

Danfoss 013G0003

Danfoss RA-FN 15 Thermostatic Valve Instruction Manual

Model: 013G0003

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1. INTRODUCTION

This manual provides instructions for the installation, operation, and maintenance of the Danfoss RA-FN 15 Thermostatic Valve, model 013G0003. This valve is designed for use with radiators, featuring an angle connection without pre-setting, and includes a 1/2 inch iron connection and tailpiece. Please read these instructions carefully before installation and use to ensure proper function and safety.

2. SAFETY INFORMATION

Always observe general safety precautions when working with heating systems. Improper installation or maintenance can lead to property damage or personal injury.

- Ensure the heating system is depressurized and cooled before beginning any installation or maintenance work.
- Wear appropriate personal protective equipment (PPE), such as gloves and eye protection.
- If you are unsure about any part of the installation process, consult a qualified professional.
- Do not exceed the maximum operating pressure or temperature specified for the valve.

3. SETUP AND INSTALLATION

3.1 Tools Required

- Adjustable wrench or pipe wrench
- Thread sealant (e.g., PTFE tape or pipe dope)
- Bucket or towels for catching residual water

3.2 Preparation

1. Turn off the heating system and allow it to cool down completely.
2. Close the isolation valves for the radiator where the thermostatic valve will be installed. If no isolation valves are present, the entire heating system may need to be drained.
3. Drain any remaining water from the radiator by opening the bleed valve and loosening the existing valve connection.

3.3 Installation Steps

The Danfoss RA-FN 15 valve is designed for an angle connection to the radiator. It includes a 1/2 inch iron connection and a tailpiece.

1. Remove the old valve from the radiator connection. Clean the threads thoroughly.
2. Apply thread sealant to the threads of the new Danfoss RA-FN 15 valve and the tailpiece.
3. Screw the tailpiece into the radiator inlet. Tighten firmly with a wrench, but do not overtighten.
4. Connect the main valve body to the tailpiece. Ensure the flow direction arrow on the valve body (if present) matches the direction of water flow into the radiator.
5. Connect the other end of the valve to the heating pipework. Tighten all connections securely to prevent leaks.
6. Once the valve is installed, slowly open the isolation valves (if closed) and then the bleed valve on the radiator to allow water to refill the system and release trapped air. Close the bleed valve once water flows steadily.
7. Check all connections for leaks.

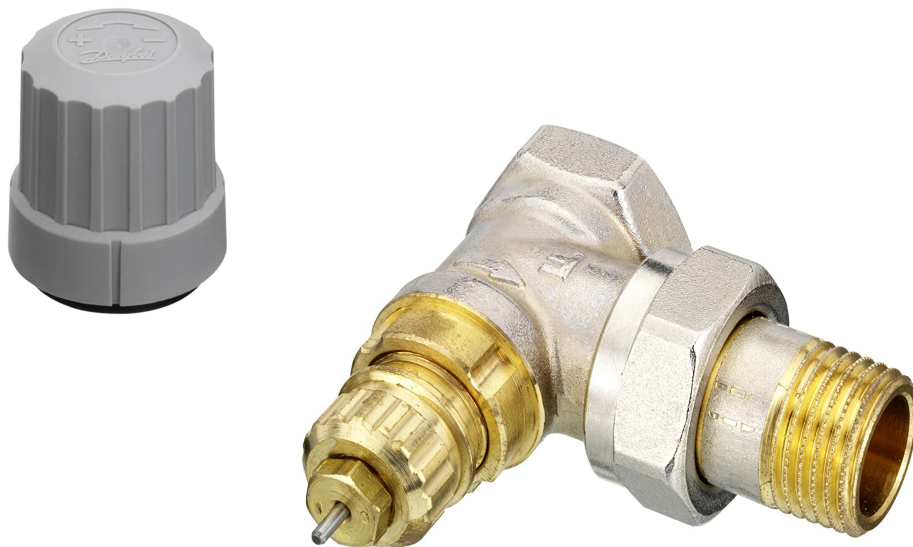


Image showing the Danfoss RA-FN 15 thermostatic valve, including the valve body and tailpiece. This valve is designed for an angle connection.

4. OPERATING INSTRUCTIONS

The Danfoss RA-FN 15 is a thermostatic radiator valve designed to regulate the room temperature by controlling the flow of hot water through the radiator. This model does not feature pre-setting, meaning the maximum flow is determined by the system pressure and the valve's design.

4.1 Temperature Adjustment

- To adjust the room temperature, rotate the thermostatic head (sold separately) attached to the valve.
- Typically, rotating the head clockwise decreases the temperature setting, and rotating it counter-clockwise increases it.
- The numbers or symbols on the thermostatic head correspond to different temperature levels. Refer to the specific instructions for your thermostatic head for precise temperature ranges.
- The valve automatically adjusts the water flow to maintain the desired room temperature, saving energy.

5. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your thermostatic valve.

- **Cleaning:** Periodically wipe the valve body and thermostatic head with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Checking for Leaks:** Regularly inspect all connections for any signs of water leaks. Tighten connections if necessary, but do not overtighten.
- **Valve Pin Movement:** If the radiator remains cold even when the thermostatic head is set to a high temperature, the valve pin might be stuck. Remove the thermostatic head and gently press the pin several times to free it. If the issue persists, professional assistance may be required.
- **Winterization:** If the heating system is shut down for an extended period during cold weather, ensure the system is properly drained or protected with antifreeze to prevent freezing damage to the valve and pipes.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Radiator remains cold	Valve pin stuck; air in radiator; thermostatic head set too low; system pressure too low.	Remove thermostatic head and gently press pin; bleed radiator; increase temperature setting; check system pressure.
Radiator is too hot	Thermostatic head set too high; valve not closing completely.	Decrease temperature setting; check valve pin for debris or damage.
Water leaks from connections	Loose connection; insufficient thread sealant; damaged threads.	Tighten connections; reapply thread sealant; replace valve if threads are damaged.

If troubleshooting steps do not resolve the issue, contact a qualified heating technician.

7. TECHNICAL SPECIFICATIONS

Feature	Value
Model Number	013G0003
Connection Size	1/2 inch (1.27 cm)
Connection Type	Female iron pipe (inlet/outlet)

Feature	Value
KV Range	0.22 - 0.7 m³/h
kVS Value	0.9 m³/h
Maximum Working Pressure	10 bar
Maximum Differential Pressure	0.6 bar
Maximum Water Temperature	120 °C
Material	Iron
Product Dimensions (L x W x H)	9.7 x 5.3 x 2.7 cm
Weight	240 grams
Number of Ports	2
Certification	EU RoHS (6c)

8. WARRANTY AND SUPPORT

Danfoss products are manufactured to high-quality standards. For specific warranty information, please refer to the documentation provided with your purchase or visit the official Danfoss website. Keep your proof of purchase for warranty claims.

For technical support, spare parts, or further assistance, please contact your local Danfoss distributor or customer service. Contact information can typically be found on the Danfoss official website or on the product packaging.