

Fig. 1

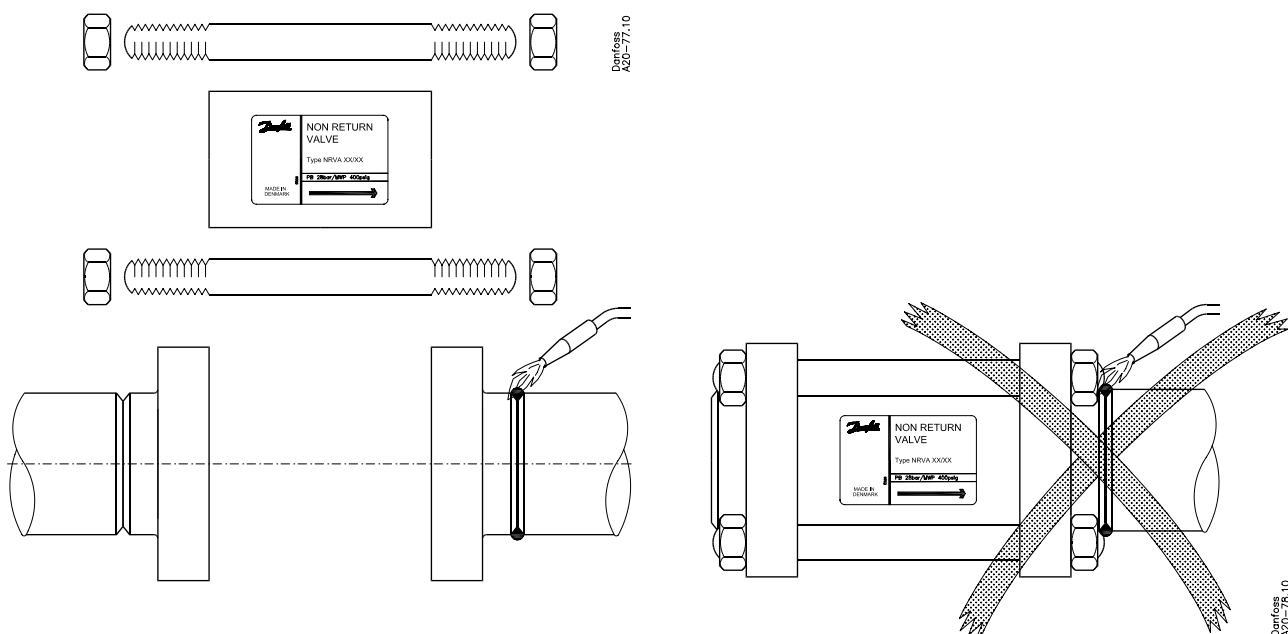


Fig. 2

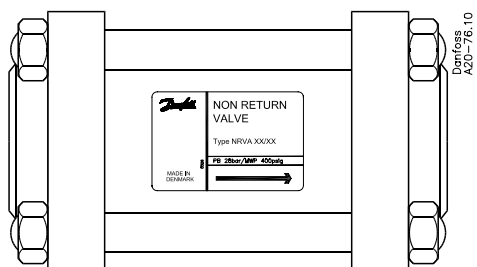


Fig. 3

Type	Bolt	Nm	LB-Feet
NRVA 15-20	2 × M12	50	37
NRVA 25-32	4 × M12	70	52
NRVA 40-50	4 × M12	70	52
NRVA 65	8 × M16	100	74

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**Installation**


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**Refrigerants**

Applicable to all common non-flammable refrigerants, including R717 and non-corrosive gases/liquids dependent on sealing material compatibility. Flammable hydrocarbons are not recommended. The valve is only recommended for use in closed circuits. For further information please contact Danfoss.

**Temperature range**

NRVA: -50/+140°C (-58/+285°F)

**Pressure range**

NRVA: The valves are designed for a max. working pressure of 40 bar g (580 psi g).

**Installation**

The valve must be installed in the flow direction as indicated by the arrow on the valve housing (fig. 1).

The valve is designed to withstand a high internal pressure. However, the piping system should be designed to avoid liquid traps and reduce the risk of hydraulic pressure caused by thermal expansion. It must be ensured that the valve is protected from pressure transients like "liquid hammer" in the system.

**Welding**

The internal parts should be removed before welding (fig. 2) to prevent damage to the gaskets, as well as the teflon gasket in the valve seat.

Only materials and welding methods, compatible with the flange material, must be welded to the flanges. The flanges should be cleaned internally to remove welding debris on completion of welding and before the valve is reassembled.

Be careful not to damage the teflon on the cone.

The valve inclusive flanges must be free from stresses (external loads) after installation.

The valves must not be mounted in systems where the outlet side of the valve is open to atmosphere. Both the inlet and outlet side of the valve must always be connected to the system or properly capped off, for example with a welded-on end plate.

**Assembly**

Remove welding debris and any dirt from pipes and valve body before assembly.

**Tightening**

Tighten the staybolts and nut with a torque wrench, to the values indicated in the table (fig. 3).

**Surface protection**

The external surface of the flanges must be prevented against corrosion with a suitable protective coating after installation and assembly.

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**Maintenance**


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**Dismantling the valve**

Do not remove the valve housing while the valve is still under pressure.

- Check that the gasket has not been damaged.
- Check that the cone is free of scratches and impact marks.
- If the teflon cone ring has been damaged, the whole cone assembly must be replaced.

**Assembly**

Remove any dirt from the body before the valve is assembled.

**Tightening**

Tighten the staybolts and nut with a torque wrench, to the values indicated in the table (fig. 3).

Use only original Danfoss parts, including gaskets for replacement. Materials of new parts are certified for the relevant refrigerant.

In cases of doubt, please contact Danfoss. Danfoss accepts no responsibility for errors and omissions. Danfoss Industrial Refrigeration reserves the right to make changes to products and specifications without prior notice.

**DECLARATION OF CONFORMITY**  
The Pressure Equipment Directive 97/23/EC



**Name and Address of Manufacturer within the European Community**

Danfoss Industrial Refrigeration A/S  
Stormosevej 10  
PO Box 60  
DK-8361 Hasselager  
Denmark

**Declaration**

We hereby declare that below-mentioned equipment are classified for Fluid Group I (all refrigerants (toxic, non-toxic, flammable and non-flammable)), and that all are covered by Article 3, paragraph 3.

For further details / restrictions – see Installation Instruction

**Description of Pressure Equipment**

Refrigerant check valve

**Type NRVA**

Nominal bore	DN ≤ 25 mm (1 in.)
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**References of other Technical Standards and Specifications used**

prEN 12284      DIN 3158  
AD-Merkblätter

**Authorised Person for the Manufacturer within the European Community**

**Name:** Michael Breumsø      **Title:** Production Manager

**Signature:**       **Date:** 13/10/2004

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**DECLARATION OF CONFORMITY**  
The Pressure Equipment Directive 97/23/EC



**Name and Address of Manufacturer within the European Community**

Danfoss Industrial Refrigeration A/S  
Stormosevej 10  
PO Box 60  
DK-8361 Hasselager  
Denmark

**Description of Pressure Equipment**

Refrigerant check valve

**Type NRVA**

Nominal bore	<b>DN 32-65 mm.</b> (1 <sup>1</sup> / <sub>4</sub> - 2 <sup>1</sup> / <sub>2</sub> in.)	
Classified for	<b>Fluid Group I</b> (all refrigerants (toxic, nontoxic, flammable and nonflammable)). For further details / restrictions - see Installation Instruction.	
Temperature range	NRVA	<b>-50°C/+140°C</b> (-58°F/+284°F)
Maximum allowable working pressure	NRVA	<b>40 bar (580 psi)</b> -50°C/+140°C (-58°F/+284°F)

**Conformity and Assessment Procedure Followed**

Category	<b>II</b>		
Module	<b>D1</b>		
Certificate ID	-		
Nominal bore	Standard applications	DN 32-65 mm (1 <sup>1</sup> / <sub>4</sub> - 1 <sup>1</sup> / <sub>2</sub> in.)	

**Name and Address of the Notified Body which carried out the Inspection**

TÜV-Nord e.V.  
Grosse Bahnstrasse 31  
22525 Hamburg, Germany



**Name and Address of the Notified Body monitoring the Manufacturer's Quality Assurance System**

TÜV-Nord e.V.  
Grosse Bahnstrasse 31  
22525 Hamburg, Germany

**References of Harmonised Standards used**

**References of other Technical Standards and Specifications used**


prEN 12284      DIN 3158  
AD-Merkblätter      DIN 17173

**Authorised Person for the Manufacturer within the European Community**

**Name:** Michael Breumsø

**Title:** Production Manager

**Signature:**

  
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**Date:** 13/10/2004

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