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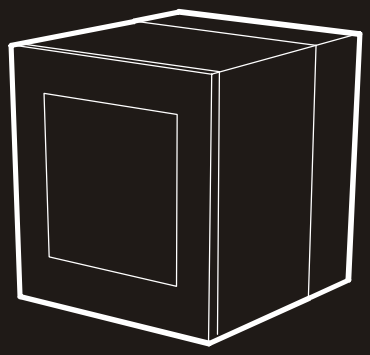
NetShelter® Wall-Mount Enclosure

AR100, AR100S
AR100HD, AR100HDS

Installation



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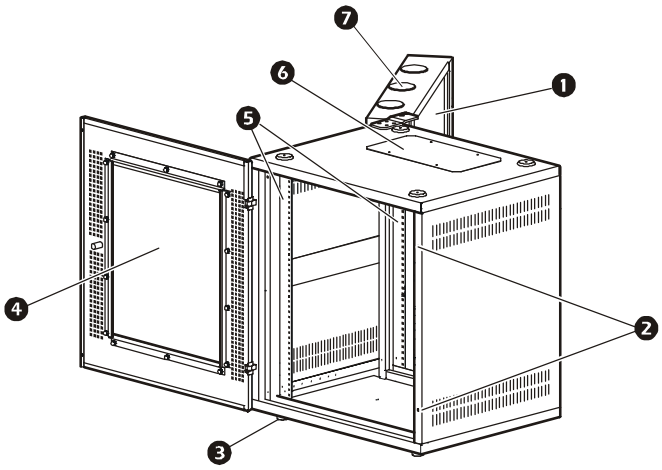
Product Description

American Power Conversion (APC) NetShelter® 13U Wall-Mount Enclosures (AR100, AR100S, AR100HD, and AR100HDS) provide storage for industry-standard (EIA-310) 19-inch (483-millimeter) rack-mount hardware, including voice, data, networking, and internetworking equipment.

Components of the enclosure



❶ Rear door

❷ Rear door locking rods

❸ Rubber feet

❹ Front door

❺ Vertical mounting rails

❻ Removable access plate

❼ Cable access hole covers

This fully reversible unit has the following features:

- 13U (22.75 in) storage height for 19-inch rack-mount equipment
- Smoked, tempered glass front door (AR100 and AR 100S) or fully vented front door (AR100HD and AR100HDS)
- Solid rear door with keyholes for wall-mounting
- Locks on front and back doors
- Double hinge design provides front and rear access to installed equipment
- Adjustable front mounting rails with #12-24 tapped holes or square caged nut holes
- Fixed rear mounting rails with square caged nut holes

Receiving and Inspection

Before you unpack the enclosure, read the following warnings on preventing injury and damage.

- **Use at least two people to unpack the enclosure**.
- Attach the rubber feet or securely mount the unit to the wall before installing the components.
- Do not extend more than one component from the enclosure at one time.

Unpacking procedure

1. Move the shipping pallet containing the enclosure to a firm, level surface. Inspect the packaging for signs of shipping damage.
2. Open the cardboard box and remove the four foam corner protectors.
3. With one person on each side of the enclosure, carefully lift the enclosure assembly out of the box and set it on the floor.
4. If you detected any shipping damage, contact APC Customer Support at the number listed on the back cover of this manual.

Save the packaging if you intend to re-ship the enclosure in the future.

Please recycle

The shipping materials are recyclable. Please save them for later use, or dispose of them appropriately.

Disclaimer

American Power Conversion is not responsible for damage sustained during reshipment of this product.

Inventory

After unpacking the enclosure, verify that all required components and hardware have been shipped. See the “Components of the enclosure” on page 1 for a list of components and hardware.

If any items are missing, contact APC Customer Support using the appropriate number or Web address listed on the back cover of this manual.

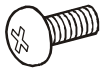
Hardware, Tools, and Keys

Location of hardware, tools, and keys

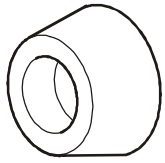
A bag containing the mounting hardware, provided caged nut tool, and door keys is fastened to the floor of the enclosure.

Hardware inventory

#12-24 screw (30)



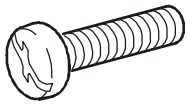
M4×16 pan-head Phillips screw (4)



Rubber feet (4)

M6 caged nut (30)

Plastic cup washer (30)

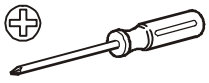


M6×16 pan-head, Phillips/slotted screw (30)

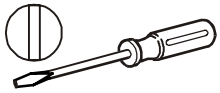
Tools provided

Caged nut tool

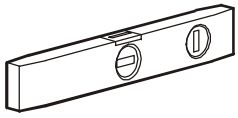
Tools required (not provided)



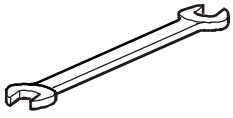
#2 Phillips screwdriver



Small flathead screwdriver



Level



10-mm wrench

Enclosure Adjustments

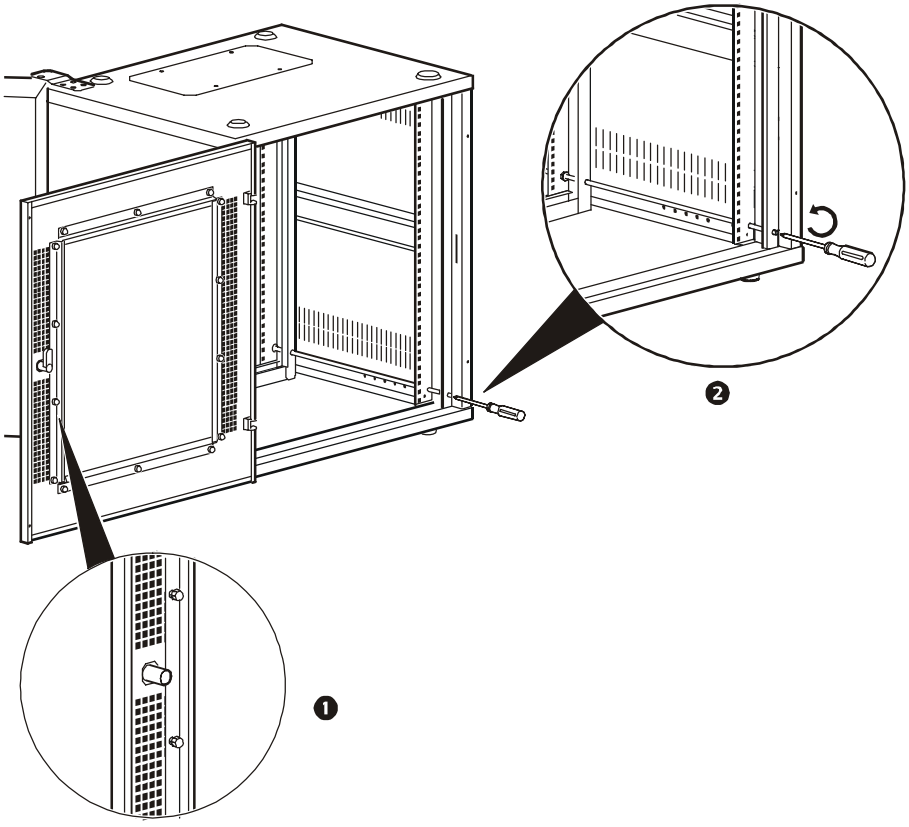
The enclosure is already fully assembled when you receive it. This section explains how to adjust the enclosure to accommodate particular components or site configurations.

Planning your configuration

Before installing your enclosure, plan the location and arrangement of components within the enclosure based on the available space.

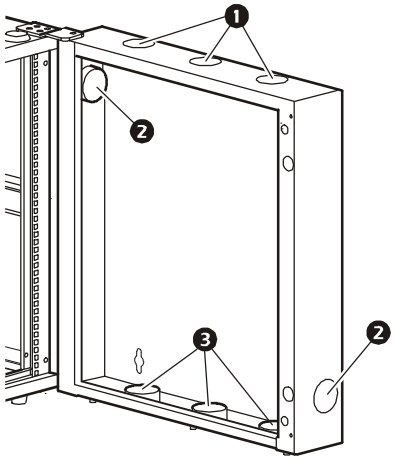
Door locks

The front and back doors of the unit have locks. The front door uses a key lock ❶, and the back door uses two locking rods ❷ that are accessible from the front of the unit. Use a small flathead screwdriver to unscrew each locking rod.

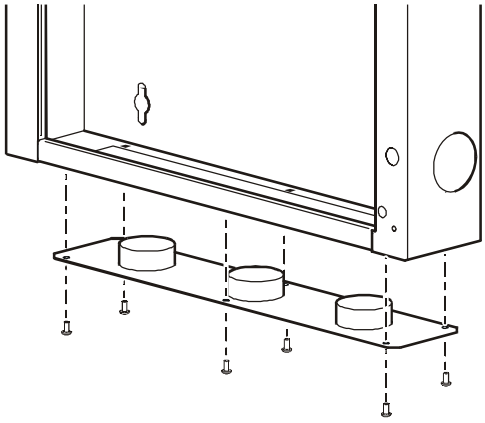


Cable access

The back door of the enclosure has eight openings for cable access: three in the top of the door ❶, one in either side of the door ❷, and three in the bottom of the door ❸. Each opening has an adjustable plastic cap for cable access.

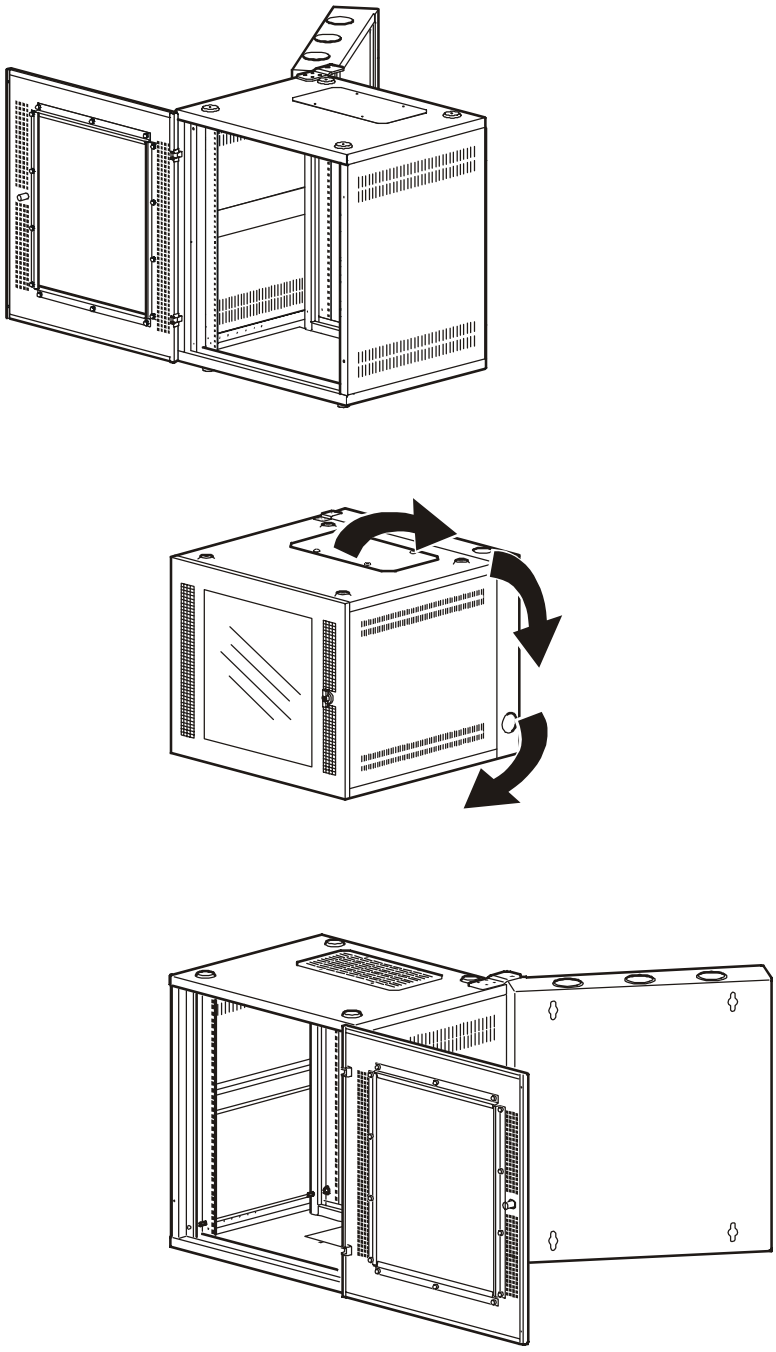


For unrestricted access to the back of the enclosure when the standard openings are insufficient; remove the six screws securing the access plate to the bottom of the rear door.



How to reverse the enclosure

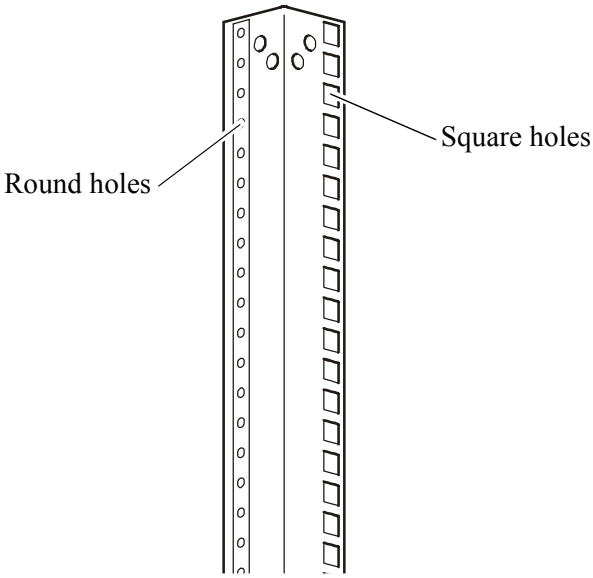
To reverse the enclosure to accomodate various configurations, turn it over so that the doors open in the opposite direction.



Mounting rails

This enclosure has square holes for using caged nuts and round #12-24 tapped holes for screws. You can reverse the front mounting rails to use either set of holes. You can also adjust the depth of the front rails to accommodate your equipment.

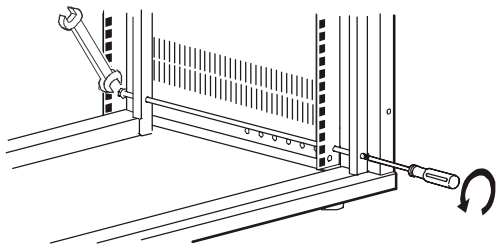
See “How to reverse the mounting rails” on page 8 and “How to adjust the depth of the front mounting rails” on page 9.



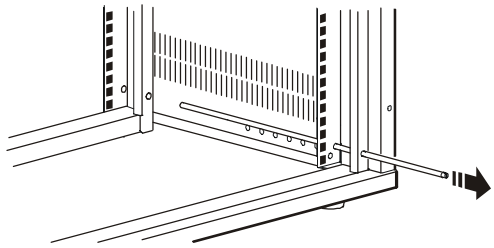
How to reverse the mounting rails

To reverse the front mounting rails, you must remove the locking rods, which are threaded through the upper and lower holes in the rail on the lock side of the enclosure, as shown.

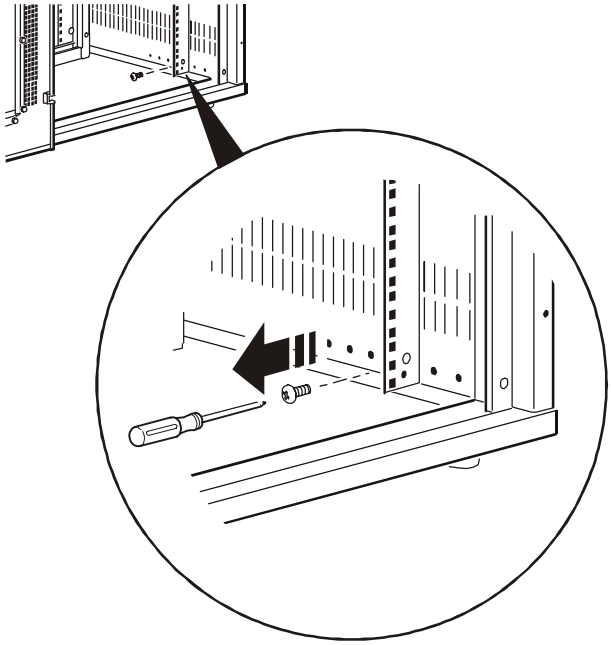
1. Each rod is held in place by a locking nut at the back of the enclosure. Use a 10-millimeter wrench to hold the nuts while you use a small flathead screwdriver to unscrew the locking rods.



2. Remove the rods from the enclosure.



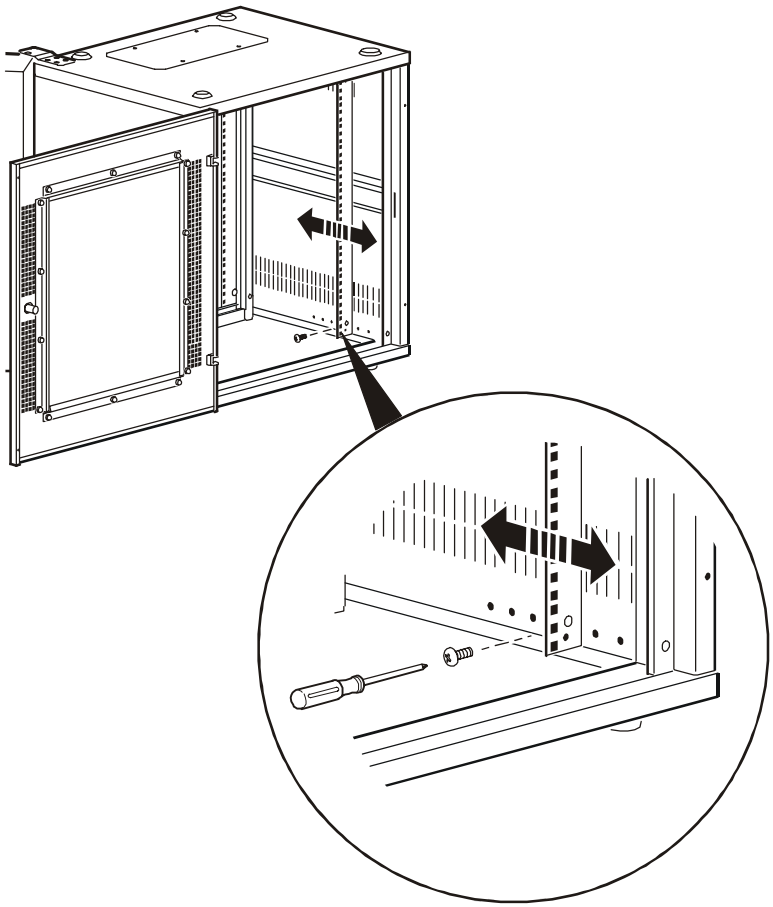
3. Use a Phillips screwdriver to remove the screws at the top and bottom of both rails.



4. Turn the rails over so that the holes you want to use are facing the front.
5. Adjust the depth of the rails as required. See step 2 and step 3 of "How to adjust the depth of the front mounting rails" on page 9.
6. Re-insert the locking rod through the holes at the top and bottom of the rail. Use the nuts to keep the locking rods in place. Use a small flathead screwdriver to lock the rear door.

How to adjust the depth of the front mounting rails

1. Use a Phillips screwdriver to remove the screws in the front mounting rail.
2. Reposition the mounting rail to the front or back in one of the seven available positions.
3. Replace and tighten the screws in the uppermost and lowermost holes.



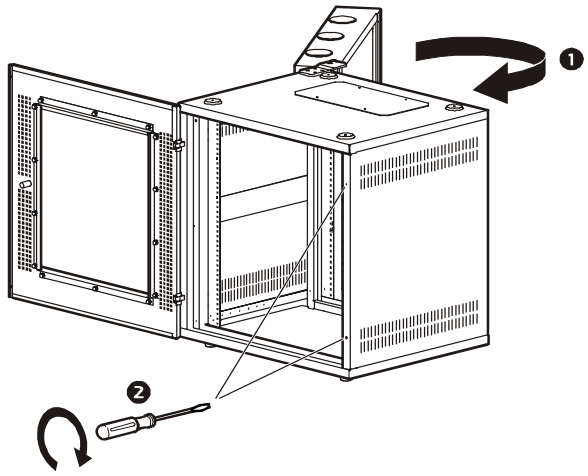
Floor Installation

Warning **To prevent the unit from tipping or becoming unstable and causing personal injury, install the rubber feet or securely mount it to the wall before installing any components.**

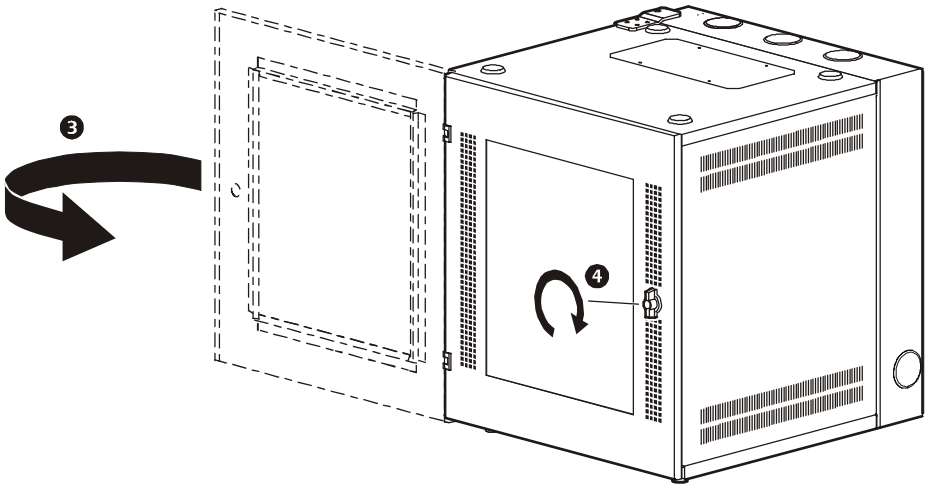
How to attach the rubber feet

Move the enclosure to a level location.

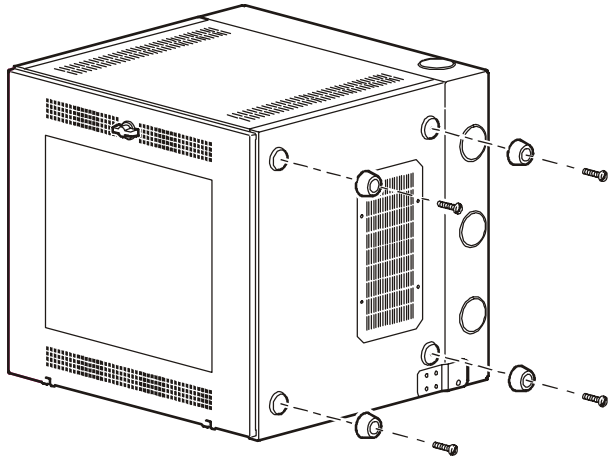
1. Close the back door (❶).
2. Use a flathead screw driver, turn the door locking rods clockwise to lock the back door (❷).



3. Close the front door (❸) and secure it by turning the handle clockwise (❹).



4. Lay the enclosure on its side.
5. Attach the rubber feet with the supplied screws.

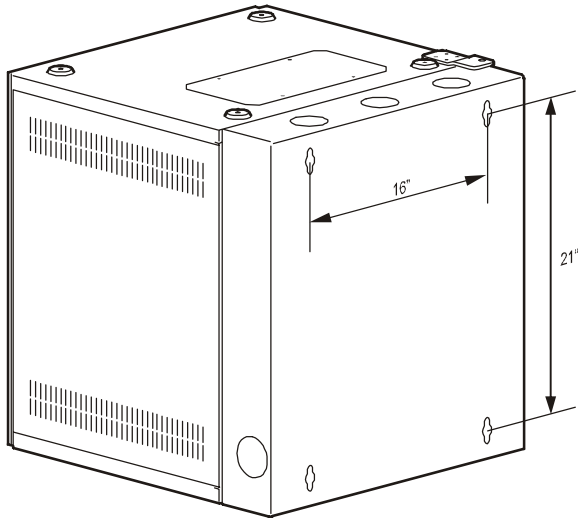


6. Set the unit upright.

Wall-Mounting the Enclosure

There are four keyhole cutouts on the back door that will accommodate up to a 3/8-inch bolt. The holes are on standard 16-inch (406.4 millimeter) centers horizontally, and 21-inch (533 millimeter) centers vertically. Use the included template with a level to position the unit properly.

Use appropriate fasteners to secure the enclosure to the wall. See “Specifications” on page 15 for weight of enclosure and maximum weight capacity.

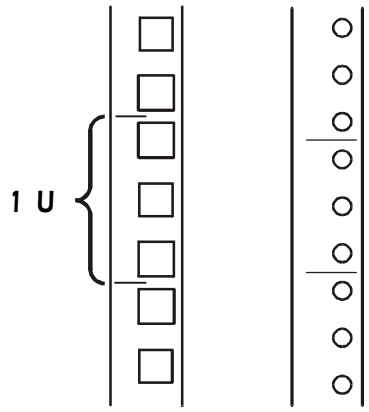


Installing Equipment

For specific information on how to mount rack equipment in the enclosure, see the installation instructions supplied with the equipment.

How to identify one U-space

To install most equipment, you must locate the top and bottom of a U-space on the mounting rails. This enclosure has square holes for using caged nuts and round #12-24 tapped holes for screws. For the caged nuts and the tapped holes, the narrower space above and below each set of the three mounting holes indicates the top and bottom of a U-space.



Caged nuts

During the installation of equipment in your enclosure, you may need to install or remove caged nuts. APC offers a caged nut hardware kit (AR8100) for use with square holes.

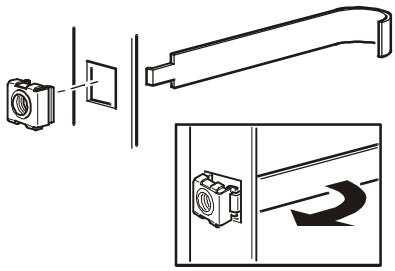
How to install and remove caged nuts

To install a caged nut:

Warning

Install the caged nut horizontally. Do not install the caged nut vertically with the sides of the caged nut engaging the top and bottom of the square hole.

1. Insert the caged nut into the square hole by hooking one side of the caged nut assembly through the far side of the hole.
2. Place the caged nut tool (provided) on the other side of the caged nut and pull to snap it into position.



To remove a caged nut:

1. Remove any attached screw.
2. Grasp the caged nut and squeeze the sides to release it from the square hole.

Specifications

Item	Measurement
Height	25.75 in (65.4 cm)
Width	23.0 in (58.4 cm)
Depth	24.25 in (61.6 cm)
Clearance (for wiring between front door and vertical rail)	2.94 in (7.48 cm)
Clearance (for wiring between rear door and vertical rail)	5 in (12.7 cm)
Maximum equipment depth	15.25 in (38.7 cm)
Net Weight	94 lb (42.6 kg)
Equipment weight capacity	100 lb (45.5 kg)
Ventilation (front door)	223 in^2 (1444 cm^2)
Ventilation (side panel)	33 in^2 (213 cm^2)
Ventilation (glass front door)	24 in^2 (158 cm^2)
Mounting space (without fan tray installed)	13U or 22.75 in (57.8 cm)

Warranty and Service

Limited warranty

APC warrants the NetShelter Wall-Mount Enclosure to be free from defects in materials and workmanship for a period of two years from the date of purchase. Its obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. This warranty does not apply to equipment that has been damaged by accident, negligence, or misapplication or has been altered or modified in any way. This warranty applies only to the original purchaser.

Warranty limitations

Except as provided herein, APC makes no warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose. Some jurisdictions do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

Except as provided above, in no event will APC be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of this product, even if advised of the possibility of such damage.

Specifically, APC is not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, costs of substitutes, claims by third parties, or otherwise. This warranty gives you specific legal rights and you may also have other rights, which vary according to jurisdiction.

Obtaining service

To obtain support for problems with your NetShelter Wall-Mount Enclosure:

1. Note the serial number and date of purchase. The serial number is located at the rear of the enclosure, on the center of the top enclosure frame.
2. Contact Customer Support at a phone number on the back cover of this manual. A technician will try to help you solve the problem by phone.
3. If you must return the product, the technician will give you a return material authorization (RMA) number. If the warranty expired, you will be charged for repair or replacement.
4. Pack the unit carefully. The warranty does not cover damage sustained in transit. Enclose a letter with your name, address, RMA number and daytime phone number; a copy of the sales receipt; and a check as payment, if applicable.
5. Mark the RMA number clearly on the outside of the shipping carton.
6. Ship by insured, prepaid carrier to the address provided by the Customer Support technician.

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APC Worldwide Customer Support

Customer support for this or any other APC product is available at no charge in any of the following ways:

- Visit the APC Web site to access documents in the APC Knowledge Base and to submit customer support requests.
  - **www.apc.com** (Corporate Headquarters)

    Connect to localized APC Web sites for specific countries, each of which provides customer support information.
  - **www.apc.com/support/**

    Global support searching APC Knowledge Base and using e-support.
- Contact an APC Customer Support center by telephone or e-mail.
  - Regional centers:

Direct InfraStruXure Customer Support Line	(1)(877)537-0607 (toll free)
APC headquarters U.S., Canada	(1)(800)800-4272 (toll free)
Latin America	(1)(401)789-5735 (USA)
Europe, Middle East, Africa	(353)(91)702000 (Ireland)
Japan	(0) 35434-2021
Australia, New Zealand, South Pacific area	(61) (2) 9955 9366 (Australia)

  - Local, country-specific centers: go to **www.apc.com/support/contact** for contact information.

Contact the APC representative or other distributor from whom you purchased your APC product for information on how to obtain local customer support.

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