



For the 11000 VA 5U uninterruptible power supply and 11000 VA 3U extended battery module

Use the instructions in this document to install the IBM® 11000 VA LCD 5U Rack UPS and IBM 11000 VA UPS 3U Extended Battery Module in a rack cabinet.

Review the documentation that comes with your rack cabinet for safety and cabling information.

When you install the uninterruptible power supply (UPS) or extended battery module in a rack cabinet, observe the following precautions:

- The extended battery module and UPS internal battery and chassis are heavy. Make sure that you have the minimum number of persons and equipment that are required to safely lift the components. See step 7c on page 5 and Table 1 on page 6.
- Make sure that the room air temperature is below 35°C (95°F).
- Do not block any air vents; usually 15 cm (6 in.) of air space provides proper airflow.
- Plan the device installation starting from the bottom of the rack cabinet.
- Install the heaviest device in the bottom of the rack cabinet.
- Do not extend more than one device out of the rack cabinet at the same time.
- Connect all power cords to properly wired and grounded electrical outlets.
- Do not overload the power outlet when you install multiple devices in the rack cabinet.

You will need a Phillips screwdriver to install the UPS or extended battery module in a rack cabinet.

Note: The illustrations in this document might differ slightly from your hardware.

The following parts come with the rack mounting kit:

- One right adjustable rail
- One left adjustable rail
- Four adapter plates with adhesive (for round hole racks)
- Sixteen M5 x 16 mm Phillips screws

Note: Removing the rack doors and side panels might make installation easier. See the rack cabinet documentation for more information.



DANGER

Electrical voltage and current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet. Ensure outlet supplies proper voltage and phase rotation according to the system rating plate.
- Connect any equipment that will be attached to this product to properly wired outlets.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described below when installing, moving, or opening covers on this product or attached devices.

To Disconnect:

1. Turn everything OFF (unless instructed otherwise).
2. Remove power cords from the outlet.
3. Remove the signal cables from connectors.
4. Remove all cables from devices.

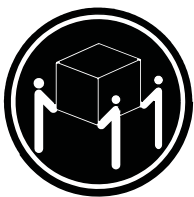
To Connect:

1. Turn everything OFF (unless instructed otherwise).
2. Attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach the power cords to outlets.
5. Turn device ON.

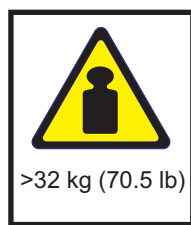
(D005)



CAUTION:



or



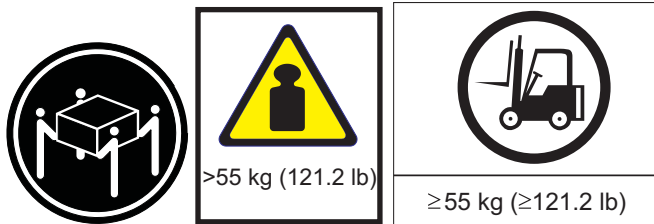
or



The weight of this part or unit is between 32 and 55 kg (70.5 and 121.2 lb). It takes three persons to safely lift this part or unit. (C010)



CAUTION:

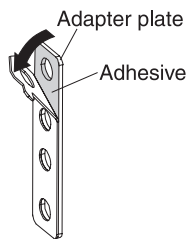


The weight of this part or unit is more than 55 kg (121.2 lb). It takes specially trained persons, a lifting device, or both to safely lift this part or unit. (C011)

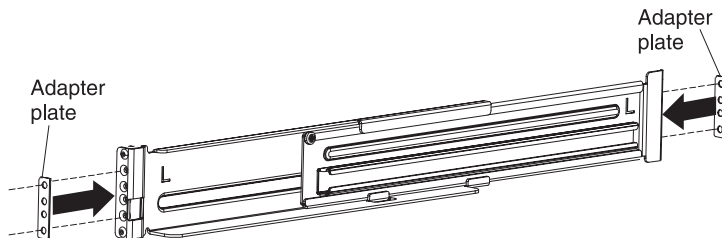
Installing a UPS or extended battery module in the rack cabinet

To install a UPS or extended battery module in the rack cabinet, complete the following steps:

1. **For racks with round holes only:** Install one adapter plate on each of the ends of the right and left rails:
 - a. Locate the four adapter plates that come in the rail kit.
 - b. Peel off the covering that protects the adhesive side of the adapter plate.

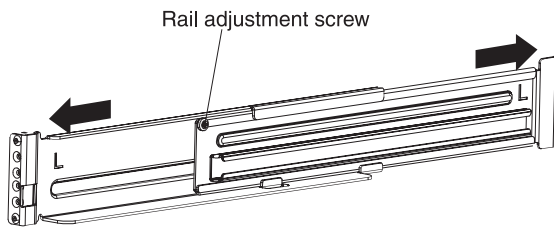


- c. Align the adapter plate holes with the holes on one end of a rail.

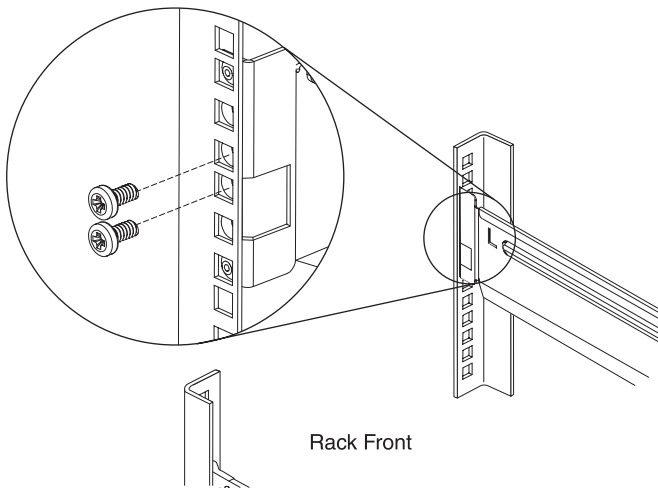


- d. Press firmly to adhere the adapter plate to the end of the rail.
 - e. Repeat step 1b to step 1d to attach the other adapter plates to the ends of the rails.

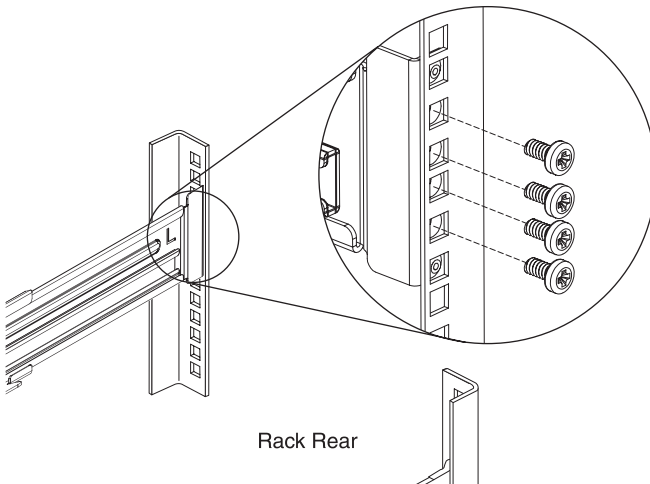
2. Loosen the rail adjustment screw and adjust the left and right rail length to the depth of the rack cabinet.



3. Select a location in the bottom of the rack cabinet for the UPS or extended battery module.
4. Secure each rail to the front of the rack with two M5 x 16 mm screws. Make sure that the rails are on the inside of the rack-cabinet mounting flanges and the letter on each rail faces the inside of the rack.



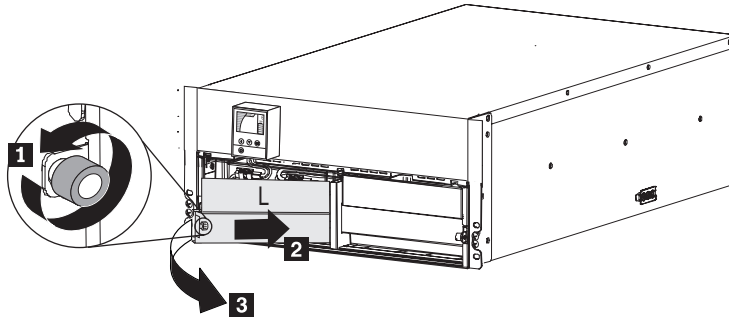
5. Secure each rail to the rear of the rack with four M5 x 16 mm screws.



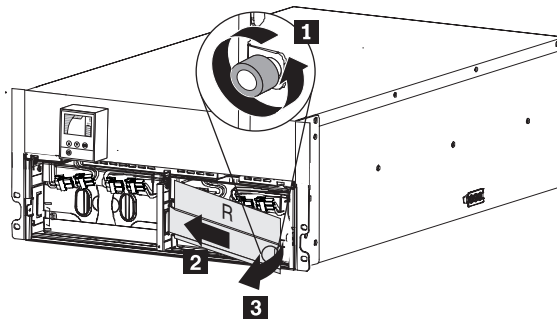
6. Tighten the rail adjustment screws in the middle of each rail.

7. **For UPS installation only:** To reduce the weight of the UPS, remove the internal battery modules:

- a. Loosen the thumbscrew on the left battery retention bracket **1**, slide the bracket to the right **2**, rotate the bracket out **3**, and then remove it.



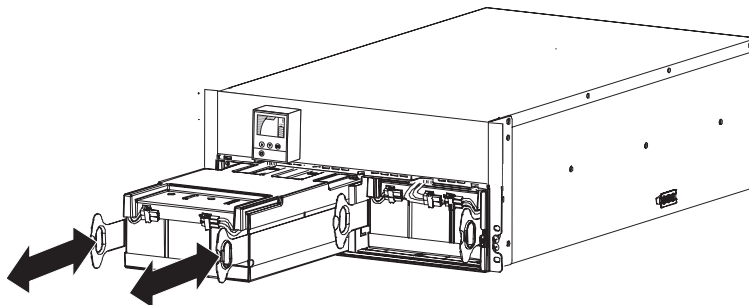
- b. Loosen the thumbscrew on the right battery retention bracket **1**, slide the bracket to the left **2**, rotate the bracket out **3**, and then remove it.



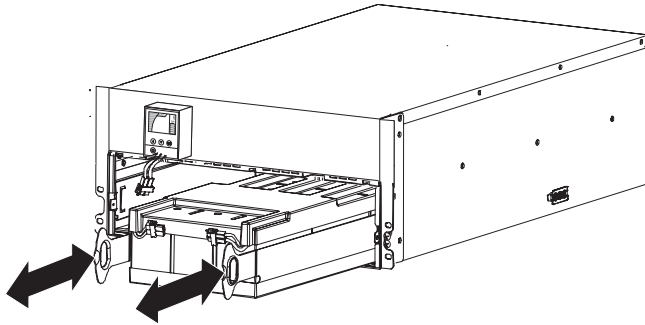
- c. Remove the left internal battery module.

Important: Each internal battery module weighs 32 kg (71 lb) and requires three people to safely lift it.

With the required three people, use the plastic tabs to pull the left internal battery module completely out of the bay. Place the internal battery module on a sturdy, flat surface.



- d. Remove the right internal battery module. With the required three people, use the plastic tabs to pull the right internal battery module completely out of the bay. Place the internal battery module on a sturdy, flat surface.



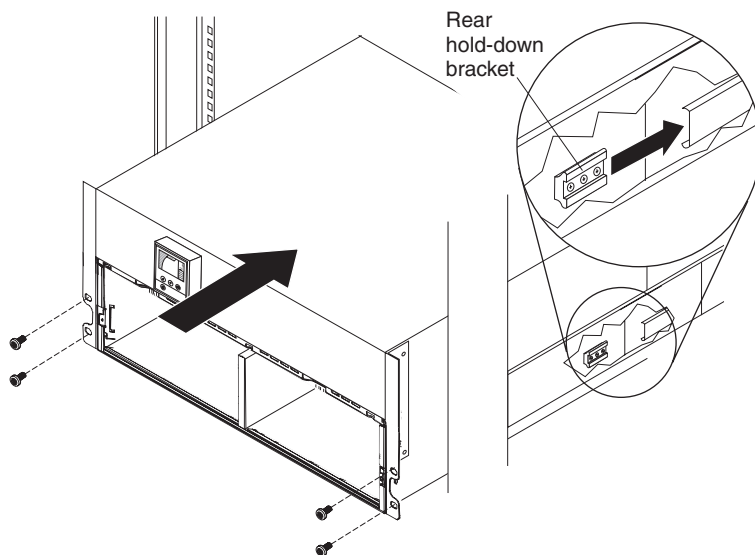
If you are installing another UPS, repeat step 7a on page 5 to step 7d.

8. The UPS and extended battery module are very heavy. See the following table to determine the handling requirements for safely lifting and installing these devices.

Table 1. UPS and extended battery module handling requirements

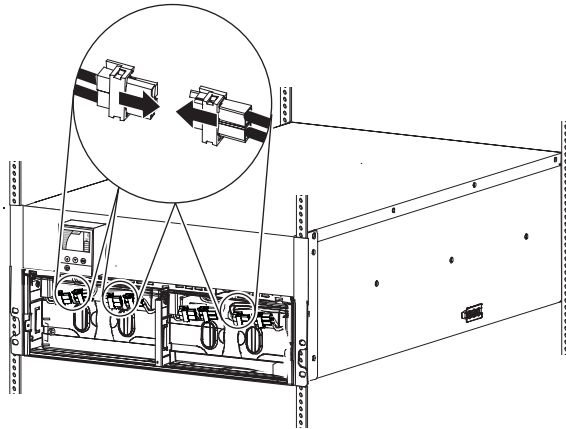
Machine type-model or part number	Product description	Weight	Handling requirement
5395-9KX	11000 VA 5U rack UPS	35 kg (77 lb) (without internal battery modules)	Three persons
69Y1986	11000 VA 3U extended battery module	79 kg (174 lb)	Specially trained persons, a lifting device, or both

9. Using the handling requirements in Table 1, align the rear hold-down brackets on the sides of the UPS or extended battery module with the inner rails. Carefully slide the UPS or extended battery module into the rack cabinet.



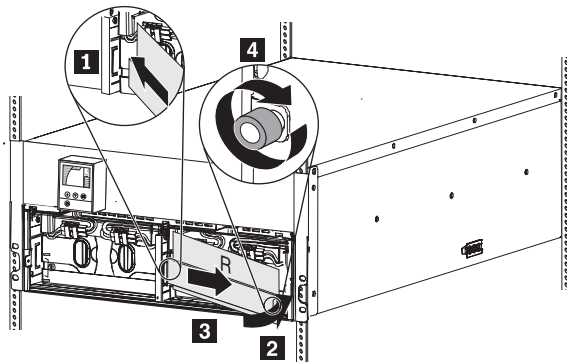
10. Secure the front of the UPS or extended battery module to the rack cabinet with four M5 x 16 mm screws.

11. **For UPS installation only:** To reinstall the internal battery modules, complete the following steps:
- With the required three people, carefully slide one battery module into the UPS. Repeat this step for the second battery module.
 - Connect the three internal battery connectors.



Note: A small amount of arcing might occur when you connect the batteries. This is normal and does not damage the unit or present any safety concern.

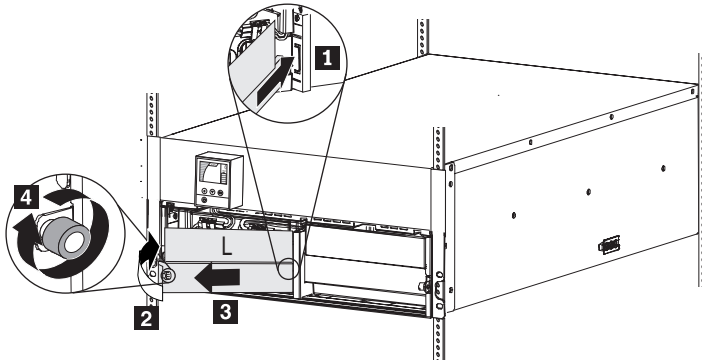
- Reinstall the right battery retention bracket:
 - Slide the right battery retention bracket to the left and into the slot **1**.



- Rotate the battery retention bracket toward the UPS **2**. Make sure that the internal battery connectors are out of the way.
- Slide the battery retention bracket to the right **3**.
- Tighten the thumbscrew on the right battery retention bracket **4**.

d. Reinstall the left battery retention bracket:

- 1) Slide the left battery retention bracket to the right and into the slot **1**.



- 2) Rotate the battery retention bracket toward the UPS **2**. Make sure that the internal battery connectors are out of the way.

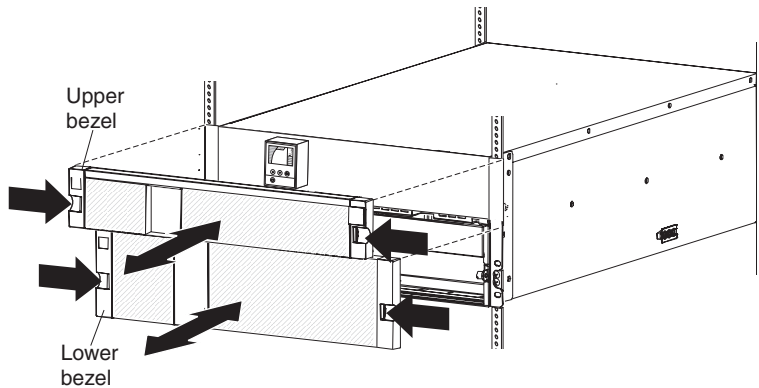
- 3) Slide the battery retention bracket to the left **3**.

- 4) Tighten the thumbscrew on the left battery retention bracket **4**.

12. Install the bezel:

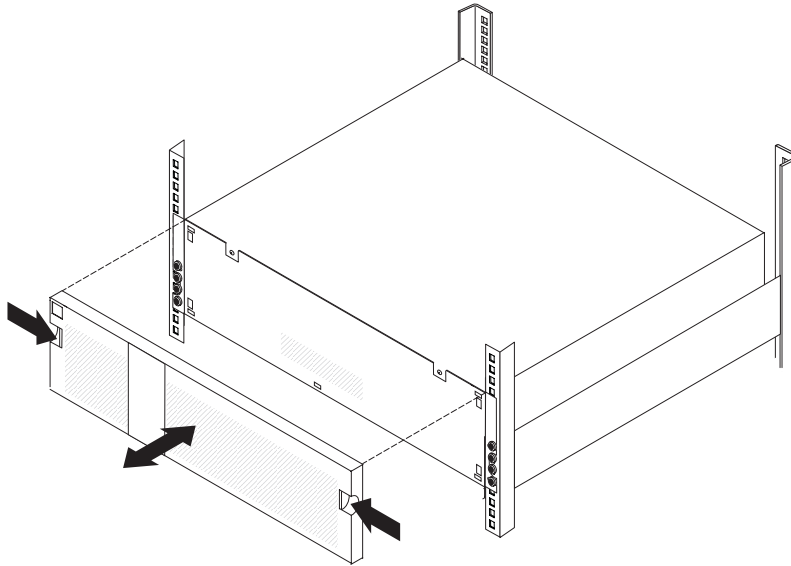
- **For a UPS:**

- a. Locate the upper and lower bezels that come with the UPS. The upper bezel has an opening for the liquid crystal display (LCD).
- b. To install the UPS upper bezel, press the two side latches toward each other, align the bezel so that it goes over the LCD on the front of the UPS, and snap it into place.



- c. To install the UPS lower bezel, press the two side latches toward each other, align the bezel underneath the upper bezel, and snap it into place.

- **For an extended battery module:** Locate the bezel that comes with the extended battery module. Press the two side latches toward each other, align the bezel with the extended battery module, and snap it into place.



13. Remove the clear protective film that covers the LCD on the front of the UPS.

For more information about installing and operating the UPS and extended battery module, see the *Installation and Maintenance Guide* that comes with the UPS.

Important: Before you ship the UPS in a rack cabinet, you must install a shipping bracket in front of the UPS for extra protection. For more information, see “Installing the shipping bracket on the UPS” on page 10.

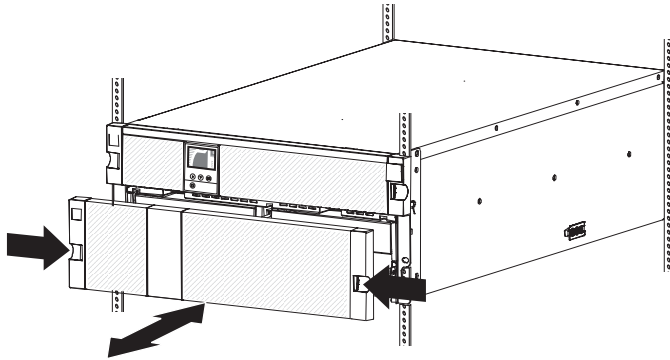
Store this information with your UPS documentation for future use.

Installing the shipping bracket on the UPS

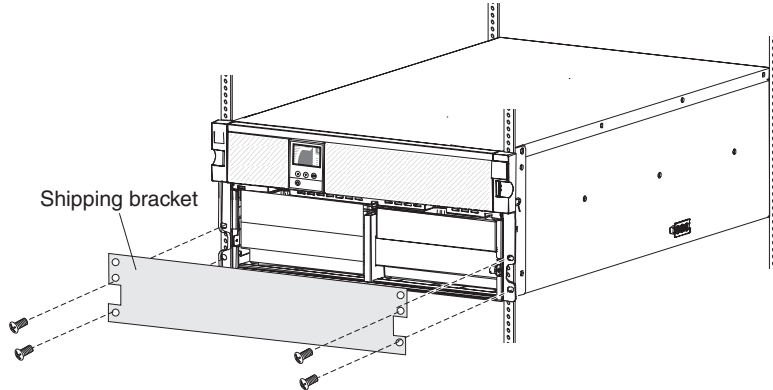
You must install the shipping bracket on the front of the UPS before the UPS is shipped installed in a rack cabinet. The shipping bracket provides extra protection for the UPS during shipment.

To install the shipping bracket, complete the following steps:

1. If the UPS bezels are installed, remove the lower front bezel. Press the two side latches toward each other to release the bezel, and pull the bezel away. Keep the bezel.



2. Make sure that the UPS internal batteries are disconnected. For more information, see the *Installation and Maintenance Guide* on the IBM Documentation CD that comes with the UPS.
3. Remove the four screws that secure the front of the UPS to the rack cabinet. Keep the four screws.
4. Align the shipping bracket with the lower front of the UPS, with the support lip under the UPS.



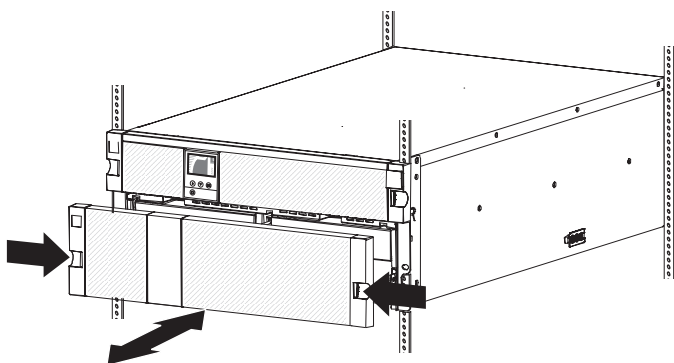
5. Secure the shipping bracket and the UPS to the rack cabinet with the four screws that you removed in step 3.
6. To attach the UPS lower front bezel, press the two side latches toward each other, align the bezel over the shipping bracket, and snap it into place.

Removing the shipping bracket from the UPS

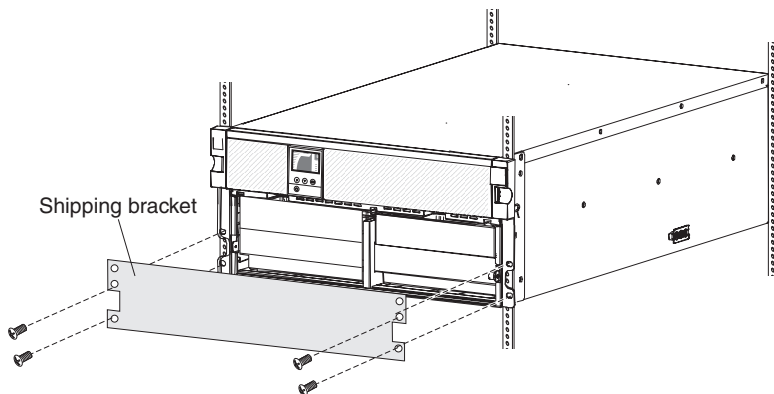
If the UPS was shipped installed in a rack cabinet, a shipping bracket is installed to provide extra protection for the UPS during shipment. Before using the UPS, remove the shipping bracket on the front of the UPS.

To remove the shipping bracket, complete the following steps:

1. If the UPS lower front bezel is installed, remove it. Press the two side latches toward each other to release the bezel, and pull the bezel away. Keep the bezel.



2. Remove the four screws that secure the shipping bracket and the UPS to the rack cabinet. Keep the four screws.



3. Remove the shipping bracket and save it in case you have to ship the UPS in the rack cabinet in the future.
4. Secure the front of the UPS to the rack cabinet with the four screws that you removed in step 2.
5. If you are connecting the UPS internal batteries, see the *Installation and Maintenance Guide* on the IBM Documentation CD that comes with the UPS.
6. To attach the UPS lower front bezel, press the two side latches toward each other, align the bezel underneath the upper bezel, and snap it into place.

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