

hp StorageWorks

ESL9000 series tape library
unpacking and relocating guide

Part Number: 243490-005

Fifth Edition (August 2002)



i n v e n t

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About this Guide

Document Conventions

The conventions included in Table 1 apply in most cases.

Table 1: Document Conventions

Element	Convention
Key names, menu items, buttons, and dialog box titles	Bold
File names and application names	<i>Italics</i>
User input, command names, system responses (output and messages)	Monospace font COMMAND NAMES are uppercase unless they are case sensitive
Variables	<i>Monospace, italic font</i>
Website addresses	Sans serif font (http://www.compaq.com)

Symbols in Text

These symbols may be found in the text of this guide. They have the following meanings.



WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or loss of life.



CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or data.

IMPORTANT: Text set off in this manner presents clarifying information or specific instructions.

NOTE: Text set off in this manner presents commentary, sidelights, or interesting points of information.

Symbols on Equipment



Any enclosed surface or area of the equipment marked with these symbols indicates the presence of electrical shock hazards. Enclosed area contains no operator serviceable parts.

WARNING: To reduce the risk of injury from electrical shock hazards, do not open this enclosure.



Any RJ-45 receptacle marked with these symbols indicates a network interface connection.

WARNING: To reduce the risk of electrical shock, fire, or damage to the equipment, do not plug telephone or telecommunications connectors into this receptacle.



Any surface or area of the equipment marked with these symbols indicates the presence of a hot surface or hot component. Contact with this surface could result in injury.

WARNING: To reduce the risk of injury from a hot component, allow the surface to cool before touching.



Power supplies or systems marked with these symbols indicate the presence of multiple sources of power.

WARNING: To reduce the risk of injury from electrical shock, remove all power cords to completely disconnect power from the power supplies and systems.



Any product or assembly marked with these symbols indicates that the component exceeds the recommended weight for one individual to handle safely.

WARNING: To reduce the risk of personal injury or damage to the equipment, observe local occupational health and safety requirements and guidelines for manually handling material.

Getting Help

If you still have a question after reading this guide, contact service representatives or visit our website.

Technical Support

In North America, call technical support at 1-800-OK-COMPAQ, available 24 hours a day, 7 days a week.

NOTE: For continuous quality improvement, calls may be recorded or monitored.

Outside North America, call technical support at the nearest location. Telephone numbers for worldwide technical support are listed on the website:
<http://www.compaq.com>.

Be sure to have the following information available before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions.

Product Website

The hp website has the latest information on this product, as well as the latest drivers. Access the HP website at: <http://www.compaq.com/storage>. From this website, select the appropriate product or solution.

Authorized Reseller

For the name of your nearest authorized reseller:

- In the United States, call 1-800-345-1518.
- In Canada, call 1-800-263-5868.
- Elsewhere, see the HP website for locations and telephone numbers.

Introduction



WARNING: Be sure to read this unpacking and relocating guide completely before attempting to unpack, move or relocate the library. Failure to follow the procedures in this guide could result in personal injury and/or equipment damage.

This guide outlines procedures for unpacking and relocating HP StorageWorks ESL9000 Series Tape Libraries. Once a library is moved to the desired installation location and unpacked, set up the library using the instructions in the *hp StorageWorks ESL9000 Series Tape Library Reference Guide*.

The ESL9198 Series is an automated storage and retrieval library consisting of up to 8 tape drives and up to 198 tape cartridges (see Figure 1-1).

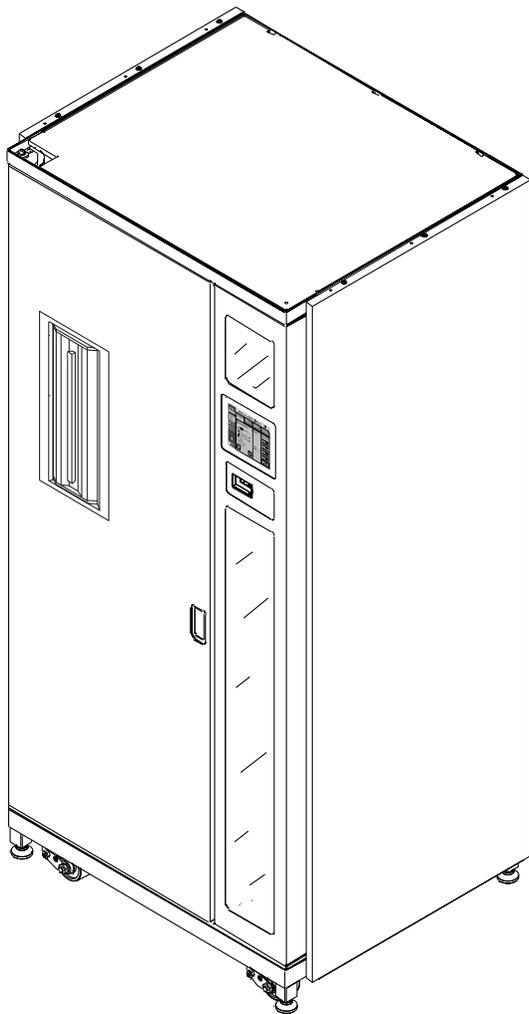


Figure 1-1: ESL9198 series tape library (front view)

The ESL9322 Series is an automated storage and retrieval library consisting of up to 8 tape drives and up to 322 tape cartridges. See Figure 1–2.

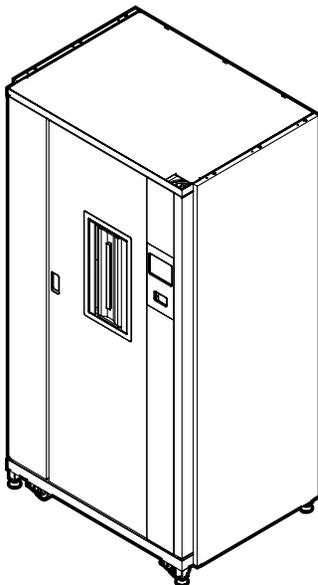


Figure 1–2: ESL9322 series tape library (front view)

The ESL9326/ESL9595 Series is an automated storage and retrieval library consisting of up to 16 tape drives and up to 326 tape cartridges (ESL9326) and up to 595 tape cartridges (ESL9595). See Figure 1–3.

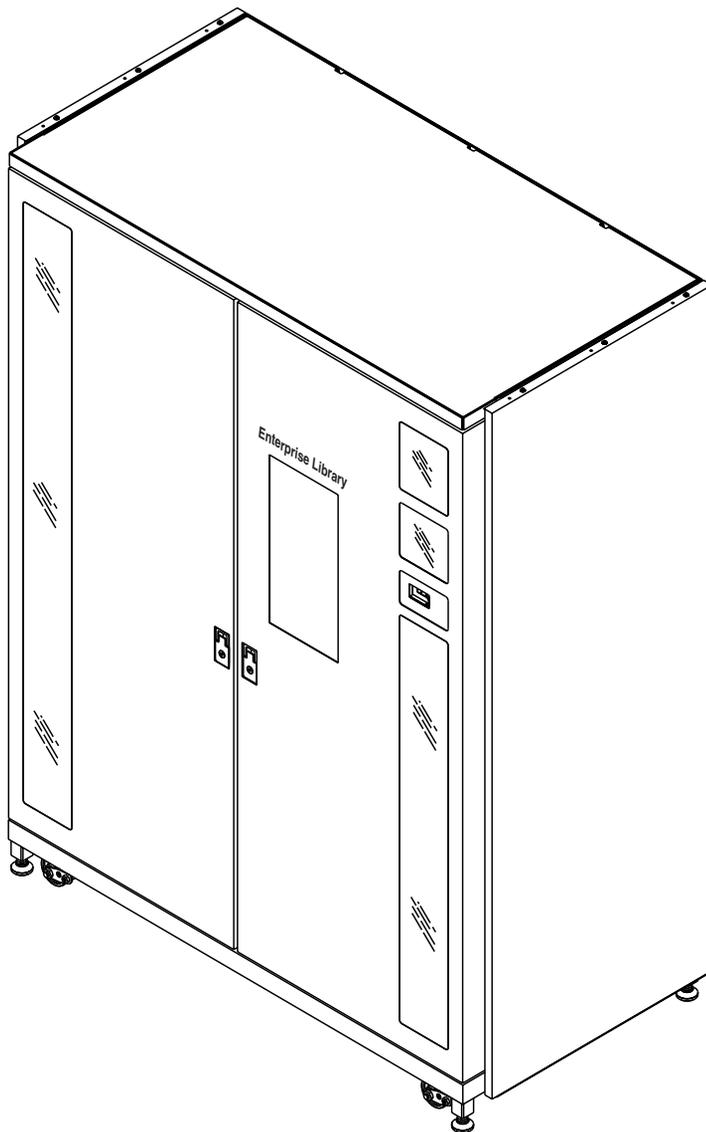


Figure 1–3: ESL9326/ESL9595 series tape library (front view)

Selecting an Installation Location



WARNING: Be sure to read and understand the instructions in the *hp StorageWorks ESL9000 Series Tape Library Pre-Installation Site Survey* before selecting an installation site, moving, unpacking, or relocating the library. Failure to follow the instructions could result in personal injury and/or equipment damage.

When choosing an installation site for an HP StorageWorks ESL9000 Series Tape Library, consider the following requirements:

- Floor space
- Floor clearance
- Floor strength and inclination
- Power and grounding
- Environmental conditions
- Physical distance between the library and a host workstation

Floor Space

Figure 2-1 shows the minimum floor space required for an ESL9198 library.

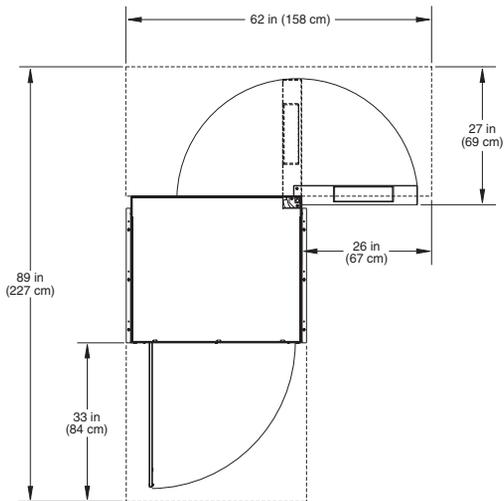


Figure 2–1: Minimum floor space requirements (ESL9198)

Figure 2-2 shows the minimum floor space required for an ESL9322 library.

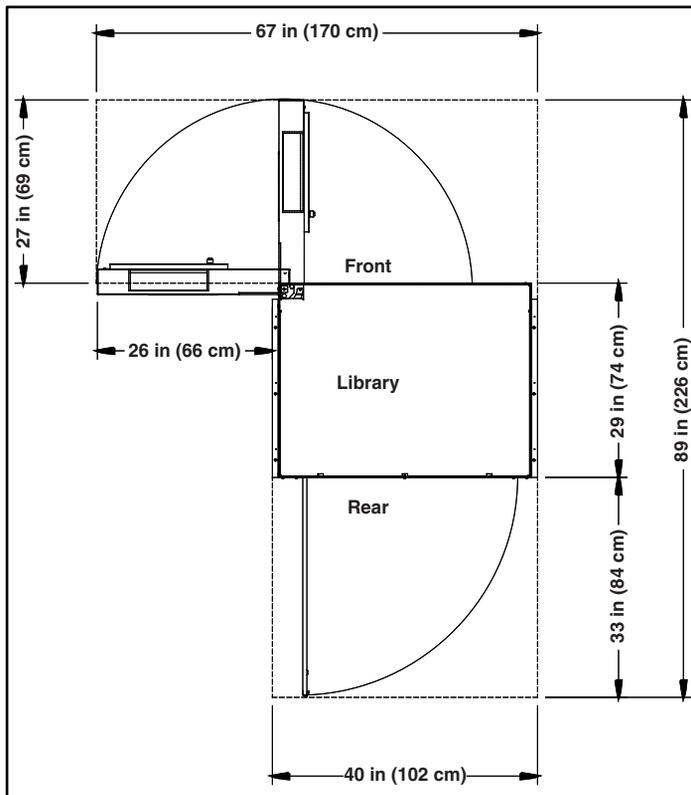


Figure 2-2: Minimum floor space requirements (ESL9322)

Figure 2-3 shows the minimum floor space required for an ESL9326 library.

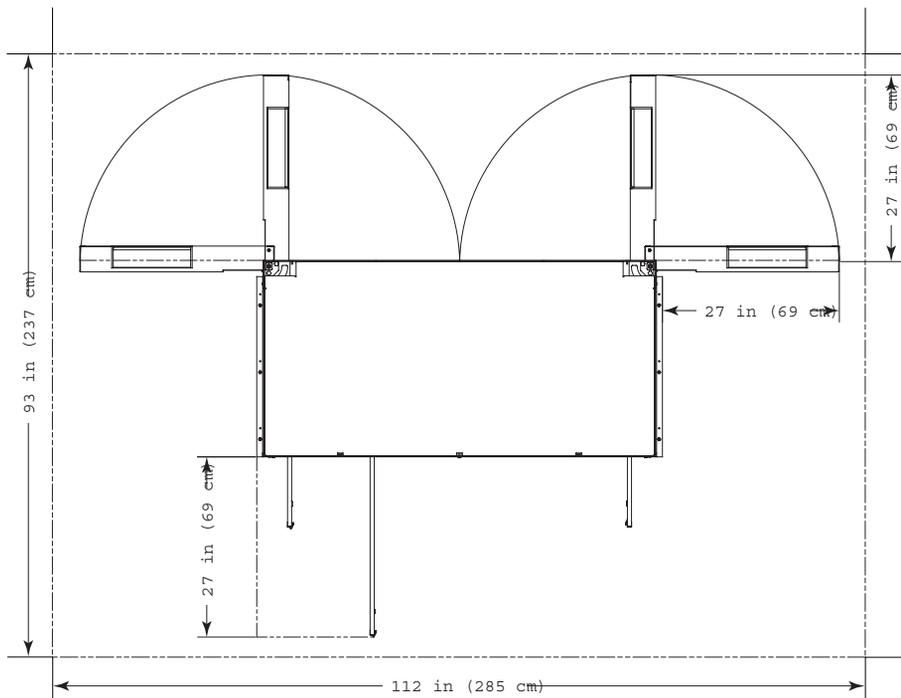


Figure 2-3: Minimum floor space requirements (ESL9326)

Figure 2-4 shows the minimum floor space required for an ESL9595 library.

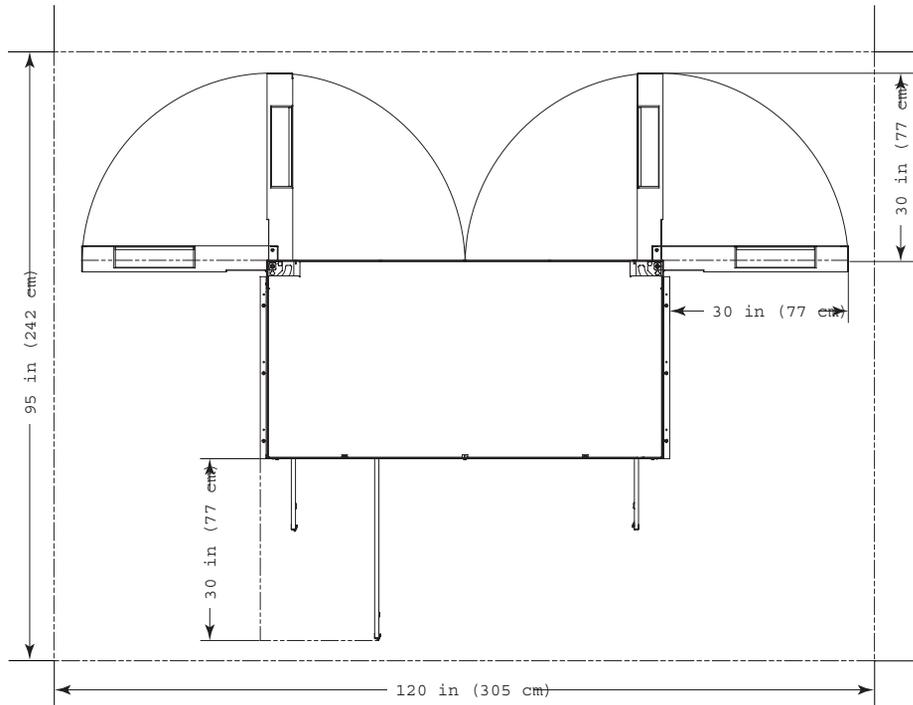


Figure 2–4: Minimum floor space requirements (ESL9595)

Floor Clearance

The library has a nominal floor clearance of 0.75 inches (19.0 mm). Place the library on a level, uncarpeted floor that is free of defects.

Floor Strength and Inclination

The floor at the installation site must be rated at 250 lb/ft² (1221 kg/m²). This is sufficient to support a fully loaded library.

The floor must be level to within 0.25 inches (6.4 mm) over a 6 ft x 6 ft (1.83 m x 1.83 m) area.

Power and Grounding

The tape library is rated for 100-240 VAC~, 50-60 Hz, 16 A-8 A, 1600 W service (1200 W for the ESL9198 and ESL9322). A dedicated outlet and a 20 amp circuit breaker must provide power to the tape library. In addition, it is necessary to use a harmonized 3 x 1.5mm² power cord approved by the associated country of use with the appropriate wall outlet. For important safety information about hp products and power cords, refer to the *Important Safety Information* booklet.

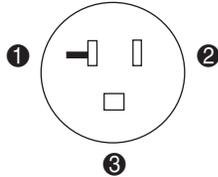


Figure 2-5: Wall outlet requirements for North America

- ❶ Neutral
- ❷ Line
- ❸ Ground

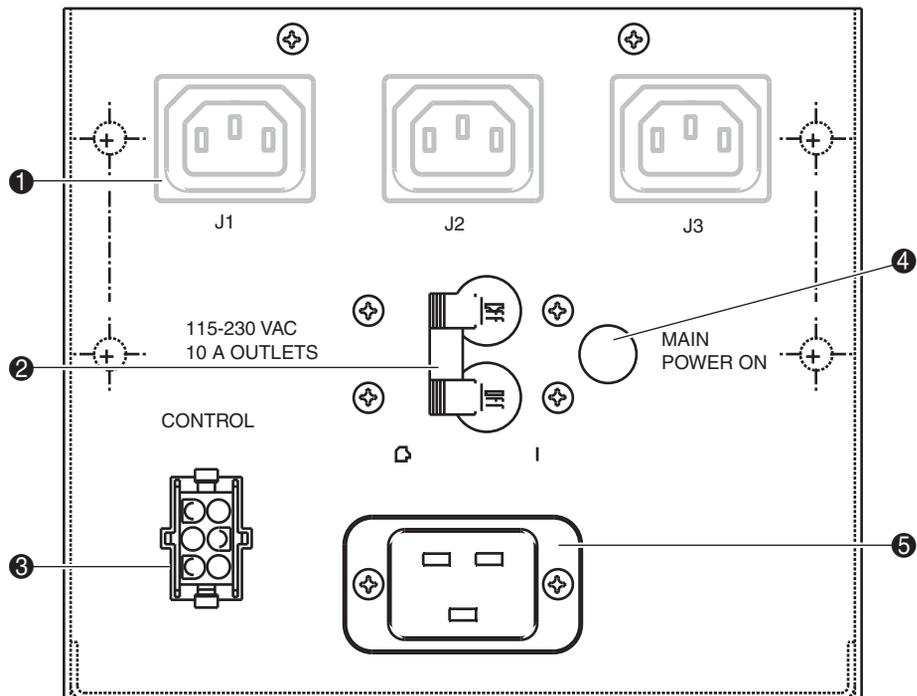
NOTE: The tape library contains redundant power supplies. As a result, two wall outlets are required.



WARNING: The library must be connected to a grounded electrical outlet. Failure to properly connect the library to a grounded electrical outlet could result in personal injury and/or equipment damage.

Library Power Supply

Figure 2–6 shows the library wide-range power supply and describes its components.



- ❶ Power receptacle (internal use only)
- ❷ Circuit breaker
- ❸ Circuit connector
- ❹ AC indicator light
- ❺ AC power connector (IEC-320 C19)

Figure 2–6: Library wide-range power supply

Environmental Conditions

The installation site must provide the following environmental conditions during normal library operation:

- Humidity: 20% to 80% non-condensing
- Temperature: 59°F to 90°F (10° to 32°C)
- Altitude: sea level to 10,000 feet (3,048 m)

NOTE: For additional library specifications refer to Appendix A of the *hp StorageWorks ESL9000 Series Tape Library Reference Guide*.

Physical Distance Between the Library and a Host Workstation

The maximum physical distance between the library (SCSI bulkhead) and the SCSI connector on a host workstation is dictated by the Low Voltage Differential (LVD) bus characteristics (see Table 2-1 and Table 2-2).

NOTE: For the ESL9198, ESL9322, and most ESL9326/ESL9595 libraries, a SCSI bus extender is used for bus 1 (robotic controller, drive 0, drive 1.) For the other drive pairs (D2, D3), (D4, D5), (D6, D7), (D8, D9) no internal SCSI extender is used. See Table 2-1 and Table 2-2 for the maximum external SCSI bus cable lengths.

SCSI bus extenders can be purchased for other drive pairs.

Table 2-1: Physical Distances (ESL9198/ESL9322)

Bus	Devices	Maximum External Length
1	Robot, D0, D1	20 meters
2	D2, D3	10 meters
3	D4, D5	10 meters
4	D6, D7	10 meters

Table 2–2: Physical Distances (ESL9326/ESL9595)

Bus	Devices	Maximum External Length
1	Robot, D0, D1	20 meters
2	D2, D3	10 meters
3	D4, D5	10 meters
4	D6, D7	10 meters
5	D8, D9	10 meters
6	D10, D11	10 meters
7	D12, D13	10 meters
8	D14, D15	10 meters

Preparing for the Installation



WARNING: Be sure to read and understand the instructions in the *hp StorageWorks ESL9000 Series Tape Library Pre-Installation Site Survey* before selecting an installation site, moving, unpacking, or relocating the library. Failure to follow the instructions could result in personal injury and/or equipment damage.

Before you begin the installation procedure in this guide, read the following topics as described in this chapter:

- Required tools and equipment
- Taking ESD precautions

Required Tools and Equipment

The following tools are required for unpacking the library:

- Metal shears for cutting steel packing bands
- Ratchet with 15/16-inch socket

The following tools are required for removing the shipping restraints:

- #2 Phillips screwdriver
- Tie wraps (various lengths)

The following tools are required for leveling the library:

- 3/4-inch open-end wrench
- Carpenter levels (12 inches [40.4 cm] and 2 feet [60.9 cm])
- 5/32-inch hex key wrench (for opening the rear door)

Designating Host and Diagnostic Workstations

You must provide the host and diagnostic workstations that communicate with the library.

Host workstations communicate with the library using a SCSI interface and the standard SCSI-2 command set. Diagnostic workstations communicate with the library using special diagnostic software (located on the CD-ROM) and a low-speed EIA/TIA-574 (RS-232 9-pin) serial interface.

NOTE: Hosts without a direct SCSI interface require external communications bus converters.

Taking ESD Precautions

Some components within the library contain static-sensitive parts. To avoid damage to these parts while performing installation, maintenance, or replacement procedures, observe the following precautions:

- Keep the library turned off during all installation procedures.
- Keep the library power cord plugged into a grounded power outlet except when working with AC electrical components.
- Avoid contact with power supplies, EMI filters, and AC electrical components while the library is connected to a power outlet.
- Use an anti-static wrist strap.
- Keep static-sensitive parts in their original shipping containers until ready for installation.
- Do not place static-sensitive parts on a metal surface. Place them inside their protective shipping bag or on an anti-static mat.
- Avoid touching connectors and other static-sensitive components.
- Close the library door and access panel when not working on the library.

NOTE: Dry climates and cold-weather heating environments have lower relative humidity and are more likely to produce static electricity.

Unpacking and Moving the Library

This chapter explains how to unpack the library and move it to its final installation location. HP StorageWorks ESL9000 Series Tape Libraries are shipped in packing materials designed to protect them from damage during transit. By following these instructions, you help ensure that a library remains undamaged through installation at the site.

Major steps in this procedure are:

- Receiving the library
- Removing the shipping container
- Moving the library
- Removing the shipping plate
- Removing the shipping restraints
- Storing the shipping materials
- Leveling the library
- Reinstalling the gripper restraint

Receiving the Library

To receive the library:



WARNING: A library can weigh up to 1822 pounds (826 kg). At least two people should move and install the library. Failure to use two people could result in personal injury and/or equipment damage.

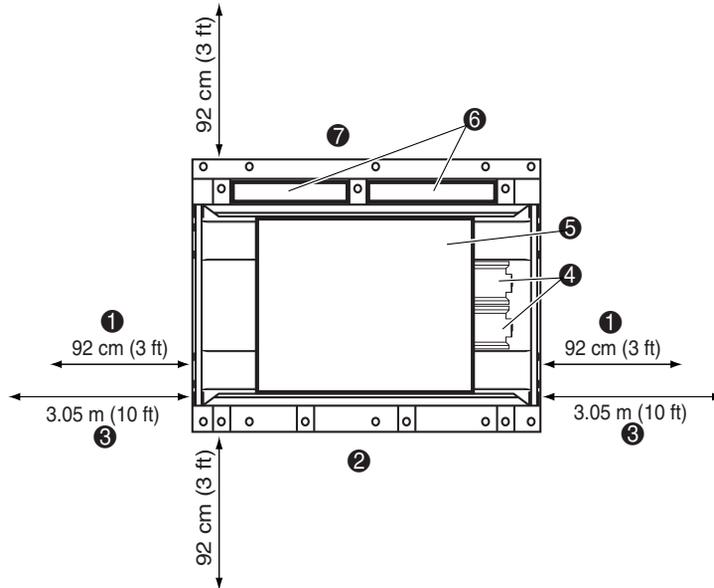
1. Unpack the library as close to the installation site as possible.
2. Inspect the shipping pallet and shipping container for damage that may have occurred during shipment. Report any damage to the shipper.

Removing the Library Shipping Container

To remove the library shipping container:

1. Choose the unloading side. The library can be unloaded from either the right or the left side of the pallet.
2. Verify the minimum floor space requirements.
 - Removing the ESL9198 library shipping container requires a minimum of 3 feet (92 cm) on all sides. For the side being used for the ramp, an additional 5 feet (1.53 m) is required for a total of 8 feet (2.44 m). (When crated, the library occupies a footprint of 48 x 48 inches (122 cm x 122 cm) and is 80 inches (203 cm) tall.)
 - Removing the ESL9322 library shipping container requires a minimum of 3 feet (92 cm) on all sides. For the side being used for the ramp, an additional 6 feet (1.83 m) is required for a total of 9 feet (2.74 m). (When crated, the library occupies a footprint of 48 x 52 inches (122 cm x 133 cm) and is 80 inches (203 cm) tall.)
 - Removing the ESL9326/ESL9595 library shipping container requires a minimum of 3 feet (92 cm) on all sides. For the side being used for the ramp, an additional 7 feet (2.14 m) is required for a total of 10 feet (3.05 m). (When crated, the ESL9326 library occupies a footprint of 48 x 68 inches (122 cm x 173 cm) and is 80 inches (203 cm) tall. When crated, the ESL9595 library occupies a footprint of 48 x 71 inches (122 cm x 181 cm) and is 80 inches (203 cm) tall.)

- The minimum height required for unpacking a library is 85 inches (2.16 m). Figure 4-1 shows the minimum floor space required by a library to remove its shipping container.



- ❶ Without ramp extensions
- ❷ Front
- ❸ With ramp extensions
- ❹ Ramp extensions
- ❺ Library
- ❻ Accessory kits
- ❼ Rear

Figure 4–1: Minimum floor space requirements (top view of unpacking site)

- Using metal shears, cut the two steel bands that secure the library and packing material to the pallet (see Figure 4-2).



WARNING: The steel bands are under tension and will snap away from the shipping container when cut. Be sure to stand clear of the bands while cutting. Failure to stand clear of the bands could result in personal injury.

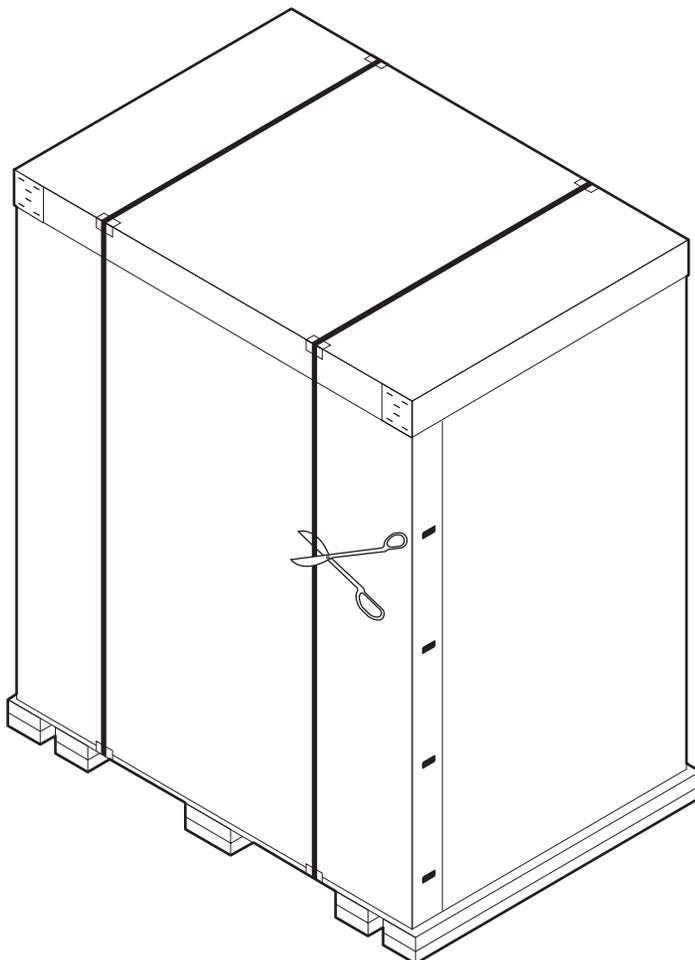


Figure 4-2: Removing the steel bands

NOTE: Figures 4-2 through 4-13 show an ESL9326 library, however the procedures are the same for all libraries.

4. Lift the top cover straight up and off the shipping container (see Figure 4-3).
5. Pull the eight retaining clips, on opposing corners of the shipping container, to their open position (❶ Figure 4-3).

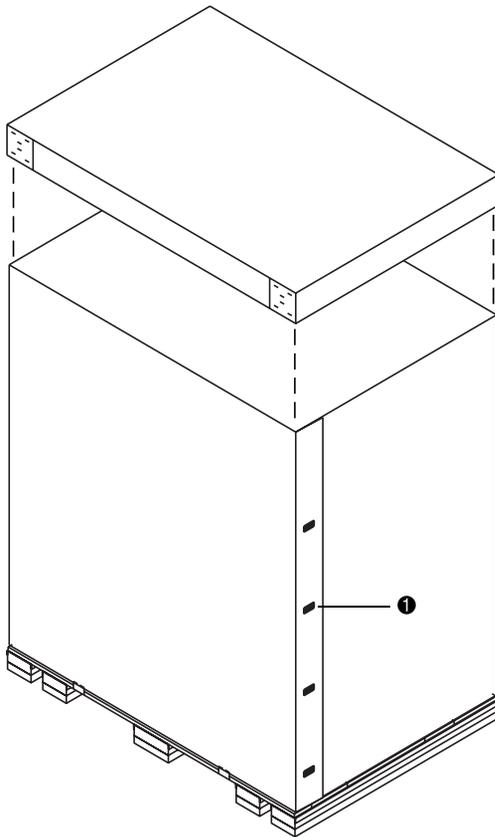


Figure 4-3: Removing the box top cover

6. Unwrap the cardboard box from the library (see Figure 4-4).

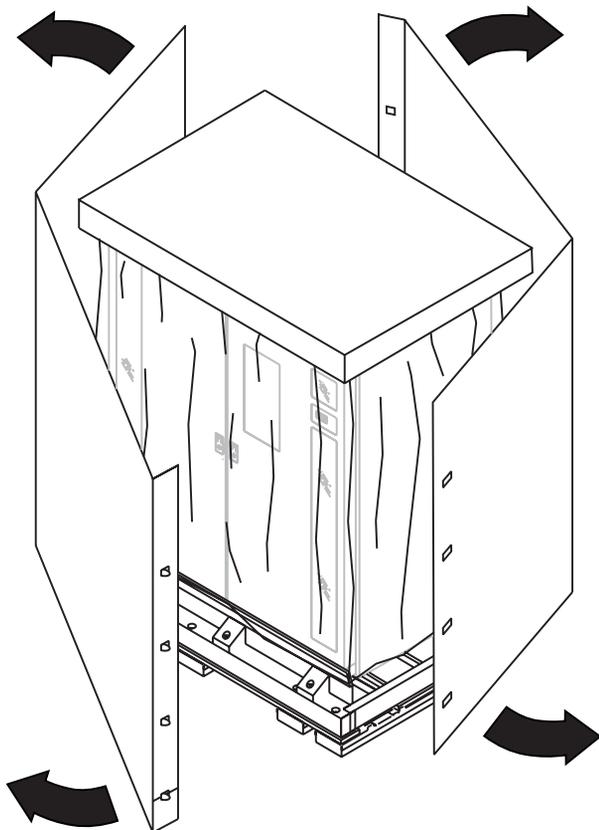


Figure 4-4: Removing the cardboard box

7. Remove the accessory kits from the rear compartment of the crate (ⓐ Figure 4-1).
8. Check the packing list and verify that all accessories have been received. If any part is missing or is damaged, contact your authorized reseller.

9. Lift the foam cap up and off the library (see Figure 4-5).

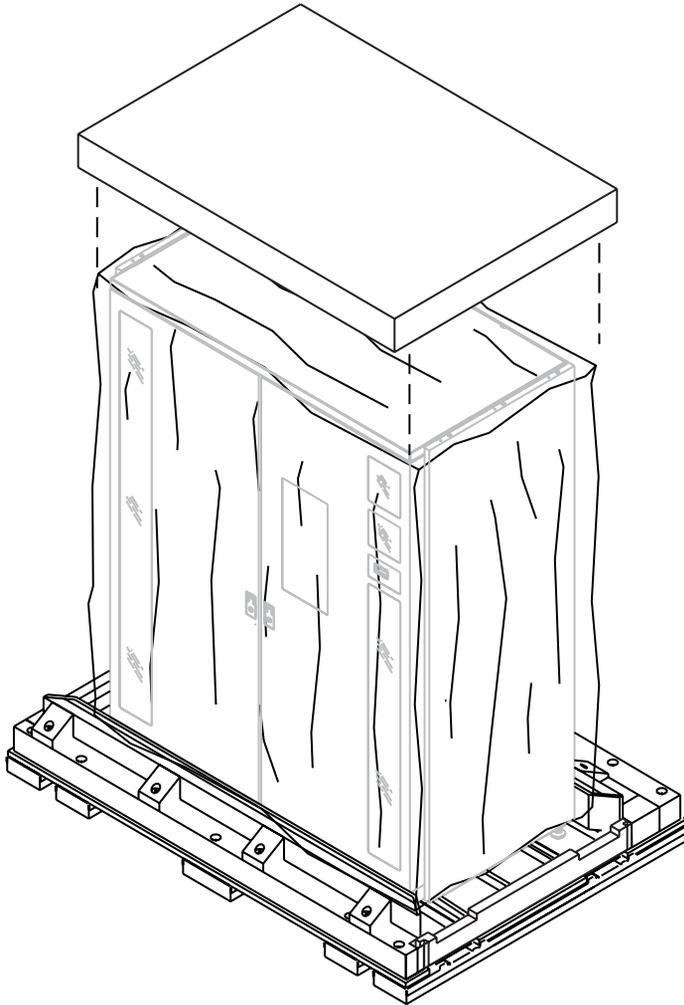


Figure 4-5: Removing the foam cap

10. On the right side of the library, lift the wooden bar out of its brackets on the pallet (see Figure 4-6).

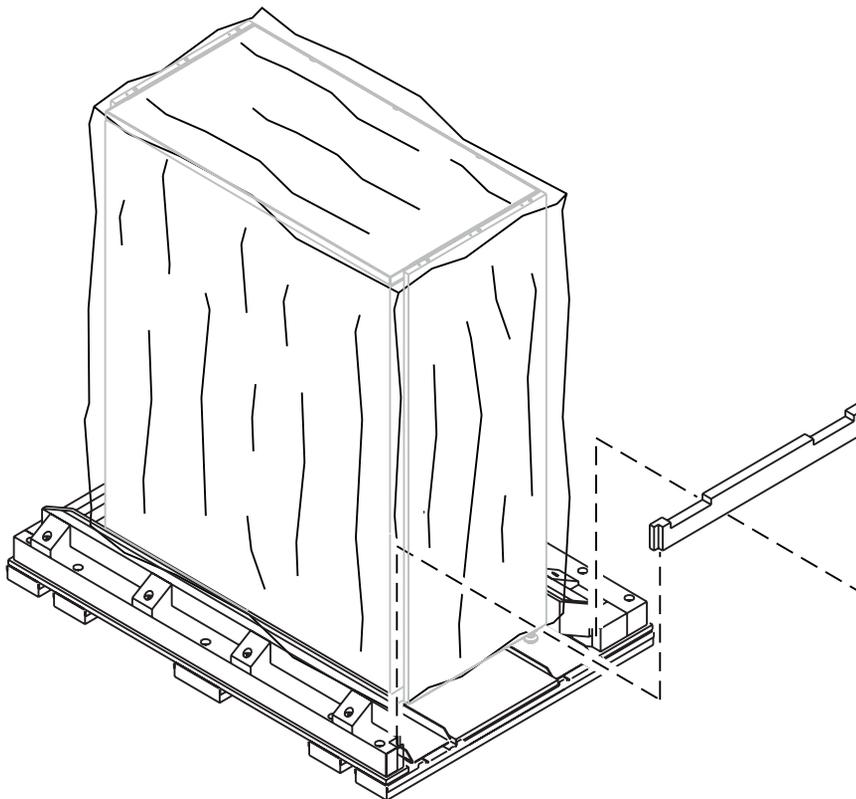


Figure 4-6: Removing the wooden bar

11. On the right side of the library, remove the two bolts that secure each of the two stop blocks.

12. Remove the two stop blocks from under the right side of the library (see Figure 4-7).

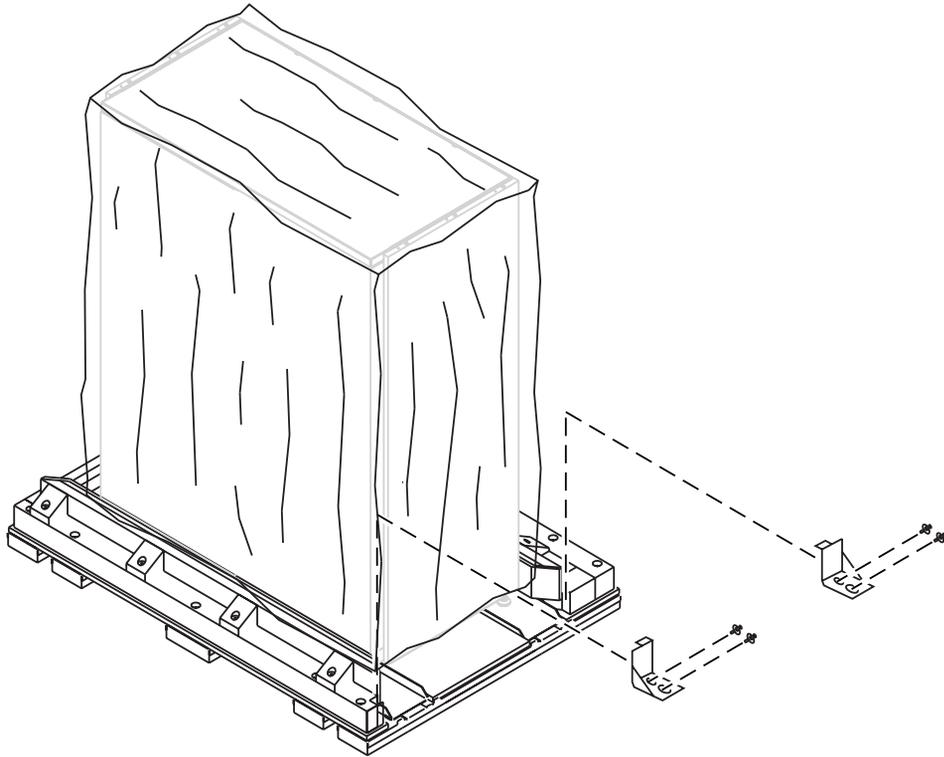


Figure 4-7: Removing the stop blocks

13. Reinsert the right wooden bar in its brackets on the pallet to hold the library in place (see Figure 4-6).
14. Repeat steps 10, 11, and 12 for the left side of the library.

15. Remove the right wooden bar and then slide the two ramp extensions and the foam block out from under the right side of the library (see Figure 4-8). Set the ramp extensions aside until you are ready to move the library.

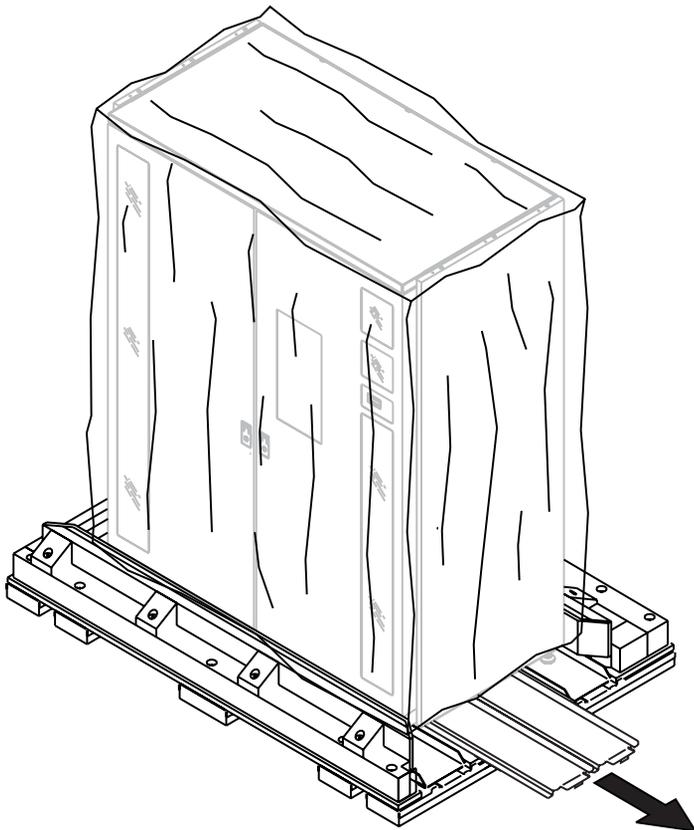


Figure 4-8: Removing the ramp extensions

16. Reinsert the right wooden bar into its brackets on the pallet to hold the library in place.



WARNING: Do not move the pallet with the library unrestricted. If the pallet must be moved, reinstall the metal stop blocks.

Moving the Library

To move the library to its installation site:

1. Map out a route to the installation site.
2. Carefully lift the shipping bag off of the library (see Figure 4-9).

NOTE: Use caution when removing the shipping bag so that it can be used to repack the library.

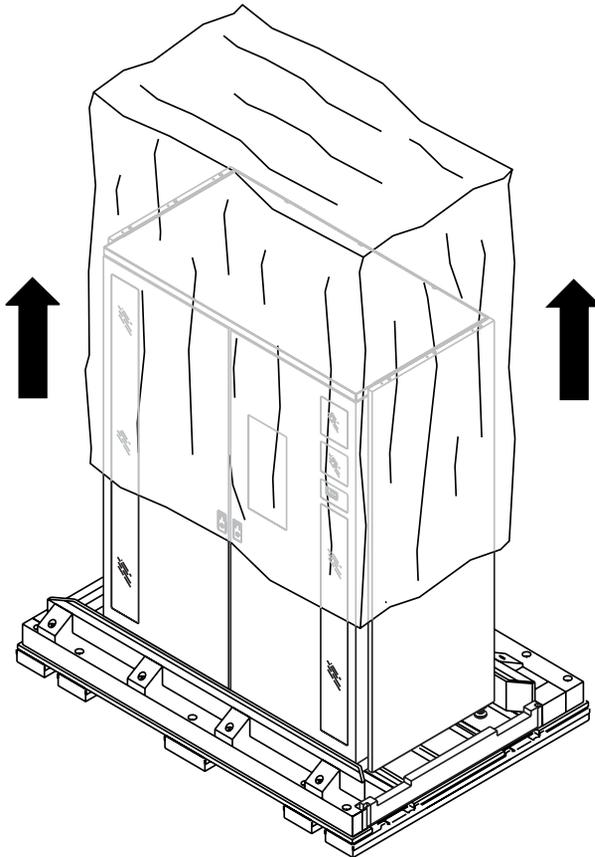


Figure 4-9: Removing the shipping bag

3. Inspect the library for any damage that might have occurred during shipment.
4. Place the two ramp extensions in the slots provided at the edge of the pallet (see Figure 4-10). The ramp can be set up on either the right side or the left side of the pallet.

NOTE: The following illustrations show the ramp setup procedure from the right side of the library.

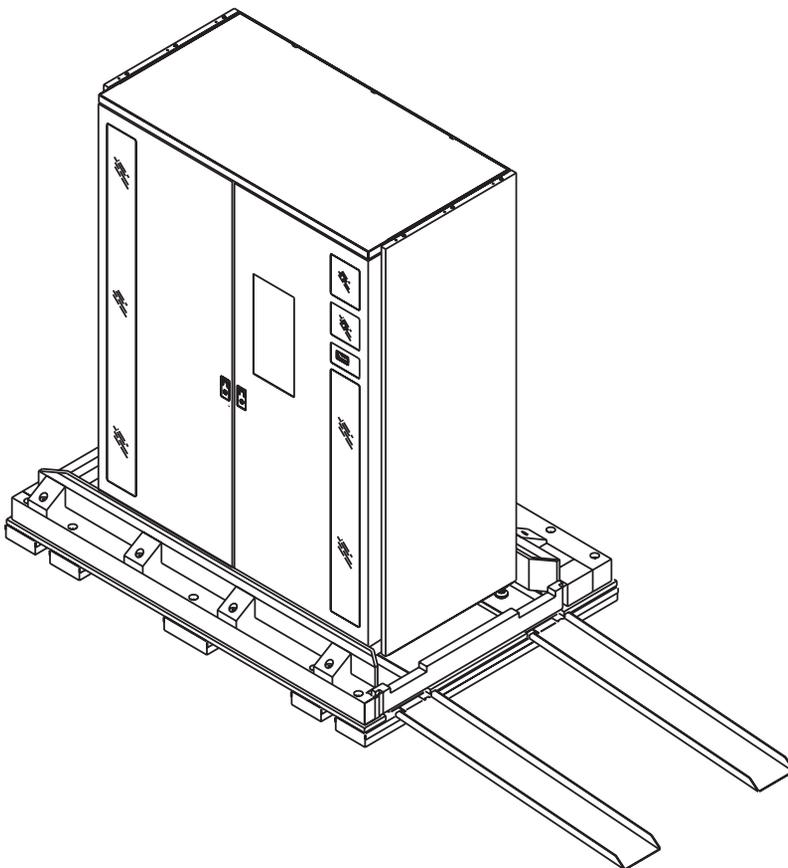


Figure 4–10: Preparing the ramp

5. Verify that the library's four leveling feet are raised. If the library is resting on the leveling feet, turn each of them to the right (using the 3/4-inch open-end wrench supplied in the accessory kit) until they are all 1/2 inch above the pallet (see Figure 4-11).

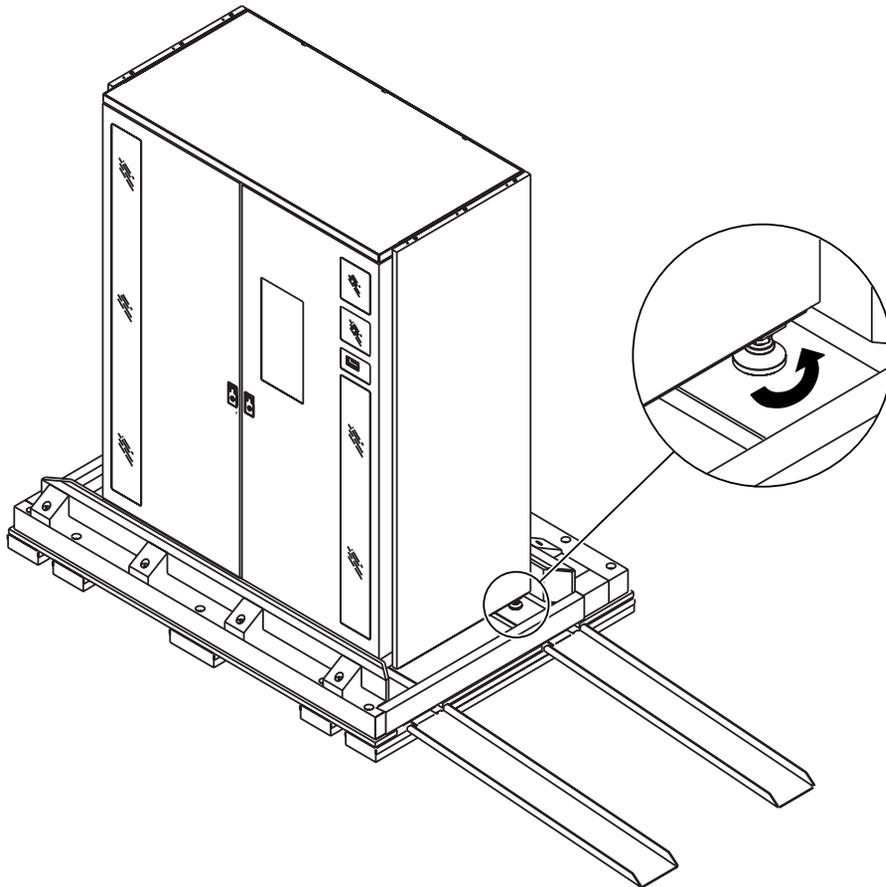


Figure 4-11: Raising the leveling feet

6. Move the wooden bar (see Figure 4-12):
 - a. Remove the wooden bar from the ramp-side of the pallet.
 - b. Turn the wooden bar over and place under the ramp extensions for support.

NOTE: Align the notches in the wooden bar with the ramp extensions.

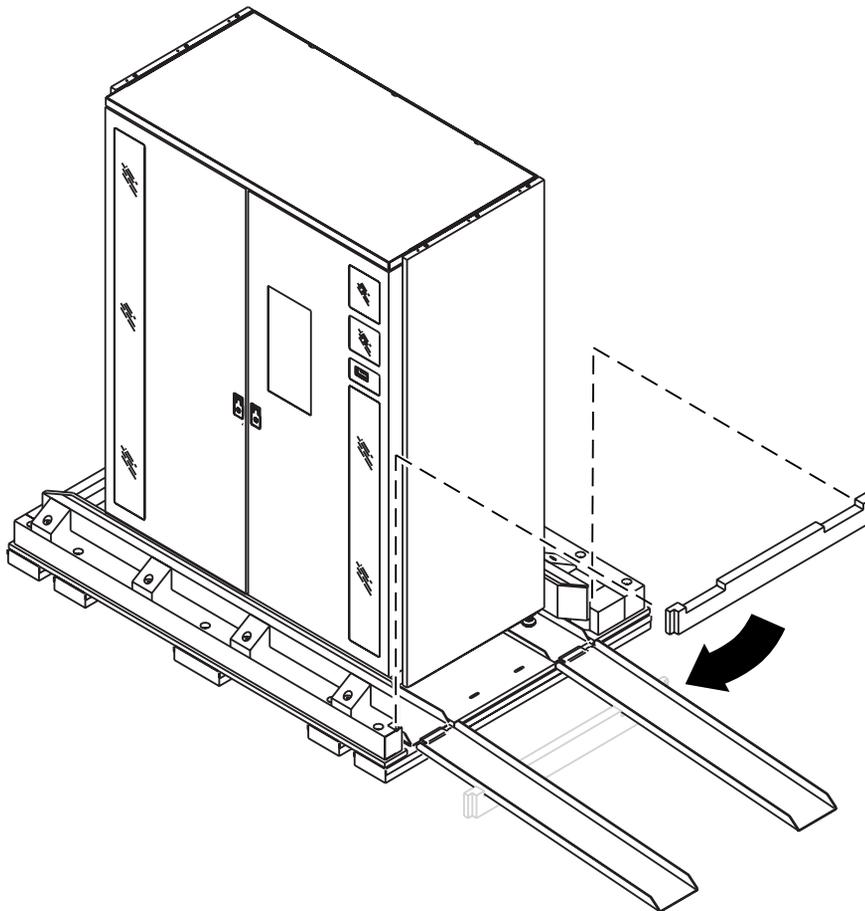


Figure 4-12: Moving the wooden bar

7. With the help of another person, slowly guide the library down the ramp (see Figure 4-13). Control the speed of its descent.
8. Move the library to its final installation site.



WARNING: A library can weigh up to 1822 pounds (827 kg). At least two people must roll it down the ramp. Failure to use two people could result in personal injury and/or equipment damage.

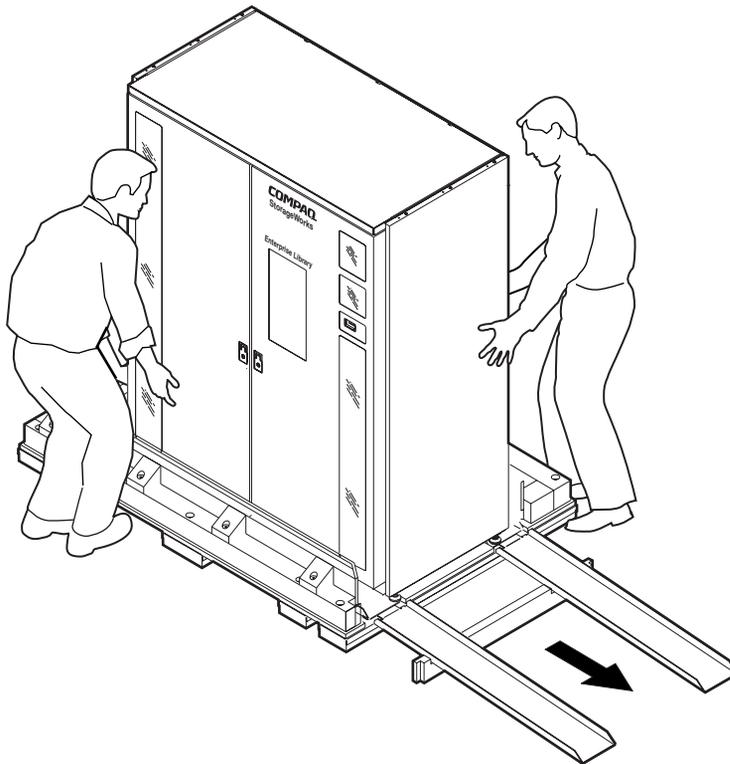


Figure 4–13: Rolling the library down the ramp

Removing the Shipping Plate

To remove the shipping plate:

1. Connect the library to a grounded power source.
NOTE: Do not turn the library on.
2. Unlock and open the front library doors:
 - a. Using the key from the accessory kit, unlock the door.
 - b. Lift the door handle straight up and then turn the handle counterclockwise to unlatch it.
 - c. Gently pull the door handle to open the door.
3. Remove the foam pads from inside the front doors and around the robotics.

4. Remove the shipping plate that protects the load port (see Figure 4-14):

NOTE: The load port is located inside the front door of the library and is secured with a steel plate for protection during shipment.

- a. Unscrew and remove the 12 bolts and washers securing the plate to the load port.
- b. Remove the shipping plate from the load port.

NOTE: Save the bolts, washers, and shipping plate to use in re-packing the library.

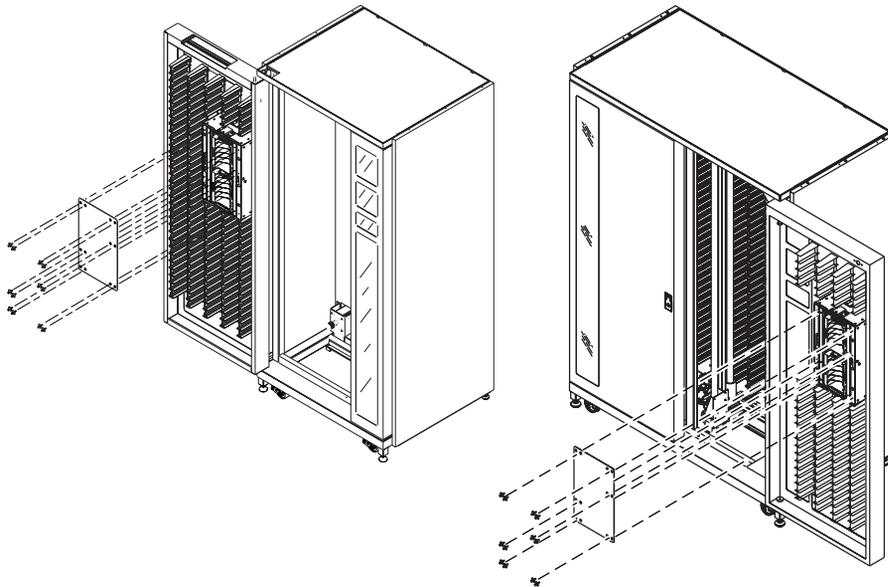
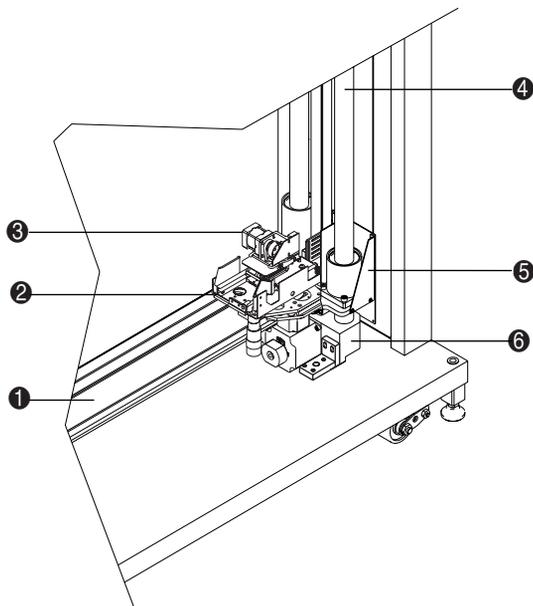


Figure 4–14: Removing the shipping plate

Removing the Shipping Restraints

Use the following procedures to remove the library shipping restraints from the Cartridge Handling Mechanism (CHM).

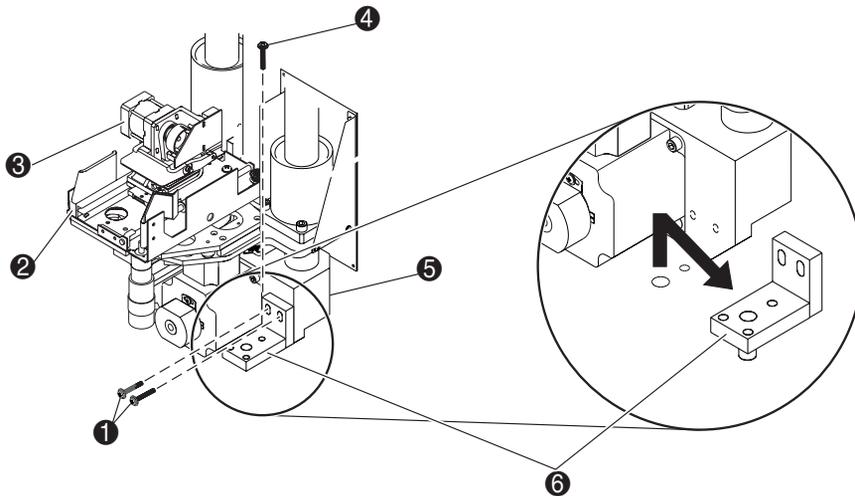
1. Locate the vertical carriage assembly ⑤ as shown in Figure 4-15.



- ① Horizontal axis
- ② Extension axis assembly
- ③ Gripper assembly
- ④ Vertical axis
- ⑤ Vertical carriage assembly
- ⑥ Horizontal carriage assembly

Figure 4-15: Locating the vertical carriage assembly

2. Remove the horizontal carriage restraint as shown in Figure 4-16:
 - a. Remove the two screws that secure the horizontal carriage restraint to the horizontal carriage ❶.
 - b. Remove the screw that secures the horizontal carriage restraint to the floor of the library ❷.
 - c. Remove the horizontal carriage restraint ❸.

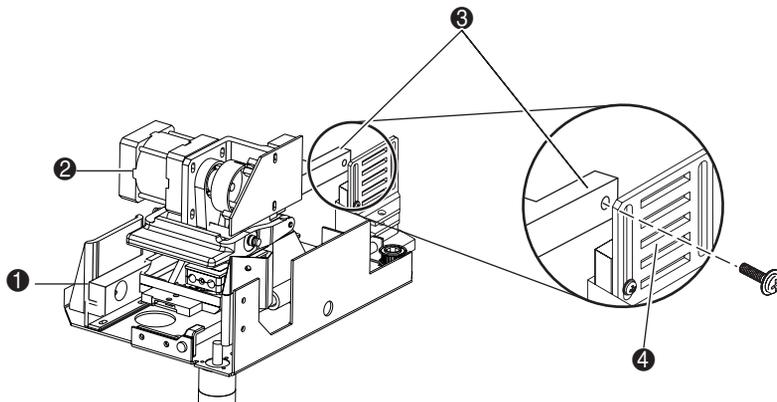


- ❶ Horizontal carriage restraint screws
- ❷ Extension axis assembly
- ❸ Gripper assembly
- ❹ Horizontal carriage restraint screw
- ❺ Horizontal carriage assembly
- ❻ Horizontal carriage restraint

Figure 4-16: Removing the horizontal carriage restraint

3. Slide the horizontal carriage assembly along the horizontal axis toward the middle of the library.

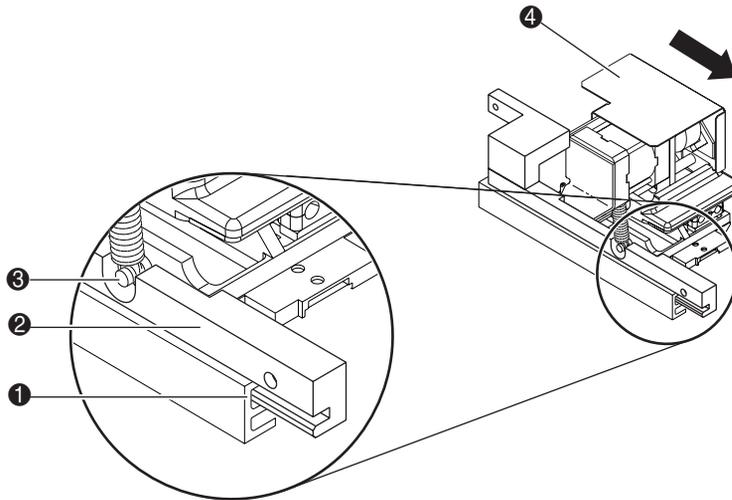
4. Remove the gripper restraint:
 - a. Remove the screw that secures the gripper restraint to the belt clamp ④ as shown in Figure 4-17.



- ① Extension axis assembly
- ② Gripper assembly
- ③ Gripper restraint
- ④ Belt clamp

Figure 4-17: Removing the gripper restraint screw

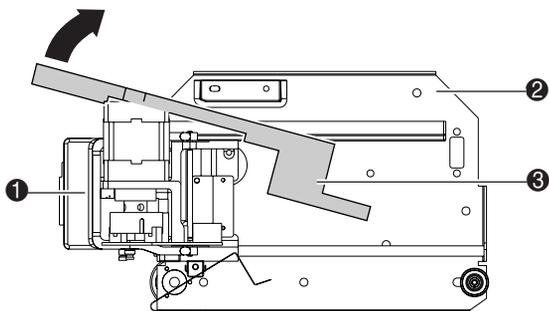
- b. Slide the gripper assembly ④ away from the vertical axis until the gripper assembly is fully extended and the gripper restraint ② disengages from the follower guide ① (see Figure 4-18).



- ① Follower guide
- ② Gripper restraint
- ③ Spring post
- ④ Gripper assembly (view rotated)

Figure 4–18: Releasing the gripper restraint

- c. Pivot the gripper restraint ③ until it clears the motors and spring post as shown in Figure 4-19.
- d. Remove the gripper restraint ③ by gently pulling it back toward the vertical axis.
- e. Slide the gripper assembly ① toward the vertical axis.



- ① Gripper assembly (fully extended)
- ② Extension axis assembly (top view)
- ③ Gripper restraint

Figure 4–19: Removing the gripper restraint

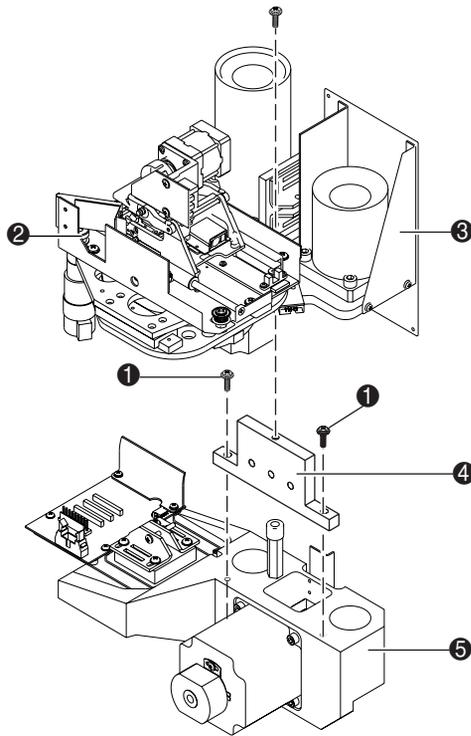
5. Remove the vertical carriage restraint ④ as shown in Figure 4-20:



WARNING: The vertical carriage assembly is extremely heavy.

- a. Rotate the extension axis ② assembly 90 degrees.
- b. Remove the screw that secures the vertical carriage assembly ③ to the vertical carriage restraint ④.
- c. Gently slide the vertical carriage assembly ③ up to eye level.

- d. Squeeze the two sides of the vertical belt together, making sure to interlock the belt cogs.
- e. Secure the vertical belt to the vertical carriage assembly ③ using a tie wrap.
- f. Remove the two screws ① that secure the vertical carriage restraint to the horizontal carriage.
- g. Remove the vertical carriage restraint ④.
- h. Remove the tie wrap installed in step 5e.
- i. Gently lower the vertical carriage assembly ③.



- ① Vertical carriage restraint screws
- ② Extension axis assembly (rotated 90°)
- ③ Vertical carriage assembly
- ④ Vertical carriage restraint
- ⑤ Horizontal carriage assembly

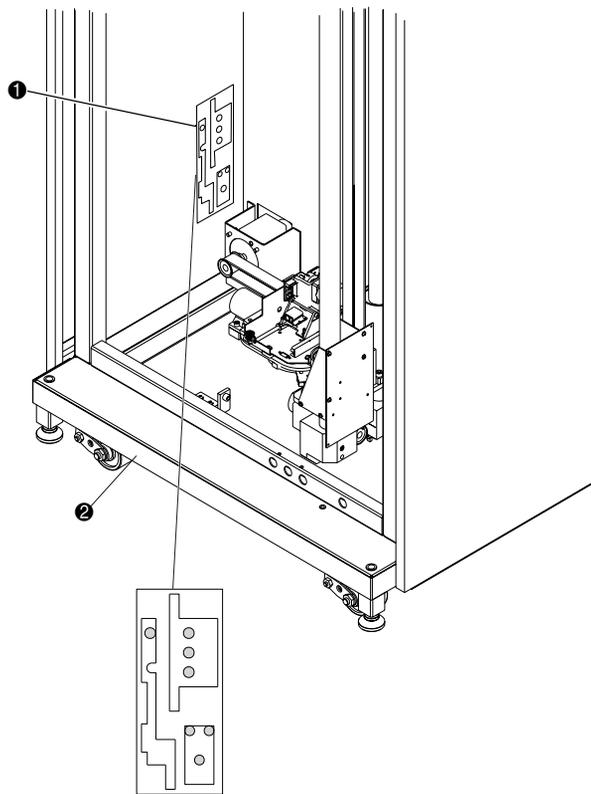
Figure 4–20: Removing the vertical carriage restraint

Storing the Shipping Materials

To store the shipping and packaging materials for future use:

1. Using the gripper, horizontal, and vertical restraint screws, secure the shipping restraints to the inside of the library as shown in Figure 4-21 (ESL9198 and ESL9326) or Figure 4-22 (ESL9322 and ESL9595).

NOTE: The profile of each shipping restraint is clearly outlined on the storage label.



- ① Label with shipping restraints outlined
- ② Front of library

Figure 4-21: Storing the shipping restraints (ESL9198 and ESL9326)

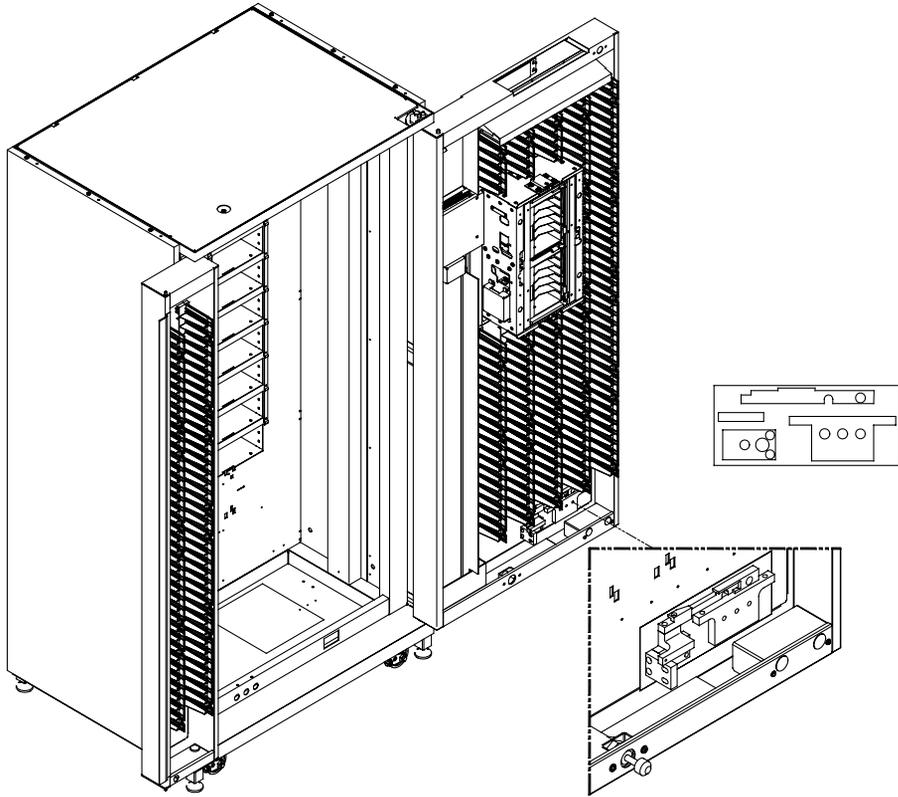


Figure 4–22: Storing the shipping restraints (ESL9322 and ESL9595)

2. Slide the two ramp extensions into their shipping position on top of the pallet.
3. Secure the ramp extensions with the foam block.
4. Re-insert the wooden bar into its brackets on the pallet.
5. Fold the shipping bag.
6. Place the shipping bag, load port shipping plate, stop blocks, foam cap, screws, and other packaging materials on the pallet.
7. Collapse the cardboard box.
8. Place the cardboard box on top of the packaging materials on the pallet.
9. Secure the pallet, packaging materials, and cardboard box for future use.

Leveling the Library

To level the library:

NOTE: If a multi-unit library system is being implemented, refer to the *Compaq StorageWorks ESL9000 Series Tape Library Pass-Through Mechanism (PTM) Installation Guide* for installation instructions.

1. Using the $\frac{3}{4}$ -inch open-end wrench (supplied in the accessory kit), rotate each foot of the library until it makes contact with the floor.
2. Rotate each foot an additional one-quarter turn to begin raising the library.
3. Center a carpenter's level on the top front edge of the library.
4. Check the gauge on the level. If the front of the library is level, proceed to step 6. If it is not level:
 - a. Determine which side of the library is low.
 - b. Adjust the leveling foot on the low side of the library by rotating the leveling foot with the open-end wrench.
5. Repeat step 4 until the front is level.
6. Repeat steps 3 and 4 for the left edge, back edge, and right edge of the library.
7. Recheck the level on all top edges.
8. If necessary, repeat steps 3 and 4 until all four top edges of the library are level.

NOTE: You can now configure the library for normal operation. Refer to the *hp StorageWorks ESL9000 Series Tape Library Reference Guide* for more information.

Reinstalling the Gripper Restraint

If the library is to be moved to a different location, use this procedure to re-install the gripper restraint:

NOTE: To relocate the library or prepare it for shipment, see Chapter 5, “Relocation.”

1. Pull the gripper all the way out toward you (see Figure 4-23).
2. Insert the gripper restraint ❶ into the follower guide so that it is in the same position as shown in Figure 4-23.
3. Slide the gripper and restraint to lock them into the groove (approximately half way in).
4. Rotate the gripper 90 degrees.
5. Line up the restraint and then attach it. See the section “Removing the Shipping Restraints” for attaching information.

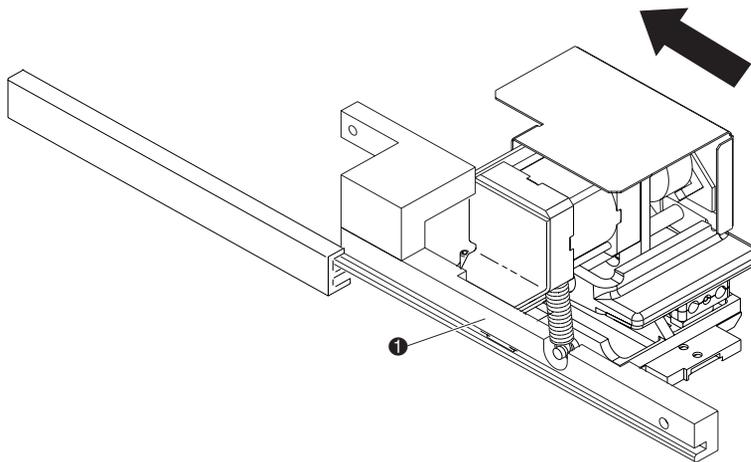


Figure 4–23: Reinstalling the gripper restraint

Relocation

This chapter explains how to relocate the HP StorageWorks ESL9000 Series Tape Library. As used in this chapter, the term relocate means either to ship the library or simply move it to a nearby location (for example, from one area in a building to another).

The instructions in this chapter are divided into the following sections:

- Checking the new installation site
- Preparing the library for relocation
- Crating the library
- Preparing the library for operation

To ship the library or relocate it using a motor vehicle (for example, truck or forklift) follow all of the instructions in this chapter.

To move the library to a new location within the same building or facility, follow all instructions in this chapter except for those found in “Crating the Library.”

NOTE: These procedures require the original packing materials of the library. If you do not have the original packing materials, contact your hp sales representative.



CAUTION: Relocating or shipping the library without proper packing materials can result in damage to library components.

Checking the New Installation Site

Check the new installation site for the library using the guidelines found in Chapter 2, “Selecting an Installation Location.” Make sure the new location meets all applicable clearance, environmental, and power requirements.

Preparing the Library for Relocation

To prepare the library for relocation:

- Remove tape cartridges
- Install internal packing materials
- Disconnect library cables



CAUTION: Always prepare the library for relocation before any move.

Removing Tape Cartridges

To remove tape cartridges:

1. Stop all library operation.
 - a. Press the **Standby** button on the control panel. This places the library off-line after the completion of any currently executing operations. When the library is off-line, the control panel displays System Off-line.
 - b. Press the **Stop** button to remove power from library robotics.
2. Unlock and open the library doors.
3. Turn off the library.
4. Remove all tape cartridges from the library bins and tape drives.
5. Carefully pack all tapes for shipment.

Installing Internal Packing Materials

To install internal packing materials:

1. If the Cartridge Handling Mechanism (CHM) is not in the far right position, gently move it along the horizontal carriage until it is as far right as possible.
2. Place a foam block between the extension axis and the floor.
 - a. Lift the extension axis assembly and place the large foam block between it and the floor of the library.
 - b. Gently lower the extension axis assembly, resting it on the foam block.
3. See Chapter 4, “Unpacking and Moving the Library,” for information pertaining to reattaching the shipping brackets to the CHM.
 - a. Using the screws attached to the bracket, insert and tighten the restraining bracket.

NOTE: To gain access to the restraining bracket, manually glide the CHM up the y-axis and hold in place using a tie wrap, so that the motor assembly is above the library floor.
4. Insert and tighten the restraining bracket.

NOTE: Slide the CHM to the left (along the x-axis) for greater access to the area.

 - a. Insert the restraining bracket onto the CHM and the library floor and secure it using the screws provided.

NOTE: More than one technician might be required to assist this operation.

5. Attach the shipping plate that protects the load port (see Figure 5-1). The load port is located in the right door of the library.
 - a. Attach the shipping plate and cardboard to the load port.
 - b. Insert the bolts and washers that secure the plate to the load port and secure them using the screws provided during the unpacking procedure. See Chapter 4, “Unpacking and Moving the Library,” for further instructions.

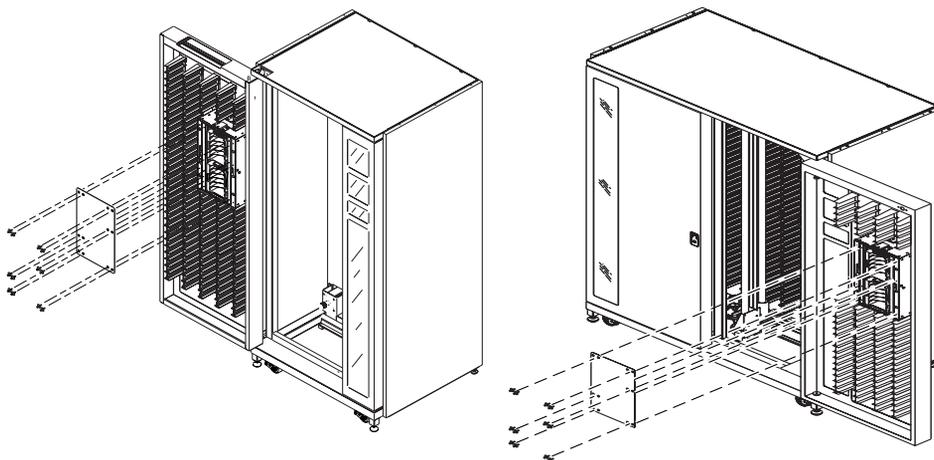


Figure 5-1: Inserting the shipping plate

Disconnecting Library Cables

To disconnect library cables:

1. Disconnect SCSI cables and terminators.
2. Disconnect the power cord from the outlet and the power distribution assembly of the library.
3. Pack all cables with other library accessories.

Crating the Library

Use this section:

- If you need to ship the library to the new site.
- If you need to transport the library by forklift or similar means.

If you are moving the library within a facility, see “Preparing the Library for Operation,” described later in this chapter.

Crating Instructions

To crate the library for a new site:



CAUTION: The library weighs approximately 985 pounds (447 kg) for the ESL9198, approximately 1072 pounds (487 kg) for the ESL9322, approximately 1300 pounds (590 kg) for the ESL9326, and approximately 1444 (655 kg) for the ESL9595. Use at least two people to perform any steps that involve lifting or guiding the library. Use safe practices when lifting or guiding the library and handling the ramp.

1. Prepare the shipping pallet for the library.
 - a. Attach the two ramp extensions to the pallet.
 - b. Place the wooden support bar underneath the ramp extensions.
 - c. Attach the metal stop blocks to the left side of the pallet to help prevent the library from rolling off the end.
2. Place the library on the pallet.
 - a. Raise the library support feet.
 - b. With the help of at least one person, roll the library to a position in front of the pallet ramp.
 - c. Roll the library onto the pallet.
 - d. Remove the left side stop blocks and replace the wooden bar.

3. Secure the library (see Figure 5-2).
 - a. Place the shipping bag over the library, and secure it into place.
 - b. Remove the ramp sections from the pallet and slide them into the center section.
 - c. Insert the foam block between the bottom of the library and the pallet.
 - d. Insert and attach the stop blocks underneath the library on the right side.
 - e. Attach the wooden bar on the right side of the library.
 - f. Remove the wooden bar on the left side of the library.
 - g. Repeat steps d and e for the left side of the library.
4. Place the accessory kits into the cutouts on the back crate panel.
5. Place the foam cap over the library.
6. Wrap the cardboard crate around the library and fasten it using the plastic restraining clips.
7. Place the top onto the crate.
8. Secure the crate with two steel restraining bands.

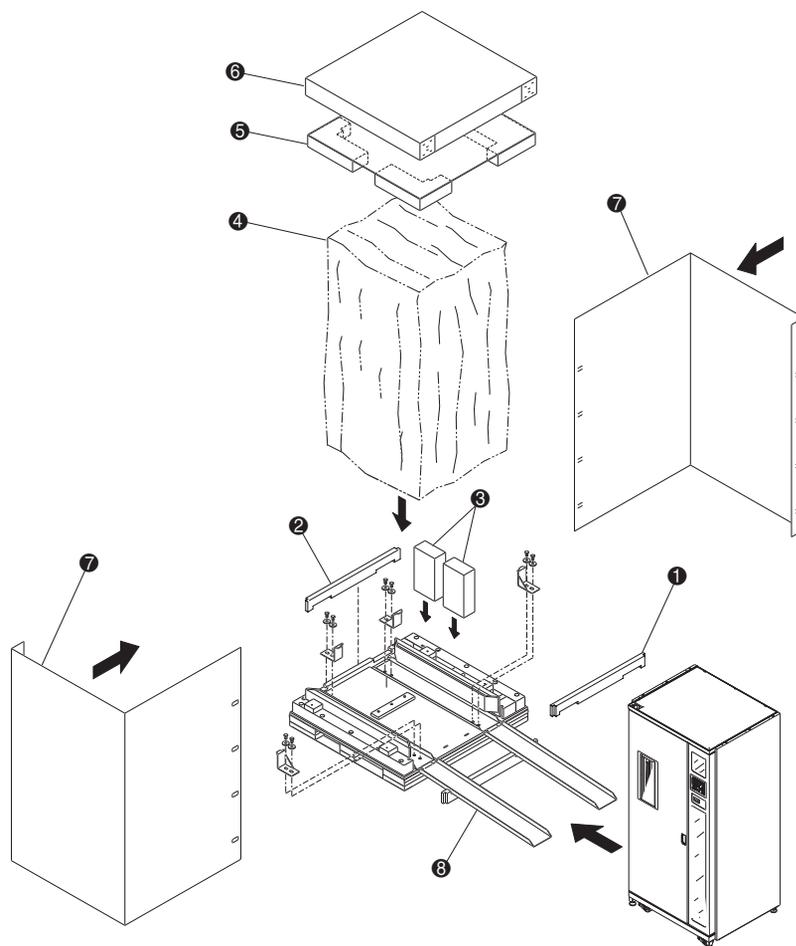


Figure 5–2: Crating the library (ESL9198 shown)

- ❶ Right wooden bar
- ❷ Left wooden bar
- ❸ Accessory kits
- ❹ Shipping bag
- ❺ Foam cap
- ❻ Top
- ❼ Cardboard crate
- ❽ Ramp

Preparing the Library for Operation

After relocating the library, refer to the *hp StorageWorks ESL9000 Series Tape Library Reference Guide* to:

- Close the library doors and access panels
- Connect the host workstations

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