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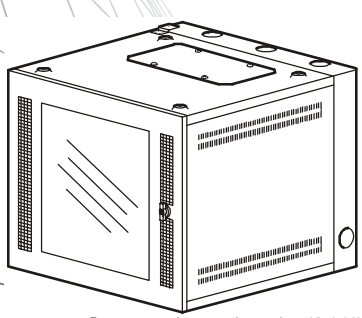
Unpacking, Installation, and Customization

NetShelter® WX Enclosure



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Product Overview

Description

American Power Conversion (APC®) NetShelter® 13-U Wall-Mount Enclosures (AR100, AR100S, AR100HD, and AR100HDS) provide storage for industry-standard (EIA-310) 19-inch (482-millimeter) rack-mount hardware, including voice, data, networking, and internetworking equipment.

NetShelter WX Enclosure

Model	Rack Mounting Height	Rack Mounting Width	External Enclosure Width	Description
AR100	13 U†	19 in (482 mm)	23 in (584.2 mm)	Enclosure with glass door and M6 tapped mounting rails
AR100HD	13 U	19 in (482 mm)	23 in (584.2 mm)	Enclosure with vented door and M6 tapped mounting rails
AR100S	13 U	19 in (482 mm)	23 in (584.2 mm)	Enclosure with glass door and square hole mounting rails
AR100HDS	13 U	19 in (482 mm)	23 in (584.2 mm)	Enclosure with vented door and square hole mounting rails

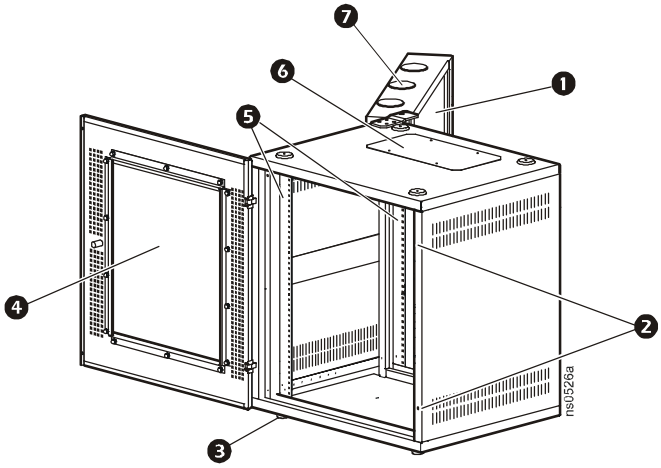
†One U=1.75 in (44.45 mm)

This fully reversible unit has the following:

- Storage height for 19-inch rack-mount equipment
- Smoked, tempered glass front door (AR100 and AR100S) 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 cage nut holes
- Fixed rear mounting rails with square cage nut holes

Product Inventory

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

Before Installation

Tools

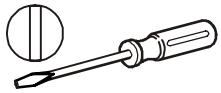
A bag containing the mounting hardware, provided cage nut tool, and door keys is fastened to the floor of the enclosure.

Tools (provided)

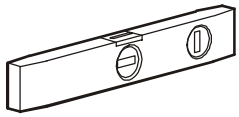
Cage nut tool

Other tools required (not provided)

Allen wrench (1)



Small flathead screwdriver (1)



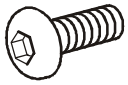
Level (1)

10-mm open-ended wrench (1)

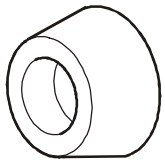
Hardware

Hardware (provided)

#12-24 screws (30)



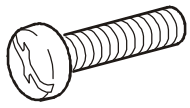
M6 × 22 mm socket-head screws (4)



Rubber feet (4)

M6 cage nuts (30)

Plastic cup washers (30)



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

Unpacking

How to unpack the enclosure

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 a time.

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

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

Please recycle

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

Disclaimer

APC is not responsible for damage sustained during reshipment of this product.

Verify the inventory

After unpacking the enclosure, verify that all required components and hardware have been shipped. See “Product Inventory” on page 2 for a list of components and hardware.

If any items are missing, contact APC Customer Support at a number on the back cover of this manual, or at the APC Web site, **www.apc.com**.

Configuration

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

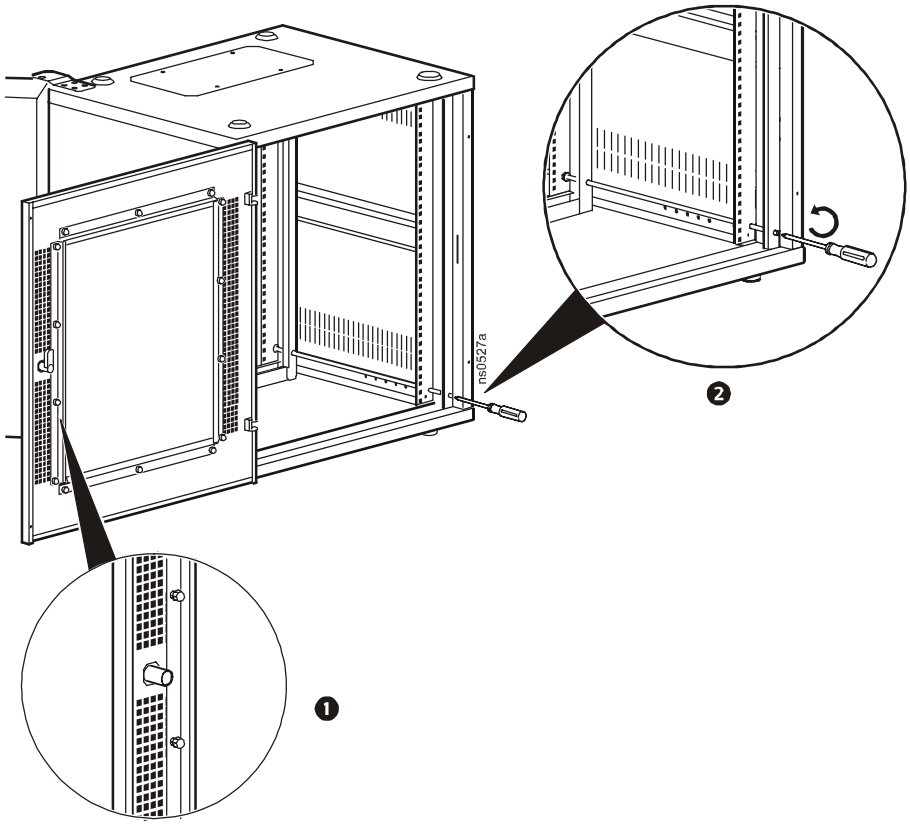
The Rack Configurator, available on the APC Web site, **www.apc.com**, helps you plan your configuration to maximize the available U-space of your enclosure.

Note

APC Uninterruptible Power Supply (UPS) products should be mounted in the bottom of the enclosure.

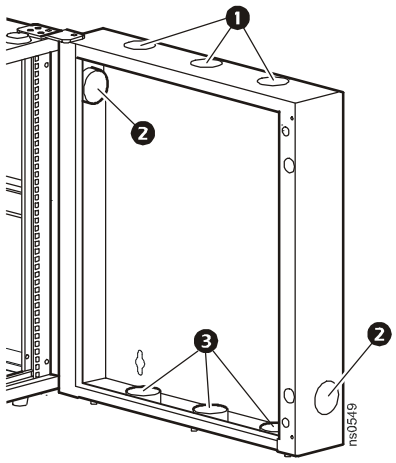
Door locks

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.

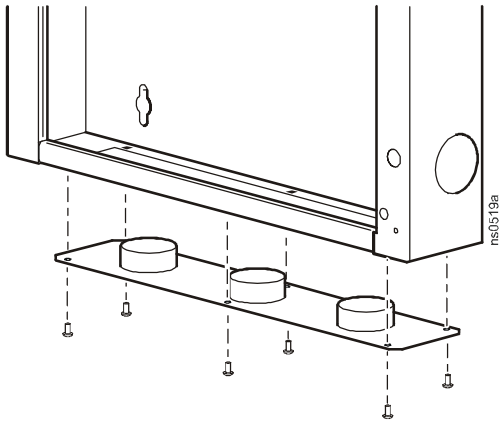


Cable access

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.

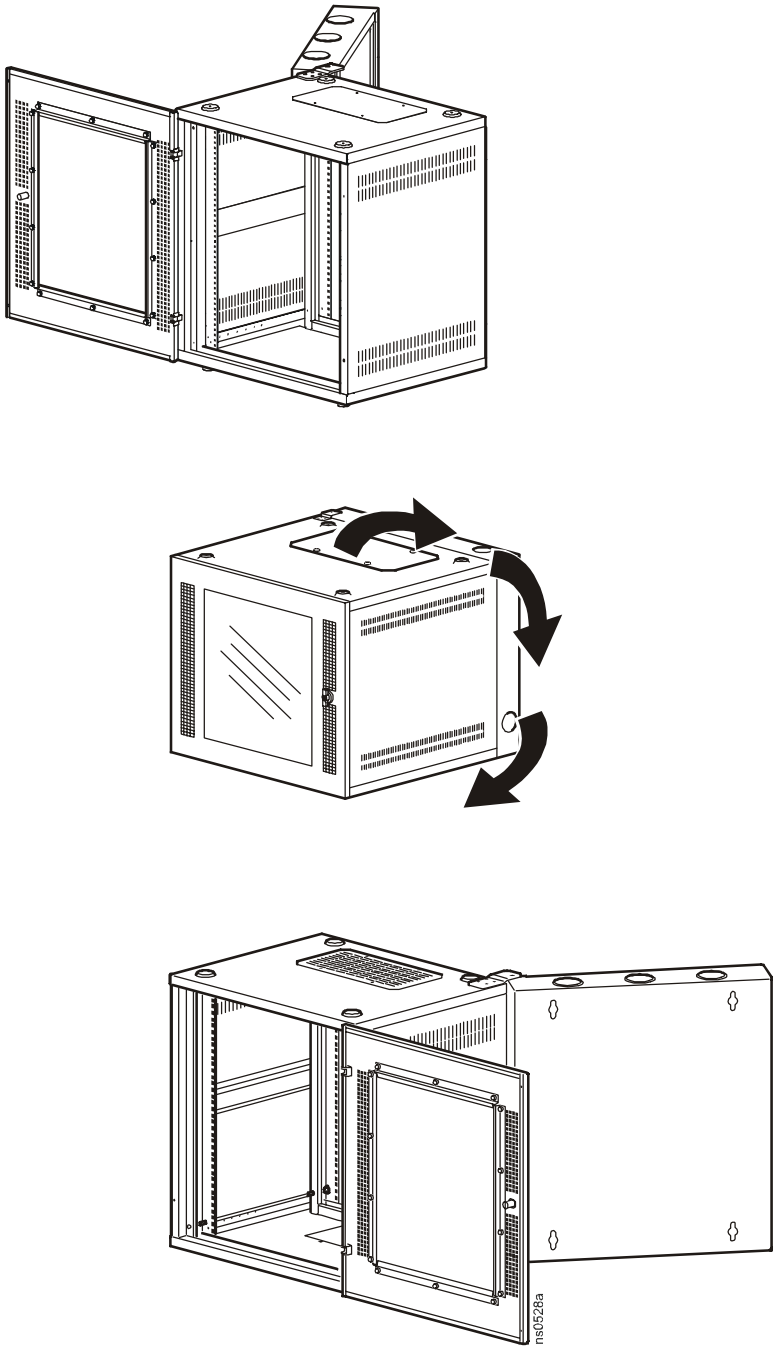


For unrestricted access to the back of the enclosure when the standard openings are insufficient, remove the six screws securing the access plate to the bottom of the rear door.



Reversing the enclosure

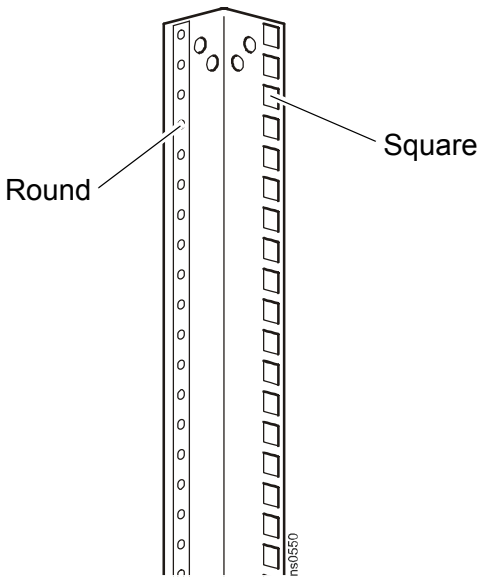
To reverse the enclosure to accomodate various configurations, turn it over so that the doors open in the opposite direction.



Mounting rails

This enclosure has square holes for using cage 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.

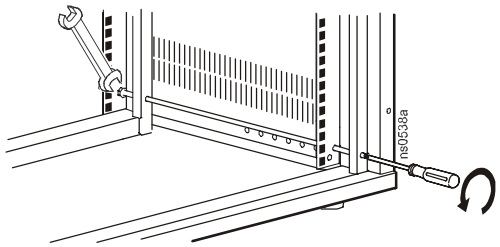
See “How to reverse the mounting rails” on page 8 and “Adjusting the depth of the front mounting rails” on page 10.



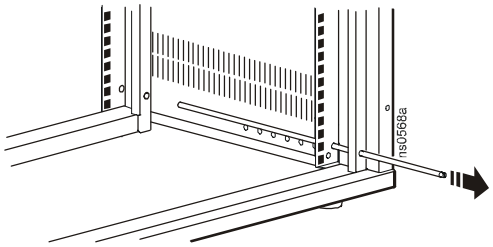
Reversing the mounting rails

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.

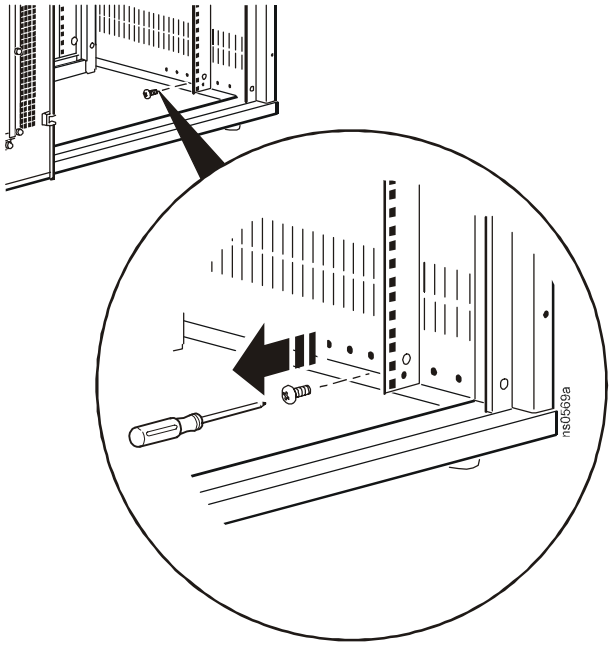
1. Each rod is held in place by a locking nut at the back of the enclosure. Use a 10-mm wrench to hold the nuts while you use a small flathead screwdriver to unscrew the locking rods.



2. Remove the rods from the enclosure.



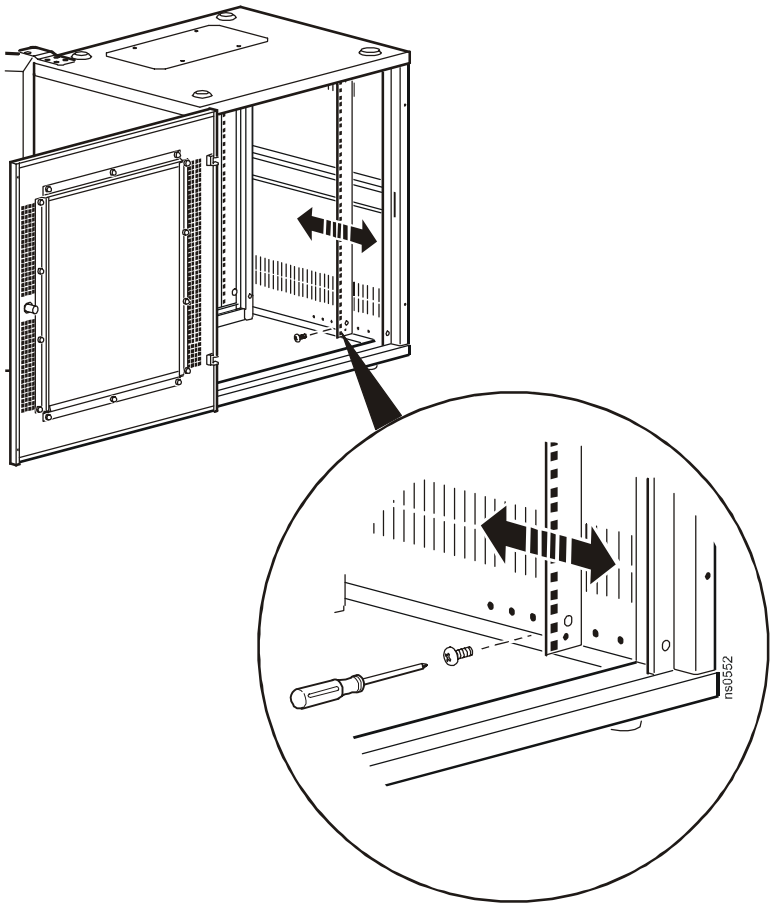
3. Use a Phillips screwdriver to remove the screws at the top and bottom of both rails.



4. Turn the rails over so that the the upper and lower holes are facing the front of the enclosure.
5. Adjust the depth of the rails as required. See step 2 and step 3 of “Adjusting the depth of the front mounting rails” on page 10.
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.

Adjusting 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 of the enclosure in one of the seven available positions.
3. Replace and tighten the screws in the highest and lowest holes.



Installation

How to Install the Enclosure

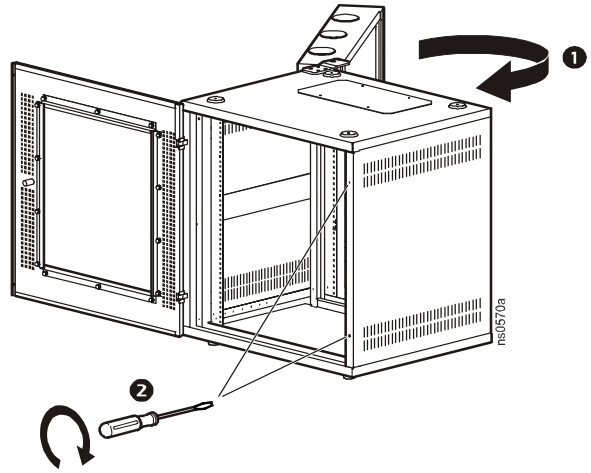
Warning

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.

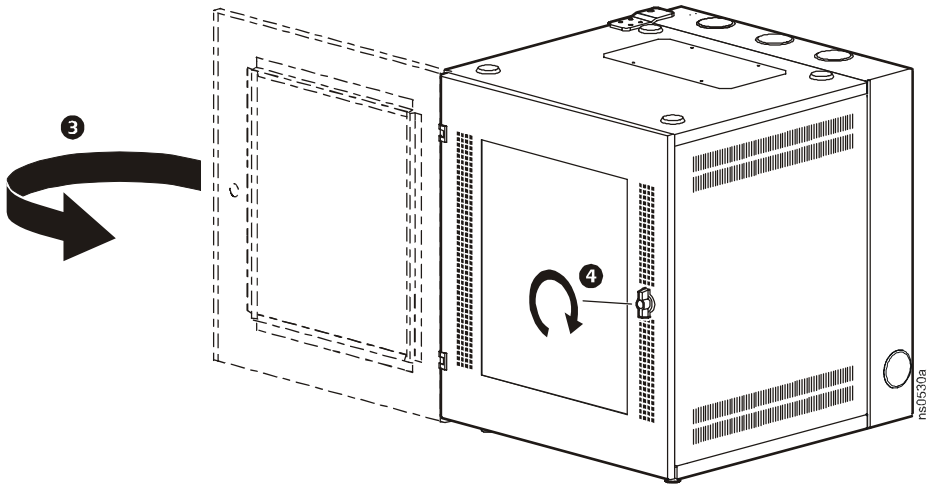
Attaching the rubber feet

Move the enclosure to a level location.

1. Close the back door ❶.
2. Using a flathead screwdriver, turn the door-locking rods clockwise to lock the back door ❷.

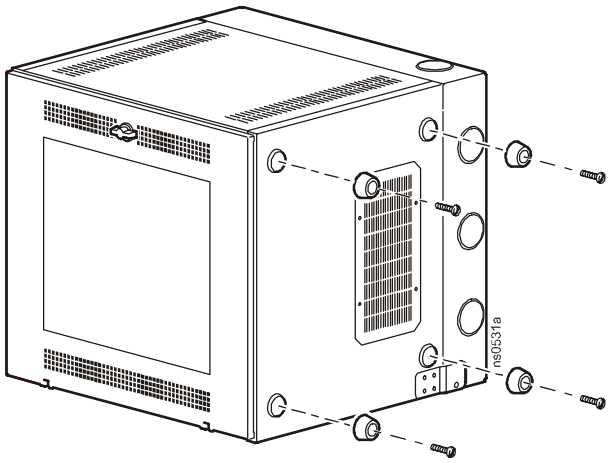


3. Close the front door ❸ and secure it by turning the handle clockwise ❹.



4. Lay the enclosure on its side.

5. Attach the rubber feet with the supplied screws.

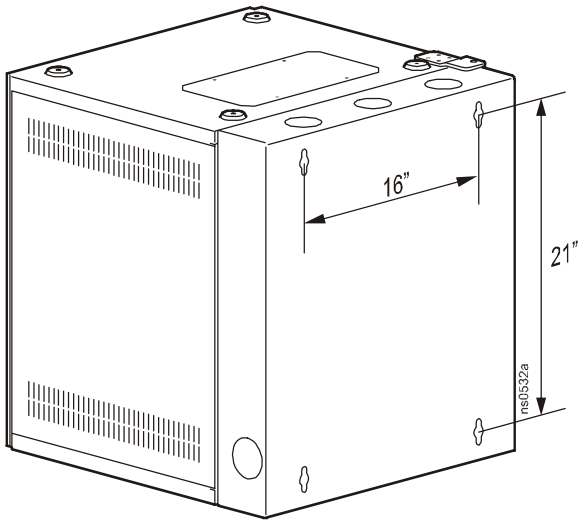


6. Set the enclosure upright.

Wall-Mounting the Enclosure

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

Use appropriate fasteners to secure the enclosure to the wall. For the weight of the enclosure and its maximum weight capacity, see “Specifications” on page 15.

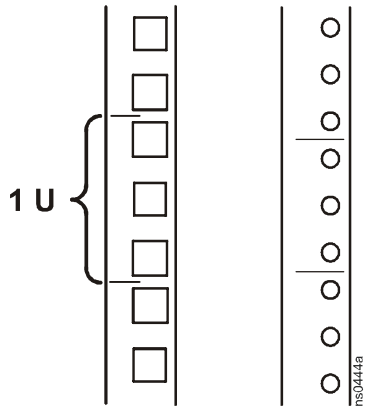


Installing Equipment

For specific information on how to mount rack equipment in the enclosure, see the installation instructions supplied with the equipment. No rail kits are utilized with the APC UPS products, so the UPS products should be mounted in the bottom of the enclosure. The UPS products will rest on the bottom cross-members of the NetShelter WX.

Identifying 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 cage nuts and round #12-24 tapped holes for screws. For the cage 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.



Installing cage nuts

APC offers a cage nut hardware kit (AR8100) for use with square holes.

Warning

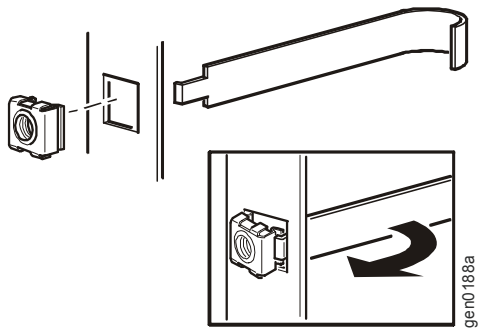
Install cage nuts horizontally, with the ears engaging the sides of the square hole. Do NOT install cage nuts vertically with the ears engaging the top and bottom of the square hole

1. Insert the cage nut into the square hole by hooking one ear of the cage nut assembly through the far side of the hole.

Note

Install the cage nuts on the interior of the mounting rails.

2. Place the cage nut tool (provided) on the other ear of the cage nut and pull to snap it into position.



Removing cage nuts

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

Specifications

Item	Measurement
Height	25.75 in (654.05 mm)
Width	23.00 in (584.20 mm)
Depth	24.25 in (615.95 mm)
Maximum equipment depth	19.00 in (482.60 mm)
Net weight	94.00 lb (42.60 kg)
Equipment weight capacity	200.00 lb (90.72 kg)
Ventilation (front door)	223.00 in^2 (143 870.70 mm^2)
Ventilation (side panel)	33.00 in^2 (21 290.28 mm^2)
Ventilation (glass front door)	24.00 in^2 (15 483.84 mm^2)
Mounting space (without fan tray installed)	13 U or 22.75 in (577.85 mm)

APC Limited Factory Warranty

The limited warranty provided by American Power Conversion (APC®) in this Statement of Limited Factory Warranty applies only to Products you purchase for your commercial or industrial use in the ordinary course of your business.

Terms of Warranty

American Power Conversion warrants its products to be free from defects in materials and workmanship for a period of five years (two years in Japan) from the date of purchase. Its obligation under this warranty is limited to repairing or replacing, at its sole discretion, 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. Repair or replacement of a defective product or part thereof does not extend the original warranty period. Any parts furnished under this warranty may be new or factory- remanufactured.

Non-transferable Warranty

This warranty applies only to the original purchaser who must have properly registered the product. Product may be registered at http://www.warranty.apc.com .

Exclusions

APC shall not be liable under the warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by end user's or any third person's misuse, negligence, improper installation or testing. Further APC shall not be liable under the warranty for unauthorized attempts to repair or modify wrong or inadequate electrical voltage or connection, inappropriate on-site operation conditions, corrosive atmosphere, repair, installation, start-up by non-APC designated personnel, a change in location or operating use, exposure to the elements, Acts of God, fire, theft, or installation contrary to APC recommendations or specifications or in any event if the APC serial number has been altered, defaced, or removed, or any other cause beyond the range of the intended use.

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Warranty Claims

Customers with warranty claims issues may access the APC worldwide customer support network by visiting http://www.apc.com/support. Select your country from the country selection pull-down menu. Open the Support tab at the top of the web page to obtain contact information for customer support in your region.

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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