ABB DRIVES
ACS580-01..., ACH580-01... and ACQ580-01...
+C135 drives with flange mounting kit
Supplement
ACS580-01…, ACH580-01… and ACQ580 01…+C135 drives with flange mounting kit

Supplement

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Mechanical installation
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Further information
Introduction to the supplement

Contents of this chapter
This chapter describes the supplement.

Applicability
This supplement is applicable to ACS580-01...+C135, ACH580-01...+C135 and ACQ580-01...+C135 drives with flange mounting kit:

• for these R1 to R3 drive types:
  -02A7-4, -03A4-4, -04A1-4, -05A7-4, -07A3-4, -09A5-4, -12A7-4, -018A-4,
  -026A-4, -033A-4, -039A-4, -046A-4

• for all R4 to R9 drive types.

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

<table>
<thead>
<tr>
<th>Drive hardware manuals and guides</th>
<th>Code (English)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACS580-01…, ACH580-01… and ACQ580-01…+C135 drives with flange mounting kit supplement</td>
<td>3AXD50000349821</td>
</tr>
<tr>
<td>ACS580-01…+C135, ACH580-01…+C135 and ACQ580-01…+C135 frames R1 to R3 flange mounting kit quick installation guide</td>
<td>3AXD50000119172</td>
</tr>
<tr>
<td>ACS580-01…+C135, ACH580-01…+C135 and ACQ580-01…+C135 frames R4 to R5 flange mounting kit quick installation guide</td>
<td>3AXD50000287093</td>
</tr>
<tr>
<td>ACS880-01…+C135, ACS580-01…+C135, ACH580-01…+C135 and ACQ580-01…+C135 frames R6 to R9 flange mounting kit quick installation guide</td>
<td>3AXD5000019099</td>
</tr>
<tr>
<td>ACS580-01 drives (0.75 to 250 kW, 1.0 to 350 hp) hardware manual frames R1 to R9</td>
<td>3AXD50000044794</td>
</tr>
<tr>
<td>ACS580-01 drives quick installation and start-up guide for frames R1 to R5</td>
<td>3AXD50000044838</td>
</tr>
<tr>
<td>ACS580-01 drives quick installation and start-up guide for frames R6 to R9</td>
<td>3AXD50000009286</td>
</tr>
<tr>
<td>ACH580-01 drives (0.75 to 250 kW, 1 to 350 hp) hardware manual frames R1 to R9</td>
<td>3AXD50000044839</td>
</tr>
<tr>
<td>ACH580-01 drives quick installation and start-up guide for frames R1 to R5</td>
<td>3AXD50000044861</td>
</tr>
<tr>
<td>ACH580-01 drives quick installation and start-up guide for frames R6 to R9</td>
<td>3AXD50000036602</td>
</tr>
<tr>
<td>ACQ580-01 drives (0.75 to 250 kW, 1.0 to 350 hp) hardware manual frames R1 to R9</td>
<td>3AXD50000044862</td>
</tr>
<tr>
<td>ACQ580-01 drives quick installation and start-up guide for frames R1 to R5</td>
<td>3AXD50000044864</td>
</tr>
<tr>
<td>ACQ580-01 drives quick installation and start-up guide for frames R6 to R9</td>
<td>3AXD50000037301</td>
</tr>
</tbody>
</table>

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.

![QR Code for ACS580-01 manuals](QR Code for ACS580-01 manuals)

ACS580-01 manuals

![QR Code for ACH580-01 manuals](QR Code for ACH580-01 manuals)

ACH580-01 manuals

![QR Code for ACQ580-01 manuals](QR Code for ACQ580-01 manuals)

ACQ580-01 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 can 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 type.
Example: tilted position, frames R1 to 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
Example: upright position, frames R4 to R9

![Diagram of drive assembly with labels]

1. Hood (in the cooling air channel; required for UL Type 12)
2. Top flange bracket
3. Mounting plate
4. Lifting hole
5. Drive heat sink in the cooling air channel
6. Side flange bracket
7. Drive front side
8. Bottom flange bracket

Degree of protection

This table shows the degree of protection of the flange-mounted drive. In frames R1, R2, R4 and R5 to R9 the degree of protection of IP55 (UL Type 12) for the front is not possible because the cover cannot be installed.

<table>
<thead>
<tr>
<th>Frame size</th>
<th>Plus code</th>
<th>Degree of protection</th>
<th>Degree of protection with flange</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Front</td>
</tr>
<tr>
<td>R1</td>
<td>-</td>
<td>IP21 (UL Type 1)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R1</td>
<td>B056</td>
<td>IP55 (UL Type 12)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R2</td>
<td>-</td>
<td>IP21 (UL Type 1)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R2</td>
<td>B056</td>
<td>IP55 (UL Type 12)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R3</td>
<td>-</td>
<td>IP21 (UL Type 1)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R3</td>
<td>B056</td>
<td>IP55 (UL Type 12)</td>
<td>IP55 (UL Type 12)</td>
</tr>
<tr>
<td>R4</td>
<td>-</td>
<td>IP21 (UL Type 1)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R4</td>
<td>B056</td>
<td>IP55 (UL Type 12)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R5</td>
<td>-</td>
<td>IP21 (UL Type 1)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R6</td>
<td>-</td>
<td>IP21 (UL Type 1)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R7</td>
<td>-</td>
<td>IP21 (UL Type 1)</td>
<td>IP20 (UL Open Type)</td>
</tr>
</tbody>
</table>
**Hardware description**

### Special requirements

<table>
<thead>
<tr>
<th>Frame size</th>
<th>Plus code</th>
<th>Degree of protection</th>
<th>Degree of protection with flange</th>
</tr>
</thead>
<tbody>
<tr>
<td>R8</td>
<td>-</td>
<td>IP21 (UL Type 1)</td>
<td>IP20 (UL Open Type)</td>
</tr>
<tr>
<td>R9</td>
<td>-</td>
<td>IP21 (UL Type 1)</td>
<td>IP20 (UL Open Type)</td>
</tr>
</tbody>
</table>

#### Ordering codes

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

<table>
<thead>
<tr>
<th>Frame size</th>
<th>Ordering code of flange mounting kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>3AXD50000105311 (IP21, UL Type 1)</td>
</tr>
<tr>
<td>R2</td>
<td>3AXD50000105328 (IP21, UL Type 1)</td>
</tr>
<tr>
<td>R3</td>
<td>3AXD50000105335 (IP21 and IP55, UL Type 1 and UL Type 12)</td>
</tr>
<tr>
<td>R4</td>
<td>3AXD50000031460 (IP21, UL Type 1)</td>
</tr>
<tr>
<td>R5</td>
<td>3AXD50000031461 (IP21, UL Type 1)</td>
</tr>
<tr>
<td>R6</td>
<td>3AXD50000018852 (IP21, UL Type 1)</td>
</tr>
<tr>
<td>R7</td>
<td>3AXD50000018853 (IP21, UL Type 1)</td>
</tr>
<tr>
<td>R8</td>
<td>3AXD50000018854 (IP21, UL Type 1)</td>
</tr>
<tr>
<td>R9</td>
<td>3AXD50000018855 (IP21, UL Type 1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frame size</th>
<th>Ordering code of IP55 (UL Type 12) internal cooling fan for IP21 (UL Type 1) drives</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>3AXD50000050128</td>
</tr>
<tr>
<td>R2</td>
<td>3AXD50000050128</td>
</tr>
<tr>
<td>R3</td>
<td>3AUA00000088115</td>
</tr>
<tr>
<td>R4</td>
<td>3AXD50000034334</td>
</tr>
</tbody>
</table>

- **Reason for installing an extra fan**: is that the sealing plug will prevent cooling air flow from below to the control circuits of the drive. This fan is included in IP55 (UL Type 12) drives as standard. For IP21 (UL Type 1 drives) it can be ordered with the codes given in section *Ordering codes* below.
- **Exception**: In dry environment, you can leave the cover in place without inserting the sealing plug.
Contents of this chapter

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

Safety instructions

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.

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* in the mechanical installation chapter of the frame size in this 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 with 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.
Installing drives above one another

Make sure that the outlet cooling air flows away from the drive above.
Mechanical installation – General
Mechanical installation – Frames R1 to R3

Contents of this chapter

This chapter describes how to install drive frame sizes R1 to R3 with the flange mounting kit mechanically.

Unpacking and examining the delivery

Transport package contents

The flange mounting kit package is 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.

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 18.
• Open the drive cardboard box. For the contents of the drive package, see the drive hardware manual.
• Lift the drive.
## Flange mounting kit package contents

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Straps</td>
<td>12</td>
<td>Grounding plate (In frame R3 different)</td>
</tr>
<tr>
<td>2</td>
<td>Side brackets</td>
<td>13</td>
<td>Quick guide</td>
</tr>
<tr>
<td>3</td>
<td>Bottom bracket</td>
<td>14</td>
<td>Hood (required for UL Type 12)</td>
</tr>
<tr>
<td>4</td>
<td>Top bracket</td>
<td>15</td>
<td>Screw package:</td>
</tr>
<tr>
<td></td>
<td>(In frame R3 different)</td>
<td></td>
<td>• M4 nut (4 pcs)</td>
</tr>
<tr>
<td>5</td>
<td>Tightening brackets</td>
<td></td>
<td>• M5x20 screw (4 pcs)</td>
</tr>
<tr>
<td>6</td>
<td>Bottom U-bracket</td>
<td></td>
<td>• M6x25 screw</td>
</tr>
<tr>
<td>7</td>
<td>Top U-bracket</td>
<td></td>
<td>(R1: 10 pcs; R2: 12 pcs; R3: 14 pcs)*</td>
</tr>
<tr>
<td>8</td>
<td>Cardboard tray</td>
<td></td>
<td>• M6 nut</td>
</tr>
<tr>
<td>9</td>
<td>Top cardboard cover</td>
<td></td>
<td>(R1...R2: 18 pcs; R3: 19 pcs)</td>
</tr>
<tr>
<td>10</td>
<td>Sealing plug</td>
<td></td>
<td>• M4x8 screw</td>
</tr>
<tr>
<td>11</td>
<td>Mounting template</td>
<td></td>
<td>(R1...R2: 2 pcs)</td>
</tr>
</tbody>
</table>

*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 hole in the mounting plate.

An example template is shown below.
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.

<table>
<thead>
<tr>
<th></th>
<th>Above</th>
<th></th>
<th>Below</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm</td>
<td>in</td>
<td>mm</td>
<td>in</td>
</tr>
<tr>
<td>R1</td>
<td>100</td>
<td>3.94</td>
<td>200</td>
<td>7.87</td>
</tr>
<tr>
<td>R2</td>
<td>100</td>
<td>3.94</td>
<td>200</td>
<td>7.87</td>
</tr>
<tr>
<td>R3</td>
<td>115</td>
<td>4.53</td>
<td>200</td>
<td>7.87</td>
</tr>
</tbody>
</table>
**Installation procedure**

1. To remove the fan assembly, push the retaining clips. Lift the assembly up.

2. Insert the sealing plug (a) to the hole. The sealing plug is installed in IP55 (UL Type 12) drives at the factory.
3. Reinstall the fan assembly.

4. To install the internal fan for IP21 drives, see the hardware manual section

Replacing the auxiliary cooling fan, IP55 (UL Type 12) frames R1 ...R2 or
Replacing the auxiliary cooling fan, IP55 (UL Type 12) frames R3.
5. Attach the U-brackets (b and c) to the back of the drive.
6. First attach the side brackets (d) to the U-brackets which were attached in step 5 using M6 nuts finger-tight. Then use the tightening brackets (e, M5×20 screws) to press the side brackets against the module. Tighten the side bracket nuts.

4 × M5×20 screw
3 N·m
4 × M6 nut
6 N·m
7. Attach the top (f) and bottom (g) brackets to the side brackets, first the inner sides (1) (the sides that touch the drive), then the outer sides (2). Remove the tightening bracket (e) from the top to enable replacement of the cooling fan.

8 × M6 nut
6 N·m
Optional steps

Grounding plate

If you wish to install the grounding plate, push it onto the alignment pins of the bottom bracket and attach it.

**R1 and R2**

- 2 x M4 nut 1.5 N·m
- 2 x M4 x 8 Combi screw 1.5 N·m
To attach the grounding plate to the bottom plate use the cable entry plate screw (h).

2 x M4 nut 1.5 N·m
Power cable grounding shelf

1. If you wish to install the power cable grounding shelf lower on the bottom bracket, first remove the cover and the cable entry plate.
2. Then detach the power cable shelf (screws i). Reinstall the screws to avoid moisture exchange through the empty holes! Attach the cable shelf to the bottom bracket with M4 nuts. Frame R3 is shown as an example. The cable shelf varies in different frame sizes.
Installing the drive on the mounting plate

1. 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.
2. Attach the hood to the cooling channel. UL Type 12 is fulfilled on the drive backside when the flange and hood are installed. This is not required for IP55.

**UL Type 12**

- **R1…R2:**
  - 2 × M6 nuts
  - 6 N·m

- **R3:**
  - 3 × M6 nuts
  - 6 N·m

Back: View from top
Back: View from bottom
3. Attach chains to the drive lifting holes and lift the drive with a lifting device onto the opening in the mounting plate.

4. Attach the bottom bracket with one screw.

5. Attach the top bracket with one screw.

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

- **1 × M6×25 screw**
  - 6 N·m

**R1:**
- **8 × M6×25 screw**
- **10 × M6×25 screw**
- **12 × M6×25 screw**
  - 6 N·m
Mechanical installation – Frames R4 and R5

Contents of this chapter

This chapter describes how to install drive frame sizes R4 and R5 with the flange mounting kit mechanically.
Unpacking and examining the delivery

Transport package contents

The flange mounting kit package is 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.

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 35.
- Remove the drive cardboard box and option box.
- Remove the cover protecting film. For the contents of the drive package, see the drive hardware manual.
- Lift the drive.
**Flange mounting kit package contents**

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tightening brackets</td>
<td>9</td>
<td>Bottom bracket</td>
</tr>
<tr>
<td>2</td>
<td>Top and bottom U-brackets</td>
<td>10</td>
<td>Side brackets</td>
</tr>
<tr>
<td>3</td>
<td>Top cardboard cover</td>
<td>11</td>
<td>Quick guide</td>
</tr>
<tr>
<td>4</td>
<td>Cardboard tray</td>
<td>12</td>
<td>Hood (required for UL Type 12)</td>
</tr>
<tr>
<td>5</td>
<td>Sealing plug R4</td>
<td>13</td>
<td>Screw package:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• M5x20 screw (4 pcs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• M6x25 screw (16 pcs) *</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• M6 nut (23 pcs)</td>
</tr>
<tr>
<td>6</td>
<td>Clamp plate R5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Mounting template</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Top bracket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Bottom bracket</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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 hole in the mounting plate.
An example template is shown below.

**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.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above drives</td>
<td>115 mm (4.53 in)</td>
</tr>
<tr>
<td>Below drives</td>
<td>200 (7.87 in)</td>
</tr>
</tbody>
</table>
Installation procedure

1. To remove the fan assembly, push the retaining clip with a flat screwdriver. Lift the assembly up.

2. Insert the sealing plug (a) to the hole. For IP55 (UL Type 12) the plug is installed at the factory.
3. Reinstall the fan assembly.

4. To install the internal fan for IP21 drives, see the hardware manual section *Replacing the auxiliary cooling fan, IP55 (UL Type 12) frames R4.*
5. Attach the U-brackets (b and c) to the back of the drive.
6. Attach the side brackets (d) to the U-brackets using M6 nuts finger-tight. Then use the tightening brackets (e, 4 × M5×20 screws) to press the side brackets against the module. Tighten the side bracket nuts.
7. Attach the top (f) and bottom (g) brackets to the side brackets, first the inner sides (1) (the sides that touch the drive), then the outer sides (2).

R4, R5

8 × M6 nut
6 N·m
8. Remove the tightening bracket (e) from the front of the fan.

9. Attach the clamp plate.
10. 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.
11. Attach the hood to the cooling channel for UL Type 12. The degree of protection is fulfilled on the drive backside when the flange and hood are installed. This step is not needed for IP55.

**UL Type 12**

- 3 × M6 nut
- 6 N·m

**Back: View from top**

**Back: View from bottom**
12. Attach the chains to the lifting holes of the flange and lift the drive with a lifting device onto the opening in the mounting plate.

13. Attach the bottom bracket with one screw.

14. Attach the top bracket with one screw.

15. Attach the rest of the mounting screws. Remove the chains.
Mechanical installation – Frames R4 and R5
Mechanical installation – Frames R6 to R9

Contents of this chapter

This chapter describes how to install drive frames sizes R6 to R9 with the flange mounting kit mechanically.

Safety

**WARNING!** For frame sizes R6 to R9: 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.
Unpacking and examining the delivery

Transport package contents

The flange mounting kit package is on the side of 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.

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 hoist.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Straps</td>
<td>5</td>
<td>Drive with factory installed options</td>
</tr>
<tr>
<td>2</td>
<td>Cardboard cover</td>
<td>6</td>
<td>Pallet stopper</td>
</tr>
<tr>
<td>3</td>
<td>Flange mounting kit</td>
<td>7</td>
<td>Pallet tray</td>
</tr>
<tr>
<td>4</td>
<td>Cardboard sleeve</td>
<td>8</td>
<td>Printed manuals and quick guides, manuals CD and multilingual residual voltage warning stickers</td>
</tr>
</tbody>
</table>
Flange kit contents

- Mounting template
- The flange mounting kit package includes a template in actual size for drilling the attaching holes and cutting the hole in the mounting plate.

An example template is shown below.
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.

<table>
<thead>
<tr>
<th></th>
<th>200 mm (7.87 in)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>300 mm (11.81 in)</td>
<td></td>
</tr>
</tbody>
</table>
Installation process

1. Attach the side brackets to the drive.

2. Attach the top and bottom brackets.
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 the hood to the cooling channel for UL Type 12. The degree of protection is fulfilled on the drive backside when the flange and hood are installed. This step is not needed for IP55.

**UL Type 12**

- **3 × M6 nut**
- **6 N·m**

Back: View from bottom

Back: View from top
5. Attach the chains to the lifting holes of the flange and lift the drive with a lifting device onto the opening in the mounting plate.

6. Attach the bottom bracket with one screw.

7. Attach the top bracket with one screw.

8. 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.
Frame R1
Hood is needed for UL Type 12 installation only
Attaching points and hole dimensions
Frame R2
Hood is needed for UL Type 12 installation only
Attaching points and hole dimensions
Frame R3
Hood is needed for UL Type 12 installation only
Attaching points and hole dimensions
Frame R4

Dimension drawings

3AXD50000038122
Hood is needed for UL Type 12 installation only
Attaching points and hole dimensions
Frame R5
Hood is needed for UL Type 12 installation only
Attaching points and hole dimensions
Frame R6

Dimension drawings
Hood is needed for UL Type 12 installation only
- Attaching points and hole dimensions
Frame R7
Hood is needed for UL Type 12 installation only
Attaching points and hole dimensions
Frame R8
Hood is needed for UL Type 12 installation only
Attaching points and hole dimensions
Frame R9
Hood is needed for UL Type 12 installation only
Attaching points and hole dimensions
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.

Product training
For information on ABB product training, navigate to 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.

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