



DCR Filter Drier, Shell  
with Cross Gasket



# Danfoss DCR Filter Drier, Shell with Cross Gasket Installation Guide

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**Danfoss DCR Filter Drier, Shell with Cross Gasket**



## Specifications

- **Product Name:** Filter drier, shell with cross gasket Type DCR, DCR/H, DCR E
- **Refrigerants Compatibility:**
  - R1233zd, R134a, R407A, R407C, R407F, R407H, R410A, R422B, R422D, R448A, R449A, R449B, R450A, R452A, R513A, R515B, etc.
  - R1234yf, R1234ze, R32, R444B, R452B, R454A, R454B, R454C, R455A, R457A, R516A, etc.
  - R1234yf, R1234ze, R32, R444B, R452B, R454A, R454B, R454C, R455A, R457A, R516A, R290, R600a, etc.
- **Working Pressure:** From 7 to 13 bar (PS) / 100 to 667 psig (MWP)
- **Material:** Copper Steel
- **Brazing Material:** Min. 5% Ag Silver-flo 55 + Easy-flow flux

## Product Usage Instructions

### Installation

When installing the filter drier:

- Use a ratcheting wrench of 13mm for DCR and DCRE gasket installation.
- Use an Allen wrench of 6mm for DCR/H gasket installation.
- Apply a small amount of oil to the gasket before assembly.

### Tightening Instructions

**Follow these steps to tighten the bolts:** Finger-tighten all bolts using the specified sizes for each type (M8-1.5 x 35mm for DCR/M8-1.5 x 35mm G12.9 for DCR/H/M10-1.5 x 40mm for DCRE).

1. Step 1: 3 Nm / 2.21 ft lb
2. Step 2: 10 Nm / 7.37 ft-lb
3. Step 3: 20 Nm / 14.75 ft-lb
4. Step 4: 28 Nm / 20.65 ft-lb

### **Maintenance**

Replace the gasket every time the filter is opened to ensure proper sealing.

### **Safety Precautions**

Keep flames away from the body during brazing. Ensure correct gasket selection before installation.

### **Refrigerants**

#### **DCR Standard (A1, Group 2)**

- R1233zd, R134a, R407A, R407C, R407F, R407H, R410A, R422B, R422D, R448A, R449A, R449B, R450A, R452A, R513A, R515B, etc.
- For other refrigerants, please contact your Danfoss representative.

**Media Temperature:** -40 – 70 °C / -40 – 160 °F

**DCR/H (A2L, Group 1) – UL Listed, for use in the US market only** R1234yf, R1234ze, R32, R444B, R452B, R454A, R454B, R454C, R455A, R457A, R516A, etc.

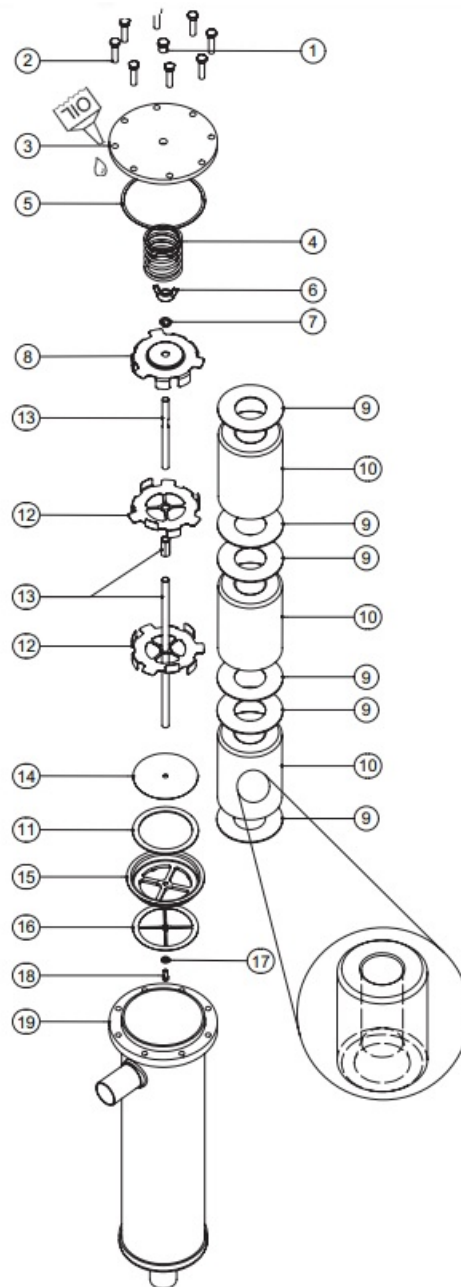
Also compatible with DCR Standard Refrigerants.

#### **DCRE (A3, A2L, Group 1) – PED approved**

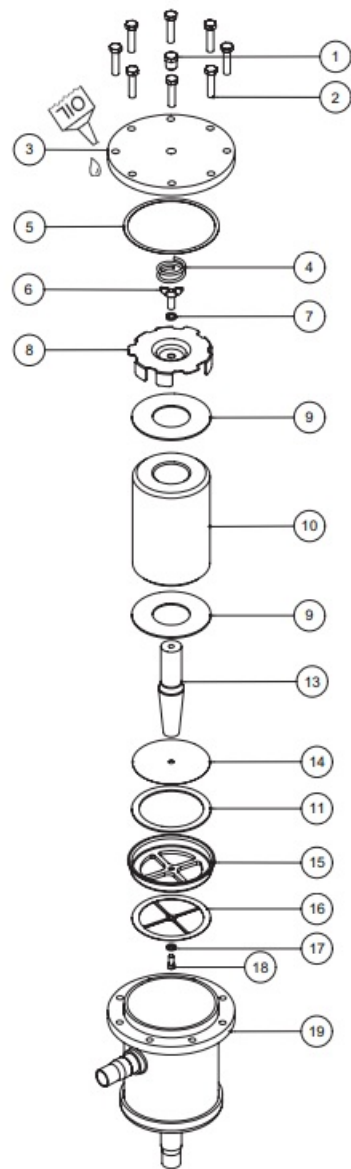
- R1234yf, R1234ze, R32, R444B, R452B, R454A, R454B, R454C, R455A, R457A, R516A, R290, R600a, etc.
- Also compatible with DCR Standard Refrigerants.

### **Design**

#### **DCR and DCR/H**



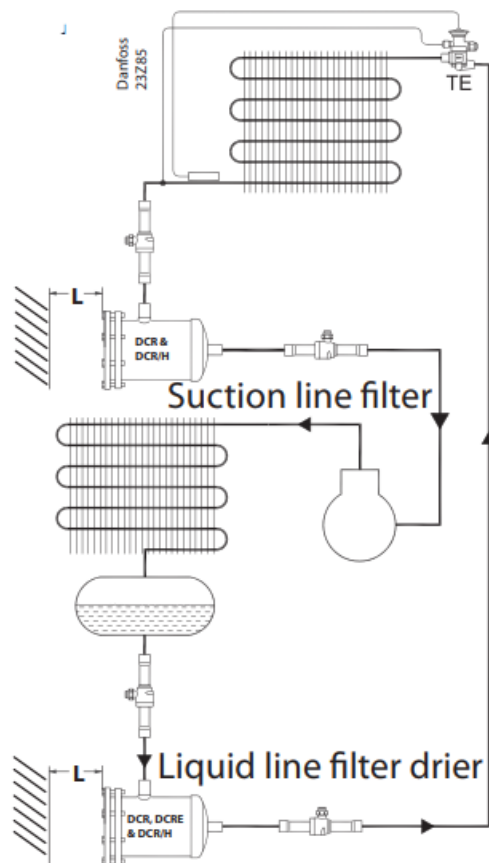
DCR E



Position.	Description
1	Plug for cover
2	Bolts for cover
3	Top cover
4	Spring
5	Top cover gasket
6	Wing Nut (DCR) / Bolt (DCRE)
7	Lock washer
8	top plate
9	Core felt gasket
10	Solid core
11	Core holder felt gasket
12	Core plate
13	Distance rods
14	Wire Mesh
15	Core holder
16	Cross gasket
17	Washer
18	Hex socket head screw
19	Cover

The inner taper of the core always faces the filter outlet. This applies to all DCR Families.

## Installation



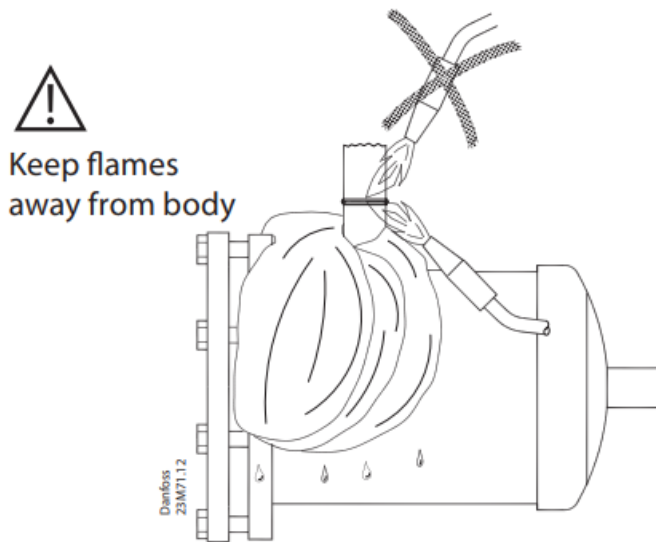
Type		Minimum		Maximum working pressure PS / MWP [bar] / [psig]
		[mm]	[in]	
DCR DCR/H	048	170	7	46 / 667 *
DCR DCR/H	096	310	13	46 / 667 *
DCR DCR/H	144	310	13	35 / 507 <sup>1</sup> )
				46 / 667 <sup>2</sup> )
DCR DCR/H	192	310	13	28 / 406 <sup>1</sup> )
				40 / 580 <sup>2</sup> )
DCRE	048	170	7	50 / 725

1. For use with a strainer or as a receiver application
2. For the “drier” application using all permissible cores
3. For 1\* or 2\*

MWP shall not be less than the pressure described in section 9.2 of ANSI/ASHRAE 15 for the refrigerant used in the system. After charging, the system shall be marked with the refrigerant and oil used.

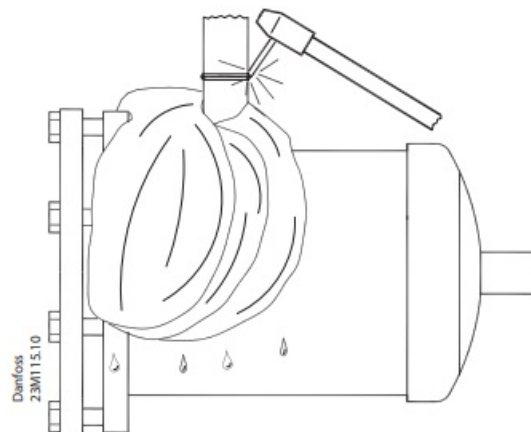
“The DCRE can only be used for A2L when the solid core is placed. The DCRE is not allowed to be used as a receiver.”

## Brazing



Connector type	Brazing material
Copper	Min. 5 % Ag
Steel	Silver-flo 55 + Easy-flow flux

## Welding

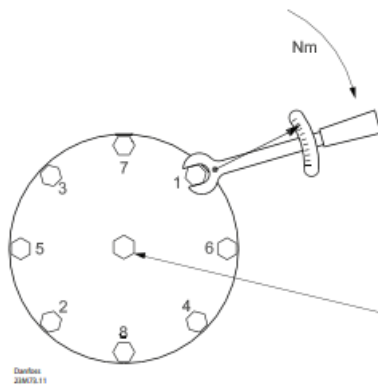
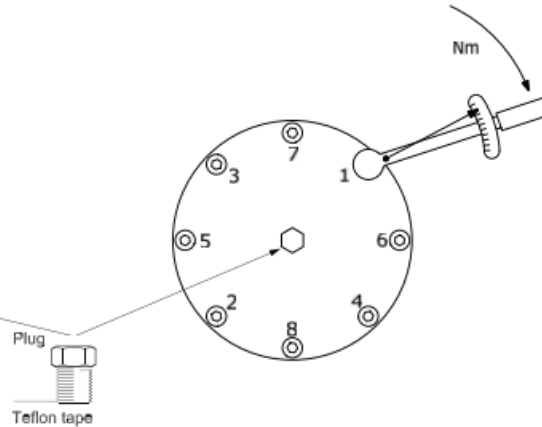


### Customer best practices will still be required:

- Use wet wrap when installing.
- Braze the joints.
- Let them cool.
- Clean the brazing/welding area after installation (remove the remaining flux with a brush).
- This is an important operation and needs to be done with great care to remove all remaining flux.
- Paint / Anti-corrosive needs to cover all exposed steel parts, areas where the original black paint has burned away due to brazing and at least 3 cm around the copper.
- Paint the joints twice.

## How to tighten bolts

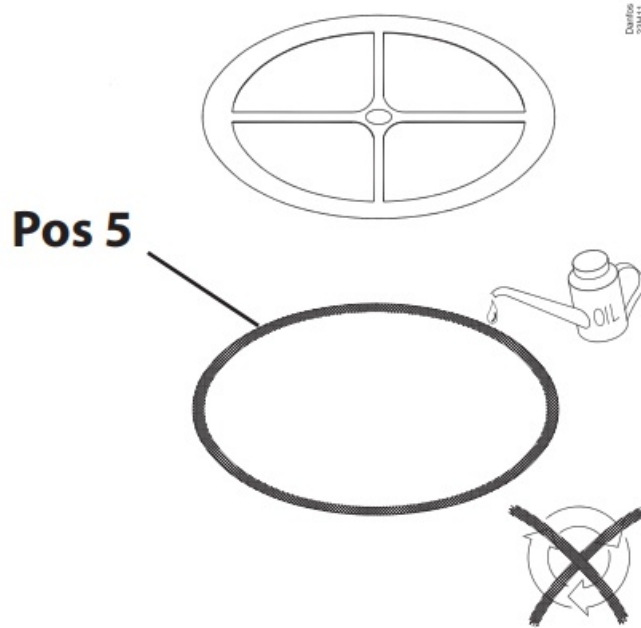


**DCR and DCRE****Ratcheting wrench of 13mm****DCR/H****Allen wrench of 6mm**

	<b>DCR</b> <b>M8-1.5 x 35mm</b> <b>A2-70 Hex head</b>	<b>DCRE</b> <b>M10-1.5 x 40mm</b> <b>A2-70 Hex head</b>	<b>DCR/H</b> <b>M8-1.5 x 35mm</b> <b>G12.9 Socket head</b>
<b>Step 1</b>	<b>Fingertighten all bolts</b>		
<b>Step 2</b>	3 Nm / 2.21 ft lb	5 Nm / 3.69 ft lb	4 Nm / 2.95 ft lb
<b>Step 3</b>	10 Nm / 7.37 ft lb	20 Nm / 14.75 ft lb	13 Nm / 9.59 ft lb
<b>Step 4</b>	20 Nm / 14.75 ft lb	35 Nm / 25.81 ft lb	25 Nm / 18.44 ft lb
<b>Step 5</b>	28 Nm / 20.65 ft lb	50 Nm / 36.88 ft lb	35 Nm / 25.81 ft lb

**Gasket**

# Gasket



Do not install a gasket before soldering.

**Note:** Confirm the correct top cover gasket is selected. There are 2 gaskets:

- DCR and DCR/H
- DCRE

## Recommendation

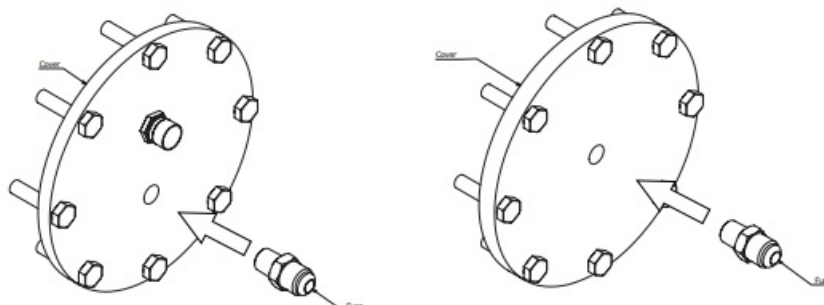
- Apply a small amount of oil to the gasket before assembly.
- Preferably POE or PVE synthetic oil, although any general-purpose oil can be used.

**Note:** Do not reuse the gasket.

## Optional Fuse and/or Plug, recommended tightening torques:

- **Fuse:** 1/4"NPT – 3/8" Flare: 20 Nm / 14.75 ft-lb applying 2 to 3 wraps of Teflon tape.
- **Plug:** 1/4" NPT: 50 Nm / 36.87 ft-lb applying 2 to 3 wraps of Teflon tape.

## Reference



The torque values mentioned only apply to bolts supplied by Danfoss.

Each step should be applied after the image sequence.

## FAQ

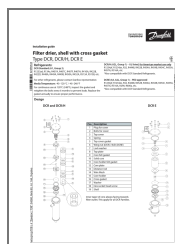
### Q: Can DCRE be used as a receiver?

A: No, DCRE cannot be used as a receiver. It is only suitable for A2L when the solid core is placed.

### Q: What type of oil should be applied to the gasket?

A: Preferably synthetic POE or PVE oil is recommended for applying to the gasket before assembly. However, any general-purpose oil can be used.

## Documents / Resources



[Danfoss DCR Filter Drier, Shell with Cross Gasket](#) [pdf] Installation Guide  
023R9543, 23M71.12, 23M115.10, 23Z85, DCR Filter Drier Shell with Cross Gasket, DCR, Filter Drier Shell with Cross Gasket, Drier Shell with Cross Gasket, Shell with Cross Gasket, Cross Gasket, Gasket

## References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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