Hardware Installation Guide

English

Lotem 400

653-00684C-EN

www.creo.com/

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D478,608	5,420,702	5,699,740	6,016,752	6,191,882	6,407,849	6,587,211
4,558,302	5,420,722	5,708,736	6,043,865	6,204,874	6,409,331	6,589,710
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5,113,249	5,488,906	5,771,794	6,072,518	6,217,965	6,430,136	6,605,407
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5,155,782	5,509,561	5,802,034	6,093,447	6,252,522	6,441,914	6,611,363
5,157,516	5,517,359	5,813,346	6,096,461	6,255,033	6,443,571	6,618,187
5,177,724	5,519,852	5,818,498	6,098,544	6,260,482	6,450,092	6,628,435
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5,208,888	5,579,115	5,861,904	6,112,663	6,266,134	6,471,335	6,637,329
5,247,174	5,583,551	5,861,992	6,115,056	6,267,054	6,476,342	6,637,860
5,249,067	5,592,309	5,875,288	6,116,160	6,268,948	6,476,931	6,640,713
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5,291,273	5,600,448	5,900,981	6,130,702	6,283,589	6,493,064	6,641,978
5,305,091	5,608,822	5,934,196	6,134,393	6,295,076	6,494,965	6,646,669
5,323,248	5,615,282	5,946,426	6,136,509	6,299,572	6,503,691	6,648,468
5,325,217	5,625,397	5,947,028	6,137,580	6,318,266	6,509,903	6,652,088
5,339,176	5,625,766	5,958,647	6,147,789	6,328,408	6,511,163	6,654,147
5,343,059	5,636,330	5,966,504	6,158,345	6,336,708	6,520,084	6,660,997
5,355,446	5,649,220	5,969,872	6,159,659	6,340,817	6,530,317	6,661,561
5,359,451	5,650,076	5,973,801	6,164,637	6,352,816	6,541,181	6,665,048
5,359,458	5,652,804	5,986,819	6,165,658	6,353,216	6,544,336	6,665,121
5,367,360	5,680,129	5,995,475	6,180,325	6,366,339	6,545,772	6,670,986
5,384,648	5,691,823	5,996,499	6,181,362	6,371,026	6,550,388	6,684,783
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Creo Inc.
3700 Gilmore Way
Burnaby, B.C., Canada
V5G 4M1
Tel: +1.604.451.2700
Fax: +1.604.437.9891

http://www.creo.com/
Internal 653-00684C-EN

Revised January 2006

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Introduction

The Lotem® 400 Hardware Installation Guide describes the process of installing a Lotem 400 platesetter at a customer site. This guide is applicable to the Lotem 400 and the Lotem 400 Xpose platesetters.

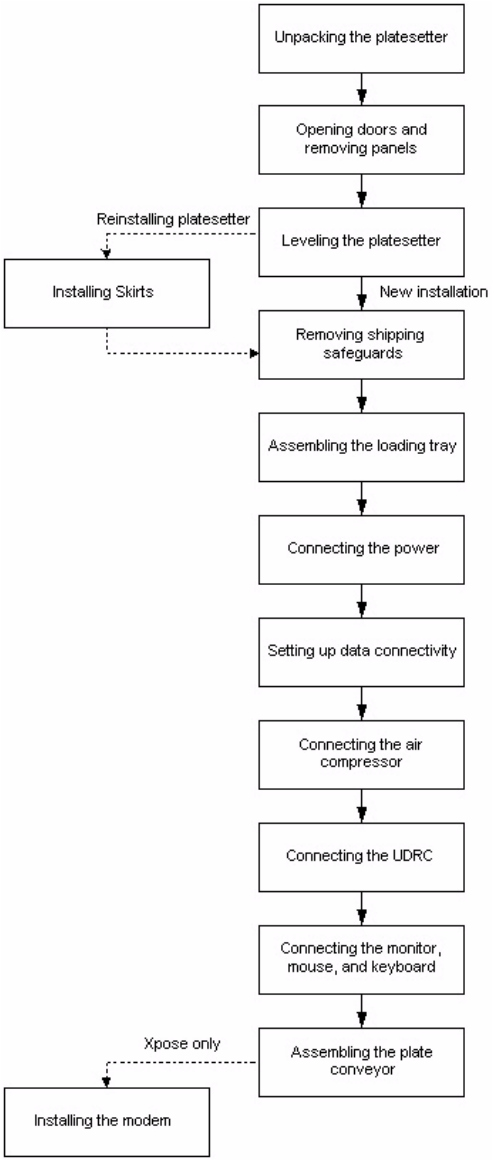


Figure 1: Lotem 400 and Lotem 400 Xpose installation workflow

Unpacking the Platesetter



Note: It is recommended to read this entire section before starting to unpack.

Handle all packing material with care. These materials will be used again if you need to transport the platesetter in the future. Use a forklift to lift the shipping container and place it at the unpacking site.

- Shipping container size: length—2060 mm (82.5"), width—1140 mm (45.5"), height—1160 mm (46.5")
- Platesetter size: length—920 mm (36.22"), width—1760 mm (69.29"), with doors open 2700 mm (106"); height—1340 mm (52.76"), with doors open 1950 mm (77").

Before unpacking, ensure that the site is large enough to allow easy maneuvering of the platesetter. For example, check the following:

- Available space for the forklift to lower the platesetter from the shipping pallet
- Doorway clearance for the platesetter and forklift

Checking for Damage



WARNING: Check that the shipping container is undamaged. Do not proceed with the unpacking if it is damaged in any way and notify the shipping agent immediately.

Precautions

Observe the following precautions before unpacking:

- Do not unpack the platesetter in extreme heat (above 30°C) or cold (below 0°C).
- If there are any signs of ice on the platesetter, do not touch any of the mechanical parts. Wait at least 24 hours (preferably 48 hours) for the platesetter to gradually reach room temperature.
- Do not unpack the platesetter in room that is not air-conditioned, if the weather is very humid.

Parts Checklist

For a parts list, see the *GCL* forms attached to the platesetter packaging.

Removing the Platesetter From the Packaging

At least two people and a forklift are required to unpack and lower the platesetter from its shipping pallet. The unpacking process is shown in Figure 2 on page 4. The numbers in the instructions below refer to the item numbers shown in the figure.

1. Carefully cut the two steel bands [1] surrounding the carton [2].
2. Open the top flaps of the carton [2].
3. Remove the staples that secure the carton [2] to the shipping pallet [7] and to the support struts [5].
4. Remove the entire carton [2].
5. Remove all the parts that are tied to the shipping pallet at the rear of the platesetter.
6. Remove the top support struts [3] and the side support struts [5].
7. The platesetter is secured to the shipping pallet with four screws, brackets and washers [8]. Remove the screws, brackets and washers from underneath the shipping pallet.
8. Using the forklift, lift the platesetter from the shipping pallet. Make sure to lift the platesetter *only* at the designated locations, marked on the pallet frame.
9. Lower the platesetter from the shipping pallet.
10. Remove the nylon wrapping from the platesetter.
11. To move the platesetter, lift its legs so that the platesetter can be rolled on its wheels, and then close the nut on each leg by turning it counterclockwise.
12. Roll the platesetter to its final location.
13. Lower the four legs of the platesetter by turning the nut on each leg clockwise.

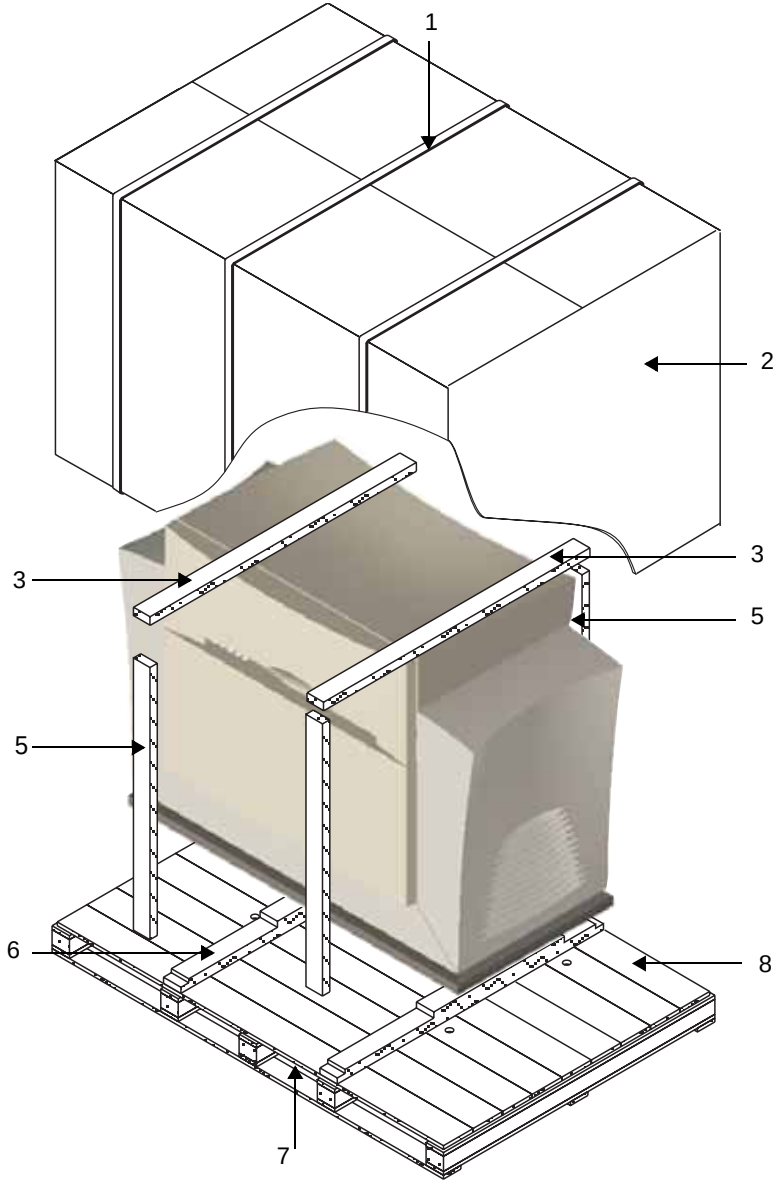


Figure 2: Unpacking the platesetter

Opening Doors and Removing Panels

Opening Doors

Open the upper door first, then the side doors, and finally the front door.

1. To open the upper door, insert a 5/32" hex key at least 6 cm into the two holes of the upper-rear cover, as shown. Turn the key to the right. (On the left side, turn the key to the left).



Figure 3: Inserting a hex key to open the upper door

2. To open the side doors, press the spring latch for each door, as shown in Figure 4. The latch is located on the side door near the front of the platesetter.



Figure 4: Opening the side doors

3. When the upper and side doors are open, on the left and right sides of the front door, push the hook upward twice (that is, in two stages), as shown in Figure 5. You can then fully open the front door.



Figure 5: Opening the front door

Removing Panels

1. To remove the back panel, with the upper door open, remove the two screws on each side of the platesetter, as shown in Figure 6.



Figure 6: Removing the back panel

2. To remove the back trapezoid, with the two side doors open, remove the two screws [1], as shown in Figure 7. Then slide the panel left and remove it through the key-shaped opening [2].

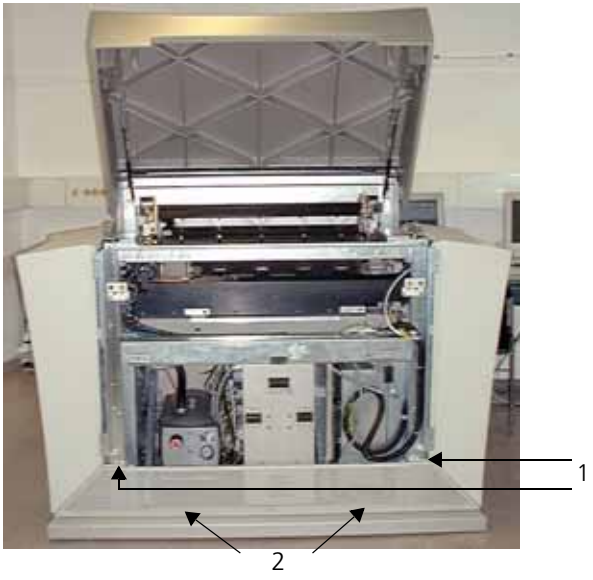


Figure 7: Removing the back trapezoid

The rear side of the platesetter is now as shown in Figure 8.



Figure 8: Rear view of the platesetter after the panels are removed

3. To remove the front panel under the loading tray, remove the two screws, as shown in Figure 9.



Figure 9: Removing the front panel

4. To remove the front trapezoid, remove the two screws [1], as shown in Figure 10. Then slide the panel left and remove it through the key-shaped opening [2].

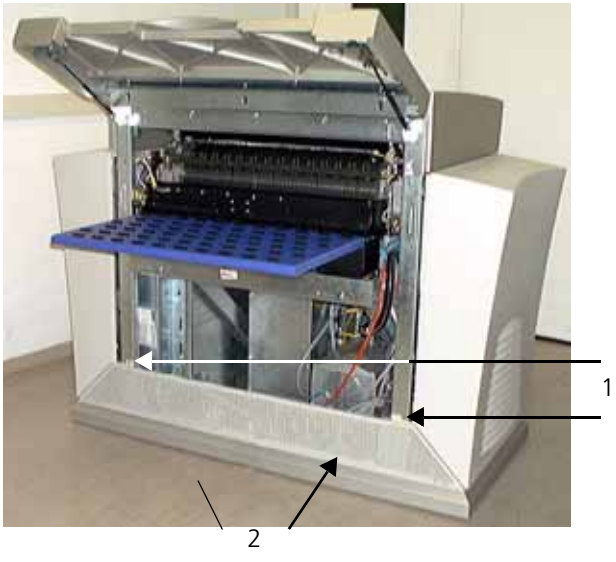


Figure 10: Removing the front trapezoid

The front side of the platesetter is now as shown in Figure 11.



Figure 11: Front view of the platesetter after the panels are removed

Leveling the Platesetter

Final leveling means that the platesetter is positioned on a uniform horizontal plane at all four corners, with all four wheels raised above the floor, to ensure smooth plate loading.

1. Place a standard leveling instrument on the main frame side door, and verify that the front and rear of the platesetter are level.
2. If the front and rear are not level, adjust the rear legs. Open or close the adjusting nut of one of the rear legs. Then tighten the locking nut.

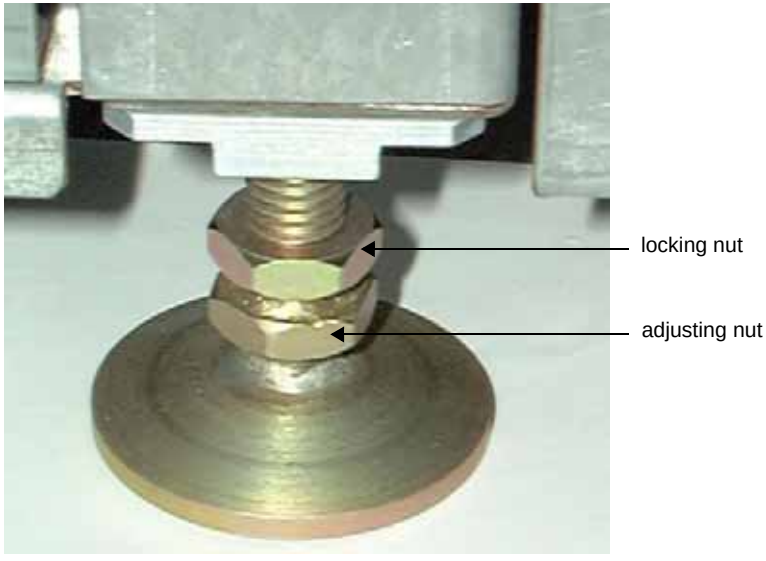


Figure 12: Adjusting leg height

3. After the platesetter is properly aligned, tighten the legs by closing the locking nut of all four legs.

Installing Skirts

The platesetter is shipped without skirts. If your platesetter is new, you do not need to install skirts, and you can proceed to *Removing Shipping Safeguards* on page 14.

If you are reinstalling a platesetter that has skirts, the following procedure describes the installation process.

1. To install the back skirting board, slide it to the left until it can be inserted through the key-shaped opening. Then secure it with three screws, as shown in Figure 13.



Figure 13: Back skirting board screws location

2. To install the front skirting board, slide it to the left until it can be inserted through the key-shaped opening. Then secure it with three screws, as shown in Figure 14.

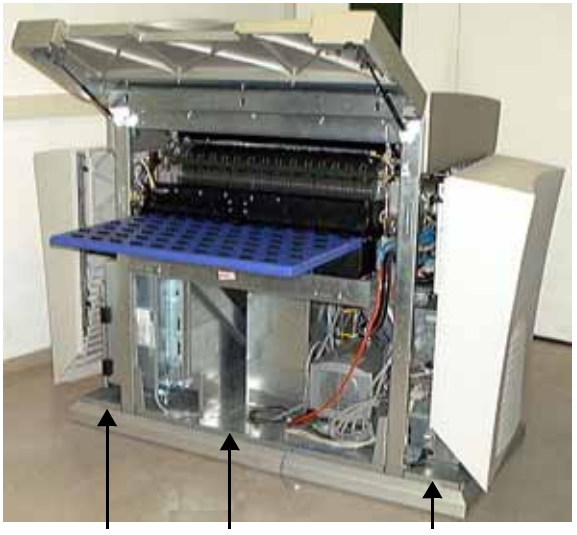


Figure 14: Front skirting board screws location

3. To install the left and right skirting boards, repeat the instructions for the rear and front skirting boards. Figure 15 shows the location of the screws for the left skirting board.

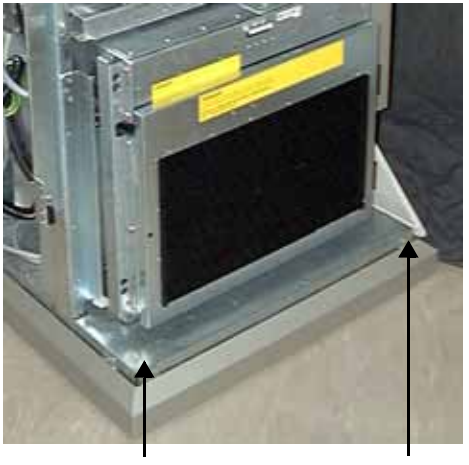


Figure 15: Left side skirting board screws location

Removing Shipping Safeguards

The platesetter is shipped with several safeguards that prevent excessive movement of internal parts during transport. This section describes how to remove these safeguards.

Removing Unloading Tray Locking Devices

At the rear of the platesetter, remove the two screws that lock the unloading arm.

Removing Optomechanic-to-Chassis Locking Devices

Special locking devices secure the optomechanic and carriage assembly to the main frame during transport. There are five such locking devices—two on the front of the platesetter, one on the left side, and two on the carriage. The locking devices are red for easy identification.

- Using a 5/16" hex key, remove the two screws that secure each locking device, and then remove the device.

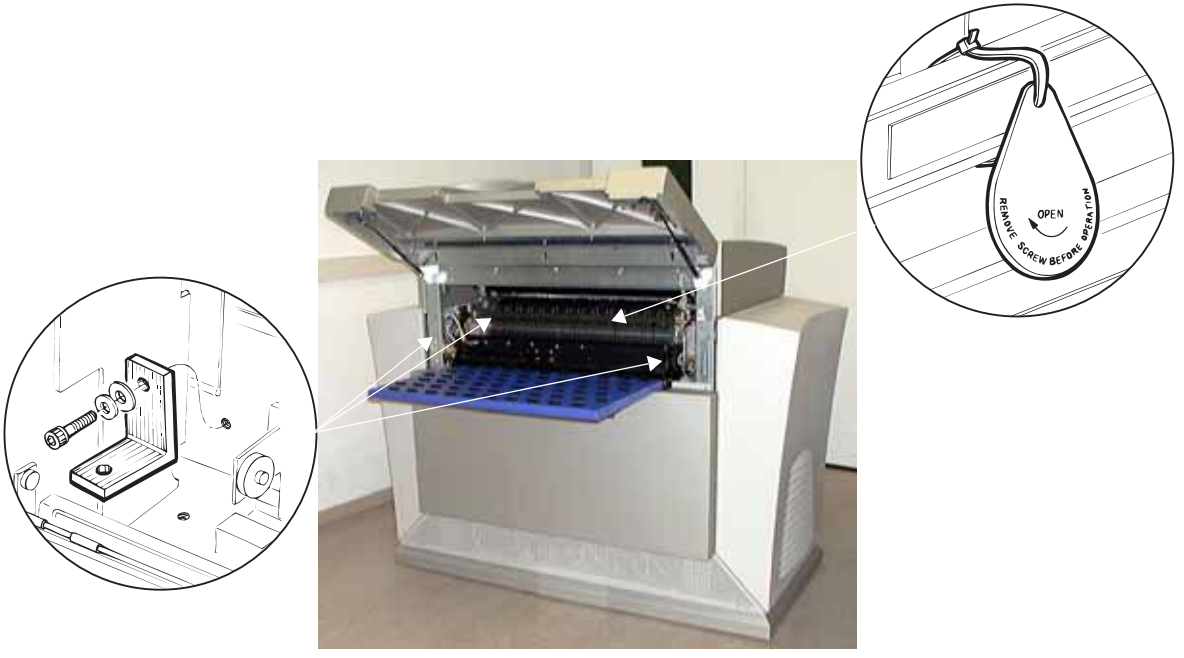


Figure 16: Optomechanic-to-chassis locking devices, front view

Removing Carriage-to-Optomechanic Locking Devices

Two locking devices secure the carriage to the V block during transport, one in front of the carriage and one behind the carriage.

To remove the locking devices:

1. From the back of the platesetter, use a 5/16" hex key to remove the six screws from the locking device in front of the carriage, and then remove the locking device.
2. From the left side door, use the hex key to remove the five screws from the locking device behind the carriage, and then remove the locking device.

Note: After removing the locking devices, inspect the components inside the platesetter to verify that they are undamaged.

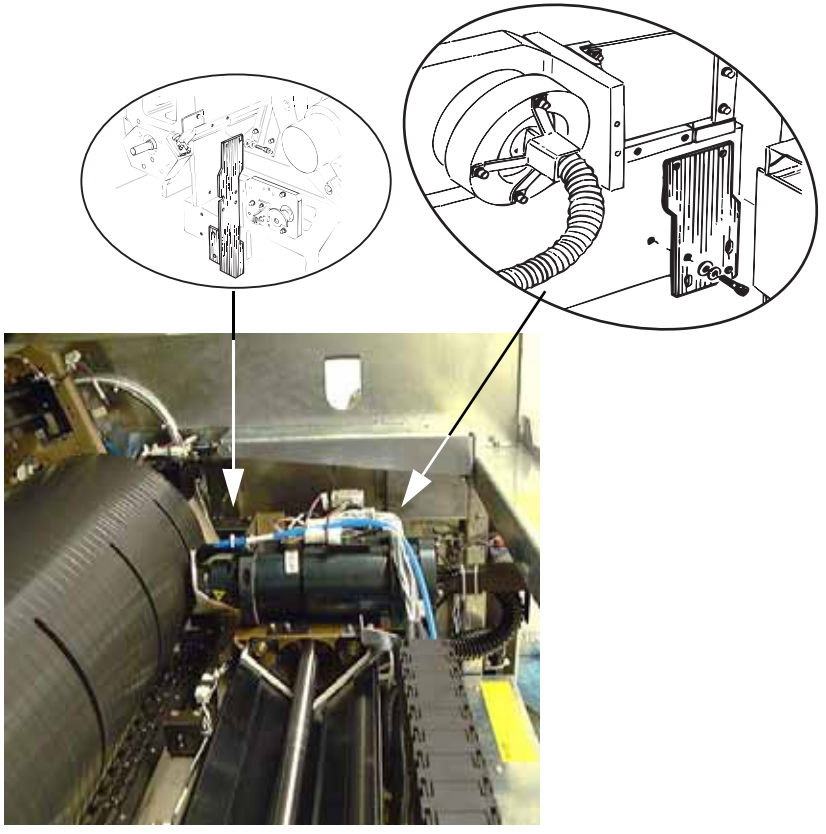


Figure 17: Carriage-to-Optomechanic locking devices

Assembling the Loading Tray

1. Position the left [1] and right [2] brackets as shown in Figure 18. Using a 10 mm wrench, secure each bracket with three head screws [3]. Do not tighten the screws.



Important: The right bracket has wiring holes. When installing the right bracket, make sure not to damage the wire that extends from the platesetter.

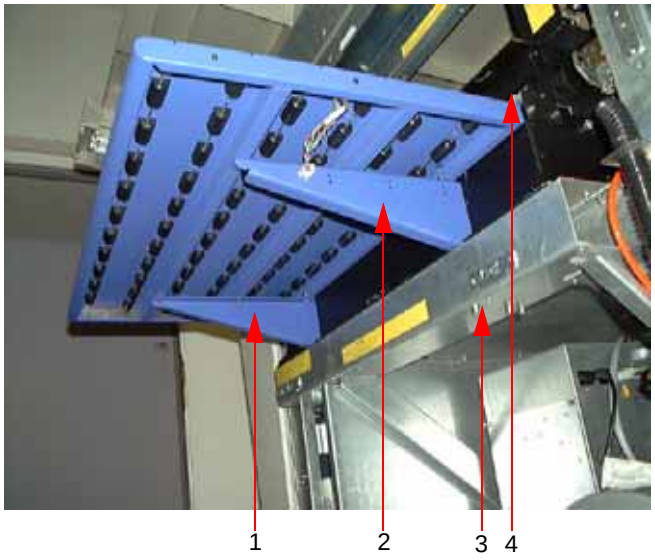


Figure 18: Loading tray assembly

2. Place the loading tray on the brackets and secure it to each bracket with two hex screws. Do not tighten the screws.
3. Tighten the six head screws [3], and then tighten the four hex screws.
4. Tighten the two spring screws [4] located on the upper part of the tray near the mainframe of the platesetter.
5. Route the harness that extends from the platesetter to the right bracket and secure it with ties.
6. Insert the harness Molex® connector into the slot on the right bracket.
7. Connect the push-button Molex of the loading tray to the harness Molex.

Connecting the Power

Before you connect power to the platesetter, ensure that your site meets the following electrical requirements:

- Line voltage at customer site: two-phase supply in 120 V 25 A configuration, or one-phase in 230 V 25 A configuration
- Supply voltage: 200–240 Vac ±10%; frequency variation up to 50/60 Hz ±2%
- Cable connector: male, 6h 3–pin – 2 phase and ground, supplied with platesetter
- Wall connector: female, 32 A 6h, 3–pin – 2 phase and ground, supplied by customer
- Power supply connections for Brisque® workstation, Brisque monitor and Lotem Controller monitor: three required, 120 V ±10% or 230 V ±10%, 16 A
- Additional isolated single-phase outlet for service purposes
- Additional power is required for the processor, pre-heat ovens, baking ovens and/or plate stacker.



Note: For more information, see *Lotem 400 Family Site Preparation Guidelines* (part number 399Z1M151B).

Connecting the Main Power Cable

Before you start this procedure, ensure that the doors are open and panels removed, as described in *Opening Doors and Removing Panels* on page 5.

1. Locate the main power cable (black cable), and pull it out through the cable opening in the trapezoid panel at the lower rear of the platesetter.
2. Using a digital voltmeter (DVM), measure the actual line voltage.
3. According to the line voltage, select the correct plug to be used on the distribution box.



Note: If the actual measured voltage is between two values that appear on the distribution box, round the value upward.

4. Connect the male 3-pin 6h 2-phase and ground cable connector to the main power cable.

Setting Up Data Connectivity

Perform the following step to ensure that the platesetter can communicat with your workflow system. Connectivity consists of a cable connection for data transfer and a TCP/IP link for communication between the Lotem Controller and the workflow solution workstation.

Connecting the TSP Cable

- To connect the platesetter to the workstation, connect the TSP cable from the middle data connector on the L-box of the platesetter to the TSP board on the workstation.

Note: Do not connect the cable to the top connector.



Figure 19: TSP cable connection on the platesetter L-box

Setting Up the TCP/IP Connection

- Connect both the workflow solution workstation and the platesetter to the site's network infrastructure. Verify that the workflow solution workstation is connected to the network via the fast ethernet board in slot 2, and connect the network port in the E-box to the communication network switching hub.

Note: Do not to use the point-to-point connection method (connecting the workflow solution workstation directly to the platesetter) because it does not enable remote support.

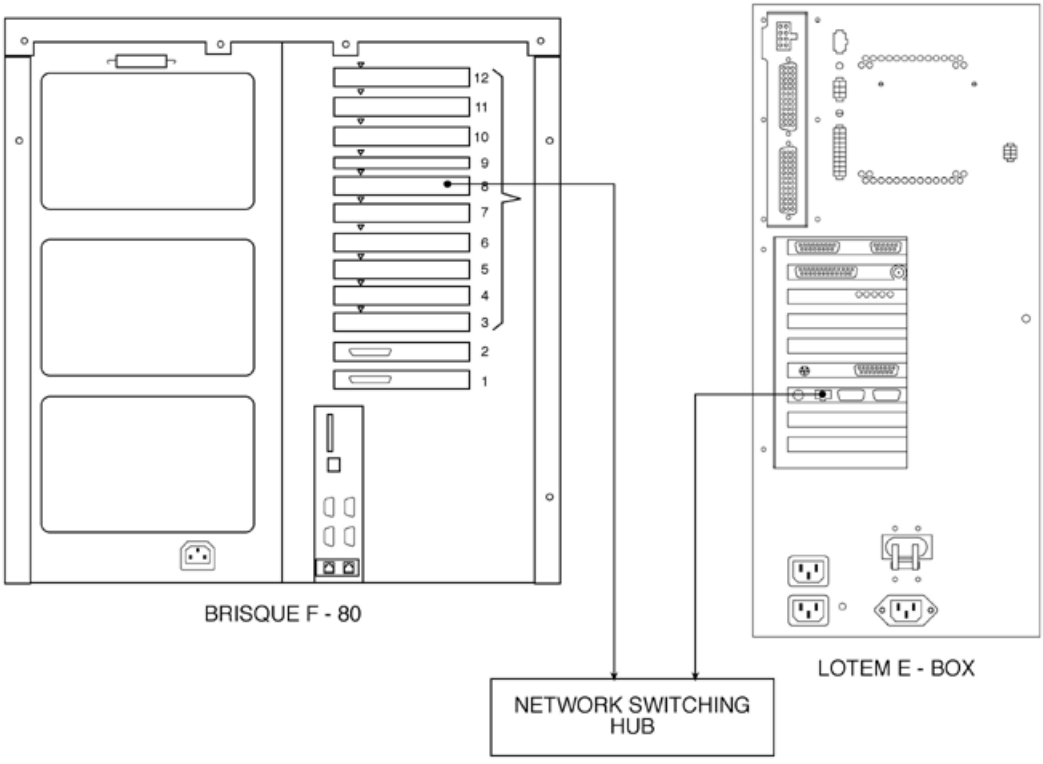


Figure 20: Connecting the workflow solution workstation and the platesetter to the network switching hub

Connecting the Air Compressor

1. Connect the orange air pressure tube to the air plug near the cable opening at the lower rear side of the platesetter. The 5 m tube is supplied with the platesetter.
2. Carefully pull the tube through the cable opening. Make sure the tube does not crack as it is routed out of the platesetter.
3. Connect the air pressure regulator to the air pressure tube. The regulator with the filters is supplied with the platesetter.
4. Connect the air pressure regulator to the air pressure outlet on the wall. See the air compressor specifications in the *Lotem 400 Family Site Preparation Guidelines.*



Figure 21: Air compressor connections—old (left) and new (right)

5. Set the gauge to 6 ATM (90 psi).

Connecting the Universal Debris Removal Cabinet (UDRC)

1. Position the UDRC as close to the rear of the platesetter as possible.
2. Attach the 1-1/2" vacuum hose from the adaptor to the back of the UDRC.
3. Make the electrical connections between the platesetter and the UDRC, as described following.

   - **UDRC BP**

     Local2 cable—connect the Local2 control cable from the two-pin J5 Molex connector on the distribution box to the UDRC connector. (The sensor is labeled J5 SOLENOID).

     Note: Use the Local2 control cable for platesetters with either Local2 or Local3 boards.

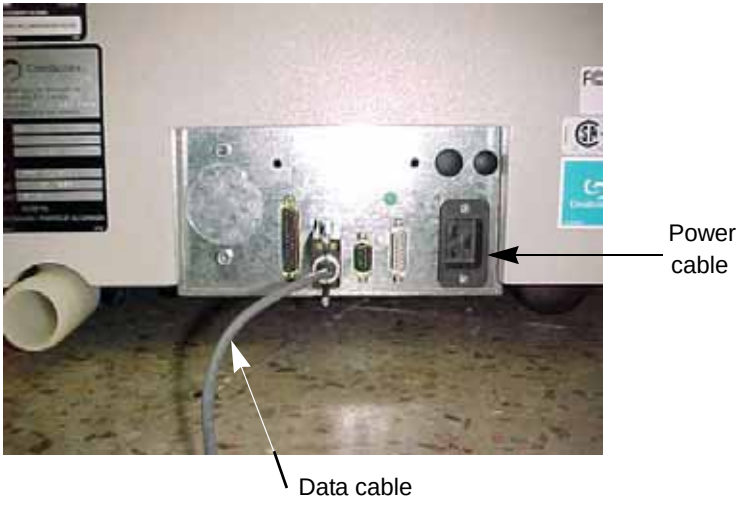


Figure 22: UDRC BP connection

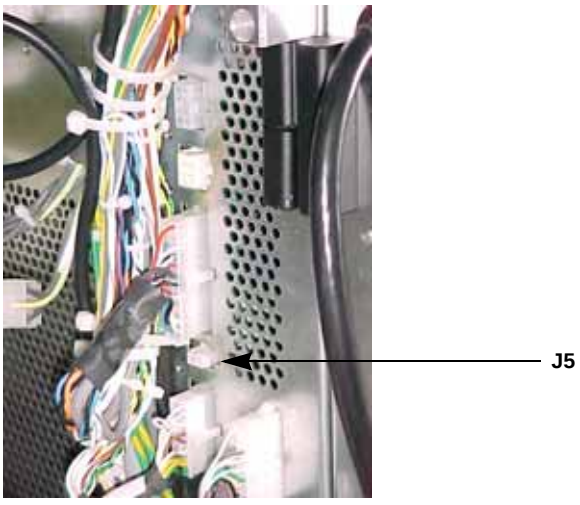


Figure 23: Distribution box

❒ **UDRC LC**

- NUC—connect the data cable from the NUC board (COM 6) to the UDRC J1 connector.
- Vacuum sensor—connect the vacuum sensor cable from the vacuum sensor unit to the UDRC J1 connector.
- DIS J5—connect the DIS J5 cable from the J5 Molex connector on the distribution box to the UDRC J5 connector.

Note: The data cabled is labeled Local2, but it is also used for Local3 platesetters.



Figure 24: UDRC LC connections

4. Connect the UDRC power cable.
5. Reconnect the main power supply to the platesetter.

6. Open the circuit breaker in the distribution box.
7. Open the air supply valve on the wall air supply unit.



Note: Verify that the air pressure level is at least 6 ATM (90 psi).

Connecting the Monitor, Mouse, and Keyboard to the E-box

1. Place the Lotem monitor, keyboard, and mouse on the designated monitor table.
2. Connect the cables from the Lotem monitor, keyboard and mouse to the E-box, as shown in Figure 25.
3. Connect the main power cable of the Lotem monitor to the wall socket.

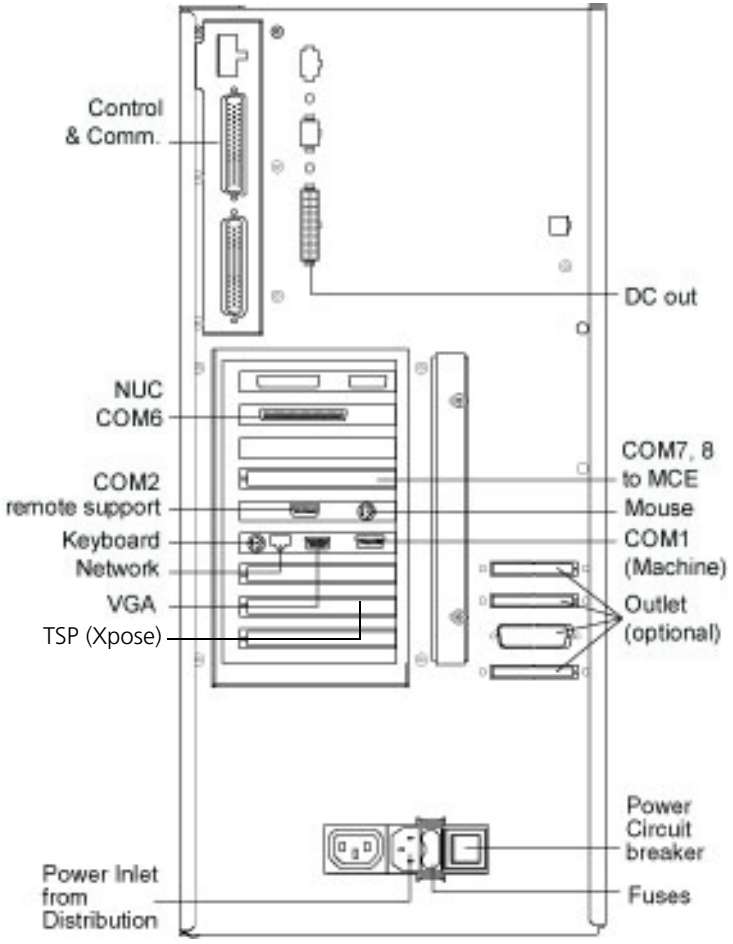


Figure 25: E-box connections

Assembling the Plate Conveyor

The round belt plate conveyor is supplied in a separate package. We recommend that two people unpack and assemble the conveyor.

Refer to Figure 26; the numbers in brackets in the following instructions identify the parts shown in this figure.

1. For each leg, insert the four screws [1]. Use the lower set of holes for non-Agfa processors, and the higher set for Agfa processors. **Do not tighten the screws.**

Note: The Agfa processor is taller than other processors.

2. To secure the bottom tray [2], insert two screws [3] with Loctite® 242 into each of the four wheels, and then tighten the eight wheel screws.
3. Tighten the four leg screws [1].

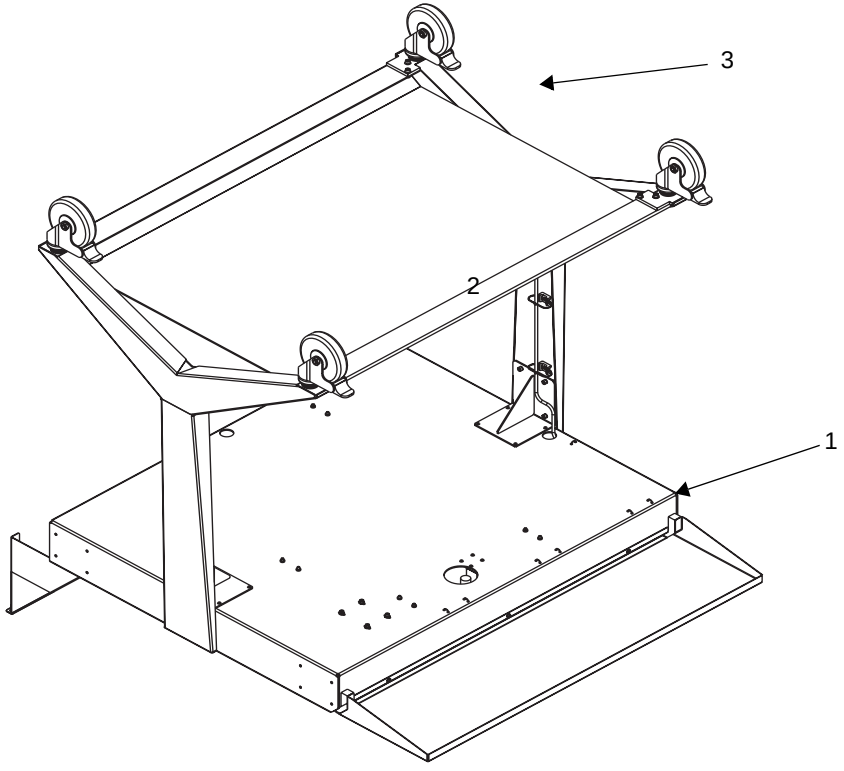


Figure 26: Round belt conveyor assembly (1)

Refer to Figure 27—the numbers in brackets in the following instructions identify the parts shown in this figure.

4. Connect the conveyor cable to the platesetter through the hole at the back trapezoid.
5. Remove the top cover [11].
6. Remove the side cover [5] (the cover with the hole for connecting the processor detector—see step 8).
7. Connect the processor detector to the conveyor, as shown in Figure 28.
8. Route the processor detector cable through the hole located under the detector and secure it with cable ties.
9. Assemble the top and side covers.
10. Attach the plate tray between the platesetter to conveyor. For an Agfa processor, use tray [6]; for all others use tray [7]. Place the top of the tray so that the two screws at the sides of the platesetter fit the two holes of the tray.
11. Fora Horselle processor, you need to attach an additional plate tray from conveyor to processor [8]. Before attaching it, connect the bracket [9] to the conveyor at location [10] using two screws. Attach the bracket at both sides. Then attach the plate tray [8] to brackets. Place the top of the tray so that the two screws at the sides of the conveyor fit the two holes of the tray.

Figure 29 on page 28 shows the conveyor connected to the platesetter. (The additional plate tray connected for the Horsell processor is not shown.)

After the conveyor is assembled and connected, set the parameters as described in *Appendix A: Packing the Platesetter for Shipment* on page 30.

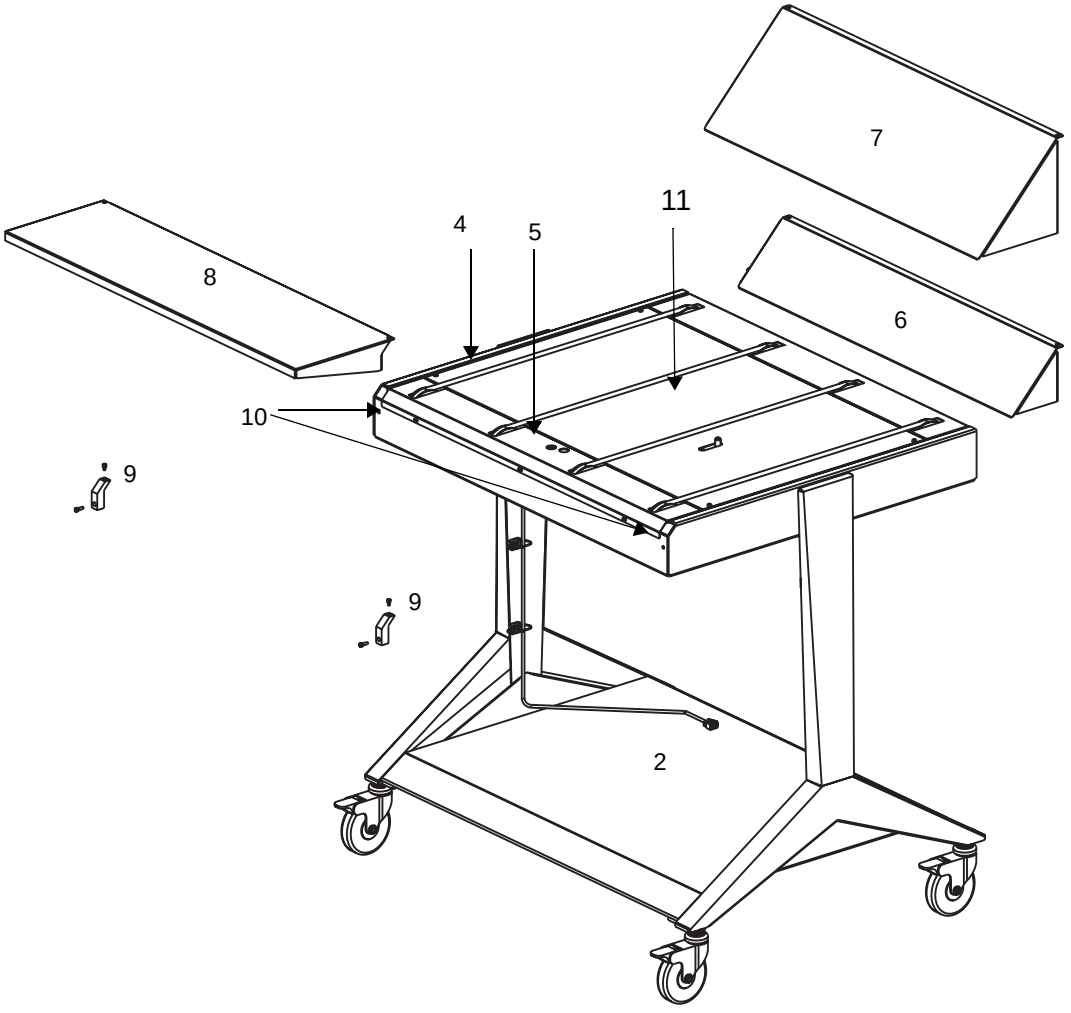


Figure 27: Round belt conveyor assembly (2)

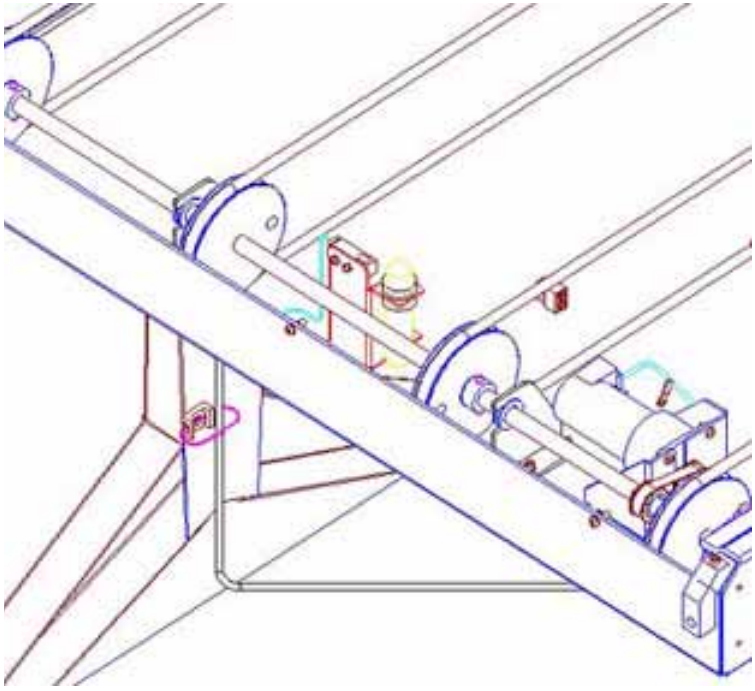


Figure 28: Processor detector installed on conveyor



Figure 29: Conveyor connected to platesetter

Installing the Modem

If your platesetter is the Lotem 400 **Xpose**, you must install the modem to enable remote support. The Lotem 400 does not require model installation.



Note: You need to instll the modem only once. However, if the modem malfunctions, then reinstall the software.

1. Connect the modem to the power supply.
2. Connect the cable between the modem connector and the COM2 port in the E-box.
3. Connect the telephone cable to the modem.
4. Select **Start > Programs > Diamond > Modem > Diamond Modem Component Setup**.
5. In the Diamond Install dialog box, click **Next**.
6. In the next Diamond Install dialog box, click **Reinstall the product**, and then click **Next**.

Appendix A: Packing the Platesetter for Shipment

A minimum of two people and a forklift are required to pack the platesetter and place it on the shipping pallet. See Figure 30 on page 31. The numbers in the instructions below refer to the item numbers shown in the figure.

1. Disconnect all the electrical cables from the platesetter and remove the skirting boards from the front, rear and sides.
2. Disassemble the loading tray and brackets [2].
3. If the forklift cannot be moved to the platesetter location, roll the platesetter to the shipping pallet. To do so, on each leg, turn the nut counterclockwise to its maximum position until the wheels touch the floor and then roll the platesetter to the shipping pallet.
4. Place the two lower shipping beams [6] on the shipping pallet [7] above the main shock-absorbing beams.
5. Using the forklift, lift the machine and place it on the shipping beams, aligned according to the securing bracket holes.
6. Secure the machine to the shipping pallet using the four brackets, screws and washers [8].
7. After confirming that the platesetter is positioned and secured properly, cover the platesetter with nylon wrapping.
8. Pack the skirting boards in bubbled nylon and place them behind the platesetter. Secure them with plastic tape [1].
9. Staple the side wooden struts [5] to the shipping beams [6].
10. Staple the top wooden struts [3] to the side wooden struts [5].
11. Place an outer carton container [2] on the platesetter. Use staples to secure the outer carton to the shipping pallet [7] and side wooden struts.
12. Close the top flaps of the outer carton.
13. Close the outer carton with plastic tape and with two steel bands.

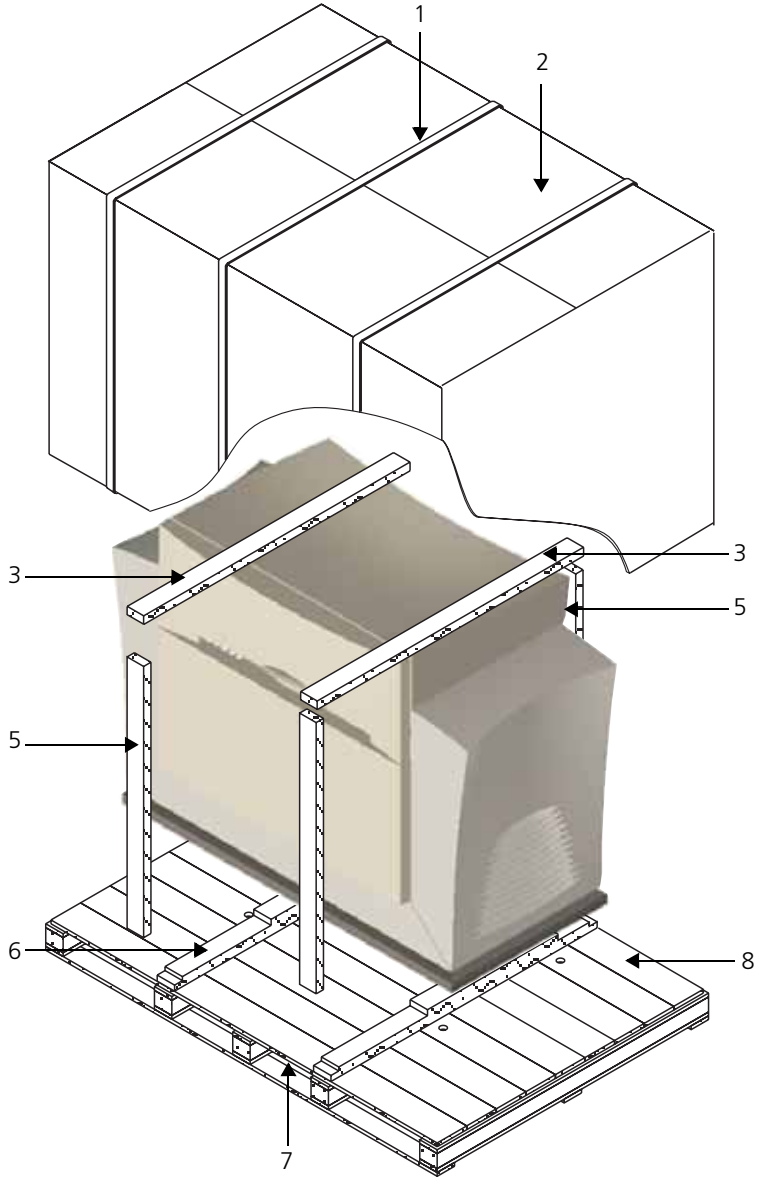


Figure 30: Packing the Platesetter for Shipment