SigenCube Series

Installer Manual

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Revision History

Version	Date	Description
Draft A	2026.09.24	Initial Release

Preface

Overview

This document mainly introduces the product overview and equipment installation of the SigenCube series.

Target Audience

This document is intended for product users and professionals.

Icon Definitions

The following icons may be used in the document to indicate safety precautions or key information. Please familiarize yourself with the icons and their definitions before installation and operation.

Icon	Definition
Danger	Indicates danger. Non-compliance may result in death or serious personal injury.
Warning	Indicates warning. Non-compliance may result in serious personal injury or property damage.
Caution	Indicates caution. Non-compliance may result in property damage.
Tips	Provides key information or operational tips.

Chapter 1 Safety Precautions

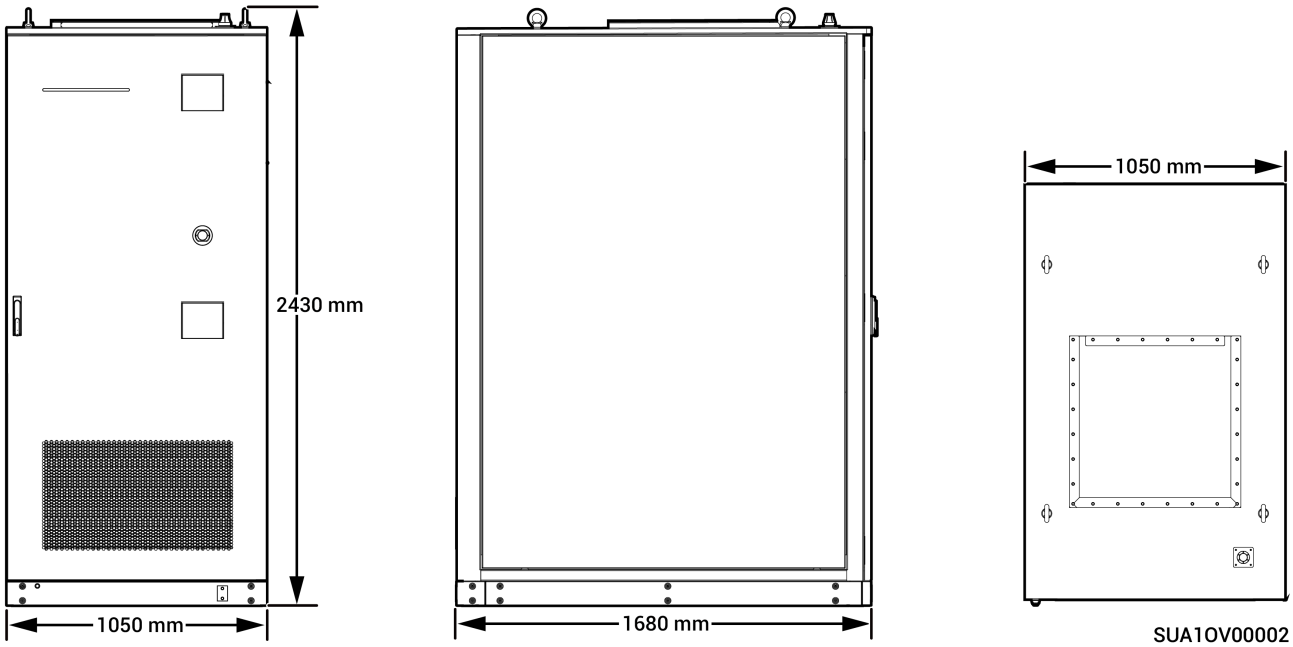
Caution

- Only trained personnel or professionals with electrical expertise should operate the equipment.
- Operators must be thoroughly familiar with national/regional laws, regulations, standards, as well as the composition and working principles of relevant systems.
- Before operation, please thoroughly read the operational requirements and precautions in this document and the User Manual. Equipment damage caused by failure to comply with the requirements will not be covered under the warranty.

Chapter 2 Product Introduction

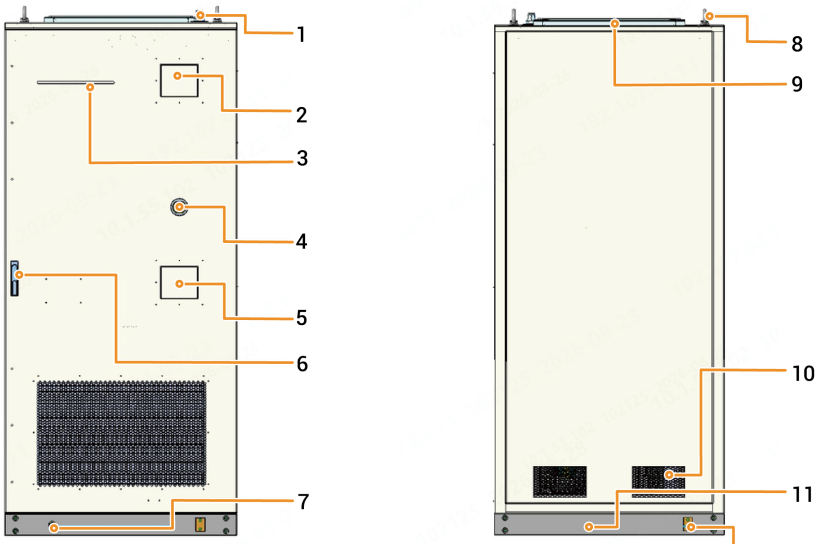
The SigenCube adopts a compact design to reduce footprint and construction costs; with built-in EMS, it enables multi-unit parallel connection without data collectors, combined with factory pre-commissioning to support rapid on-site deployment. Multiple overcurrent protections ensure safe and stable system operation; AI intelligent temperature control works in synergy with liquid cooling for low noise and adaptability to various harsh environments. Battery active balancing and grid-friendly performance across all scenarios further ensure reliable power supply under complex working conditions, effectively reducing operational and maintenance efforts.
This article uses the SigenCube 401 series products as an example for illustration.

2.1 Product Dimensions



2.2 Appearance and Port Introduction

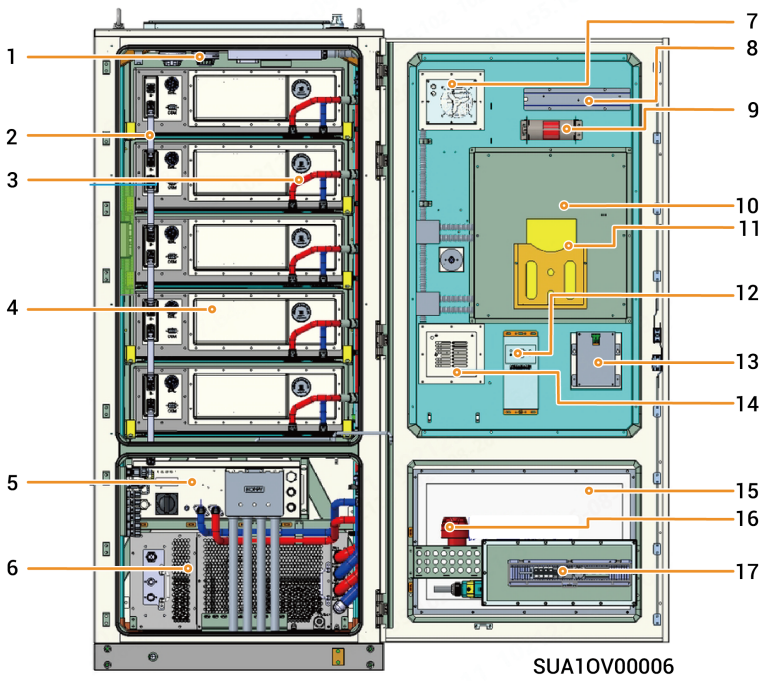
Appearance Introduction



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No.	Name
1	Antenna
2	Fire exhaust vent
3	LED light strip
4	Emergency stop button
5	Fire air intake
6	Door lock
7	Water firefighting interface
8	Lifting ring
9	Explosion vent window
10	Liquid cooling unit air outlet
11	Forklift opening decorative panel
12	Cabinet external grounding point

Internal port introduction



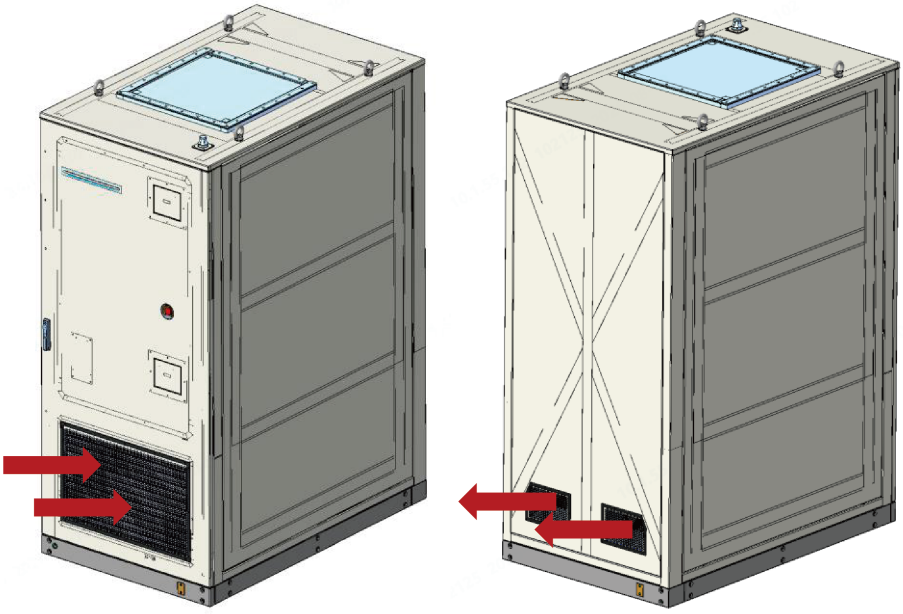
Serial number	Name
1	Smoke, temperature, and combustible detector
2	Series-connected copper busbar
3	Liquid cooling pipeline
4	Battery pack
5	PCS
6	Liquid cooling unit
7	Fire exhaust
8	LED strip PCBA
9	Aerosol
10	BAU PCBA & Communication rod PCBA & UPS
11	Folder
12	Dehumidifier
13	UPS battery
14	Fire air intake
15	Shutters
16	Sound alarm light
17	AC control box

2.3 Ventilation Design

The energy storage system adopts a front air intake and rear air exhaust design.

Tips

The illustration is for reference only, the actual product appearance shall prevail.



Chapter 3 Transportation Requirements

The energy storage system can be transported via land and sea. It features an integrated and easy-to-hoist design for convenient transportation. Currently, the energy storage system has not been approved for air transport, nor are there relevant railway transportation guidelines available for reference.
The energy storage system can be transported domestically by truck.

Equipment Transportation

At the time of factory shipment, most internal components of the energy storage system are already secured inside the enclosure. During transportation, you can directly hoist or move the energy storage system as a whole unit.
When transporting and moving the energy storage system, please ensure the following requirements are met:

- All doors of the energy storage system must be locked.
- Select appropriate cranes or hoisting tools based on site conditions. The chosen equipment must have sufficient load capacity, boom length, and swing radius.
- It is recommended to use a single crane for hoisting the energy storage system.
- Additional traction may be required when moving the energy storage system along slopes.
- Remove all existing or potential obstacles along the transportation route, such as tree branches and cables.
- Transport or move the energy storage system under favorable weather conditions whenever possible.
- Ensure warning signs or barricades are set up to prevent unauthorized personnel from entering the work area to avoid accidents.
- During transportation, the energy storage system must remain upright.
- Ensure the base of the energy storage system remains level throughout transportation, with a maximum allowable tilt angle of 15°.
- Avoid collisions or severe impacts during transportation.
- For land transportation, use ropes to secure the lifting rings at the top of the energy storage system to the transport vehicle to prevent excessive tilting during transit.
- The transport vehicle must comply with local traffic regulations.
- During transportation, the vehicle should maintain a steady speed as much as possible, and sudden braking is strictly prohibited.
- The logistics carrier should monitor abnormal driving behavior through the logistics tracking platform or the vehicle's onboard GPS system and issue timely warnings or manual intervention alerts. If any visible damage is found during on-site unpacking, the carrier must provide driving records as evidence for liability determination.

Chapter 4 Site Selection Requirements

Tips

- Before installing the equipment, please carefully read the following installation requirements. If any functional abnormalities, damages, or even personal safety accidents occur due to failure to comply with these requirements, our company shall not bear any responsibility.
- During actual installation, the selected location must comply with local laws, fire safety regulations, and other relevant standards. The specific installation location planning shall be determined by the installer or EPC (Engineering, Procurement, Construction).
- The equipment must not be installed indoors.

Installation Site Requirements

- When selecting an installation site, full consideration should be given to climatic conditions and geological factors, such as stress wave emissions, groundwater levels, etc.
- The surrounding environment of the installation site should be dry and well-ventilated.
- There should be no trees around the installation site to prevent branches or leaves blown by strong winds from blocking the doors or air inlets of the energy storage system container.
- The installation site should be far away from areas with toxic or harmful gas accumulation and free from flammable, explosive, or corrosive substances.
- Avoid installing the energy storage system container in dusty, smoky, or environments with floating cotton fibers. These particles may adhere to the inlets/outlets or radiators of the container, affecting heat dissipation performance or even damaging the equipment.
- Do not install the energy storage system container in environments contaminated with halogen or sulfur pollutants.
- There are no underground facilities within the site.

Installation location

Improper foundation construction may cause difficulties or failures in equipment installation, cabinet door operation, and subsequent equipment maintenance. Therefore, the foundation must be designed and constructed according to relevant standards to meet the requirements of supporting structures, cable laying, and later maintenance.
During foundation construction, the following requirements must be met at minimum:

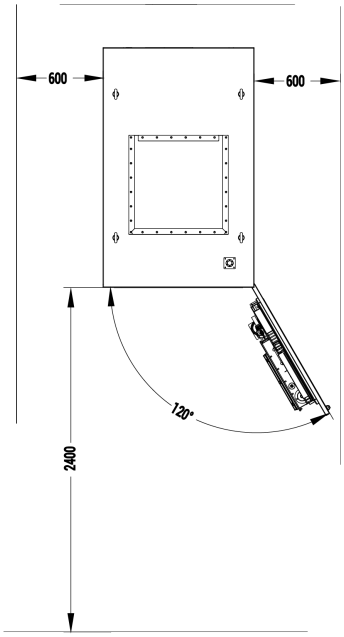
- The bottom of the excavation pit must be compacted, backfilled, and leveled.
- The foundation must provide sufficient and effective support for the equipment.
- The equipment should be installed at a higher position to prevent rainwater from eroding the equipment base and interior. It is recommended to build the foundation approximately 300 mm above the ground level.
- An appropriate drainage system should be installed based on local geological conditions.

- Construct a concrete foundation with sufficient cross-sectional area and height. The foundation height should be determined by the construction party based on on-site geological conditions.
- Cable laying requirements should be considered during foundation construction.
- Construct maintenance platforms around the foundation to facilitate later maintenance.
- During foundation construction, sufficient space should be reserved for the AC-side cable trench according to the position and size of the equipment's inlet/outlet ports, and cable conduits should be pre-embedded in advance.

Installation and maintenance space requirements

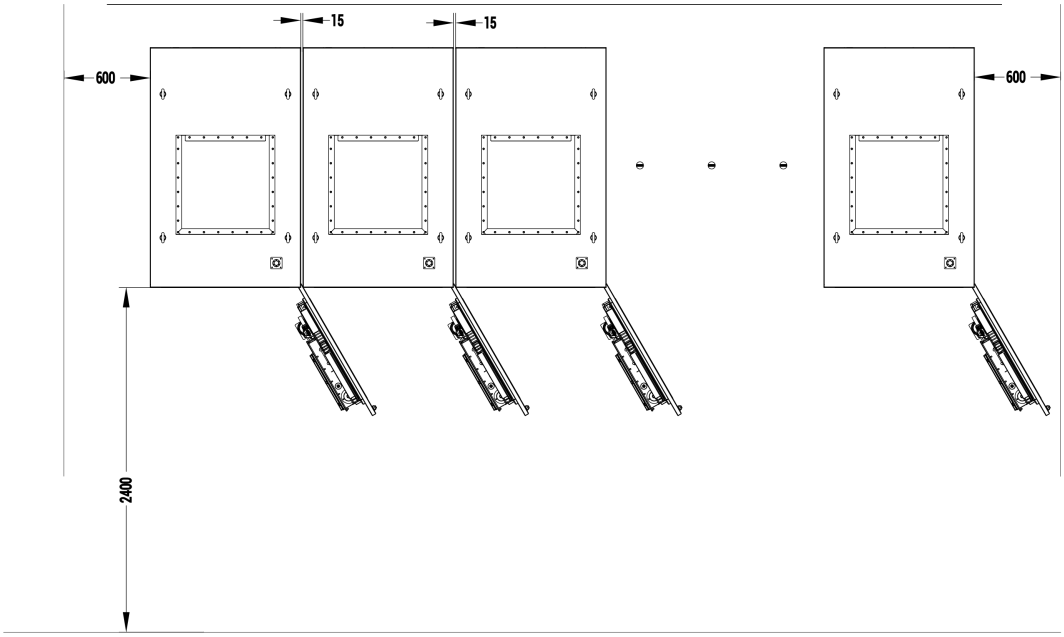
If equipped with a vent panel, reserve a minimum clearance of ≥700 mm above the top; if not equipped with a vent panel, reserve a minimum clearance of ≥300 mm above the top. For other installation clearance dimensions, refer to the figure below.

Fig 4-1 Single cabinet installation space (unit: mm)



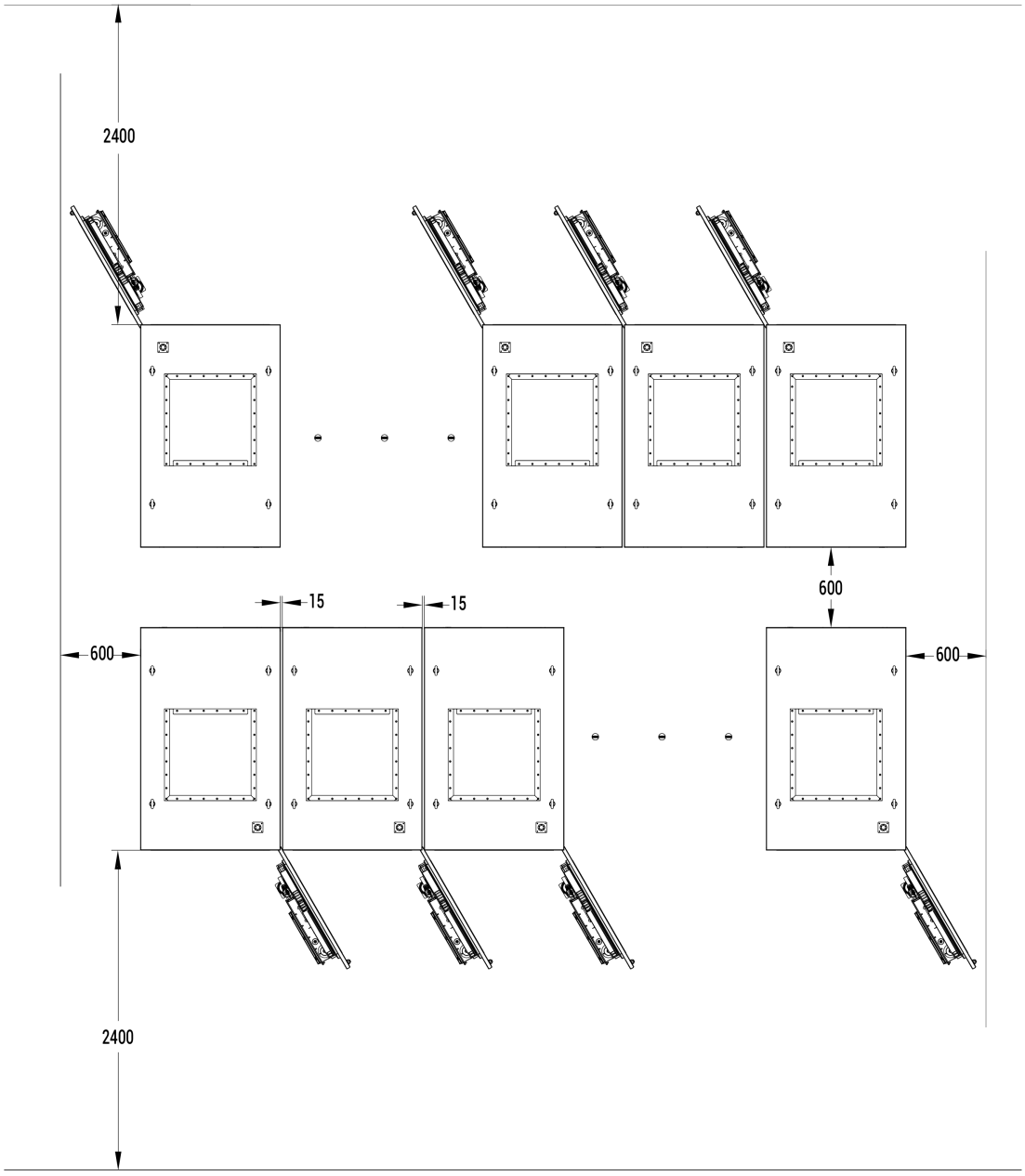
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Fig 4-2 Single-row multi-cabinet installation space (unit: mm)



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Fig 4-3 Double-row multi-cabinet installation space (unit: mm)



Chapter 5 Device Installation

5.1 Forklift Handling

If the installation site has a flat ground surface, a forklift can be used to move the energy storage system. The bottom of the energy storage system is equipped with forklift slots for the insertion of forklift arms.
When using a forklift to move the energy storage system, ensure the following requirements are met:

- The forklift must have sufficient load-bearing capacity.
- The length of the forklift arms must be sufficient to move the equipment.

The forklift arms must be inserted into the forklift slots at the bottom of the equipment (see the diagram below for slot locations). The insertion depth of the forklift arms should match the depth of the forklift slots.

- Transport, move, and place the energy storage system slowly and steadily. It is recommended to perform a trial lift first to confirm all requirements are met.
- The energy storage system must be placed on a flat and stable ground surface. The placement location should be free of obstacles or protrusions and have good drainage.

> **Tips**
>
> The illustrations are for reference only. The actual product appearance shall prevail.

Fig 5-1 Forklift Handling (Side View)

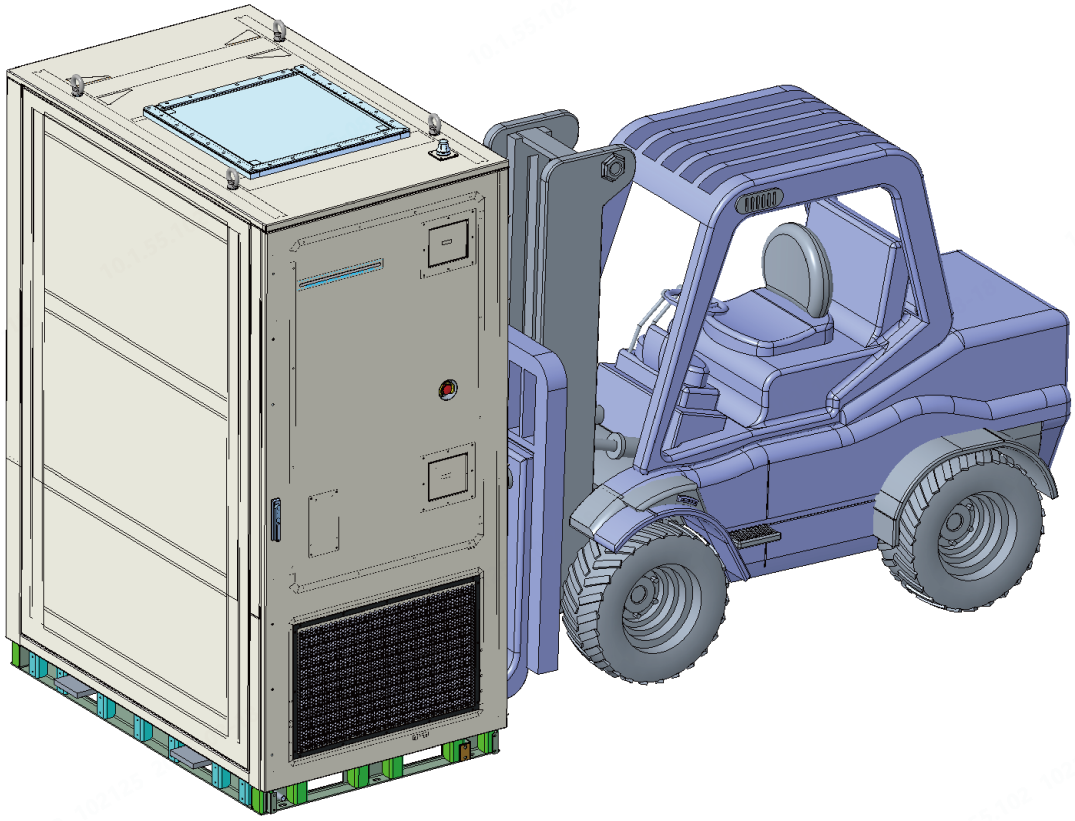
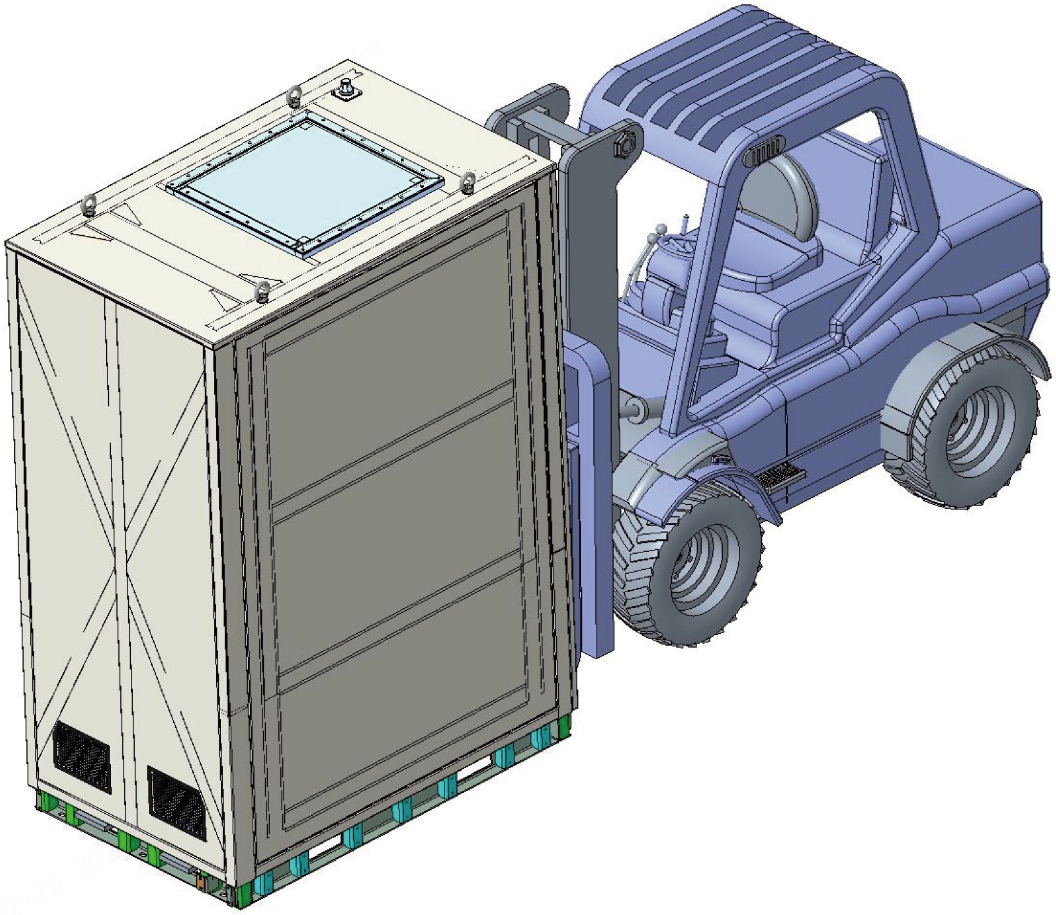
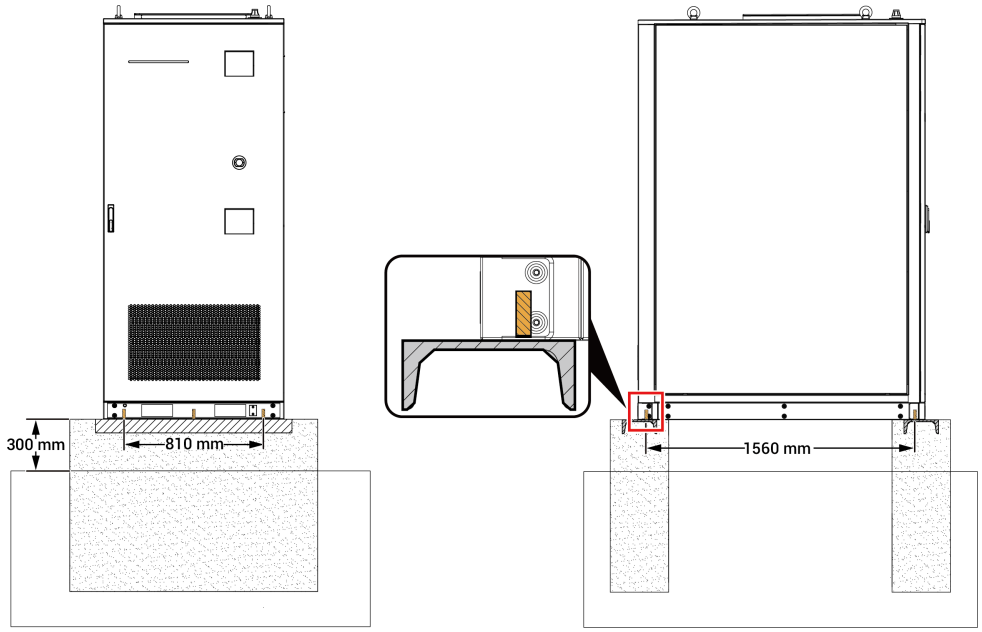


Fig 5-2 Forklift handling (front view)



5.2 Mounting SigenCube

There are mounting holes at the bottom of the device. Please pre-embed 6 M16 studs to secure the SigenCube. The installation dimensions are as shown in the figure.



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