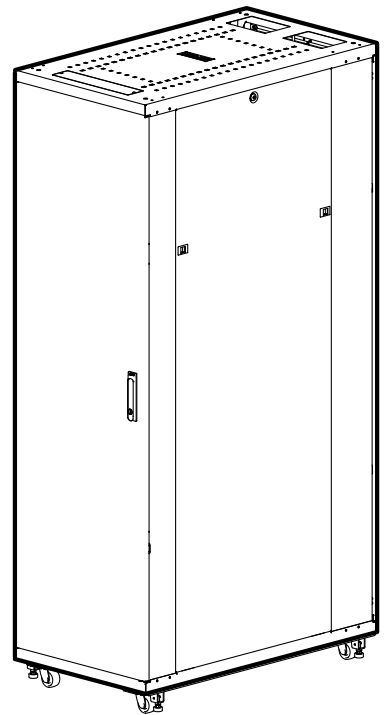


# Unpacking and Assembly Instructions

## NetShelter SV

AR2400FP1





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## **Please Note:**

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

No responsibility is assumed by APC by Schneider Electric for any consequences arising from the use of this material.



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# General Information

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## Introduction

The NetShelter SV Flatpack 600mm (23.6 in) wide cabinet is for storage of industry-standard (EIA/ECA-310), 483 mm (19 in) rack-mount hardware, which includes servers and voice, data, networking, internetworking, and APC power protection equipment.

This manual provides assembly instruction for:

**NetShelter SV 42 U, 600 mm (23.6 in) wide, 1060 mm (41.7 in) deep cabinet (AR2400FP1)**

### **NOTICE**

- NetShelter SV cabinets are intended for use with approved equipment. If you install other than approved equipment, fully evaluate the safety of your configuration.
- For cabinet installation and customization, see the NetShelter SV User Manual available on the website, [www.apc.com](http://www.apc.com).
- Use only qualified personnel to install the cabinet.

## Safety

### Important Safety Information

Read the instructions carefully to become familiar with the equipment before trying to assemble, operate, service or maintain it. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a Danger or Warning safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **⚠ DANGER**

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

### **⚠ WARNING**

Indicates a potentially hazardous situation which, if not avoided, can result in death or serious injury.

### **⚠ CAUTION**

Indicates a potentially hazardous situation which, if not avoided, can result in moderate injury.

### **NOTICE**

Addresses practices not related to physical injury including certain environmental hazards, potential damage or loss of data.

# Receiving and Unpacking

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<b><i>NOTICE</i></b>
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APC by Schneider Electric is not responsible for damage sustained during shipment of this product.
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## Inspection

Upon receipt, inspect the package and contents for damage. Verify the contents are complete.

If damage is found it should be noted on the bill of lading and a claim should be filed with the shipping company.

Keep all packaging for inspection by the shipping company.

## Moving the Equipment

The recommended tools for moving the equipment while it is still on the pallet, include:

Pallet Jack



Forklift



<b><i>NOTICE</i></b>
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The assembled cabinet can be rolled to its final location using its casters if the floor is smooth and clean.
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# Unpacking

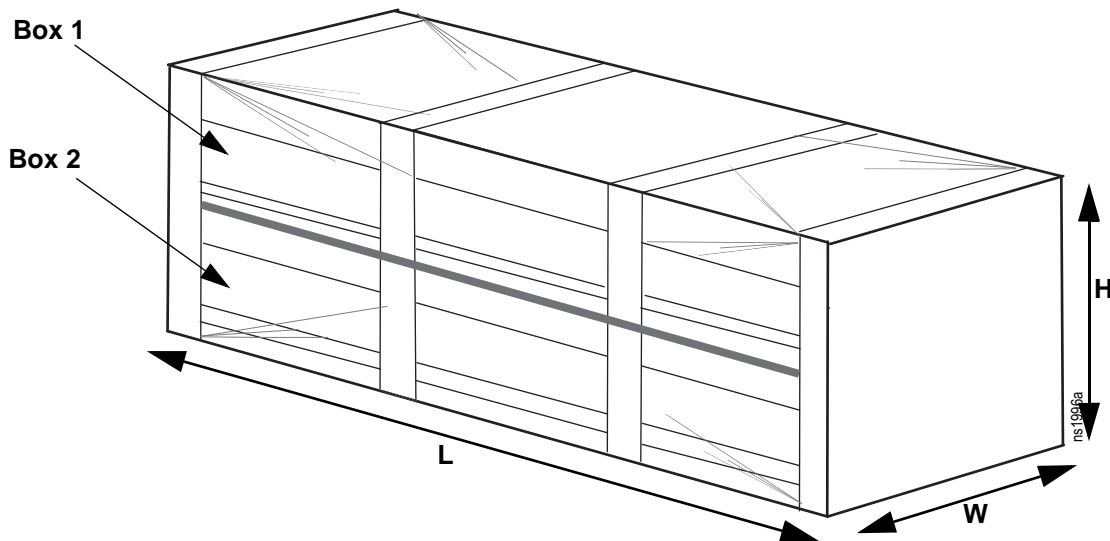
## ⚠ CAUTION

### HEAVY EQUIPMENT HAZARD

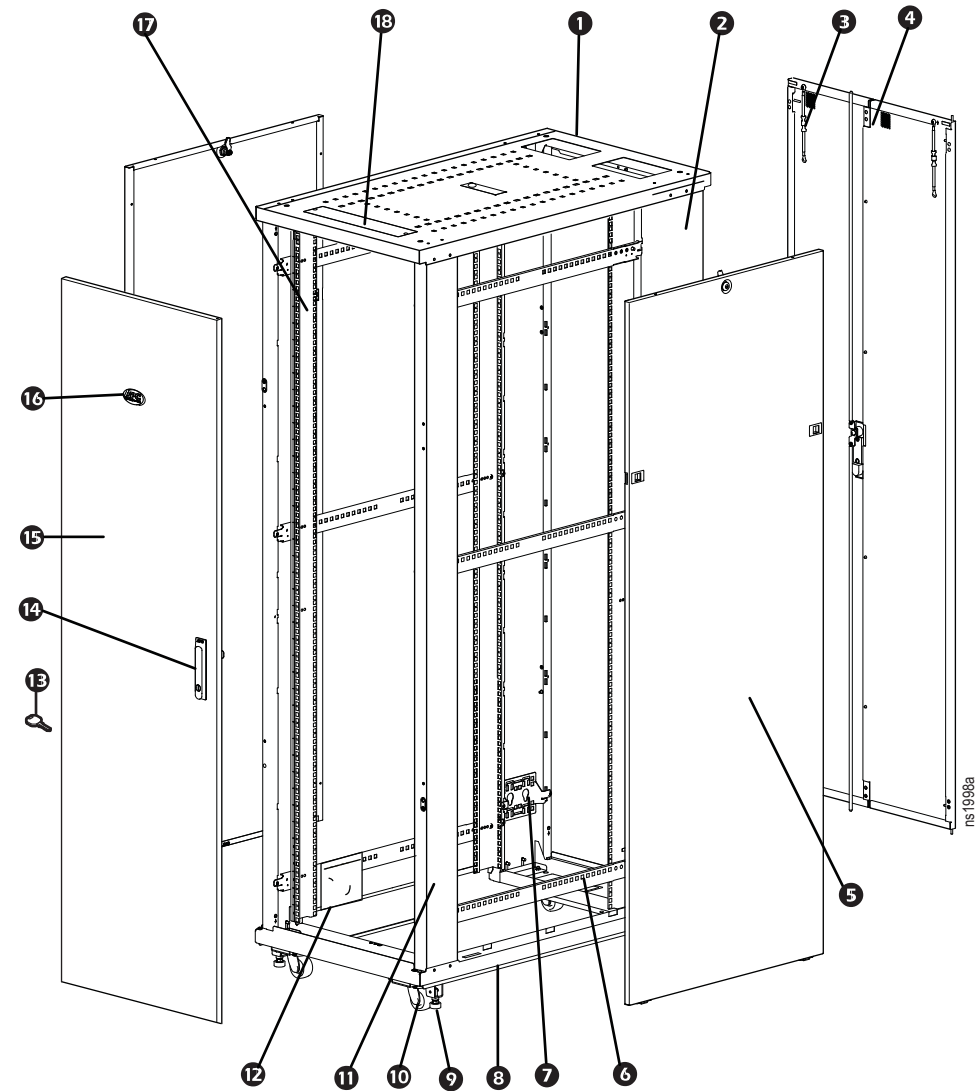
Use at least two people when unpacking, lifting and assembling this equipment.  
**Failure to follow these instructions can result in injury.**

1. Move the shipping pallet to a firm, level surface in an open area.
2. Inspect for visible signs of shipping damage. See “Inspection” on page 2 for more information.
3. Use cutting pliers to carefully cut the packing straps securing the boxes to the pallet.
4. Remove the two boxes from the pallet.

Item	Weight kg (lb)	Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)
Package	221.1 (487.4)	2230 (87.8)	810 (31.9)	683 (26.9)
Box 1	95.7 (211.0)	2177 (85.7)	771 (30.3)	330 (13.0)
Box 2	98.7 (217.6)	2177 (85.7)	771 (30.3)	209 (8.2)

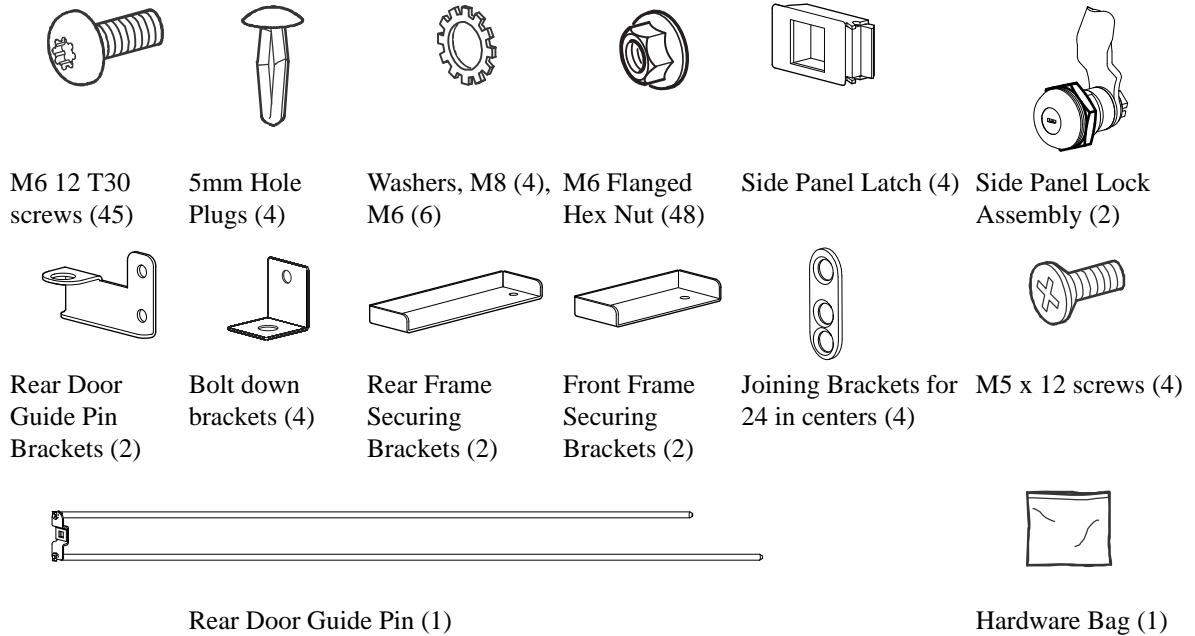


# Component Identification

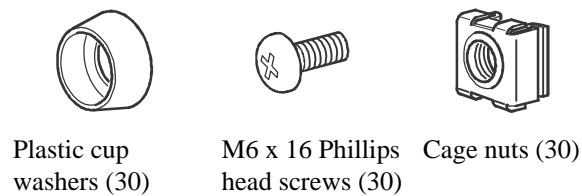


Item	Description	Qty	Box	Item	Description	Qty	Box
1	Roof	1	1	10	Casters	4	1
2	Rear Frame	1	1	11	Front Frame	1	2
3	Grounding wire (attached to doors)	3		12	Hardware Bag	1	1
4	Rear Split Doors	2	2	13	Door and Side Panel Keys	2	1
5	Side Panels	2	2	14	Door Handles	2	1
6	Horizontal Side Braces	6	1	15	Front Door	1	2
7	Accessory Mounting Brackets	4	1	16	APC Nameplate	1	1
8	Base	1	1	17	Vertical Mounting Flanges	4	1
9	Leveling Feet	4	1	18	Roof/Base Access Panels	2	1

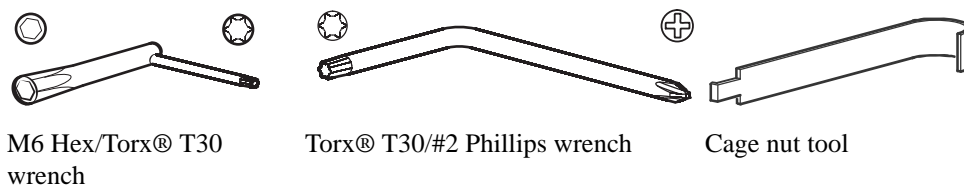
## Cabinet Assembly Hardware



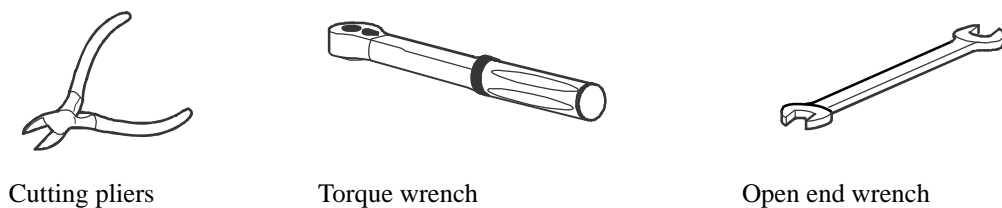
## Equipment Installation Hardware



## Tools (provided)



## Tools (not provided)



# Cabinet Assembly

## Base

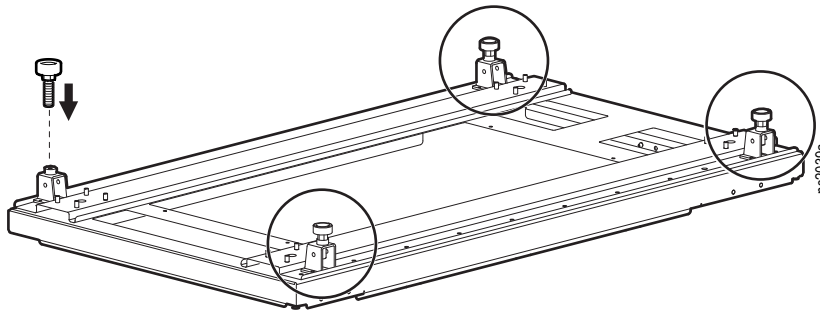
### ⚠ CAUTION

#### WEIGHT/LOAD/STRUCTURAL HAZARD

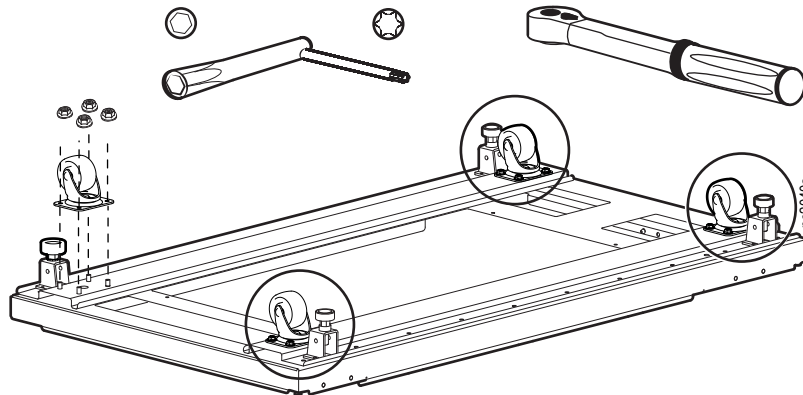
- Use at least two people when unpacking, lifting and assembling this equipment.
- Do not step on or into the cabinet base.
- A torque wrench is required for proper assembly.
- Assure that all fasteners are torqued to the specified value.

**Failure to follow these instructions can result in injury.**

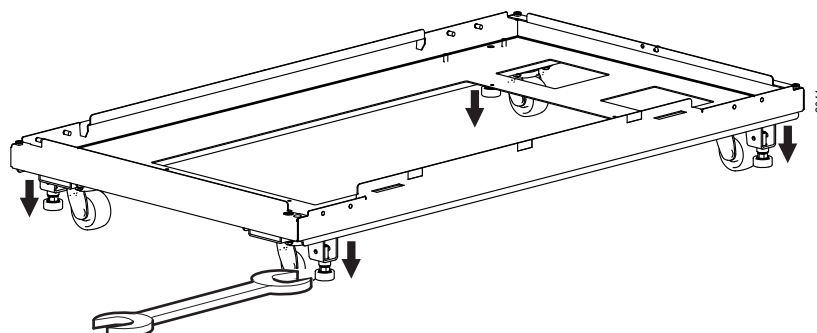
1. Install the four leveling feet into the brackets.



2. Install the four swivel casters. Secure the casters with 16 flanged hex nuts, 4 for each caster mounting bracket, and tighten. Torque to 70 - 75 in-lb (7.9 - 8.5 N-m).

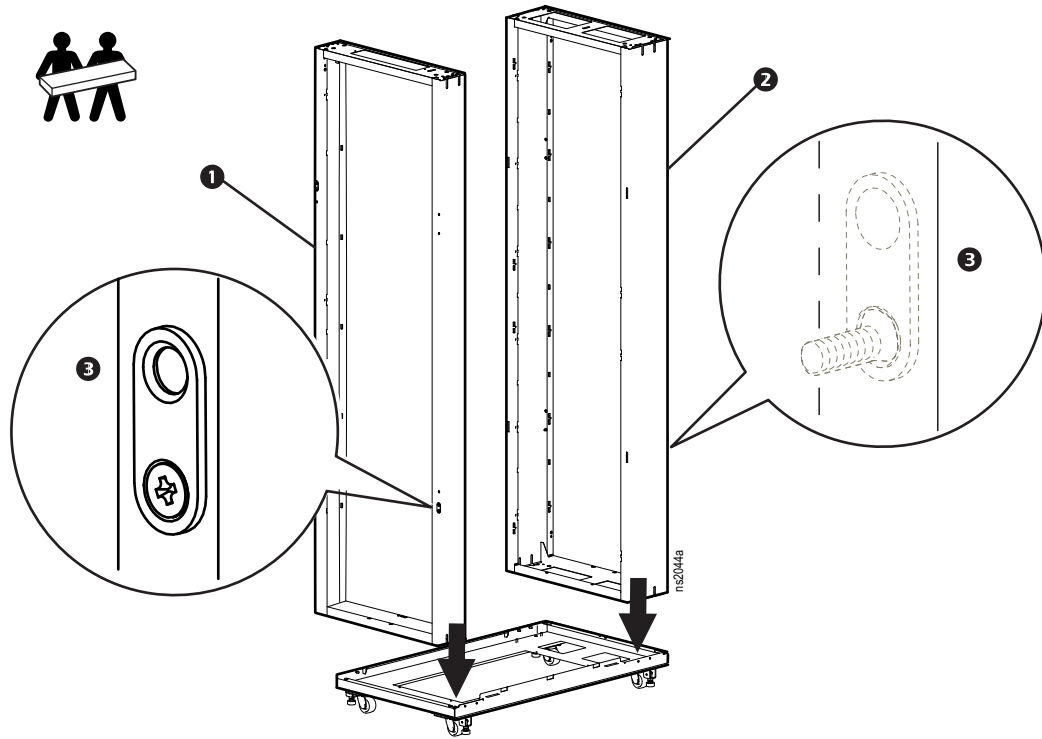


3. Use an open ended wrench to lower the leveling feet for support during assembly of the cabinet.

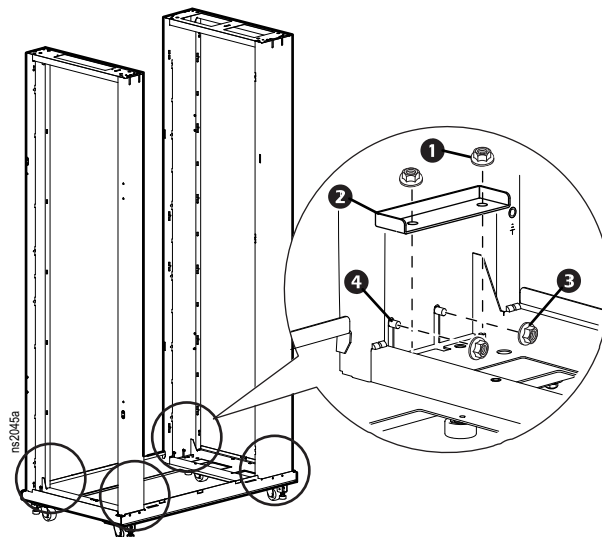


# Front and Rear Frame

1. Place the front frame **1** and the rear frame **2** on the base. Ensure that the joining brackets **3** are facing outward.

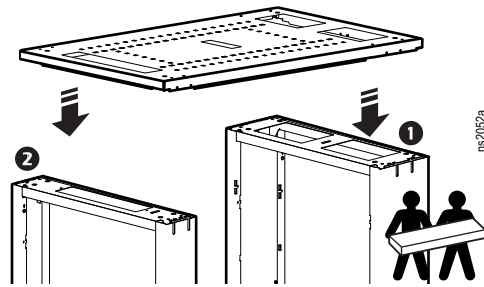


2. Install the front and rear frames using the Front and Rear Frame Securing Brackets **2** and securing with two M6 flanged hex nuts **1**, leaving the nuts slightly loose.
3. Install two M6 flanged hex nuts **3** to the threaded studs **4** on the side frames, securing loosely.

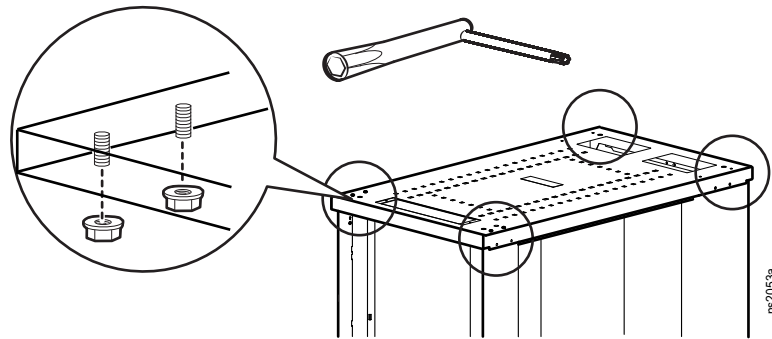


# Roof

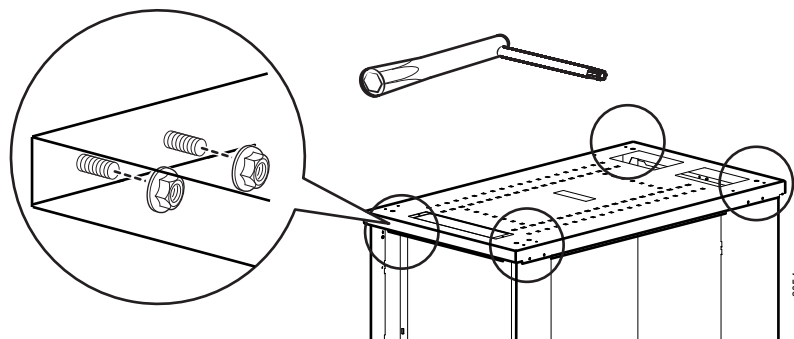
1. Install the roof to the rear **1** and front **2** frames.



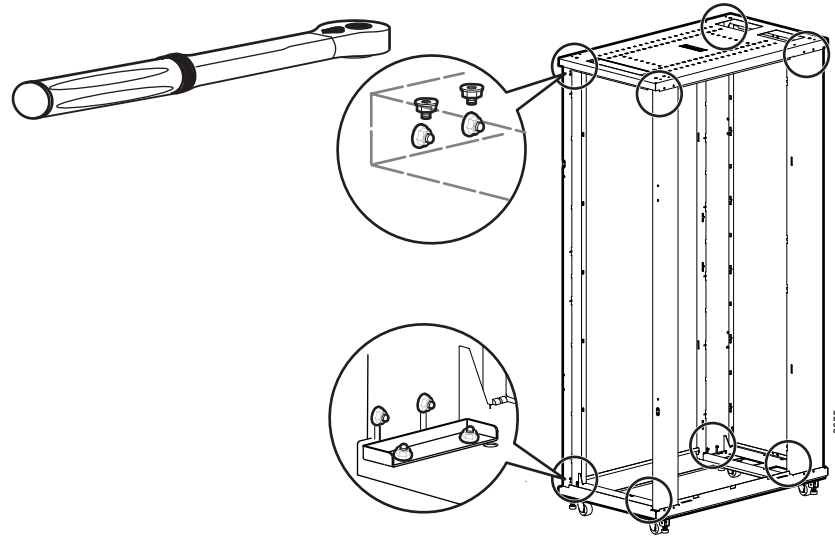
2. Loosely secure the roof from underneath using eight M6 flanged hex nuts.



3. Loosely install eight M6 flanged hex nuts to the side frames.

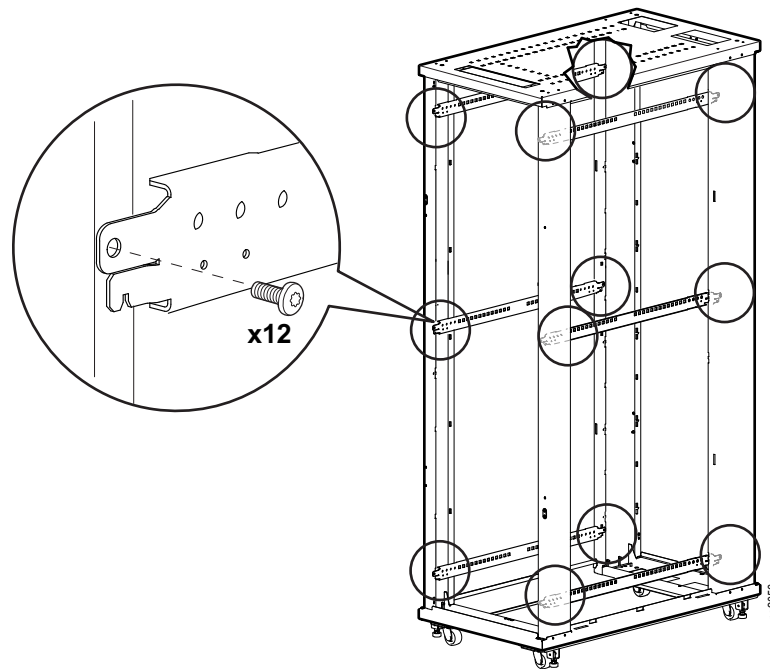


4. Tighten the top and bottom hex nuts securing the frame to the base and the roof.  
Torque to 70 - 75 in-lb (7.9 - 8.5 N-m).
5. Tighten the hex nuts on the side of the frames to the roof and the base.  
Torque to 70 - 75 in-lb (7.9 - 8.5 N-m).
6. Inspect the roof, and ensure that all parts are in place and tightened to torque specifications.



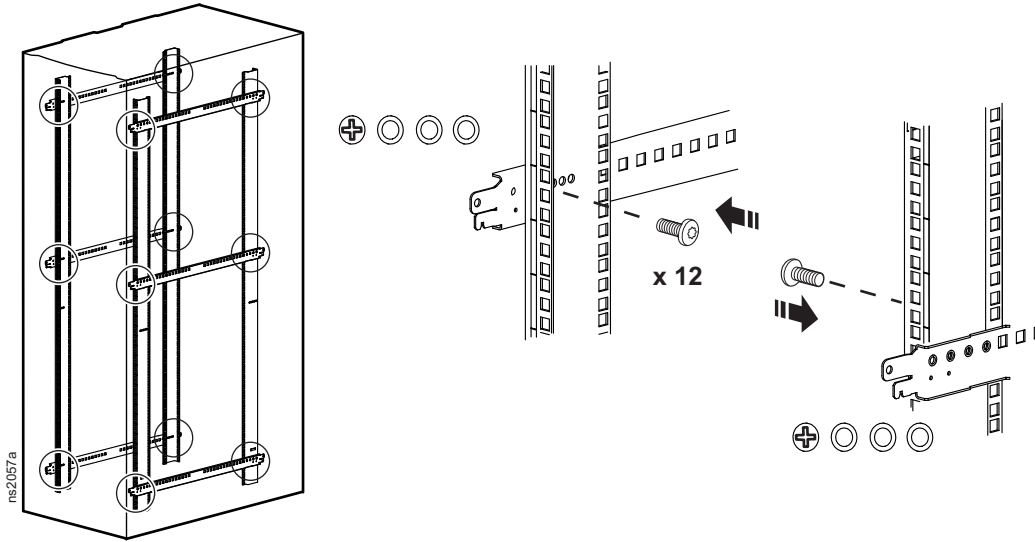
## Horizontal Side Braces

1. Insert the six side braces into the front and rear frames.
2. Secure with twelve M6 x 12 T30 screws. Torque to 28 - 30 in-lb (3.2 - 3.4 N-m).



# Vertical Mounting Flanges

Attach the four Vertical Mounting Flanges to the top, middle, and bottom side braces using M6 x 12 T30 screws. Torque to 28 - 30 in-lb (3.2 - 3.4 N-m).

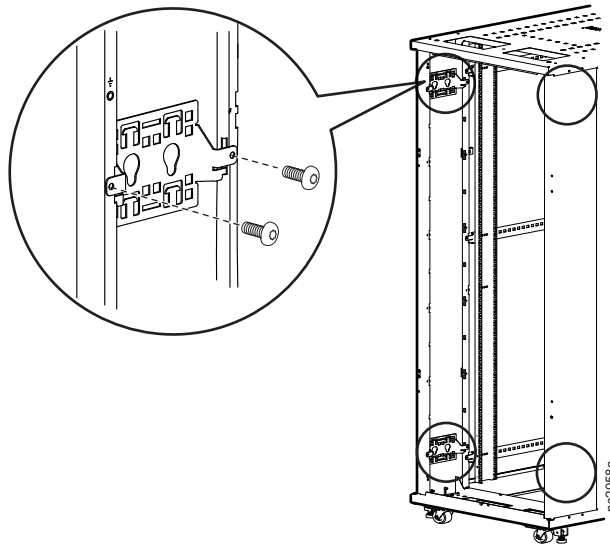


## NOTICE

For proper alignment of the Vertical Mounting Flanges, ensure that the same mounting hole on the flange is used to attach to the side brace at the top, middle and bottom.

# Accessory Mounting Bracket

1. Insert the four Accessory Mounting Brackets into the rear frame.
2. Secure with eight M6 x 12 T30 screws. Torque to 28 - 30 in-lb (3.2 - 3.4 N-m).

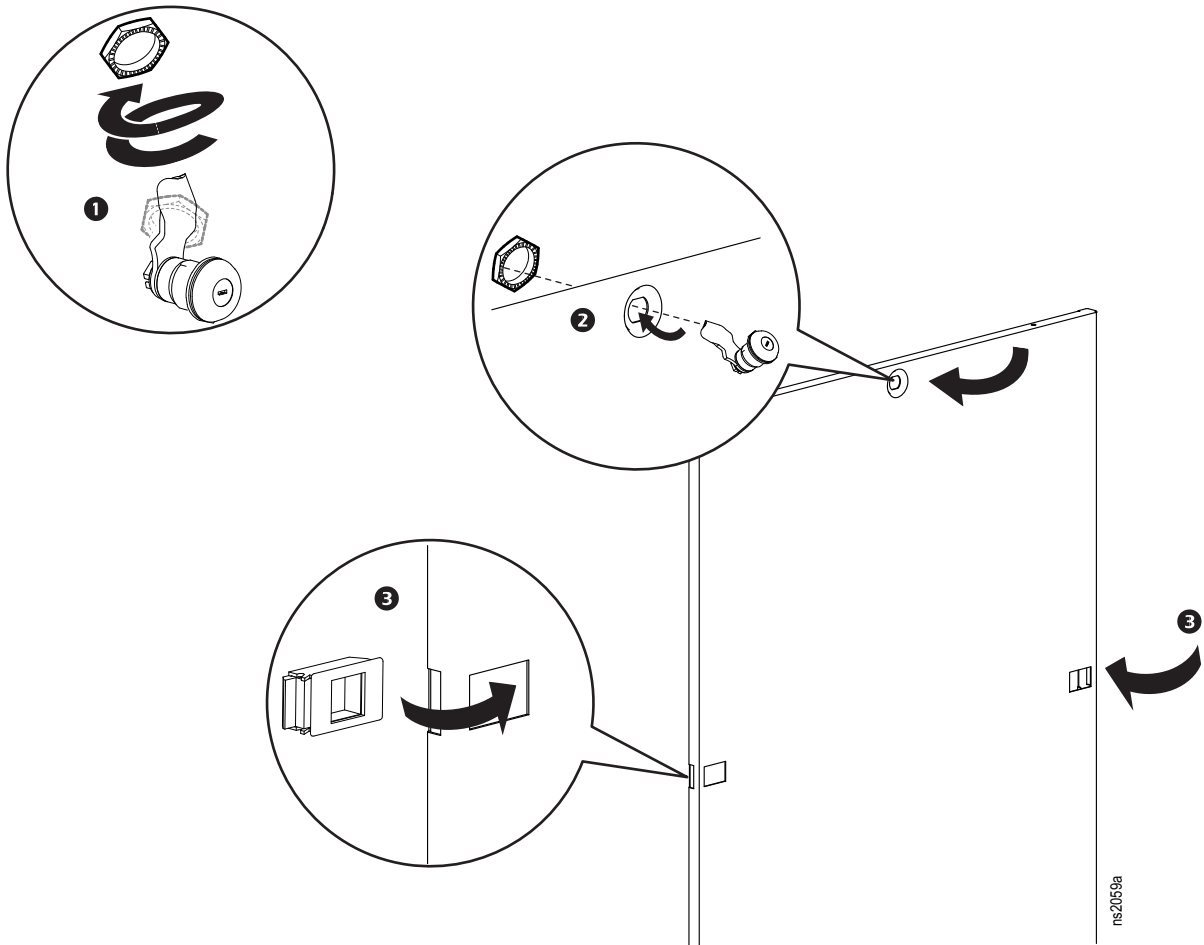




# Side Panels

## Lock assembly and side latch installation

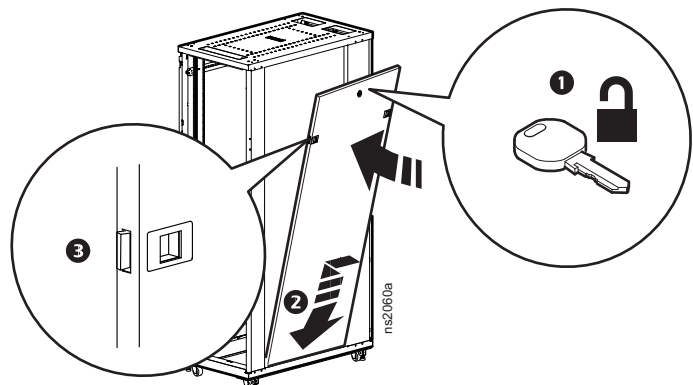
1. Remove the lock nut from the lock assembly
2. Install as shown on each of the 2 side panels.
3. Install the side latches as shown.



## Side panel installation

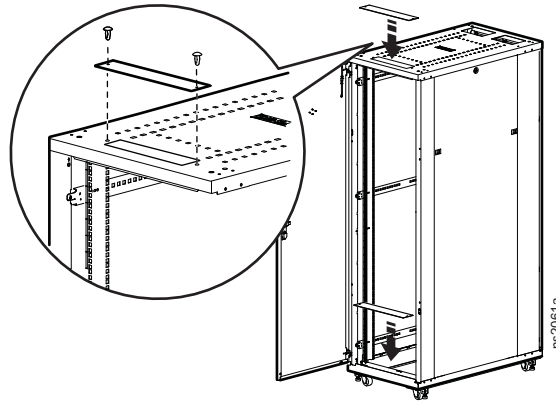
1. Check that the lock is not locked.
2. Set the door into the opening starting at the base.
3. The side latches will contact the notches in the frame opening and secure the panel in position.

Lock the side panels, if desired.



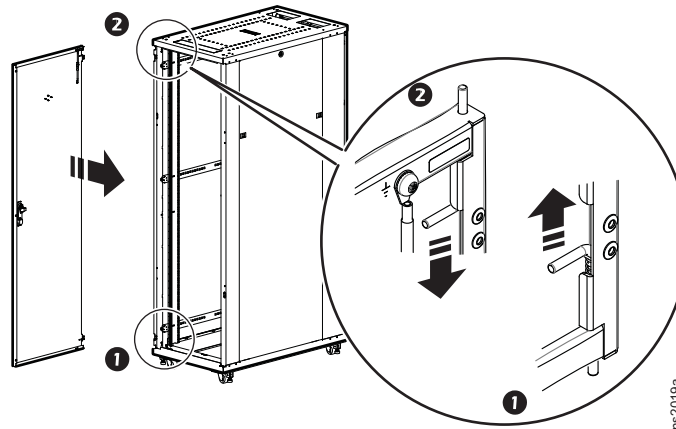
# Roof/Base Access Panels (Optional)

Set the Access panels into the base and roof. Fasten in place with 5mm hole plugs.

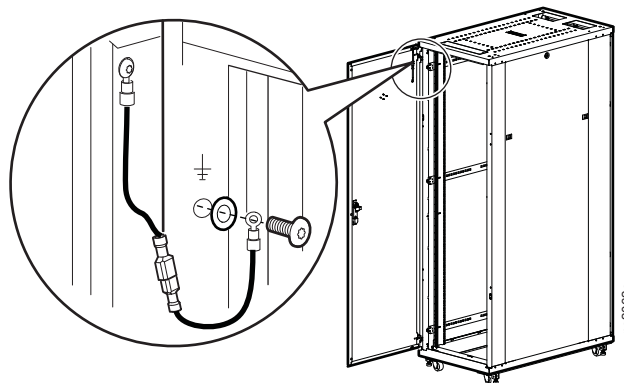


## Front Door

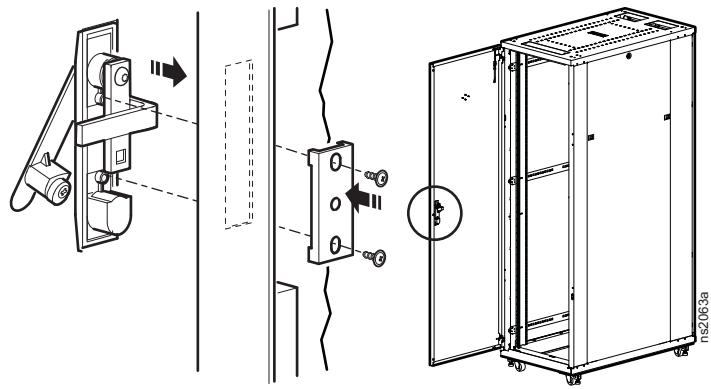
1. Install the front door by aligning the bottom hinge pin to the hole in the cabinet base.
2. Pull the top hinge pin down, align it with the hole in the roof, then release.



3. Connect the door grounding wire attached to the front door to the frame with one M6 x 12 T30 screw and one M6 washer. Torque to 28 - 30 in-lb (3.2 - 3.4 N-m).

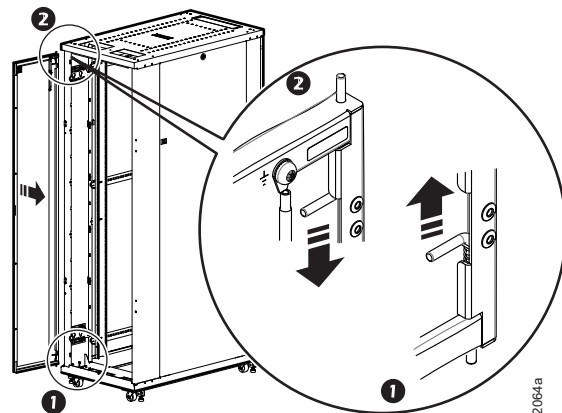


4. Install the front handle assembly with the latch oriented as shown.

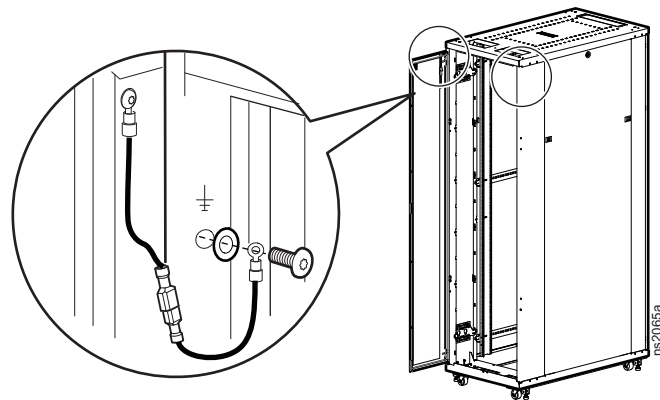


# Rear Doors

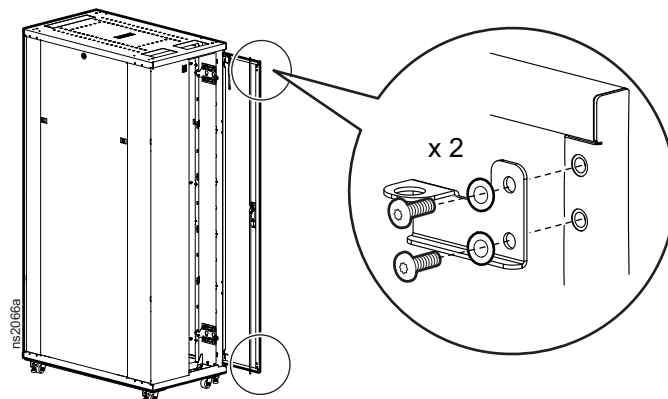
1. Install the left and right rear doors by aligning the bottom hinge pin to the hole in the cabinet base.
2. Pull the top hinge pin down, align with the hole in the roof, then release.



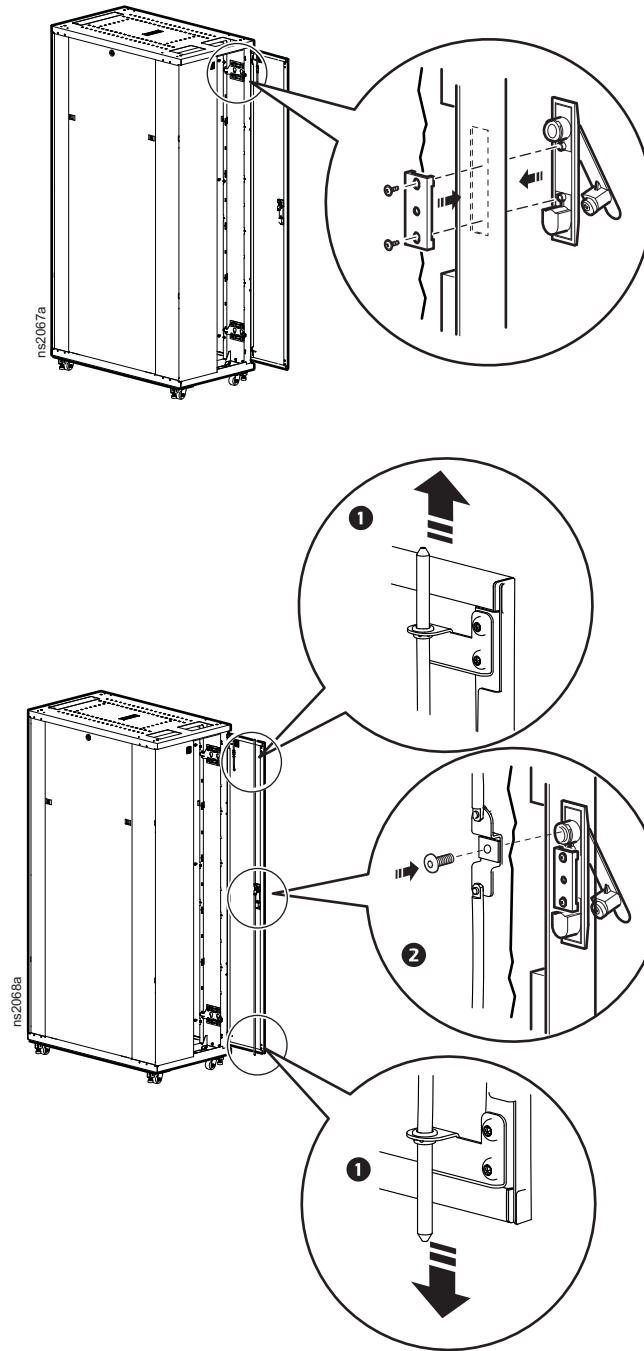
3. Connect the grounding wires attached to the rear doors to the rear frame with M6 x 12 T30 screws and M6 washers. Torque to 28 - 30 in-lb (3.2 - 3.4 N-m).



4. Install two guide pin brackets at the top and bottom of the right rear door using two M6 X 12 T30 screws and two M6 washers. Torque to 28 - 30 in-lb (3.2 - 3.4 N-m).



5. Install the right rear handle assembly and door guide pins with the latch and washer oriented as shown.



# Cabinet Inspection

1. Ensure side braces, vertical mounting flanges, door grounding assembly, and accessory mounting brackets are fastened with the M6 x 12 T30 screws.  
Torque to 28 - 30 in-lb (3.2 - 3.4 N-m).
2. Tighten all M6 flanged hex nuts secured on frames, base and roof to a torque of 28 - 30 in-lb (3.2 - 3.4 N-m).
3. Verify all cabinet assembly hardware has been installed.
4. Save all additional hardware and tools, including the bolt down brackets, 24 inch center joining brackets, and the equipment installation hardware bag for later use.
5. Raise the leveling feet before attempting to roll the cabinet on its casters.

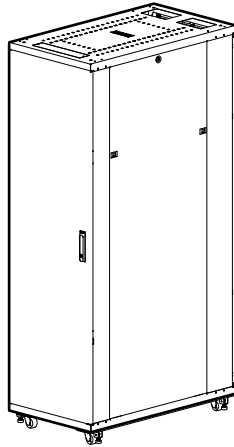
<b><i>NOTICE</i></b>
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For cabinet installation and customization, see the NetShelter SV User Manual at the website, <a href="http://www.apc.com">www.apc.com</a> .
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# Specifications

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## AR2400FP1



Height	2057 mm (80.9 in); 42 U
Width	600 mm (23.6 in)
Depth	1060 mm (41.7 in)
Net Weight	111.9 kg (246.7 lb)
Total open area (front door)	778 176 mm <sup>2</sup> (30,637 in <sup>2</sup> )
Total open are (rear door)	805 637 mm <sup>2</sup> (31,718 in <sup>2</sup> )
Open area per U (front door)	18 528 mm <sup>2</sup> (729 in <sup>2</sup> )
Open area per U (rear door)	19 181 mm <sup>2</sup> (755 in <sup>2</sup> )
Perforation pattern percentage	69%
Percent of perforation area (front)	69%
Percent of perforation area (rear)	71%
Clearance (for wiring between front door and vertical mounting flange)	14.0 mm (0.6 in)
Load rating: static (leveling feet down)	1000 kg (2,205 lb)
Load rating: dynamic (casters) †	460 kg (1,014 lb)
Load rating: overhead cable distribution	45 kg (99 lb)

† To move the cabinet on its casters, the equipment load must be:

- evenly distributed
- less than 460 kg (1,014 lb)
- installed below the 20 U height

### **NOTICE**

It is prohibited to ship a NetShelter SV cabinet while the unit is loaded with any equipment.

# Limited Factory Warranty

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The limited warranty provided by APC by Schneider Electric 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

APC by Schneider Electric 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 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 by Schneider Electric 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 the end user's or any third person's misuse, negligence, improper installation or testing. Further APC by Schneider Electric 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 by Schneider Electric designated personnel, a change in location or operating use, exposure to the elements, Acts of God, fire, theft, or installation contrary to APC by Schneider Electric recommendations or specifications or in any event if the APC by Schneider Electric serial number has been altered, defaced, or removed, or any other cause beyond the range of intended use.

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### **Warranty Claims**

Customers with warranty claims issues may access the APC by Schneider Electric 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 the APC Customer Support Center by telephone or e-mail.
  - Local, country-specific centers: go to **www.apc.com/support/contact** for contact information.

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