

Figure 28. Left : lifting the unit to be installed without the steel base. Right: lifting the unit to be installed on the steel base.

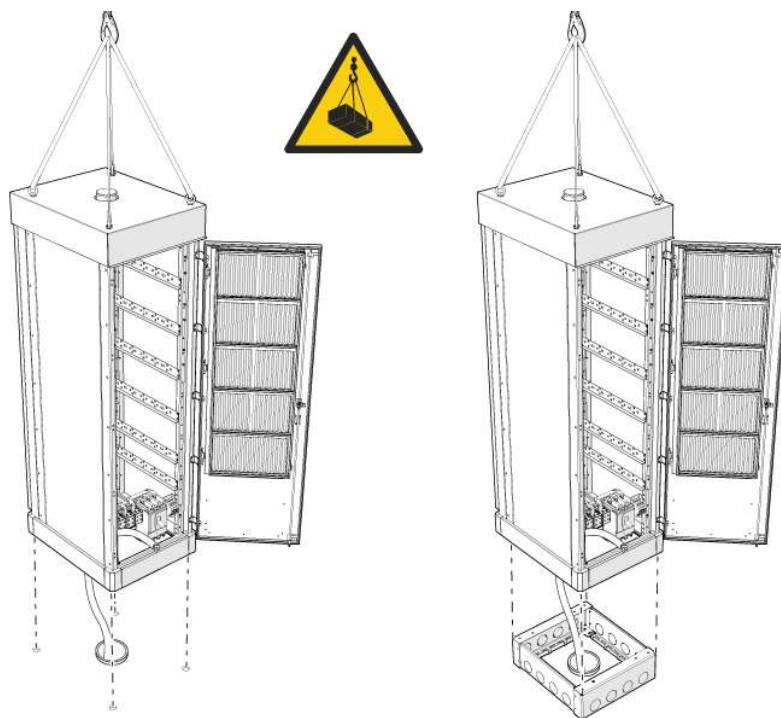


Figure 29. Lifting lugs on a single, double, and triple cabinet

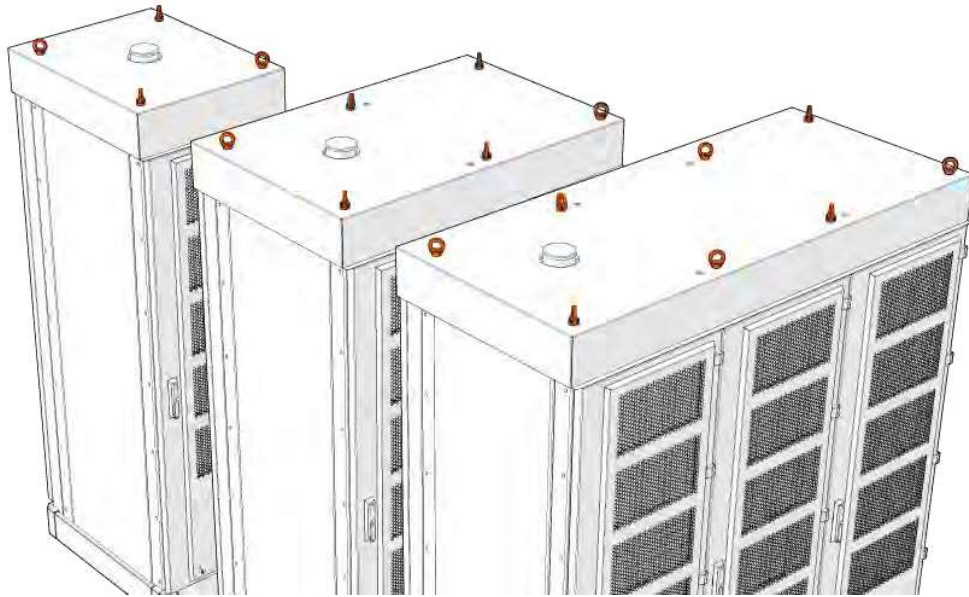
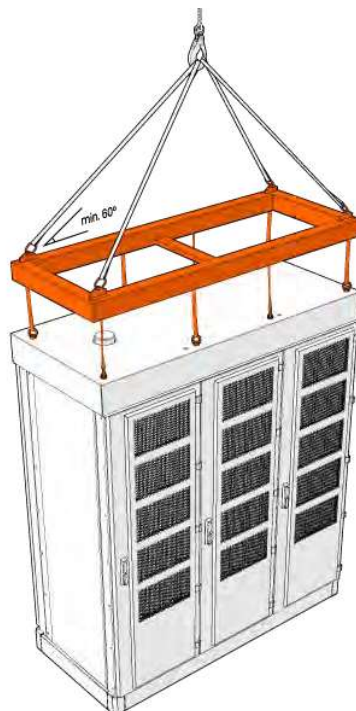


Figure 30. Use all fastening points if you use lifting beams



5.1.5. Moving and lifting Station Charger

**WARNING**

Do not go under the unit when it is lifted.

**CAUTION**

Use all lifting lugs of the unit when you lift it. Minimum angle of slings 60 degrees.

**CAUTION**

High center of gravity. Make sure that the cabinet does not fall over.

**NOTICE**

The maximum tilting angle of the charging power unit is 6 degrees. High center of gravity.

**NOTICE**

One cabinet with four power modules weighs approximately 400 kg. Use appropriate lifting equipment operated by qualified professionals.

**NOTICE**

Carefully remove the control module, the power distribution module, the bottom power module, and the front panel of the mains module from each cabinet before you lift the unit. This is done to reduce the weight and make space for installing the cables. Keep the modules clean and dry.

**NOTICE**

Make sure that you replace the same serial number card to the same cabinet when you install or replace control modules. Each cabinet is identified with its unique serial number in ChargeEye.

**NOTICE**

Do not lift the power module from its guide pins.

**NOTE**

The power module weighs approximately 43 kg.

**NOTE**

The power distribution module weighs approximately 32 kg.

Figure 31. Remove the bottom modules before you lift the unit

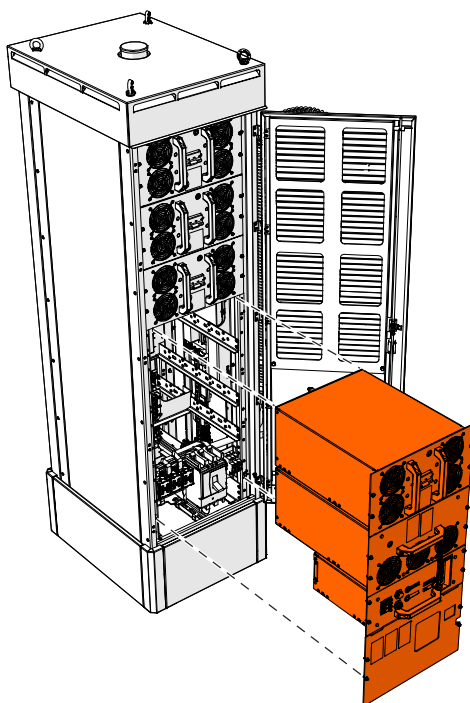


Figure 32. Lifting the unit to be installed on the steel base.

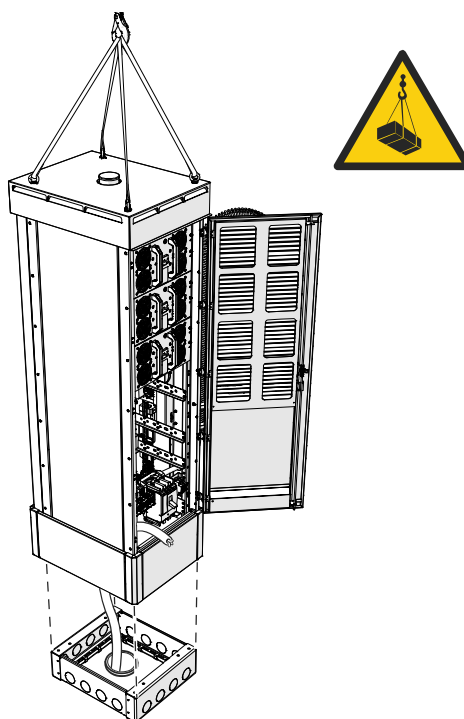


Figure 33. Lifting lugs on a single, double, and triple cabinet

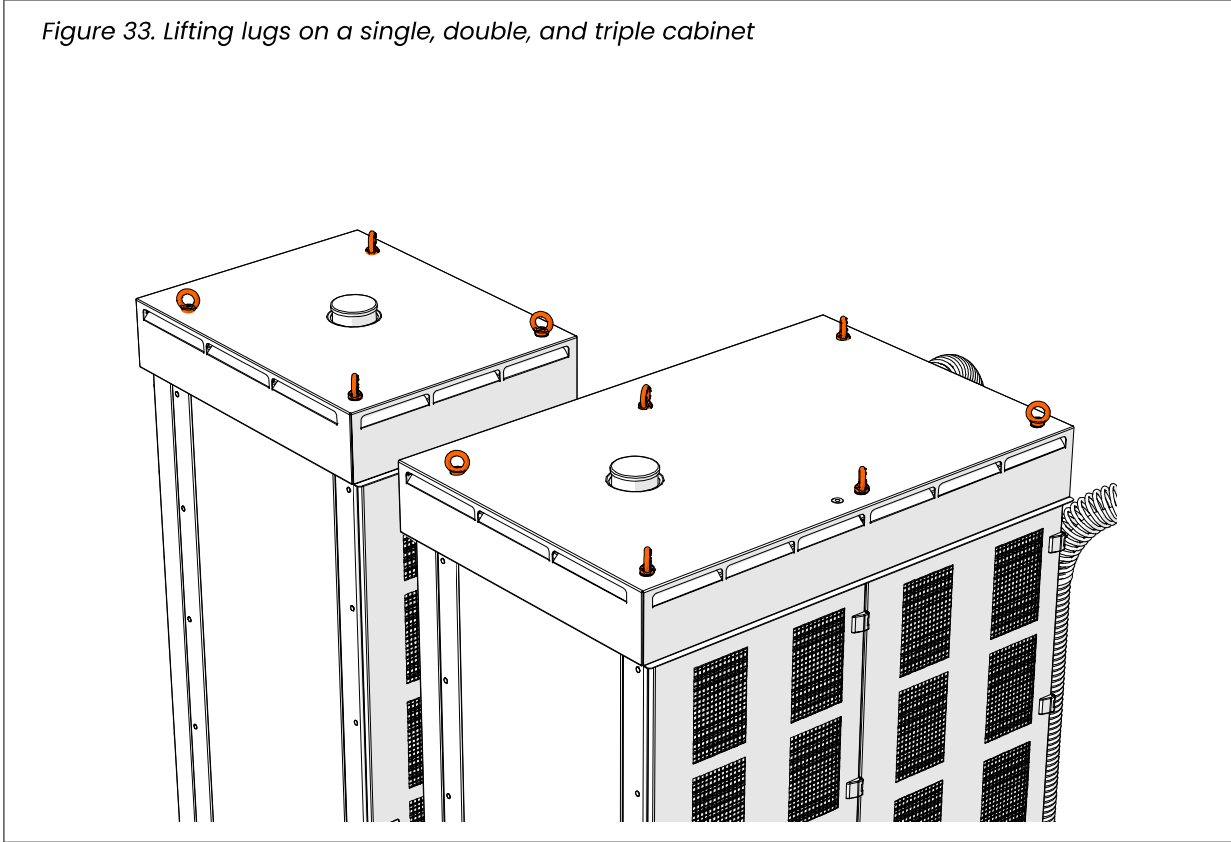
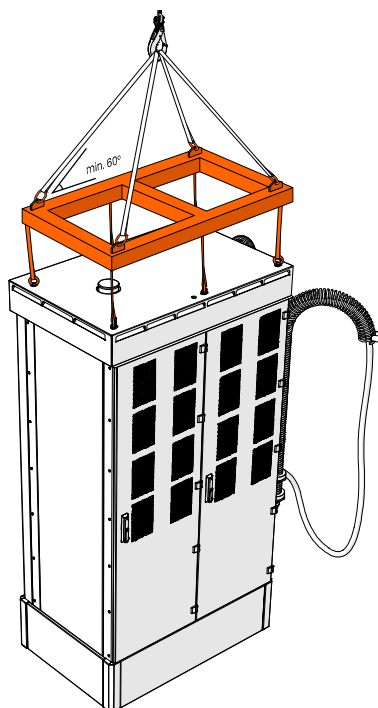


Figure 34. Use all fastening points if you use lifting beams



5.1.6. Moving and lifting Satellite



NOTICE

Depending on the Satellite model, one shipping crate weighs on average 150 kg (with charging cables and support springs). Stack at maximum two crates on top of each other. Use appropriate lifting equipment operated by qualified professionals.



NOTICE

Two persons are needed for this task.



NOTICE

The Satellite frame weighs approximately 50 kg without the charging cables and support springs.



NOTICE

The AC Satellite frame weighs approximately 36 kg without the charging cables and support springs.



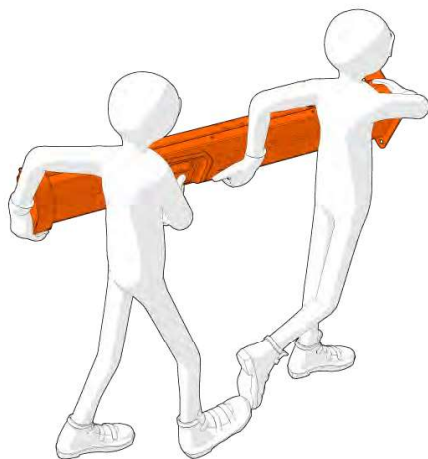
NOTICE

If the Satellite has two charging cables, you can use both support spring holders to lift the Satellite. Do not lift the Satellite from one holder.

The Satellite is shipped with its charging cables and support springs in a crate. The charging cables and support springs are not installed on the unit at the factory

The AC Satellite is shipped in a crate. If the AC Satellite has charging cables, they are packed in the same crate with the support springs. The charging cables and support springs are not installed on the unit at the factory.

Figure 35. Moving the Satellite



5.1.7. Moving and lifting Liquid Cooled Satellite



NOTICE

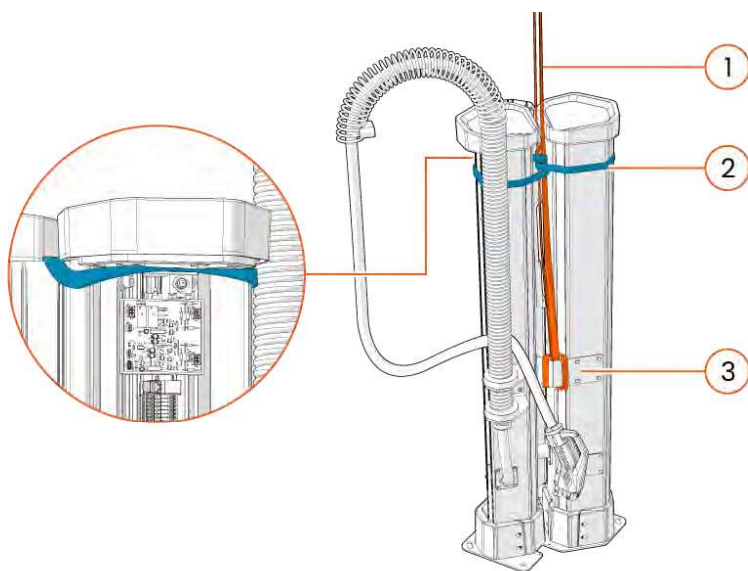
The Liquid Cooled Satellite is shipped upright in a crate. The total weight is approximately 150 kg. Use appropriate lifting equipment operated by qualified professionals.

The charging cables and support springs are installed on the unit at the factory.

The Liquid Cooled Satellite is delivered with the cooling liquid (Glysofor N) prefilled inside the unit. The maximum tilting angle of the Liquid Cooled Satellite is approximately 45 degrees. If liquid comes out of the Liquid Cooled Satellite during transportation, make sure that the expansion tank in the liquid cooling unit is approximately 1/3 full before you start operation. The coolant/water mix ratio is 50/50 when delivered. Use clean water when refilling.

The Liquid Cooled Satellite weighs approximately 150 kg and must be lifted to its installation position with lifting equipment and straps. See [Figure 36](#).

Figure 36. Lifting points of the Liquid Cooled Satellite



- 1 Lifting strap
- 2 Fastening strap

- 3 Fastener between frames

5.1.8. Moving and lifting Control Unit



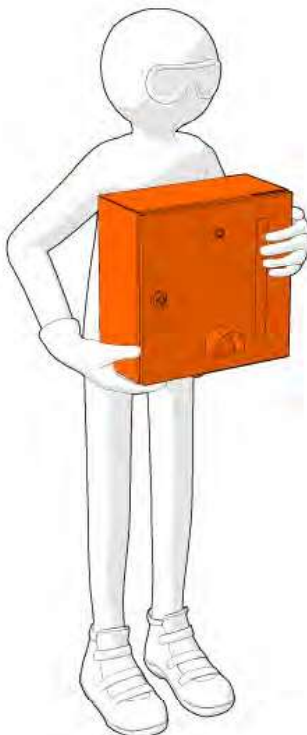
NOTICE

The Control Unit frame weighs approximately 12.5 kg without the charging cable.

The Control Unit is shipped in two boxes, one for the unit and another for the charging cables. The charging cables are not installed on the unit at the factory.

The weight of the Control Unit box is less than 15 kg and the weight of the charging cable box is less than 22 kg so they can be lifted without lifting equipment.

Figure 37. Lifting the Control Unit



5.1.9. Installing the charging power unit



CAUTION

The module rails inside the cabinet have sharp edges. Be careful when removing and installing modules.



NOTICE

Make sure that the AC mains power cables have been routed to the foundation or installation location before you install the units in place. The distance from the bottom of the cabinet to the bottom of the AC terminal blocks is approximately 290 mm.



NOTICE

Make sure that the installation surface is solid and as level as possible.



NOTICE

Make sure that the door of the unit has space to open when the unit is in position.



NOTICE

Two persons are needed for this task.



NOTE

Use four M12 anchor bolts or equivalent per cabinet.

1. Drill the fixing holes. See [9: Unit footprints and clearances](#).
2. Install the fixing anchors in place. If necessary, use epoxy or equivalent to fasten them.
3. Make sure that the installation level is horizontal. If necessary, use appropriate washers.
4. To make cable routing easier, strap the power and control cables together with electric tape or equivalent.
5. If the steel base is used, install it in place.
 - Note the cable routes and open the necessary knock-out holes of the steel base.
 - Use cable bushings or file the sharp metal edges of the knock-out holes to protect the cables from damages.
 - Route the cables into the steel base.



NOTICE

Do not exceed the bending radius of the cable given by the cable manufacturer.

6. Fasten the door(s) of the unit in the open position with duct tape or equivalent.

7. Remove the control module, the power distribution module, the bottom power module, and the front panel of the mains module from each cabinet. Lift the unit to its installation position. See [5.1.3: Moving and lifting Power Unit](#).


WARNING

Do not go under the unit when it is lifted.


CAUTION

The module rails inside the cabinet have sharp edges. Be careful when removing and installing modules.


NOTE

The power distribution module weighs approximately 32 kg.


NOTE

The power module weighs approximately 43 kg.


NOTICE

Make sure that you replace the same serial number card to the same cabinet when you install or replace control modules. Each cabinet is identified with its unique serial number in ChargeEye.

8. Before the unit is set down, through the door guide the cables inside the unit. Make sure that cables are not caught between the unit and the installation surface.


NOTICE

Do not exceed the bending radius of the cable given by the cable manufacturer.

9. Install the unit on the fixing anchors or onto the steel base.
 - Make sure that the unit is horizontally level.
 - If you are using a concrete base, prevent ground moisture from rising into the unit. When the installation is finished, fill the base with granular clay or equivalent.
10. If the electrical installation is done immediately after the mechanical installation, do not install the removed modules and front panel of the mains module back into the unit. See [5.2: Electrical installation](#). Otherwise, carefully push the modules back into the unit and install the front plate of the mains module in place.


CAUTION

The module rails inside the cabinet have sharp edges. Be careful when removing and installing modules.



NOTICE

Do not lift the power module from its guide pins.



NOTICE

Make sure that the module's connectors and connector pins are in good operating condition. When you push the module into the unit, be very careful not to damage the connector pins.

5.1.10. Installing Satellite



NOTICE

Two persons are needed for this task.



NOTICE

The Satellite frame weighs approximately 50 kg without the charging cables and support springs.



NOTICE

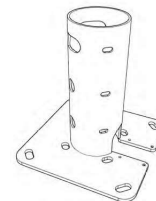
Do not exceed the bending radius of the cable given by the cable manufacturer.



NOTE

Use four M16 anchor bolts or equivalent per Satellite installation flange.

Install the Satellite with its installation flange on a stable, hard surface. The installation flange of the Satellite is part of the standard delivery.



The standard installation flange of the Satellite cannot be used if the Satellite is installed in a concrete element typically used for e.g. lamp posts. In this case, remove the standard installation flange and replace it with the mounting tube (option). See [5.1.10.1: Removing the standard installation flange of the Satellite](#).

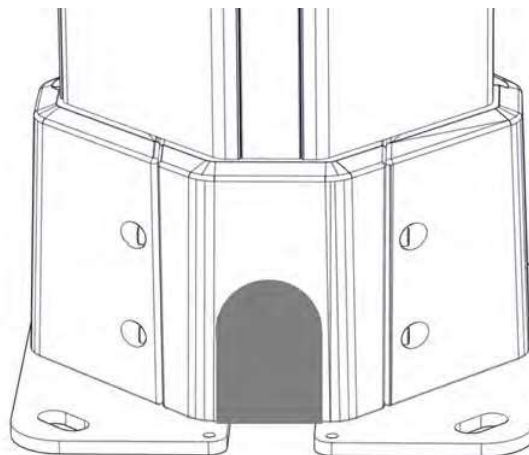


1. Make sure that:

- The installation flange or mounting tube is tightly fixed to the Satellite.
- The front panel has room to open when the Satellite is installed.

- The bending radius of the cables is not exceeded when the Satellite is installed.
2. To make cable routing easier, strap the power and control cables together with electric tape or equivalent.
 3. Drill the fixing holes. See [9: Unit footprints and clearances](#).
 4. Install the fixing anchors in place. If necessary, use epoxy or equivalent to fasten them.
 - Make sure that the installation level is horizontal. If necessary, use appropriate washers.
 5. If the cables are surface-installed, make an opening in the collar on the bottom of the Satellite for routing the cables. See [Figure 38](#).
 - The collar is plastic. Use a suitable tool such as a hole saw.
 - To make installing the cables easier, extend the opening to the bottom edge of the collar.
 6. Remove the three security T30H screws and open the front panel of the Satellite. Fasten it in the open position with duct tape or equivalent.
 7. Lift the Satellite to the installation position. Before you set the Satellite in place, route the cables into the Satellite through the installation flange or mounting tube.
 8. Install the Satellite on the fixing anchors or into the concrete element.
 - Make sure that the unit is horizontally level.
 - If you are using a concrete base, prevent ground moisture from rising into the unit. When the installation is finished, fill the base with granular clay or equivalent.
 9. If the Satellite has charging cable(s), install them and their support spring(s) as soon as possible. See [5.1.13: Installing the charging cable to Satellite](#).
 10. Connect the cables. See [5.2: Electrical installation](#).

Figure 38. Opening in Satellite collar for surface-installed cables



5.1.10.1. Removing the standard installation flange of the Satellite



NOTICE

Two persons are needed for this task.



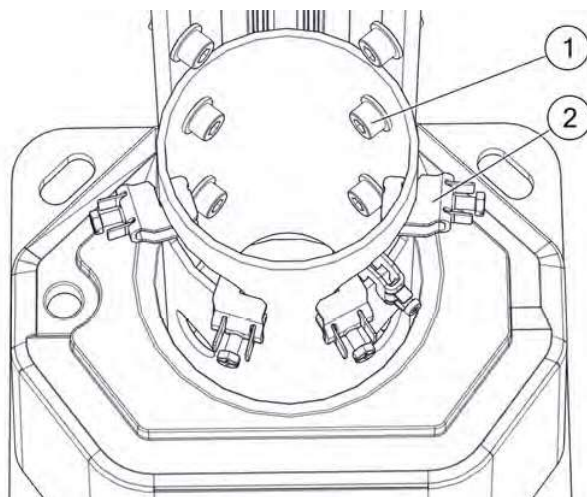
NOTICE

The Satellite frame weighs approximately 50 kg without the charging cables and support springs.

- Place the Satellite so that you can open the front panel and slide the standard installation flange out from the bottom of the Satellite.
- Remove the three security T30H screws and open the front panel of the Satellite.
- Remove the busbar connectors from the installation flange.
- Remove the four H8 fixing screws of the installation flange.
- Slide out the installation flange.

Assemble in the reverse order.

Figure 39. Removing the standard installation flange



- 1 Fixing screws
- 2 Busbar connectors

5.1.11. Installing Liquid Cooled Satellite



NOTICE

Two persons are needed for this task.



NOTICE

Liquid Cooled Satellite weighs approximately 150 kg. Use appropriate lifting equipment operated by qualified professionals.



NOTICE

Do not exceed the bending radius of the cable given by the cable manufacturer.

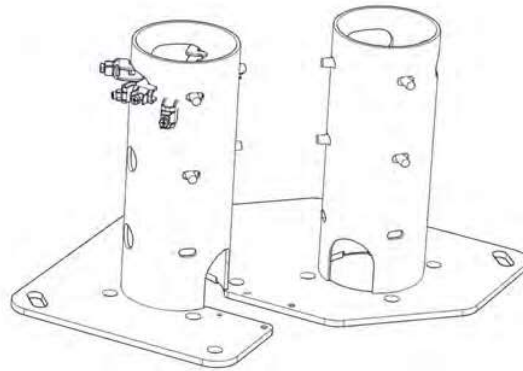


NOTE

Use five M16 anchor bolts or equivalent per Liquid Cooled Satellite installation flange.

Install Liquid Cooled Satellite with its installation flange on a stable, hard surface. The tube of the installation flange with the opening for cable routing is for the Liquid Cooled Satellite frame that has the user interface.

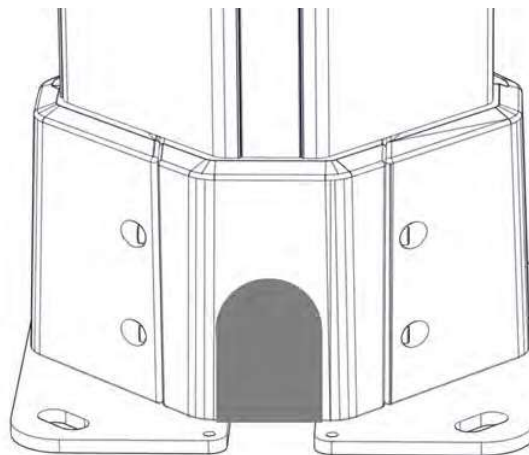
The optional mounting tube cannot be used with Liquid Cooled Satellite.



1. Make sure that:
 - The installation flange is tightly fixed to Liquid Cooled Satellite.
 - The front panel has room to open when Liquid Cooled Satellite is installed.
 - The bending radius of the cables is not exceeded when Liquid Cooled Satellite is installed.
2. The cables are routed to the Liquid Cooled Satellite frame that has the user interface. To make cable routing easier, strap the power and control cables together with electric tape or equivalent.
3. Drill the fixing holes. See [9: Unit footprints and clearances](#).
4. Install the fixing anchors in place. If necessary, use epoxy or equivalent to fasten them.
 - Make sure that the installation level is horizontal. If necessary, use appropriate washers.

5. If the cables are surface-installed, make an opening in the collar on the bottom of Liquid Cooled Satellite for routing the cables. See [Figure 40](#).
 - The collar is plastic. Use a suitable tool such as a hole saw.
 - To make installing the cables easier, extend the opening to the bottom edge of the collar.
6. Remove the three security T30H screws and open the front panel of Liquid Cooled Satellite. Fasten it in the open position with duct tape or equivalent.
7. Lift Liquid Cooled Satellite to the installation position. Before you set Liquid Cooled Satellite in place, route the cables into Liquid Cooled Satellite through the installation flange.
8. Install Liquid Cooled Satellite on the fixing anchors or into the concrete element.
 - Make sure that the unit is horizontally level.
 - If you are using a concrete base, fill the base with granular clay or equivalent when the installation is finished.
9. Connect the cables. See [5.1.13: Installing the charging cable to Satellite](#).
10. Connect the cables. See [5.2: Electrical installation](#).

Figure 40. Opening in Liquid Cooled Satellite collar for surface-installed cables



5.1.12. Installing Control Unit 200 A



DANGER

High-voltage installation. Make sure that the units are correctly isolated and the lockout-tagout (LOTO) procedure completed when necessary during installation, service or maintenance work. Know and obey general and local safety regulations and procedures. Use adequate personal protection equipment (PPE).



NOTICE

The Control Unit frame weighs approximately 12.5 kg without the charging cable.



NOTICE

Do not exceed the bending radius of the cable given by the cable manufacturer.



NOTE

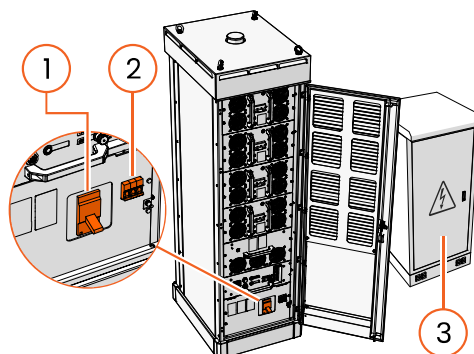
See [11: Examples of connecting cables to the Satellites](#) for more information.

1. Unlock and open the door(s) of the charging power unit.

In each cabinet, set the miniature circuit breaker (MCB) for control voltage (2) and main switch (1) to OFF position.

Disconnect the AC power supply to the unit from the main supply point (3).

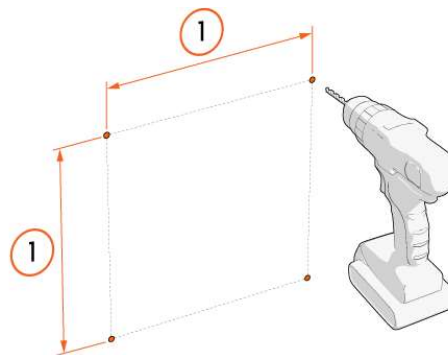
Complete the lockout-tagout (LOTO) procedure.



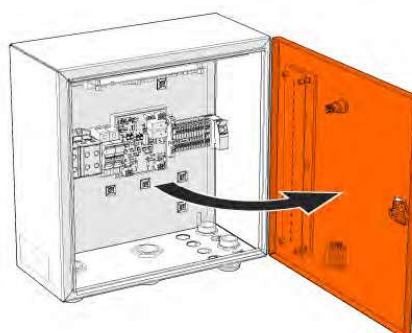
WARNING

After you disconnect the power supply, wait a minimum of two minutes for the capacitors of the power modules to discharge before you continue. Before you start work, measure the voltage of the electrical circuits to make sure that no dangerous voltage remains.

2. Drill the fixing holes (1): 350 x 350 mm.



3. Open the Control Unit door and align the unit with the fixing holes.

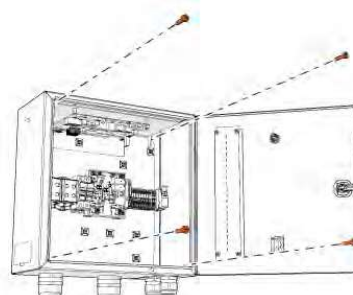


4. Install the fixing screws into place. Make sure that the installation level is horizontal. If necessary, use appropriate washers.



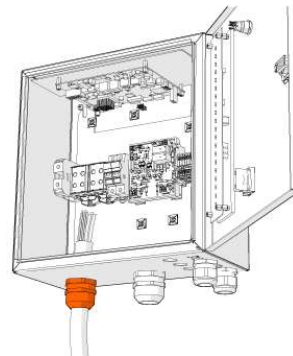
NOTICE

6 mm fixing screws are recommended for wall-mounted installations. Use 8 mm fixing screws for more challenging installations.



5. Route the charging cable into the unit. Make sure that the wires reach the terminals.

Tighten the cable bushing.



6. Connect the charging cable wires to the terminals.

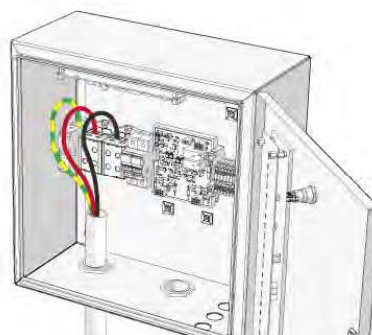
Tighten each screw terminal to the correct torque.

- 6–25 mm²: 12 Nm
- 35–95 mm²: 22 Nm



NOTICE

Do not exceed the bending radius of the cable given by the cable manufacturer.



7. Route the supply cable into the unit and connect the wires to the terminals.

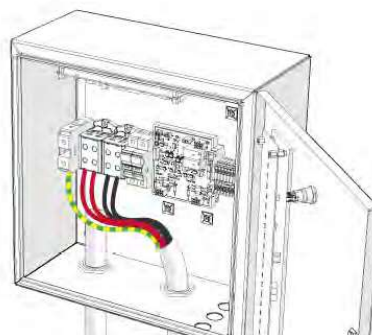
Tighten each screw terminal to the correct torque.

- 6–25 mm²: 12 Nm
- 35–95 mm²: 22 Nm



NOTICE

Do not exceed the bending radius of the cable given by the cable manufacturer.

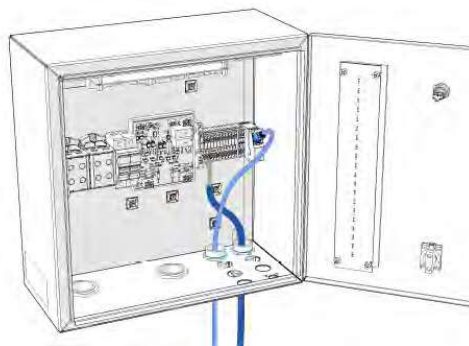


8. Route the control cable into the unit and connect the wires to the terminals.

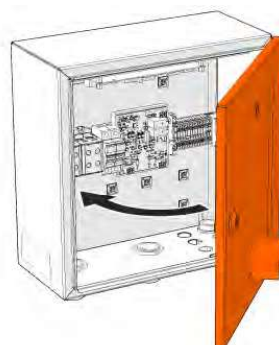


NOTICE

Do not exceed the bending radius of the cable given by the cable manufacturer.



9. Close the Control Unit door.



10. Connect the AC power supply to the unit from the main supply point (3).

In each cabinet, set the miniature circuit breaker (MCB) for control voltage (2) and main switch (1) to ON position.

Lock the door(s) of the unit.

