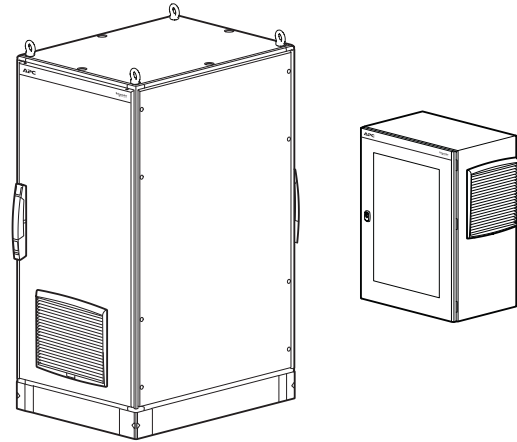




## EcoStruxure™ Micro Data Center R-Series for Industrial Environments Installation



### Before You Start

#### Check your inventory

Your sales representative will provide a detailed quote with all of the items included in your EcoStruxure™ Micro Data Center. Ensure that you have received all items listed. Check the documentation for each piece of equipment to ensure you have received the included accessories. If anything is missing or damaged, contact your sales representative immediately.

#### Review the specifications

Your Micro Data Center equipment is subject to warranties that may be void if the equipment is exposed to power or environmental factors outside its specifications. Review the power and environmental specifications for each piece of equipment in your Micro Data Center. Ensure the equipment is stored and operated within the specifications.

You can find equipment specifications in several places:

- Installation manuals provided with your equipment.
- Specifications and documentation are available on the appropriate product page at [www.se.com](http://www.se.com) or [www.apc.com](http://www.apc.com). To find a product page, enter the part number for your equipment in the Search bar.
- Your Sales Representative can also provide a report detailing the power specifications for your Micro Data Center solution. Check this report or the power specifications for your UPS model.

#### Review the documentation

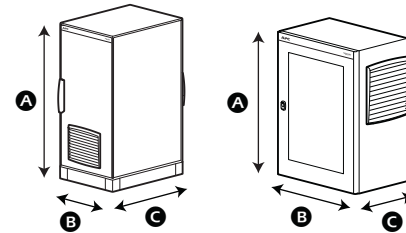
Documentation for the Micro Data Center equipment is stored in an accessory box in the bottom of the cabinet. You should also receive links to the online documentation from your sales representative.

- Read and follow all the safety information provided.
- In addition to safety and installation documents, you can find release notes and user guides on the appropriate product page of the Schneider Electric website: go to [www.se.com](http://www.se.com) or [www.apc.com](http://www.apc.com), and enter the product number (or SKU) in the **Search** bar.

#### Guidelines for edge computing

ASHRAE has published guidelines for owners of Edge computing equipment such as your Micro Data Center. (Edge equipment performs computing outside of a commercial data center with strict environmental controls.) It is recommended that you follow these guidelines to help prevent equipment damage and extend the life of your Micro Data Center. You can download the guidelines from [www.ashrae.org/technical-resources/bookstore/datacom-series](http://www.ashrae.org/technical-resources/bookstore/datacom-series).

### Cabinet Specifications



Part number	Height* A	Width B	Depth C	Static Weight Rating	Weight** (empty)		
NSYSFRSEDC12680	130.6 cm (51.42 in)	60 cm (23.6 in)	80 cm (31.5 in)	240 kg (529 lb)	125 kg (276 lb)		
NSYSFRSEDC1268E						171 kg (377 lb)	
NSYSFRSEDC20680	210.5 cm (82.88 in)	60 cm (23.6 in)	80 cm (31.5 in)	400 kg (882 lb)	221 kg (487 lb)		
NSYSFRSEDC2068E							189 kg (417 lb)
NSYSFRSEDC208100			100 cm (39.4 in)				213 kg (470 lb)
NSYSFRSEDC208100E							
NSYSFRSEDC208120			120 cm (47.2 in)				
NSYSFRSEDC20812E							
NSYVDM16U4P	80 cm (31.5 in)	60 cm (23.6 in)	40 cm (15.7 in)	48 kg (105.8 lb)	35 kg (76 lb)		
NSYVDMRS16UEDC							

\* The plinth (10 cm/4 in) is included in the floor-standing cabinet height. Eye bolts (55 mm/2 in) are not included in the cabinet height.

\*\* Depending on your solution, each floor-standing Micro Data Center may arrive with up to 113 kg (250 lb) of equipment installed (except for 80 cm/31 in wide models, which may arrive with up to 23 kg/50 lb of equipment installed). Each wall-mounted Micro data Center may arrive with up to 48 kg (106 lb) of equipment installed. Check the shipping report for the weight of installed equipment.

### System overview

Your EcoStruxure Micro Data Center may include any of the following components: uninterruptible power supply (UPS), ventilated temperature control system, power distribution units (PDUs), NetBotz environmental management, and EcoStruxure IT Gateway. If included, the UPS provides power to the other components. Otherwise, power is provided by the PDU(s).

#### About ventilated systems

Your Micro Data center may include one or more fans and one or more heating units for humidity control. The Hygrotherm allows you to control the behavior of the fans and heating units. If the heating units are included with your solution, an additional temperature sensor (NSYCCASTE) is connected to the Hygrotherm. Connections between all elements of the ventilated system are controlled by a series of relays and terminal blocks at the top of the cabinet.

**NOTE:** Heating units and Hygrotherms are not included in wall-mounted cabinets.

Door-mounted fans on floor-standing units are programmed to turn off when the door opens. For this purpose, door switches may be installed at the top of your cabinet. In wall-mounted cabinets, the fans do not turn off.

#### Hygrotherm default values

Heating units are controlled by the Hygrotherm. During integration, your Hygrotherm is pre-configured with the following settings to protect the equipment in your Micro Data Center: CO = 20°C/68°F (fans turn on if the temperature rises above 20°C/68°F), HF = 15°C/59°F and 70% RH (heaters turn on if the temperature is less than 15°C/59°F or if the relative humidity rises above 70%). Consult the Hygrotherm manual for instructions to change these settings.

#### EcoStruxure IT Gateway

The Gateway appliance has a private network on its LAN2 port for connecting your Schneider Electric equipment. Do not connect equipment that requires internet access to this private network. Go to [helpcenter.ecostruxureit.com](http://helpcenter.ecostruxureit.com) for instructions on how to set up the Gateway appliance.

### Installation

#### ⚠️ DANGER

##### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Ensure the cabinet is properly grounded to the building Common Bonding Network (CBN) according to local and national codes and guidelines.
- Grounding must be performed only by qualified personnel.
- Electrical equipment must be installed, operated, serviced, and maintained only by qualified and authorized personnel.
- Only certified electricians are authorized to connect power to the Micro Data Center.
- The Micro Data Center must be installed in accordance with the National Electrical Code and all applicable local codes.
- Perform appropriate Lock Out/Tag Out procedures during equipment installation.
- Remove incoming Main power upstream from the Micro Data Center before performing any work.
- The Micro Data Center does not incorporate a Main disconnect. Due to the use of the UPS, live power exists within the equipment when power is turned off at the input circuit breaker.
- Wear appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.

**Failure to follow these instructions will result in death or serious injury.**



There are electrical hazard labels (left) inside the Micro Data Center. Each label indicates the presence of a terminal block, which can be a potential electrical hazard. Do not remove the labels or guards from a terminal block. If you must replace a fan module, install a cover on the terminal block.

#### ⚠️ WARNING

##### HEAVY EQUIPMENT

- Floor-standing Micro Data Centers are easily tipped. Use extreme caution when unpacking or moving.
- Wall-mounted Micro Data Centers may be heavy. Use at least two people to lift and mount.
- Ensure the mounting wall can support the total weight of your wall-mounted Micro Data Center.

**Failure to follow these instructions can result in injury or equipment damage.**

#### ⚠️ CAUTION

##### HOT SURFACE

- Do NOT touch an operating heater.
- Disconnect and lockout power, and allow the heater surface to cool before servicing.

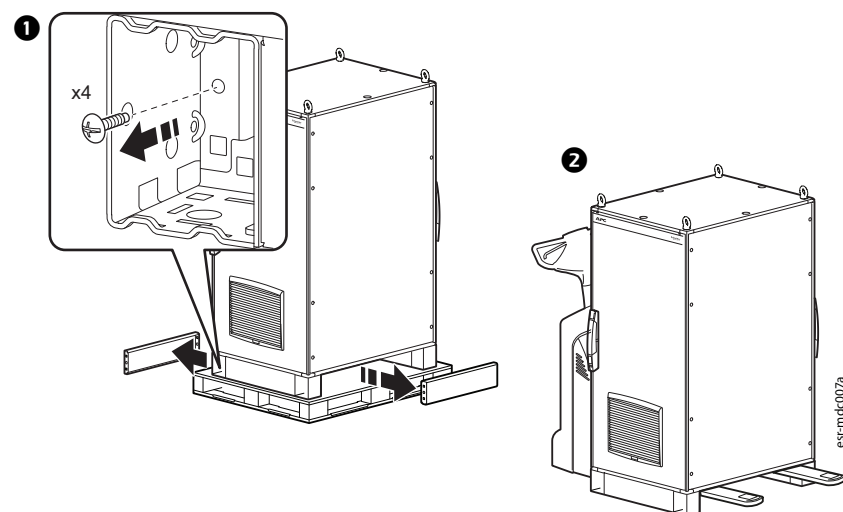
**Failure to follow these instructions can result in injury or equipment damage.**

Install the EcoStruxure Micro Data Center R-Series indoors. Before you begin, ensure the final location of your cabinet allows easy access for maintenance to the cabinet and equipment. See the **Cabinet Specifications** for dimensions.

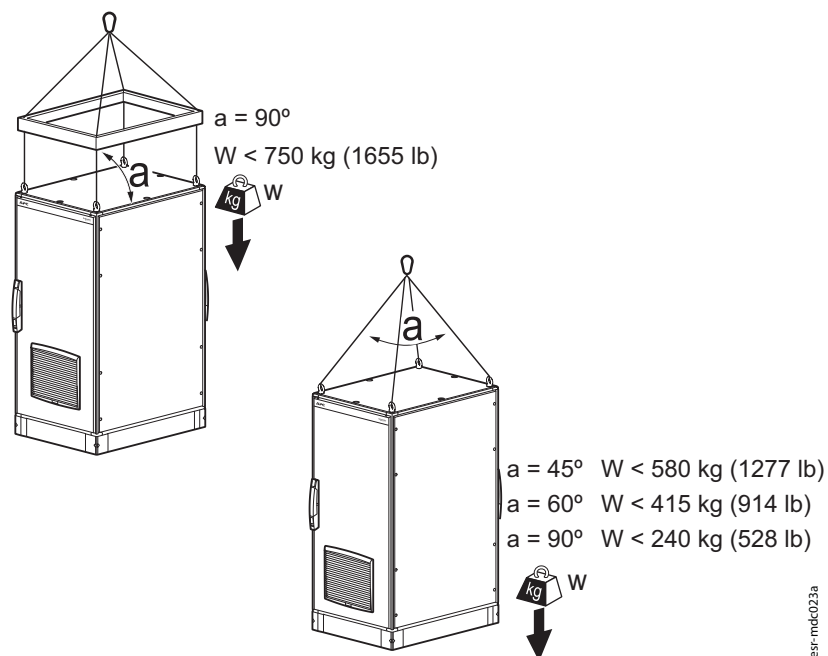
**NOTE:** Installation and safety documentation for your Micro Data Center Equipment is provided online and in the accessory box. Carefully read the safety instructions for your equipment.

## Move a floor-standing cabinet

You can move a floor-standing cabinet using a mechanical lift or the pre-installed M12 eye bolts on top of the cabinet. Before using a lift, remove two plinth sections from the sides of the cabinet.



When using the eye bolts, the weight limit for installed equipment (W) depends on the angle of the lifting cables.



For a finished look, you can replace the eye bolts with four M12 TORX screws and 13 mm (type 17) washers in the accessory box once the cabinet is in its final location. Do not leave the fastener holes empty, as this can allow dust and debris to enter the cabinet.

## Move a wall-mounted cabinet

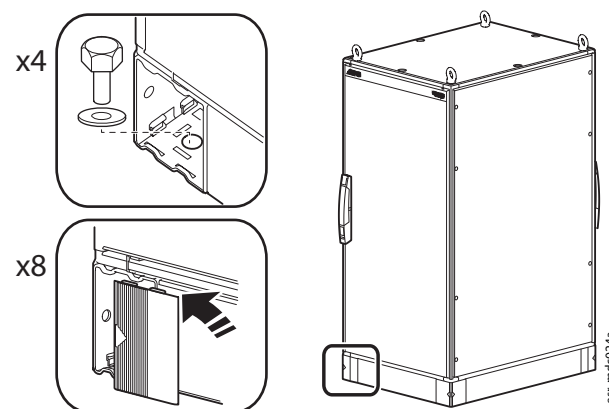
Use two people to lift the cabinet, or use a mechanical lift.

## Install cabinets

To install a floor-standing cabinet:

1. Ensure there is enough clearance in the final location to completely open the front and rear doors. Leave enough space for the width of the door plus a technician in the front and rear of the cabinet.

2. Once the cabinet is in its final location, secure it to the ground. There are 13.5 mm holes at the bottom corners of each floor-standing cabinet. Use appropriate mounting hardware to secure your cabinet to the floor in all four locations. You can then install the 8 corner covers (included inside the cabinet).



3. Connect the cabinet frame to the Building Common Bonding Network (grounding equipment not provided).

To install a wall-mounted cabinet, see the installation sheet for your cabinet. Connect the cabinet frame to the building Common Bonding Network (grounding equipment not provided).

## Configuration options

See your cabinet manual for instructions to

- Remove and replace side panels
- Remove and replace doors

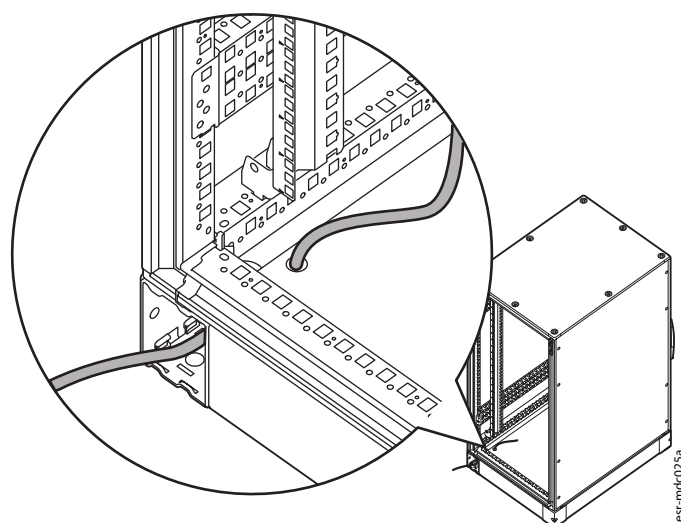
## Create passages for power and network connections

Depending on your configuration, you may need to drill holes in the cabinet for any or all of the following connections:

- Connection to building CBN.
- Mains power to UPS or PDU(s).
- Network connection(s). You must provide entry points for any network connections your equipment requires. It is recommended that you use network switches to reduce the number of entry points needed.

**NOTE:** Solutions with EcoStruxure IT Gateway require a network connection for the Gateway.

You can thread wires through the corners of the plinths after drilling holes in the bottom plate of the cabinet.



Take precautions to ensure metal shavings do not get into the pre-installed equipment. Install fittings rated for your environment.

## Install your equipment

Ensure the equipment weight does not exceed the weight rating of the cabinet. Refer to the specification table above to find the weight rating for your cabinet. Your sales representative can provide a shipping report that includes the combined weight of the cabinet and all installed equipment.

$$\text{total shipping weight} - \text{cabinet weight} = \text{installed equipment weight}$$

$$\text{cabinet weight rating} - \text{installed equipment weight} = \text{maximum weight to be installed}$$

Follow the installation instructions provided with your equipment. Ensure your equipment does not block the fan inlet. Install IT equipment from the bottom of the cabinet up to increase stability and cooling efficiency.

## Connect power to the UPS/PDUs

The UPS is configured to provide power to the rest of the equipment in the Micro Data Center. Follow the instructions included in your UPS documentation to connect power to the UPS. Be sure to consider power specifications listed in the documentation.

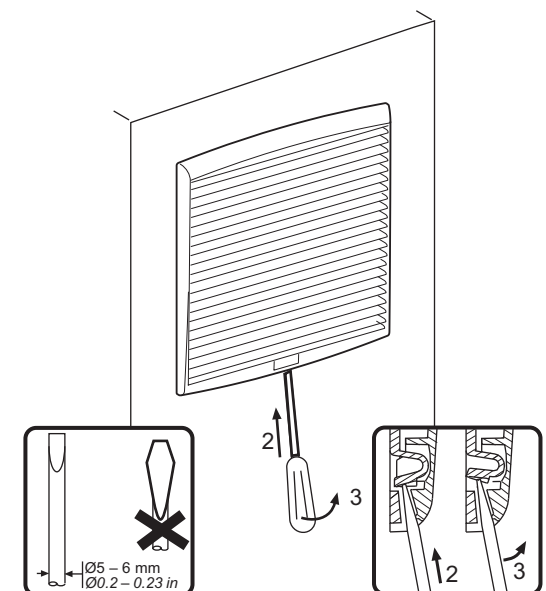
If no UPS is included, provide a power connection to each PDU. Review the safety and installation instructions for your PDUs before you make the power connections.

See **Review the documentation** for details on where to find your product documentation.

## Replace Fan Filters

Monitor and replace filters as needed to maintain proper airflow. Turn off all power to the fan before replacing the filter.

The filter is held in place by the fan grill. To replace a filter, remove the fan grill.



You can purchase replacement filters for your fans at [www.se.com](http://www.se.com). Ensure the filter matches the cutout dimension of your fan. Fan models NSYCVF560M115PF and NSYCVF850M115PF require 291 mm<sup>2</sup> filters (for example, NSYCAF291). NSYCVF300M115PF requires a 223 mm<sup>2</sup> filter (for example, NSYCAF223). You can find compatible filters in the Universal Enclosure catalog at the appropriate product page of [www.se.com](http://www.se.com). Enter your fan model in the Search bar, navigate to the fan product page, then select Documentation.

## Worldwide Customer Support

Customer support and warranty information is available at [www.apc.com/support](http://www.apc.com/support).

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