



**ELECTRIC VEHICLE CHARGER
EVC-X STELLA SERIES**

Installation Guideline



CONTENTS

1 - SAFETY INFORMATION	1
1.1 - SAFETY WARNINGS.....	1
1.2 - INSTRUCTIONS FOR DEALING WITH A FIRE AT ELECTRIC VEHICLE CHARGING STATION	2
1.3 - GROUND CONNECTION WARNINGS.....	3
1.4 - POWER CABLES, PLUGS AND CHARGING CABLE WARNINGS	3
1.5 - REQUIRED UPSTREAM PROTECTIONS.....	4
2 - DESCRIPTION	8
3 - GENERAL INFORMATION.....	9
3.1 - INTRODUCTION OF THE PRODUCT COMPONENTS	9
3.2 - DIMENSIONAL DRAWINGS.....	10
4 - REQUIRED EQUIPMENT, TOOLS AND ACCESSORIES	11
4.1 - SUPPLIED INSTALLATION EQUIPMENTS AND ACCESSORIES.....	11
4.1.2 - RECOMMENDED EQUIPMENTS AND TOOLS	12
5 - TECHNICAL SPECIFICATION.....	12
6 - USER INTERFACE & AUTHENTICATION.....	13
7 - CONNECTIVITY	13
8 - MECHANICAL SPECIFICATIONS	14
9 - ENVIRONMENTAL TECHNICAL SPECIFICATIONS	14
10 - INSTALLING CHARGING STATION	15
10.1 - FOUNDATION, ALIGNMENT & PLACEMENT	16
10.2 - CABLE INSTALLATION	23
10.2.1 - CABLE INSTALLATION FOR POWER UNIT	23
10.2.2 - CABLE INSTALLATION FOR DISPENSER UNIT.....	28
10.2.3 - DISPENSER UNIT ROTARY SWITCH ID CONFIGURATION.....	33
10.2.4 - SIM CARD CONNECTION	37
10.2.5 - CONNECT PC TO THE SAME NETWORK WITH PU AND DU HMI BOARDS	38
10.3 - COMMISSIONING VIA WEB CONFIGURATION INTERFACE	39
11 - PERIODIC MAINTENANCE LIST	44

ABBREVIATIONS

PU	Power Unit
DU	Dispenser Unit
AC	Alternative Current
DC	Direct Current
PE	Protective Earth
L	Line
LED	Light Emitting Diot
MID	Measuring Instruments Directive

1 - SAFETY INFORMATION



CAUTION RISK OF ELECTRIC SHOCK



CAUTION: ELECTRIC VEHICLE CHARGER DEVICE SHALL BE MOUNTED BY A LICENSED OR AN EXPERIENCED ELECTRICIAN AS PER ANY REGIONAL OR NATIONAL ELECTRIC REGULATIONS AND STANDARDS IN EFFECT.



CAUTION



The AC grid connection and the electric vehicle charger's load plan are examined and approved by the electrical regulations and standards of the related region or country determined by the authorities. In the installation of multiple electric vehicle chargers, the load plan will be determined accordingly. The manufacturer shall not be liable in any way, directly or indirectly, for damages or risks caused by the errors that may occur due to AC grid connection or load planning.

CAUTION: FOR DEVICES WITHOUT EMERGENCY BUTTON;

If any suspicious or emergency situation arises at the charging station aside from normal operation, start by halting the charging process through the vehicle (using the appropriate switch or button, which may vary depending on the model), and then disconnect the socket. As an alternative option, consider switching off the MCB or RCCB in the panel where the product is energized by the installer.

IMPORTANT - Please read these instructions fully before installing or operating

1.1 - SAFETY WARNINGS

- Keep this manual in a safe place. These safety and operating instructions must be kept in a safe place for future reference.
- Check that the voltage marked on the rating label and do not use charging station without appropriate mains voltage.
- Do not continue to operate the unit if you are in any doubt about it working normally, or if it is damaged in any way - switch off the mains supply circuit breakers (MCCB and RCCB) in upstream distribution panel. Consult your local dealer.
- The ambient temperature range during charging should be between -35 °C and +50 °C (without direct sunlight) and at a relative humidity of between 5 % and 95 %. Use the charging station only within these specified operating parameters.
- The device location should be selected to avoid excessive heating of the charging station. High operating temperature caused by direct sunlight or heating sources, may cause reduction of charging current or temporary interruption of charging process.
- The charging station is intended for outdoor and indoor use. It can also be used in public places.

- To reduce the risk of fire, electric shock or product damage, do not expose this unit to severe rain, snow, electrical storm or other severe weathers. Moreover, the charging station shall not be exposed to spilled or splashed liquids.
- Do not touch end terminals, electric vehicle connector and other hazardous live parts of the charging station with sharp metallic objects.
- Avoid exposure to heat sources and place the unit away from flammable, explosive, harsh, or combustible materials, chemicals, or vapors.
- Risk of Explosion. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. It should not be located in a recessed area or below floor level.
- This device is intended only for charging vehicles not requiring ventilation during charging.
- To prevent risk of explosion and electric shock, ensure that the specified Circuit Breaker and RCD are connected to building grid.
- Charging Station bottom must be at (or above) the ground level.
- Adaptors or conversion adapters are not allowed to be used. Cable extension sets are not allowed to be used.
- The allowed current value of the service socket is maximum 10A.



WARNING: Never let people (including children) with reduced physical, sensory or mental capabilities or lack of experience and or knowledge use electrical devices unsupervised.



CAUTION: This vehicle charger unit is intended only for charging electric vehicles not requiring ventilation during charging.

1.2 - INSTRUCTIONS FOR DEALING WITH A FIRE AT ELECTRIC VEHICLE CHARGING STATION

- Personal Safety: If you notice a fire or signs of danger, your own safety is the most important. Do not take risks.
- Immediate Notification of Emergency Services: Contact the appropriate emergency services in your region.
- Discontinuing Charging: If safe to do so, disconnect the charging cable from the vehicle and the charging station.
- Use of Fire Extinguishing Agents: If a fire extinguisher or other fire-fighting equipment is nearby and you are trained to use them, attempt to extinguish the fire. However, never risk your own safety.
- Avoid Direct Contact with the Fire: Do not attempt to extinguish the fire if you do not have the appropriate equipment or knowledge, or if the fire is too large or dangerous.
- Move Away from the Station: If the fire is uncontrolled or growing in strength, move away from the charging station while maintaining a safe distance.
- Avoid Inhaling Smoke: Try to avoid inhaling smoke. If possible, cover your nose and mouth with a damp cloth or clothing.
- Warn Others in the Area: Inform others in the vicinity about the fire hazard and encourage them to leave the area.

- Wait for Emergency Services: After safely leaving the area, wait for the arrival of emergency services at a location that is safe for you.
- No Return to the Station Premises: Do not return to the charging station premises until the emergency services have completed their operation.
- Reporting the Incident: Contact customer support to report the incident.

Remember, safety is paramount. In the event of a fire, always consult with local emergency services and follow their instructions.

1.3 - GROUND CONNECTION WARNINGS

- Charging station must be connected to a centrally grounded system. The ground conductor entering the charging station must be connected to the equipment grounding lug inside the charger. This should be run with circuit conductors and connected to the equipment grounding bar or lead on the charging station. Connections to the charging station are the responsibility of the installer and purchaser.
- To reduce the risk of electrical shock, connect only to properly grounded outlets.
- **WARNING :** Make sure that during installing and using, the charging station is constantly and properly grounded.

1.4 - POWER CABLES, PLUGS and CHARGING CABLE WARNINGS

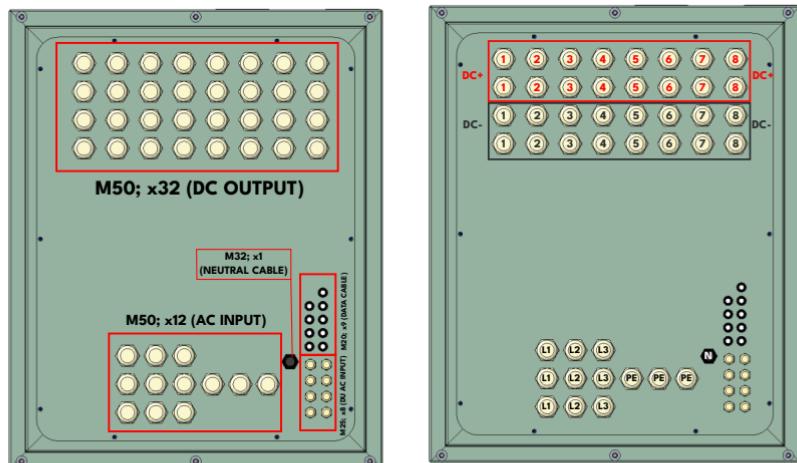
- Be sure that plugs and sockets are compatible on charging station side.
- A damaged charging cable can cause fire or give you an electric shock. Do not use this product if the flexible Charging cable or vehicle cable is frayed, has broken insulation, or shows any other signs of damage.
- Ensure that the charge cable is well positioned thus; it will not be stepped on, tripped over, or subjected to damage or stress.
- Do not forcefully pull the charge cable or damage it with sharp objects.
- Never touch the power cable/plug or vehicle cable with wet hands as this could cause a short circuit or electric shock.
- To avoid a risk of fire or electric shock, do not use this device with an extension cable. If the mains cable or vehicle cable is damaged it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.
- Use appropriate protection when connecting to the main power distribution cable.

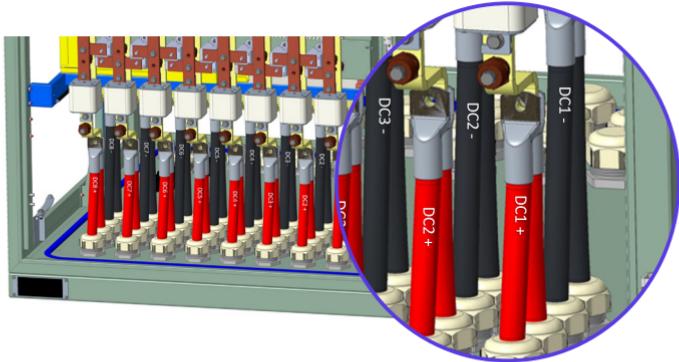
1.5 - REQUIRED UPSTREAM PROTECTIONS

- Class-I/B Lightning Protection must be connected to the upstream distribution panel. Min. cable length between the charger and the protection device recommended to be 10m. *The charger contains Class II Surge Protector Device (SPD).
- MCCB (Thermic Magnetic Adjustable) must be connected to the upstream distribution box.
- Residual Current Device (Toroid) must be connected to the upstream cabinet.
- Single pole 63A MCB must be placed in the upstream cabinet, on the neutral line.

Power Unit (PU)						
Model	Power output	Input Voltage	Maximum Input AC current	Recommended Cross-Section Values L1-L2-L3 (mm ²) - (XLPE 1kV 90 °C degrees Copper cable)	Suggested Cross-Section Value for Neutral - (Copper Conductor Cable)	Recommended Cross-Section Value for PE (mm ²) - (Copper Conductor Cable)
EVCXP-720**	720kW	400V (nom.)	1100A	3x240mm ²	1x35mm ²	2x240mm ²
		360V (-%10)	1220A			
EVCXP-400**	400kW	400V (nom.)	610A	2x185mm ²	1x35mm ²	1x185mm ²
		360V (-%10)	680A			

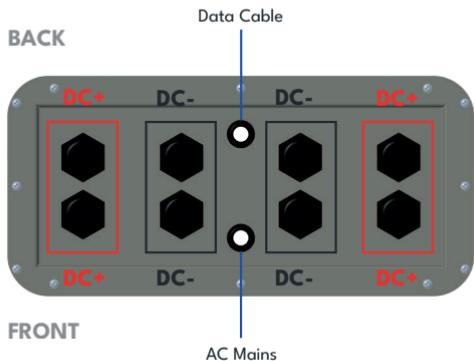
Details of Cable Glands for PU





NOTE!! : The mounting plate and glands given in the image are factory output according to 720kW power. According to the product power to be preferred in the installations, the mounting plate revisions due to the cable cross-section belong to the customer.

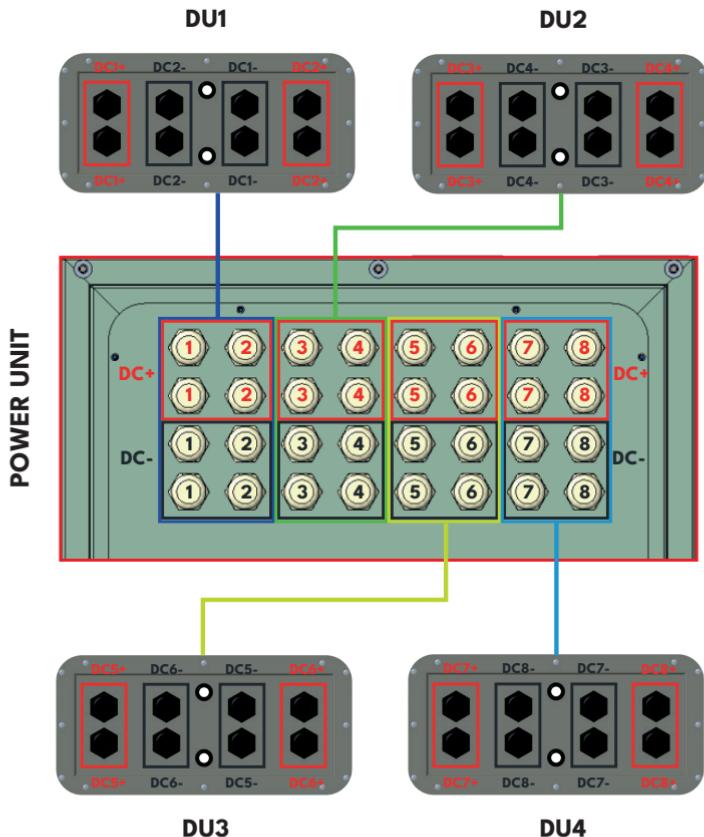
Dispenser Unit (DU)											
Model	Input Voltage (DC)	Maximum Input DC Current	Cooling Unit	Meter	Recommended Cross Section Values Li-NiPE (mm ²) - (Copper Conductor Cable for AC Input)	Recommended Cross-Section Values +DC & -DC (mm ²) - (XLPE 1kV 90°C degrees Copper cable)	Fiber Optic Cables for Per Dispenser Unit (recommended shielded)				
EVC-XD**	200-920V	600A	YES	YES	3x6mm ²	2x2x150mm ² (+DC)	2xSC to SC, Single Mode, 9um diameter, 1310nm				
		750A				2x2x150mm ² (-DC)					
						2x2x240mm ² (+DC)	1x CAT6 SFTP RJ45 Cable				
						2x2x240mm ² (-DC)					

Details of Cable Glands for DU

- ◆ DC Cable Glands (M32)
- AC Mains and Data (Ethernet and Fiber Optic) Cables Glands (M20)

DC Cable connection for individual DUs:

Charging station has capability of maximum 4 DU connection to the PU. There is a sequential connection necessity of the DUs to the PU. Whether 4 DUs are used or not, connections should be as shown in figure below:



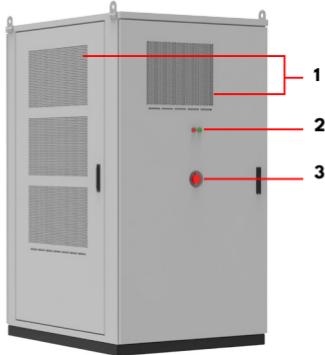
2 - DESCRIPTION

POWER UNIT	
Model Name	<p>EVC-XP Series (Name Coding: EVC-XP***)</p> <p>1st Asterisk (*) : Rated Output Power 720 : 720 kW DC Power Output 400 : 400 kW DC Power Output</p> <p>2nd Asterisk (*) : Supply Input A : Only AC Supply</p> <p>3rd Asterisk (*) : Max Number of Charging Interfaces 8 : Power Unit Capable of Supplying Up to 8 Charging Interfaces</p>
Cabinet	EVC-XP

DISPENSER UNIT	
Model Name	<p>EVC-XD Series (Name Coding: EVC-XD***)</p> <p>1st Asterisk (*) : Number of Charging Interfaces CC : Dispenser Unit with liquid cooled or non-cooled double CCS charging output</p> <p>2nd Asterisk (*) : Max Output Current per Charging Interface 600 : Max 600 A Output Current per Charging Interface 750 : Max 750 A Output Current per Charging Interface</p> <p>3rd Asterisk (*) : Meter Type Blank : Internal meter without approval -MID : External meter with MID approval -EICH: External meter with Eichrecht approval</p>
Cabinet	EVC-XD

3 - GENERAL INFORMATION

3.1 - INTRODUCTION OF THE PRODUCT COMPONENTS



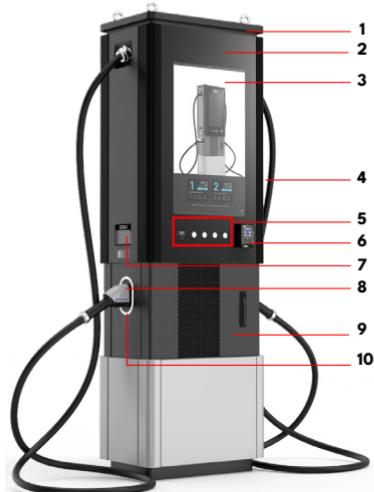
1- Access cover for fans, relays and main power button

2- Indicator LEDs

Red: If active AC power available at the input of the unit, circuit breaker is open.

Green: If active AC power available at the input of the unit, circuit breaker is close and power unit is operational.

3- Emergency Button



1- LED

2- Branding Area

3- Display

4- Charging Cable

5- RFID Reader and Buttons

6- Payment Terminal (optional)

7- MID Meter (optional)

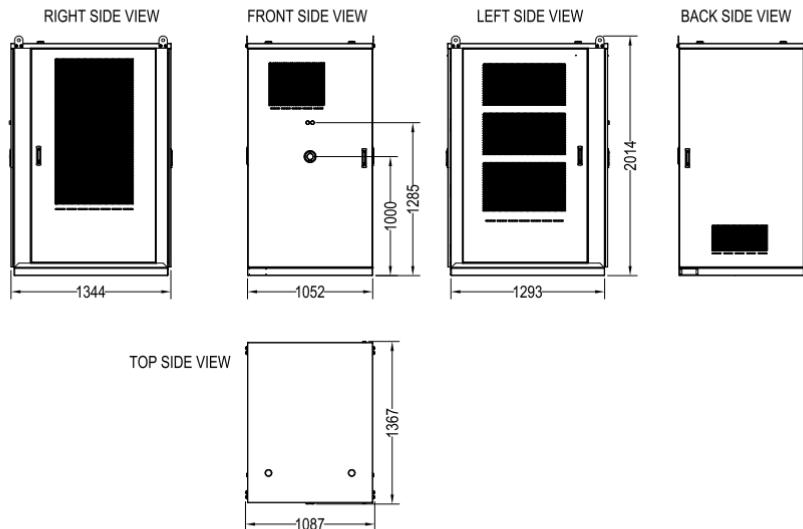
8- DC Outlet

9- Access Cover for Internal Components and Boards

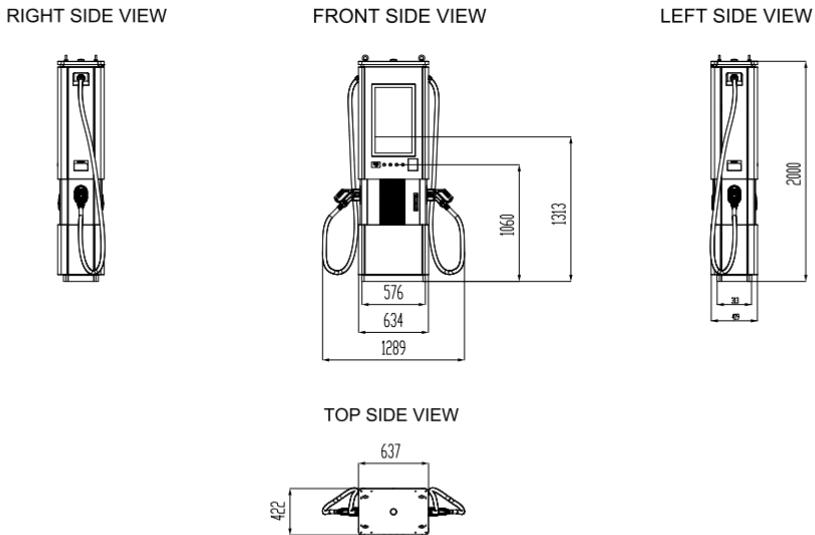
10- CCS Socket LED

3.2 - DIMENSIONAL DRAWINGS

POWER UNIT



DISPENSER UNIT



4 - REQUIRED EQUIPMENT, TOOLS and ACCESSORIES

4.1 - SUPPLIED INSTALLATION EQUIPMENTS and ACCESSORIES

M10x20 BOLT x6 (PU)	
M10 WASHER x6 (PU)	
M10 SPRING WASHER x6 (PU)	
M8x30 BOLT x6 (per DU)	
M8 WASHER x6 (per DU)	
M8 SPRING WASHER x6 (per DU)	
EYEBOLT x4 (per DU)	
SEAL WASHER x4 (per DU)	
1 set (x2) LOCK KEYS	
FERRITE CLAMP x16 (per DU)	

4.1.2 - RECOMMENDED EQUIPMENTS and TOOLS

			
Ø20 Drill Bit	Impact Drill	PC	Philips Screwdriver
			
RJ45 Crimping Tool	Cat5e or cat6 ethernet cable	Spanner set	Hammer
			
M20 Steel Expansion Bolt x8 (4+4)	RJ45 Male Connector	20 - 200 Nm D: 40mm H: 43mm	

5 - TECHNICAL SPECIFICATION

POWER UNIT	
Protection class	Class - I
Power Input	Voltage 230/400 VAC ±10 % , 50/60 Hz
	Current 1220 A max. / phase
	Connection 3P - N - PE
	Power Factor > 0.98 for over 50 % of rated power
	Efficiency > % 95 @ rated power
Power Output	Voltage Range 200 – 920 V DC
	Total Power 720 kW
	Maximum Current per Charging Interface 750 A (Lower current levels can be provided by the power unit according to the dispenser specifications.)
Power Sharing	
Noise Level	
Electrical Protections	
Over current / Over voltage / Under voltage / Short circuit / Over Temperature / Surge Protection	

DISPENSER UNIT		
Protection Class		Class - I
Power Input	Voltage	200 – 920 V DC
	Current	600 A per charging interface for EVC-XD*600 models 750 A per charging interface for EVC-XD*750 models
Power Output	Voltage Range	200 – 920 V DC
	Maximum Power	720 kW
	Maximum Current per Charging Interface	Up to 600 A for EVC-XD*600 models with liquid and non-cooled cable and DC metering Up to 750 A for EVC-XD*750 models with liquid cooled cable.
	CCS Interface Compliance	IEC 62196-1 / 3 / 3-1 IEC 61851-1 / 23 / 24 ISO 15118-1 / 2 / 3 / 20 DIN 70121
Noise Level		< 65 dBA avg. from 1m distance from front @25° C
Internal Protections		RCBO Type-A for internal SELV circuit, Insulation monitoring for DC outputs, Over current / Over voltage / Under voltage / Short circuit / Over Temperature / Surge Protection (Type-1, Type-2)
DC Metering (Optional)		DC meter in accordance with IEC 62052-11:2020
Other Safety Features		Emergency Stop button (optional), Tilt sensor, Door Switches, Upstream Protection Trip (NC)

6 - USER INTERFACE & AUTHENTICATION

Display	27" Color TFT LCD
User Interface	Capacitive Touch Screen
RFID Reader Module	ISO-14443A/B and ISO-15693
Automatic Authentication (optional)	AutoCharge using MAC ISO-15118-2 Plug & Charge
Credit Card Reader (optional)	Contactless Credit Card Reader with PIN on Glass

7 - CONNECTIVITY

LAN Connectivity	Ethernet
Cellular Connectivity (Power Unit)	GSM 900/1800 UMTS 900/2100 LTE Band 1/3/7/8/20/28A
OCPP Specification	OCPP 1.6 J, OCPP 2.0.1 (via OTA Update)

8 - MECHANICAL SPECIFICATIONS

Material		Metal
Protection Degree		Ingress Protection Impact Protection
Power Unit Cooling		Forced Air Cooling Fan
Cable Cooling (Optional)		Liquid Cooled Cable Using Passive Heat Exchanger with Fan
Cable Length		5.50 m with cable retraction unit 4.00 m without cable retraction unit
Dimensions (Product)	Power Unit	2014 mm (H) x 1052 mm (W) x 1344 mm (D)
	Dispenser Unit	2000 mm (H) x 637 mm (W) x 422 mm (D) (without cable retraction unit holders)
Dimensions (With packing)	Power Unit	2260.0 mm (H) x 1250.0 mm (W) x 1500.0 mm (D)
	Dispenser Unit	2200.0 mm (H) x 1000.0 mm (W) x 1000.0 mm (D)
Weight (Product)	Power Unit	1080 kg
	Dispenser Unit	280 kg (Liquid cooled) 255 kg (Non-cooled)
	Power Unit	1265 kg
Weight with Package	Dispenser Unit	330 kg (Liquid cooled) 305 kg (Non-cooled)

9 - ENVIRONMENTAL TECHNICAL SPECIFICATIONS

Operation Condition	Temperature	-35°C to + 50°C (Derating is applied over +40°C to +50 °C) For products with credit card option-20°C to + 50°C
	Humidity	5 % - 90 % (Relative humidity, non-condensing)
	Altitude	0 - 2,000m

If the product is kept de-energised in a cold environment ($t < -20C$), it must be allowed to warm up for a certain period of time before the current is drawn.

10 - INSTALLING CHARGING STATION

Screws inside the product are recommended to be exceeding 72 hours Salt Fog test under ASTM B117 Method. Screws outside the product are recommended to be exceeding 480 hours.



WARNING: RISK OF ELECTRICAL SHOCK AND INJURY. POWER OFF THE CHARGING STATION MAIN SUPPLY BEFORE ANY INSTALLATION STEPS.

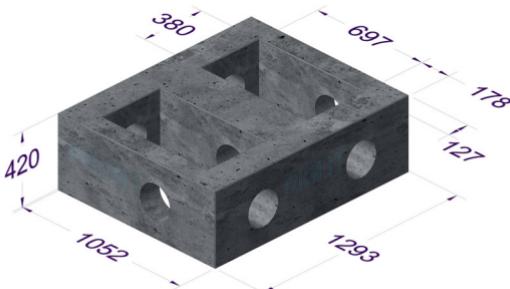


WARNING: TO AVOID PERSONAL INJURY OR DAMAGE THE CHARGING STATION, ENSURE THE INSTALLATION AREA IS SUITABLE AND THE FLOOR CAN WITHSTAND THE WEIGHT OF THE CHARGING STATION.

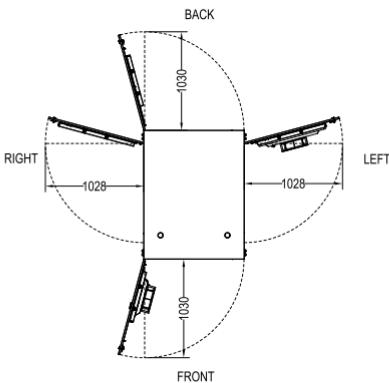
10.1 - FOUNDATION, ALIGNMENT & PLACEMENT

The concrete foundation dimensions are shown as below:

CONCRETE FOUNDATION FOR POWER UNIT



1. Dig a foundation pit in the ground according to the dimensions of the concrete foundation shown at Figure.
2. Make the rectangular spaces in the concrete for the cables which come from main supply (3P+N+PE), Communication (Data Cables and Fiber Cable) and DC Cables in between PU and DU on the concrete foundation from top to bottom. The dimensions and the position on the concrete foundation are shown in the figure above.
3. For installation, a minimum distance of 110 centimeter must be left from all sides of the PU.



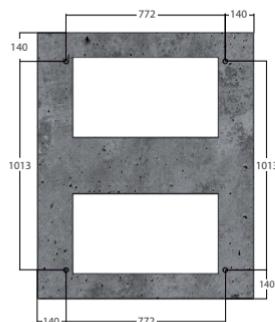
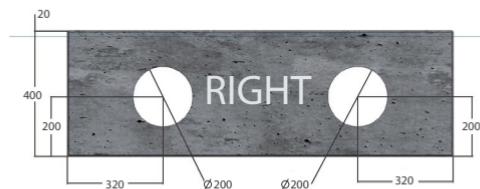
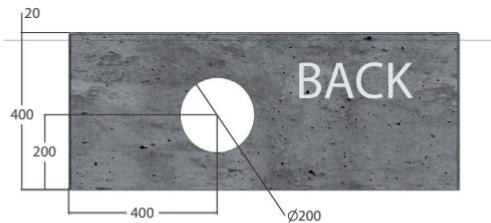
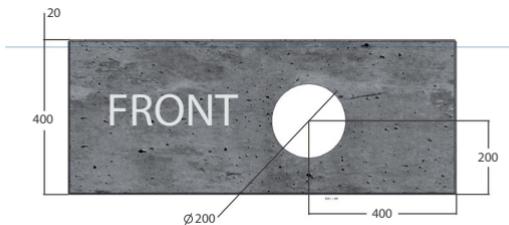
4. Make the necessary cable ducts on the concrete foundation as shown in concrete figures.
5. The top surface of the foundation must be at least 20 mm above the ground.

6. Open all covers of the product using the keys.

7. The cable length of 80 cm should be available above the foundation for cable assembly in cabinet. Figure below.

8. Drill 4 holes on the concrete foundation with dimensions shown at Figure below and tap M20x170 mm expansion bolt in these holes stated as shown at figure below.

Different Angles of Concrete:



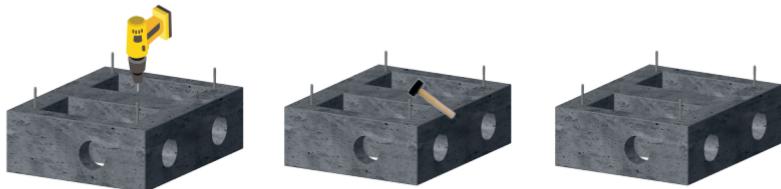
9. Place the Bottom Cover(base) of the Power Unit on the concrete foundation such that the base holes of the PU are aligned with these expansion bolts(4 unit) in the figure below. Tighten the expansion bolts with nuts. Type of the expansion bolts used are shown at figure below.

Then Lift the PU* by using four hanger brackets on the top of the PU. Place the PU on the Base. Then mount the PU to its base by using bolts (6 pieces) given.

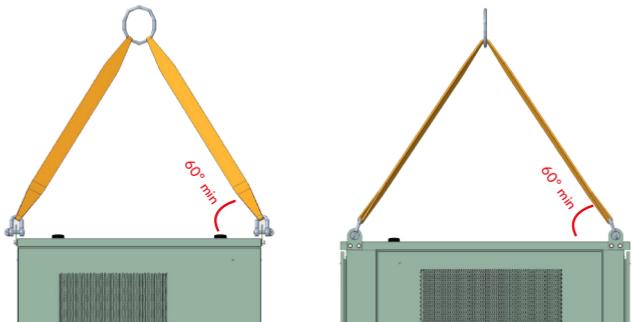
*During transportation, sling angles must be at least 60 degrees. The sling lenght must be suitable for this angle.



M20

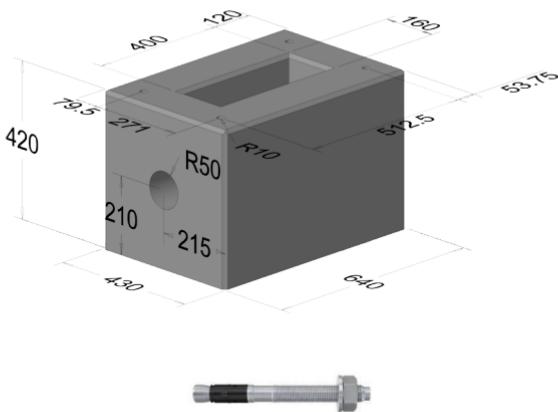


All products images are given for as a representative



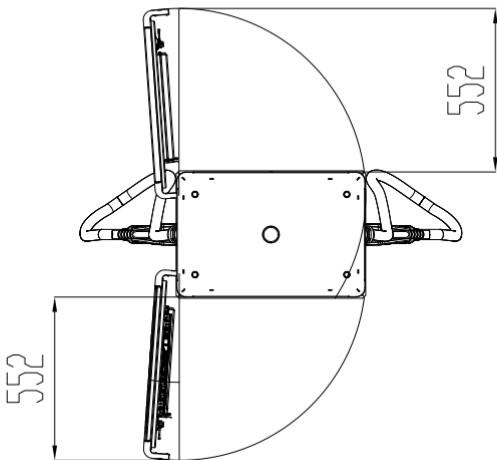
All products images are given for as a representative

CONCRETE FOUNDATION FOR DISPENSER UNIT



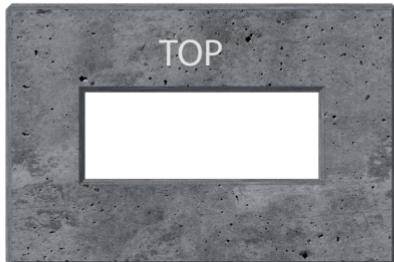
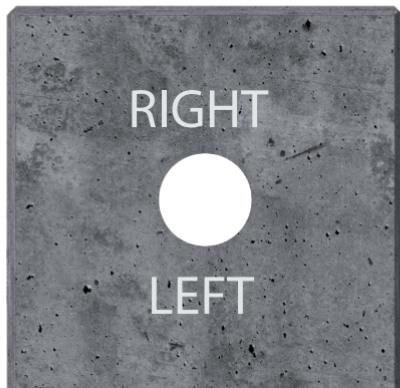
M20

1. Dig a foundation pit in the ground according to the dimensions of the concrete foundation shown at figure.
2. Make the rectangular spaces in the concrete for the cables which come from main supply (3P+N+PE), Communication (Data Cables and Fiber Cable) and DC Cables in between PU and DU on the concrete foundation from top to bottom. The dimensions and the position on the concrete foundation are shown in the figure above.
3. For installation, a minimum distance of 65 centimeter must be left from all sides of the DU.



Top View

- 4.** Make the necessary cable ducts on the concrete foundation as shown in concrete figures.
- 5.** The top surface of the foundation must be at least 20 mm above the ground.
- 6.** Open all covers of the product using the keys.
- 7.** The cable length of 80 cm should be available above the foundation for cable assembly in cabinet. figure below.
- 8.** Drill 4 holes on the concrete foundation with dimensions and tap M20x170 mm expansion bolt in these holes stated as shown at figure below.

Different Angles of Concrete:

1. Remove the screws of the base plate which is assembled on the top of the DU.

2. Mount the base plate on the concrete surface.

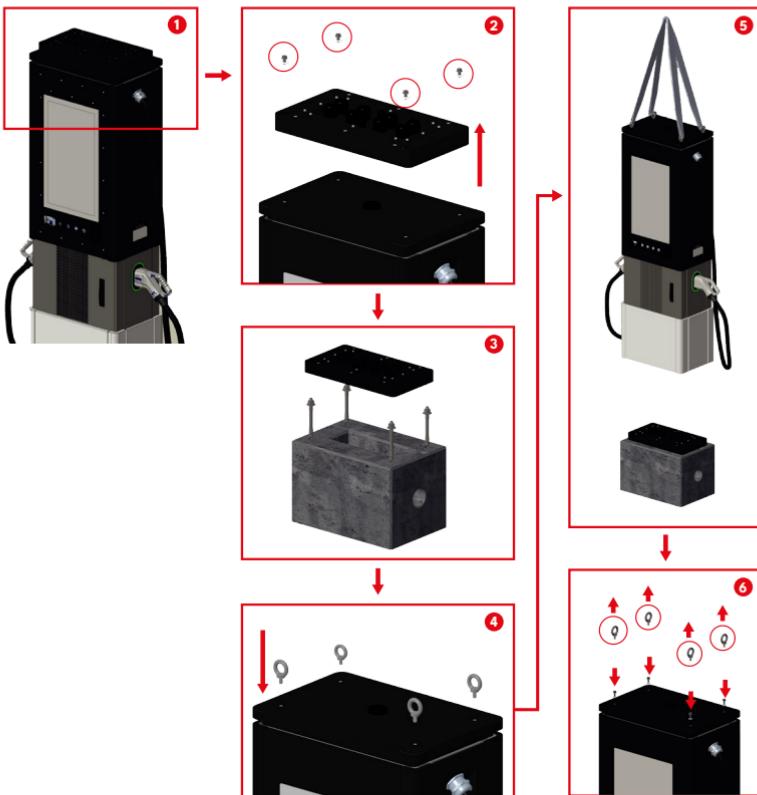
3. Place and align the unit on the base plate as shown in figure.

4. The eyebolts should be assembled to the top of the unit to lift.

5. The unit should be lifted over the concrete base.

*During transportation, sling angles must be at least 60 degrees. The sling lenght must be suitable for this angle.

6. The eyebolts should be removed and the screws which were removed in the begining should be assembled to the top of the unit. The washers should be fastened together with the screws.



All products images are given for as a representative

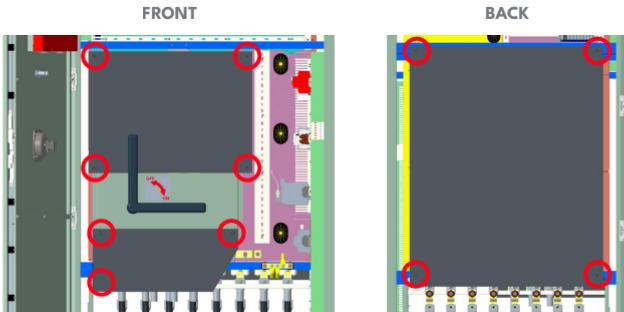
You can continue following “Cable Installation” steps.

10.2 - CABLE INSTALLATION

10.2.1 - CABLE INSTALLATION FOR POWER UNIT

1- Open the covers of the product using the keys provided by turning the handle.

2- Remove the screws and isolator plates covering (front and back).



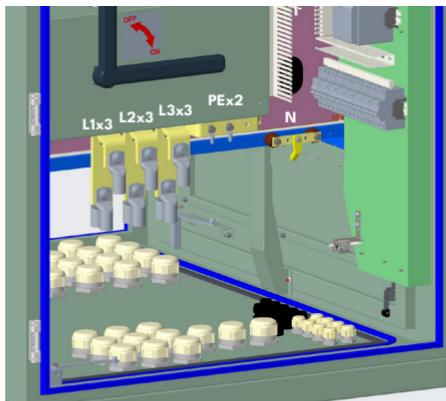
3- For AC Mains cable is in the bottom of circuit breaker to connect.



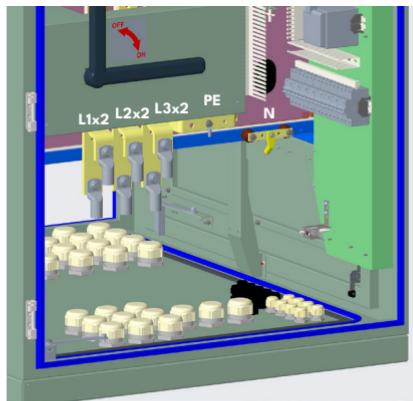
All products images are given for as a representative

Crimping lug positions:

L1, L2, L3, PE Crimping lugs are selected for 240mm² for 720kW version, 185mm² for 400kW version. For cable gland nuts are compatible with 240mm² and 185mm² cable sections complying with sealing standards. This structure is designed so that the cables with low elasticity can be mounted with the crimping lugs on the busbar as shown in the figure. Therefore the center points of the cable glands and the crimping lugs are aligned with the same axis (z-axis) as shown in the figure. The installation must be done accordingly as shown in the figure.

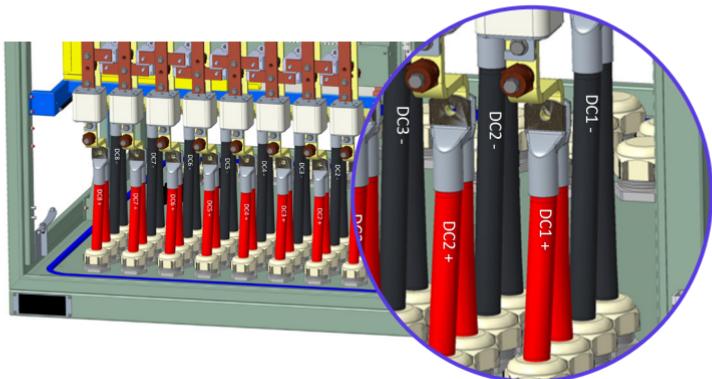


720kW Version



400kW Version

4- DC Output cables are in the bottom of busbars to connect.



Crimping lug positions:

DC+ and DC- cables crimping lugs are selected as 240mm^2 for 720kW version, 185mm^2 for 400kW version. For Cable gland nuts are compatible with 240mm^2 and 185mm^2 cable sections complying with sealing standards. This structure is designed so that the cables with low elasticity can be mounted with the crimping lugs on the busbar as shown in the figure. Therefore the center points of the cable glands and the crimping lugs are aligned with the same axis (z-axis) as shown in the figure. The installation must be done accordingly as shown in the figure.

Contact surface of cable gland nuts and crimping lugs:

Surface contact of crimping lugs and cable glands must be connected to mounting surface of crimping lugs which corresponds to %92 of the surface data indicated in the crimping lug datasheet compatible with cable cross-section.



240-M12 SKP for AC
240-M10 SKP for DC



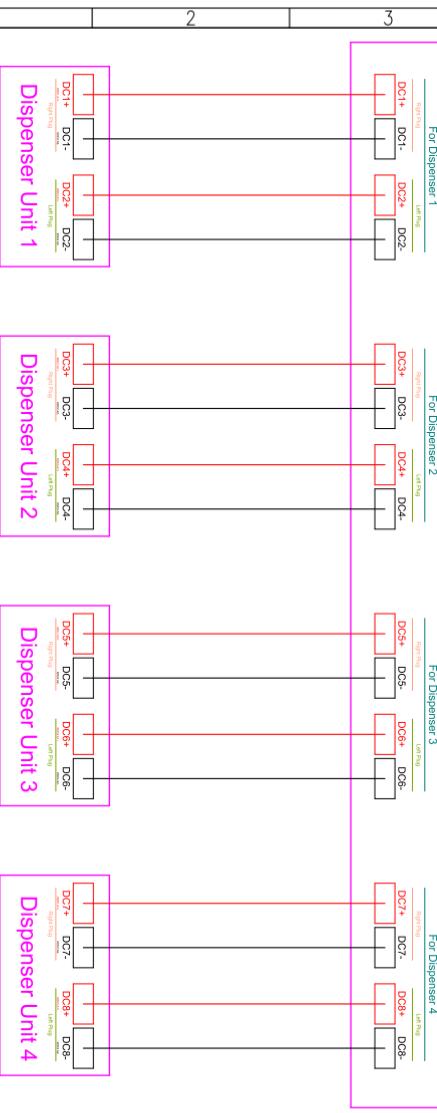
185-M12 SKP for AC
185-M10 SKP for DC



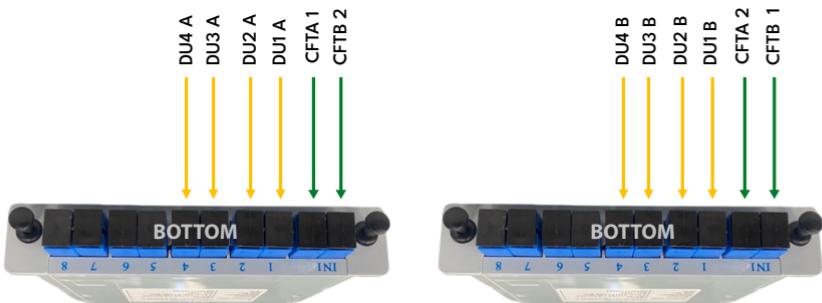
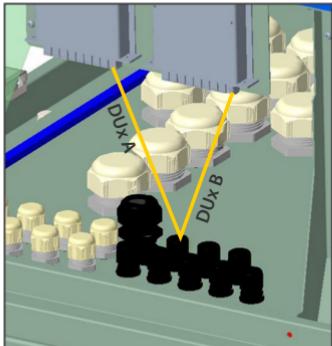
35-M8 SKP

All DC connections should be done according to below schematic.

EVG-X STELLA POWER UNIT



5- Fiber Optic Cables Connection in Power Unit



- Green marked cables are already connected in the power unit
- Yellow marked cables are the cables from dispenser unit. Depending on the number of dispenser unit (From 1 to 4) can be added and connected.

6- Pass the cables through the cable glands at the bottom of the charging station.

7- When AC Mains cables connect, first connect “Line PE” cable, then “Line N” cable, finally three phase cables (“Line 1”, “Line 2”, “Line 3”) as shown below:

The phase sequence is counter clockwise rotation.

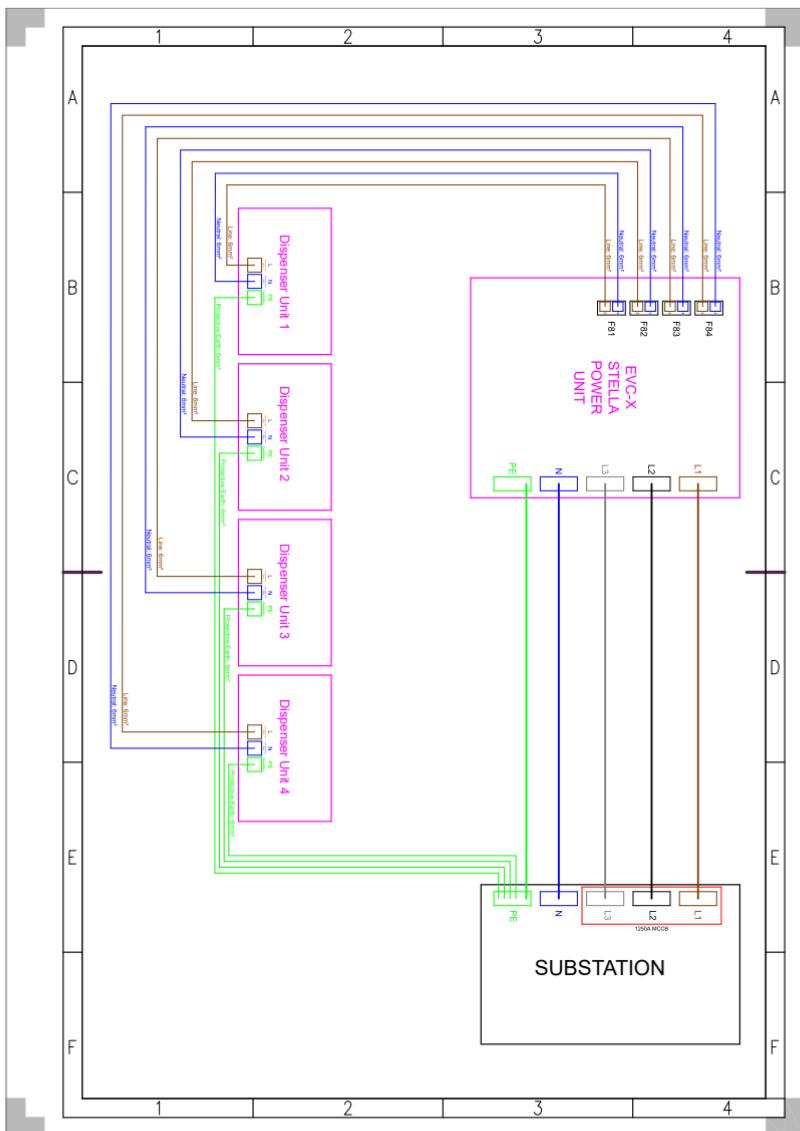
8- When DC out cables connect, first connect “DC-” cables, then “DC+” cables.

9- Tighten the cable glands using an adjustable wrench 25Nm.

10.2.2 - CABLE INSTALLATION FOR DISPENSER UNIT

All AC connections should be done according to below schematic.

Protective Earth cables should be connected from Main Distribution Panel to each Dispenser Units directly and separately.

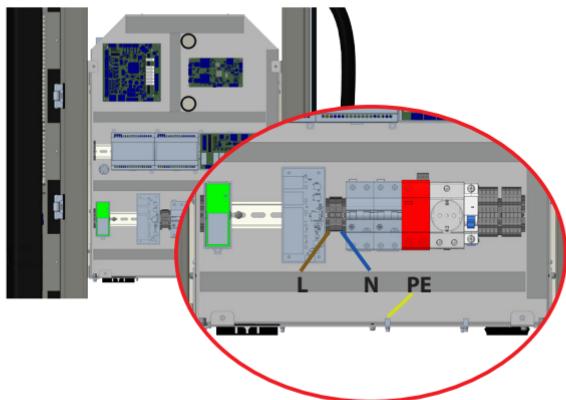


- 1- Open the covers of the product using the keys provided by turning the handle.
- 2- Remove the screws and isolator plates covering (front and back).
- 3- DC Mains cables are needed to be connected from the bottom of busbars.



Cable Crimping Lugs:

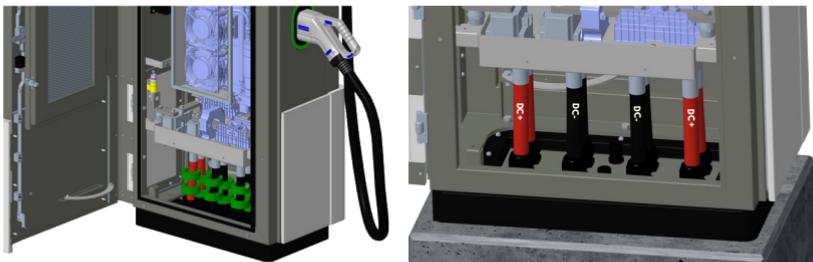
For AC supply of Dispenser Unit, L1, PE,N cable lugs are selected for 6mm^2 for 720kW and 400kW versions, for cable gland nuts are compatible with 6mm^2 cable sections complying with sealing standards. This structure is designed so that the cables with low elasticity can be mounted with the cable lugs on the terminal block as shown in the figure. Therefore the center points of the cable glands and the cables are aligned with the same axis (z-axis) as shown in the figure. The installation must be done accordingly as shown in the figure.



4- DC Input cables are in the bottom of busbars to connect.

The ferrite clamps provided in package should be installed to each DC cable before attaching to busbars as shown in figure below.

Two ferrite clamps are needed to attached each DC cable.

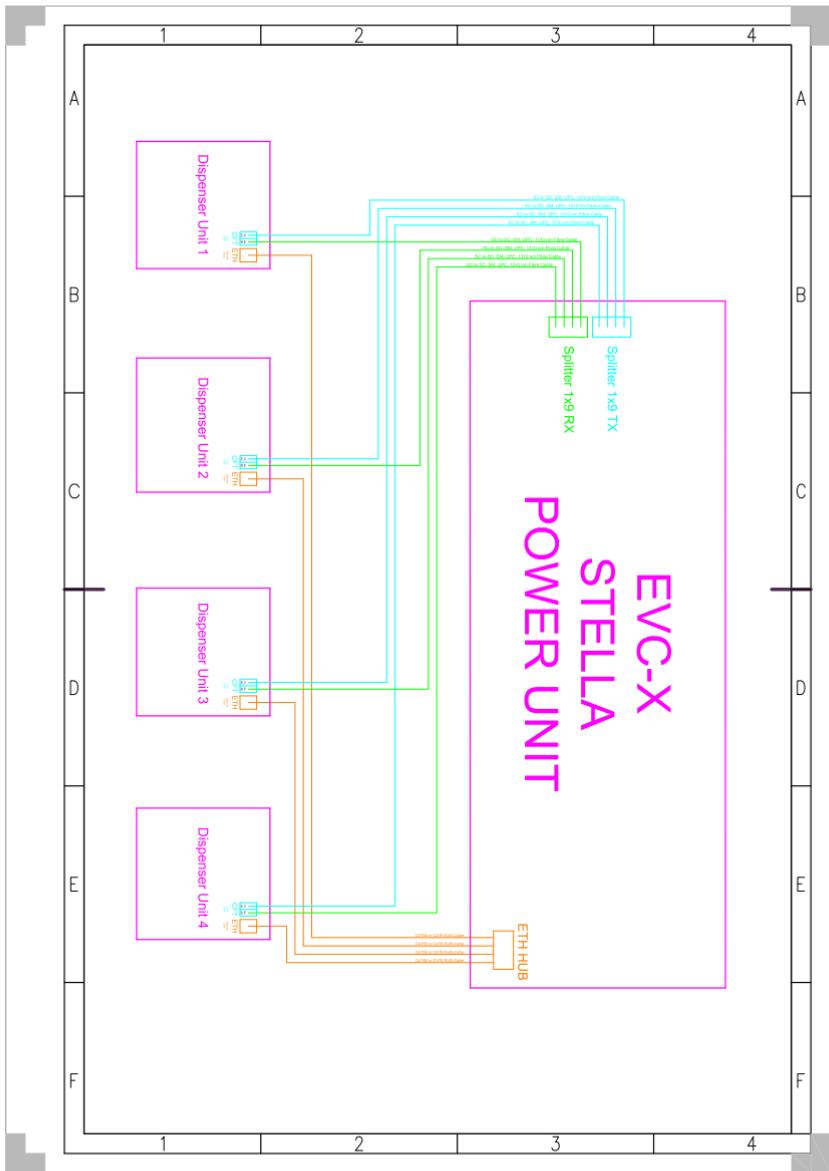


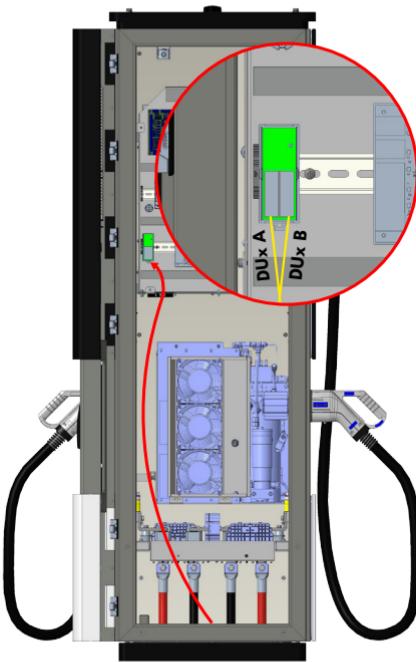
Crimping lug positions:

DC+ and DC- cables crimping lugs are selected as 240mm^2 for 720kW version, 185mm^2 for 400kW version. For Cable gland nuts are compatible with 240mm^2 and 185mm^2 cable sections complying with sealing standards. This structure is designed so that the cables with low elasticity can be mounted with the crimping lugs on the busbar as shown in the figure. Therefore the center points of the cable glands and the crimping lugs are aligned with the same axis (z-axis) as shown in the figure. The installation must be done accordingly as shown in the figure.

5- Fiber Optic Cables Connection

All communication cable connections should be done according to below schematic.





Dispenser Unit	Fiber Optic Cable Names
DU1	DU1 A-DU1 B
DU2	DU2 A-DU2 B
DU3	DU3 A-DU3 B
DU4	DU4 A-DU4 B

10.2.3 - DISPENSER UNIT ROTARY SWITCH ID CONFIGURATION

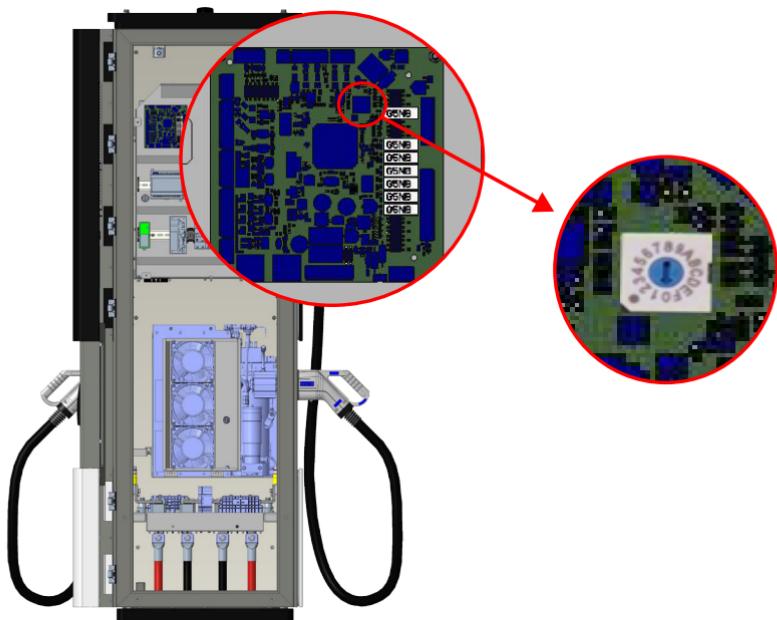
Set the rotary switch IDs for each dispenser unit's control boards according to the table below.

Dispenser Unit	Rotary Switch
DU1	0
DU2	1
DU3	2
DU4	3

WARNING:

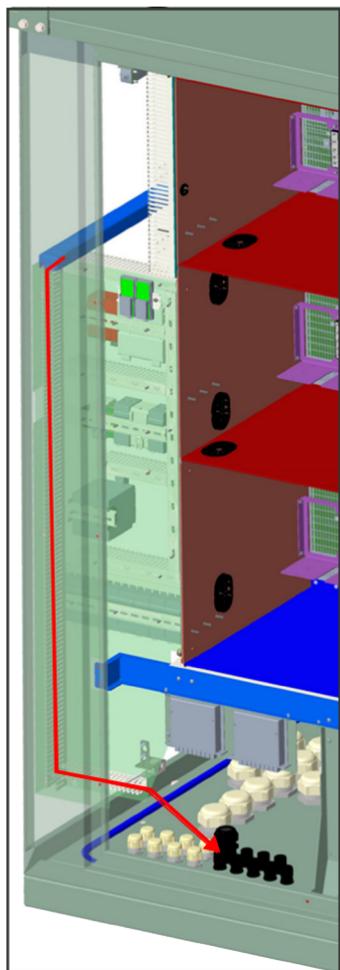
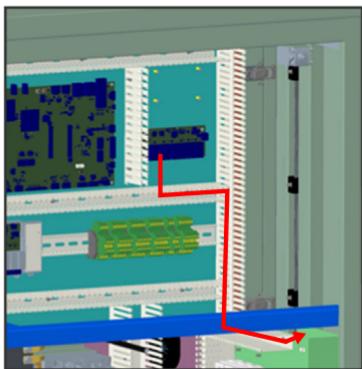
Do not set the same rotary switch ID on more than one dispenser unit.

There shouldn't be incorrect setting on rotary switch ID's



POWER UNIT ETHERNET CONNECTION

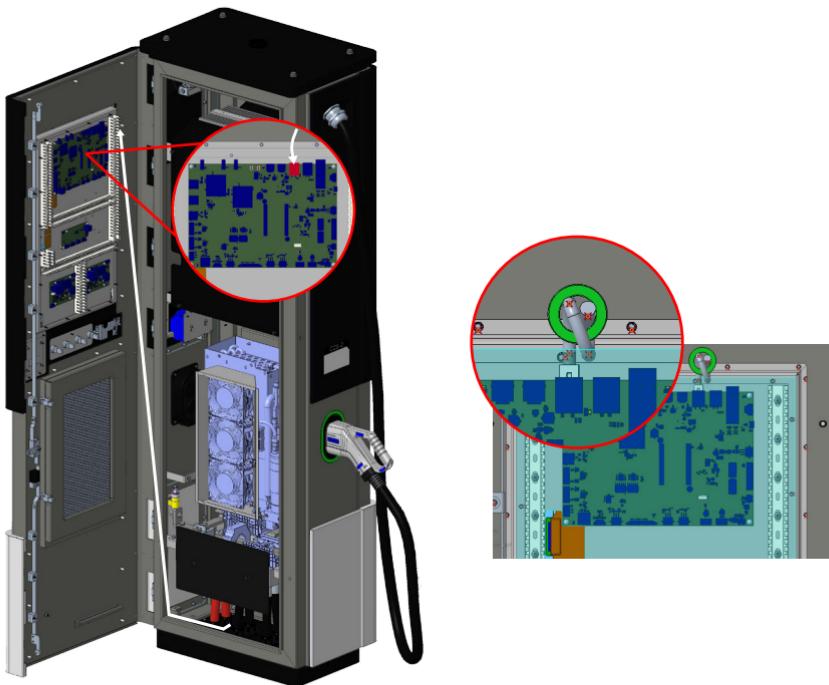
Red line for DU to PU ethernet cable connection



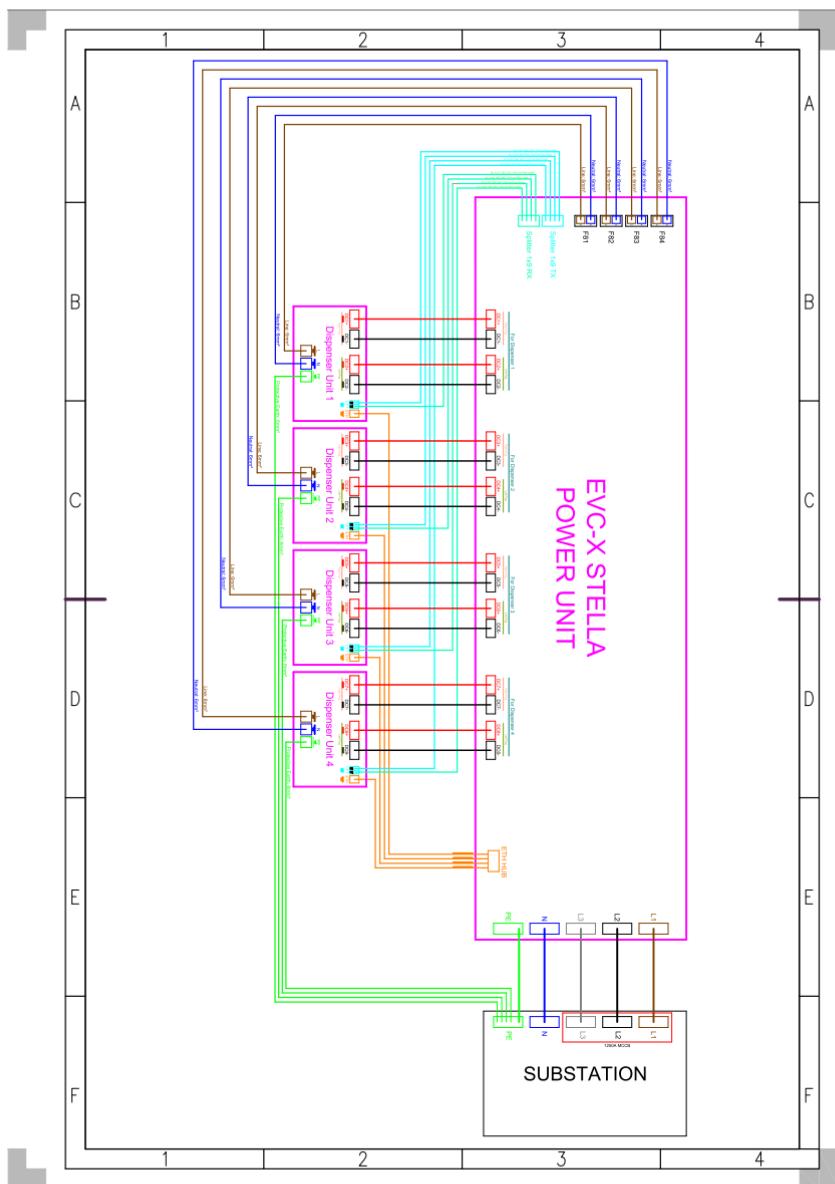
DISPENSER UNIT ETHERNET CONNECTION

White line for DU to PU ethernet cable connection.

The Ethernet cable coming from the Power Unit should be looped once through the ferrite core before being terminated with the RJ45 connector.

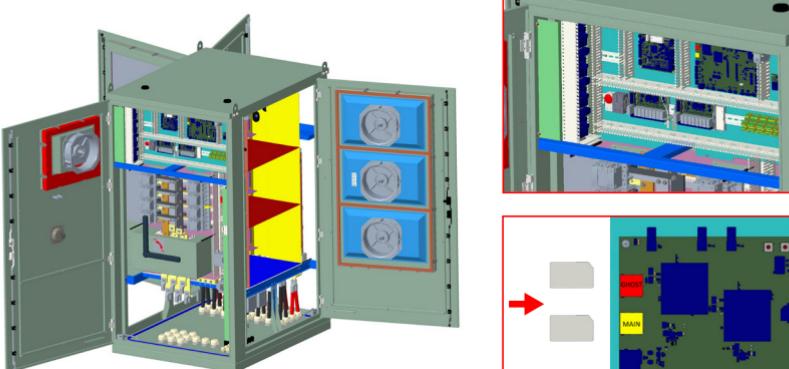


All AC, DC and communication cable connections are shown in schematic below.



10.2.4 - SIM CARD CONNECTION

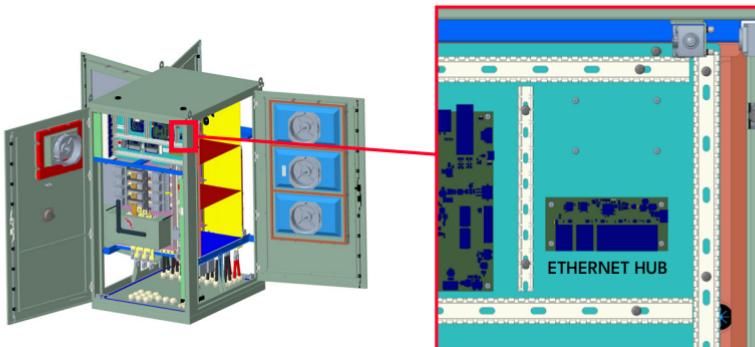
Open the side covers as described in previous section and insert the Micro SIM Cards (Main SIM Card and ghost OCPP SIM Card) to the module slots on the board as shown in the below figure.



All products images are given for as a representative

10.2.5 - CONNECT PC TO THE SAME NETWORK WITH PU and DU HMI BOARDS

In order to access Web Config UI, first you need to connect your PC and EV charger to the same ethernet switch or connect EV charger to your PC directly.



Power-on the charging station. You should assign static IP address to your PC in 192.168.1.1/254 network to access Power Unit and Dispenser Unit webUI's.

Static IP address of your PC should be in a range between 192.168.1.1 and 192.168.1.254, except 192.168.1.10 (Power Unit IP) and Dispenser Unit/Units IP's (192.168.1.40/41/42/... etc.). For example, 192.168.1.11 can be set as a static IP to your PC.

After setting static IP to your PC correctly, use those addresses on the any browser to connect webUI's of the Power Unit and Dispenser Units; To connect Power Unit webUI, use 192.168.1.10 address.

To connect Dispenser Unit webUI's, use assigned Dispenser Unit IPs by Power Unit, such as 192.168.0.40/41/...etc.

10.3 - COMMISSIONING VIA WEB CONFIGURATION INTERFACE

OPENING WEB CONFIGURATION INTERFACE WITH BROWSER

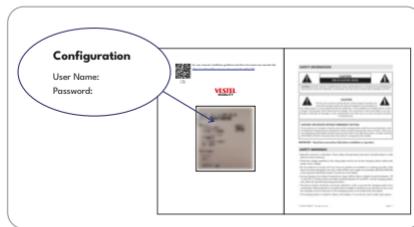
Open your web browser and type 192.168.1.10 which is IP address of HMI board.

You will see login page on your browser;

Each product has a user name and password set as factory configuration.

In this section you can log in to the Web configuration interface by entering the configuration information printed on the label. User Name and Password informations are located on the label pasted to the Quick Start Guide as shown below.

You can change password with Change Password Button in WEBUI login page or Administration Password section in the System Maintenance tab.



Visual representation is provided

Change Password:

If you click the “Change Password Button“ you will be redirected to the Change Password page.

Your password must be minimum 12 maximum 32 character and it contains at least two uppercase letters two lower case letters two number digits and two special characters.

After typing your current password and new password twice, you will be redirected to the login page again to log in with your new password.

CHANGE PASSWORD

Your password must be minimum 12, maximum 32 characters and it contains at least two uppercase letters, two lower case letters, two number digits and two special characters.

User Name:

Current password:

New password:

Confirm new password:

SUBMIT

[Back to Login](#)

POWER UNIT WEBUI

MAIN PAGE

In this page, charge point serial number, device software versions, OCPP device ID, duration after power on and Connection Interface can be seen.

GENERAL SETTINGS

In this page, Language Settings, Display Settings, Logo Settings, Tilt Threshold, Optional Prepaid settings, Display QR Settings and Customer Service Number Settings can be reached.

OCPP SETTINGS

In this page, OCPP Connection Main Settings like Charge Point Central System Address and Charge Point ID can be set. Also, OCPP version and other Ocpp Configuration parameters can be set.

NETWORK INTERFACE

In this page, Cellular and Ethernet (LAN) settings can be made.

POWER MANAGEMENT

In this page, Charge point maximum power can be limited and also, Fail Safe Power Setting can be done.

DISPENSER MANAGEMENT

Dispenser Management	<p>“Dispenser Management” is responsible for adding or removing dispensers from the system.</p> <p>In this page individual dispenser adding and removing can be done. IP Address, Serial Number, Connection Status of each dispenser can be seen in this page. Also, dispenser actions like Soft Reset, Hard Reset and sending configuration can be done.</p>
Dispenser Current Settings	<p>“Dispenser Current Settings” controls the current limitations on the connectors of the dispenser.</p> <p>This tab was created to adjust the currents of the connectors owned by the dispenser.</p> <p>Current limitation shall be done after installation.</p>

SYSTEM MAINTENANCE

In this page, Log Files can be downloaded. Also, Firmware Updates, Configuration Backup and Restore, Hard & Soft Reset, Administration Password Change and Factory Reset can be done.

DISPENSER UNIT WEBUI

MAIN PAGE

In this page, charge point serial number, device software versions, OCPP device ID, duration after power on and Connection Interface can be seen.

SYSTEM MAINTENANCE

In this page, Log Files can be downloaded. Also, Firmware Updates, Configuration Backup and Restore, Hard & Soft Reset, Administration Password Change and Factory Reset can be done.

First commissioning of the cooling unit with installed cables.

Make sure all pipes, sensors and cables are correctly fitted according to the installation instructions. To ensure a better filling process the coolant temperature should be above 12°C. There are two case for level of coolant.

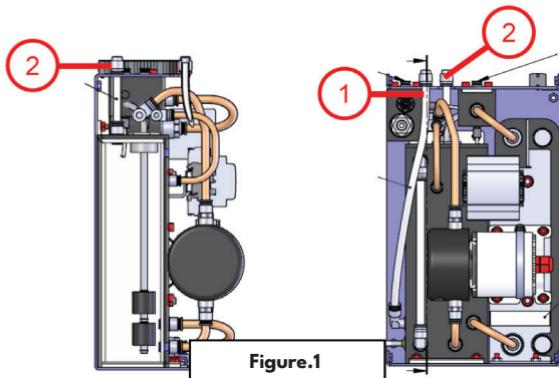


Figure.1

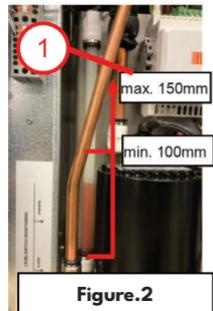


Figure.2

Case.1 : Tank is prefilled (standard at delivery)

- Tank is prefilled to operate one cable with a maximal total length of 8m. Coolant level before connecting the cable is visible in the venting tube (Figure.1, no.2).
- Starting up the cooling system for 5min.
- If coolant level is below the warning level (Figure.2 no.1), refill coolant according to the instruction case.2

Case 2: Refill coolant to have the right amount of coolant in cooling system

General amount of coolant: 1.1dl per meter cable.

- Check: Coolant level must be as shown in Figure.2 no.1 (min. 100mm, max. 150mm).
- Open cap no.1 and no.2 (Figure.1, no.1 and no.2)
- Use a funnel to avoid spillage => connect the funnel to tube Figure.1, no.1
- Tube no.1 (Figure.1, no.1) => fill in coolant
- Tube no.2 (Figure.1, no.2) => venting hole
- Coolant level must be minimum 100mm and maximum 150mm according viewing pipe (Figure.2, no.1)
- Close cap no.1 and no.2 (Figure.1, no.2)
- Starting up the cooling system for 5min.
- Check: Coolant level must be as Figure.2 no.1. If coolant level is below 100mm, refill according instruction in case 2.

6- Close the right side cover of the product by turning the handle clockwise with a wide-angle as shown in the section "Opening side covers" using the keys provided.

11 - PERIODIC MAINTENANCE LIST

	Maintenance Period (years)									
	1	2	3	4	5	6	7	8	9	10
Air filters	R	R	R	R	R	R	R	R	R	R
Plugs	I	I	I	I	I	I	I	I	I	I
Screen	C	C	C	C	C	C	C	C	C	C
Distribution elements (MCCB, MCB RCCB)	T	T	T	T	T	T	T	T	T	T
AC input terminals	T	T	T	T	T	T	T	T	T	T
Fan	I	I	I	I	I	I	I	I	I	I
DC relay terminals	T	T	T	T	T	T	T	T	T	T
DC output cable and terminals	T	T	T	T	T	T	T	T	T	T
Body	C	C	C	C	C	C	C	C	C	C
Earthing resistance	M	M	M	M	M	M	M	M	M	M
Liquid cooling unit	I	I	I	I	I	I	I	I	I	I
Liquid cooling unit liquid	I	I	I	I	R	I	I	I	I	R

C : Clean

I : Inspect (check, confirm, clean, tighten or replace if necessary)

M : Measure

T : Tighten

R : Revise

Air filters

Air filters should be changed every year when going for maintenance.

Plugs

All Plugs should be checked when going for maintenance. If the plug is broken or cracked, it should be replaced. In addition, a charge attempt should be made with all plugs.

Screen

When going for maintenance, the screen should be checked by pressing the touchscreen. It can be controlled by pressing all the functions on the screen. If there is no problem with the screen touch, the screen should be cleaned.

Distribution elements (MCCB, MCB RCCB)

Distribution elements (MCCB, MCB RCCB) should be checked and tightened when going for maintenance. It can be tightened with a screwdriver with a torque of 2 Nm.

AC input terminals

When going for maintenance, AC input terminals should be checked and tightened. It should be tightened with 8 Nm for metric 8 bolts and 10 Nm for metric 10 bolts.

Fan

Fans should be checked when going for maintenance. In case of any breakage or damage, the damaged fan must be replaced. If there is no problem with the fans, a charging attempt should be made. It should be checked whether the fans rotate during this charging.

DC relay terminals

When going for maintenance, DC relay terminals should be checked and tightened. The tightening process should be applied with 6.5 Nm.

DC output cable and terminals

DC output cable and terminallet should be checked when going for maintenance. It should be checked for any damage.

Body

When going for maintenance, the outer cabinet should be cleaned.

Earthing resistance

When going for maintenance, a mechanism should be set up like measuring with meger. After the piles are driven, the voltage between the two piles should be less than 1V

Liquid cooling unit **

When going for maintenance, a charge attempt should be made with a Liquid Cooled Plug (gun). During charging, after waiting for 5 minutes, it should be observed that there is a liquid flow from the pipes in the liquid cooling unit.

Liquid cooling unit liquid **

When going for maintenance, the liquid cooling unit fluid should be checked. If there are any particles in the liquid, the liquid must be changed. In addition, the fluid should be changed every 5 years.

**** Units available on EVC-X products only. There is a detailed explanation in the liquid cooling section of the service manual.**

VESTEL

MOBILITY

VESTEL MOBİLİTE SANAYİ VE TİCARET A.Ş. EGE SERBEST BÖLGE ŞUBESİ

Zafer SB Mah. Ayfer Sok. No:22 İç Kapı No:1 Gaziemir, İzmir/ TÜRKİYE

Telefon (pbx) : 90 (232) 251 72 90 Fax : 90 (232) 251 73 13

Gaziemir V.D. : 837 001 0241

