Danfoss FR7 VACON NXP Air Cooled Instruction Manual

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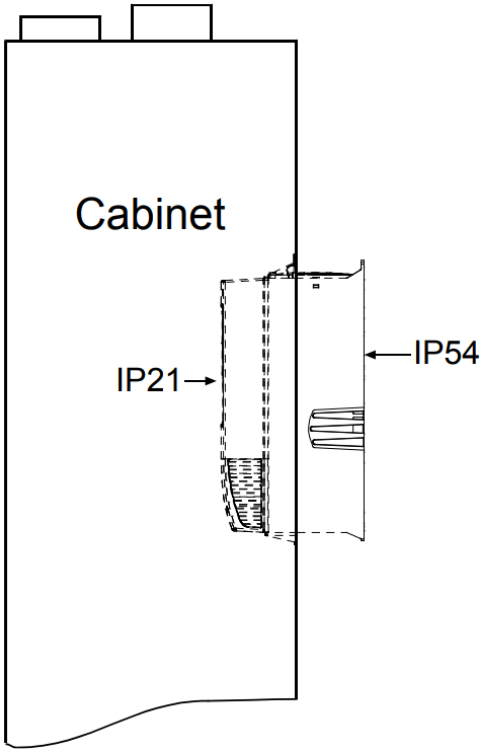
Contents

GENERAL

Using the VACON® Flange Mounting Kit, you can mount your VACON® NX AC drive through the cabinet wall so that the control unit of the drive remains inside the cabinet.

The correct installation of the Flange Mounting Kit affects the IP protection class of the frequency converter. After the installation, the control unit is protected according to IP21 and the power unit according to IP54 (unless the frequency converter was originally IP21-protected). See figure below.

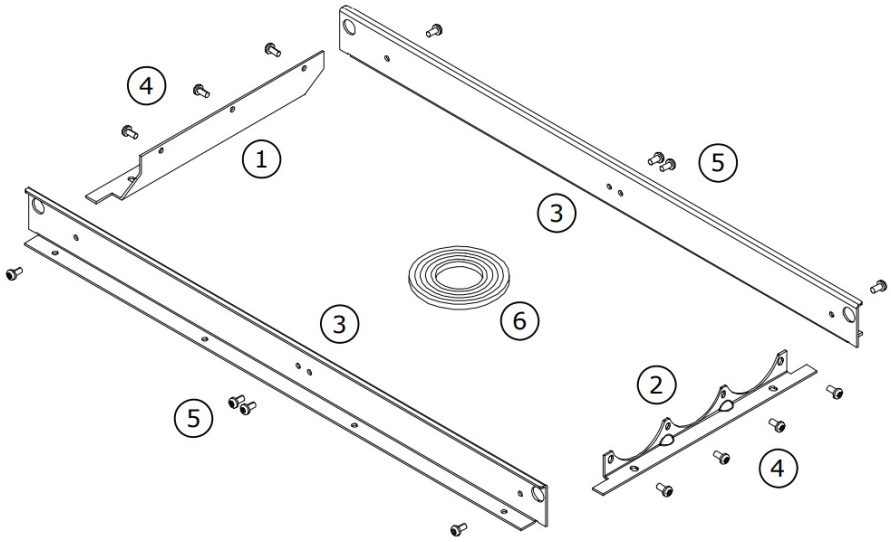


According to standard IEC 60529 (EN 60529), the IP54 AC drive enclosure provides protection against dust and water sprayed from all directions. Limited ingress of both is permitted.

VACON® FLANGE MOUNTING KIT CONTENTS

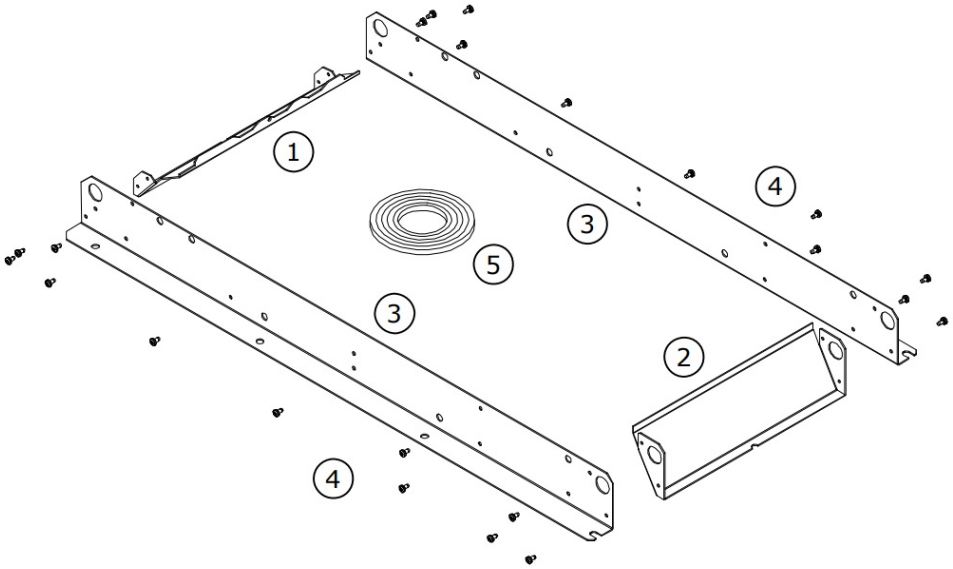
The contents of the Flange Mounting Kits for different frames are shown in the following pictures.

FR7:



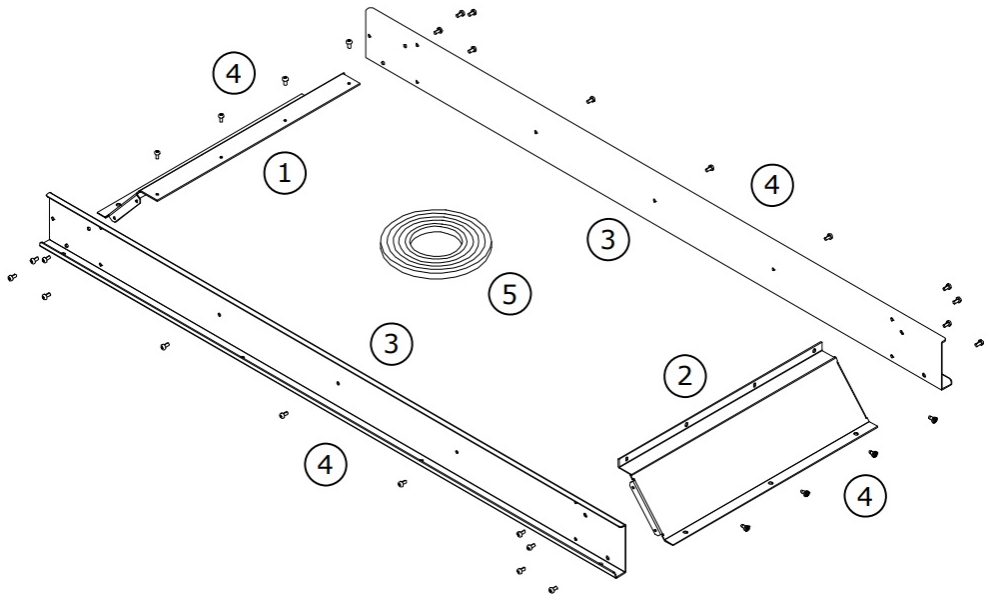
1. Flange, top
2. Flange, bottom
3. Flange, side
4. Screws (5×10 TF)
5. Screws (5×10 TX)
6. Sealing tape

FR8:



1. Flange, top
2. Flange, bottom
3. Flange, side
4. Screws (4×8 TF)
5. Sealing tape

FR9:



1. Flange, top

2. Flange, bottom
3. Flange, side
4. Screws (5×10 TX)
5. Sealing tape

INSTALLATION

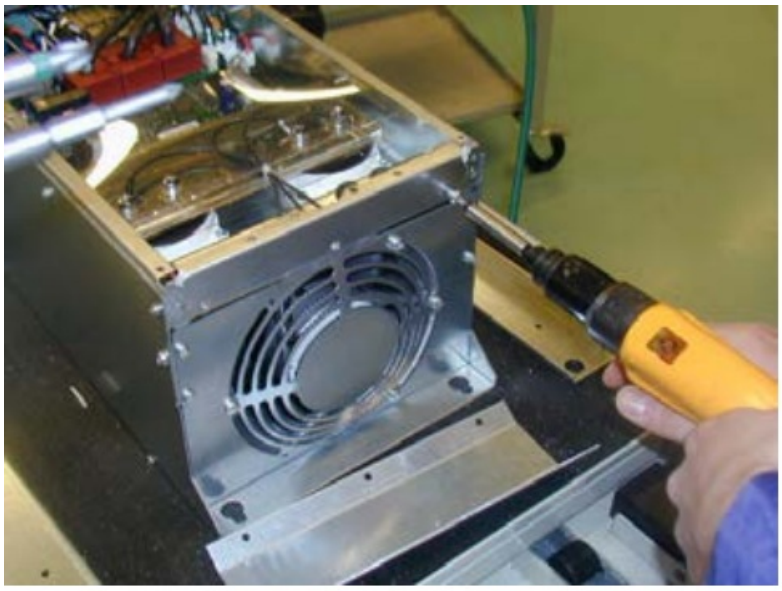
These instructions guide you through the installation of the Flange Mounting Kit that you have purchased for your FR7, FR8 or FR9 size AC drive.

NOTE! The sealant to be used in the flange mounting kit installation is flame retardant silicone sealant (e.g. Sika Firesil -N)

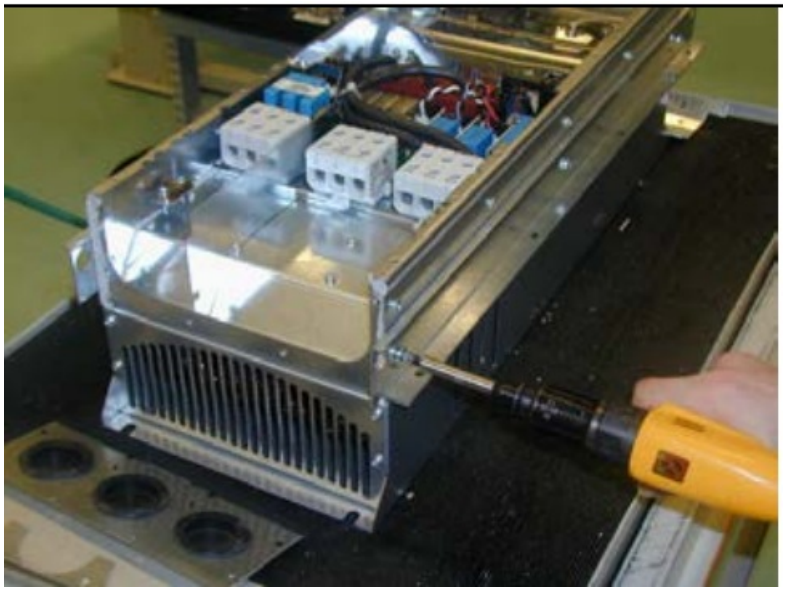
FR7

1. Remove the three screws from both sides of the AC drive.

2. Remove also three screws from the top of the AC drive.

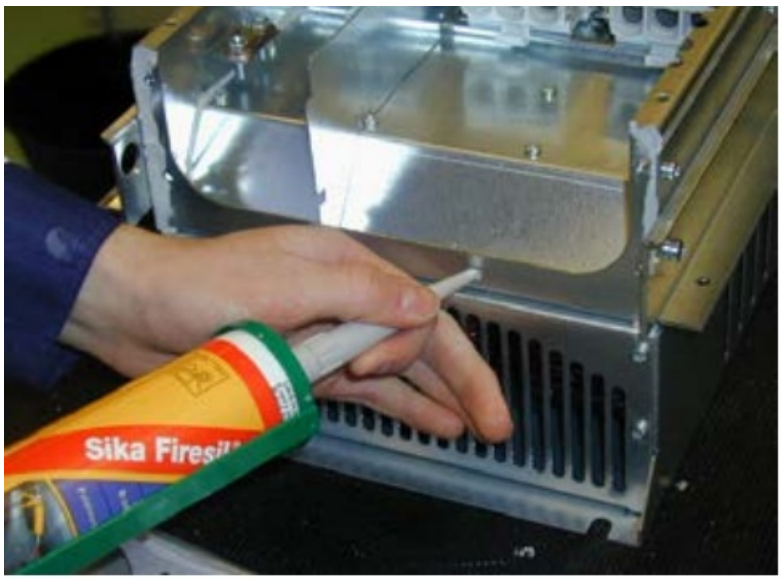


3. Attach the side flange to both sides with 5×10 Torx screws

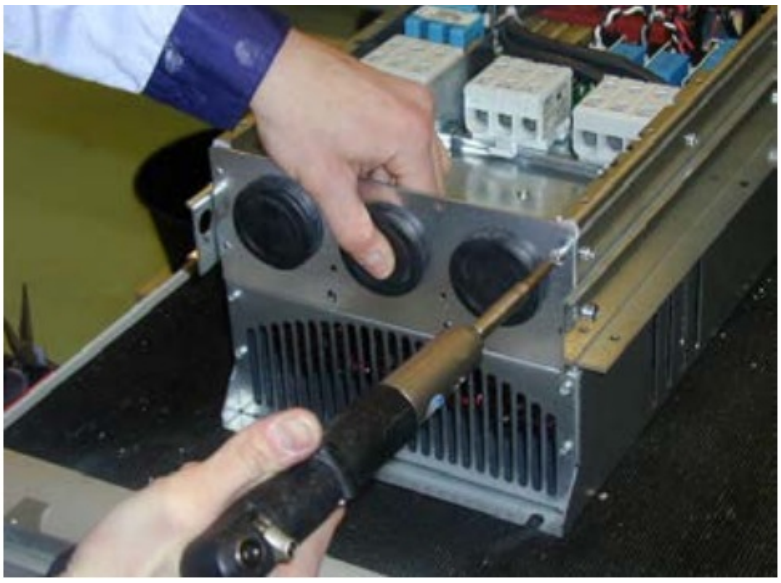


4. Attach the top flange with three 5×10 TF screws.

5. Seal the two holes and the sides in the bottom of the AC drive.

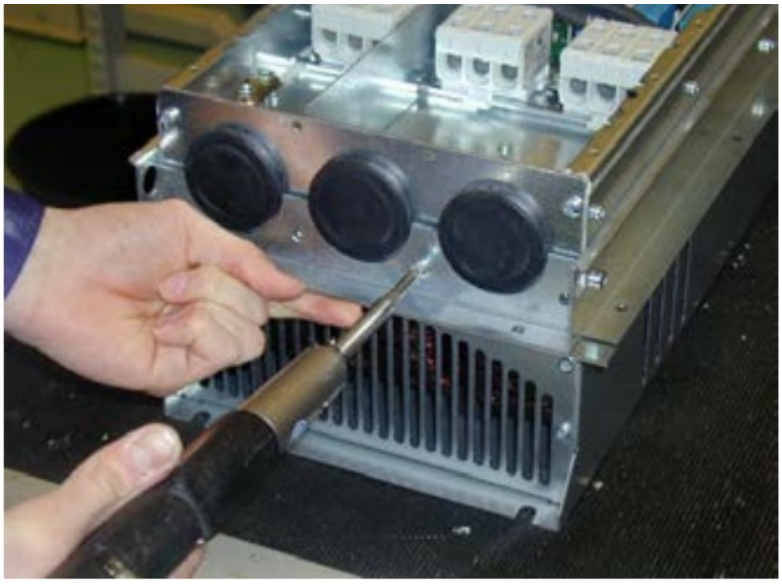


6. Fix the cable entry flange to its place. Attach first the screws (5×10 TF) in the upper corners.



7. Seal the bottom flange.

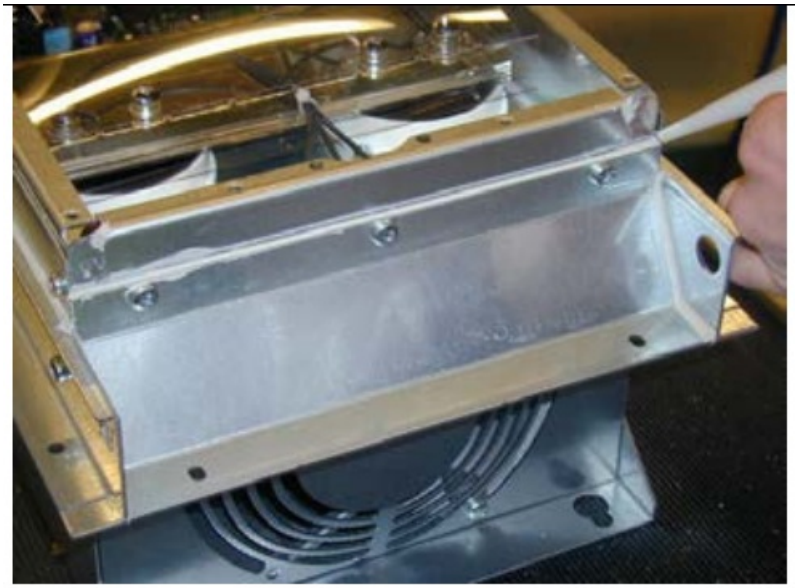
8. Attach the bottom flange. Fasten first only the two screws (5×10 TF) in the middle



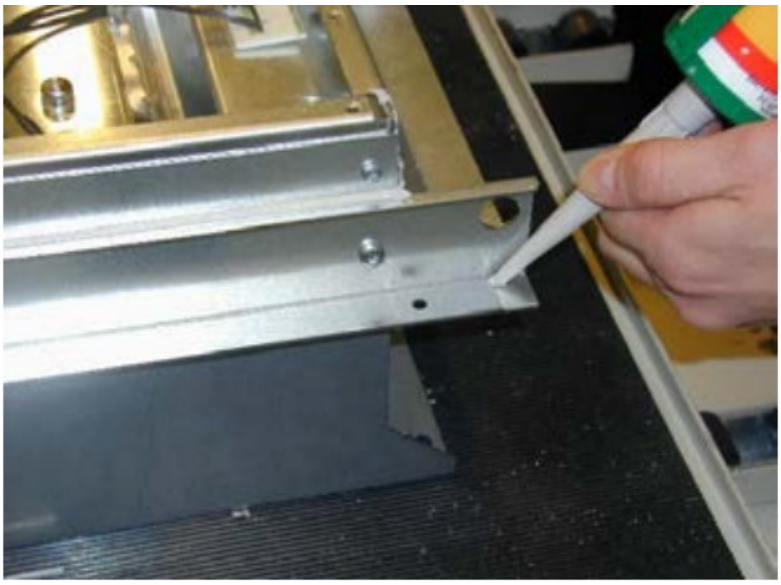
9. Seal the sides of the cable entry flange. Then attach the two remaining screws (5×10 TF).

10. Seal the sides of the frequency converter.

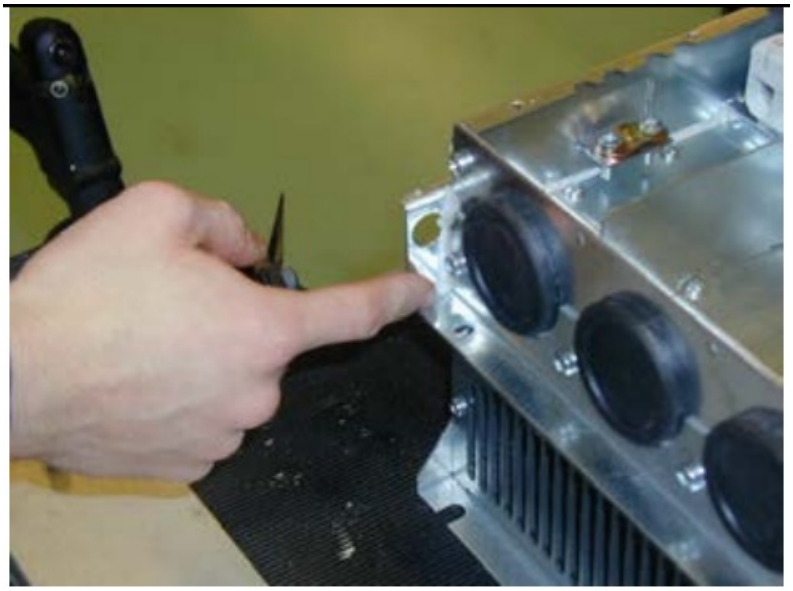
11. Seal the top flange.



12. Seal the small seams in each corner.

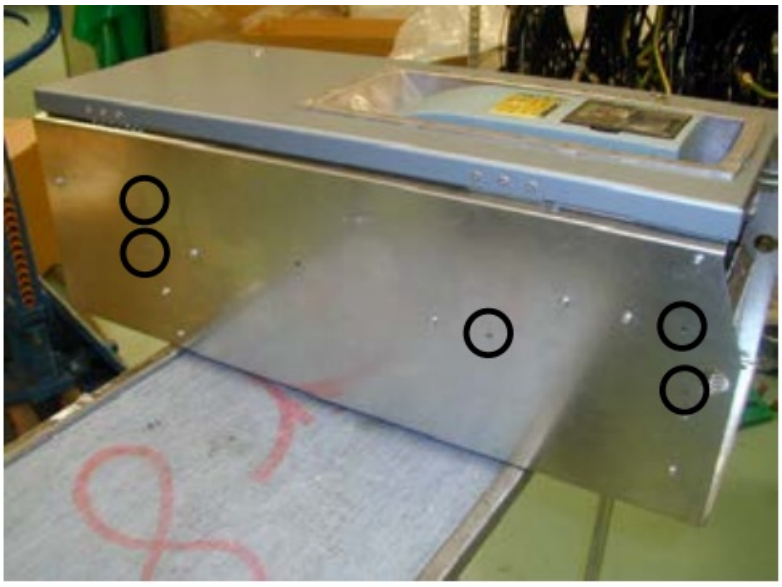


13. Smoothen all sealed seams with your finger. Tip your finger in soap water before smoothening the seams.



FR8

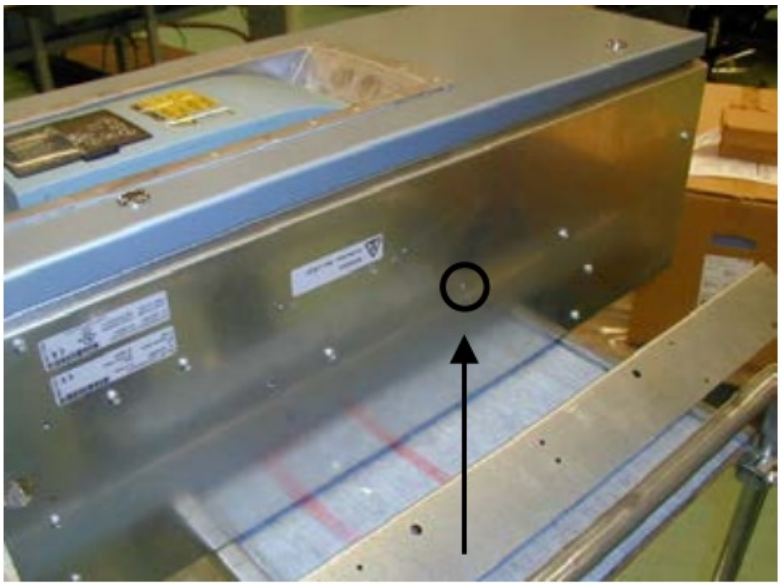
1. Remove these five screws from the right side of the AC drive.



2. Apply sealant to the right side flange.

3. Attach the right side flange with five screws (4×8 TF).

4. Repeat the steps 1-3 with the left side flange. Remove also the middle screw from this side.



5. Seal the bottom flange with sealing tape and attach it with four screws (4×8 TF).

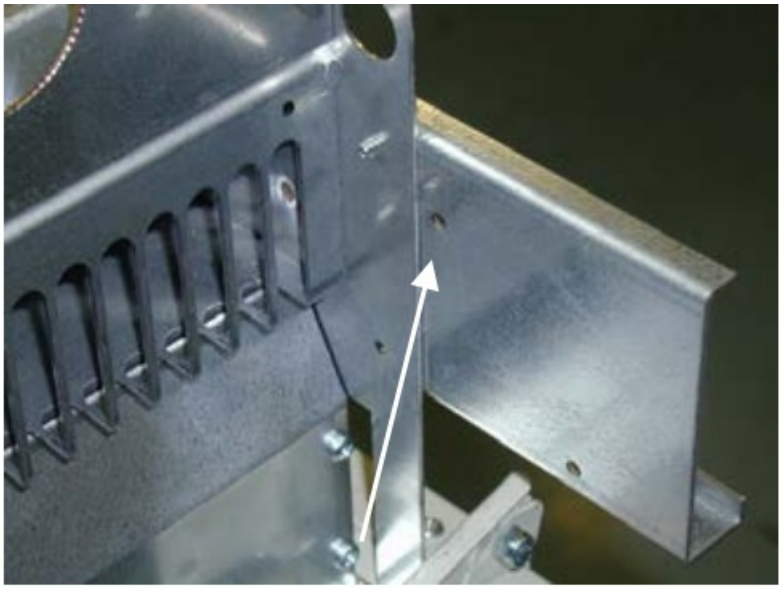
6. Seal the top flange with sealant.

7. Attach the top flange with five screws (4×8 TF). See also the next picture.

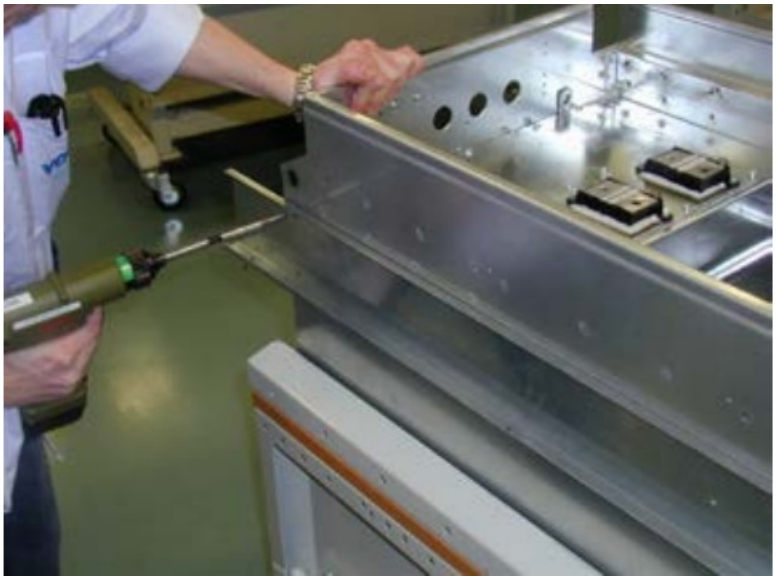
8. Seal all seams of the top and bottom flanges with sealant.

FR9

1. Before attaching the side flanges check that they are in the correct order. If the inner hole is not showing the flange is on the wrong side.



2. Seal the side flanges with sealant and attach them with 7 (5×10 TX) screws each.



3. Seal the top flange with sealant and fasten it with four screws (5×10 TX).

4. Fasten the sides of the top flange with two screws/side (5×10 TX).

5. Carefully seal all the seams of the top flange with sealant.

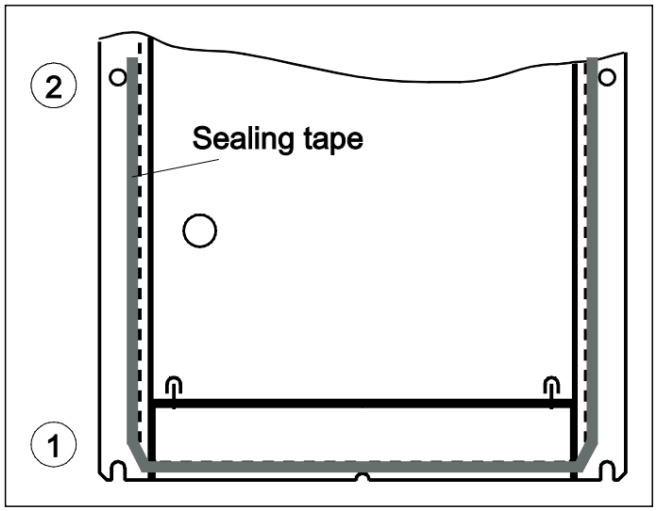
6. Seal the bottom flange with sealant and attach it four screws (5×10 TX).

7. Fasten the sides of the bottom flange with two screws/side (5×10 TX). Seal all seams as shown in step 5.

MOUNTING

MOUNTING PROCEDURE

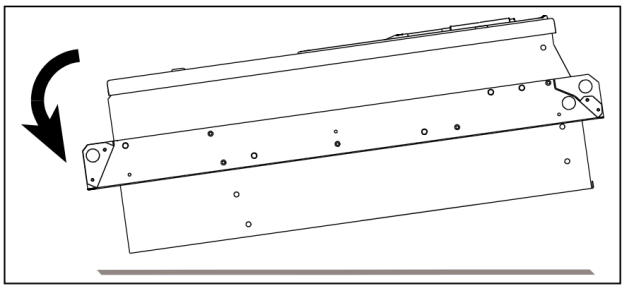
1. Make an opening in the cabinet door for the flange (collar) installation using the dimensions given in VACON® NX User's manual, chapter 5.
2. Attach the sealing tape around the opening. **See Figure 1**

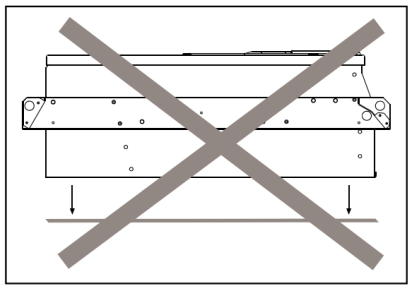


for how to bend the tape at the corners of the opening (1) and place the tape so that it runs inside the screws (2). The kit contains a greater amount of tape than what you might need. Only use such an amount of tape required by the dimensions of the opening.

3. Fit the AC drive in the opening.

NOTE! The AC drive will not fit in the opening in a straight position. Tip the drive positioning the lower end first in the opening. **See Figures 2 and 3.**

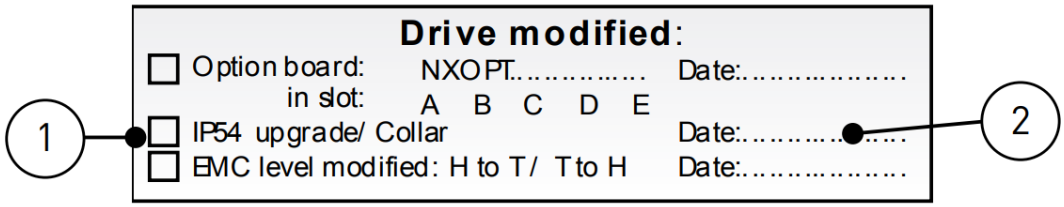




Fix the AC drive on the plane with the screws included in the kit (FR7: M5 screws / FR8: M6 screws, FR9: M5 screws).

INFORMATION STICKER

Each Flange Mounting Kit delivered by the factory includes a sticker (shown below). Please check IP54/Collar (1) and mark the installation date (2) on the sticker. Finally, attach the sticker on the drive.



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Documents / Resources

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References

- Contacts list | Danfoss
- Engineering Tomorrow | Danfoss
- User Manual