# ONEPOLE

User Manual - Pedestal with accessories



Rev.1.0 - 2023 - English | Doc.nr.: QA-UM-0001 | Created: Sanne Brembo | Check & Appr: Radmilla Govertsen

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#### **SUSTAINABLE**

The ONEPOLE product line exemplifies a commitment to sustainability, crafted from Hydro CIRCAL- a premium low-carbon recycled aluminum that constitutes 75% of the whole product assembly. This material not only enhances the product's quality but also significantly reduces the environmental impact. The CO2 footprint of ONEPOLE stands impressively low at approximately 2kg per 1kg aluminum, in stark contrast to the global average.

Moreover, the lightweight nature of aluminum, serving as a primary material, results in 54%\* reduction in CO2 emissions compared to similar products made of steel.

\*Calculation is derived from the average weight of comparable products made of steel and the global average CO2 emissions associated with steel production.

#### MODULAR

ONEPOLE pedestal encompasses a versatile array of combinations tailored to cater various applications. One pedestal with numerous possibilities and accessories.

#### UNIVERSAL

In addition to its straightforward installation process, the ONEPOLE pedestal offers a practical upgrade feature. This allows for the transition from a single charging unit to multiple units in a few minutes. This technical capability ensures adaptability and scalability without complication, allowing modifications to or replacement of the EVchargers.

without the need to replace the entire pedestal structure. This flexibility further streamlines the evolution of the charging infrastructure, accommodating changes efficiently and cost-effectively.

#### VERSATILE

Choose your desired EV-charger from our universal system. In the event you cannot find a specific EV-charger that meets your requirements, please do not hesitate to contact us: https://onepole.no/en/contact

We are more than willing to tailor a customized solution to ensure seamless compatibility with your needs.



#### 1. General information

Thank you for selecting ONEPOLE. The following manual will guide you through the installation process. Aimed at providing a detailed, stepby-step walkthrough, this manual serves as a technical guide to ensure the accurate assembly, installation, and maintenance of ONEPOLE. By adhering to the technical information provided in this manual, one can optimize the performance and functionality of ONEPOLE while mitigating the potential for errors during installation.

### 2.Standards, regulations and certification

#### 2.1 EU Declaration of conformity

The ONEPOLE PRO is a universal recycled aluminum pedestal for all leading EV-chargers. The entire ONEPOLE product line is designed with a focus on durability and is made of high-quality recycled aluminum, guaranteeing a long lifespan (minimum of 20 years) and minimal maintenance.

ONEPOLE PRO with its accessories is designed and manufactured in conformity with the relevant Union harmonization legislation: IEC (International Electrotechnical Commission), ISO (International Organization for Standardization), and EN (European Standards) where applicable. For more details, please request EU Declaration of Conformity.

#### 2.1 Testing and Approval

The ONEPOLE product line adheres to the essential requirements outlined in the relevant directives and standards applicable to products within this category intended for the European market. The design, manufacturing, and testing processes align with the prescribed standards, guaranteeing the safety and performance of the

#### product. Additionally, independent verification has been conducted by a third-party entity, TUV Rheinland, affirming the product's compliance and further validating its safety and performance attributes.

TUV Rheinland LGA Products GmbH certificate: Certificate of Conformity, registration number: AK 50596379 0001.

#### 2.2 RoHS Directive

The products of ONEPOLE line are compliant with the articles of RoHS Directive 2011/65/ EU (The Restriction of Hazardous Substances) and supplementary directive 2015/863/EU limiting the presence of hazardous substances in the whole product line.

#### 2.2 REACH Directive

The ONEPOLE line is in accordance with the EU regulation EC 1907/2006 Registration, Evaluation, Authorization and Restriction of Chemical substances regulating substances of very high concern (SVHC). The products of ONEPOLE line reflects the absence of any SVHC substances in concentration exceeding the minimum limits specified by the legislation. Furthermore, none of our products or raw materials contain chemical substances requiring registration.

#### 2.3 Accessibility

Ensuring equal access to services, products, and ease of movement is a paramount consideration. The ONEPOLE PRO pedestal and its accessories have been designed in collaboration with knowledgeable and discerning stakeholders, including EV-charger manufacturers, charge point operators (CPOs), and the Norwegian Association of Disabled (NAD). This collaborative effort aims to guarantee that the ONEPOLE products meet accessibility standards, ensuring inclusivity and functionality for all users, regardless of their individual needs or abilities.



#### 3. Main data

Rated voltage (Un) (of the assembly)	AC400V
Rated operational voltage (Ue) (of a circuit of an assembly)	AC400V
Rated insulation voltage (Ui) (of a circuit of an assembly)	500V
Rated impulse withstand voltage (Uimp) (of the assembly)	6kV
Rated current of an assembly (InA)	63A
Rated current of a main outgoing circuit (Inc)	32A for output
Group rated current of a main circuit (Ing)	63A
Rated diversity factor (RDF)	1
Rated frequency (fn)	50/60Hz
Operating temperature	Min40°C Max. +70°C
Pollution degree of the macro- environment	2
Types of earthing system for which the assembly is designed	TN-S
Stationary or movable	Stationary
Degree of protection against contact with hazardous live parts, ingress of solid foreign bodies and water, IP code	IP44
External design	Enclosed assembly
Degree of protection against mechani- cal impact, IK code, if applicable	IK10
Type of construction – fixed or removable parts	Fixed
type of short-circuit protective device(s)	RCBO
Overall dimensions for a standard pole Q9MSL	1494mm x 220mm x 220mm
Weight	App. 7,8kg - Up to 18KG with accesso- ries anc EV-charger depending on a complete assembly

#### 4. Instructions for Handling, Installation, Operation, and Maintenance

#### 4.1 Handling

 Always handle the ONEPOLE with care to avoid any potential damage. Avoid dropping or

#### **ONEPOLE**

striking it against hard surfaces.

 Ensure the ONEPOLE is securely fastened during transportation to prevent any damage during transit.

#### 4.2 Installation

- Have the ONEPOLE installed by a qualified electrician to ensure compliance with safety and electrical standards.
- Follow the installation instructions provided in this user manual for proper setup.
- Choose an installation site suitable for the product, considering factors such as exposure to the elements and proximity to power sources.

#### 4.3 Operation

- Operate the ONEPOLE according to the instructions outlined in this user manual.
- Any modifications or additions to the ONEPOLE should be carried out by a qualified individual to ensure safety and compliance with electrical standards.

#### 4.4 Maintenance

- Regular maintenance is essential to ensure the longevity and efficiency of the ONEPOLE.
- Conduct routine inspections for any signs of damage or wear. In case of damage, contact your supplier for assistance.
- Use a non-abrasive cleaner for cleaning purposes; avoid harsh chemicals that could damage the materials of the ONEPOLE. For more information, see part on maintenance at the end of this document.
- Any necessary repairs should be carried out by a qualified individual to maintain the product's safety and functionality.



#### 5. Technical description

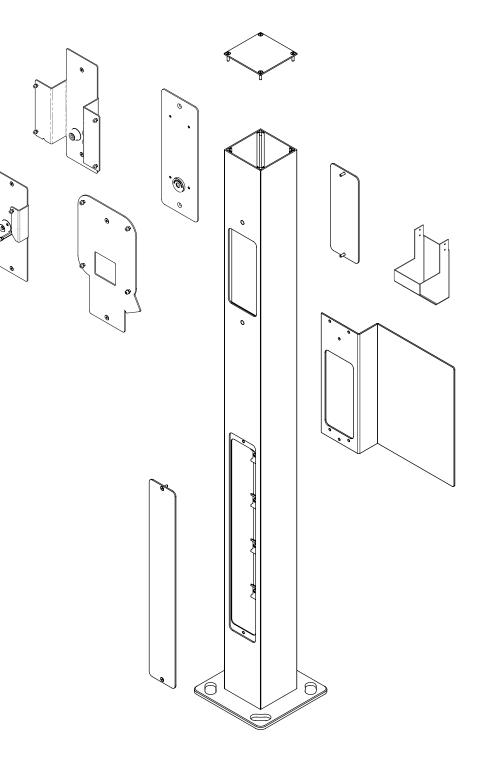
In this section, we provide an overview of the visual appearance and composition of a standard ONEPOLE pedestal, detailing the distinct functionalities of its various components. For a more in-depth understanding and customization options, we encourage you to explore our configurator.

Craft a personalized pedestal by selecting from a range of options, accommodating up to four EV-chargers integrated into a single ONEPOLE unit. Our adaptable solution offers an extensive array of products, accessories, and add-ons. Explore the configurator for additional information and to tailor ONEPOLE precisely to your specific requirements.

https://onepole.no/nb/configurator/stage/type



Configurator





### 5. Technical description

> **Country of origin** Norway

Material Powder-coated searesistant aluminum

**Color** RAL9005 (Standard) Fine structure

Surface treatment Powdercoated ISO 12944, Category C4

Protection class Class I, must be connected to PE

Degree of protection

**Gross Measurement** 1515x225x225mm

Weight 7,3kg

**Gross weight** 7,75kg

#### For illustration only

The ONEPOLE pedestal can be installed with both Connection Kit, DIN rails, and circuit breakers. See separate installation instructions for more information.



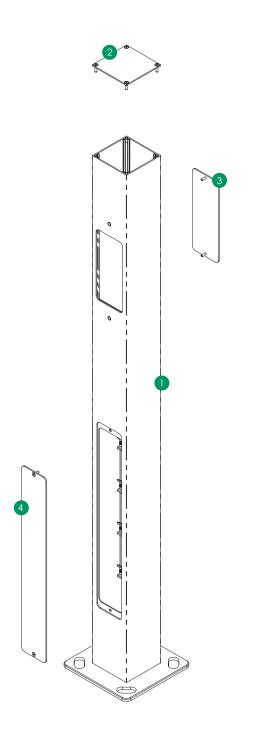
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### Pedestal

The main components of the pedestal are pre-installed, streamlining the assembly process for your convenience. This section will guide you through additional steps and details necessary to complete the installation and ensure proper setup of the remaining components.





#### Base (Included)

The base of the ONEPOLE. Innumerable combinations and customization make the ONEPOLE a fit for any project. Can be rotated 180 degrees to be mounted to the ceiling in parking basements with limited space.



#### Top Lid (Included)

Top Lid bracket is designed for securing and enclosing the ONEPOLE pedestal. 116x116mm dimension.

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#### Blind Lid (Included)

A blind lid panel fitted in the upper access entry of an ONEPOLE pedestal serves as a protective cover preventing direct access to the pedestal, at the same time it is easily removed during the installation of an additional EV-charger.



#### Access Panel (Included)

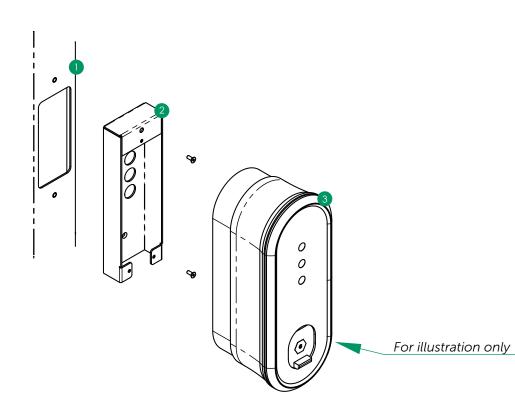
An access panel is strategically positioned at the lower access entry of an ONEPOLE pedestal, to facilitate easy entry and connection of the electrical components. This panel serves as a designated point for authorized individuals to access and interact with the internal electrical elements.

### **Mounting bracket**

This specialized bracket is designed to accommodate and securely mount a single EV-charger, offering a tailored solution for your specific device.

ONEPOLE presents a versatile solution, with each unique bracket crafted to accommodate a specific EV charger. This eliminates the need to alter the pedestal when replacing a charger. For detailed information on each bracket, refer to the respective product's datasheet.







#### Pedestal

The base of the ONEPOLE. Innumerable combinations and customizations make the ONEPOLE a fit for any project. (For more information, see 6.1 in manual).

### 2

#### **Mounting Bracket** A single bracket specifically designed for any EV-charger.

Each bracket is supplied with essential components- bolts and grommets, included in the package. This ensures a secure installation on the pedestal, simultaneously safeguarding electrical cables from moisture.



#### **Charger** EV-charger of your choice.

Safely affix the EV-charger onto the designated bracket. Make use of the provided bolts and grommets that come with the bracket for a secure installation.

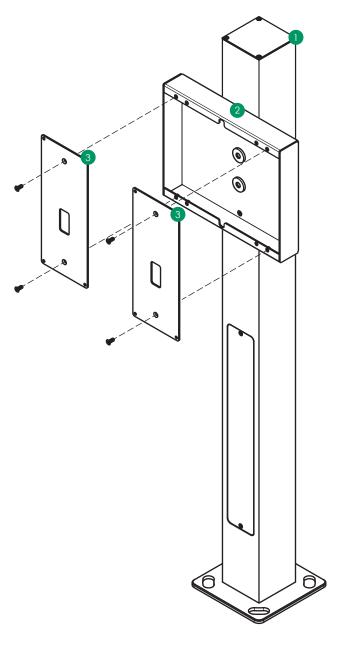
#### 6. Installation 6.2 Brackets

### Side-by-Side

This bracket holder facilitates the convenient side-by-side mounting of two EV-charger brackets, maximizing space utilization and enhancing functionality.



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The base of the ONEPOLE. Innumerable combinations and customization make the ONEPOLE a fit for any project. (For more information, see 6.1 in manual).



#### Side by Side Bracket

Designed for Side by Side installations, this bracket holder enables the convenient side-by-side mounting of two EV-charger brackets, optimizing space and functionality.

Use the screws, bolts and grommets included in the package to mount the bracket onto the pedestal.



#### Mounting Bracket

A single bracket specifically designed for any charger, complete with stainless steel screws for customized EV-charger installation.

Use the screws, bolts and grommets included in the package to mount the single bracket onto the Side-by-side.

#### 6. Installation 6.2 Brackets

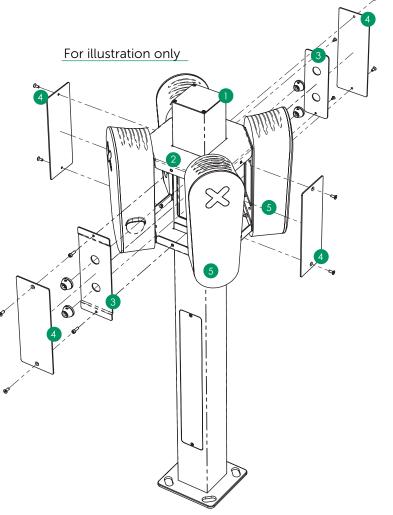
### Quattro

The Quattro bracket is a versatile mounting solution designed to be installed on the pedestal, allowing the mounting of multiple chargers based on their size and requirements. This innovative bracket offers flexibility and adaptability, accommodating various EV-charger sizes to optimize space and functionality.

#### Quattro Top view examples



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#### Pedestal

The base of the ONEPOLE. Innumerable combinations and customization make the ONEPOLE a fit for any project. (For more information, see 6.1 in manual).

#### Quattro Bracket

The quattro installation bracket holder facilitates the mount- ing of multiple brackets for chargers depending on the size of the charger. Quattro offers multiple mounting directions, allowing for customization based on the specific space and environmental requirements. Standard Quattro is composed of four components: top and bottom quattro bracket and two blind lids.

Use the screws, bolts and grommets included in the package to mount the bracket onto the pedestal.



2

#### Blind Lids (part of Quattro kit)

Designed to encase and shield the pedestal along with its internal electrical components and connections, ensuring water protection. These two lids are designed to seamlessly fit the Quattro bracket and are included as part of the Quattro kit delivery.

Use the screws, bolts and grommets included in the package of the Quattro kit.



#### Blind Lid Octo (optional additional accessories)

Designed to encase and shield the open spaces in between the EV-chargers.



#### EV-charger + Mounting Bracket

The EV-charger of your preference is affixed to an individual bracket specifically designed for the charger, and then seamlessly mounted to the Quattro bracket.

Use the screws, bolts and grommets included in the package of the single mounting bracket to mount the EV-charger onto the bracket.

### 6. Installation

### Roof

ONEPOLE offers a range of versatile roofing solutions designed to meet diverse project requirements. Our three distinct roof covers are tailored to offer specific functionalities and performance capabilities.

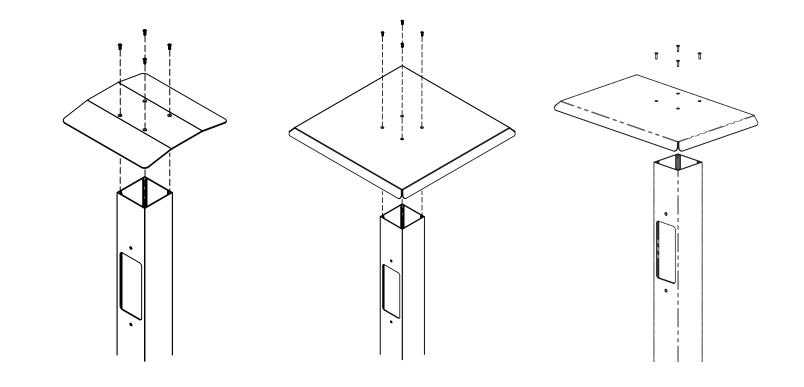
- Roof cover Quad 600
- Roof cover Duo 350,
- Roof cover Uno 350x600 (Halfcover)

Additional lighting kits can be installed beneath the roof if roofs are included in the delivery. See separate installatio n instructions for more information.



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#### Roof Cover Duo 350

Customized roof cover designed to fit the ONEPOLE PRO pedestal with dimensions of 350x350mm.

Use the screws, bolts and grommets included in the package to mount the roof onto the pedestal.

Most common combinations 1+0 / 1+1. (See next page)

#### Roof Cover Quad 600

Customized roof cover designed to fit the ONEPOLE PRO pedestal with dimensions of 600x600mm.

Use the screws, bolts and grommets included in the package to mount the roof onto the pedestal.

Most common combinations 1+1+1+1 / 2+2 (See next page)

#### Roof Cover Uno 350x600 (Halfcover)

Customized roof cover designed to fit the ONEPOLE PRO pedestal with dimensions of 350x600mm.

Use the screws, bolts and grommets included in the package to mount the roof onto the pedestal.

Most common combinations

2+0 (See next page)

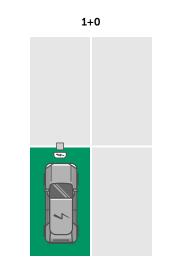
#### 6. Installation 6.4 Combinations

### Combinations

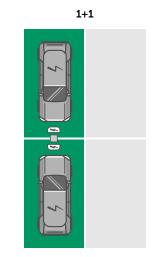
Choose between different configurations based on your charging needs.

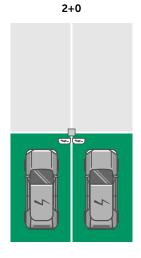


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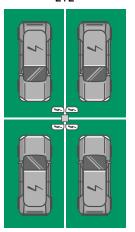


2+1

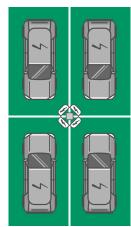




2+2



Quattro



#### 6. Installation 6.5 Foundations

### Foundation

ONEPOLE offers three distinct foundations:

- Dredging foundation
- Anchorframe
- ONEBLOC

Each foundation serves specific requirements, providing tailored solutions for various environments and project demands.



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#### The dredging foundation

boasting a base height of 500mm, has been expertly crafted to complement ONEPOLE PRO pedestals, making it the perfect solution for in-ground applications, complete with a precise 160mm center-to-center (C/C) configuration.

#### The anchor frame

has been engineered to seamlessly integrate with the ONEPOLE PRO pedestals, making it the ideal choice for in-ground concrete installations with a precise 160mm center-to-center (C/C) spacing.

#### ONEBLOC

Designed for installation on already prepared lots, especially in situations where digging is challenging or undesirable, this solution is ideal for parking lots and temporary charging stations. Its effortless integration with existing infrastructure makes it a seamless choice. The necessary cabling and piping are conveniently added above ground within 110mm pipes. In this configuration, a shorter variant of the Onepole pedestal (1000mm) is commonly employed.





### **Connection Kit**

Introducing our 6-Pole Connection Kit, designed for effortless integration of multiple chargers, seamless daisy-chaining of multiple pedestals, or straightforward circuit breaker installations. This comprehensive kit comprises five 6-pole connectors and an earth cable, ensuring a hassle-free and secure electrical connection solution.

Mounting the connection kit onto the pedestal is optional and not required. To facilitate the mounting of connection kit directly onto the backplate of the ONEPOLE pedestal, we recommend utilizing M5 8mm bolts. Please note that these bolts are not included in the delivery and should be sourced separately.



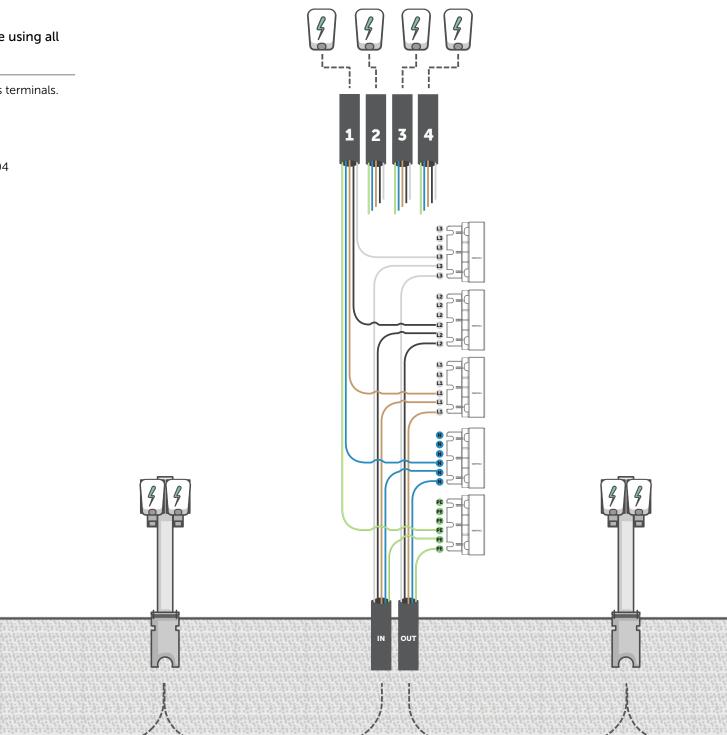
**ONEPOLE** Rev.1.0 - 2023 Designed to connect ONEPOLE pedestals in a row while using all four possible charging units.

Consist of 5 pcs terminal blocks, each terminal block has 6 pcs terminals.

#### Typical application:

1 pcs cable in, 1 pcs cable out and up to 4 pcs chargers out.

Tested according to EN 60998-1:2004 and EN 60998-2-1:2004 Approved cross-section AL cable: 10-50mm<sup>2</sup> Approved cross-section CU cable: 1.5-35mm<sup>2</sup> Dismantling lenght: 18mm Tightening torque: 10Nm Max. voltage 450V Max. load 100A Connection: 5 pcs. 6x25/50mm<sup>2</sup> AI/CU

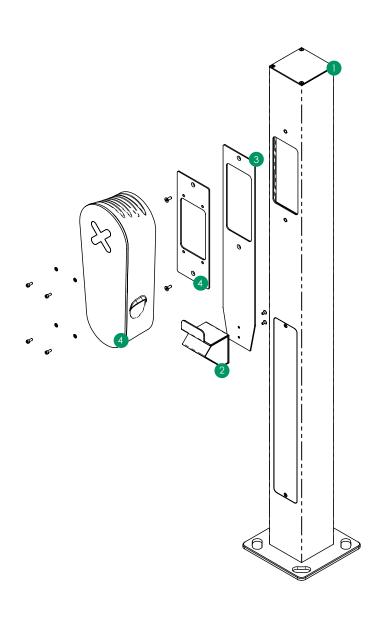


## Cliff Ocean Cable and Plug holder

Explore ONEPOLE's lineup of essential accessories designed for convenience and functionality. From cable holders to cliff adapters, our innovative solutions ensure efficient wire management and secure device mounting.



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#### Pedestal + EV-charger + Mounting bracket

Pedestal + EV-charger + Mounting bracket (see 6.1 Pedestal - 6.2 Brackets)



#### Cliff Ocean cable- and plug holder

Combined cable- and plug holder in one simple design. Outer housing is made of powdercoated aluminum and the inner part is made of recycled ocean plastic. The Cliff Ocean cable holder offers two mounting options:

### Directly affixed to the pedestal using a Cliff Ocean adapter.

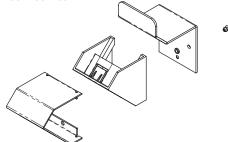
 Attach the Cliff Ocean securely to the Cliff Ocean adapter using the provided bolts.
 Next, fix the assembled unit onto the pedestal.
 Install the single mounting bracket along with the Cliff Ocean adapter onto the pedestal, using the

provided bolts. 4) Securely mount your EV charger onto the desig-

nated position on the mounting bracket.

#### Independently installed in any space, often on

**a wall.** Ensure the use of suitable bolts or screws, depending on the material to which the Cliff Ocean will be mounted.



(Delivered as assembly, made from aluminium and recycled ocean plastic)



#### **Cliff Ocean adapter**

A specially engineered single bracket, precisiondesigned for the Cliff Ocean cable holder, facilitates seamless installation beneath the EV-charger.



#### EV-charger + Mounting Bracket

(For more information see 6.2 Brackets)

### Simple Cableholder & Wallmounted Cableholder

Explore ONEPOLE's lineup of essential accessories designed for convenience and functionality. From cable holders to cliff adapters, our innovative solutions ensure efficient wire management and secure device mounting.





#### Simple cableholder

An essential component for efficient cable management. This simple yet highly effective cable holder is a must-have for your EV-charging setup. Ensure seamless installation by incorporating the cableholder before attaching the mounting bracket for your EV charger.

Utilize the provided bolts/screws from the single mounting bracket kit to securely affix both brackets onto the pedestal.

#### Wallmounted cableholder

The cable holder is specifically designed for wall mounting. Crafted from durable aluminium, it offers a straightforward installation process. Its design provides a practical solution for organizing cables on walls in both residential and commercial settings.

Ensure the use of suitable bolts or screws, depending on the material to which the cableholder will be mounted.

#### 6. Installation 6.7 Accessories

### **Pillar Flex bracket**

Explore ONEPOLE's lineup of essential accessories designed for convenience and functionality. A pillar flex bracket finds common application on structures like those in parking lots. This bracket is versatile, compatible with any EV-charger mounting bracket, and can be used with various chargers. It offers a straightforward solution for maximizing space utilization within existing infrastructure.



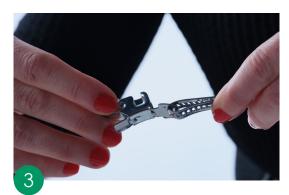
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Pull out the band to the required length plus about 50mm and cut to size



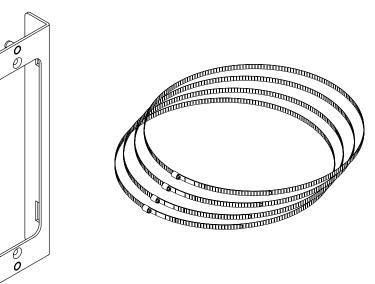
Insert the band into the plate, ensuring the rack is positioned as depicted in image number 2.



Fold the band back on itself by 180 degrees using pliers.



Secure it firmly using a screwdriver. The clip is now connected and securely locked in place.



#### Pillar Flex bracket + Pillar Flex band

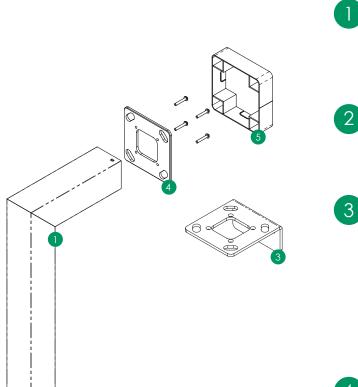
The Pillar Flex bracket is designed for mounting EV chargers on pillars, offering the flexibility to install either a single EV-charger or multiple EV-chargers side by side. It is compatible with all our single mounting brackets. The bracket can be securely mounted on the existing pillar structures either independently or using steel bands. A supplementary Pillar Flex band box, featuring a standard 2x2m steel band equipped with a lock, is available for separate purchase. The length can be adjusted according to the instructions provided in this manual.

### Ceiling/floor adapter + Angled footplate bracket 90 deg

In challenging mounting scenarios, particularly in parking structures or confined outdoor or indoor spaces, we offer specialized solutions to adapt the pedestal for ceiling or wall installations. This involves the use of a ceiling/floor adapter and/or an angled footplate. Additionally, we provide customization options for the standard ONEPOLE pedestal, including variations like an L-shaped base. While various sizes are available, the standard 500 x 1200mm configuration is the most commonly used.



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#### L-shape pedestal

The base of the ONEPOLE. Can be customized. Standard L-shape with measurements 500x1200mm.

#### Top Lid

Top Lid bracket is designed for securing and enclosing the ONEPOLE pedestal. 116x116mm dimension.

#### Angled Footplate Bracket 90deg

A versatile, aluminium, powder-coated fixture, enables secure ONEPOLE mounting on vertical surfaces in both upward and downward directions. Includes 4 x M20 bolts for ONEPOLE attachment. Suitable for indoor/outdoor use. Attention: Concrete screws are not included in case of mounting on a concrete.

Footplate CC160

Specially designed Footplate tailored for ONEPOLE pedestals. Delivered with center distance on bolts C/C 160 mm for attachment to standard foundations. The footplate is designed for versatile mounting options, allowing it to be easily installed on both ceilings and floors.

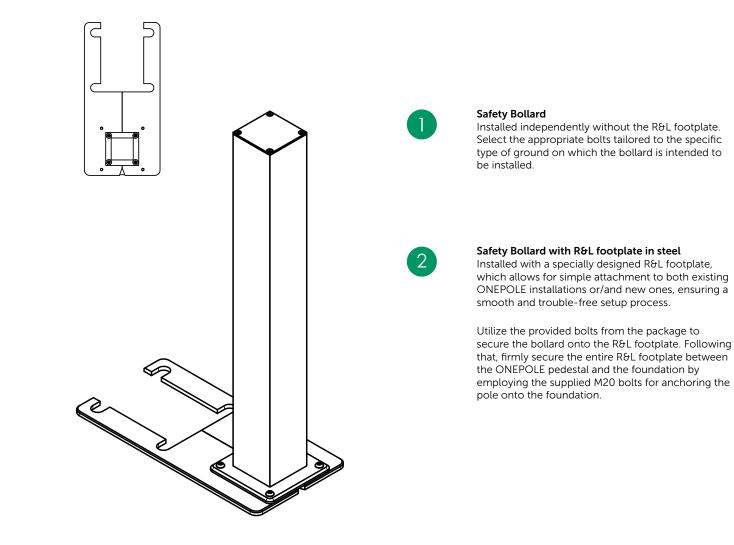
5

#### Ceiling/floor adapter

Primarily employed for fine-tuning the positioning of the footplate, this feature allows for the seamless integration of multiple cable entries without compromising the structural integrity. It effectively creates additional space between the ceiling and the footplate, facilitating the entry of cables into the pedestal.

### Safety bollard

Introducing our enhanced safety bollard, designed to safeguard the Onepole pedestal in bustling environments. This essential addition serves as a barrier against potential destructive forces, reducing the likelihood of significant damage incidents.



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#### 7. Maintenance

Proper maintenance is crucial for preserving a decorative appearance and will also influence the coating's durability. Each construction site should be treated individually as the coating will be exposed to varying atmospheric conditions.

#### 7.1 External Powder Coating

Cleaning is performed to remove dirt and/or stains to maintain the decorative appearance of the coating. If the coating is to be used near the sea or in highly polluted areas—whether man- made or natural—it may result in the deposition of aggressive pollutants that can lead to a reduction in gloss. This can accelerate material degradation through corrosion, thereby reducing the product's lifespan.

Generally, cleaning is recommended every 6 months, but in highly exposed areas, the frequency should be increased depending on the stresses the coating is subjected to. Common dirt and stains can be removed with a cleaning agent mixed with water. The agents should not con- tain abrasives or solvents that may have an adverse effect on the coating. Cleaning agents should be a neutral detergent with a pH in the range of 5 to 8.

#### 7.2 Special Conditions

Metallic Surfaces: Since metallic coatings are produced with mica or metal flakes, special considerations must be taken during application and mainte- nance. For routine maintenance, periodic cleaning with a mild detergent with a pH between 5 and 8 is recommended. Extreme caution is advised for repairs/ renewal with wet paint, and we suggest contacting Jotun Powder Coatings before undertaking such work.

Matte Surfaces: For routine maintenance, periodic cleaning with a mild detergent with a pH between 5 and 8 is recommended. If repair/renewal is required, sanding/polishing can be performed, although laboratory tests have shown that the gloss level of the orig inal coating may be affected. Uneven application may result in uneven gloss.

Faded Surfaces: When repairs/renewals can no longer restore the lacquer surface to an acceptable level, overcoating will be necessary. We suggest contacting the local representative of Jotun Powder Coatings for necessary guidance.



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### 8. Color variations and acceptable deviations

#### 8.1 Color Variations

A. Nature of Powder Coating: Powder coating is
a complex process influenced by various factors,
including application techniques, substrate
material, and environmental conditions.
B. Possible Color Differences: There may be slight
variations in color between different batches
or pieces of powder-coated products. This is
a normal occurrence in the powder-coating
industry.

#### 8.2 Surface Characteristics

A. Matte Finishes: Matte finishes are known for their unique texture and appearance.
B. Scratch Visibility: The matte structure of the powder coating may make small scratches more visible compared to gloss finishes.
These scratches may occur during handling, transportation, or installation but have no impact on product's overall quality or its corrosion resistance capabilities.

#### **8.3 Nuance Variations**

A. Tailored Colors and Additives: The use of tailored colours containing additives may result in nuance variations.

B. Tolerance: A tolerance of +/- 10% is considered acceptable for nuance variations in such cases.

#### 8.4 Visible Defects

A. Defect Categories: Visible defects may include lumps/spikes, pinholes, contaminants, "orange skin," colour variations, and scratches.
B. Definition of Visible Defects: Visible defects are defined as those that can be discerned from three meters in indoor settings.

C. Outdoor Settings: In outdoor settings, defects must be visible at five meters under normal and uniform daylight conditions with overcast skies and not in direct sunlight.

#### 8.5 Discernment Distances

A. Indoor Settings: Visible defects are assessed based on discernment from three meters in indoor settings.

B. Outdoor Settings: Defects must be visible at five meters under normal and uniform daylight conditions with over-cast skies and not in direct sunlight.







www.onepole.no