

Danfoss G0605.162

Danfoss DCL162 Filter Drier Instruction Manual

Model: G0605.162

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the Danfoss DCL162 Filter Drier. Please read this manual thoroughly before installation and keep it for future reference. This product is designed for use in refrigeration, air conditioning, and heat pump units to ensure system longevity and efficiency by removing moisture and contaminants.

2. SAFETY INFORMATION

Always observe general safety precautions when working with refrigeration systems. Ensure the system is depressurized before attempting installation or maintenance. Wear appropriate personal protective equipment (PPE), including safety glasses and gloves. Only qualified personnel should perform installation and service.

- Ensure proper ventilation when working with refrigerants.
- Avoid contact with refrigerants, as they can cause frostbite.
- Do not exceed the maximum operating pressure or temperature specified for the filter drier.
- Dispose of old filter driers and refrigerants according to local regulations.

3. PRODUCT OVERVIEW

The Danfoss DCL162 Filter Drier (Model: 023Z5007) is a hermetic filter drier designed for liquid line applications in refrigeration and air conditioning systems. It features a solid core composed of 80% molecular sieve and 20% activated alumina, optimized for adsorbing system moisture and capturing acids and other contaminants. Its universal design allows it to serve as a direct replacement for many existing driers.

Key Features:

- **Universal Compatibility:** Suitable for most refrigeration, air conditioning, and heat pump units.
- **Robust Construction:** Features solid bronze inlet and outlet flare connections.
- **High Performance Core:** Effectively removes moisture, acids, and solid contaminants.
- **Wide Refrigerant Compatibility:** Works with R1234Yf, R134A, R290, R22, R407C, R404A, R507A, R600, and

many others.



Figure 3.1: Front view of the Danfoss DCL162 Filter Drier, showing the product label and flare connections.



Figure 3.2: Angled view of the Danfoss DCL162 Filter Drier, highlighting the compact design.

4. INSTALLATION AND SETUP

The Danfoss DCL162 Filter Drier is designed for installation in the liquid line of refrigeration and air conditioning systems. Proper installation is crucial for optimal performance and system longevity.

Installation Steps:

1. **System Depressurization:** Before beginning, ensure the refrigeration system is completely depressurized and

isolated. Recover all refrigerant according to environmental regulations.

2. **Locate Installation Point:** Identify the appropriate location in the liquid line, typically between the condenser and the expansion device.
3. **Cut and Prepare Tubing:** Cut the existing liquid line tubing cleanly. Ensure the ends are deburred and free of debris.
4. **Connect Filter Drier:** The DCL162 features 1/4" flare connections. Connect the filter drier to the liquid line using appropriate flare nuts and ensure a tight, leak-free seal. Use a backup wrench to prevent twisting of the drier body.
5. **Direction of Flow:** Observe the flow arrow on the filter drier body to ensure it is installed in the correct direction of refrigerant flow.
6. **Evacuation:** After installation, evacuate the system to a deep vacuum to remove any non-condensable gases and moisture.
7. **Recharge System:** Recharge the system with the correct type and amount of refrigerant as specified by the system manufacturer.
8. **Leak Check:** Perform a thorough leak check on all connections using an appropriate leak detection method.

Note: The filter drier should be installed in a location that allows for future access for inspection or replacement.

5. OPERATION

The Danfoss DCL162 Filter Drier operates passively within the refrigeration system. Its primary function is to continuously remove moisture, acids, and solid contaminants from the refrigerant as it circulates through the liquid line. This action protects sensitive system components, such as the compressor and expansion valve, from damage and ensures optimal system performance and longevity.

There are no user-adjustable settings or operational controls for the filter drier itself. Its effectiveness is maintained as long as its core is not saturated with contaminants or moisture.

6. MAINTENANCE

Filter driers are generally considered maintenance-free components. However, their lifespan is dependent on the cleanliness of the system. Regular system checks are recommended to monitor the overall health of the refrigeration circuit.

Replacement Guidelines:

- **New System Installation:** Always install a new filter drier when installing a new refrigeration system.
- **System Repair:** Replace the filter drier whenever the system has been opened for major repairs, especially after a compressor burnout or if there is evidence of moisture or acid contamination.
- **Signs of Saturation:** If signs of moisture (e.g., ice formation at the expansion valve) or acid (e.g., discolored oil) are present, the filter drier may be saturated and requires immediate replacement.
- **Pressure Drop:** A significant pressure drop across the filter drier can indicate a clogged core, necessitating replacement.

Important: Always replace the filter drier with a new, appropriately sized unit. Do not attempt to clean or reuse old filter driers.

7. TROUBLESHOOTING

While the filter drier itself is a passive component, issues related to its performance can manifest as broader system problems. Here are some common indicators and potential causes:

Symptom	Possible Cause	Solution
High head pressure / Low suction pressure	Partially or fully clogged filter drier	Replace filter drier. Check for system contamination.
Ice formation at expansion valve	Moisture in system, saturated filter drier	Replace filter drier. Evacuate and recharge system.
Compressor failure (acid burnout)	Acid contamination due to moisture, saturated filter drier	Replace compressor and filter drier. Perform thorough system cleanup.
Reduced cooling capacity	System contamination or moisture affecting efficiency	Inspect filter drier, replace if necessary. Check for other system issues.

If troubleshooting steps do not resolve the issue, consult a qualified HVAC/R technician.

8. SPECIFICATIONS

The following are the technical specifications for the Danfoss DCL162 Filter Drier (Model: 023Z5007):

- **Model:** 023Z5007 (DCL 162)
- **Connections:** 1/4" Flare (Solid Bronze Inlet and Outlet)
- **Core Composition:** 80% Molecular Sieve, 20% Activated Alumina
- **Max Temperature:** 160°F (70°C)
- **Min Temperature:** -40°F (-40°C)
- **Net Volume:** 0.122 L (4.13 fl oz)
- **Weight:** Approximately 1.45 pounds
- **Product Dimensions:** 7.5 x 3.25 x 3.25 inches
- **Refrigerant Compatibility:** R1234Yf, R134A, R290, R22, R407C, R404A, R507A, R600, and others.
- **Replaces:** Dryl162, Adk162, Sd-162, 162, C-162, Wah162, 16176, Td 16 2, Apfd-162

9. WARRANTY AND SUPPORT

For information regarding product warranty, technical support, or service, please refer to the official Danfoss website or contact your authorized Danfoss distributor. Keep your purchase receipt as proof of purchase.
Note: Specific warranty terms may vary by region and product. Always consult the official Danfoss warranty policy for the most accurate information.