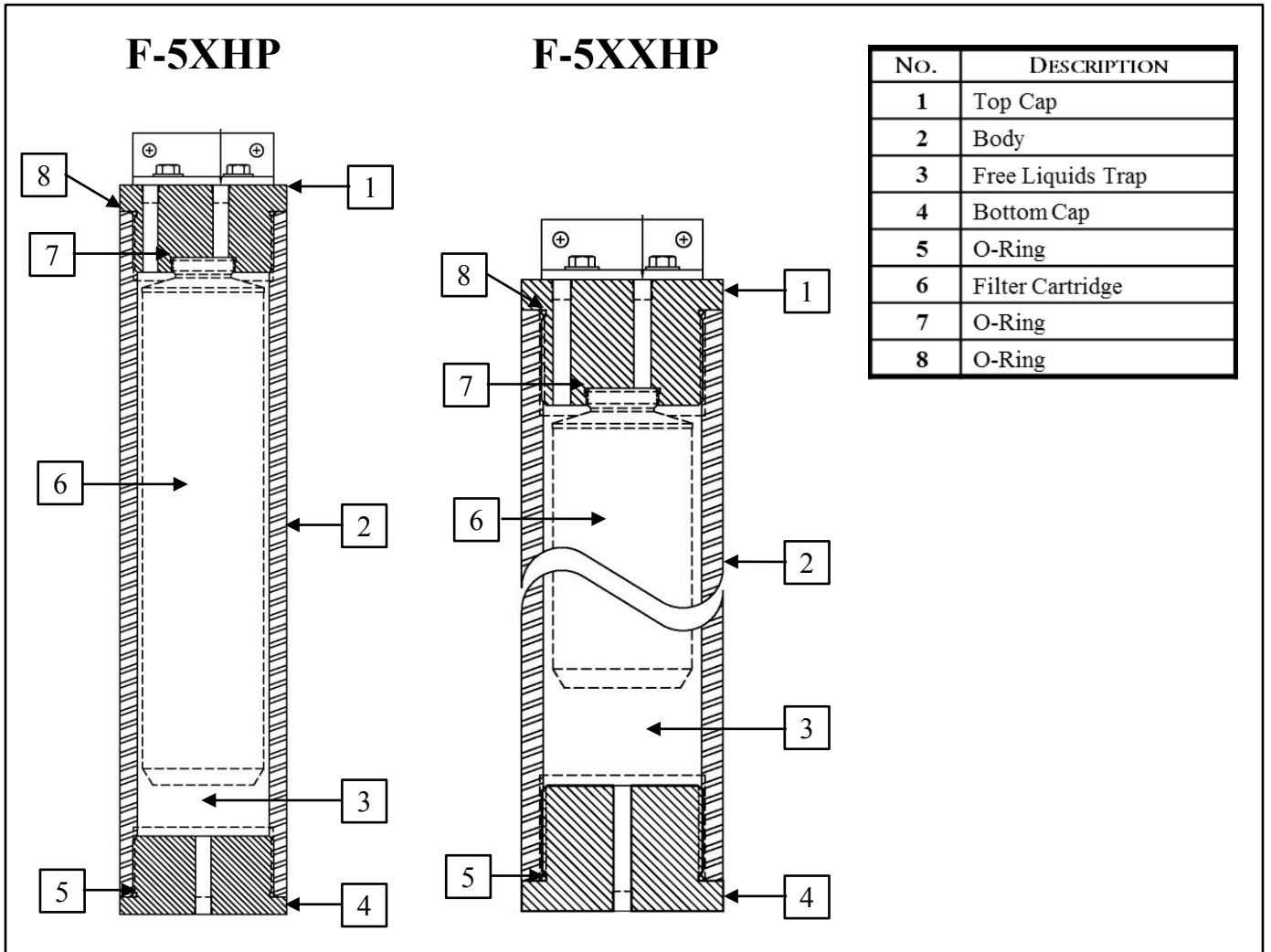


The specifications listed in this section are generalized for this equipment. Welker® can modify the equipment according to your company’s needs. However, **please note that the specifications may vary depending on the customization of your product.**

Table 1: Filter / Dryer Specifications		
Products	Natural gas, instrument air, and other products compatible with materials of construction	
Materials of Construction	Carbon Steel, Viton® Others available upon request	
Sample Outlet Connection	¼” NPT Others available upon request	
Sample Inlet Connection	¼” NPT Others available upon request	
Maximum Allowable Operating Pressure (MAOP)	F-5XHP	F-5XXHP
	3000 psi @ -20° F to 120° F 206 bar @ -29° C to 49° C	4000 psi @ -20° F to 120° F 275 bar @ -29° F to 49° C
	Others available upon request	
Maximum Allowable Operating Temperature (MAOT)	200° F @ model psi 93° C @ model bar	
Flow Rate	40 – 50 scfm Others available upon request	
Filter Media	1/3 Silica gel and 2/3 activated charcoal (standard) Others available upon request Others options may include the addition of Sulfagon and / or varying ratios of cartridge media types.	
Final Filtration	4 micron	

1.4 SYSTEM DIAGRAM

Figure 1: Filter / Dryer Diagram



Section 2:

INSTALLATION & OPERATIONS

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.

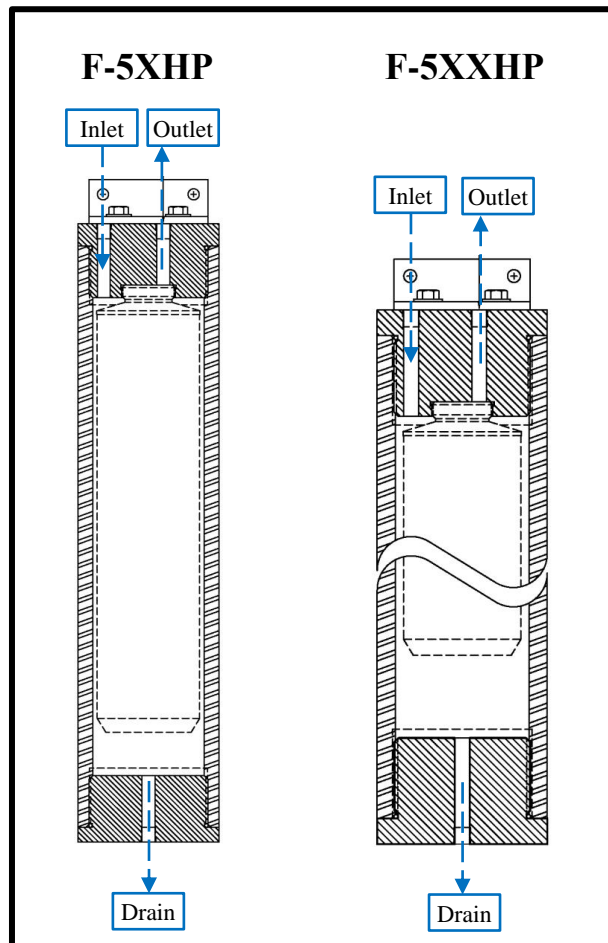


When sealing fittings with PTFE tape, refer to the proper sealing instructions for the tape used.

2.2 INSTALLATION & OPERATIONS

1. Install a valve in or plug the drain port on the bottom of the Filter / Dryer.
2. Connect the supply source to the filter's inlet port.
3. Connect the filter's outlet port to the inlet of the instrument that will receive the filtered product.
4. Slowly open the supply source valve. Check the connections for leaks.
5. Check drain for free liquids or condensation and drain as needed.

Figure 2: Connection Diagram



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.



Threads on end caps should be lightly lubricated during maintenance to prevent galling. Welker® recommends Never Seez® 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. Isolate the filter: close the supply source valve and shut down any instrumentation connected to the unit.
2. Depressurize the unit using connected instrumentation or by opening the drain valve if supplied during installation.
3. Unscrew the top cap from the body.
4. Unscrew and remove the old cartridge.
5. Replace the O-rings in the top cap.
6. Screw a new cartridge into the top cap.
7. Add anti-gall lubricant to the threads on the top cap.
8. Screw the top cap back onto the body.
9. Unscrew the bottom cap from the body.
10. Replace the O-ring in the bottom cap.
11. Add anti-gall lubricant to the threads on the bottom cap.
12. Screw the bottom cap back onto the body.

APPENDIX

ATTACHED DOCUMENTS:

Welker® *Installation, Operation, and Maintenance* Manuals suggested for use with this unit:

- None

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

- None

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

- F-5XHP Assembly Drawing: AD613BO
- F-5XXHP Assembly Drawing: AD044BC



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