

ABB DRIVES

**ACS880-11..., ACS880-31..., ACH580-31... and ACQ580-31...+C135 drives with flange mounting kit**  
Supplement





# ACS880-11..., ACS880-31..., ACH580-31... and ACQ580-31...+C135 drives with flange mounting kit

## Supplement

Table of contents



3. Mechanical installation





# Table of contents

---

## 1. Introduction to the supplement

Contents of this chapter	7
Applicability	7
Target audience	7
Purpose of the supplement	7
Related documents	8

## 2. Hardware description

Contents of this chapter	9
Product overview	9
Layout and mounting position	9
Tilted position, frame R3	10
Upright position, frames R6 and R8	11
Degree of protection	11
Special requirements	13
Ordering codes	13



## 3. Mechanical installation

Contents of this chapter	15
Safety	15
Examining the installation site	16
Additional requirements for cabinet installations	16
Required tools	16
Moving the drive	16
Unpacking and examining the delivery	16
Transport package contents	16
Frame R3	17
Frames R6 and R8	18
Flange mounting kit package contents	19
Frame R3	19
Frames R6 and R8	20
Mounting template	21
Installing the drive	22
Free space requirements	22
Installing drives above one another	23
Installation procedure	24
Frame R3	24
Frames R6 and R8	29

## 4. Dimension drawings

Contents of this chapter	37
Frame R3, IP21 (UL Type 1)	38

---

## 6 Table of contents

Attaching points and opening dimensions, frame R3, .....	39
Frame R6, IP 21 (UL Type 1) .....	40
Hood .....	41
Attaching points and opening dimensions, frame R6 .....	42
Frame R8, IP21 (UL Type 1) .....	43
Hood .....	44
Attaching points and opening dimensions, frame R8 .....	45

### **Further information**





# Introduction to the supplement

---

## Contents of this chapter

This chapter describes the supplement.

## Applicability

This supplement applies to the following drives with flange mounting kits:

- ACS880-11 and ACS880-31
- ACH580-31 and ACQ580-31.

## 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.

---

## Related documents

Drive hardware manuals and guides	Code (English)
<i>ACS880-11..., ACS880-31..., ACH580-31... and ACQ580-31...+C135 drives with flange mounting kit supplement</i>	<a href="#">3AXD50000349838</a>
<i>ACS880-11...+C135, ACS880-31...+C135, ACH580-31...+C135 and ACQ580-31...+C135 frame R3 flange mounting kit quick installation guide</i>	<a href="#">3AXD50000181506</a>
<i>ACS880-11...+C135, ACS880-31...+C135, ACH580-31...+C135 and ACQ580-31...+C135 frames R6 and R8 flange mounting kit quick installation guide</i>	<a href="#">3AXD50000133611</a>
<i>ACS880-11 drives hardware manual</i>	<a href="#">3AXD50000045932</a>
<i>ACS880-11 drives quick installation guide</i>	<a href="#">3AXD50000048138</a>
<i>ACS880-31 drives hardware manual</i>	<a href="#">3AXD50000045933</a>
<i>ACS880-31 drives quick installation guide</i>	<a href="#">3AXD50000048171</a>
<i>ACH580-31 drives hardware manual</i>	<a href="#">3AXD50000037066</a>
<i>ACH580-31 drives quick installation guide</i>	<a href="#">3AXD50000048001</a>
<i>ACQ580-31 drives hardware manual</i>	<a href="#">3AXD50000045935</a>

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 codes below open an online listing of the manuals applicable to the product.



[ACS880-11 manuals](#)



[ACS880-31 manuals](#)



[ACH580-31 manuals](#)



[ACQ580-31 manuals](#)





# Hardware description

---

## Contents of this chapter

This chapter describes the flange mounting kit.

## Product overview

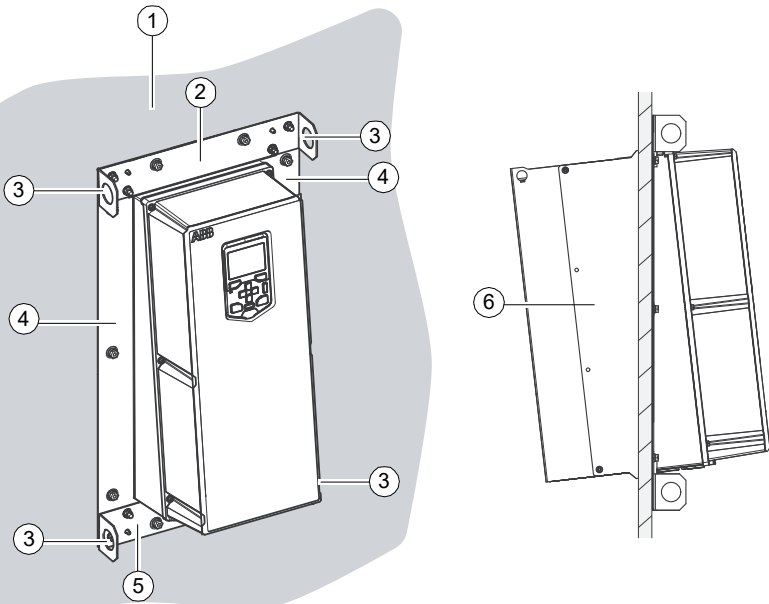
The flange mounting kit contains brackets for attaching the drive onto a mounting plate. The heat sink of the drive will be located in the cooling air channel and the front part on the other side of the mounting plate.

## Layout and mounting position

The flange-mounted drive is installed in a tilted or an upright position depending on the drive frame size.

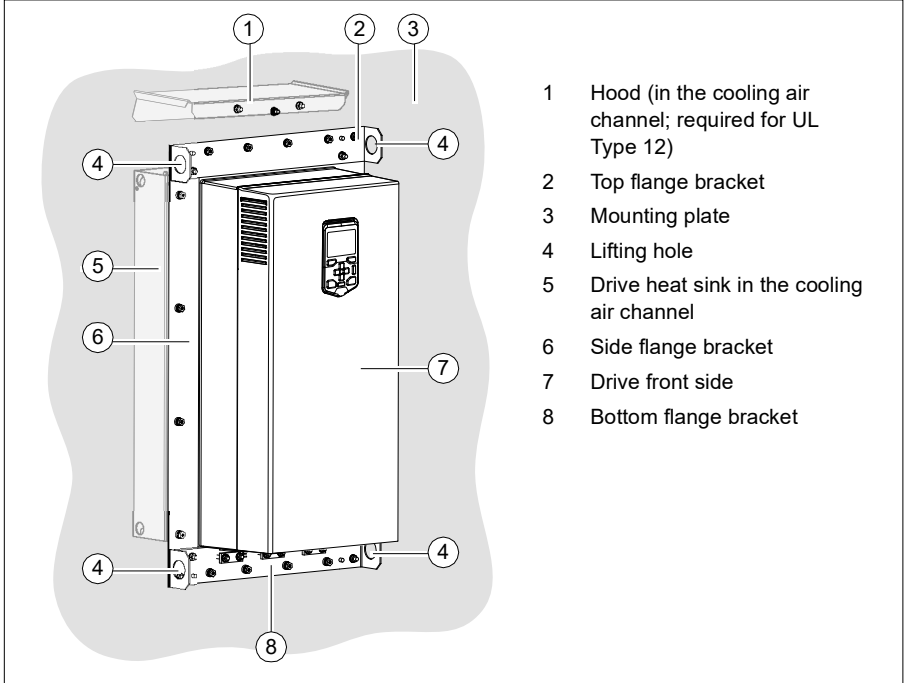
---

**Tilted position, frame R3**



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

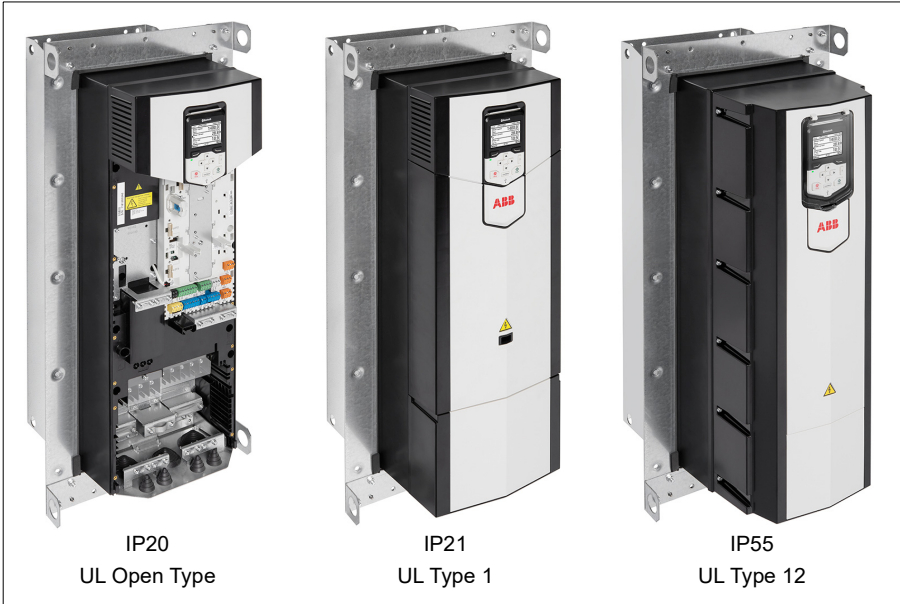
**Upright position, frames R6 and R8**



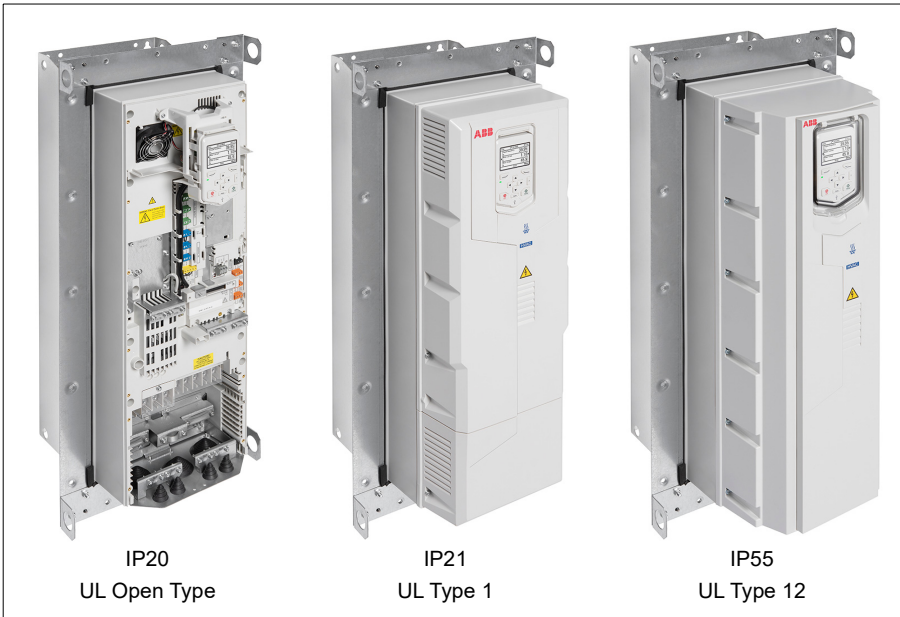
**Degree of protection**

Degree of protection of the drive	Degree of protection in flange mounting	
	Front	Back
IP21 (UL Type 1) without cover	IP20 (UL Open Type)	P55 (UL Type 12)
IP21 (UL Type 1)	IP21 (UL Type 1)	P55 (UL Type 12)
P55 (UL Type 12)	P55 (UL Type 12)	P55 (UL Type 12)

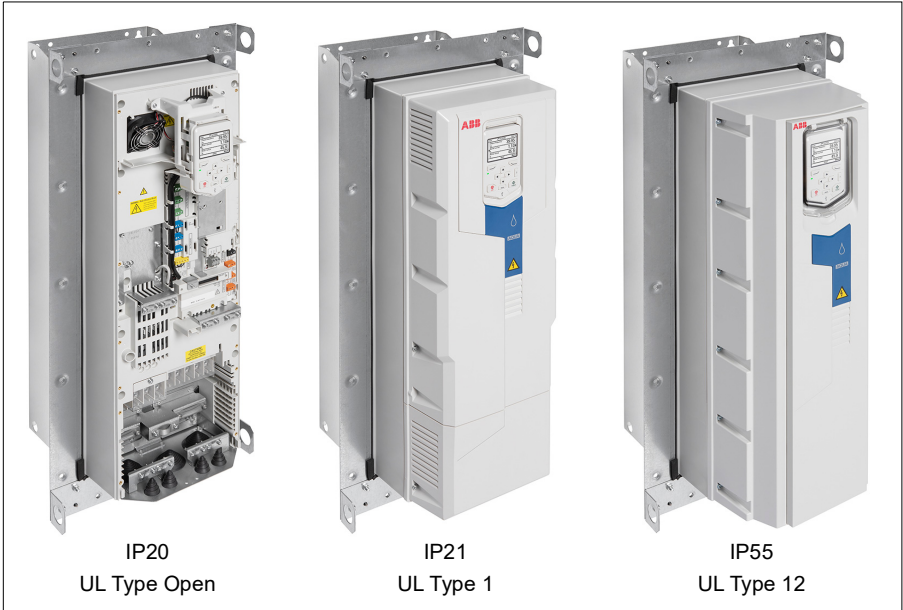
Front view of ACS880-11 and ACS880-31 frame R6 is shown below.



Front view of ACH580-31 frame R6 is shown below.



Front view of ACQ580-31 frame R6 is shown below.



### ■ Special requirements

For frame sizes R6 and R8, you must attach

- gasket into the drive
- hood in UL Type 12 installations.

### Ordering codes

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

Frame size	Ordering
R3	3AXD50000255726
R6	3AXD50000179633
R8	3AXD50000164318



## 3

# Mechanical installation

---

## Contents of this chapter

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

## Safety

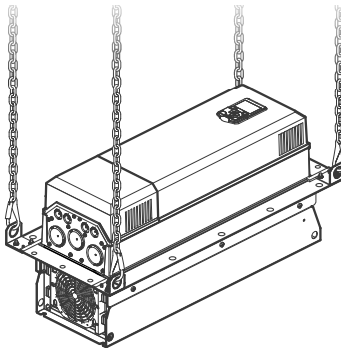
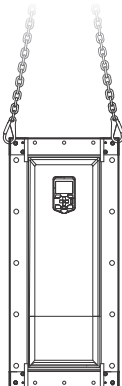
Obey the general safety instructions in the hardware manual and the task-specific instructions in this supplement.

Wear protective gloves and long sleeves. Some parts have sharp edges.

---



**WARNING!** For frame sizes R6 and R8: Use the lifting eyes of the drive when you lift the drive. Do not tilt the drive. The drive is heavy and its center of gravity is high. An overturning drive can cause physical injury.



## 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 22 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.



### Required tools

To install the drive mechanically, you need the following tools:

- drill and suitable bits
- screwdriver.

## Moving the drive

Move the drive in its transport package to the installation site. Use a pallet truck when you move a heavy drive package.

## Unpacking and examining the delivery

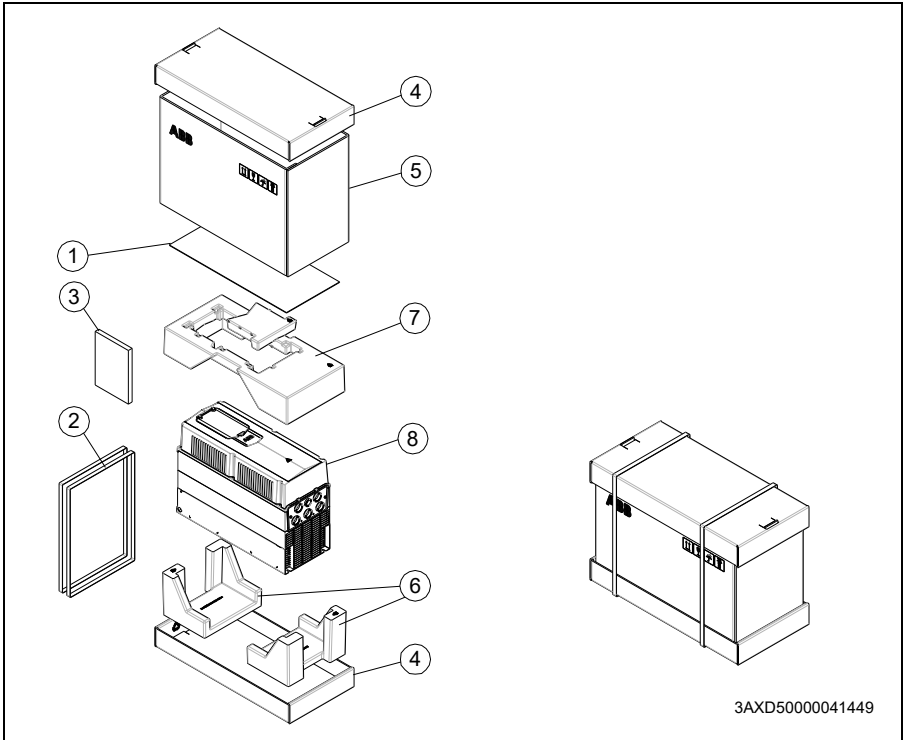
### ■ Transport package contents

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.

---



Frame R3

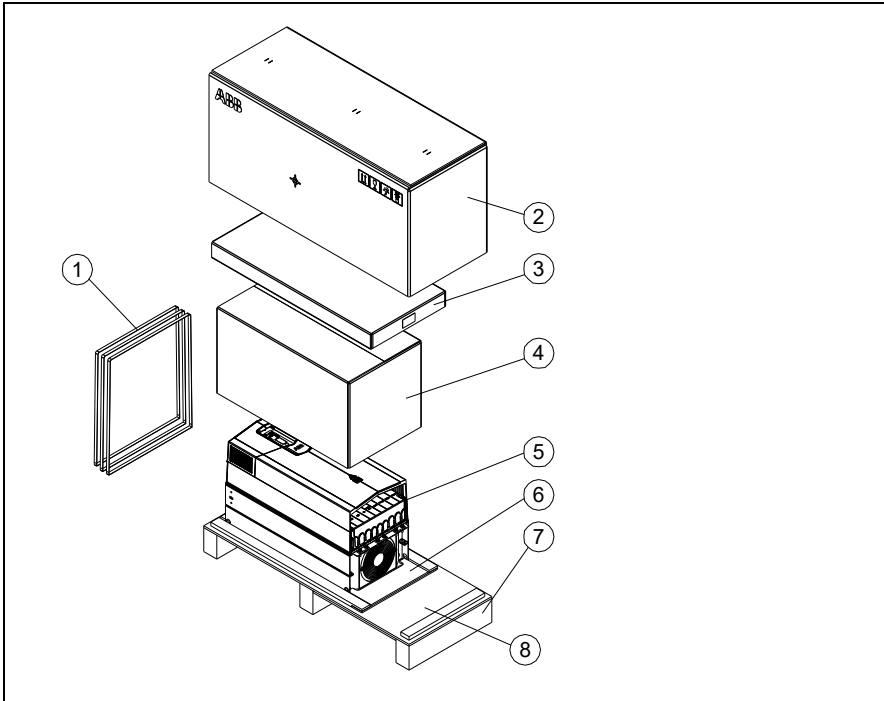


Item	Description	Item	Description
1	Mounting template	5	Cardboard sleeve
2	PET straps	6	Package cushion
3	Printed quick guides and manuals, multilingual residual voltage warning sticker	7	Foam cushion
4	Cardboard tray	8	Drive with factory installed options

- To unpack:
- Cut the straps (2).
- Remove the tray (4) and sleeve (5).
- Remove the cover protecting film.
- Lift the drive (8).



**Frames R6 and R8**



Item	Description	Item	Description
1	Straps	5	Drive with factory installed options
2	Cardboard cover	6	Pallet stopper
3	Flange mounting kit	7	Pallet tray
4	Cardboard sleeve	8	Printed manuals and quick guides, multilingual residual voltage warning stickers

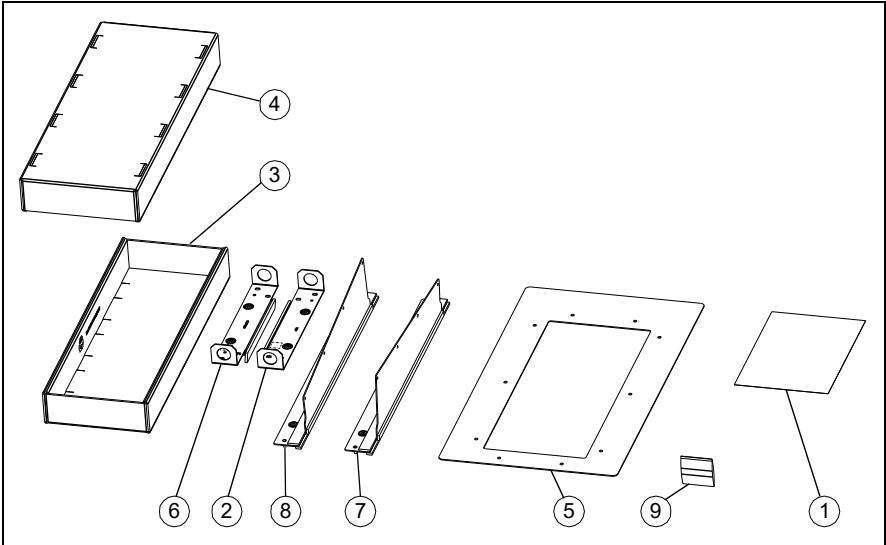
To unpack:

- Cut the straps (1).
- Remove the cardboard cover (2).
- Lift the flange mounting kit (3).
- Remove the cardboard sleeve (4).
- Attach lifting hooks to the lifting eyes of the drive (5). Lift the drive with a lifting device.

## ■ Flange mounting kit package contents

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

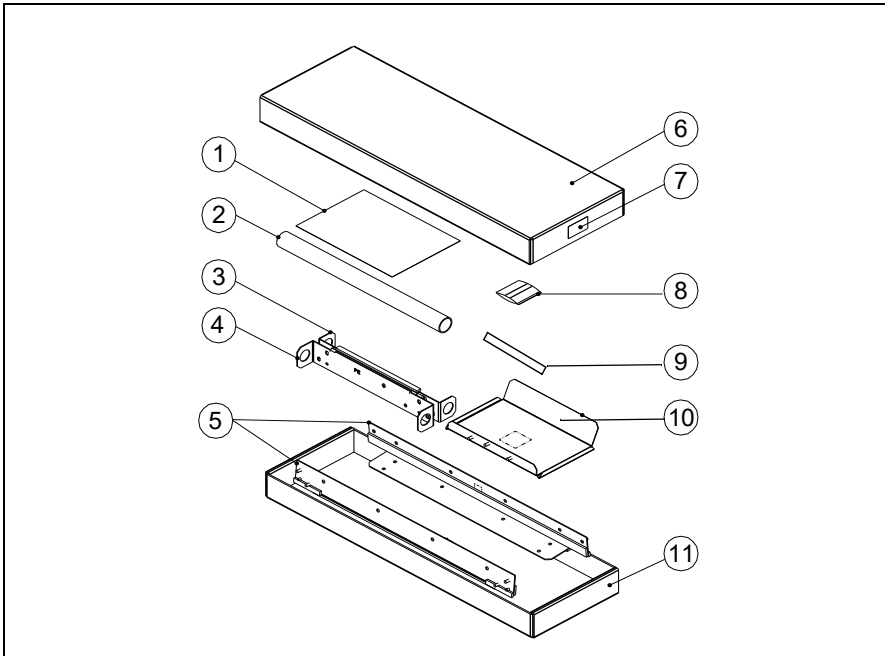
### Frame R3



Item	Description	Item	Description
1	Quick guide	6	Bottom bracket
2	Top bracket	7	Left side bracket
3	Cardboard tray	8	Right side bracket
4	Top cardboard cover	9	Screw package: <ul style="list-style-type: none"> <li>• M5x12 combi screw (4 pcs)</li> <li>• M6 nut (8 pcs)</li> </ul> M6x25 combi screw T25 (10 pcs)*
5	Mounting template		

\* The delivery does not include the Rivet or Kalei nuts for the M6 screws.

**Frames R6 and R8**



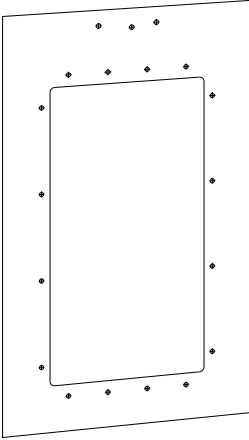
1	Quick guide	8	Screw package: <ul style="list-style-type: none"> <li>• M6 nut (11 pcs) *</li> <li>• M6×10 T30 (12 pcs) *</li> <li>• M6×25 T25 (R6...R8: 16 pcs, R9: 18 pcs)</li> </ul>
2	Mounting template		
3	Top bracket		
4	Bottom bracket		
5	Side brackets	9	Gasket
6	Top cardboard cover	10	Hood (required for UL Type 12)
7	Option kit package label	11	Cardboard tray

\* The delivery does not include the Rivet or Kalei nuts for the M6 screws.

## 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.

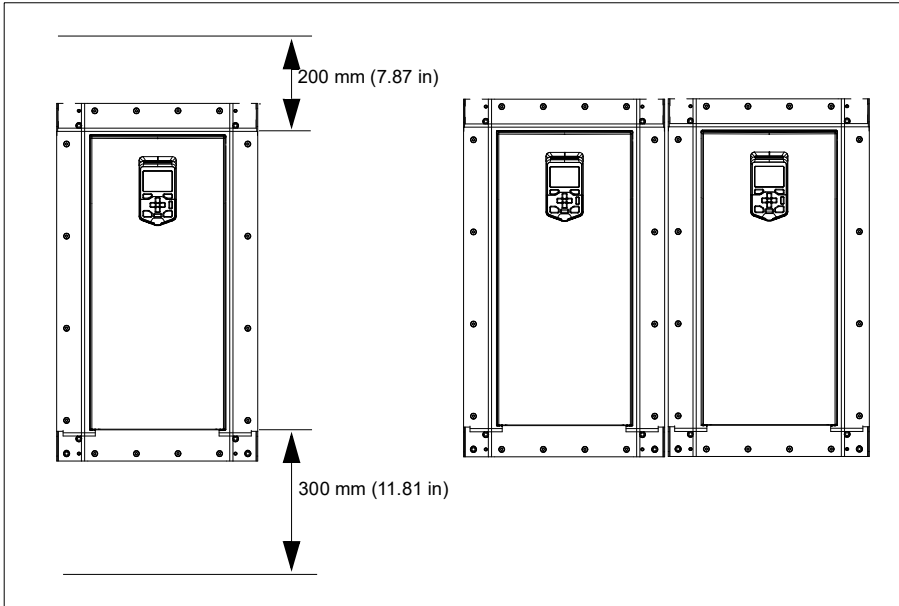
An example template is shown below.



## Installing the drive

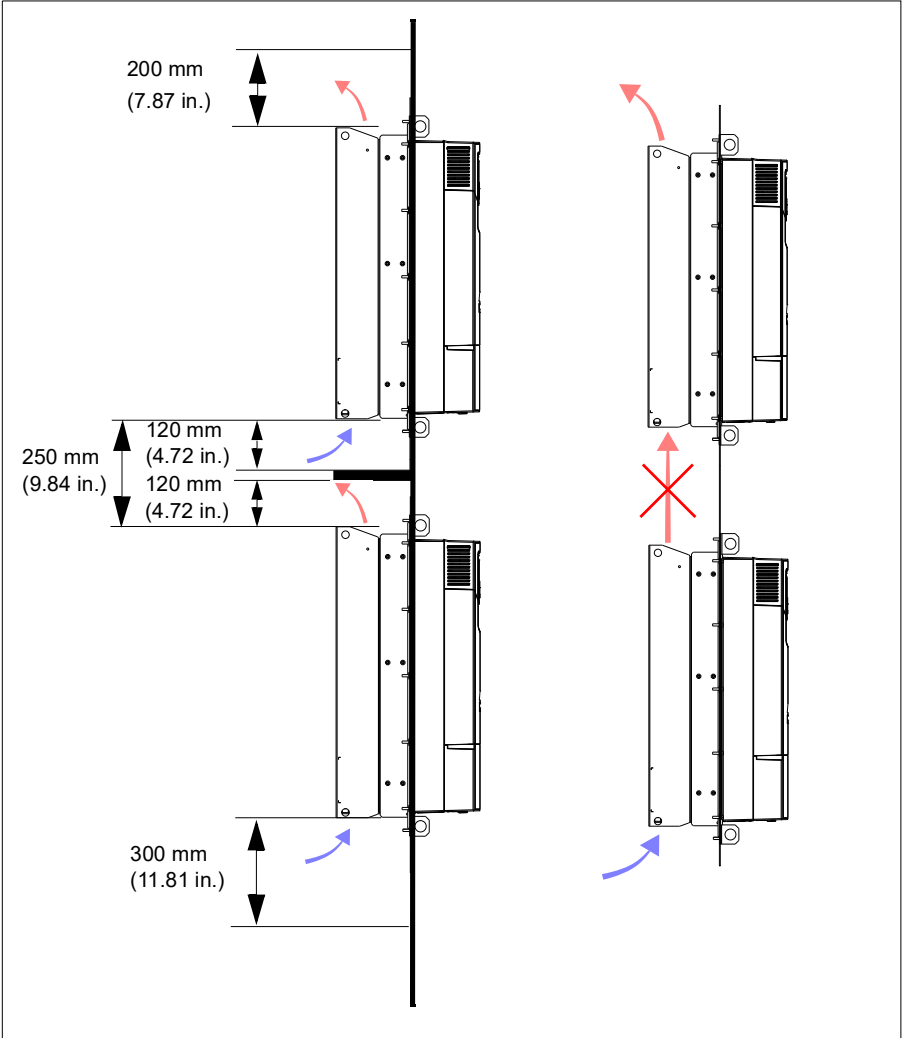
### ■ Free space requirements

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



### ■ Installing drives above one another

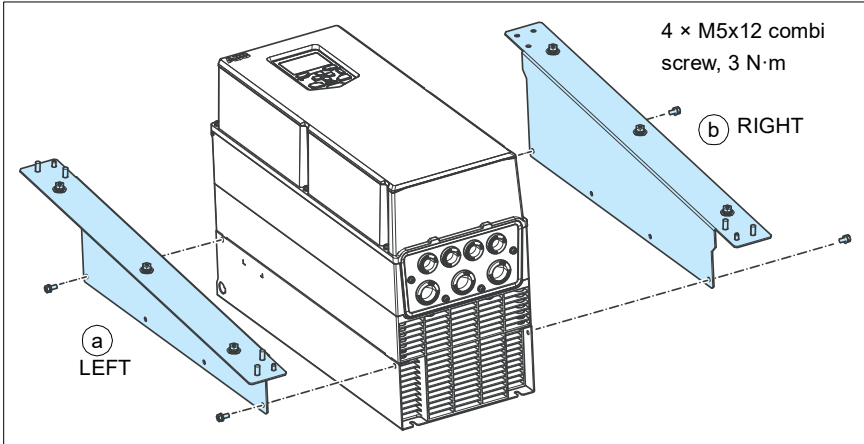
Make sure that the outlet cooling air flows away from the drive above.



## Installation procedure

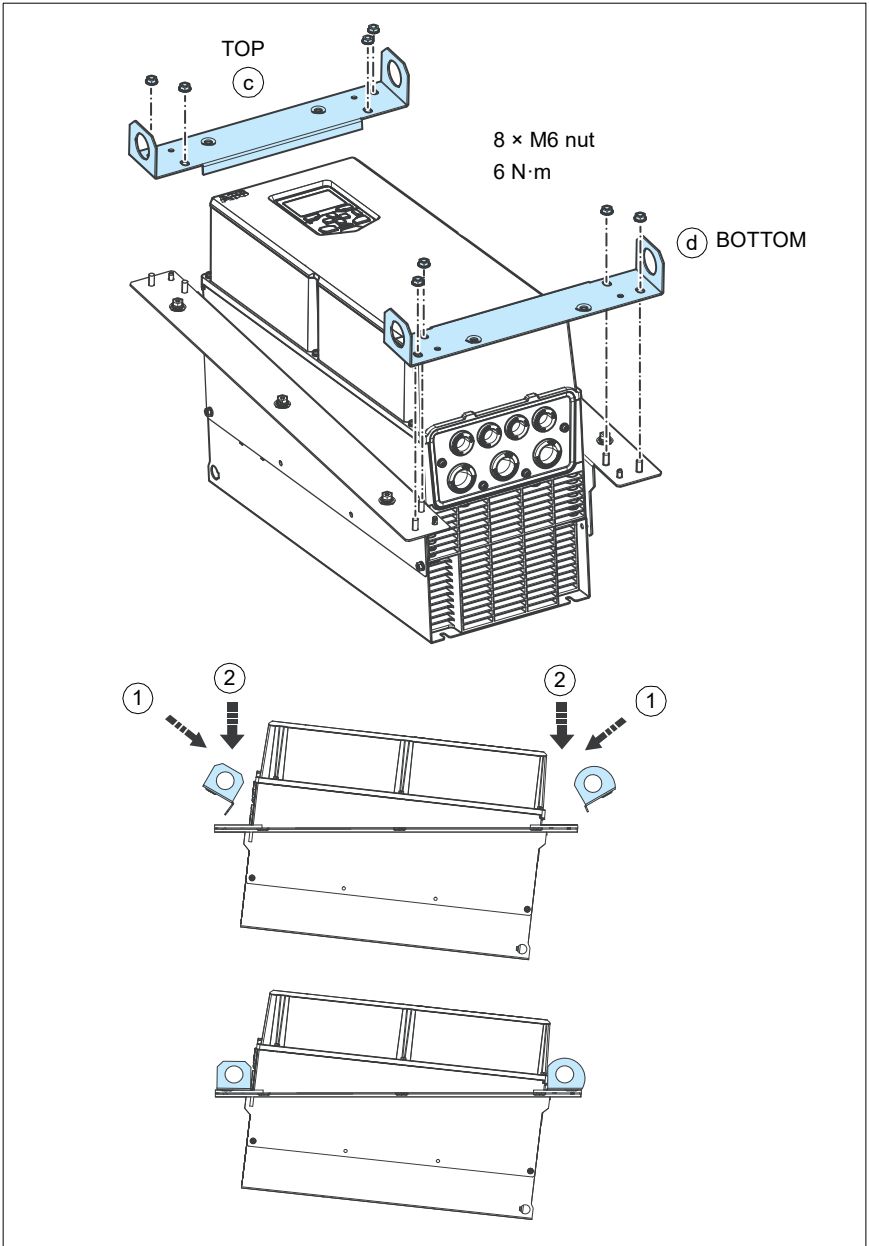
### ■ Frame R3

1. Attach the side brackets (a and b) of the flange to the drive with M5 combi screws.



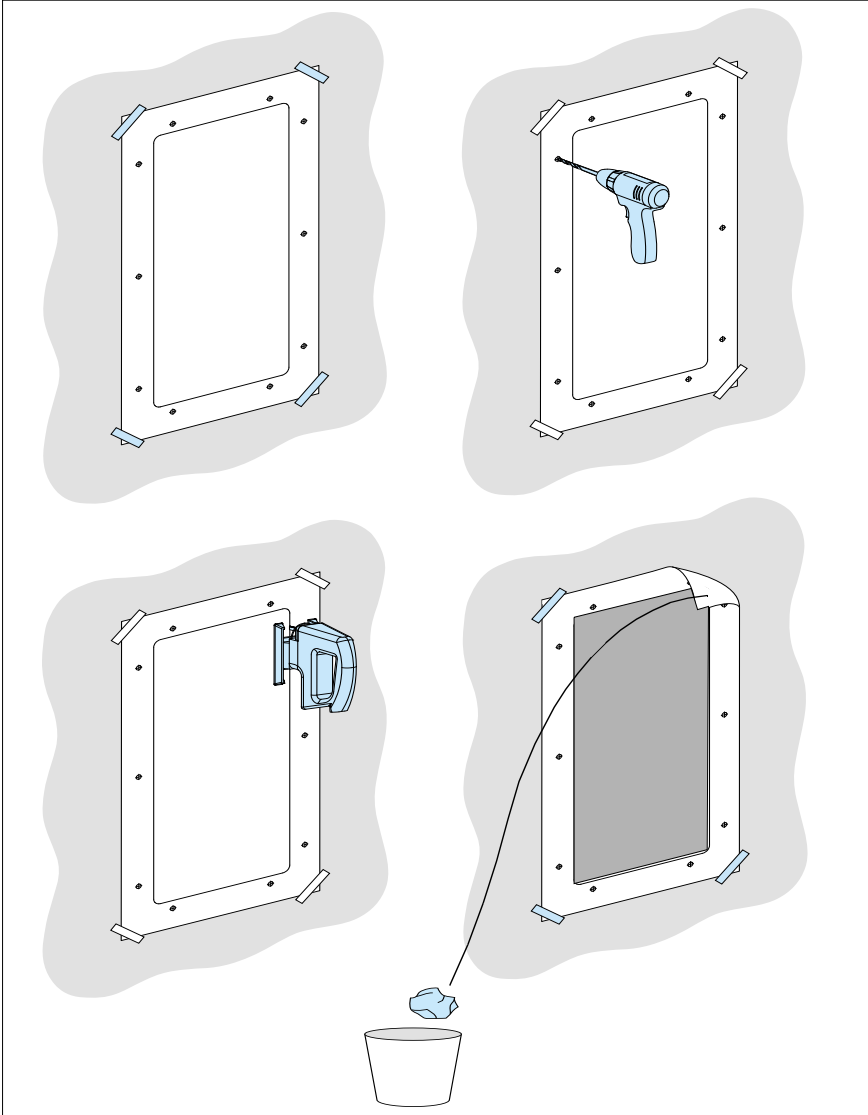


2. Attach the top (c) and bottom (d) brackets to the side brackets, first the inner sides of the top and bottom brackets (the sides that touch the drive), then the outer sides.

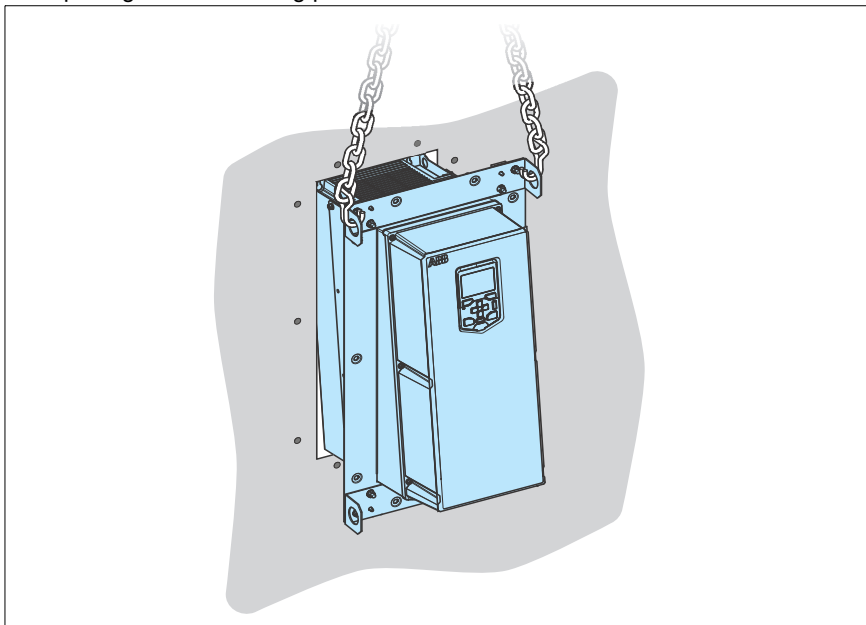


3. See chapter [Dimension drawings](#) for the dimensions of the flange and the required opening in the mounting plate. Attach the mounting template from the flange mounting kit package onto the mounting plate.

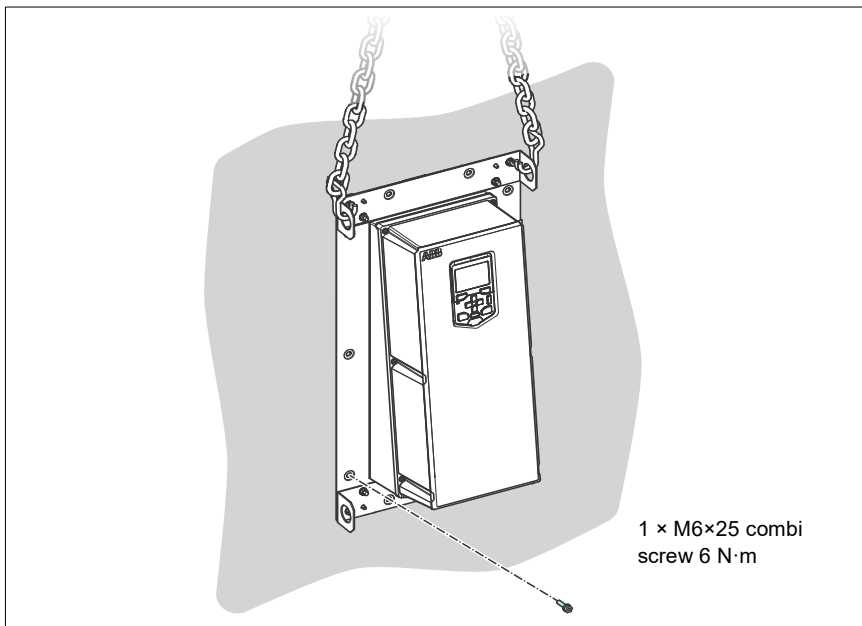
Make the opening and drill the holes for the mounting screws. Consider the hole size for the Rivet or Kalei nuts (not included in the delivery). Remove the mounting template.



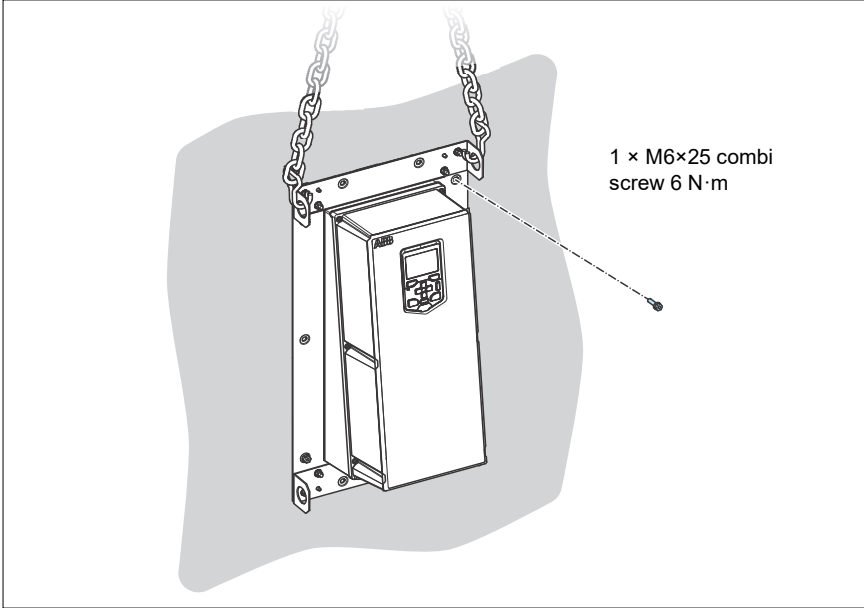
4. Attach chains to the drive lifting holes and lift the drive with a lifting device onto the opening in the mounting plate.



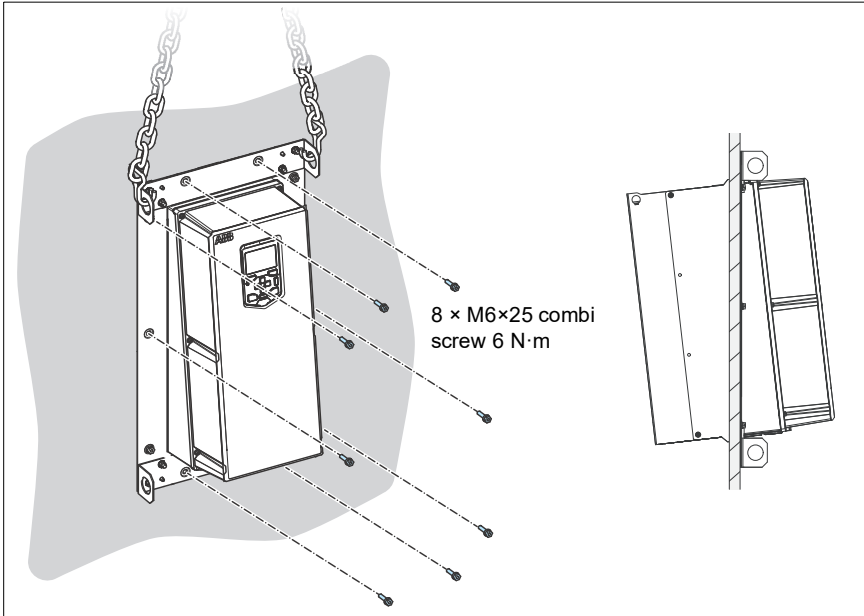
5. Attach the bottom bracket with one screw.



6. Attach the top bracket with one screw.

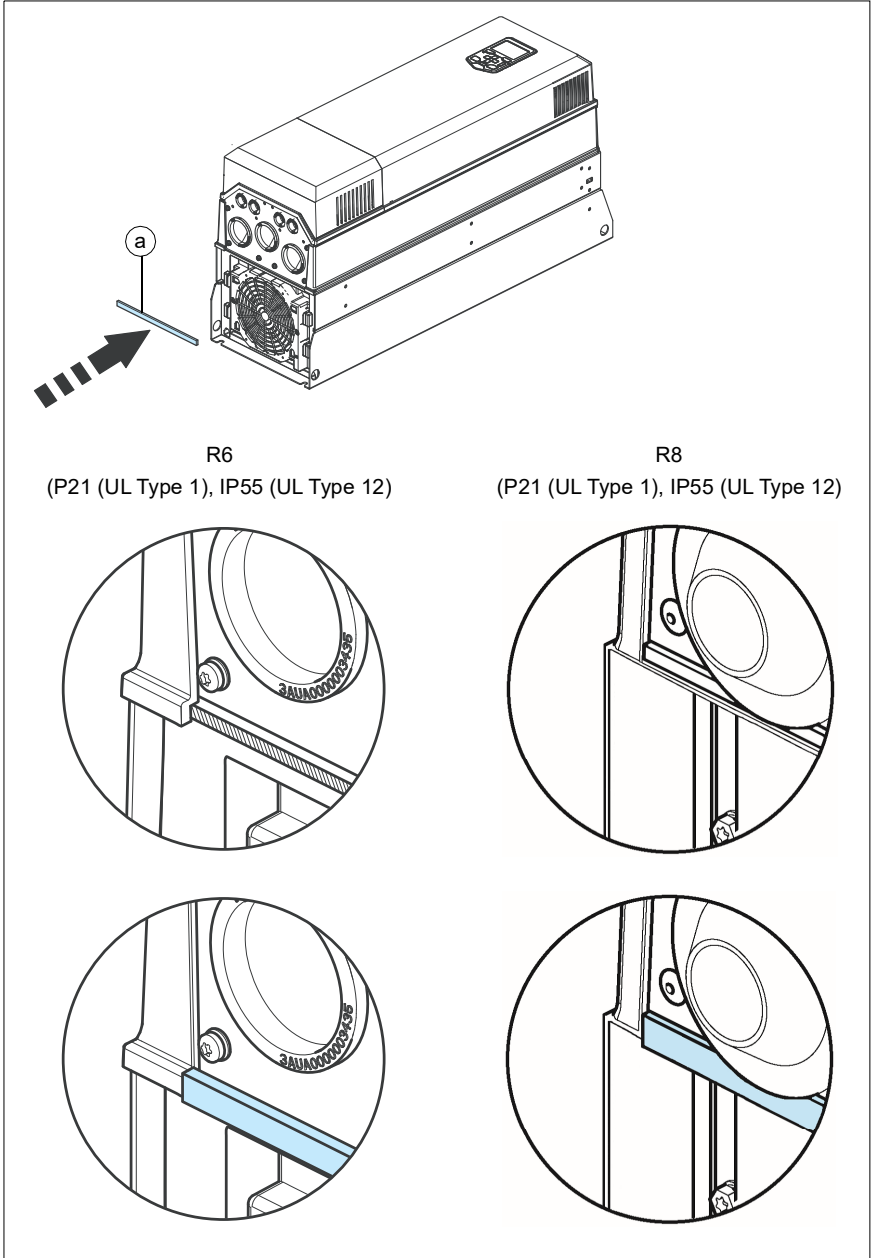


7. Attach the rest of the mounting screws. Remove the chains.

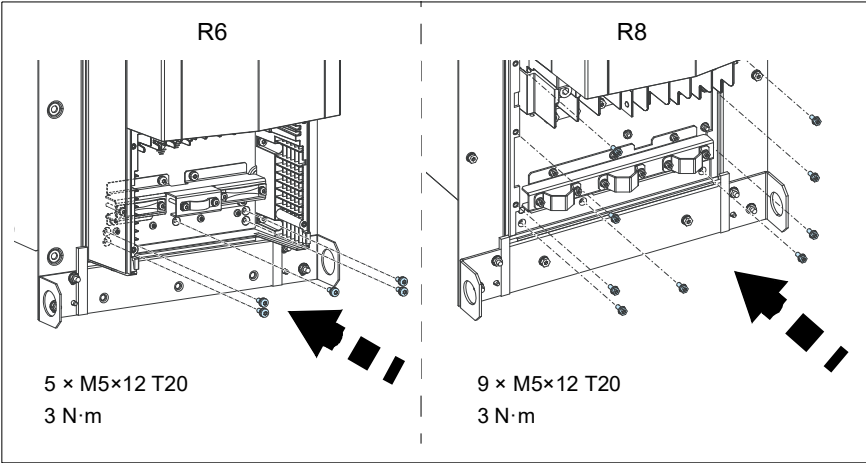


■ **Frames R6 and R8**

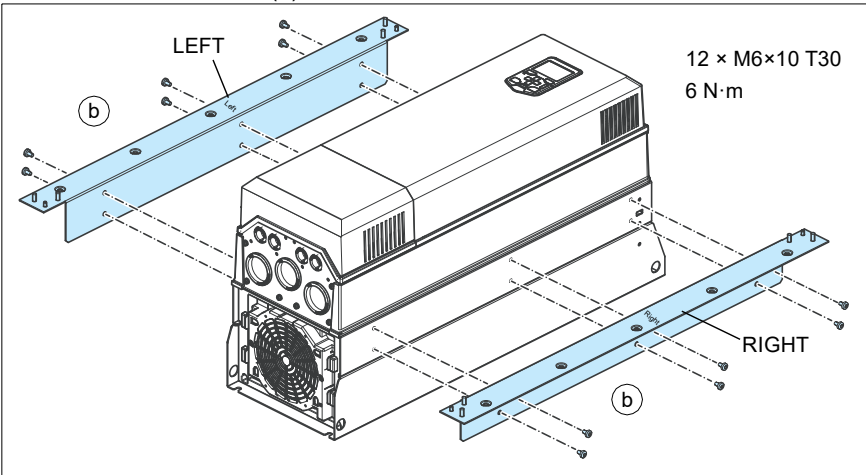
1. Attach the gasket (a).



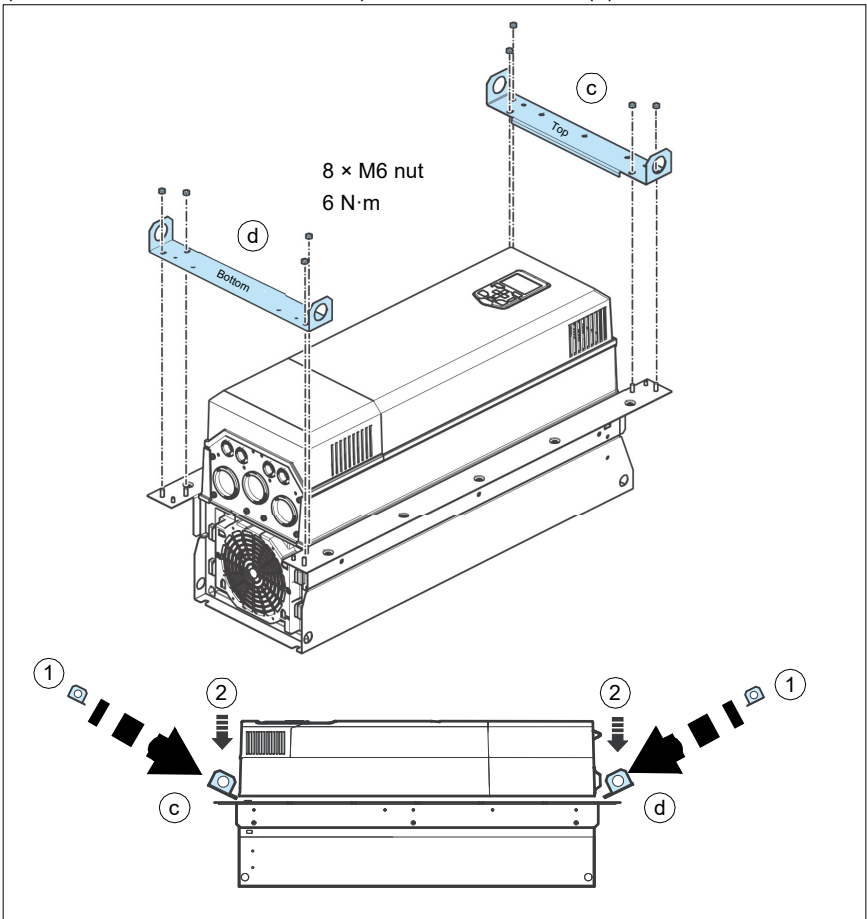
2. **IP20 (UL Open Type):** Install the sealing screws.



3. Attach the side brackets (b).



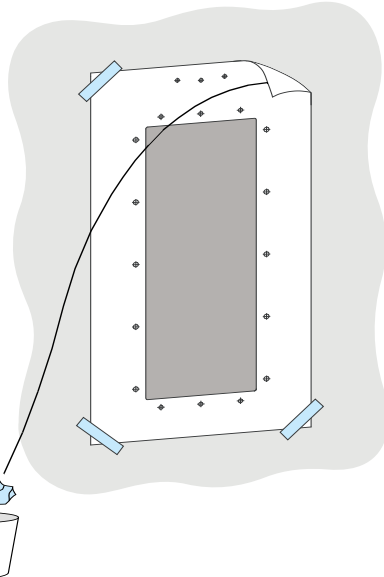
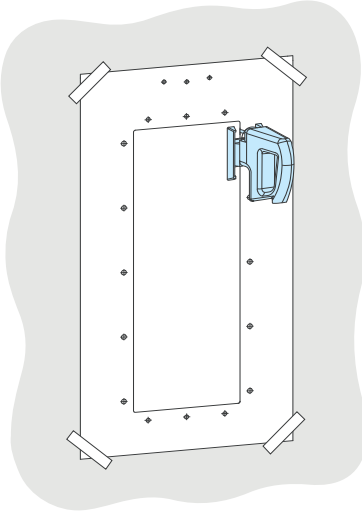
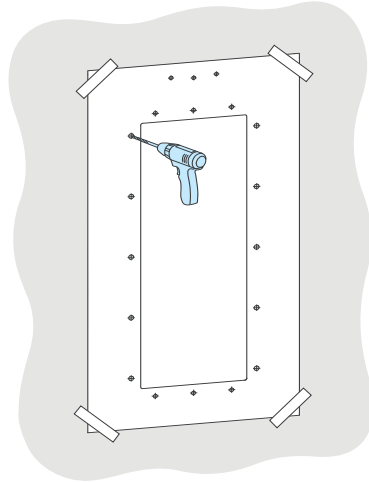
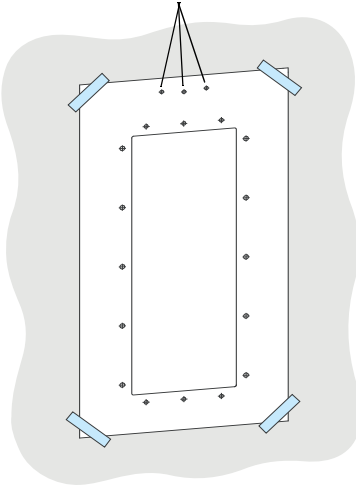
- Attach the top (c) and bottom (d) brackets to the side brackets, first the inner side (1, the side that touches the drive), then the outer side (2).



5. 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.

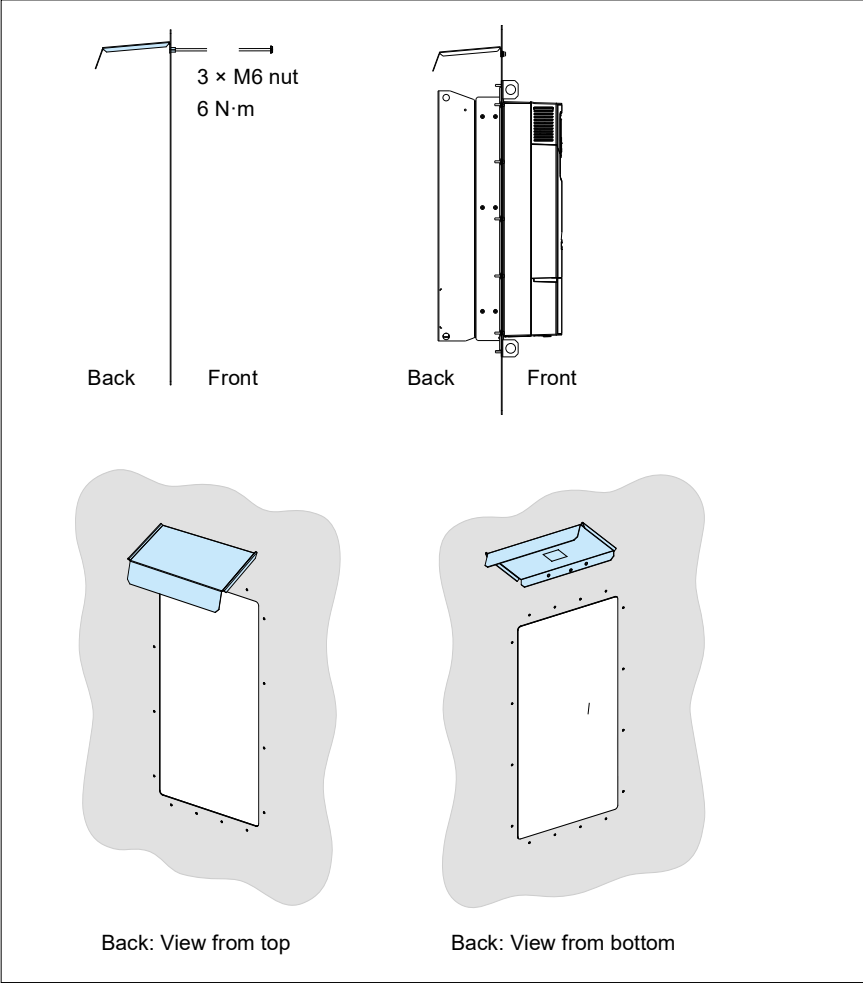
Make the opening and drill the holes for the mounting screws. Consider the hole size for the Rivet or Kalei nuts (not included in the delivery). Remove the mounting template.

**Note!** Needed for UL Type 12 only (hood)

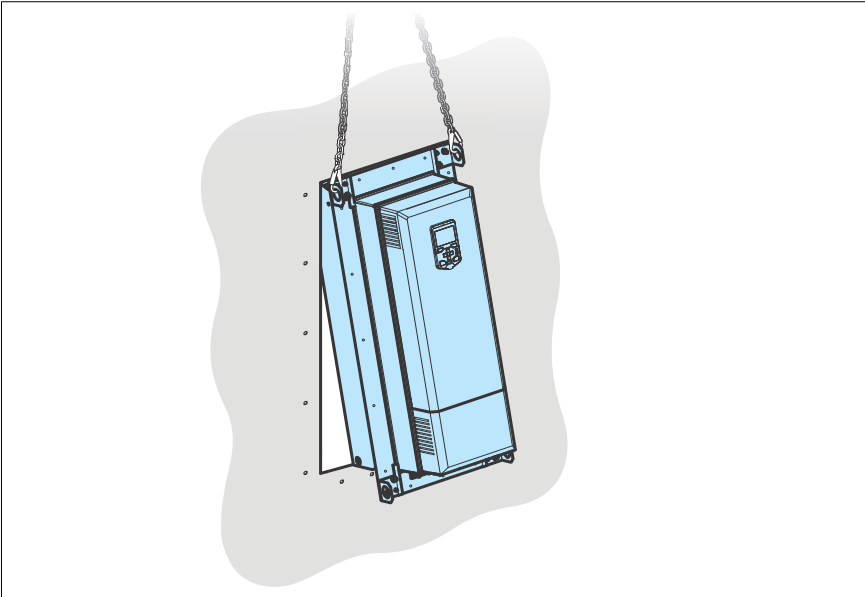




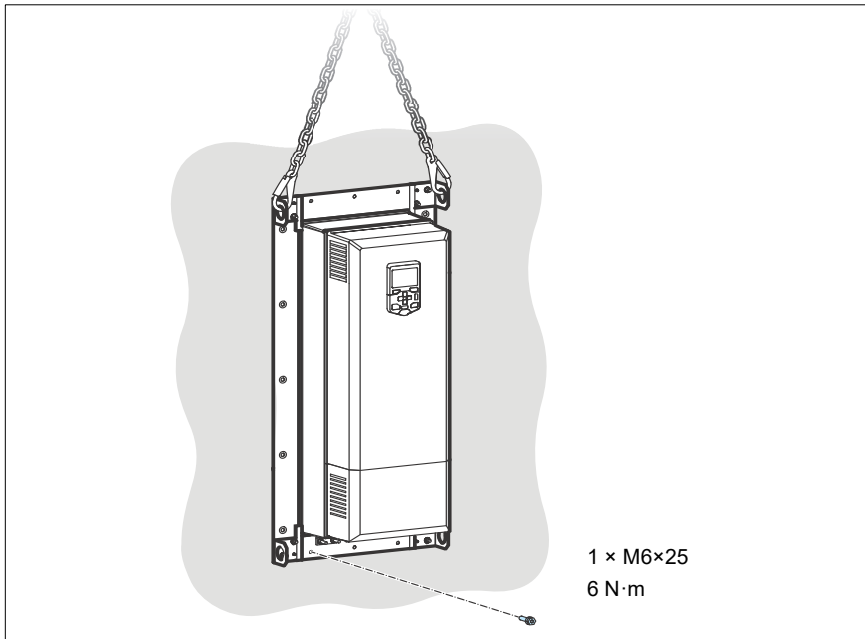
6. **UL Type 12 installation only:** Attach the hood to the cooling channel.



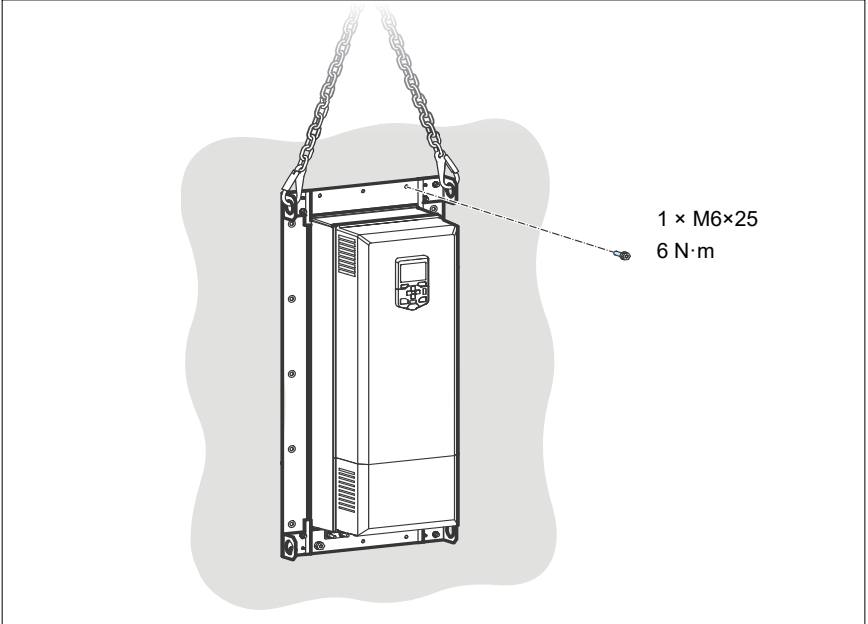
7. Attach chains to the lifting holes of the flange and lift the drive with a lifting device onto the opening in the mounting plate.



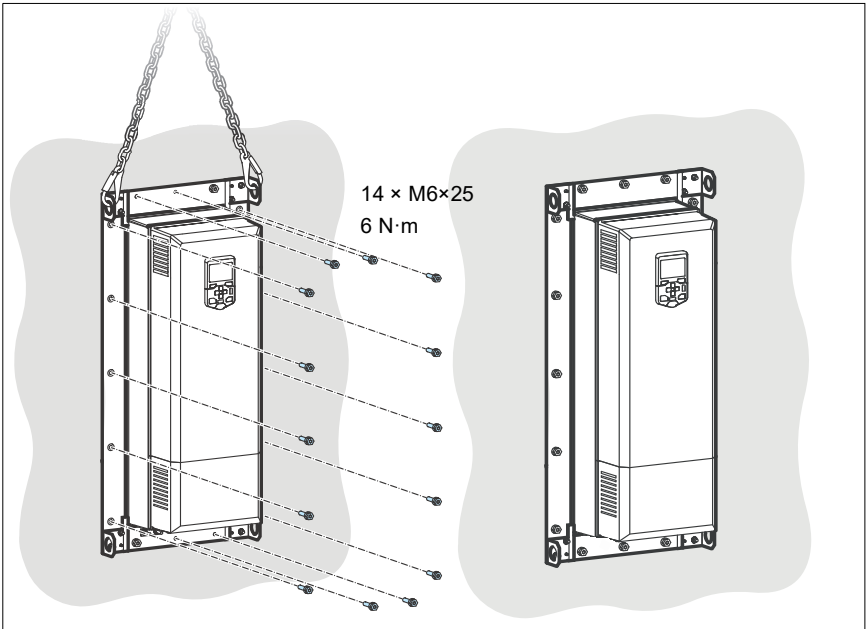
8. Attach the bottom bracket with one screw.



9. Attach the top bracket with one screw.



10. Attach the rest of the mounting screws. Remove the chains.







# Dimension drawings

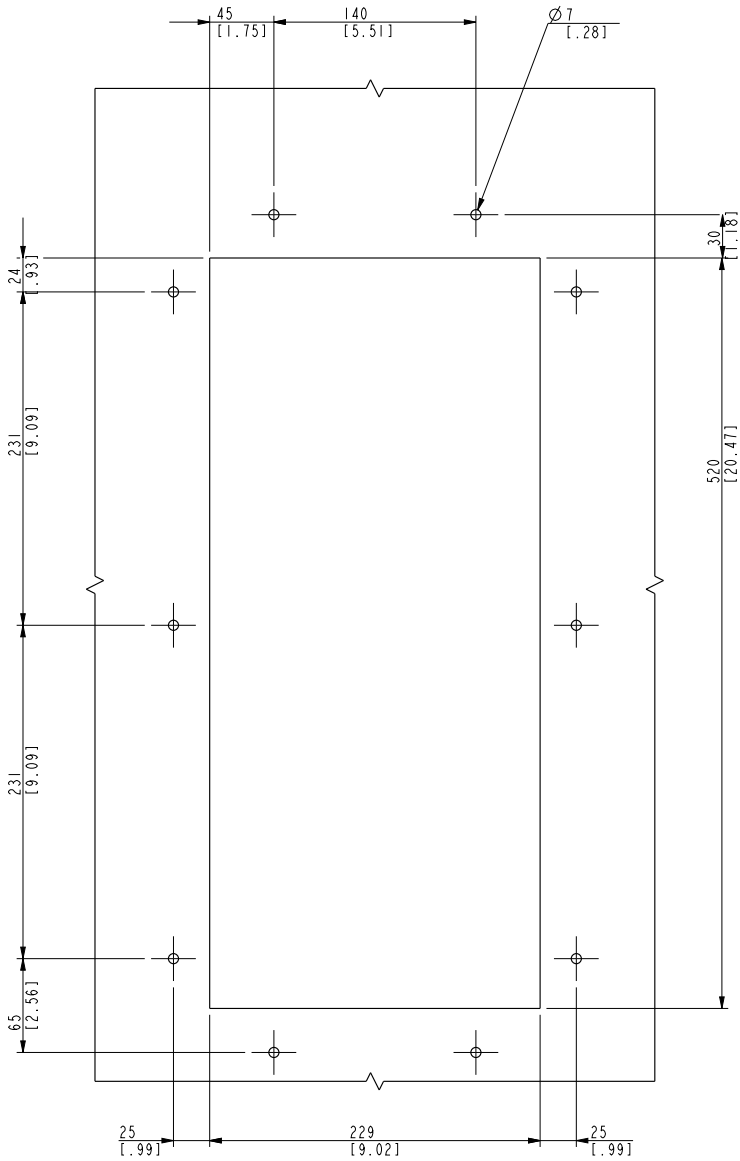
---

## Contents of this chapter

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



■ Attaching points and opening dimensions, frame R3,



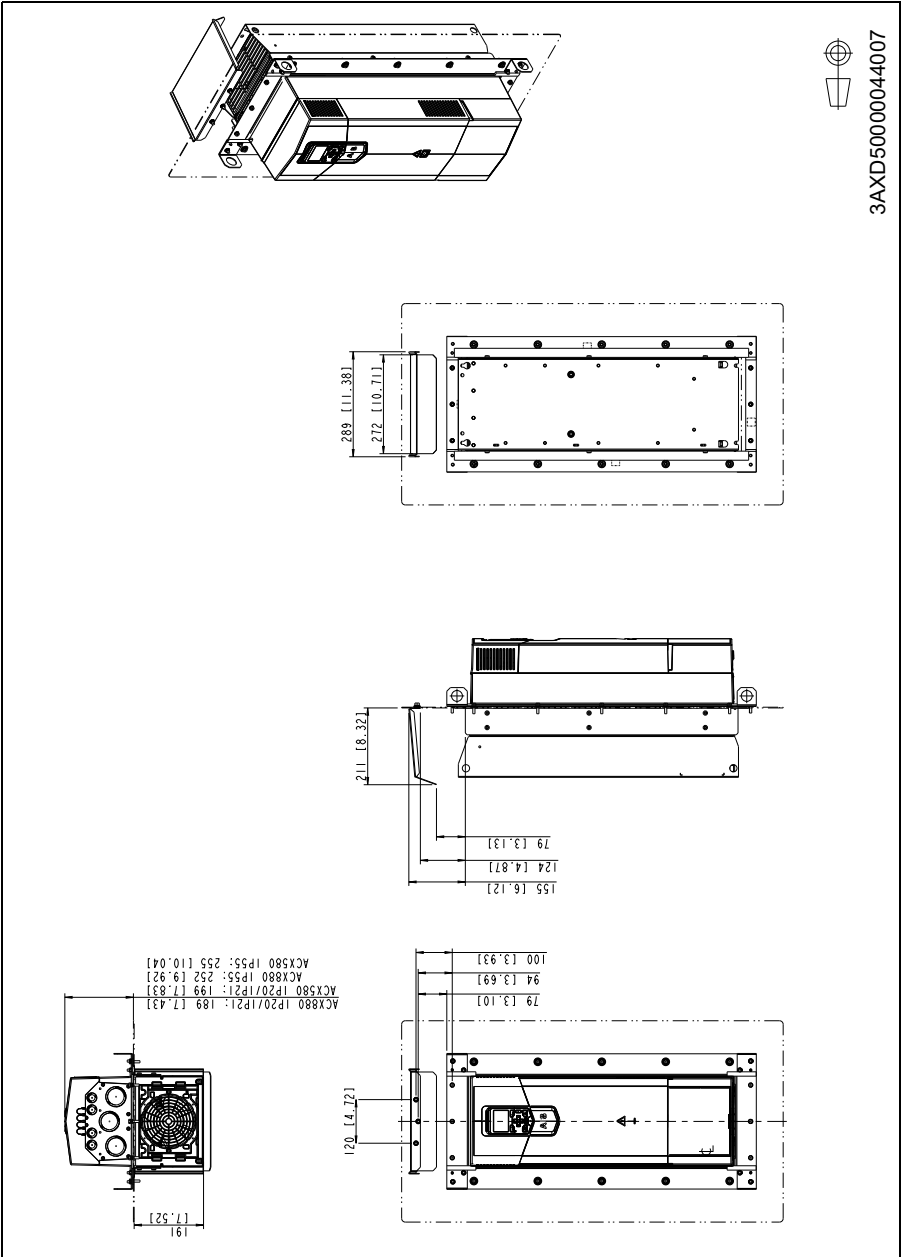
3AXD50000043907



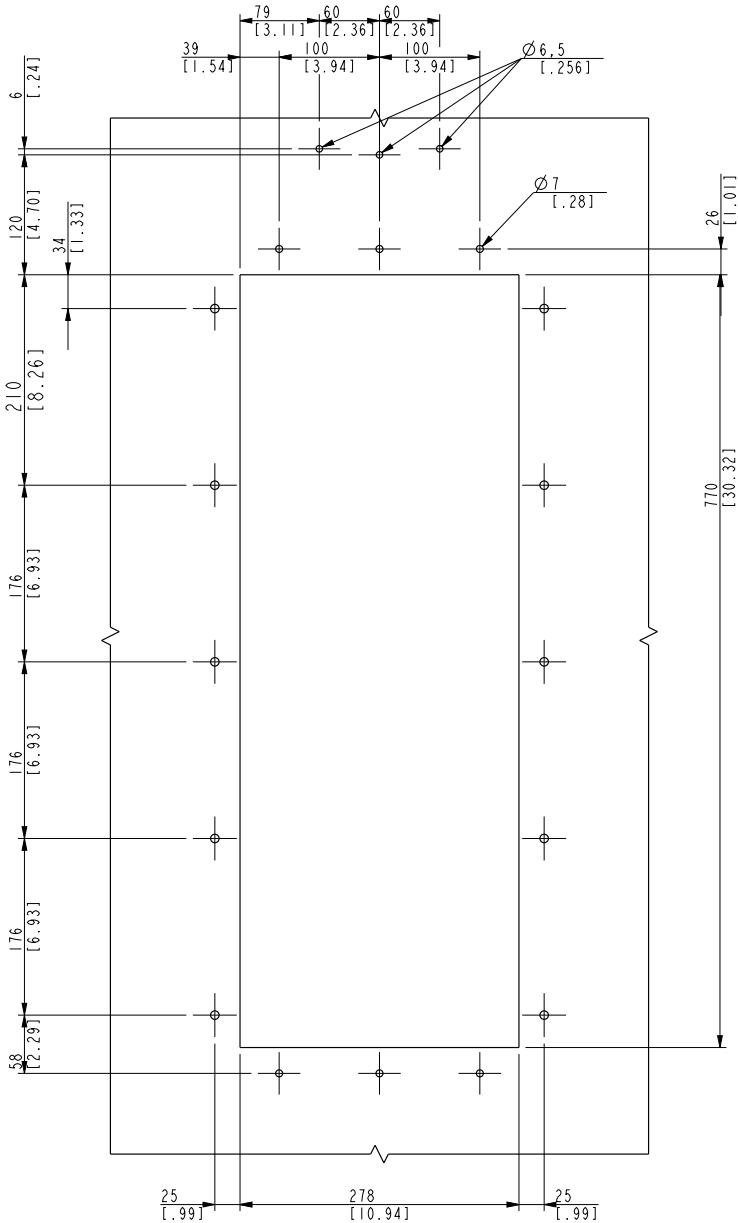


**Hood**

UL Type 12 installation at the back of the drive requires installing of the hood. Not needed in IP55.

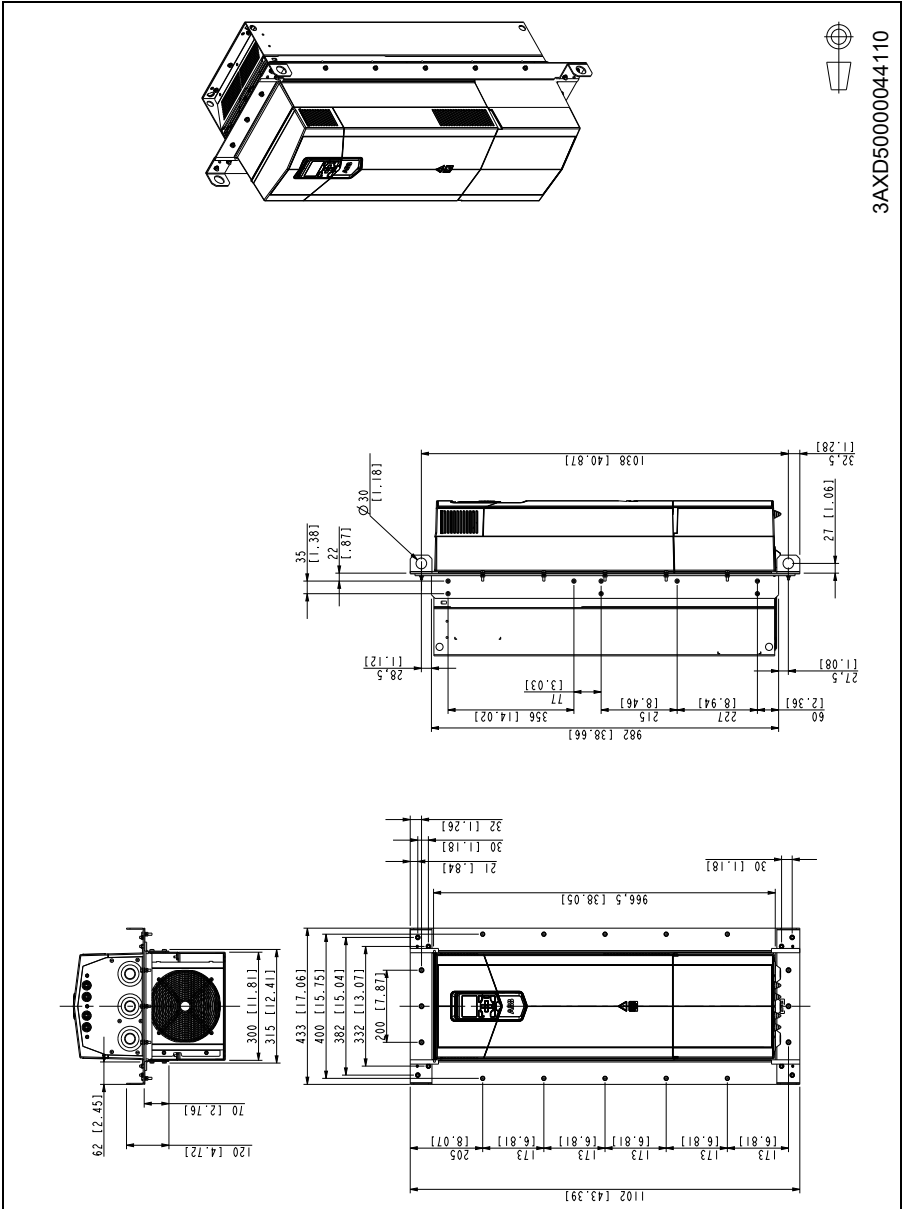


■ Attaching points and opening dimensions, frame R6



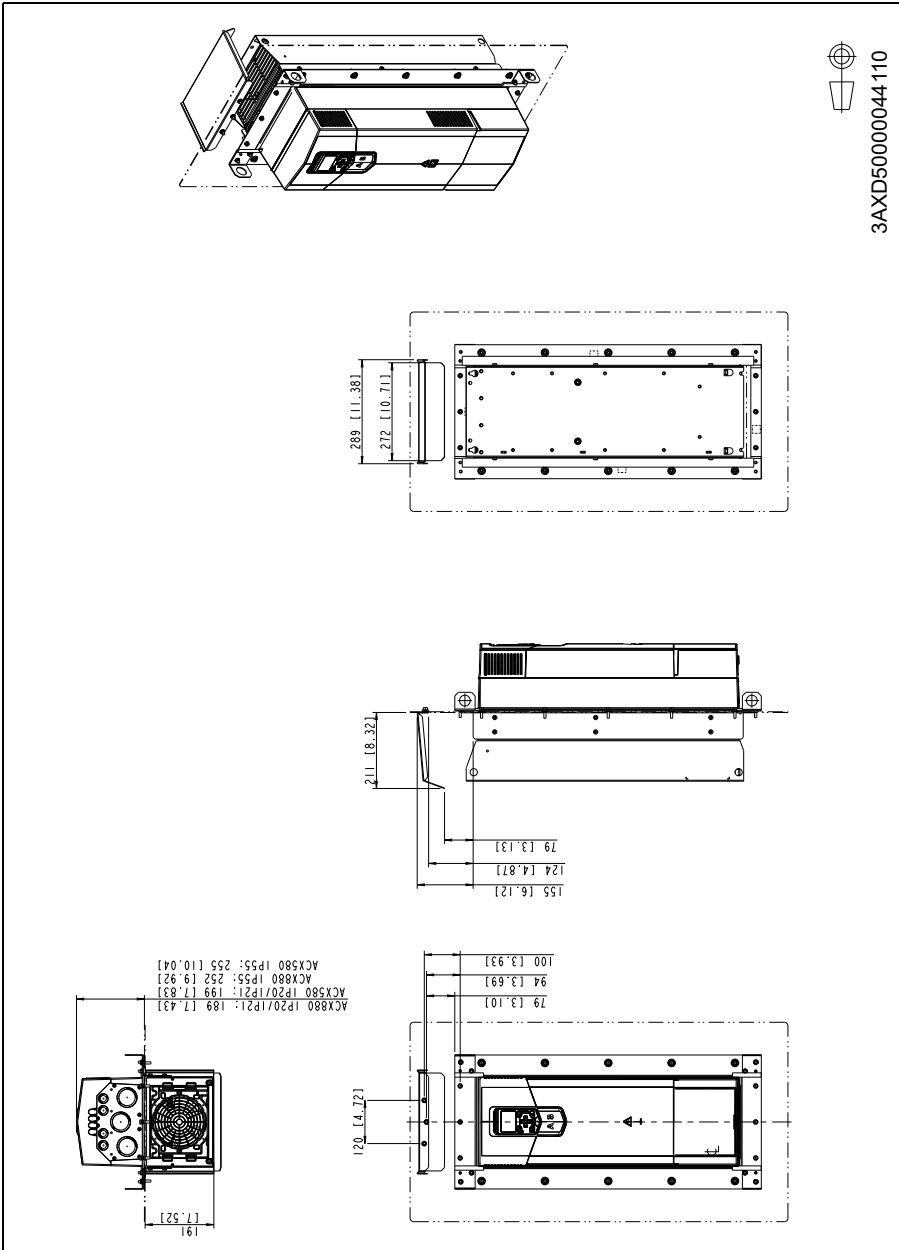
# Frame R8, IP21 (UL Type 1)

The main dimension of the flange are shown below. They are same for ACS880-11, ACS880-31, ACH580-31 and ACQ580-31. For the dimensions of the drive, see the hardware manual.)

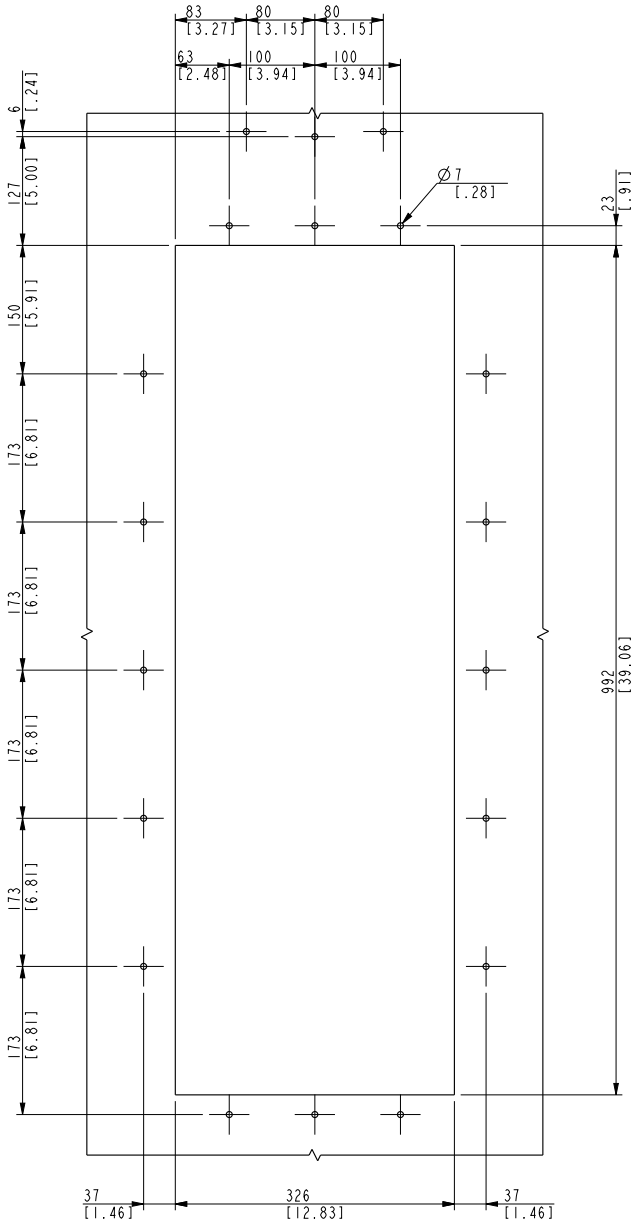


■ Hood

UL Type 12 installation at the back of the drive requires installing of the hood. Not needed in IP55.



■ Attaching points and opening dimensions, frame R8





---

# 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 [abb.com/searchchannels](http://abb.com/searchchannels).

## **Product training**

For information on ABB product training, navigate to [new.abb.com/service/training](http://new.abb.com/service/training).

## **Providing feedback on ABB Drives manuals**

Your comments on our manuals are welcome. Navigate to [new.abb.com/drives/manuals-feedback-form](http://new.abb.com/drives/manuals-feedback-form).

## **Document library on the Internet**

You can find manuals and other product documents in PDF format on the Internet at [abb.com/drives/documents](http://abb.com/drives/documents).



[abb.com/drives](http://abb.com/drives)

