

Elvi

installation manual


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safety precautions

 Warning: Chance of electric shock.

- Read the supplied documentation carefully to familiarize yourself with all safety instructions and regulations before using this product.
- This product is designed and tested in accordance with international standards.
- The use of this product is limited to those applications it is designed for.
- Installation, maintenance and repairs of this product are only to be performed by qualified personnel.
- Incorrect installation or repairs may cause hazardous situations for the user of this product.
- This product is used in combination with a power source.
- Always switch off power before any maintenance activity.
- This product does not contain any component that can be maintained by the user.
- Make sure that the product is only used under the correct operating conditions.
- Make sure that the main power is disconnected before storing or transporting this product.
- Make sure that the power line to this product is installed on a dedicated circuit breaker on your service panel that is protected by an adequate RCD. MCB must be in line with the capacity of the charging cable (3.7, 7.4, 11, 22 kW).
- For RCD, we advise you to use 40A, 30mA type A. Local regulations may be applicable and vary depending from your region or country of residence.

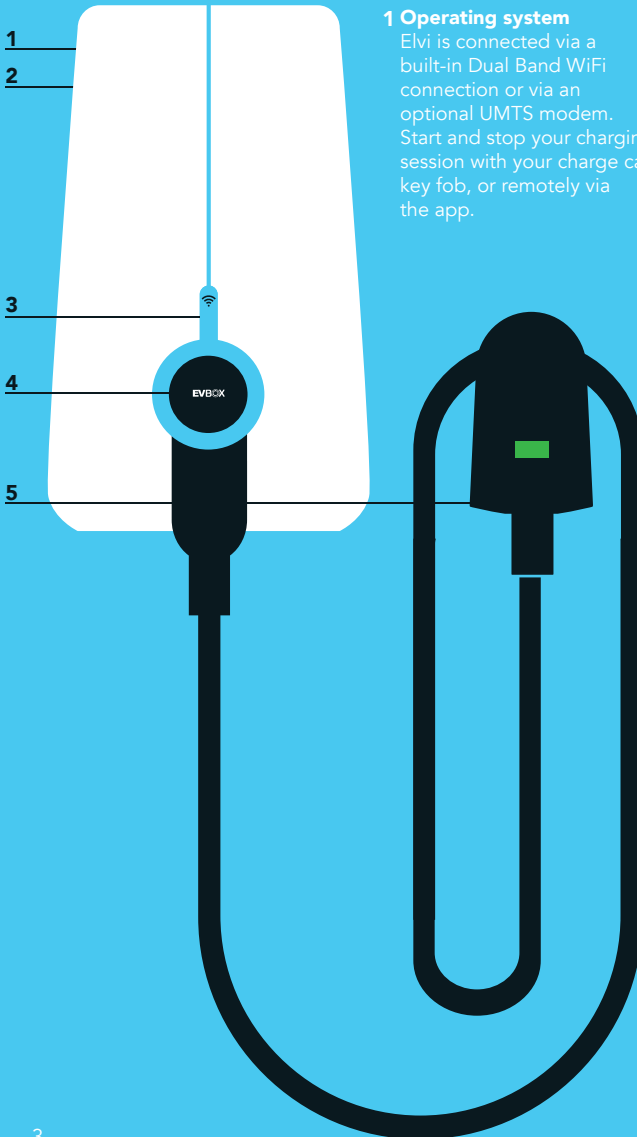
The installing party must always ensure that the station is installed according to the local regulations. In case the Amperage rating of the charge cable lies above the Amperage rating of the applied protective device (MCB), the installer / user should change the station settings in the **Hey EVBox** app or via **hey.evbox.com**. This will be signaled by a warning in the app. Installation or modification of the service panel should always be performed by a qualified electrician.

EVBox is not responsible for any damage that occurs if this product is transported in a different packaging than the packaging in which the product was originally supplied. Store this product in a dry environment; the storage temperature must be between -25°C and +60°C.

EVBox strives to produce products of the highest quality. EVBox products are fully CE certified and compliant with the essential requirements of EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU. More details can be found at evbox.com or in the Installation Manual. EVBox products are sold with a limited warranty described at evbox.com/general-terms-conditions.



components & features



1 Operating system

Elvi is connected via a built-in Dual Band WiFi connection or via an optional UMTS modem. Start and stop your charging session with your charge card, key fob, or remotely via the app.

2 Housing

Elvi consists of a wall dock, a charging station, and a charging cable. Elvi is designed with rugged high-impact strength plastics that make its housing durable, shockproof, weatherproof and colorfast.

3 Card reader

This is the area where you scan your Charge Card or Key fob. Elvi reads the data from your card to start or stop a charging session.

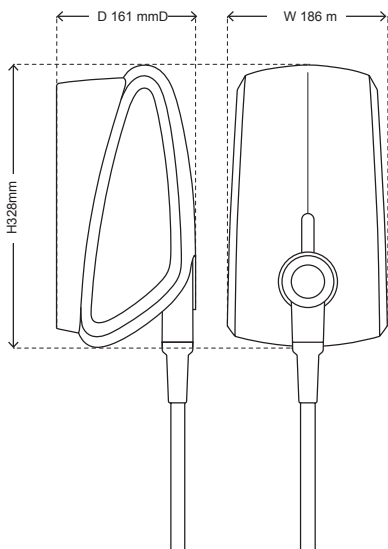
4 LED indicator

EVBox is the innovator behind the LED ring. This smart status indicator helps you to understand what Elvi is doing at all times.

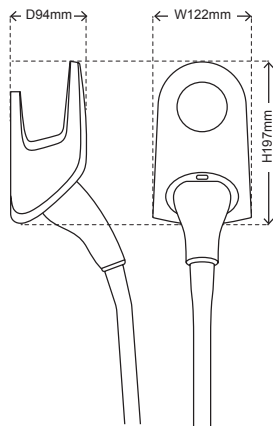
5 Charging cable & cable dock

Elvi's charging cable is compatible with all types of electric vehicles that can handle capacities from 3.7kW up to 22kW. The cable dock (sold separately, part. No.290135) secures the cable in its position when Elvi is not in use. Note: Make sure to select a charging cable/plug that is compatible with your car.

Dimensions



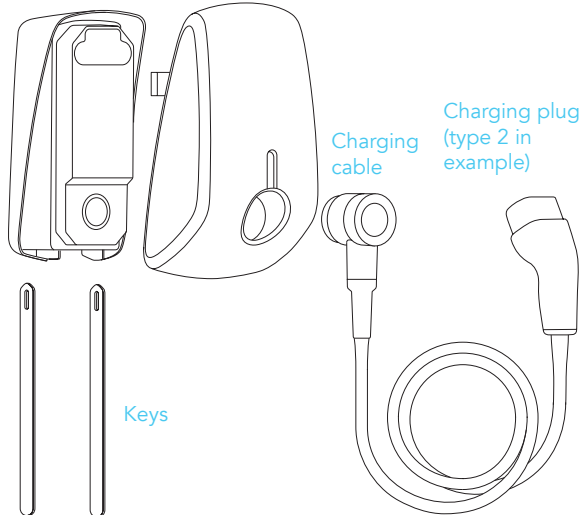
Cable dock (sold separately)



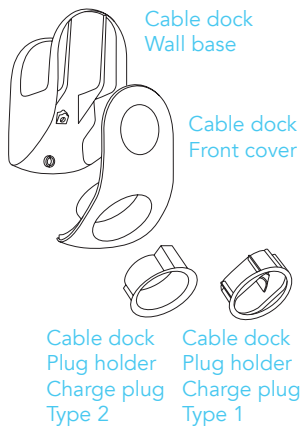
Components

Wall dock

Station



Cable dock (sold separately)



1. unpack Elvi

1.1

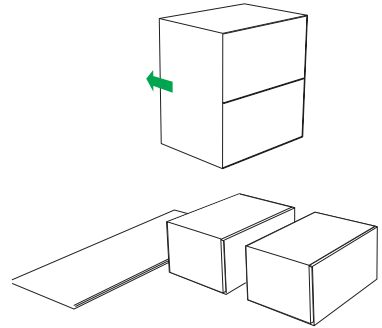
Place Elvi's package on a flat & stable surface.
Remove sleeve.

1.2

Set the boxes aside.

Box 1 contains the charging station

Box 2 contains the charging cable



1.3

Open the charging station box.

Put the instructions folder aside.

The keys you see in this folder
are only required to remove
the charging station from its wall dock.

This is needed for maintenance,
or if the charging cable needs to be changed.

Note: After installation, hand over the folder
including the keys and the charge card
to the user.

1.4

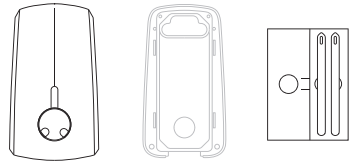
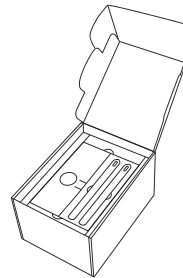
Lift the charging station,
along with its cardboard buffer,
from its box.

1.5

Lift the wall dock from its box.

Skip this step if the wall dock
has been installed beforehand.

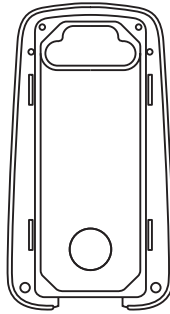
In the latter case, the wall dock is
not included in the box.



1. unpack Elvi

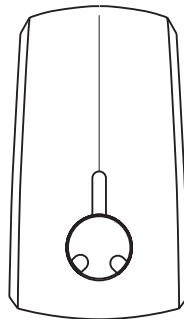
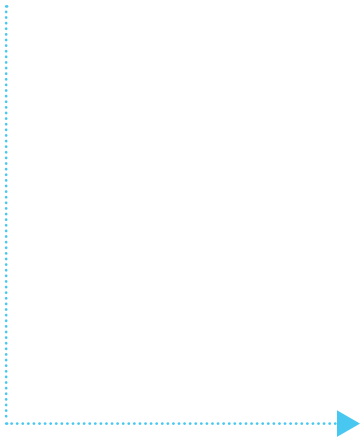
Wall dock
already installed?

NO



Go to next page

YES



Go to page 11

2. install wall dock

Before installing the wall dock

Make sure the power line you're using is switched off on your service panel.

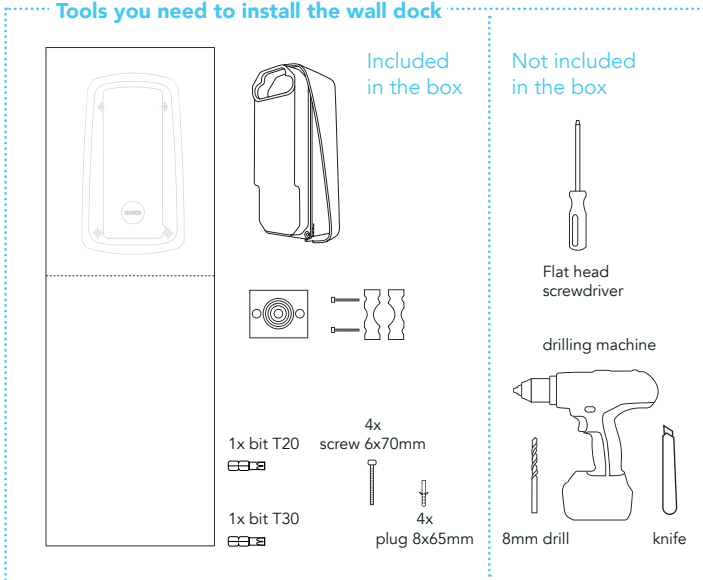
Make sure that the power line to Elvi is installed on a dedicated circuit breaker on your service panel, which is protected by an adequate RCD. MCB must be in line with the capacity of the charging cable (3.7, 7.4, 11, 22 kW). In case the Amperage rating of the charge cable lies above the Amperage rating of the applied protective device (MCB), the installer / user should change the station settings in the **Hey EVBox** app or via [heyevbox.com](https://www.heyevbox.com). For RCD, we advise you to use a 40A, 30mA AC type A.

Keep in mind that local regulations may be applicable and may vary depending on your region/country of residence. The installing party must always ensure that the station is installed according to the local regulations.

In case the values between the charging cable and protection level (MCB) are different, the installer / user should change the station settings in the *Hey EVBox* app. This difference will be signaled by a warning in the *Hey EVBox* app.

Installation settings of your service panel should always be performed by a qualified electrician.

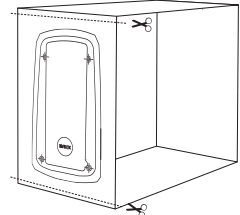
Tools you need to install the wall dock



2. install wall dock

2.1

Select a solid and flat vertical surface to install the wall dock. The surface must be able to carry a vertical load of 20 kg.

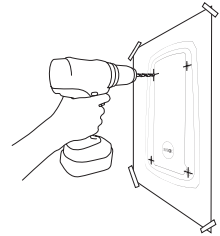


2.2

At the bottom of the box's sleeve, you'll find a drilling template. Cut the drilling template from the sleeve.

2.3

Place the drilling template onto the wall and mark the 4 mounting points on the wall.

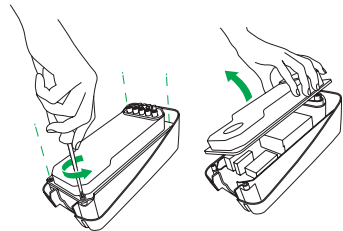


2.4

Drill holes with a drill round of 8 mm. Use the supplied 8x65 mm plugs and 6x70 mm screws.

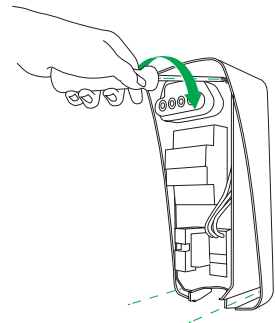
2.5

Remove the window cover of the wall mount (4 corner screws – 3x Torx T20 (use supplied bit T20) + 1x Slotted (use regular screw driver)



2.6

Screw the wall dock onto the wall. Use the supplied Torx T30 bit to fasten the screws.

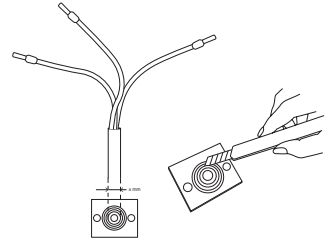


2. install wall dock

2.7

Cut off the right diameter of the rubber seal to allow the power cable and optional data cables to come in.

Note: Strain release and rubber seal are supplied in a separate bag in the box.



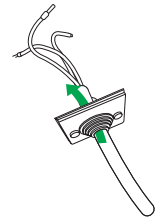
2.8

Feed the power line and optional data wiring through the seal.

Length power line = 230 mm.

Strip the power line over a length of 180 mm.

In case of stranded (flexible) wiring, please use wire end sleeves with a ferrule length of 12-15 mm, and apply a square crimp for optimal fit into the connection terminals.

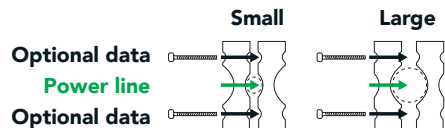


2.9

Assemble the strain release.

Depending on the feed wire thickness, you can use either the small or large diameter on the strain release. Simply flip the symmetrical parts to create a different strain release diameter.

The strain release also accommodates for extra data cables on two sides (e.g. UTP/CAT5E/CAT6).

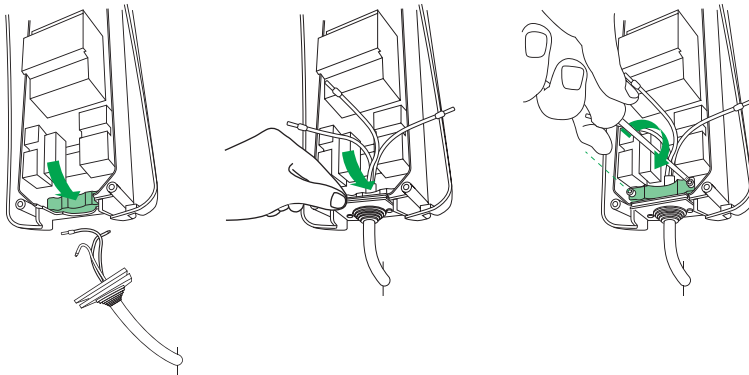


2. install wall dock

2.10

Place one part of the strain release in the bottom of the wall dock.
Place the feed wire over the bottom part of the strain release and mount the rubber seal in the outer edge of the wall dock.

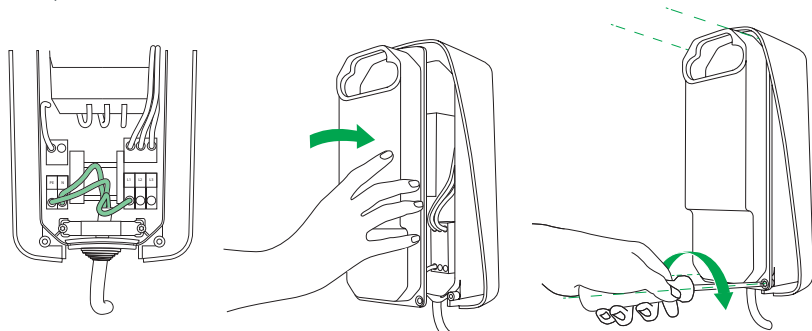
Place the top part of the strain release over the feed wire and use the two screws 4x40 mm Torx T20 head to fix the strain release on the feed wire. Do not overtighten.



2.11

Connect the wiring. Assemble window.
Make sure no wiring is protruding from under the cover window.
Tighten the bolts with T20 bit. Do not over-tighten the bolts.

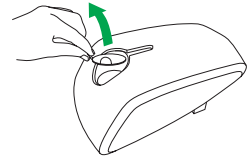
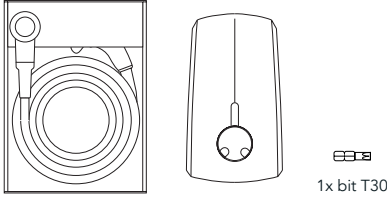
Special bolt on the bottom right corner. To seal the installation with a temporary evident seal, use a regular flat head screw driver.



Note: Installation example of a 1-phase connection of Elvi.

3. install charging cable

Tools you need to install the charging cable

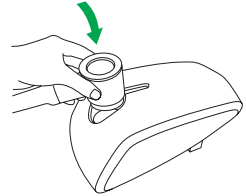


3.1

Unpack the charging cable box.
Remove the cardboard cover from the station's socket.

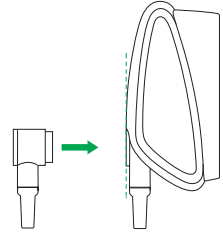
3.2

Take the cable out of the box and plug it in to the station.
When plugging in the charging cable, properly support Elvi and the four snap fits on the back of Elvi. Check if the seal on the plug is present before inserting the plug.
This is to ensure that the proper IP rating is met.



3.3

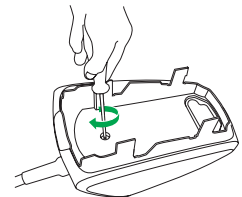
Make sure you press it until the cable plug with LED ring is firmly secured and the LED ring is at the same height as the outer surface.



3.4

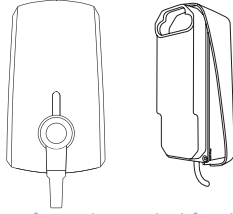
Turn the station around and put the front face of the station on a soft surface. Place the bolt and firmly tighten the bolt with the T30 bit.

Re-confirm that the cable bolt is tightened properly.
Check again if the charging cable is firmly connected to the station and LED ring is at the same height as the outer surface.



4. install station

Tools you need to install the station

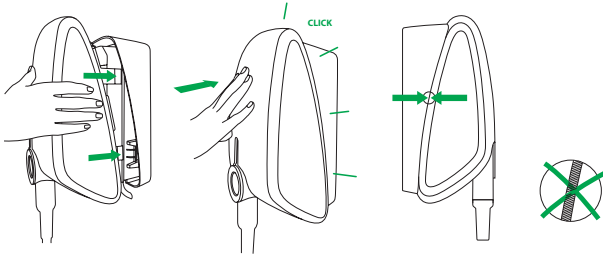


No specific tools needed for this step.

Before mounting, take a note of Elvi's station ID. This can be found on the backside of the station.

4.1

Align the station against the wall dock and press until you hear a clicking sound. If you doubt if the connection is fully secured, check if there's no air gap between the wall dock and the station, and firmly press on all four corners.

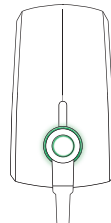


4.2

Switch on the power to the station on the service panel. Elvi will switch on automatically. This is indicated by a blinking red LED ring.

Note

When the station is powered up, the LED ring should flash RED, and switch to GREEN after 2 minutes. If the LED ring shows no color, this may indicate improper installation of the charging cable. In this case, please check / repeat step 3.3 and 3.4.



5. activate Elvi

5.1

Download the *Hey EVBox* app in your app store.
The app is available for both Android and iOS.

5.2

Login to your account in the app.
If you don't have an account yet, please create a new account in the app.
Register Elvi in the app by adding its Station ID and Security Code.
Find the Station ID and Security Code inside the left flap
of the supplied cardboard folder.
Find the charge card in the supplied folder inside the Elvi box.

5.3

Follow the steps in the app to connect Elvi.

5.4

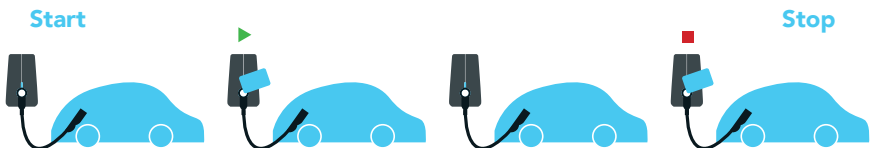
Activate your charge card in the *Hey EVBox* app.
If you have a keyfob, this needs to be registered separately from your charge card
in the app. Your charge card and key fob have separate ID numbers.

Elvi's ready to charge!

Start and stop every charging session by holding your charge card / key fob
in front of Elvi. Your charge card / key fob tracks and registers all your
charging sessions in your *Hey EVBox* account. Alternatively, you can simply unplug
your car from the charging station to stop your charging session.

Need more help?

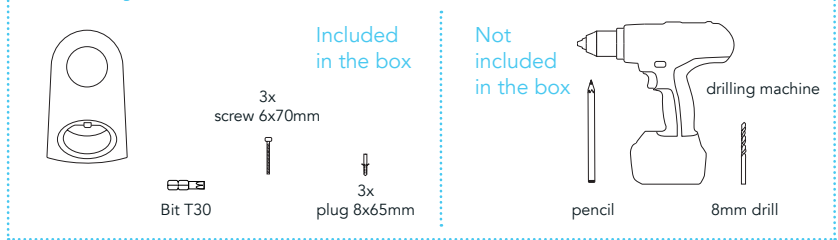
If you need assistance with setting up Elvi or your *Hey EVBox* account,
please contact us at support@evbox.com.



6. install cable dock

sold separately

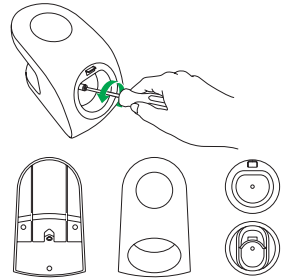
Tools you need to install the cable dock



The Elvi Cable Dock is sold separately, part. No.290135.

6.1

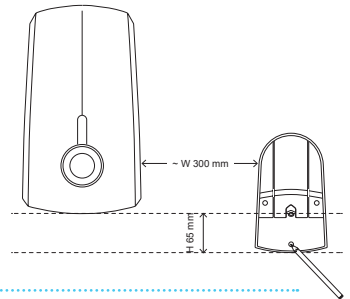
Unpack your Elvi cable dock.
De-assemble the cable management system by loosening the Torx bolt with the T30 bit.



6.2

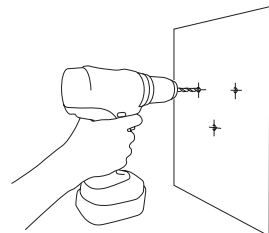
Place the cable dock's wall base on a solid and flat surface. Choose the position on the wall of your cable dock (should be on the side of your station at a comfortable height within 1 meter at least).

Use the cable dock's wall base as a drilling template to mark the 3 holes to drill. Make sure it is leveled.



6.3

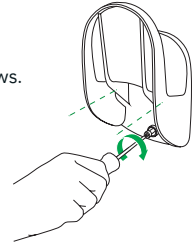
Drill holes with drill round 8 mm
Use supplied plug 8x65 mm and screws 6x70 mm length.



6. install cable dock

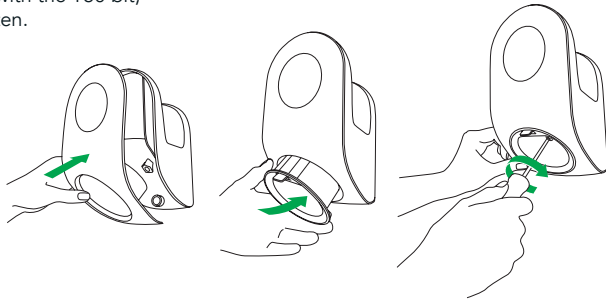
6.4

Place the cable dock's wall base on the wall and fasten the screws.
Do not overtighten.

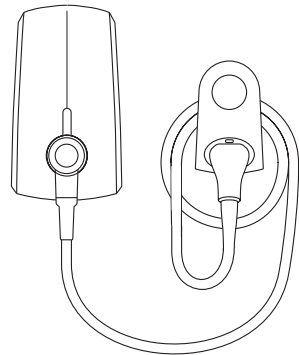


6.5

The Elvi cable dock (290135) is supplied with a plug holder for Type 1 and Type 2 charging plugs.
Insert the right charge plug holder for your situation into your cable dock (Type 1 or Type 2).
Fasten the bolt with the T30 bit, do not overtighten.

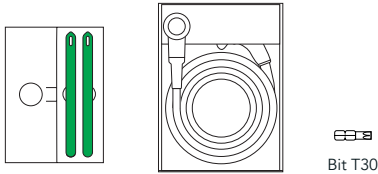


Success!
You're all set.



7. switch charging cable

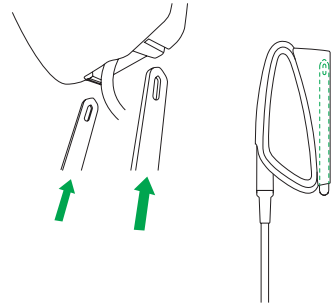
Tools you need to switch the cable



7.1

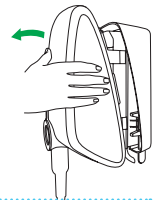
Make sure your Elvi is powered off on the service panel, the LED ring in the charging plug should be off.

Remove the keys from the folder in the box. Insert the keys into the slots on the bottom of the wall dock. This releases the snap fit connection of the charging station to the wall dock. Make sure to push them in until they only stick out approx. 50 mm and cannot be pushed any further.



Now you can remove your charging station from the wall dock. Note that it is still fixed on the connector (socket) of the wall dock and will require some force to pull it off. Take the charging station off in a straight line.

Do not twist or skew the charging station. This might damage the station's snap fits. Remove the keys from Elvi's wall dock.

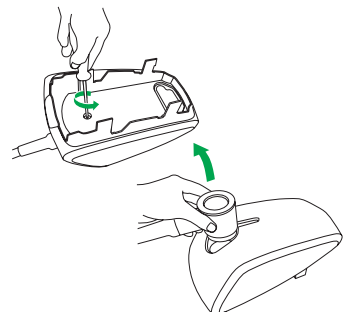


7.2

Turn the charging station around and put the front face of the station on a soft and stable surface. Untighten the bolt in the back with the supplied Torx T30 bit, and take the bolt out.

7.3

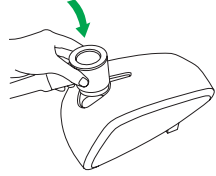
Take the cable out of the charging station. Optimally, please store it in its original packaging. Make sure to place the station on its side while unplugging in the cable.



7. switch charging cable

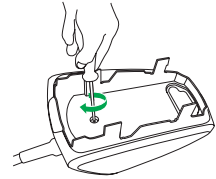
7.4

Take the new charging cable out of the box. Place the station on its side and plug the cable into the station. Make sure you press it until the charging cable plug with LED ring is firmly secured and lays flush to the surface of the charging station.



7.5

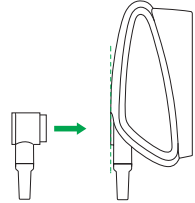
Turn the station around and put the front face of the station on a soft and stable surface. Place the bolt and firmly tighten the bolt with the supplied Torx T30 bit.



7.6

Re-confirm that the cable bolt is tightened properly. Check if the charge cable is firmly connected to the station and LED ring is at same height as RFID logo

Warning double check if charge cable plug is properly secured into the station with the bolt.

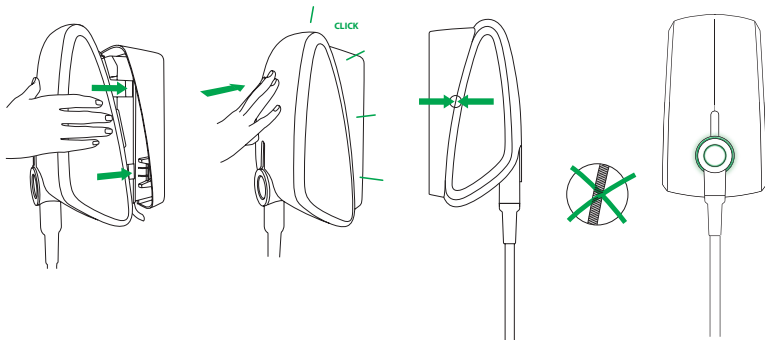


7.7

Align the station against the wall dock and the connectors and press until you hear a clicking sound.


7.8

When upgrading your charging cable to a version that is suitable for higher power application, make sure the applied RCD and MCB in the service panel are in line with local regulations, and are adequate for the type of installed charging cable and the amount of power Elvi can release (3.7, 7.4, 11 or 22 kW). Switch on the power to Elvi. Check with your installer if the selected output power from your Elvi can be supported by your local electrical installation. The setting of your maximum available power in **Hey by EVBox** may need to be adjusted to the new situation.











8. charge with Elvi

Start charging

1. Plug Elvi's charging cable into your car.
 - If you're using a cable dock (optional) and a type 1 cable, press the release button on the cable plug, then release the cable from the dock, and plug the cable into your car.
 - If you're using a cable dock (optional) and a type 2 cable, press the release button on the cable dock, then release the cable from the dock, and plug the cable into your car.
2. To start and stop a charging session, you can use a registered charge card, key fob, or your Hey by EVBox app.
3. Hold your charge card (RFID Card) in front of the reader, marked with  icon.
4. Elvi reacts with a beep. This means that your card is being authorized.
5. Elvi's LED ring turns blue when it starts charging.

Stop charging

1. Hold your charge card (RFID Card) in front of the reader, marked with  icon.
2. Elvi reacts with a beep. This means that your charge card / keyfob is being authorized. Elvi's LED ring turns green when it stops charging.
3. Unplug Elvi's charging cable from your car and place the charging cable back into Elvi's cable holder. Alternatively you can unplug your charging cable from your car directly and end your session.

What you see	What it means	What to do
 LED ring off or green	Elvi is ready for use.	Plug Elvi's charging cable into the car.
 LED ring green flashing	Your charge card is being verified.	Wait until LED ring turns blue.
 LED ring yellow	The car is fully charged.	Unplug Elvi's charging cable from the car and place the cable back into Elvi's cable holder.
 LED ring yellow flashing	Charging session is in queue, optionally in Smart Charging environment	When power becomes available, charging will start or resume, and the LED ring will turn blue.
 LED ring blue	Elvi is charging the car.	The car is charging.
 LED ring red	Elvi is experiencing an error.	Check the troubleshooting chapter in this manual for solutions. If this does not solve the issue, contact your installer or supplier of Elvi, or message us at service@EVBox.com .
 LED ring red flashing	Your charge card is not authorized to charge.	Contact your charge card service operator, or apply for a free authorized charge card at evbox.com/products .

9. troubleshooting

What you see	What it means	What to do
Charging station does not react	No power to charging station	<ul style="list-style-type: none"> • Check residual current device and circuit breaker on the service panel (check by user). If off, switch it on. • Is the supply cable entering the charging station live? The LED ring should be on. • Turn the charging station off. Turn it on again after 20 seconds, by flipping the circuit breaker or main switch to Elvi.
Residual current device prevents charging. LED ring blinks red 10x.	<ul style="list-style-type: none"> • Grounding error in the charging station • Special ground resistance needed for the vehicle • Fault in the vehicle or defective charging cable 	Contact your service technician for inspection and solution. No user serviceable parts.
LED ring lights up red constantly	Grounding fault	Check if your electrical installation is properly grounded. Contact your service technician in case of doubt, and to solve the local grounding situation.

Please see next page for more troubleshooting instructions.

9. troubleshooting

What you see	What it means	What to do
<p>LED ring lights up yellow constantly</p>	<ul style="list-style-type: none"> • Vehicle is on a timer • Vehicle is fully charged • Grounding resistance is too high, with specific vehicles, this must be < 50 Ohm 	<ul style="list-style-type: none"> • Is the charging cable plug properly inserted into the vehicle? (check by user) • Change the setting of the timer in the vehicle. (check by user) • Replace the charging cable. (user serviceable) • Is the Ground Resistance correct? (grounding measurement by electrician)
<p>Red LED starts flashing immediately after the card is held against the reader</p>	<ul style="list-style-type: none"> • Charge card is not authorized for charging at this charging station. • There is no communication with the <i>Hey by EVBox</i> app. 	<ul style="list-style-type: none"> • Is the charge card registered correctly? (check by user) • Check the settings of your charging station in the <i>Hey by EVBox</i> app or via hey.EVBox.com. (check by user) • Check if you have proper WiFi reception where Elvi is installed. (check by user) • Reboot your WiFi network first. Then reboot Elvi, and check the WiFi reception. (check by user) • Check in the <i>Hey by EVBox</i> app if your WiFi network is properly connected to Elvi. Reconnect again. (check by user) • If your Elvi is equipped with the optional UMTS module, check if Elvi is in contact with the local cellular network and if it has proper reception. (check by charging point operator)

10. warranty

15.1 Products have a two-year warranty against defects in materials or manufacturing defects. If Customer detects any damage / defect / shortcoming to the Product he must notify, within a reasonable time and in any event within ten (10) days, EVBox under statement of all possible details of the defect, the defect or malfunction via info@EVBox.com and / or +31 88 77 55 444.

15.2 Clause 15.1 applies only to Products which are taken directly from EVBox and not by third parties such as resellers, installation partners or other third parties.

15.3 EVBox can charge Customers not being consumers, travel costs, transportation costs or other costs of resolving a defect or malfunction.

15.4 Customer should send loose Products such as faulty cables, Charge Cards or Charge Key Fobs, back to EVBox. Any transportation costs are for the expense of the Customer.

EVBox does not guarantee that the Products and Services it delivers are without defects and will function without interruption EVBox has a best effort obligation to repair defects in the Products and Services within a reasonable time.

15.5 In case the customer has reported a malfunction, defect or failure EVBox can postpone the recovery of the defects until a new version of the Product and/or Service is put into service. EVBox does not guarantee that defects in software or other items that are not developed by EVBox, will be repaired. EVBox is entitled to apply problem avoiding restrictions and/or apply workarounds. If a Service and/or Product is developed by EVBox and commissioned by Customer EVBox can charge its usual rates for repair of any defects.

15.6 EVBox is not responsible for checking the accuracy and completeness of the results of the Service and the data generated using the Service. Customer can check the results of the Service and the data generated using the Service.

15.7 Customer shall, on the basis of the information provided by EVBox on measures to prevent and limit the consequences of failures, defects in service, mutilation, loss of data or other incidents, identify the risks to its organization and, if necessary, take additional measures . EVBox is prepared upon request by Customer to if reasonably possible to cooperate with Customer to incorporate the additional measures necessary. EVBox can charge Customer for the additional work using its normal fees. EVBox is not responsible for repair of damaged or lost data.

This warranty statement is subject to change.

Please refer to [evbox.com/general-terms-conditions](https://www.evbox.com/general-terms-conditions) for the latest version.

11. declaration of conformity

in accordance with Machinery Directive 2006/42/EC

EVBox B.V.,

NL registration KvK 32165082_000018683428
Pedro de Medinalaan 31, 1086XP Amsterdam, The Netherlands

declares under its' sole responsibility that the following products:

- Article series E1160-XX50XX: EVBox Charging station, 1-phase 16A with charge cable
- Article series E1320-XX50XX: EVBox Charging station, 1-phase 32A with charge cable
- Article series E3160-XX50XX: EVBox Charging station, 3-phase 16A with charge cable
- Article series E3320-XX50XX: EVBox Charging station, 3-phase 32A with charge cable

provided that they are installed, maintained and used in the applications for which they were designed, in accordance with professional practices, relevant installation standards and manufacturer's instructions for use and installation, are CE certified and comply with the essential requirements of EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU in accordance with the following standards:

- EN/IEC 61000-6-2 (2005)
- EN/IEC 61000-6-3 (2007) + A1 (2011)
- EN/IEC 61000-32 (2014)
- EN/IEC 61000-3-3 (2013)
- EN/IEC 60529-1 (1989) + A1 (1999) + A2 (2013)
- EN/IEC 60950-1 (2005) + A1 (2009) + A2 (2013)
- EN/IEC 60950-22 (2005)
- EN/IEC 61851-1 (2010)
- EN/IEC 61851-22 (2001)
- EN/IEC 62196-1 (2014)
- EN/IEC 62196-2 (2017)

Amsterdam, December 28, 2017



A.D.S. van de Leur
Chief Technical Officer

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EVBox strives to produce products of the highest quality. EVBox products are fully CE certified and compliant with the essential requirements of EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU. More details can be found at EVBox.com or in the Installation Manual. EVBox products are sold with a limited warranty described at evbox.com/general-terms-conditions.

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