IBM

IBM BladeCenter T Enterprise Rack Mount Kit Installation Instructions

Review the documentation that comes with the rack cabinet for safety and cabling information. Before you install the BladeCenter T unit in a rack cabinet, review the following guidelines:
- Three or more people are required to install the device in a rack cabinet.
- Do not leave open any unused U spaces within a rack cabinet. Blank filler panels must be used to prevent recirculation of warm air.
- If your rack cabinet has doors installed, make sure that these doors are perforated. Front or rear doors cannot be used in a 600 mm floor footprint rack cabinet.
- Remove the rack doors and side panels to provide easier access during installation.
- Connect the BladeCenter™ T Type 8730 unit to a 220-volt power distribution unit (PDU) or to a properly grounded 220-volt power outlet. Connect the BladeCenter T Type 8720 unit to the overhead direct current (dc) power source.

Safety Information, Statement 4

Use safe practices when lifting.
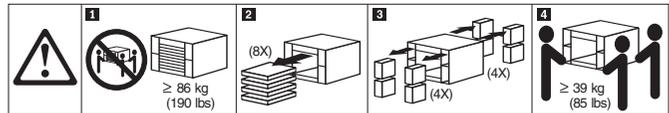
≥18 kg (39.7 lb)   ≥32 kg (70.5 lb)   ≥55 kg (121.2 lb)

Safety Information, Statement 20

To avoid personal injury, before lifting the unit, remove all the blades, power modules, and blowers to reduce the weight.

Rack Safety Information, Statement 2

DANGER
- **Always lower the leveling pads on the rack cabinet.**
- **Always install stabilizer brackets on the rack cabinet.**
- **Always install servers and optional devices starting from the bottom of the rack cabinet.**
- **Always install the heaviest devices in the bottom of the rack cabinet.**
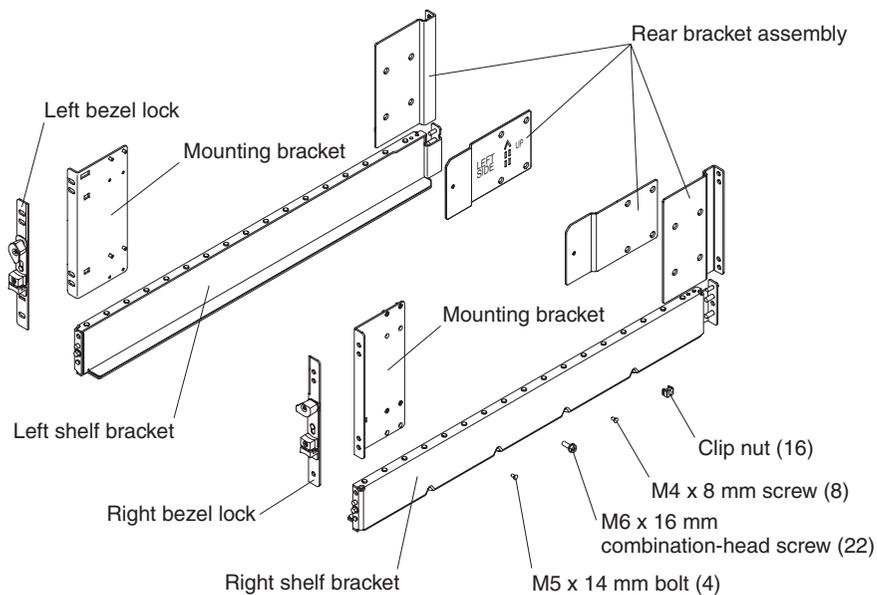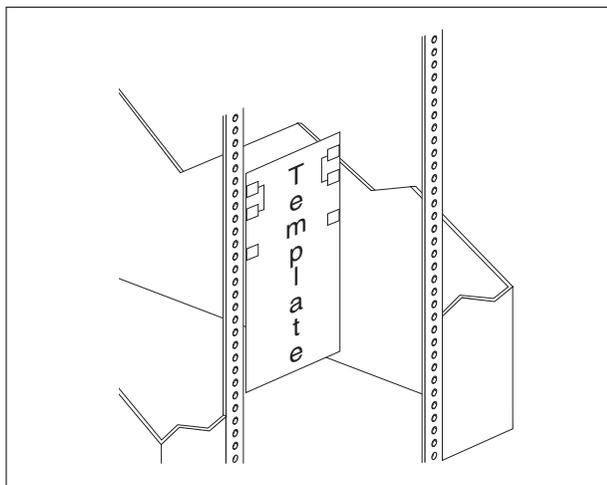
Rack Safety Information, Statement 9

DANGER

Overloading a branch circuit is potentially a fire hazard and a shock hazard under certain conditions. To avoid these hazards, ensure that your system electrical requirements do not exceed branch circuit protection requirements. Refer to the information that is provided with your device for electrical specifications.

The following illustration shows the items that you need to install the BladeCenter T unit in the rack cabinet. If any items are missing or damaged, contact your place of purchase.
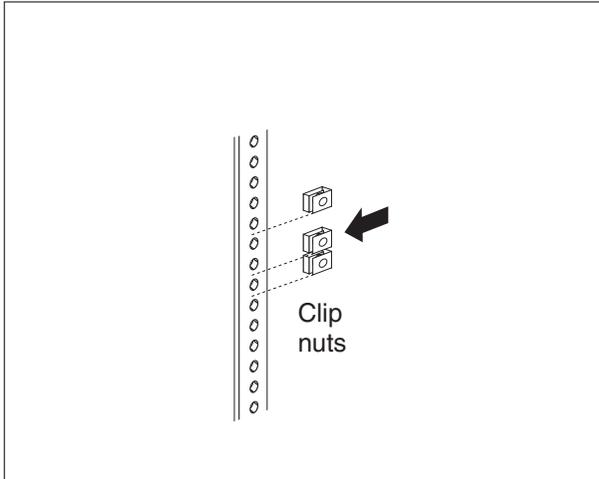
Note: The illustrations in this document might differ slightly from your hardware.
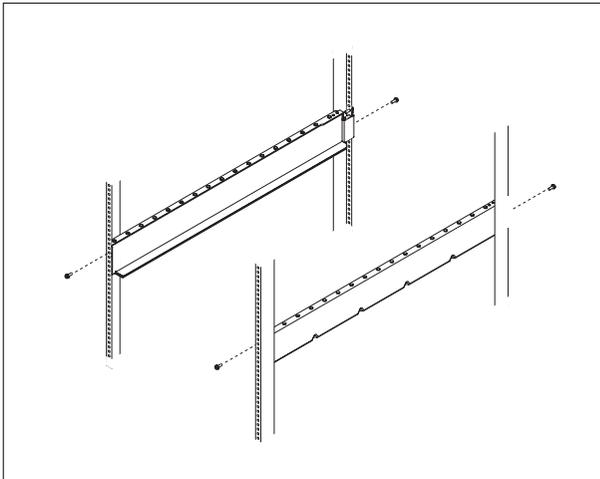

1. Read the safety information on page 1.

2. Position the template on the rack so that the edges of the template do not overlap any other devices that are to be installed. Select the holes on the front and rear of the rack in the locations that are indicated by the arrows on the template.
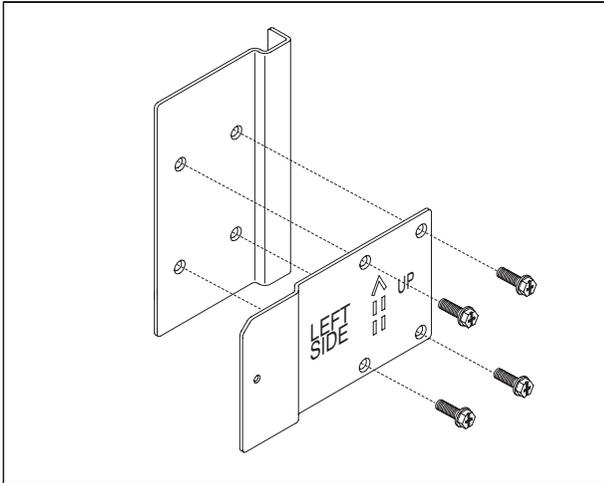
3. Install the clip nuts. (The following illustration shows how to install the clip nuts, not necessarily where to install them.)

4. Install the shelf brackets:

   a. Align the shelf bracket with the front and rear rack-mounting flanges.
   b. Insert the rear rail pins in the rear flange.
   c. Vertically align the shelf bracket; then, insert the front rail pins in the front flange.
   d. Install one M5 bolt in the front threaded mounting hole to secure the shelf bracket to the front flange.
   e. Install one M6 screw in the rear clip nut to secure the shelf bracket to the rear flange.
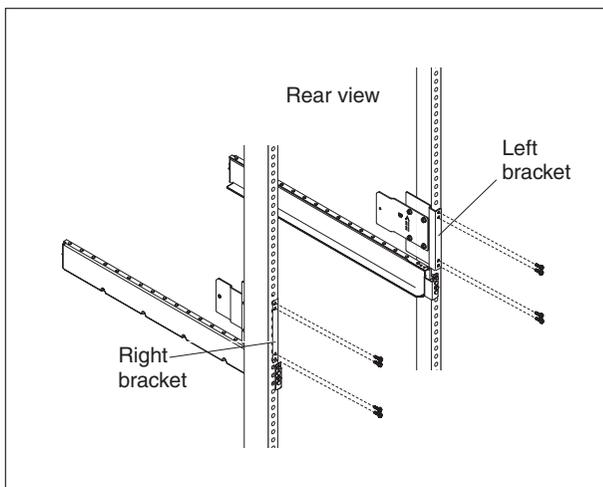   f. Repeat these steps for the remaining rail.

5. Assemble the rear brackets as shown in the following illustration, using M6 screws.
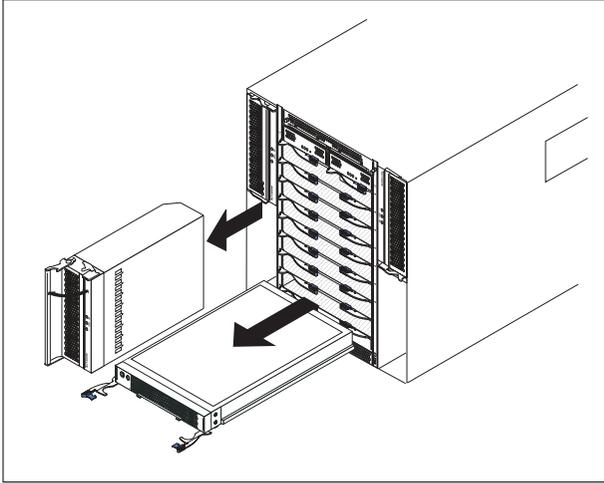

6. Install the rear brackets.

   Note: The brackets are marked "left side" and "right side". Remember that you are installing the brackets from the rear of the rack, so you must install the bracket marked "left side" on your right, and vice versa.

   a. Align the rear bracket with the rear rack-mounting flange.
   b. Install four M6 screws (finger-tight only) to secure the rear bracket to the rear rack-mounting flange.
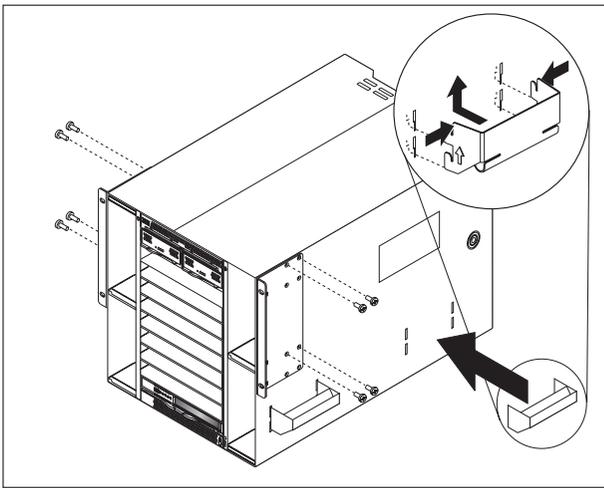   c. Repeat these steps for the other rear bracket.

7. Remove the bezel assembly (if it is not already removed), blade servers, power modules, and blowers from the BladeCenter T unit. (See the *BladeCenter T Types 8720 and 8730 Installation and User's Guide* for the removal procedures.) Place the equipment in a safe place.
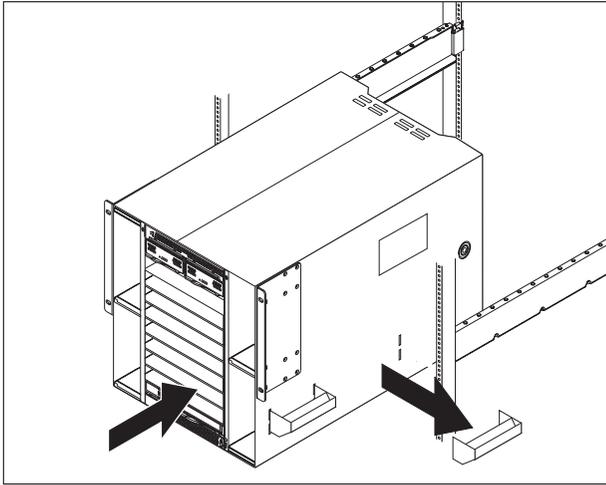
   Note: If you are installing a preconfigured BladeCenter T unit, label the blade servers and BladeCenter T unit bays to ensure that you reinstall the blade servers in the intended bays. Reinstalling a blade server into a bay different from the one from which it was removed can have unintended consequences. Some configuration information and update options are established according to bay number.
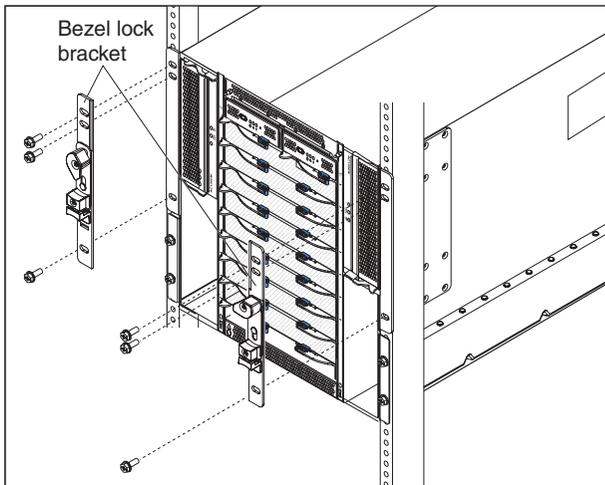
8. Attach the two mounting brackets to the sides of the unit by installing eight M4 screws.
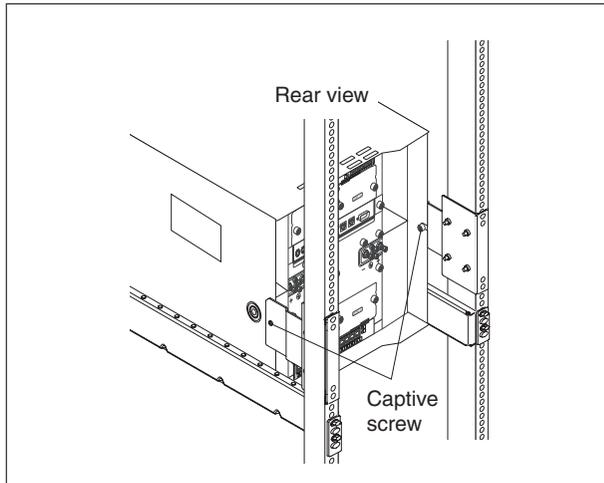

9. Install the BladeCenter T unit in the rack:

   a. Insert the four lift handles into the slots near the bottom of both sides of the BladeCenter T unit.
   b. Carefully lift and place the rear edge of the unit on the front of the shelf brackets. Slide the unit along the shelf brackets until the rear lift handles are close to the front flanges.
   c. With the unit correctly seated on the shelf brackets, securely hold the front of the unit and remove the rear set of lift handles.
   d. Continue to slide the unit into the rack until the front lift handles reach the front flanges. Remove the front lift handles from the unit.
   e. Completely slide the unit into the rack.

10. Align the holes in the bezel lock bracket with the holes in the mounting bracket; then, secure the bezel lock and mounting bracket to the shelf bracket with three M6 screws. Repeat this step on the other side.
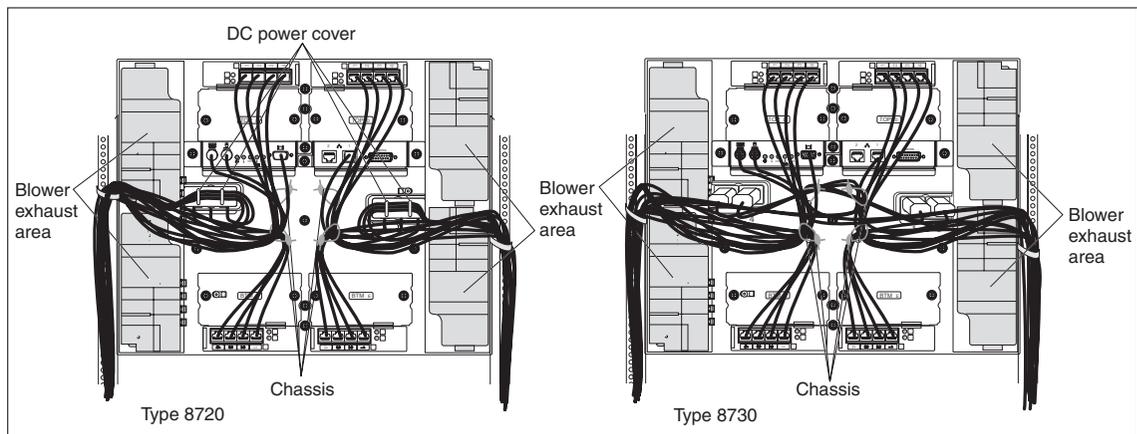

Bezel lock bracket

11. From the rear of the rack, secure the two captive screws, which are between the top and bottom blower bays; then, completely tighten the rear bracket mounting screws that you installed in step 6b on page 4

12. Reinstall the blowers in the BladeCenter T unit. (See the *BladeCenter T Types 8720 and 8730 Installation and User's Guide* for the installation procedures.)

13. Connect the power cords and other cables to the rear of the BladeCenter T unit. (For more information about connecting the dc-power cables, see the *BladeCenter T Types 8720 and 8730 Installation and User's Guide*.) If you are installing a Type 8720, route the power cables through the cable ties on the dc-power cover; then, route all the cables as shown in the illustration.

Use the cable ties on the rear of the chassis and any additional cable ties and cable straps that are necessary to secure the cables together and to the rack cabinet flanges.

Notes:

a. Allow slack in all cables so that they are not under tension and you can remove adjacent modules without uncabling the BladeCenter T unit.

b. As you route the cables to the rack flanges or adapter brackets, avoid covering or shielding the blower airflow exhaust areas.

14. To maintain power redundancy at the system level, connect the power modules as follows.
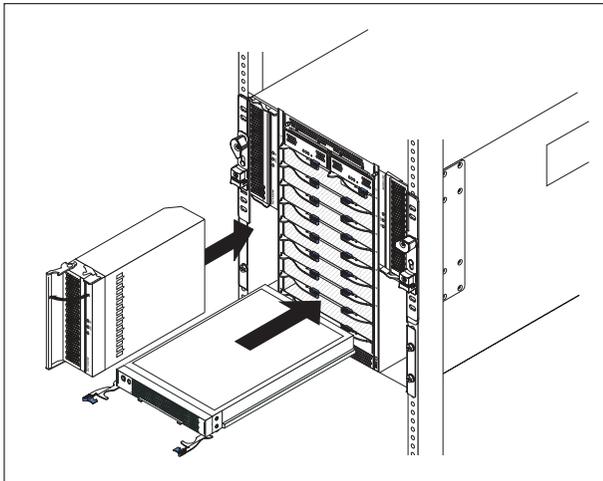
> **Note:** See "Rack Safety Information, Statement 9" before you connect the power module power cords to power sources.

- Connect the power modules in bay 1 (and bay 3 if applicable) to one power source or service entrance.
- Connect the power modules in bay 2 (and bay 4 if applicable) to a separate power source or service entrance.

15. Carefully reinstall the power modules, blade servers, and bezel assembly in the BladeCenter T unit. (See the *BladeCenter T Types 8720 and 8730 Installation and User's Guide* for installation procedures.)

> **Notes:**
> a. Make sure that the release levers on the blade servers are in the open position before you slide the blade servers into the BladeCenter T unit.
> b. If the BladeCenter T unit was configured, reinstall each blade server into the same bay from which it was removed.

To remove the BladeCenter T unit from the rack, reverse these instructions. Store this information with your BladeCenter T documentation for future use.

(1P) P/N: 31R1710