

Danfoss 034L0097

Danfoss KVR15 Pressure Regulator Instruction Manual

Model: 034L0097

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Danfoss KVR15 Pressure Regulator. The KVR15 is designed to maintain a constant evaporating pressure in refrigeration and air conditioning systems. It features a 5/8 inch ODF connection and an access port for pressure measurement.

Please read this manual thoroughly before installing or operating the unit. Keep this manual for future reference.

2. SAFETY INFORMATION

WARNING: Improper installation, operation, or maintenance can result in serious injury or equipment damage.

- Only qualified personnel should install, service, or repair this equipment.
- Always depressurize the system before attempting any installation or maintenance.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure all connections are properly sealed to prevent refrigerant leaks.
- Do not exceed the maximum operating pressure specified for the regulator.
- Refer to local regulations and standards for refrigerant handling and system installation.

3. PACKAGE CONTENTS

Verify that all components are present and undamaged upon unpacking:

- Danfoss KVR15 Pressure Regulator (Model: 034L0097)
- Instruction Manual (this document)



Image: Danfoss KVR15 Pressure Regulator. This image shows the compact design of the regulator, highlighting its 5/8 inch ODF connections on both ends and a small access port located on the side for pressure monitoring.

4. SETUP AND INSTALLATION

Follow these steps for proper installation of the KVR15 Pressure Regulator:

1. **System Preparation:** Ensure the refrigeration system is depressurized and isolated before beginning installation.
2. **Location:** Install the regulator in the suction line, upstream of the compressor, and preferably in a horizontal pipe run. Ensure there is sufficient space for service and adjustment.
3. **Connection:** The KVR15 features 5/8 inch ODF (Outside Diameter Flare) connections. Use appropriate brazing techniques for copper tubing. Ensure the regulator is clean and free of debris before brazing. Protect the valve body from excessive heat during brazing by wrapping it with a wet cloth or using a heat sink compound.
4. **Flow Direction:** Observe the arrow on the regulator body, which indicates the correct flow direction. Install the regulator so that the refrigerant flows in the direction of the arrow.
5. **Access Port:** The access port allows for pressure measurement. Ensure the cap is securely tightened after use to prevent leaks.
6. **Leak Test:** After installation, perform a thorough leak test on all connections using an appropriate leak detection method.
7. **Evacuation:** Evacuate the system to the required vacuum level before charging with refrigerant.

Recommended Tools: Brazing torch, nitrogen for purging, leak detector, vacuum pump, manifold gauge set, pipe cutters, deburring tool, wet rags or heat sink compound.

5. OPERATING INSTRUCTIONS

The KVR15 regulator is designed to maintain a constant evaporating pressure. Adjustment is typically

performed during system commissioning.

1. **Initial Setting:** The regulator is factory set to a nominal pressure. For specific system requirements, adjustment may be necessary.
2. **Adjusting Pressure:**
 - Remove the protective cap from the adjustment spindle.
 - Turn the adjustment spindle clockwise to increase the evaporating pressure.
 - Turn the adjustment spindle counter-clockwise to decrease the evaporating pressure.
 - Use a pressure gauge connected to the access port or elsewhere in the suction line to monitor the pressure while adjusting.
 - Make small adjustments and allow the system to stabilize before making further changes.
 - Once the desired pressure is achieved, replace and tighten the protective cap to secure the setting and prevent leaks.
3. **Access Port Usage:** The access port allows for temporary connection of a pressure gauge to verify the regulated pressure. Always ensure the port cap is securely tightened when not in use.

6. MAINTENANCE

The Danfoss KVR15 Pressure Regulator is designed for long-term, reliable operation with minimal maintenance. However, periodic checks are recommended.

- **Visual Inspection:** Periodically inspect the regulator and its connections for any signs of leaks, corrosion, or physical damage.
- **Leak Detection:** Conduct regular leak checks on all brazed connections, especially around the regulator body and access port.
- **Functionality Check:** If system performance issues arise, verify that the regulator is maintaining the set pressure. This can be done by connecting a pressure gauge to the access port.
- **Cleaning:** Keep the exterior of the regulator clean. Do not use harsh chemicals that could damage the valve body or seals.

Note: Internal components of the KVR15 are not user-serviceable. If the regulator malfunctions, it should be replaced by a qualified technician.

7. TROUBLESHOOTING

This section provides solutions to common issues that may arise with the KVR15 Pressure Regulator.

Problem	Possible Cause	Solution
Regulated pressure is too high/low.	Incorrect adjustment setting.	Adjust the regulator setting as described in the "Operating Instructions" section.
Pressure fluctuates significantly.	System instability; debris in regulator; incorrect sizing.	Check for system issues (e.g., TXV operation). If debris is suspected, the regulator may need replacement. Verify regulator sizing for the application.

Problem	Possible Cause	Solution
Refrigerant leak at connections.	Improper brazing; loose access port cap.	Re-braze connections if necessary. Ensure access port cap is securely tightened.
No pressure regulation.	Internal failure; completely clogged.	The regulator may need to be replaced. Consult a qualified technician.

If troubleshooting steps do not resolve the issue, contact a qualified HVAC/R technician or Danfoss technical support.

8. SPECIFICATIONS

Feature	Detail
Brand	Danfoss
Model Number	034L0097
Type	Evaporating Pressure Regulator (KVR15)
Connection Size	5/8 inch ODF (Outside Diameter Flare)
Measurement System	Inch
Features	Access Port
Manufacturer	Danfoss
ASIN	B0085POK2G
Date First Available	December 27, 2017

9. WARRANTY INFORMATION

Danfoss products are manufactured to high-quality standards. This product is covered by Danfoss's standard manufacturer's warranty. Specific warranty terms and conditions, including duration and coverage details, can be found on the official Danfoss website or by contacting Danfoss customer service. Please retain your proof of purchase for warranty claims.

Note: The warranty may be voided by improper installation, unauthorized modifications, or use outside of specified operating conditions.

10. CUSTOMER SUPPORT

For technical assistance, spare parts, or further information regarding the Danfoss KVR15 Pressure Regulator, please visit the official Danfoss website or contact their customer support department.

Danfoss Official Website: www.danfoss.com

When contacting support, please have your product model number (034L0097) and serial number (if applicable) ready.

