

ABB drives

Supplement ACX580-01 R1-R3 Flange mounting kit installation



List of related manuals

Drive hardware manuals and guides	Code (English)
<i>Flange mounting kit quick installation guide for ACX580-01 frames R1 to R3</i>	3AXD50000119172
<i>ACS580-01 (0.75 to 250 kW) hardware manual</i>	3AXD50000018826
<i>ACS580-01 quick installation and start-up guide for frames R1 to R5</i>	3AXD50000044838
<i>ACH580-01 (0.75 to 250 kW) hardware manual</i>	3AUA0000076331
<i>ACH580-01 quick installation and start-up guide</i>	3AUA0000076330
<i>ACQ580-01 (0.75 to 250 kW) hardware manual</i>	3AXD50000035866
<i>ACQ580-01 quick installation and start-up guide for frames R0 to R5</i>	3AXD50000035755

You can find manuals and other product documents in PDF format on the Internet. See section [Document library on the Internet](#) on the inside of the back cover. For manuals not available in the Document library, contact your local ABB representative.

The code below opens an on-line listing of the manuals applicable to the product.



[ACS580-01 manuals](#)



[ACH580-01 manuals](#)



[ACQ580-01 manuals](#)

Supplement

Flange mounting kit installation

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3. Mechanical installation



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Introduction to the supplement

Contents of this chapter

This chapter describes the supplement.

Applicability

This supplement applies to the flange mounting kits of the ACS580-01, ACH580-01 and ACQ580-01 drives (frames R1 to R3).

Safety instructions

Obey the general safety instructions in the hardware manual and the task-specific instructions in this supplement.

Target audience

This supplement is intended for people who plan the installation and install the drive with the flange mounting kit. Read the supplement before you work on the drive. You are expected to know the fundamentals of electricity, wiring, electrical components and electrical schematic symbols.

The supplement is written for readers worldwide. Both SI and imperial units are shown.

Purpose of the supplement

This supplement tells you how to install the drive mechanically onto an opening in a mounting plate with the flange mounting kit.

Contents of the manual

The chapters of the supplement are briefly described below.

Introduction to the supplement introduces the supplement.

Hardware description describes the flange mounting kit.

Mechanical installation describes how to install the drive with the flange mounting kit mechanically.

Dimension drawings contains dimension drawings of the flange mounting kit.

Related documents

See *List of related manuals* on the inside of the front cover.

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Hardware description

Contents of this chapter

This chapter describes the flange mounting kit.

Product overview

The flange mounting kit contains brackets for attaching the drive onto a mounting plate so that the heat sink of the drive is in the cooling air channel and the front part on the other side of the mounting plate.

The flange mounting kit is a plus code option (+C135) or can be ordered with these ordering codes also separately.

Frame size	Ordering code ACX580-01
R1	3AXD50000105311 (IP21)
R2	3AXD50000105328 (IP21)
R3	3AXD50000105335 (IP21 and IP55)

For R1 and R2, the degree of protection of a flange-mounted IP21 drive unit is IP20 on the front side and IP55 on the backside. For R3, the degree of protection of a flange-mounted IP55/IP21 drive is IP55/IP21 on the front side and IP55 on the backside.

■ Special requirements

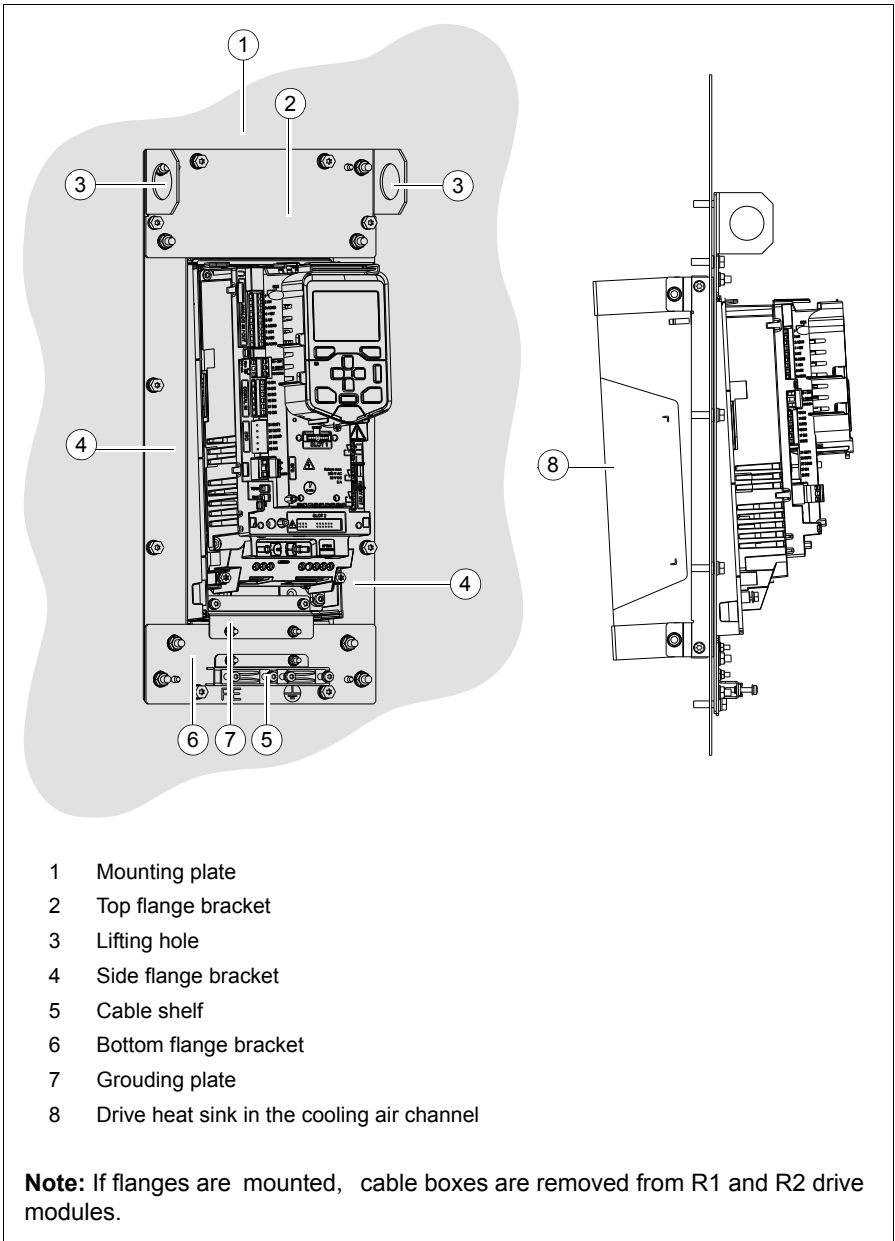
For R1 and R2, cable boxes are not compatible with flange mounting kits.

10 Hardware description

With some frame sizes, you must insert a sealing plug into the drive. Also with some degrees of protection, you must leave the drive cover in place. See the tables for more information.

Frame size	ACX580-01 IP21	ACX580-01 IP55
R1	Delivered with cover. Insert sealing plug. Exception: In dry environment, you can leave the cover in place without inserting a sealing plug.	-
R2		
R3		Delivered with cover. Insert sealing plug. You can leave the cover in place.

Layout



- 1 Mounting plate
- 2 Top flange bracket
- 3 Lifting hole
- 4 Side flange bracket
- 5 Cable shelf
- 6 Bottom flange bracket
- 7 Grounding plate
- 8 Drive heat sink in the cooling air channel

Note: If flanges are mounted, cable boxes are removed from R1 and R2 drive modules.

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Mechanical installation

Contents of this chapter

This chapter describes how to install the drive with the flange mounting kit mechanically.





Examining the installation site

Make sure that the installation site agrees with these requirements:

- The installation site has sufficient ventilation to prevent overheating of the drive. See section *Losses, cooling data and noise* in the hardware manual for the required air flow in the cooling air channel and in the front part of the drive.
- The operation conditions of the drive agree with the specifications in section *Ambient conditions* in the hardware manual.
- The mounting plate is vertical, not flammable and strong enough to hold the weight of the drive module.
- The material below the installation is not flammable.
- There is enough free space above and below the drive for cooling air flow, service and maintenance. There is enough free space in front of the drive for operation, service and maintenance. See section [Free space requirements](#) on page 18 and *Dimensions, weights and free space requirements* in the hardware manual.

Additional requirements for cabinet installations

Make sure that the cooling air gratings of the drive will not be covered. Make sure that the required cooling air change is achieved. In a totally closed cabinet with no forced ventilation, a fan for circulating the air inside the cabinet may be needed.

Necessary tools

- Drill and drill bits
- Screwdriver.

Moving the drive

Move the transport package by a pallet truck to the installation site.



Unpacking and examining the delivery

■ Transport package contents

The flange mounting kit package is either in the drive package, tied with straps onto the drive package or sent separately. Examine that all items are present and there are no signs of damage. Read the data on the type designation label of the drive to make sure that the drive is of the correct type.

ACX580-01 frames R1 to R3

The flange mounting kit package is tied onto the drive package.

To unpack:

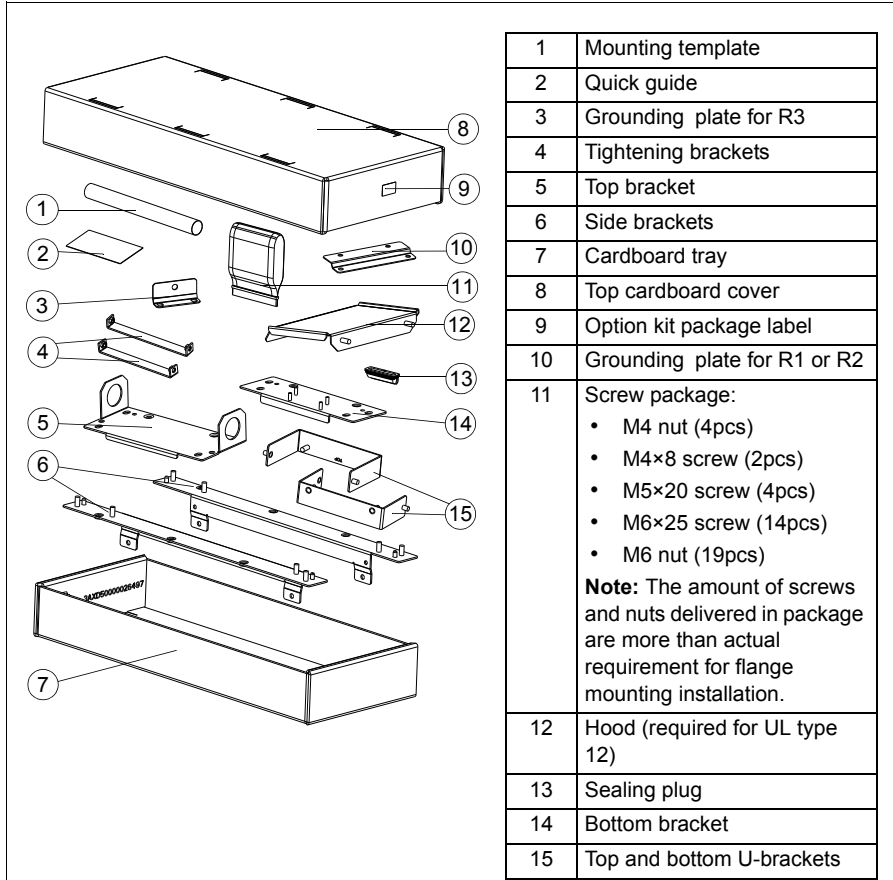
- Cut the straps.
- Remove the flange mounting kit package. For the contents of the kit package, see [Flange mounting kit package contents](#) on page 16.
- Open the drive cardboard box. For the contents of the drive package, see the relevant drive hardware manual.



■ Flange mounting kit package contents

The illustrations show the layout of the flange mounting kit packages. Examine that all items are present and there are no signs of damage.

ACX580-01 frames R1 to R3



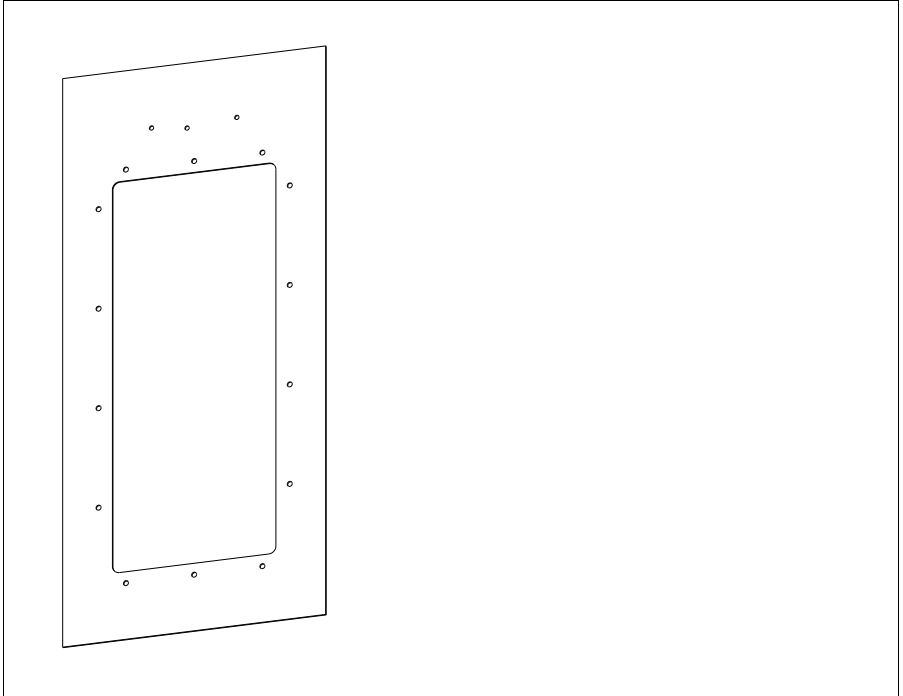
■ Example mounting template

The flange mounting kit package includes a template in actual size for drilling the attaching holes and cutting the holes in the mounting plate. For drilling the holes, see the installation procedures for:

- [ACX580-01 frames R1 to R3](#)

Note: The delivery does not include the Rivet or Kalei nuts for the M6 screws. Consider the hole size for the nuts.

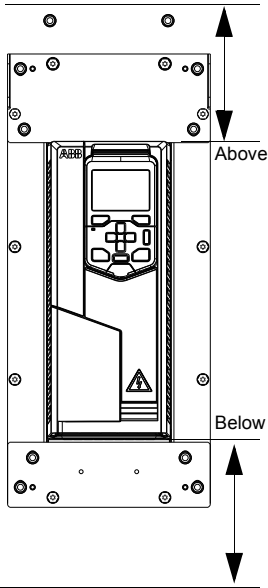
An example template is shown below.



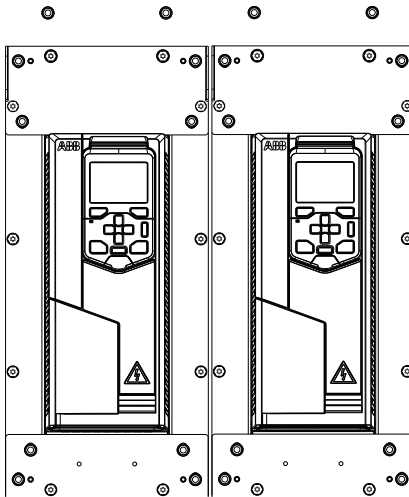
Installing the drive

Free space requirements

The flange-mounted drives can be installed side by side. For free space requirements above and below the drives, see the table.

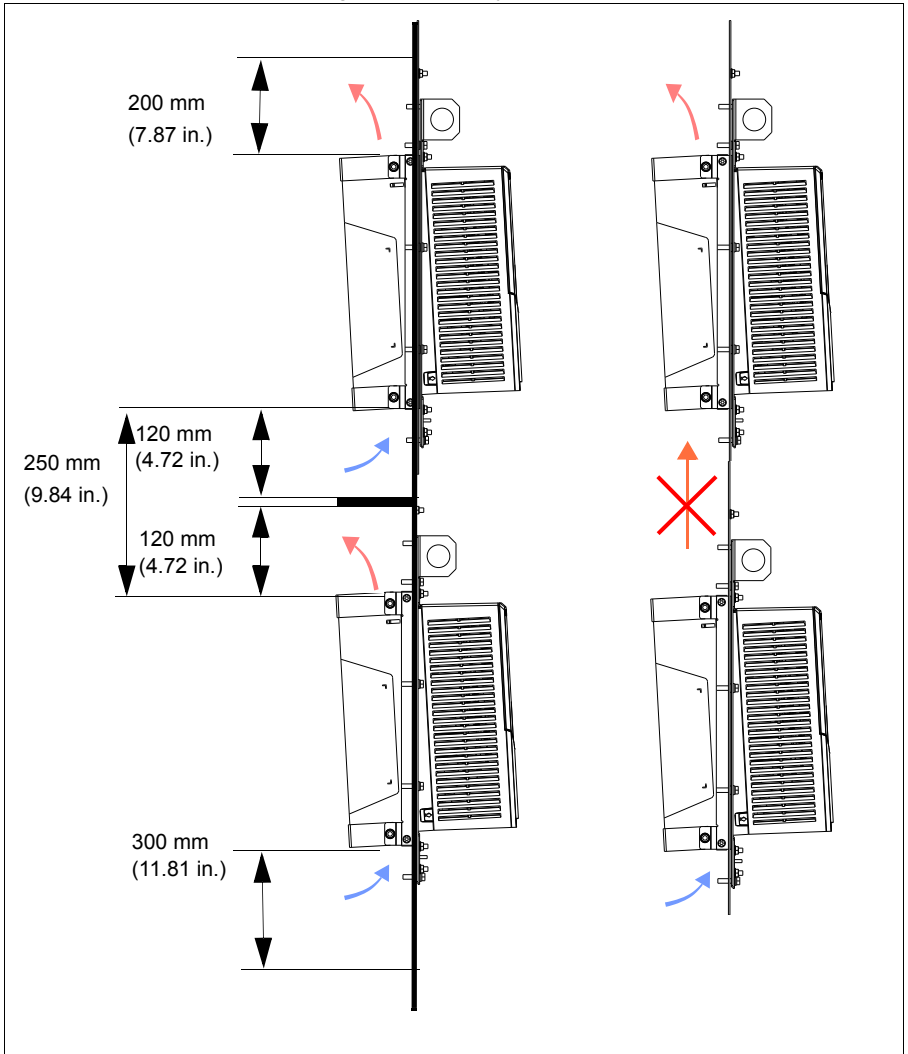


ACX580-01				
	Above		Below	
	mm	in	mm	in
R1	200	7.87	200	7.87
R2	200	7.87	200	7.87
R3	200	7.87	200	7.87



■ Installing drives above one another

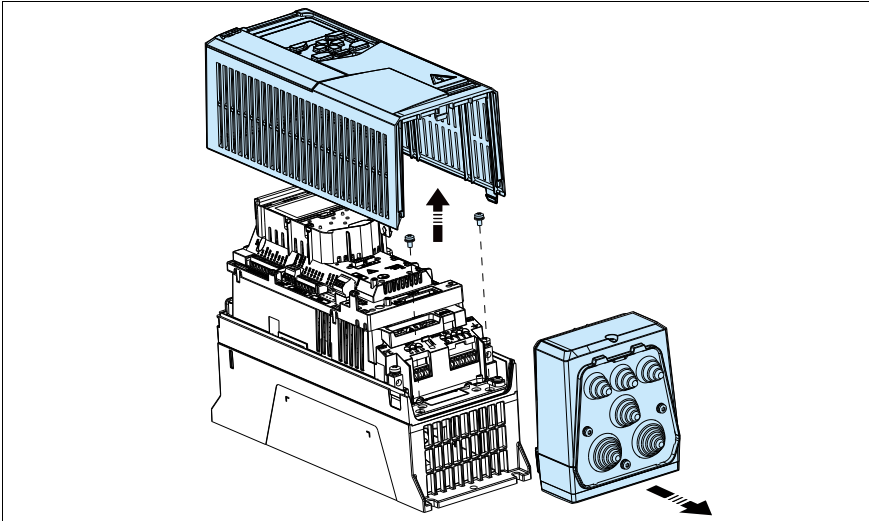
Make sure that the outlet cooling air flows away from the drive above.



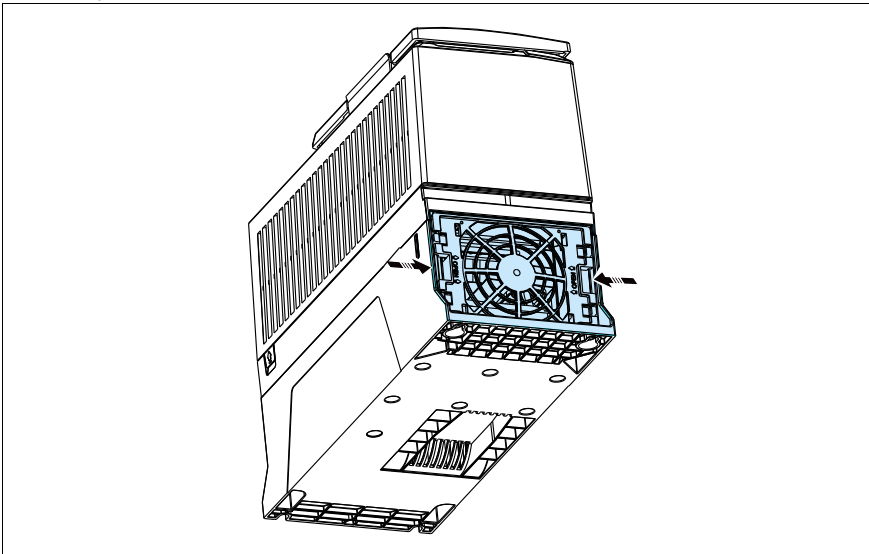
Installation procedure

■ ACX580-01 frames R1 to R3

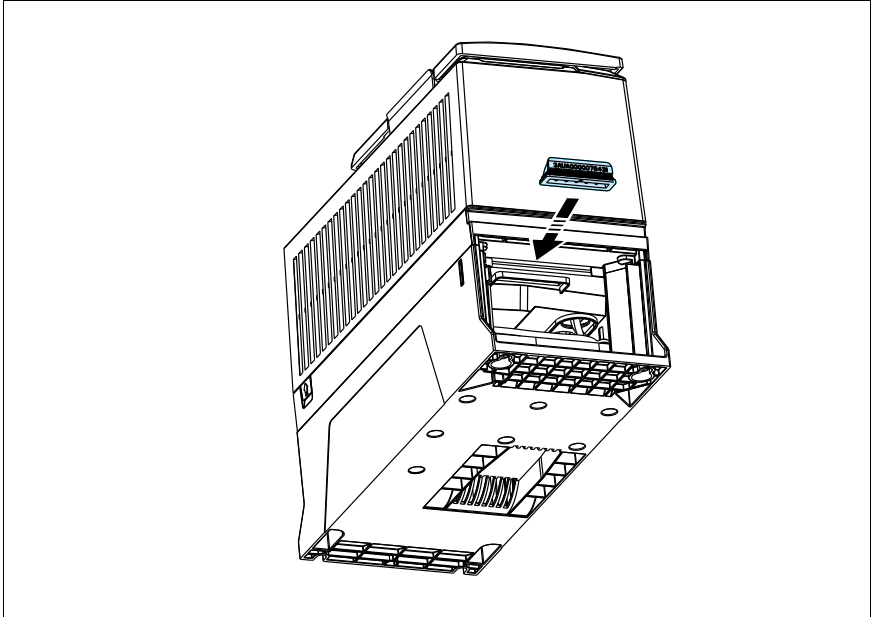
1. **Frames R1 and R2:** To remove the cable box, front cover is removed firstly. Reinstall the cover and screws.



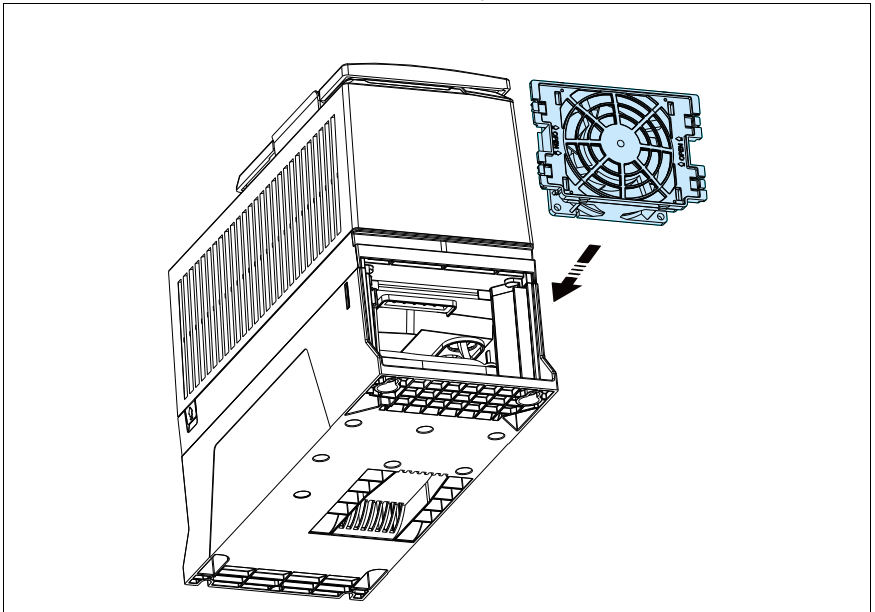
2. **Frames R1 to R3:** To remove the fan assembly, push the retaining clips. Lift the assembly up.



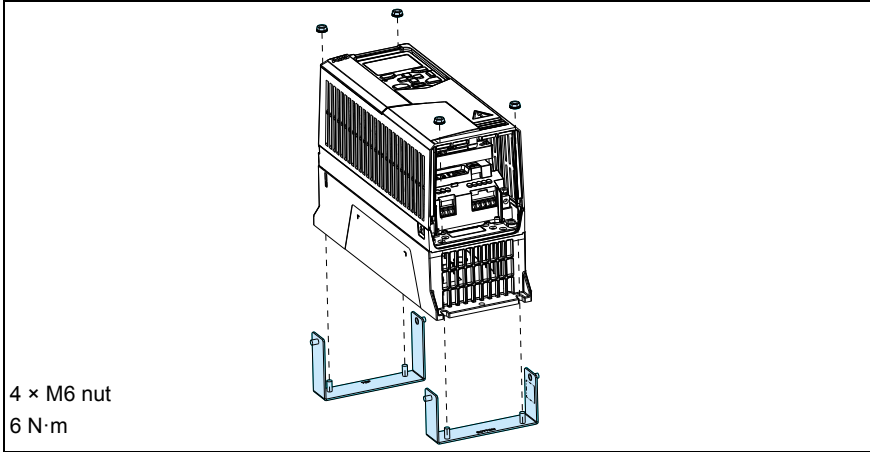
3. **Frames R3:** Insert the sealing plug to the hole shown in the figure. **Note:** For IP55/UL Type 12 unit only.



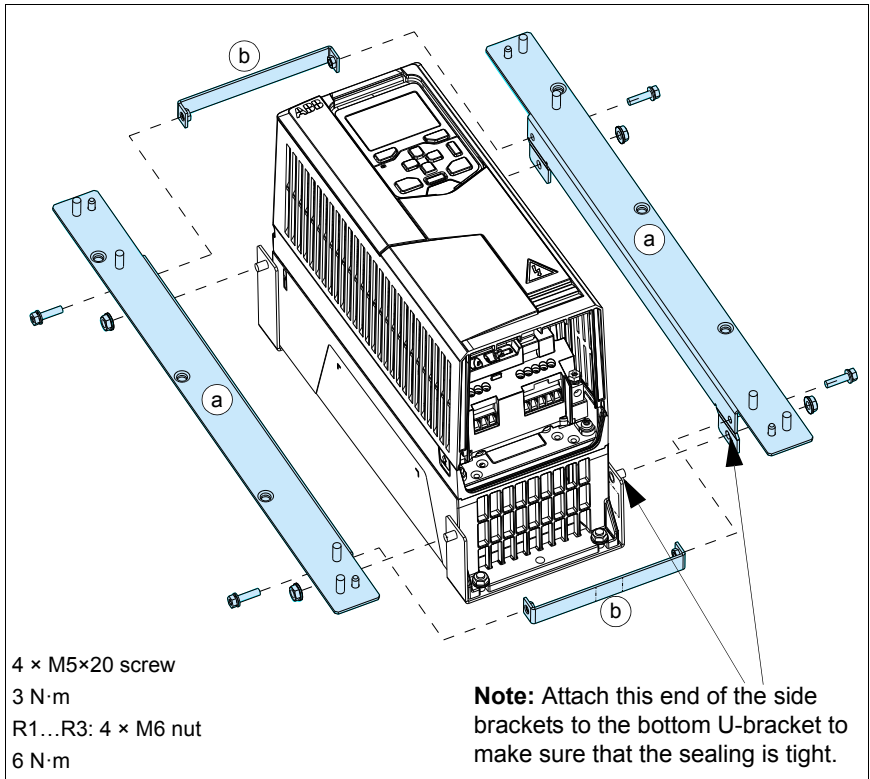
4. **Frames R1 to R3:** Reinstall the fan assembly.



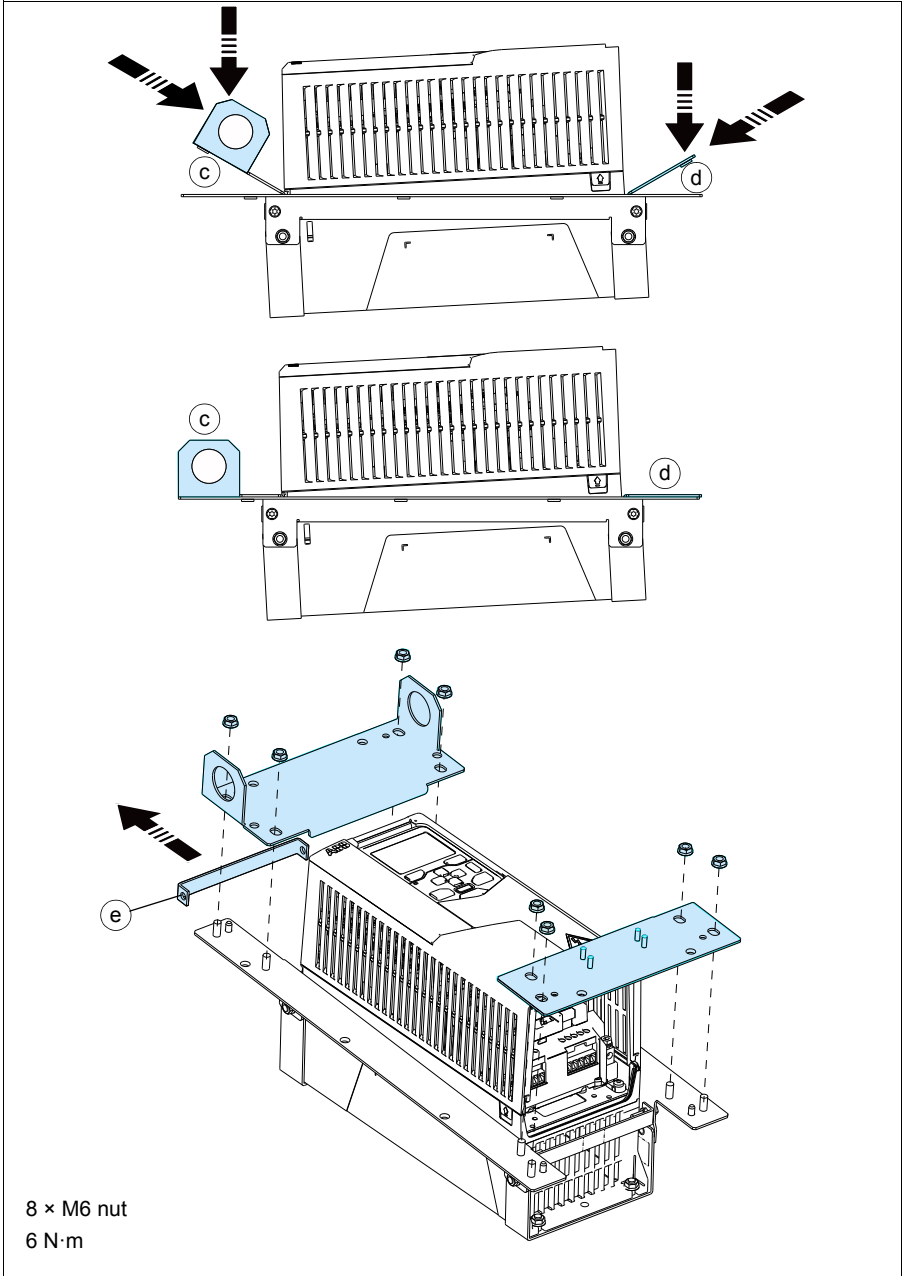
5. **Frames R1 to R3:** Attach the top and bottom U-brackets to the drive.



6. **Frames R1 to R3:** First attach the side brackets (a) to the top and bottom U-brackets with M6 nuts. Then attach the tightening brackets (b) to the both ends with M5×20 screws.

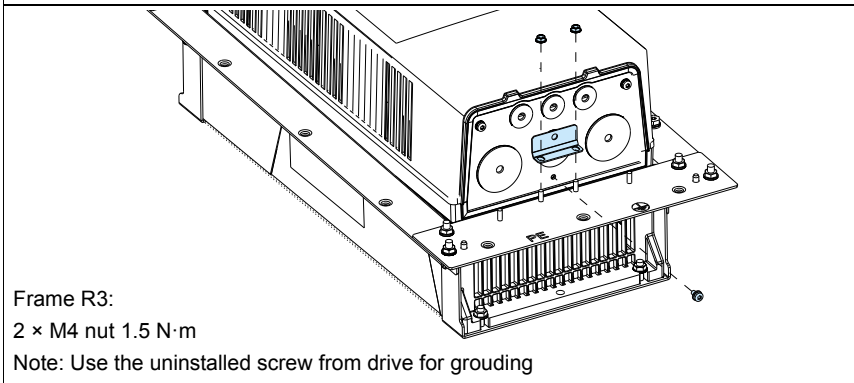
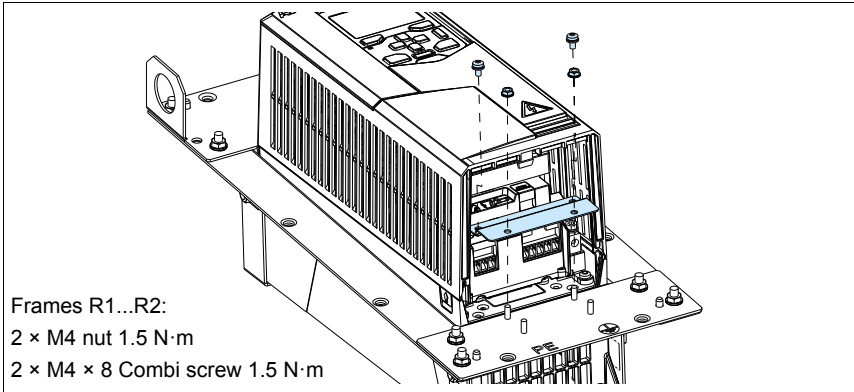


7. **Frames R1 to R3:** Attach the top (c) and bottom (d) brackets to the side brackets, first the inner sides of the top and bottom brackets (the sides that touch the drive), then the outer sides. Remove the tightening bracket (e) from the front of the fan.



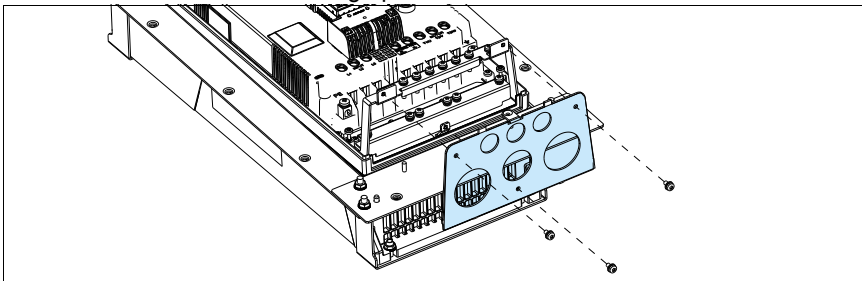
8. Grounding

- For safe reason, make protective earthing for the flange.



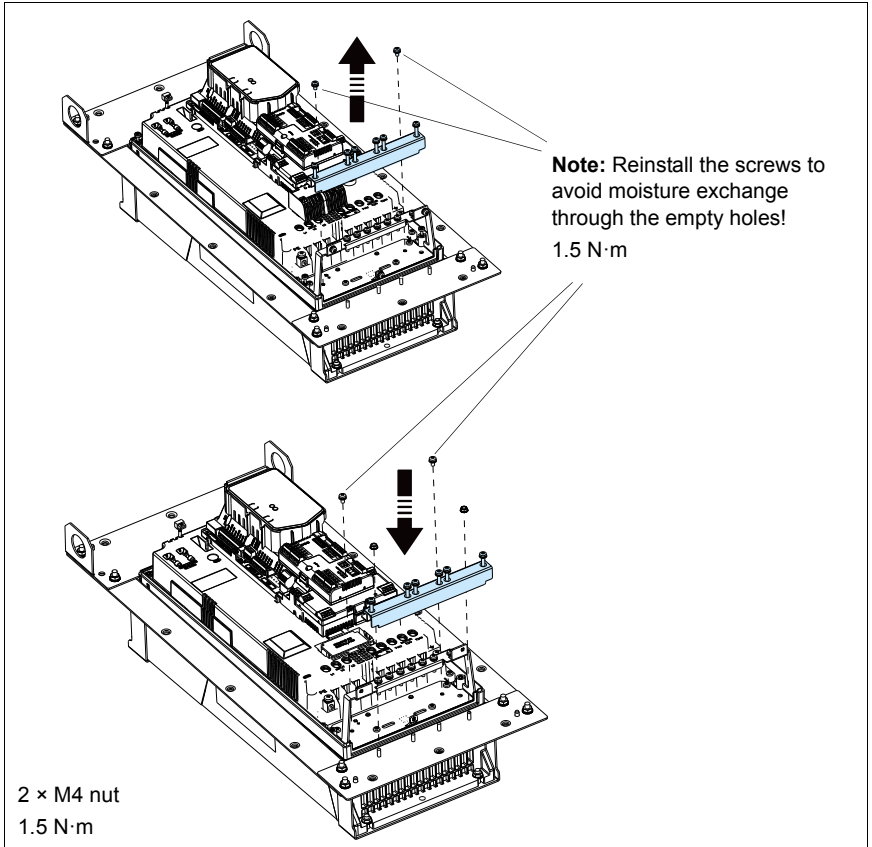
Optional steps:

- If you wish to install the power cable shelf lower on the bottom bracket, first remove the cover and lead-through plate.



- Then detach the power cable shelf and attach it to the bottom bracket with M4 nuts.

Note: Frame R3 is shown here as an example. The cable shelf varies in different frame sizes.

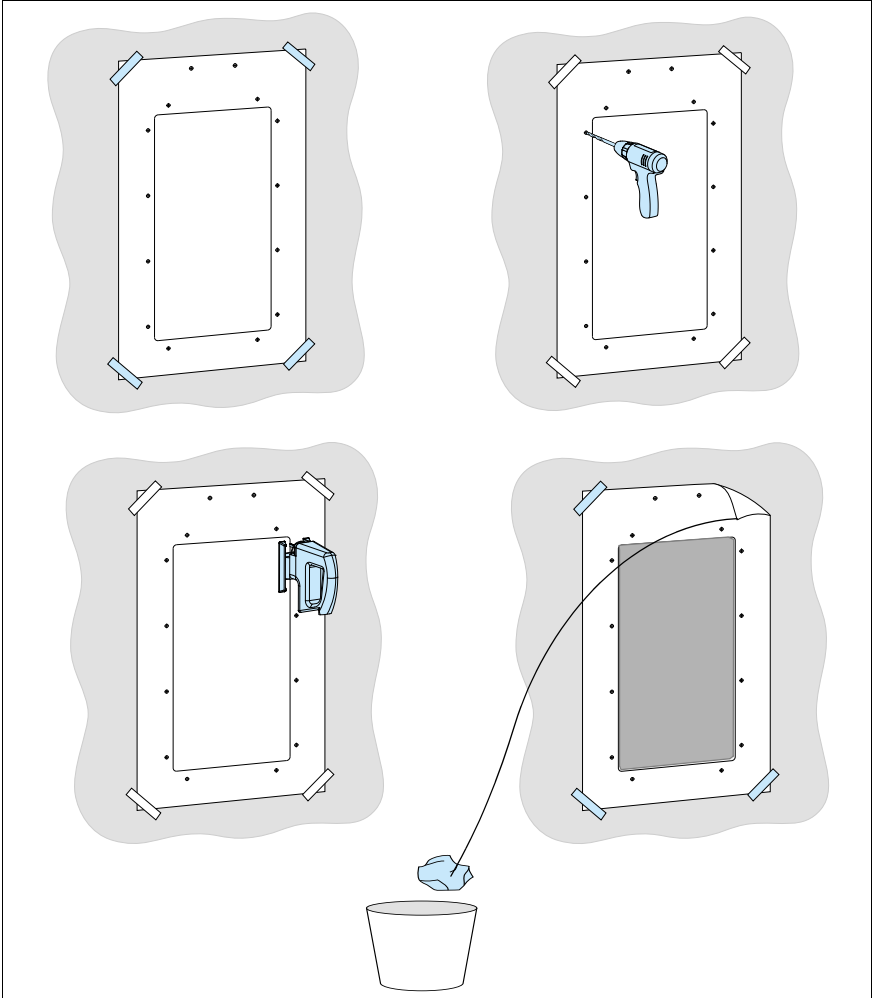


9. See chapter [Dimension drawings](#) for the dimensions of the flange and the required opening in the mounting plate. Attach the mounting template from the flange mounting kit package onto the mounting plate.

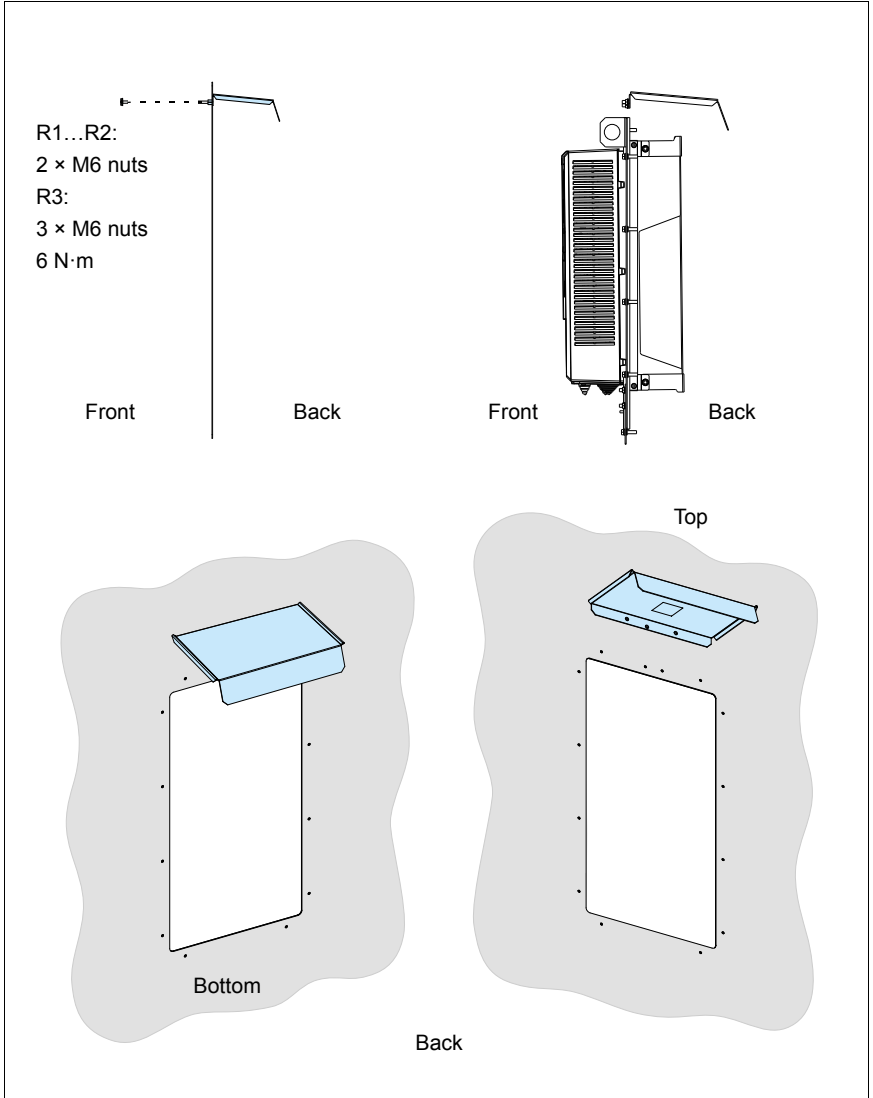
Note: Mounting templates are different (size, number and position of holes) for different frame sizes.

Note: The delivery does not include Rivet or Kalei nuts for the M6 mounting screws.

Make the opening and drill the holes for the mounting screws. Consider the hole size for the Rivet or Kalei nuts. Remove the mounting template.

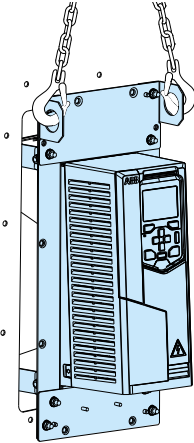


10. **UL Type 12 drives:** Attach the hood to the cooling channel. **Note:** UL Type 12 is fulfilled on the drive backside when the flange and hood are installed. Step 10 is not required for IP55.

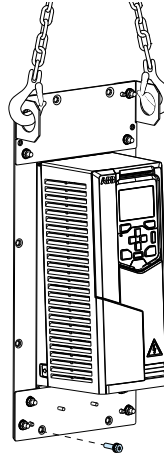


11. Attach chains to the drive lifting holes and lift the drive with a lifting device onto the opening in the mounting plate.
12. Attach the bottom bracket with one screw.
13. Attach the top bracket with one screw.
14. Attach the rest of the mounting screws. Remove the chains.

11

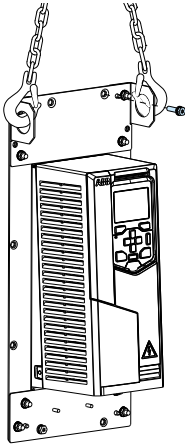


12



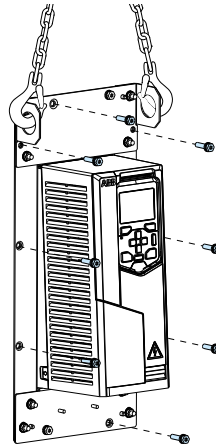
1 × M6×25 screw
6 N·m

13



1 × M6×25 screw
6 N·m

14



R1: 8 × M6×25 screw
R2: 10 × M6×25 screw
R3: 12 × M6×25 screw
6 N·m





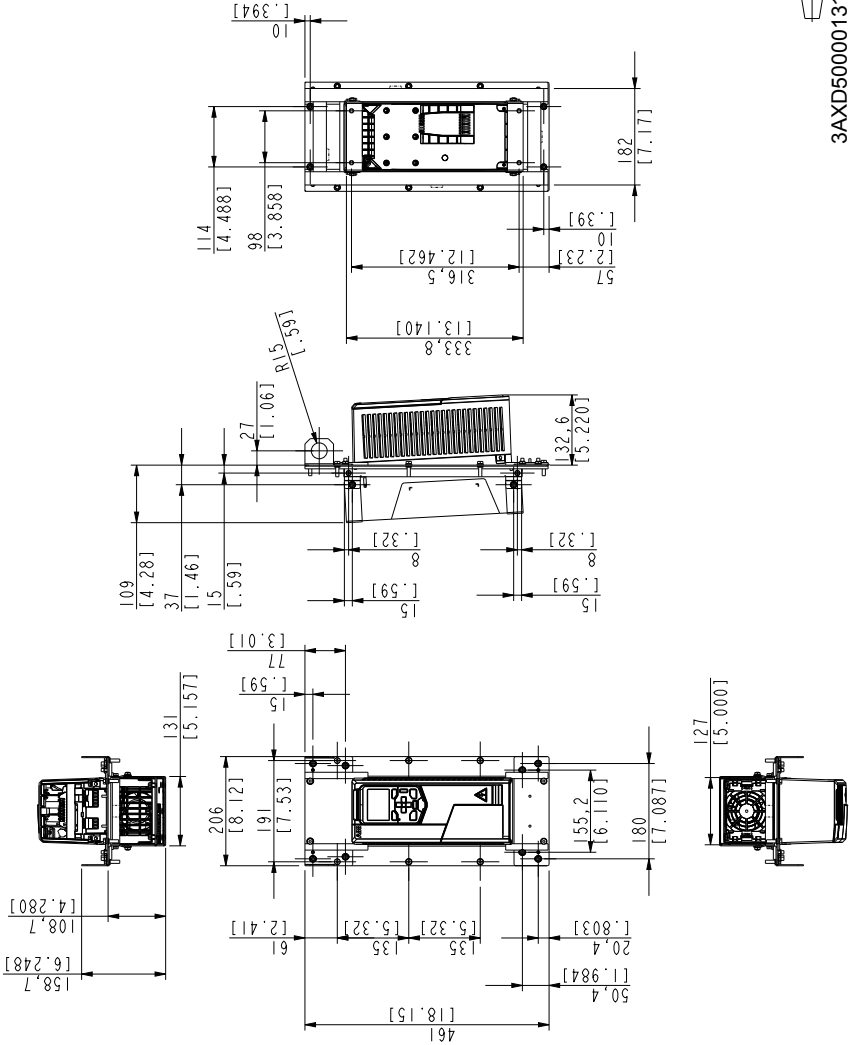
Dimension drawings

Contents of this chapter

This chapter contains the dimension drawings of the flange mounting kits and required openings in the mounting plate.

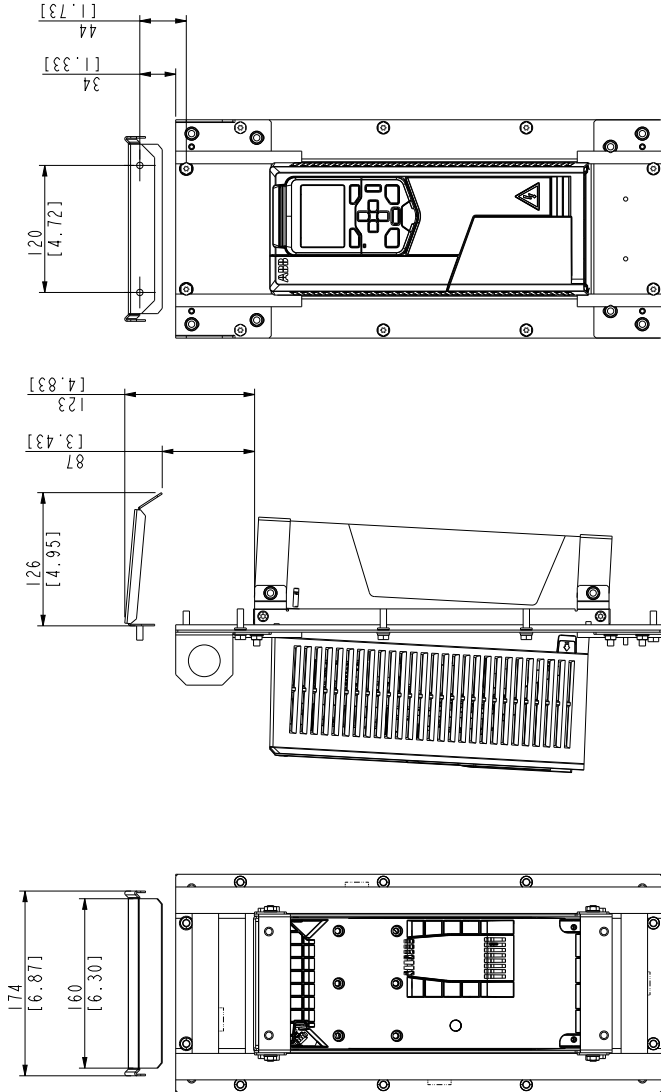
ACX580-01 frame R1

■ Flange mounting kit



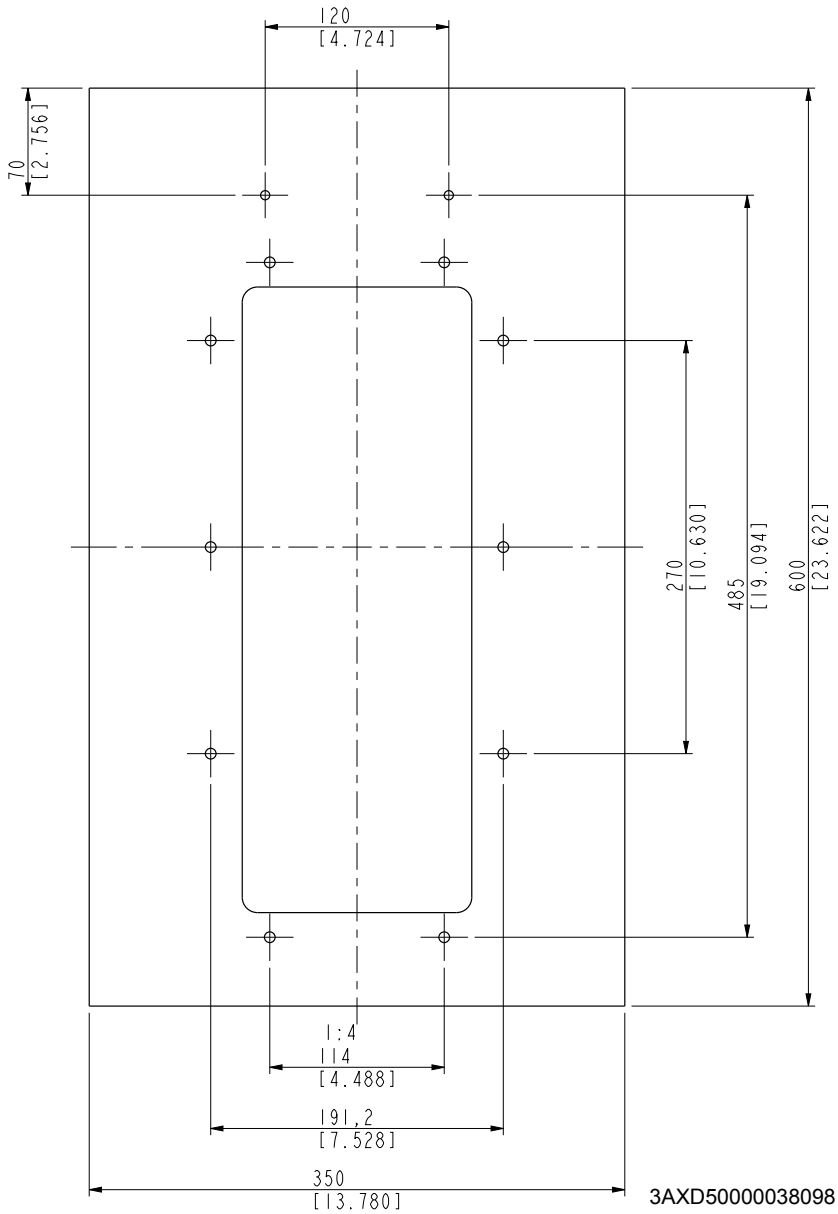
3AXD50000131310

Hood is needed for UL Type 12 drives



3AXD50000131242

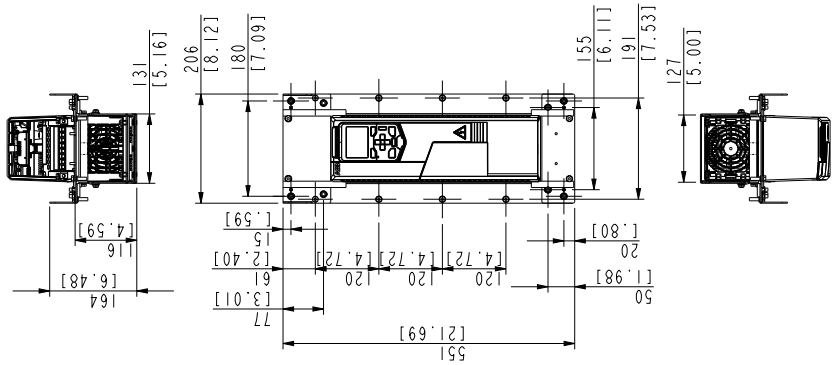
■ Attaching points and hole dimensions



3AXD50000038098

ACX580-01 frame R2

■ Flange mounting kit



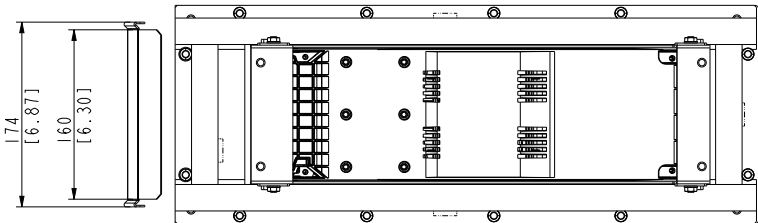
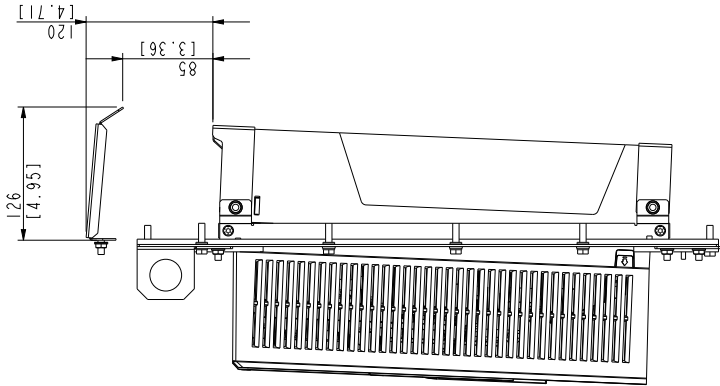
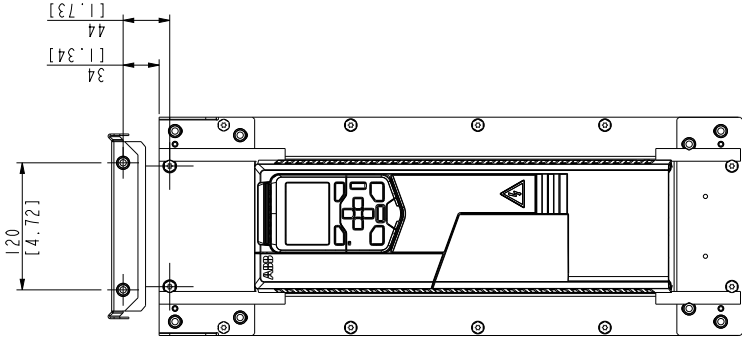
3AXD50000131327

34 Dimension drawings

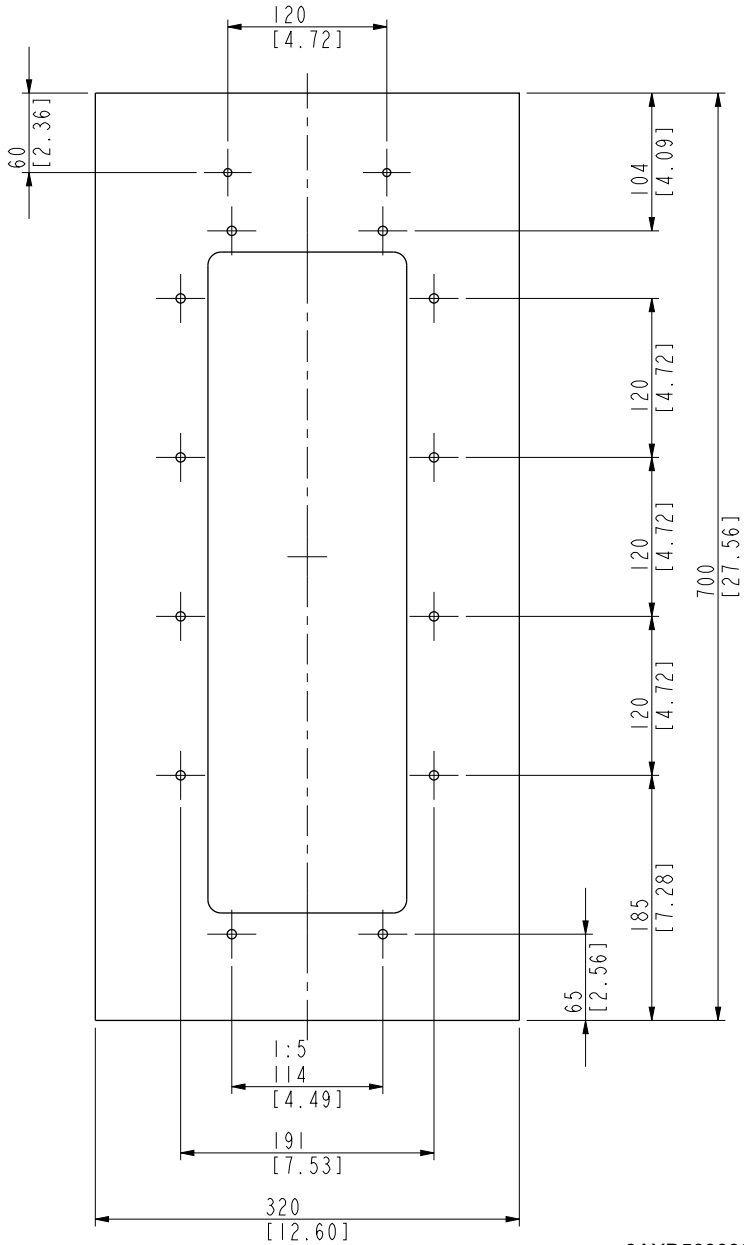
Hood is needed for UL Type 12 drives



3AXD50000130863



■ Attaching points and hole dimensions



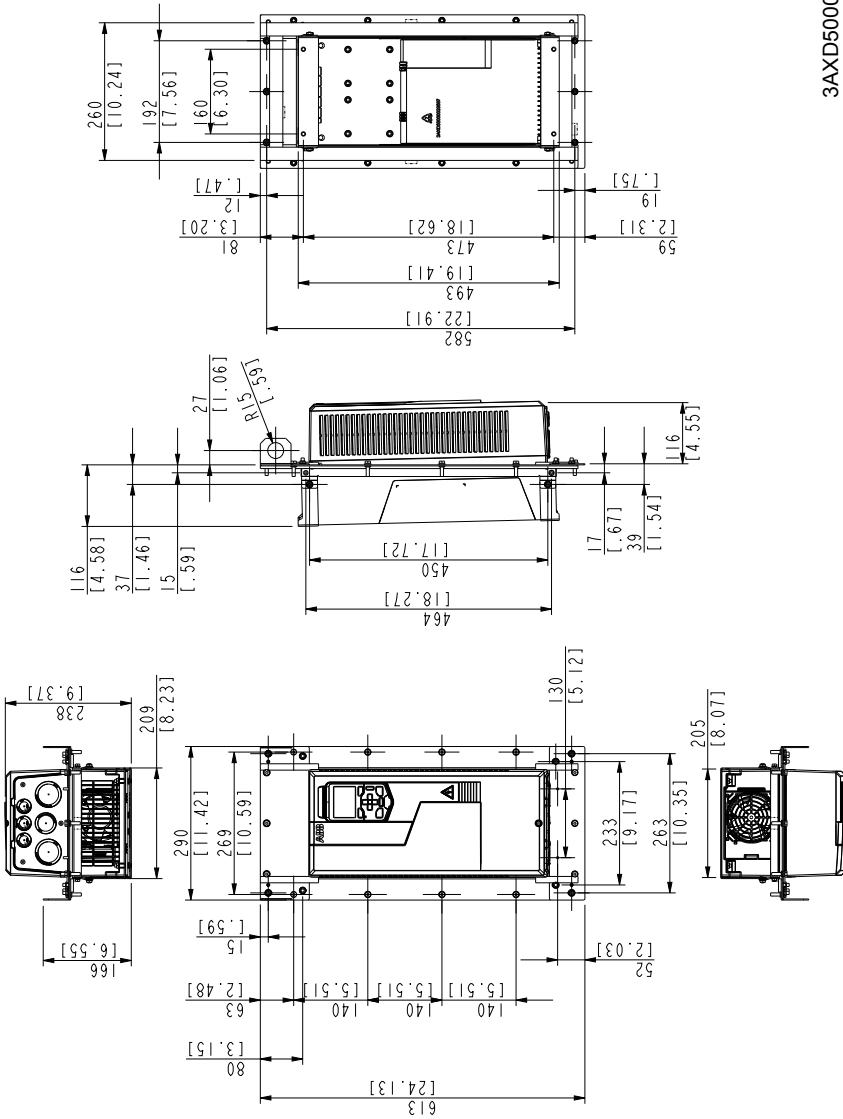
3AXD50000038111

ACX580-01 frame R3

■ Flange mounting kit



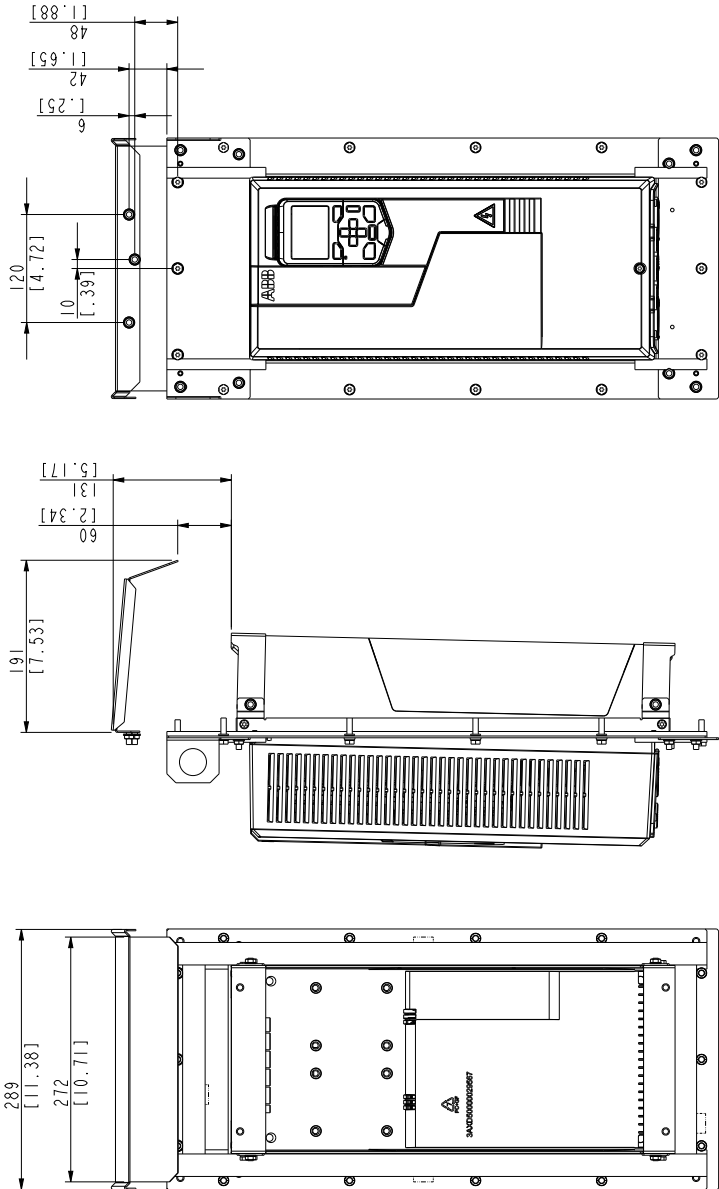
3AXD50000131143



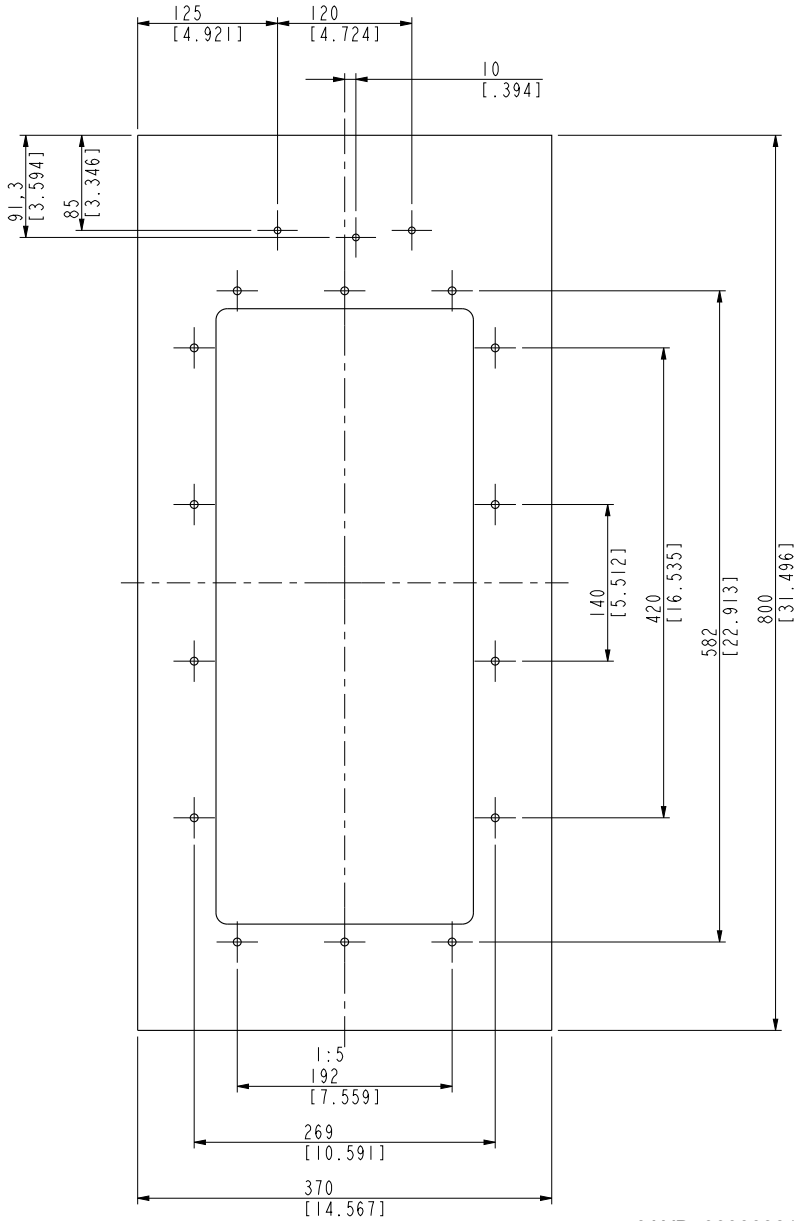
Hood is needed for UL Type 12 drives



3AXD50000130870



■ Attaching points and hole dimensions



3AXD5000038117

Further information

Product and service inquiries

Address any inquiries about the product to your local ABB representative, quoting the type designation and serial number of the unit in question. A listing of ABB sales, support and service contacts can be found by navigating to www.abb.com/searchchannels.

Product training

For information on ABB product training, navigate to new.abb.com/service/training.

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