

Flange Mount Kits for Frames FS4 to FS7 Mounting Instructions

General

Using the optional Flange Mounting Kit, you can mount your drive through the cabinet wall or similar surface so that the control unit of the drive remains inside the cabinet.

The correct installation of the Flange Mounting Kit might affect the IP or UL protection class of the drive. If your drive is protected according to Type12/IP54, or your drive is supplied with flange option at the factory, you only need to install the collars, as instructed. However, the power module of a Type1/IP21-protected drive will only become protected according to Type12/IP54 on the rear side (see figure below), if all parts of the flange mounting kit are installed properly. The need for this has to be evaluated and these actions are explained in this guide.

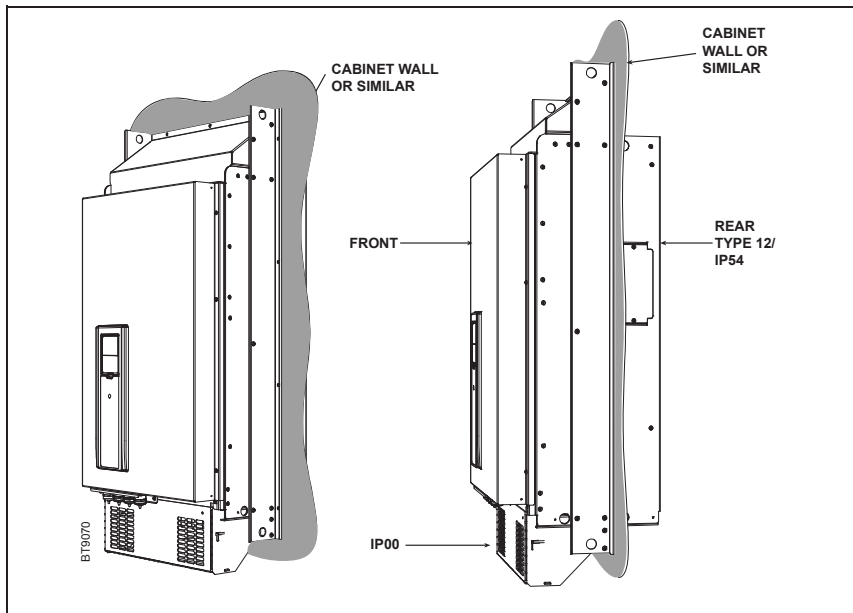


Figure 1. Example of the flange mounting.

Flange Mount - Frames FS4 - FS7

Figures 2. - 5. present the dimensions of the drives with the flange mount option. Figure 6. present the dimensions of the opening and the drive outline with the flange.

Use the embossed holes or self-clinching nuts in the back plate when mounting the drive to ensure proper sealing.

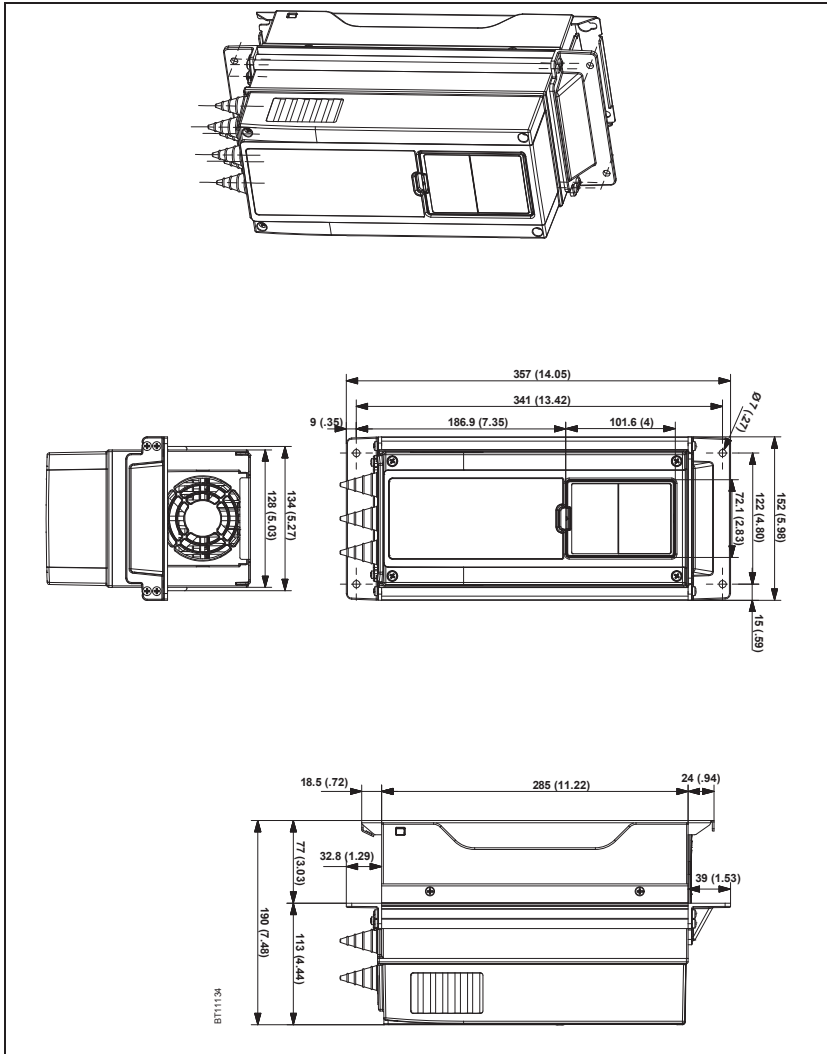


Figure 2. FS4, flange mount, dimensions.

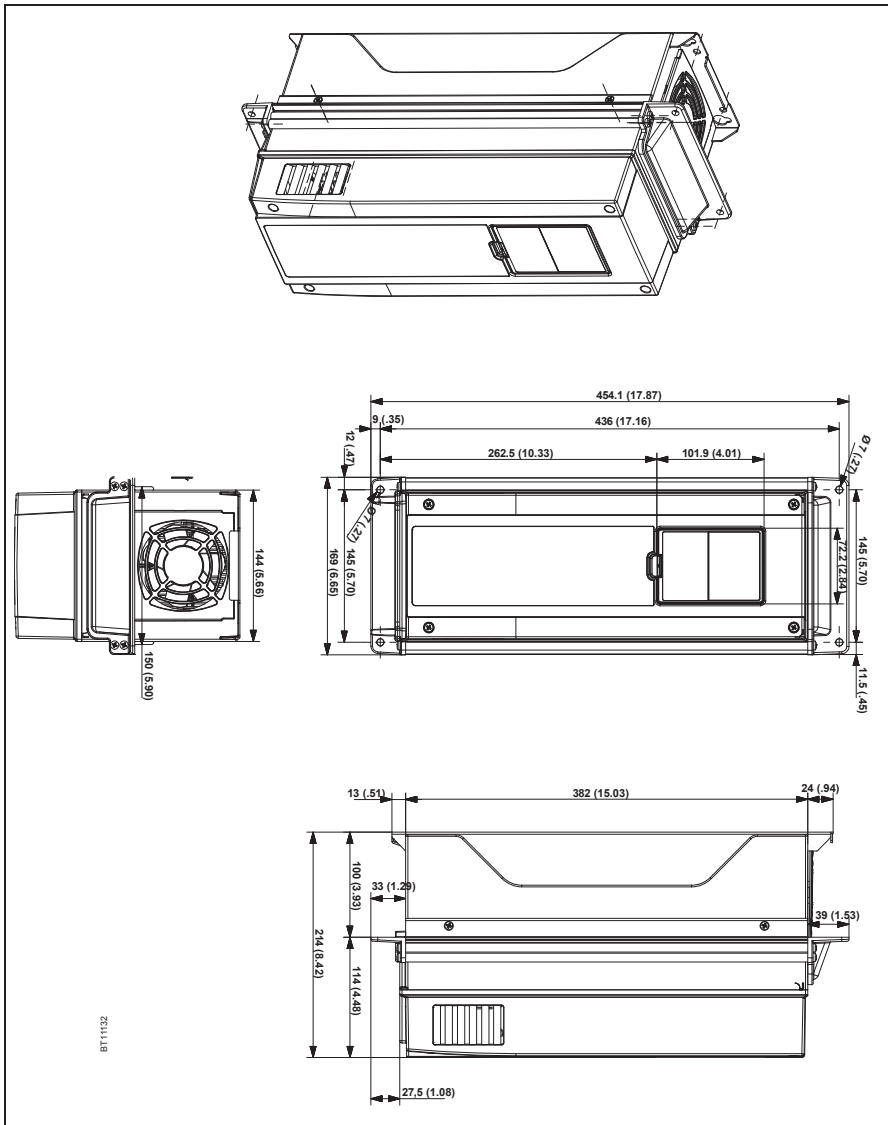


Figure 3. FS5, flange mount, dimensions.

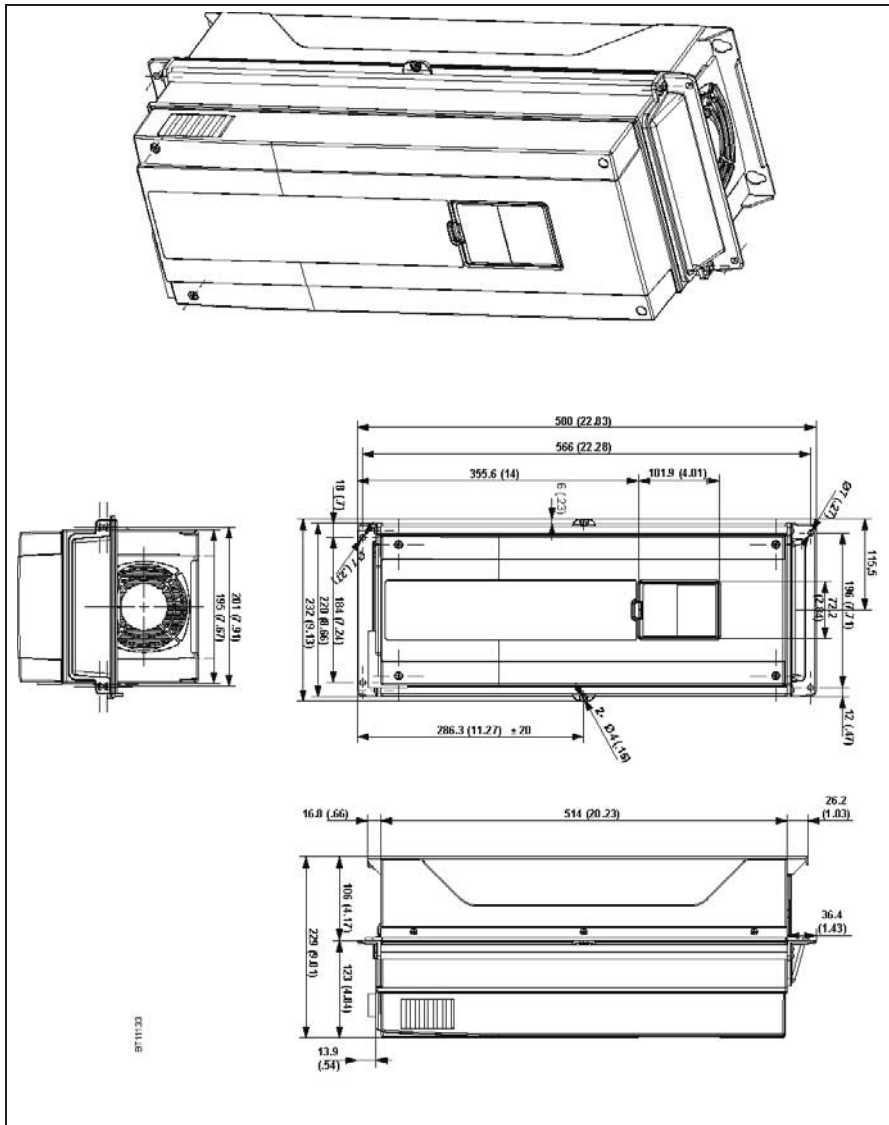


Figure 4. FS6, flange mount, dimensions

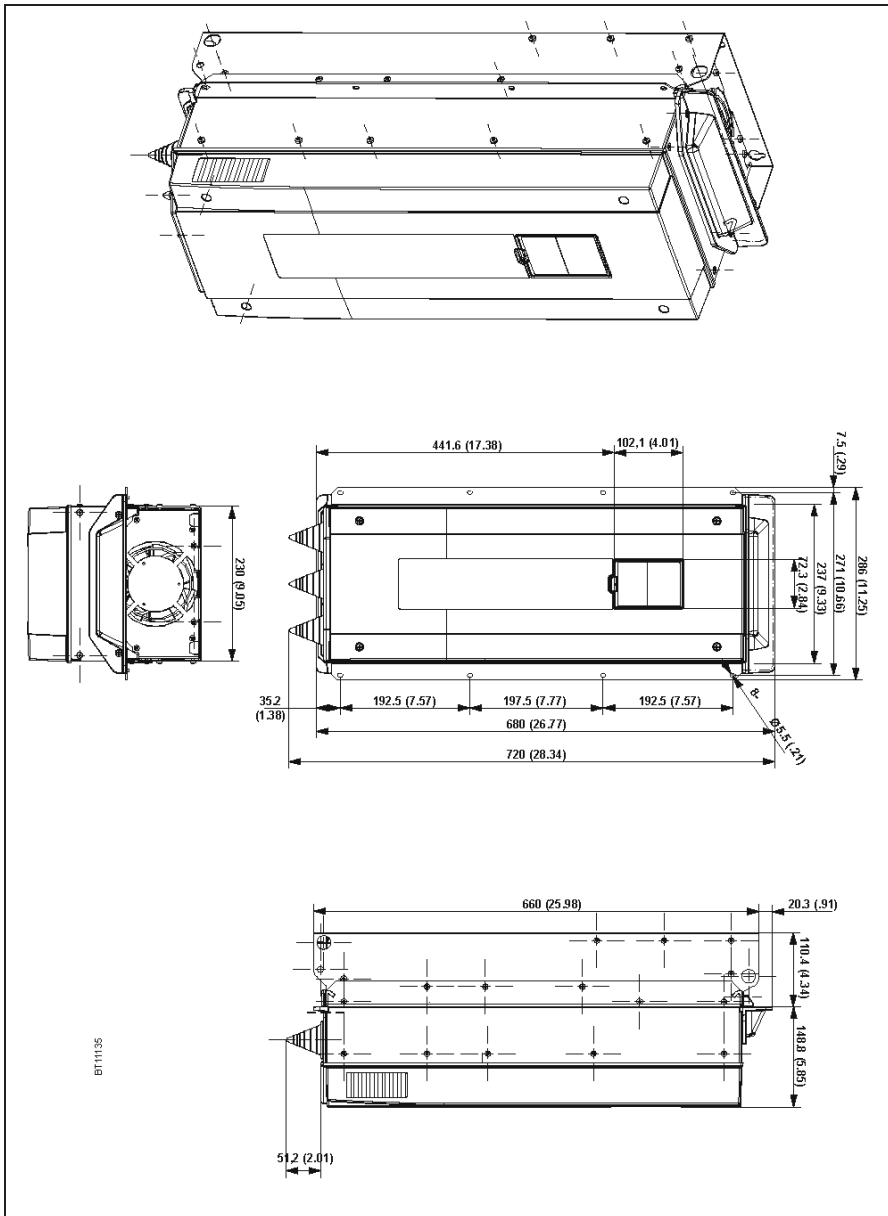


Figure 5. FS7, flange mount, dimensions

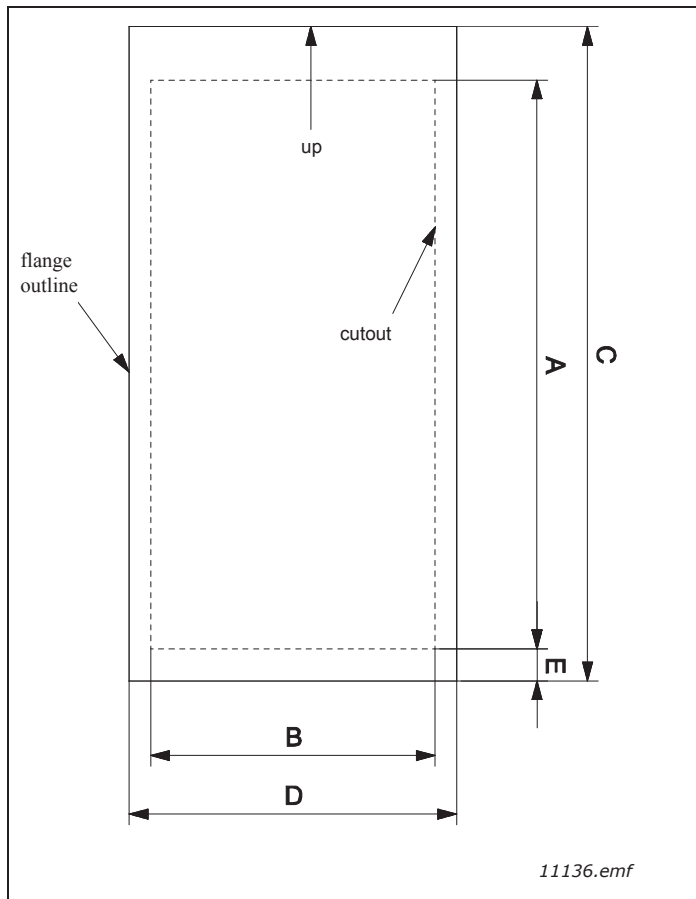
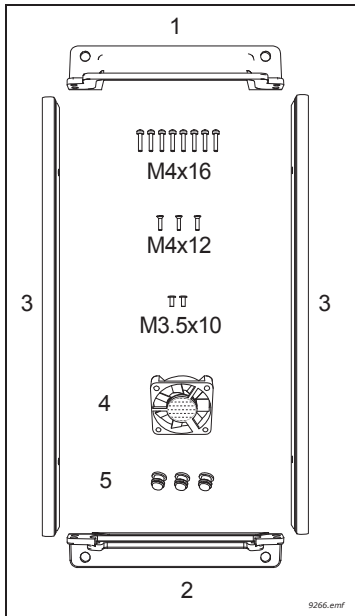


Figure 6. Flange mount cutout and drive outline dimensions for FS4 to FS7.

Table 1. Flange mount cutout dimensions for FS4 to FS7 in mm (in).

Frame	A	B	C	D	E
FS4	315 (12.40)	137 (5.39)	357 (14.05)	152 (5.98)	24 (.94)
FS5	408 (16.06)	152 (5.98)	454 (17.87)	169 (6.65)	23 (.90)
FS6	541 (21.29)	203 (7.99)	580 (22.83)	220 (8.66)	23 (.90)
FS7	655 (25.78)	240 (9.44)	680 (26.77)	286 (11.25)	13 (.51)

Flange Mount Kit for Frame FS4



The kit consists of:

1. Top collar, (70CMR00281)
2. Bottom collar, (70CMR00280)
3. Side collars (2 pcs), (70CMR00282)
4. Internal fan, (70CPE00132, 70CPE00056) depends on the control unit
5. Sealing plug (3 pcs), (70CMR00324)

Additionally:

- 8 screws size 4x16 (for the top and bottom collar mounting)
- 3 screws size 4x12 (for the side collar mounting)
- 2 screws size 3.5x10 (for the bottom collar mounting)

FS4 Flange Mounting

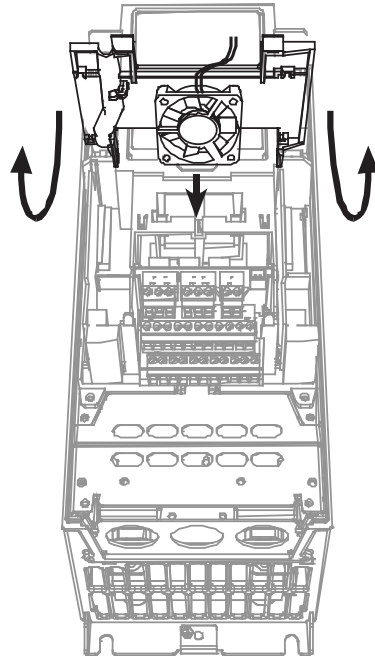
If your drive is the Type 1/IP21-protected and there is the risk that dust or other impurities in the cooling air might end up inside the control unit, start the mounting with actions described in the steps 1 to 4.

If this is not needed, install the flange mounting kit proceeding directly to the step 5. Note, in this case the rear will not be according to the Type 12/IP54.

1

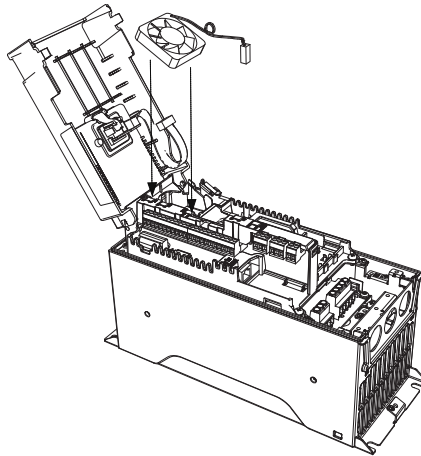
Remove the cover of the drive.
Lift up the I/O protection plate.
The location of the internal fan depends on the control unit.

If you have the control unit presented in the upper picture, slide the internal fan into the opening with the label facing the cabling end of the drive.

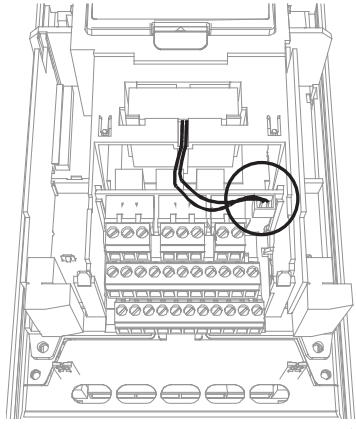
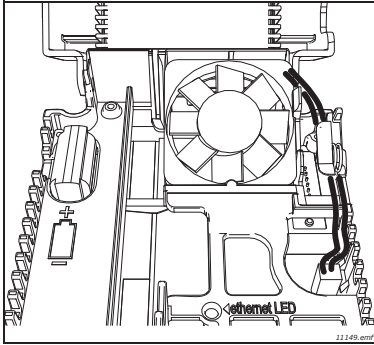
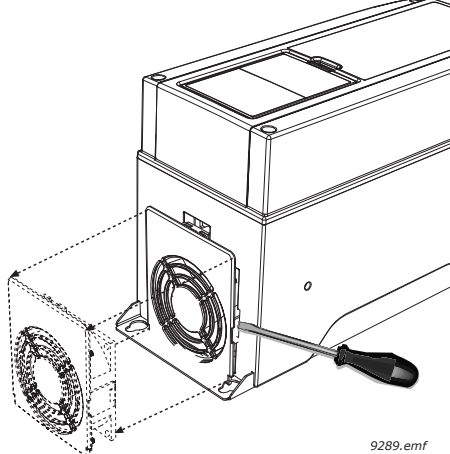


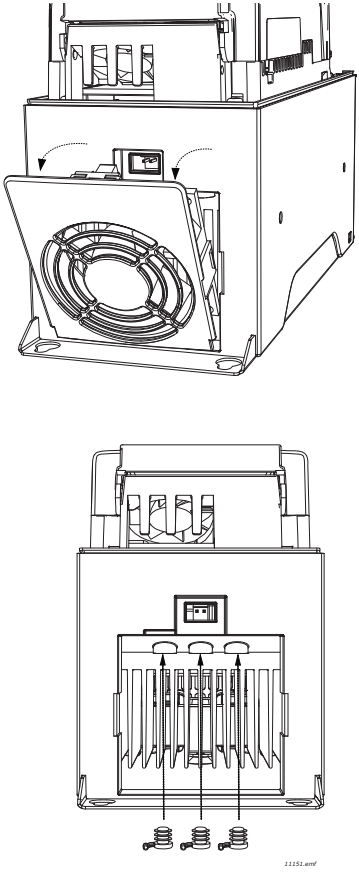
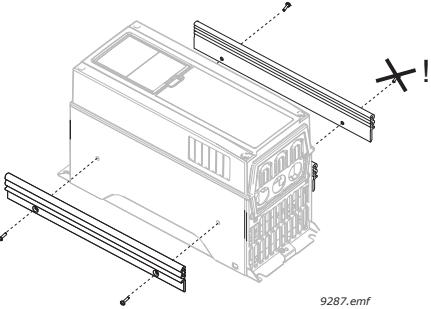
11147.emf

If you have the control unit presented in the lower picture, install the internal fan with the label facing downwards.



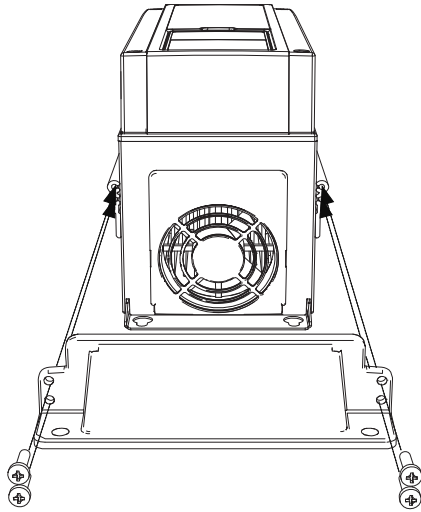
11150.emf

<p>2</p>	<p>Connect the power wire to the power connector. The location of the power connector depends on the control unit.</p>  <p style="text-align: right; font-size: small;">11148.emf</p>  <p style="text-align: right; font-size: small;">12149.emf</p>
<p>3</p>	<p>Remove the main fan.</p>  <p style="text-align: right; font-size: small;">9289.emf</p>

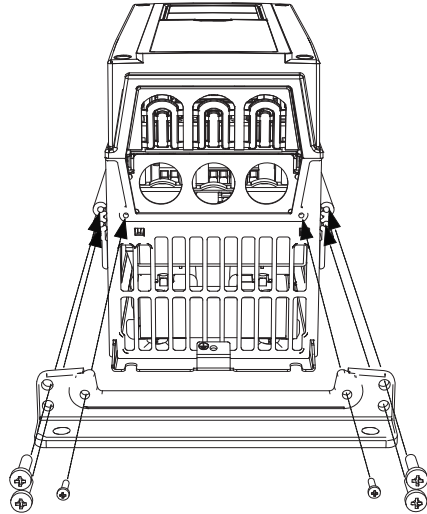
<p>4</p>	<p>Insert the three sealing plugs into position where indicated.</p> <p>Remount the main fan carefully, checking its position.</p> 
<p>5</p>	<p>Attach the side collars with three screws size 4x12. The tightening torque for the screws is 2 Nm (17.70 lbf-in).</p> <p>Important! Do not yet screw the fourth screw in the bottom right hole.</p> 

6

Mount the top collar with the four screws size 4x16; the tightening torque is 2 Nm (17.70 lbf-in).

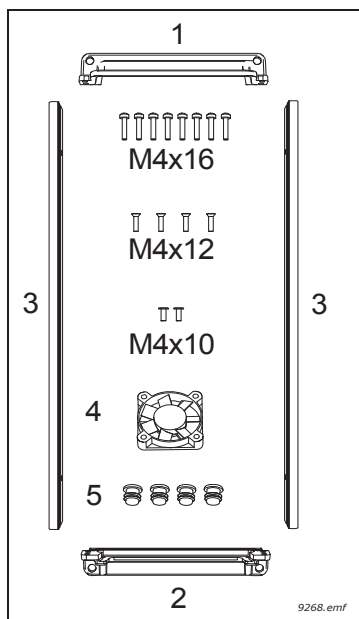


Mount the bottom collar with the four screws size 4x16, (2 Nm (17.70 lbf-in) torque) and the two screws size 3.5x10; the tightening torque is 1.7 Nm (15.04 lbf-in).



11146.enr

Flange Mount Kit for Frame FS5



The kit consists of:

1. Top collar, (70CMR00176)
2. Bottom collar, (70CMR00175)
3. Side collars (2 pcs), (70CMR00090)
4. Internal fan, (70CPE00056)
5. Sealing plugs (4 pcs), (70CMR00324)

Additionally:

- 8 screws size 4x16 (for the top and bottom collar mounting)
- 4 screws size 4x12 (for the side collar mounting)
- 2 screws size 4x16 (for the mounting of the internal fan)

FS5 Flange Mounting

If your drive is the Type1/IP21-protected and there is the risk that dust or other impurities in the cooling air might end up inside the control unit, start the mounting with actions described in the steps 1 to 4.

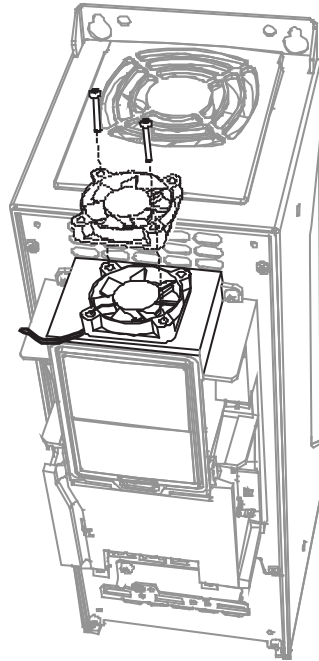
If this is not needed, install the flange mounting kit proceeding directly to the step 5. Note, in this case the rear will not be according to the Type12/IP54.

1

Remove the cover of the drive.

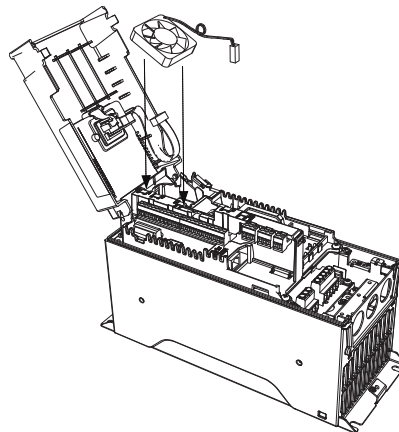
The location of the internal fan depends on the control unit. If you have the control unit presented in the upper picture, install the internal fan with the label facing upwards.

Screws size 4x16 are needed for mounting; the tightening torque for the screws is 0,5 Nm (4.42 lbf-in).

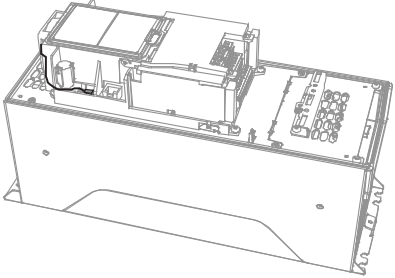
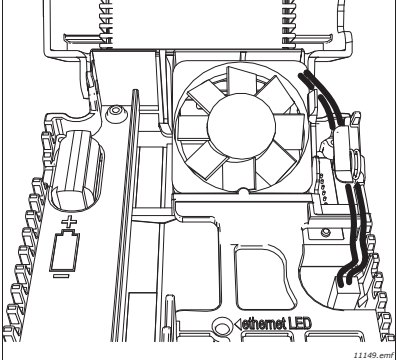
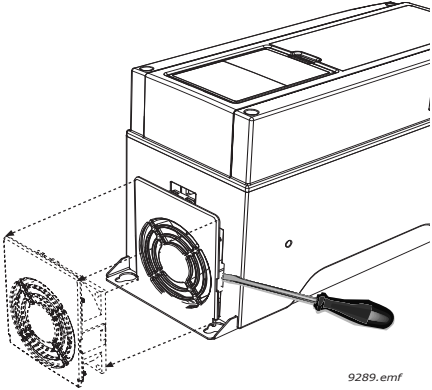


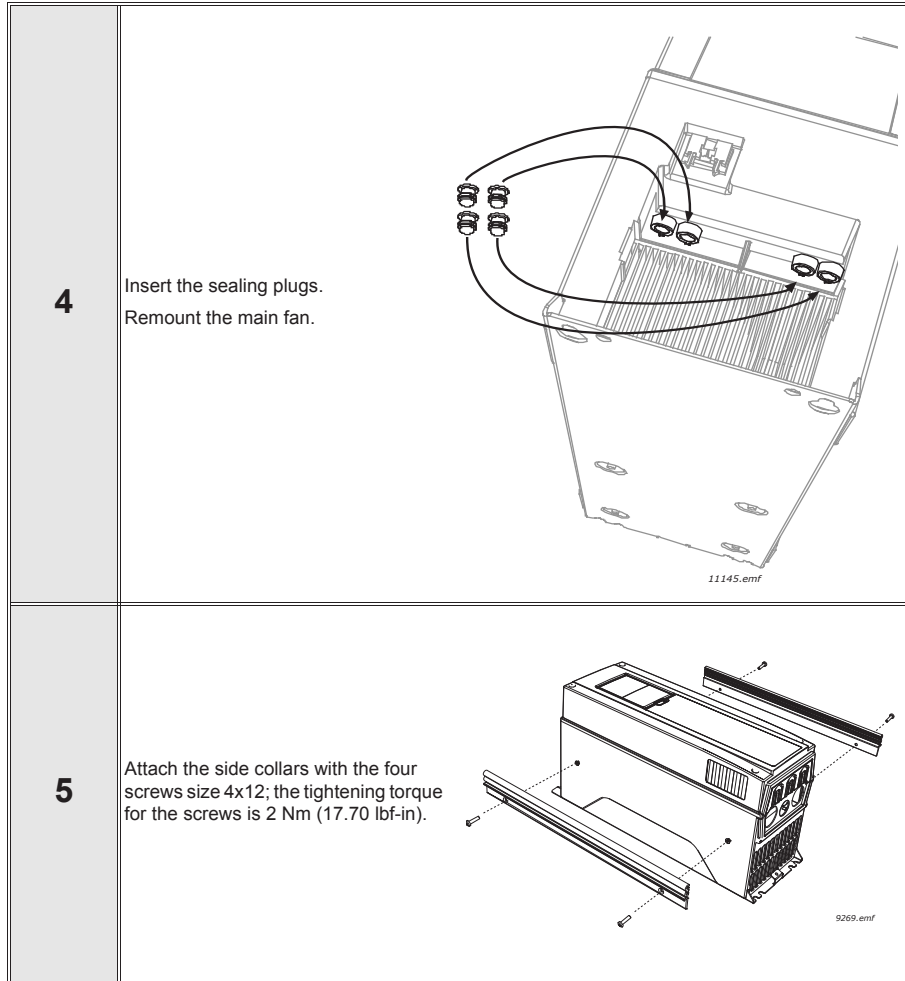
11152.emf

If you have the control unit presented in the lower picture, install the internal fan with the label facing downwards.



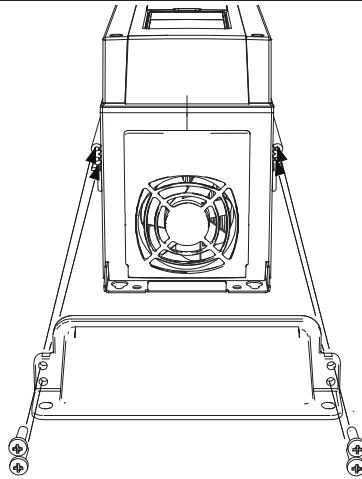
11153.emf

<p>2</p>	<p>Then insert the power connector of the internal fan into the power terminal. The location of the power connector depends on the control unit. Remount the drive cover.</p>	 <p>11156.emf</p>  <p>11149.emf</p>
<p>3</p>	<p>Remove the main fan.</p>	 <p>9289.emf</p>



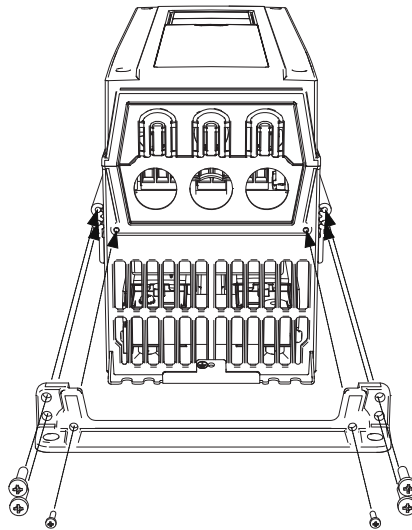
6

Then mount the top collar with the four screws size 4x16; the tightening torque is 2 Nm (17.70 lbf-in).



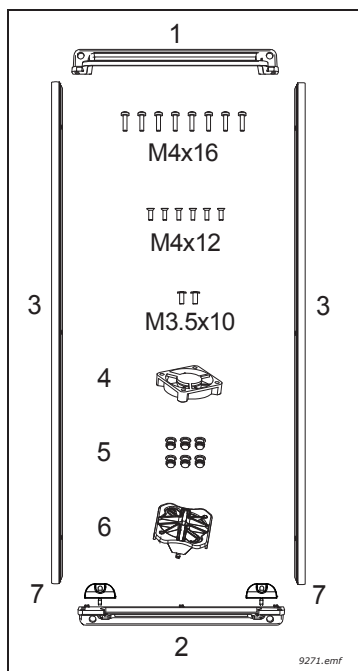
Mount the bottom collar with the four screws size 4x16, (2 Nm (17.70 lbf-in torque)) and the two screws size 3.5x10; the tightening torque is 1,7 Nm (15.04 lbf-in).

Place the screws as shown in the picture.



1153.enr

Flange Mount Kit for Frame FS6



The kit consists of:

1. Top collar, (70CMR00174)
2. Bottom collar, (70CMR00173)
3. Side collars (2 pcs), (70CMR00145)
4. Internal fan, (70CPE00056)
5. Sealing plugs (6 pcs), (70CMR00324)
6. Fan grille 50 mm, (70CTC1102509)
7. Snaps (2 pcs), (The snaps can be battered down from the bottom collar.)

Additionally:

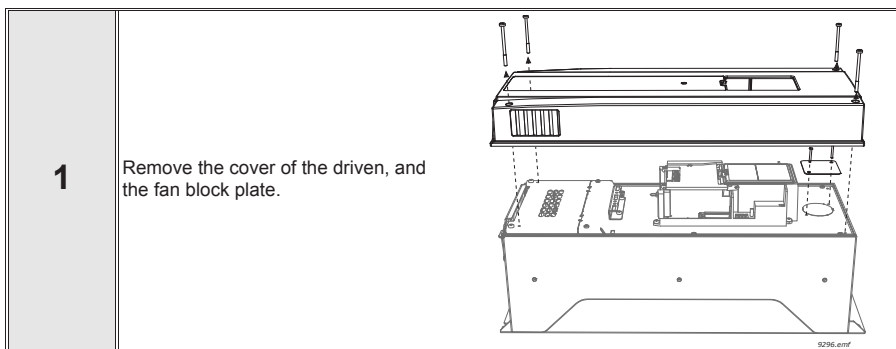
- 8 screws size 4x16 (for the top and bottom collar mounting)
- 6 screws size 4x12 (for the side collar mounting)
- 2 screws size 3.5x10 (for the bottom collar mounting)

FS6 Flange Mounting

If your drive is Type 1/IP21-protected and there is the risk that dust or other impurities in the cooling air might end up inside the control unit, start the mounting with actions described in the steps 1 to 5.

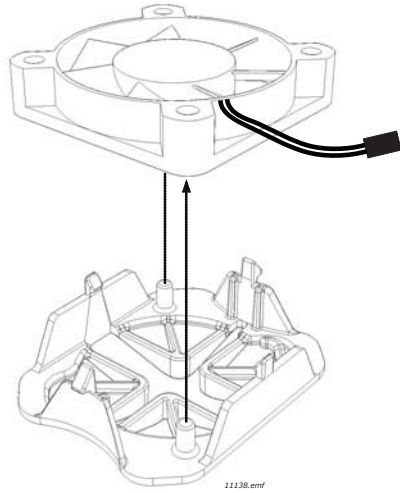
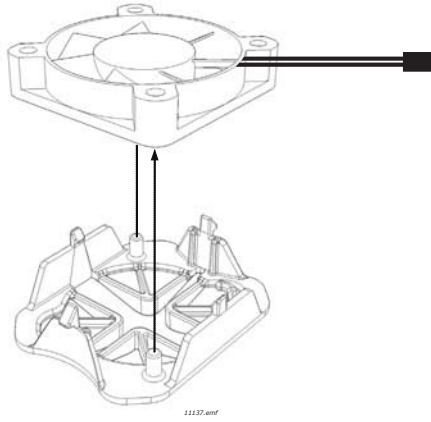
If this is not needed, install the flange mounting kit proceeding directly to the step 6. Note, in this case the rear will not be according to Type 12/IP54.

Please read the step 8 first in order to find out if the snaps are needed.



2

Install the internal fan to the fan grille so that the label is facing upwards.



3

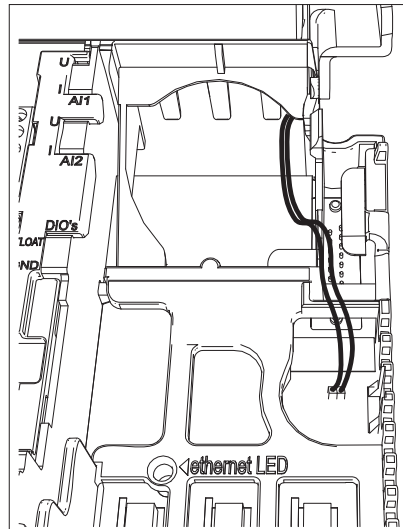
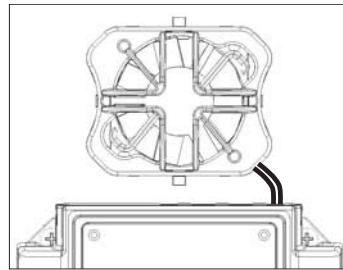
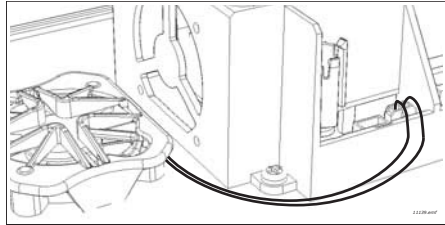
Install the internal fan and the fan grille assembly to frame.

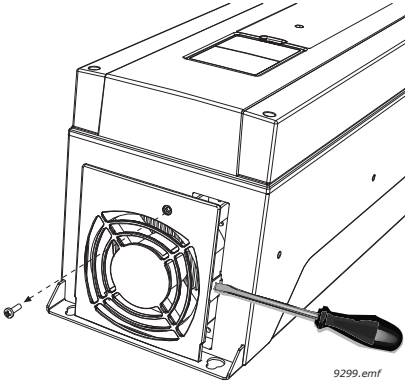
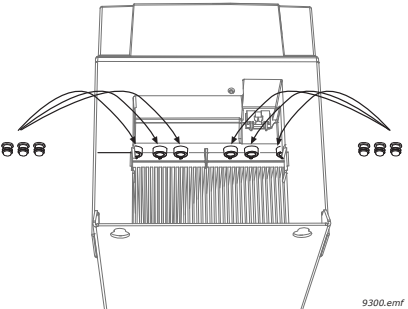
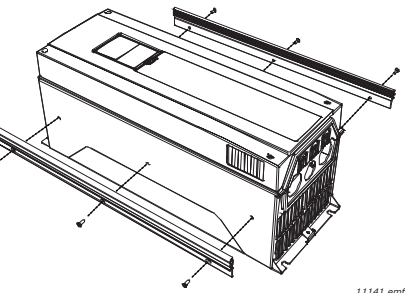
NOTE: The direction of the wire depends on the control unit.

Insert the power connector of the internal fan to the power terminal.

NOTE: The location of the power connector depends on the control unit.

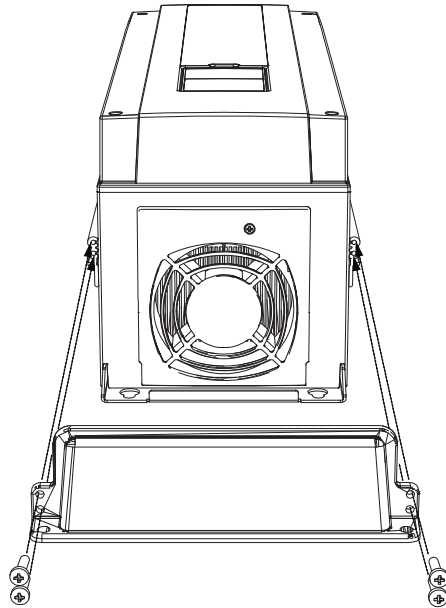
Remount the drive cover.



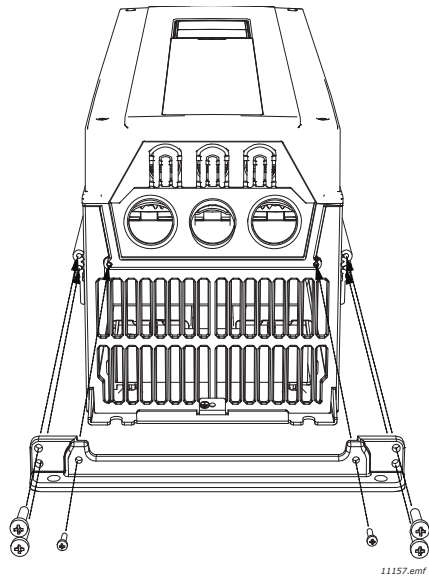
4	Remove the screw and detach the main fan.	 <p>9299.emf</p>
5	Insert the sealing plugs (6 pcs). Remount the main fan.	 <p>9300.emf</p>
6	Attach the side collar with the six screws size 4x12; the tightening torque for the screws is 2 Nm (17.70 lbf-in).	 <p>11141.emf</p>

7

Mount the top collar with the four screws size 4x16; the tightening torque is 2 Nm (17.70 lbf-in).



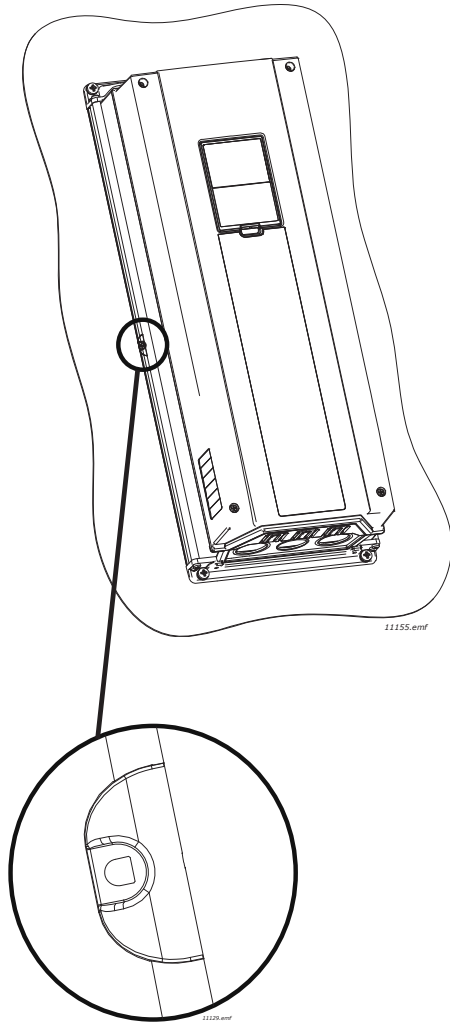
Mount the bottom collar with the four screws size 4x16, (2 Nm (17.70 lbf-in) torque) and the two screws size 3.5x10; the tightening torque is 1,7 Nm (15.04 lbf-in).



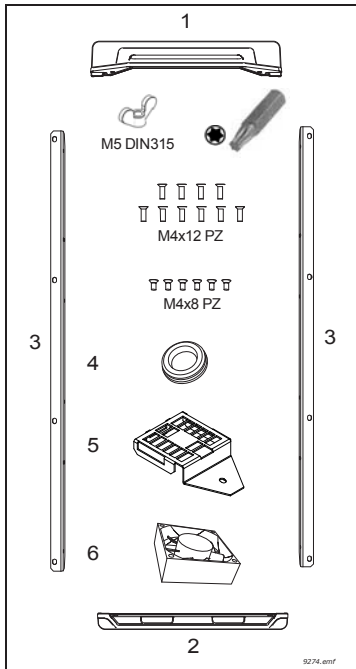
8

In case the back plate bends more than 1.5 mm (.05 in), the use of the additional snaps is required to guarantee sealing. The snaps can be battered down from the bottom cover (4 mm (.15 in) screws to be used with the snaps).

Position the snap according to the dimensional drawing, see Figure 4. (FS6, flange mount, dimensions)



Flange Mount Kit for Frame FS7



The kit consists of:

1. Top collar, (70CMC00343)
2. Bottom collar, (70CMC00344)
3. Side collars (2 pcs), (70CMC00345)
4. Bushing rubber (1 pcs), (MC00016)
5. Fan grille, (70CTC1102699)
6. Internal fan, (70CPE00173)

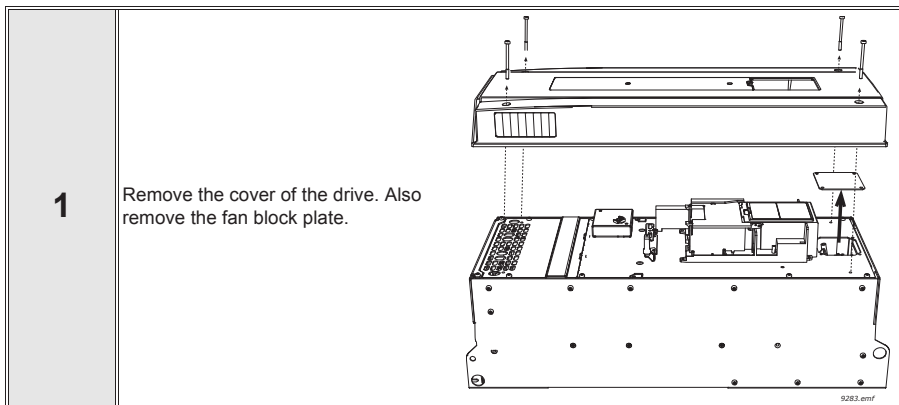
Additionally:

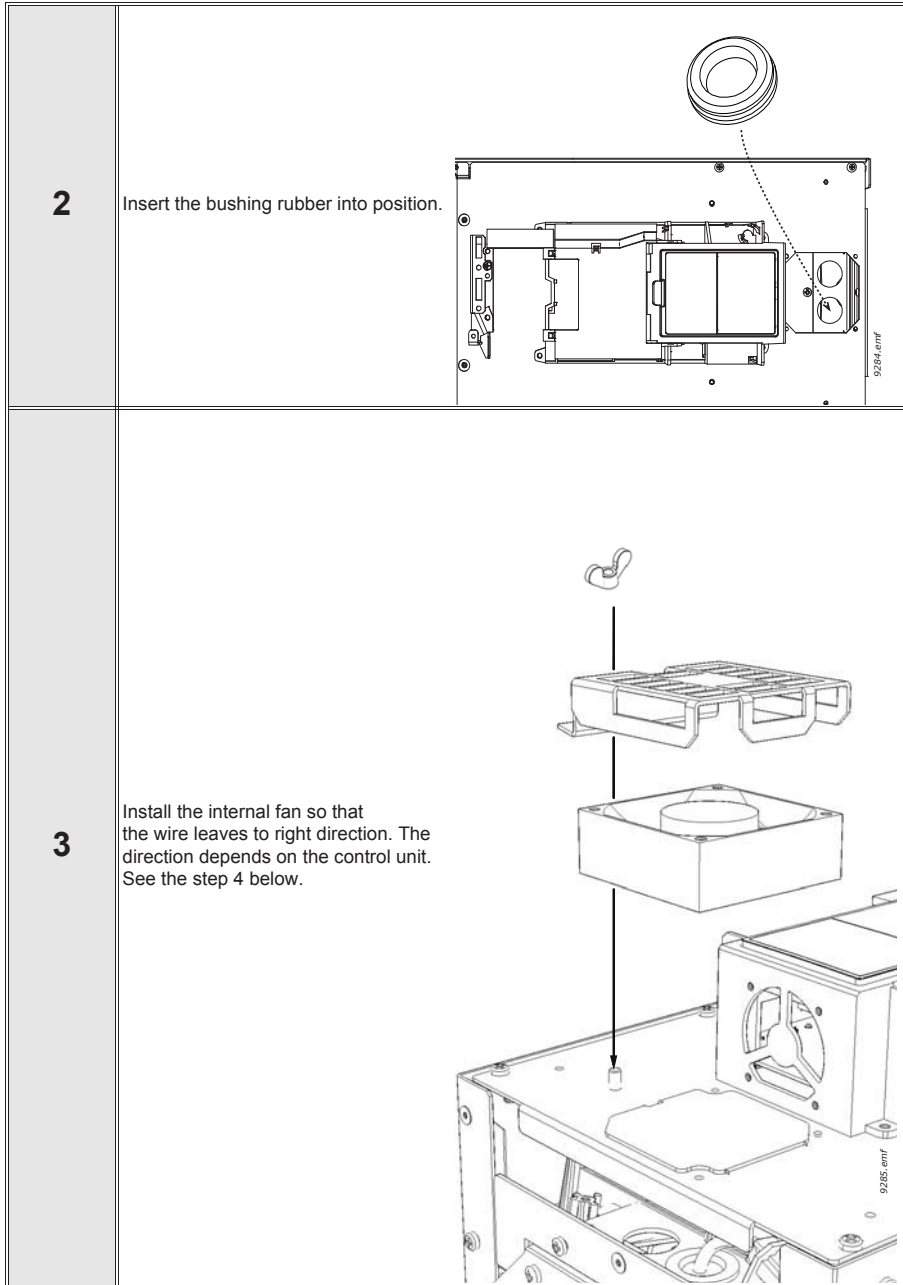
- 10 screws size M4x12 PZ (for the side, top and bottom collars mounting)
- 6 screws size M4x8 PZ (for the side collars mounting)
- 1 wing nut size M5 DIN315 (for the fan grille mounting)
- 1 torx head (for removing screws. See the step 6.)

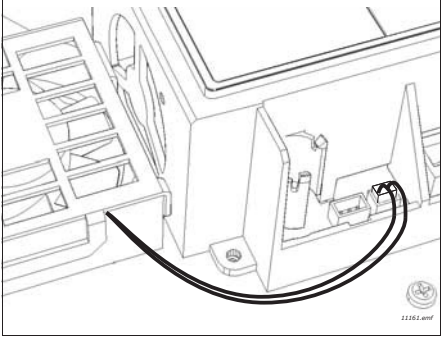
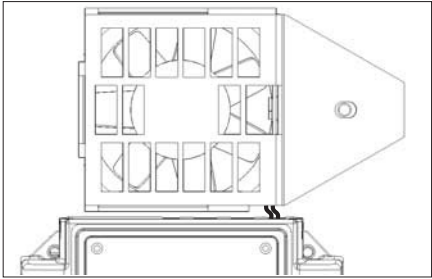
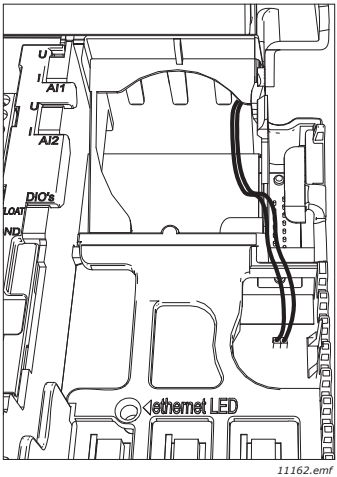
FS7 Flange Mounting

If your drive is Type 1/IP21-protected and there is the risk that dust or other impurities in the cooling air might end up inside the control unit, start the mounting with actions described in the steps 1 to 5.

If this is not needed, install the flange mounting kit proceeding directly to the step 6. Note, in this case the rear will not be according to Type 12/IP54.

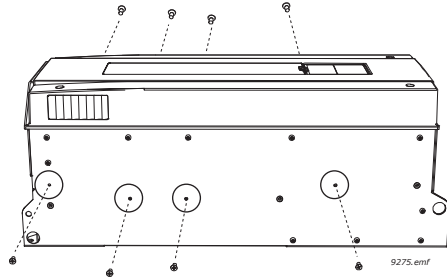




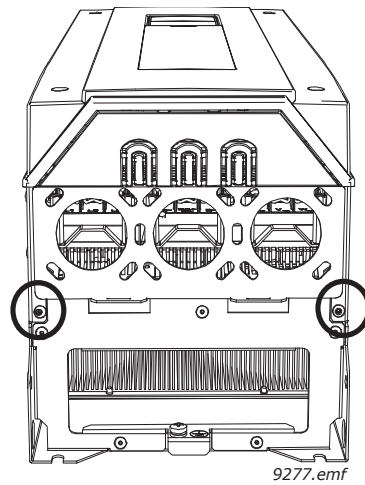
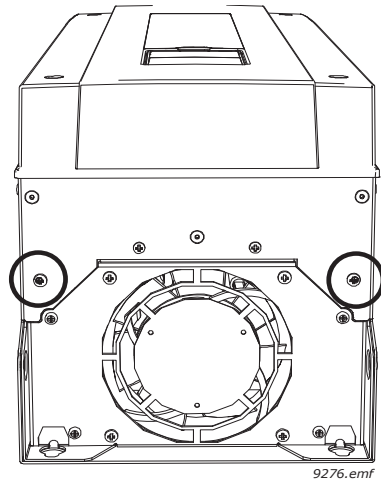
<p>4</p>	<p>To power the fan, connect it to the power terminal next to the keypad. The location of the power connector depends on the control unit.</p>   
<p>5</p>	<p>Remount the drive cover.</p>

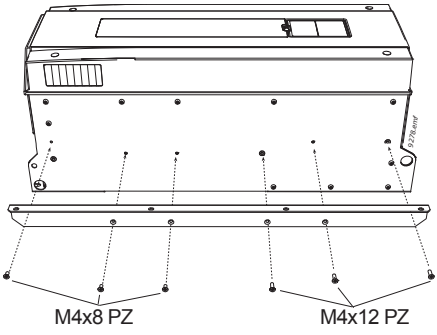
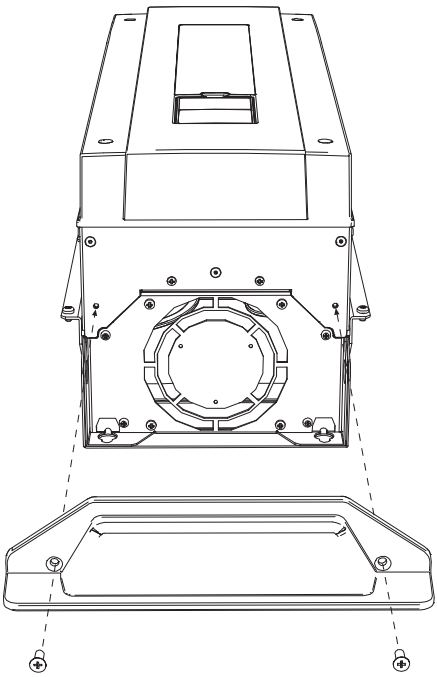
6

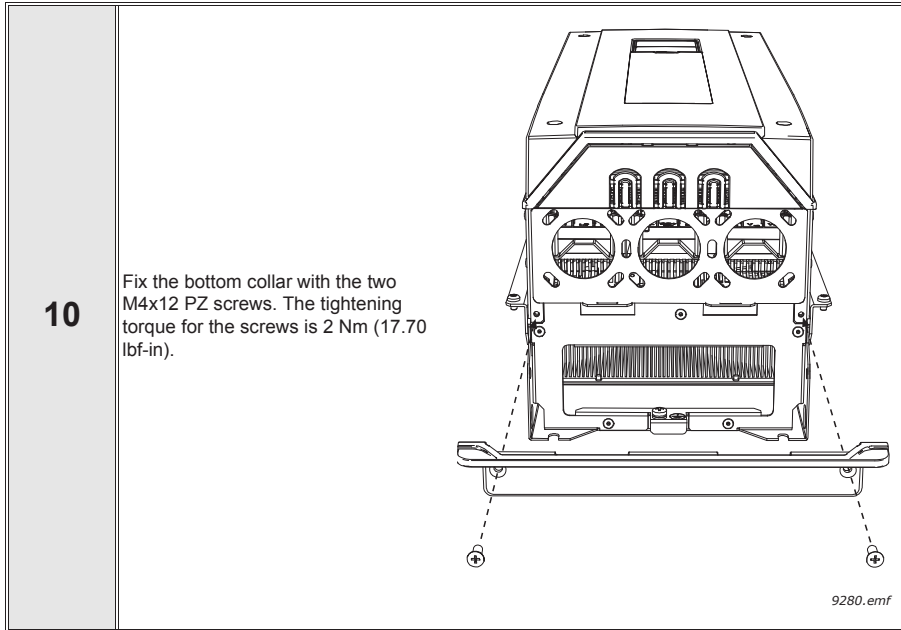
Remove the screws as shown in the picture from both sides of the drive. Use the torx head provided with the kit.

**7**

Remove the screws as shown in the picture from the top and bottom of the drive. Use the torx head provided with the kit.



8	<p>Fix the side collar with the screws starting from the top: six M4x12 PZ screws for the upper three holes and six M4x8 PZ for the lower three holes. The tightening torque for the screws is 2 Nm (17.70 lbf-in).</p>  <p>M4x8 PZ M4x12 PZ</p>
9	<p>Fix the top collar with the two M4x12 PZ screws. The tightening torque for the screws is 2 Nm (17.70 lbf-in).</p>  <p>9279.emf</p>



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Siemens Industry, Inc.
Building Technologies Division
1000 Deerfield Parkway
Buffalo Grove, IL 60089-4513
USA
1-847-215-1000

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