



## BladeCenter HT Type 8740 and 8750 4-Post Rack Mount Kit Installation Instructions

Review the documentation that comes with your rack for safety and cabling information. Before installing your IBM® BladeCenter® HT unit in a rack, review the following guidelines:

- Make sure that the room air temperature is below 40°C (104°F).
- Do not block any air vents; usually, 15 cm (6 in.) of air space in the rear and 5 cm (2 in.) in the front provides proper airflow.
- Four or more people are required to install the device in a rack.
- Do not leave any unused U space within a rack open. Blank filler panels must be used to prevent recirculation of warm air.
- Install your BladeCenter unit only in a rack cabinet with perforated front and rear doors or in a rack equipped with the IBM Rear Door Heat eXchanger.
- Plan the device installation starting from the bottom of the rack.
- Install the heaviest devices in the bottom of the rack.
- Do not extend more than one device out of the rack at the same time.
- Remove the rack doors and side panels to provide easier access during installation.
- See "Supplying power to the BladeCenter HT unit" in the *Installation and User's Guide* for information on connecting the BladeCenter HT to a power source.
- Do not overload the power outlet when installing multiple devices in a rack.
- Install your BladeCenter in a rack that meets the following requirements:
  - Minimum depth of 100 mm (3.94 in.) between the front mounting flange and inside of the front door.
  - Depth of 719 mm (28.31 in.) between the front and rear mounting flanges.
  - Vertical flanges must not occupy the space directly between the front and rear rack mounting holes.

### 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.

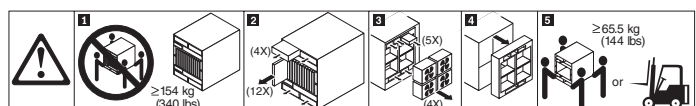
### Rack Safety Information, Statement 9



#### DANGER

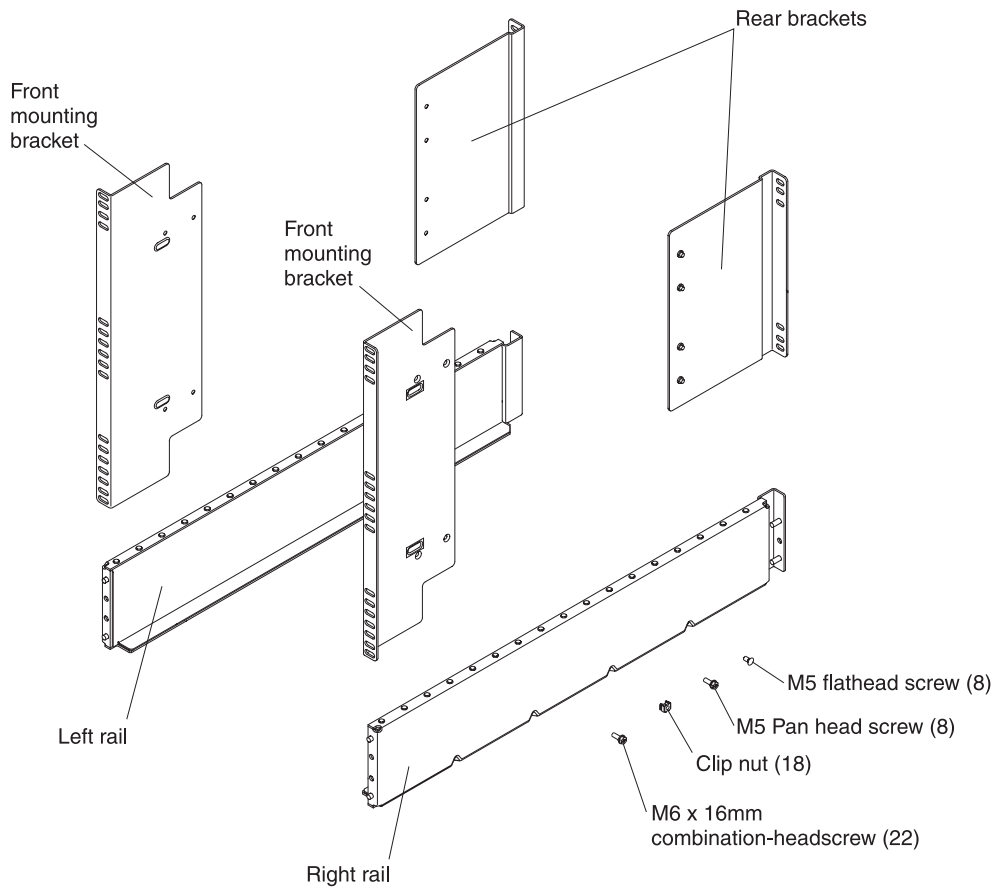
Overloading a branch circuit is potentially a fire hazard and a shock hazard under certain conditions. To avoid these hazards, ensure that your system electrical requirements do not exceed branch circuit protection requirements. Refer to the information that is provided with your device for electrical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

### Safety Information, Statement 20

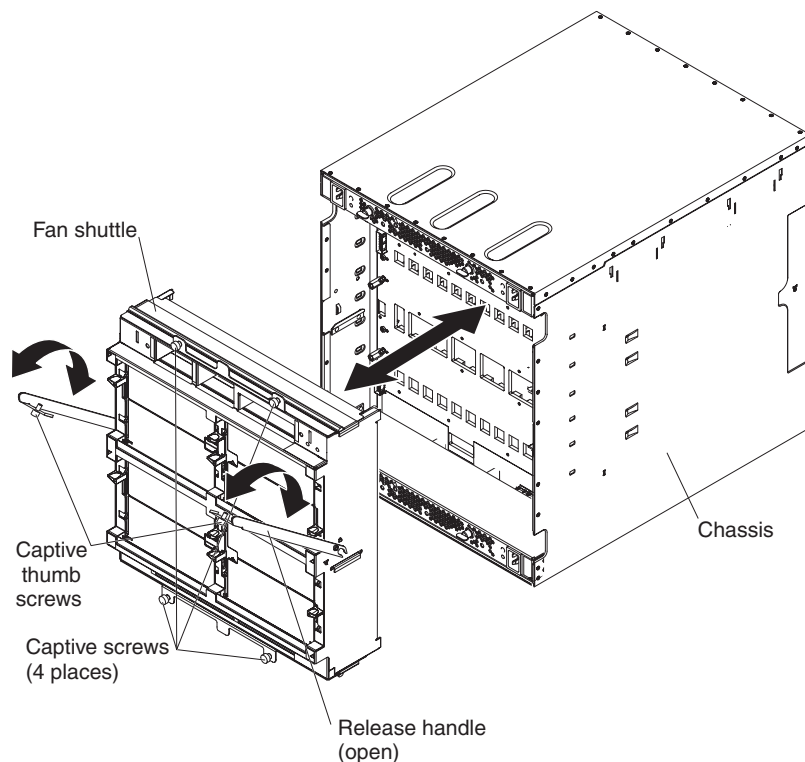


To avoid personal injury, before lifting the unit, remove all the blades, power modules, and blowers to reduce the weight.

The following illustration shows the items contained in the IBM BladeCenter HT 4-Post Rack Installation Kit. If any items are missing or damaged, contact your place of purchase.



1. Prepare the IBM BladeCenter HT unit for rack installation by removing the fan shuttle from the rear of the unit to reduce the weight. When removing the fan shuttle, you must first remove any of the following modules that are installed in the rear of the BladeCenter HT unit:
  - Fan modules.
  - Network clock fillers.
  - Multiplexer expansion modules.
  - Alarm panel module.

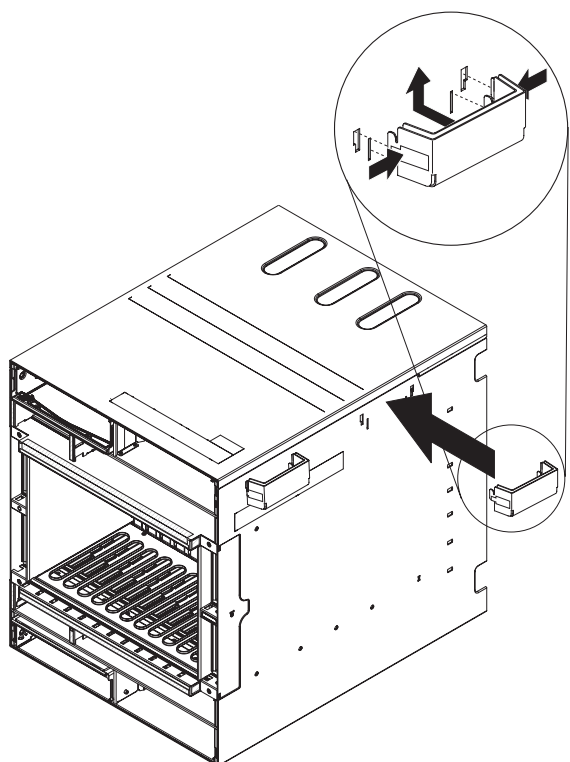


2. After removing these modules from the BladeCenter HT unit, loosen the four (two on the top and two on the bottom) blue, plastic, captive thumb screws on the fan shuttle.
3. Loosen the captive thumbscrews on the release handles, then pull the handles to the open position. The fan shuttle moves out of the BladeCenter HT unit approximately 1.3 cm (0.5 inch).

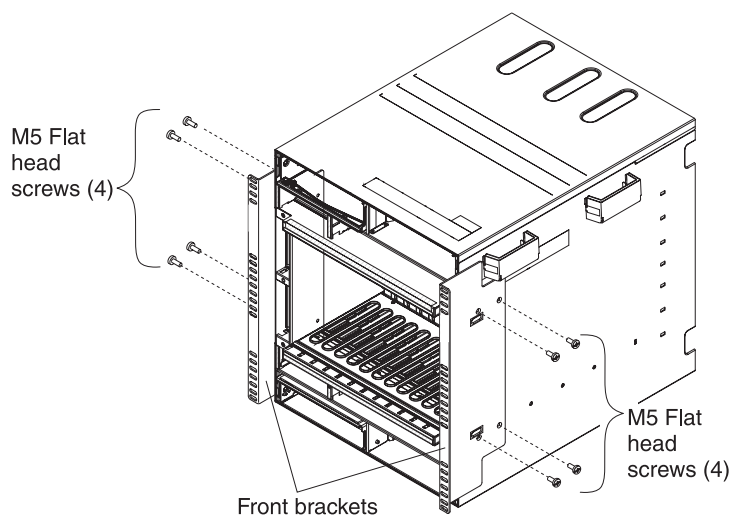
**Attention:** Use your hands to hold the frame of the fan shuttle where the fan-module bays are located. Do not use the release handles to hold the fan shuttle.

4. While you support the fan shuttle with your hands, pull the it out of the BladeCenter HT chassis.
5. From the front of the BladeCenter HT unit, remove the blade servers and the power modules. See the *IBM BladeCenter HT Type 8740 and 8750 Installation and User's Guide* for detailed removal information.
6. If you plan to use the IBM BladeCenter HT Bezel option, install it now. See the *IBM BladeCenter HT Bezel Installation Instructions* for more information.

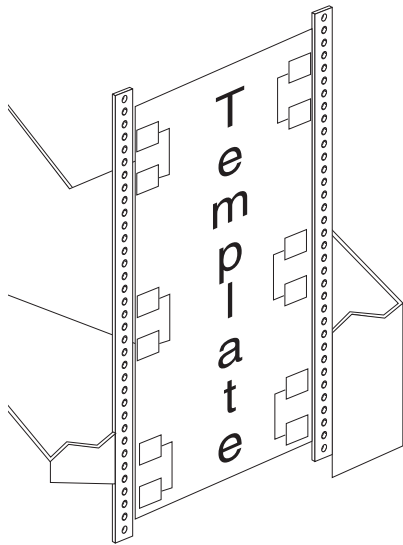
**Note:** Other devices installed into the rack might prevent the BladeCenter HT Bezel option from being installed while the BladeCenter HT unit is in the rack.



7. Install the four lift handles that come with the BladeCenter HT unit on the chassis.

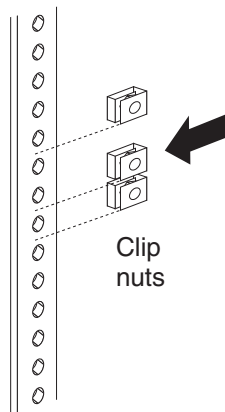


8. Attach the front mounting brackets to the chassis using four M5 flat-head screws for each bracket.

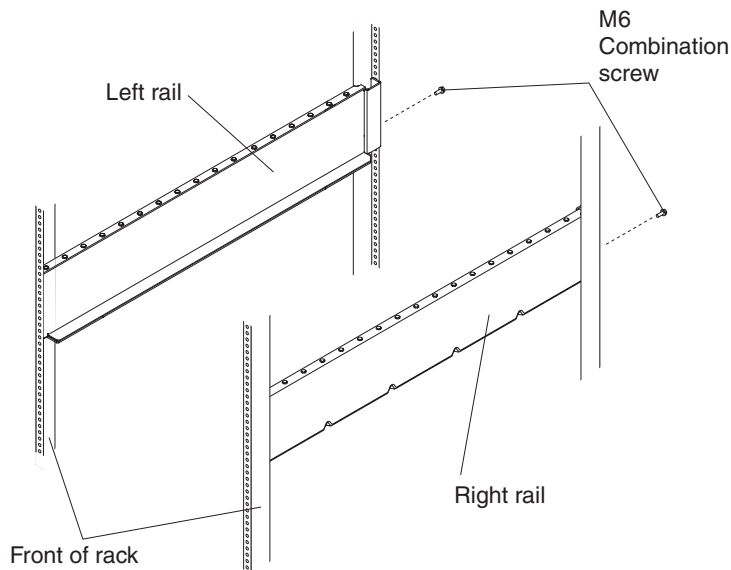


9. Position the front and back rack templates on the rack so that the edges of the templates do not overlap any other devices to be installed. Line up and select the holes on the front and rear rack posts in the locations indicated by the arrows on the attached template.

**Note:** If you will not be installing the BladeCenter HT into the bottom of the rack, fold the bottom of the template where indicated. This will allow proper spacing above any components already installed in the rack.



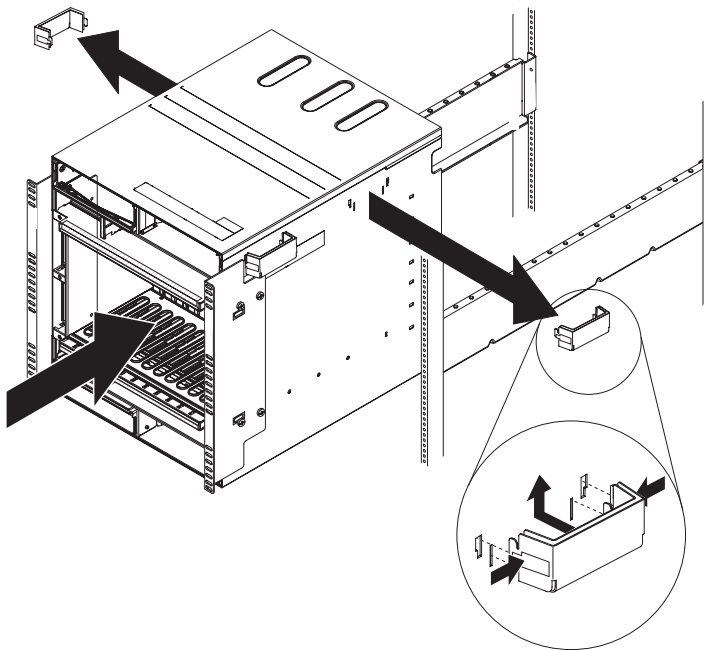
10. If your rack does not have threaded mounting holes, install clip nuts into the mounting holes indicated by the template.



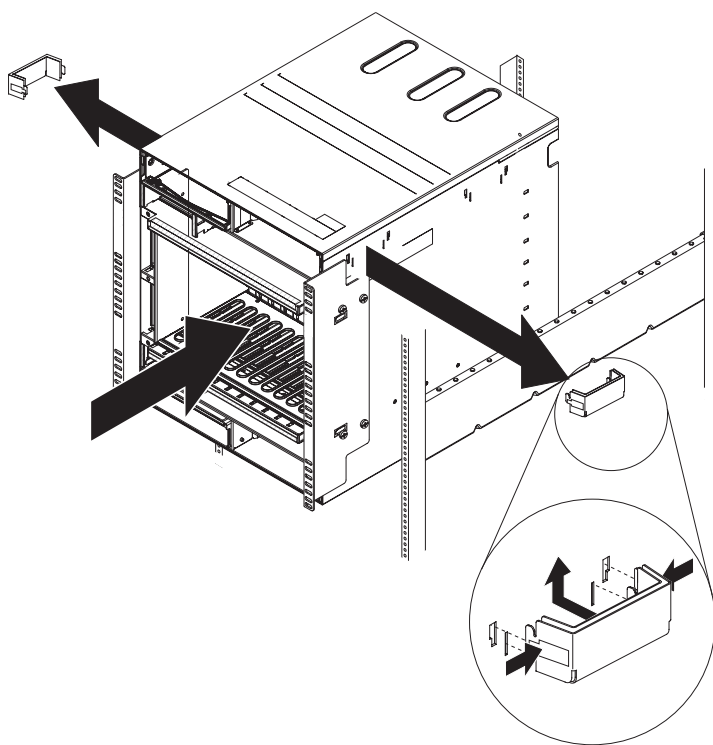
11. Install the left and right rails:

- a. The rear of each rail has a mounting flange that fits around the rear rack post. Align the pins on the mounting flange with the holes indicated by the rear rack template while aligning the pin on the front of the rails with the mounting holes indicated by the front rack template. Slide the rail towards the front of the rack to allow the pins to pass through the mounting holes in the rack post.
- b. Install an M6 combination hex screw into the back of each rail, as indicated by the back rack template.

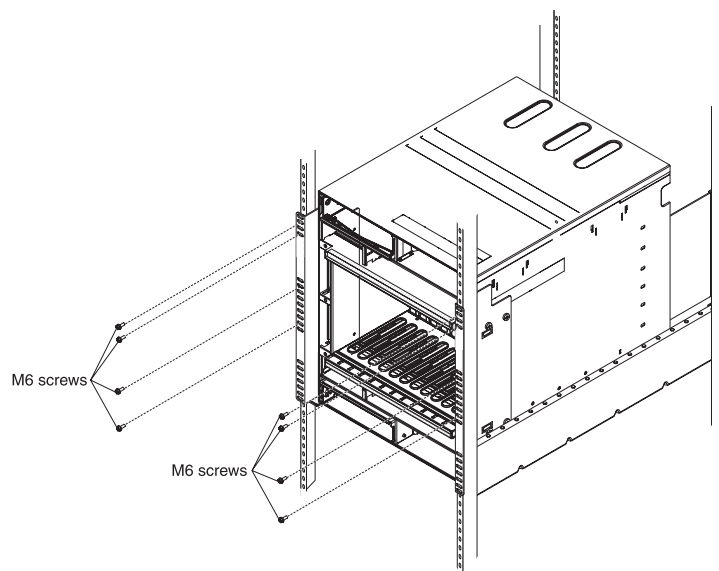
12. Lift the BladeCenter HT chassis and install it into the front of the rack.



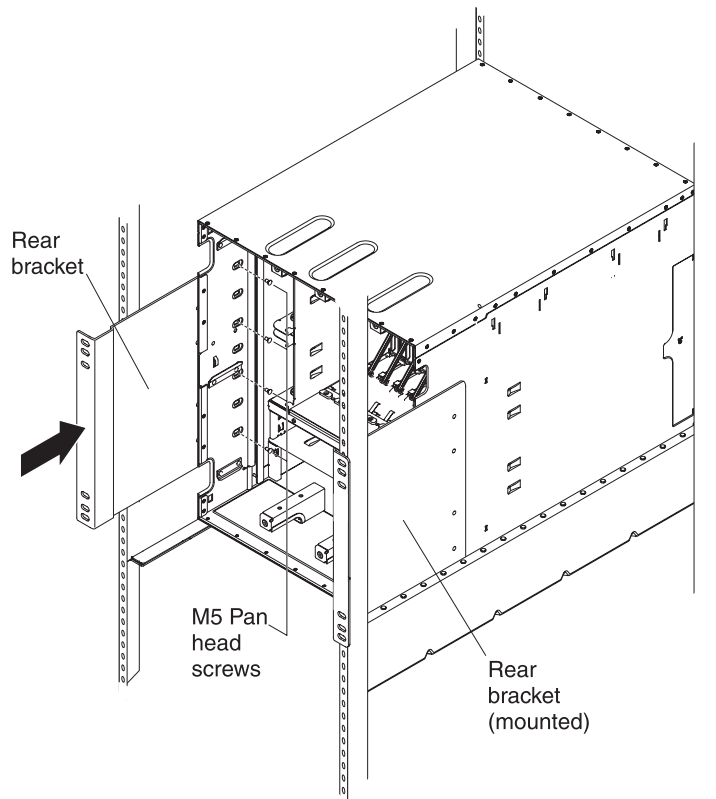
- a. Slide the back of the BladeCenter HT chassis onto the rails from the front of the rack; then, remove the rear lift handles.
- b. Slide the chassis towards the back of the rack until the front lift handles almost touch the front rack posts.



- c. Remove the front lift handles and slide the chassis into the rack until the front mounting brackets touch the front rack posts.



13. Use the front rack template to identify the mounting holes on the front of the rack and install an M6 combination screw into each mounting hole, but do not fully tighten the screws.



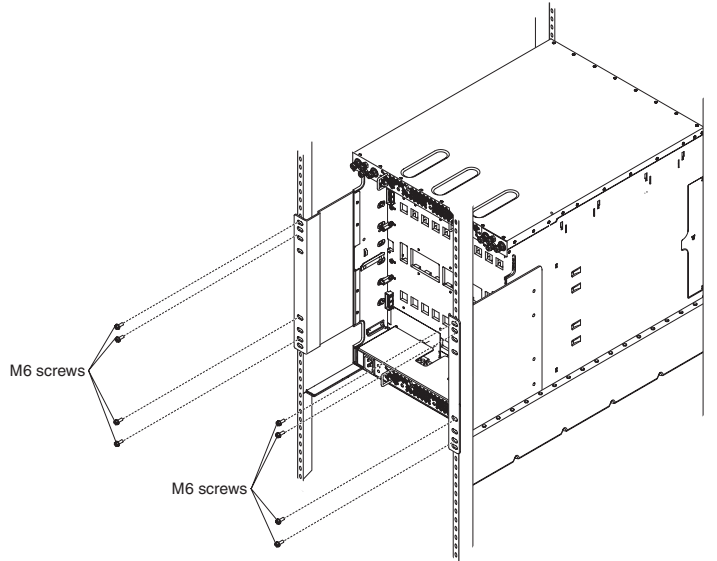
14. Install the rear brackets:

- a. Orient the left rear bracket so that the rear bracket will slide between the chassis and the rack and align the screw holes on the rear bracket with the screw holes on the rack post.
- b. Slide the rear bracket between the side of the chassis and the rear rack post.
- c. Look through the back of the chassis and align the screw holes on the rear bracket with the screw holes on the side of the chassis.
- d. Install four M5 pan-head screws through the side of the chassis and into the rear bracket to secure the bracket to the chassis.

**Note:** The M5 pan-head screws are installed from inside the chassis and screw into the rear bracket.

- e. Repeat these steps for the right rear bracket.





15. Install four M6 screws into each rear bracket to attach the rear bracket to the rear rack posts. Use the rear rack template to locate the screw locations.
16. Fully tighten all the screws in the front and in the back of the BladeCenter HT chassis. Use the front and back rack mounting template to locate the screws.
17. Reinstall the blade servers, power modules, fan shuttle and fan modules in the BladeCenter HT unit. Be sure to reinstall the blade servers in the same bays from which they were removed. For information on installing these components, refer to "Removing and replacing BladeCenter components" in the *Installation and User's Guide*.
18. Attach the power cords and other cables to the BladeCenter HT unit. Use the supplied cable straps to secure the cables together and to the rack posts.

**Note:** Allow slack in all cables to avoid tension in the cables and to allow you to remove adjacent modules without disconnecting cables from the BladeCenter HT unit.

To remove the BladeCenter HT unit from the rack, reverse these instructions.

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