Kodak

# Multi-Cassette Unit II and Single-Cassette Unit II for Magnus 400 II and Magnus 400 II Quantum Platesetters

## Installation and Upgrade Guide

English

731-01209A-EN Rev A

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# Introduction

This document describes the Kodak® Magnus™ 400 II hardware and software procedures required to install the multi-cassette unit II (MCU II) or the single-cassette unit II (SCU II) on an MCU II or SCU II-ready platesetter or to upgrade the Magnus 400 II and Magnus 400 II Quantum platesetters to the MCU II or SCU II configuration. For site requirement details for Magnus 400 II devices with MCU II or SCU II, see the Magnus 400 II and Magnus 400 II Quantum Platesetter Site Preparation Guide (731-01214A).

Figure 1 on page 2 shows the tasks in the order that you must perform them to install an MCU II or SCU II-ready platesetter or to upgrade to an MCU II or SCU II configuration.

If you are installing the MCU II or SCU II in conjunction with the platesetter, skip the sections designated for upgrades only.

**Note:** All the procedures in this guide are applicable also to the SCU II.

## Before You Begin

Before you begin the upgrade, do the following actions:

- Confirm that the upgrade kit contains all of the items in the list on page 3.
- Confirm that you have all the required tools in the list on page 4.
- If you are upgrading, back up the registry file, database folder, and the Magnus 400 Controller TCP/IP address (see page 28).

## MCU II for Magnus 400 II and Magnus 400 II Quantum Installation and Upgrade Process

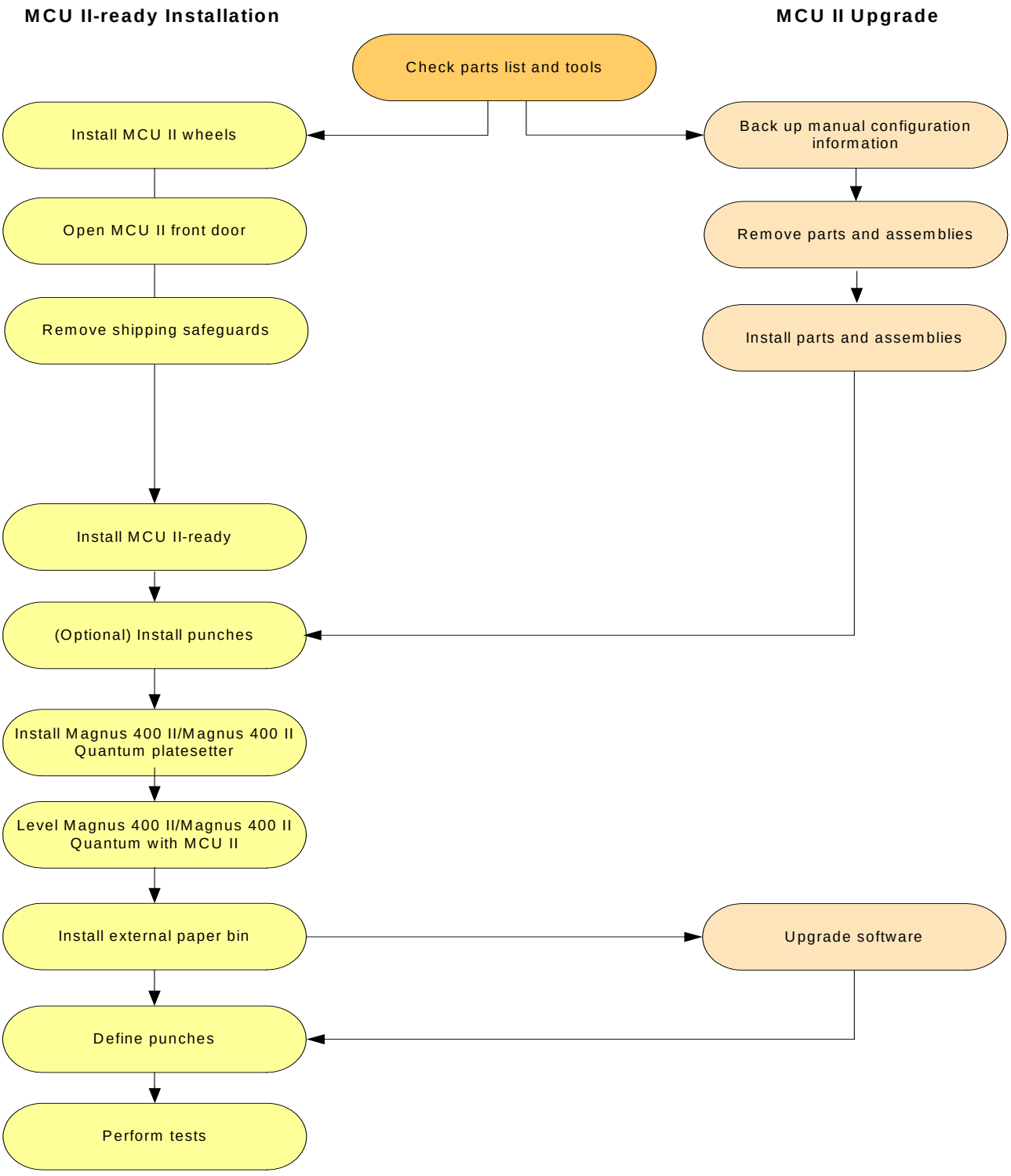



Figure 1: Installation and upgrade process for the MCU II for Magnus 400 II and Magnus 400 II Quantum

# Parts List

To upgrade or install the MCU II or SCU II configuration you will need items that appear in the parts list. Verify that all items in the list are included in their respective kits.

| Catalog Number | Quantity | Part Name |
|---|---|---|
| **Add-on Upgrade Kit for Magnus 400 II SA (manual) to Magnus 400 II with MCU II (automatic):** | | |
| 500-05252A | 1 | Magnus 400 II with MCU II Accessory Kit |
| 298A2P757 | 1 | Upper labyrinth (light guard) |
| 500-04763A | 1 | Punch assembly (Magnus) |
| 500-04812B | 1 | Centering assembly (Magnus 400 II) |
| 380A05081 | 4 | SOC HD CAP STST 8-32×5/8" |
| 382B11000 | 4 | Spring washer |
| **Magnus 400 II with MCU II Accessory Kit (500-05252A):** | | |
| 290A2P847 | 2 | Punch beam adapter (punch beam spacer) |
| 290A2U461 | 2 | Loader centering pin |
| 290A6B219 | 2 | Omron interlock bracket |
| 290B2P411 | 1 | Interlock cheater |
| 290B2P840 | 1 | Location pin bracket left (loader spacer left) |
| 290B2P841 | 1 | Location pin bracket right (loader spacer right) |
| 296A2T694 | 1 | Drum vacuum hose adapter vacuum tube weldment |
| 380A06101 | 3 | Screws for punch assy to spacer (10-32×3/4) |
| 380A12140 | 2 | Screws for connecting automatic loader to Magnus 400 II |
| 380G06020 | 6 | Screws for punch spacer (cross-head screws 10-32×½) |
| 382-01871A | 1 | Magnus 400 II Quantum sticker |
| 382A14001 | 3 | Flat washer 10 |
| 382A23000 | 2 | Flat washer ST 3/8×.049" |
| 382D13000 | 3 | Spring 10 |
| 382D23001 | 2 | Spring L/W ST 3/8 |
| 391A3L478 | 1 | RCS box 560×245×245 |
| 504L4E182 | 1 | Solo int adaptor type II (Y-connector laser interlock) |
| 653-01423A-EN | 1 | Magnus 400 II with MCU II VRG (document) |

# Tools

To perform the installation or upgrade procedure, you will need the following tools:

- Set of hex keys (US, not metric)
- Cross-head screwdriver
- Flat-head screwdriver
- 16-mm (0.63-in.) open ring
- 29-mm (1.14-in.) open ring

# Installing an MCU II or SCU II-Ready Platesetter

The MCU II/SCU II-ready platesetter is a completely factory-integrated unit. Prior to delivery to customer, the unit is separated and shipped in two individual crates (platesetter and MCU II/SCU II).

**Note:** In case an upgrade is required, you must reinstall the Magnus 400 Controller software with an MCU II configuration. See *Upgrading the Magnus 400 Controller Software for MCU II or SCU II* on page 40.

This section describes how to install a platesetter that is configured for MCU II operation.

**Note:** The procedures in this section apply also to the SCU II.




Figure 2: Platesetter with MCU II

# Installing the MCU II Wheels

The MCU II is has four wheels. The two front wheels have stoppers to lock the unit in its permanent location after you complete the installation.

Install the wheels during the unloading process, while the MCU II is still on the forklift.



Front wheel with stopper



Rear wheel

**Figure 3: MCU II wheels**

1. Insert the two rear wheels and secure with locking nut.
2. Insert the two front wheels and secure with locking nut.

# Opening the MCU II Front Door Manually

To open the MCU II front door manually, you need to release the Omron® interlock switch located in the middle of the MCU II front door.

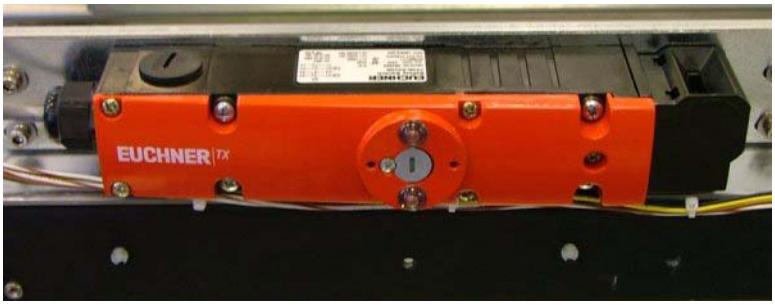



**Figure 4: Omron interlock switch**

1. Open one of the side doors on the MCU II.

2. Using a 9/64-in. hex key, remove the four screws that secure the internal side cover to the chassis and remove the internal side cover, and set it aside.




Figure 5: MCU II internal side cover

3. Insert a flat-head screwdriver between the chassis belt and mainframe until the tip of the screwdriver touches the Omron interlock switch (located in the middle of the MCU II front door).

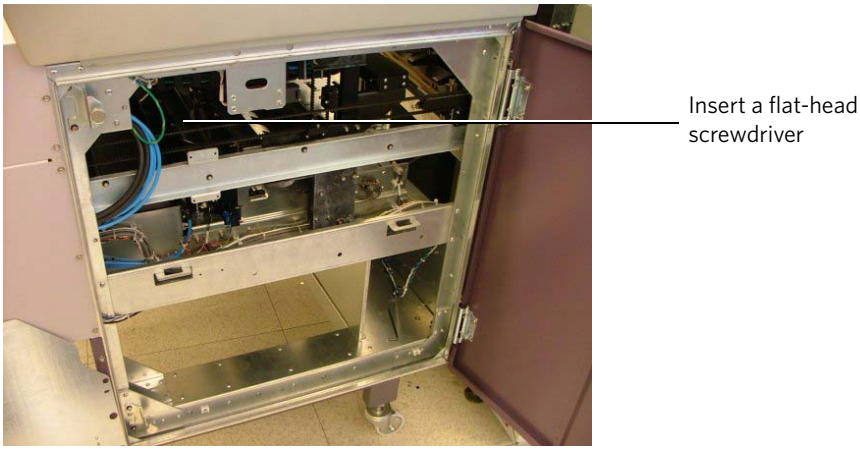



Figure 6: MCU II with internal side cover removed

4. Using a cross-head screwdriver, remove the cross-head screw at the left of the groove on the interlock switch.

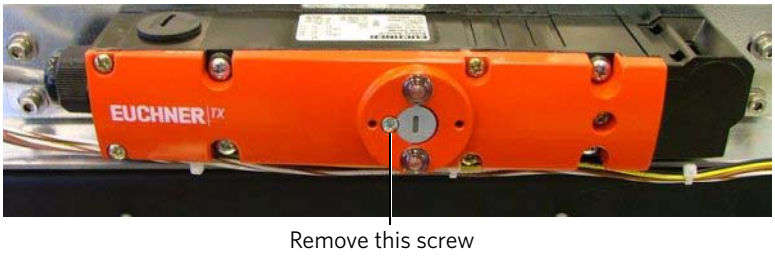



Figure 7: Removing the interlock switch's cross-head screw

5. Press the tip of the flat-head screwdriver into the groove and rotate the screwdriver clockwise.



Figure 8: Opening the MCU II front door

6. After the door opens, insert the tip of the screwdriver into the interlock's groove and rotate counterclockwise to return the interlock switch to its original position.

# Removing Shipping Safeguards

The MCU II is shipped with safeguards that prevent excessive movement of the XY bar and cassette drawers during transport. The safeguards are red for easy identification. This section describes how to remove these safeguards.

## Removing the MCU II/SCU II Crossbar



Figure 9: Crossbar safeguard

1. Remove the four screws (two on each side) that secure the crossbar bracket to the MCU II mainframe.

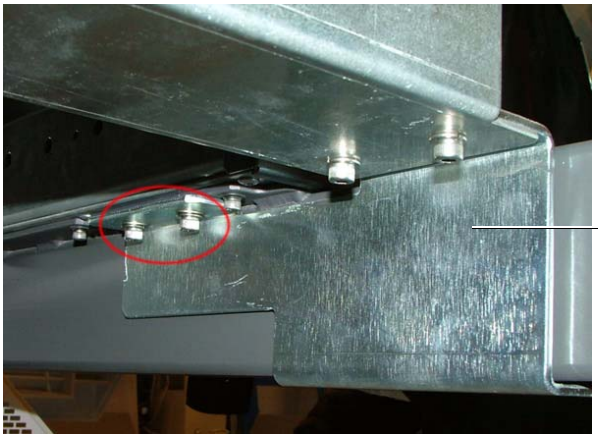



Figure 10: Removing the crossbar bracket screws

2. Remove the four screws (two on each side) that secure crossbar to the crossbar brackets, and remove the crossbar and brackets.

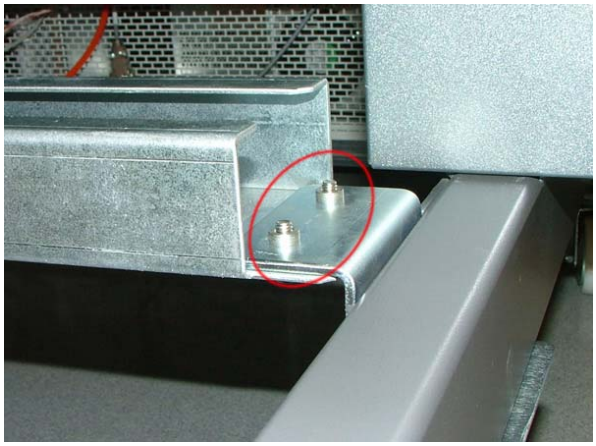


Figure 11: Removing the crossbar

## Removing the XY Bar Safeguards

➢ Cut the two cable ties that secure the XY bar.

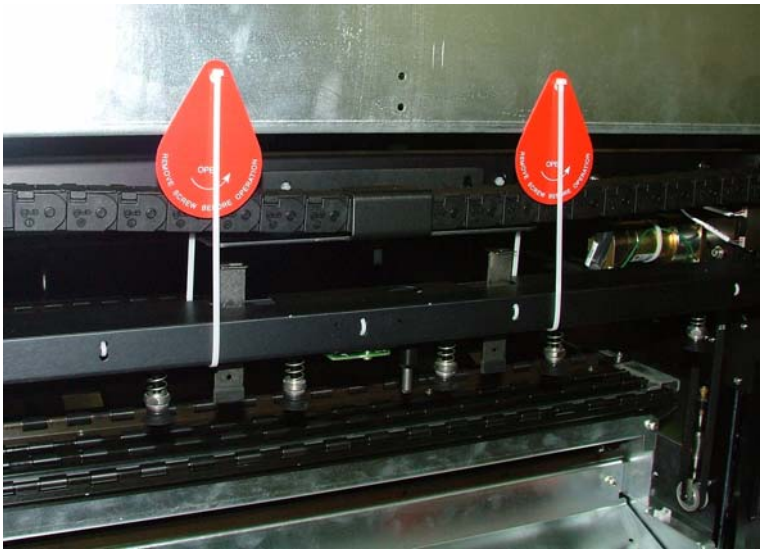


Figure 12: Removing the XY bar cable ties

# Removing the Left and Right Cassette Drawer Safeguards

1. Cut the three cable ties that secure the cassette drawers on the left side of the MCU II.

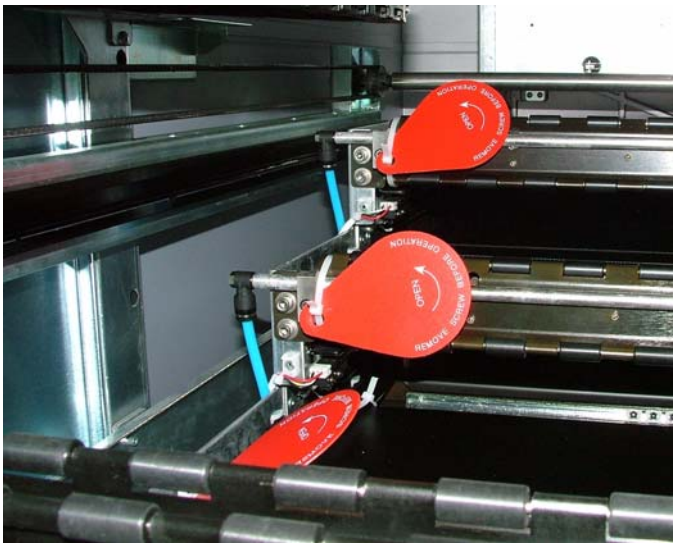



Figure 13: Removing the left-side cassette drawer cable ties

2. Cut the three cable ties that secure the cassette drawers on the right side of the MCU II.

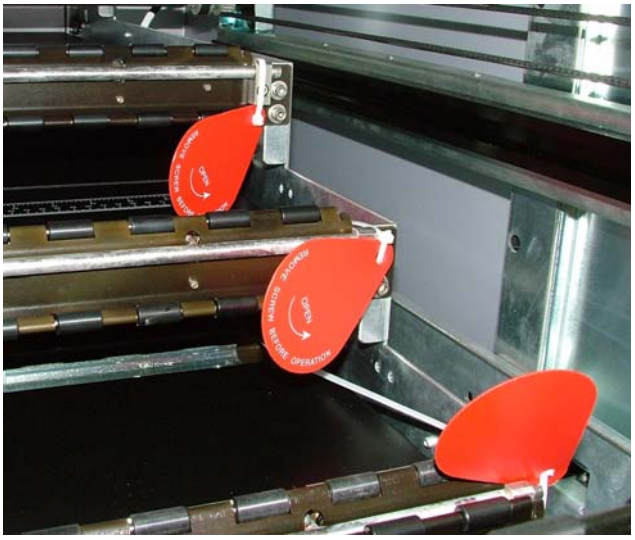



Figure 14: Removing the right-side cassette drawer cable ties

# Installing the MCU II-Ready to the Platesetter

This section describes how to connect the MCU II-ready to the platesetter. It includes cable connection procedures for the right, center, and left sides of the platesetter.

**Note:** The right, center, and left side direction references are from the loading direction (rear) of the MCU II.

The MCU II-ready is equipped with interlock safety latches on the inside of the internal side covers.

## Connecting the MCU II-Ready Cables to the Platesetter Cable Connections

For reference purposes, use the following diagram to ensure that you are connecting the correct MCU II-ready cables to the correct platesetter cable connections.

**Attention:** From the MCU II, the LASER INT cable connects to the FRONT PANEL connector via the LOTEM 400 ADP adaptor Y-connector. See Figure 22 on page 17.

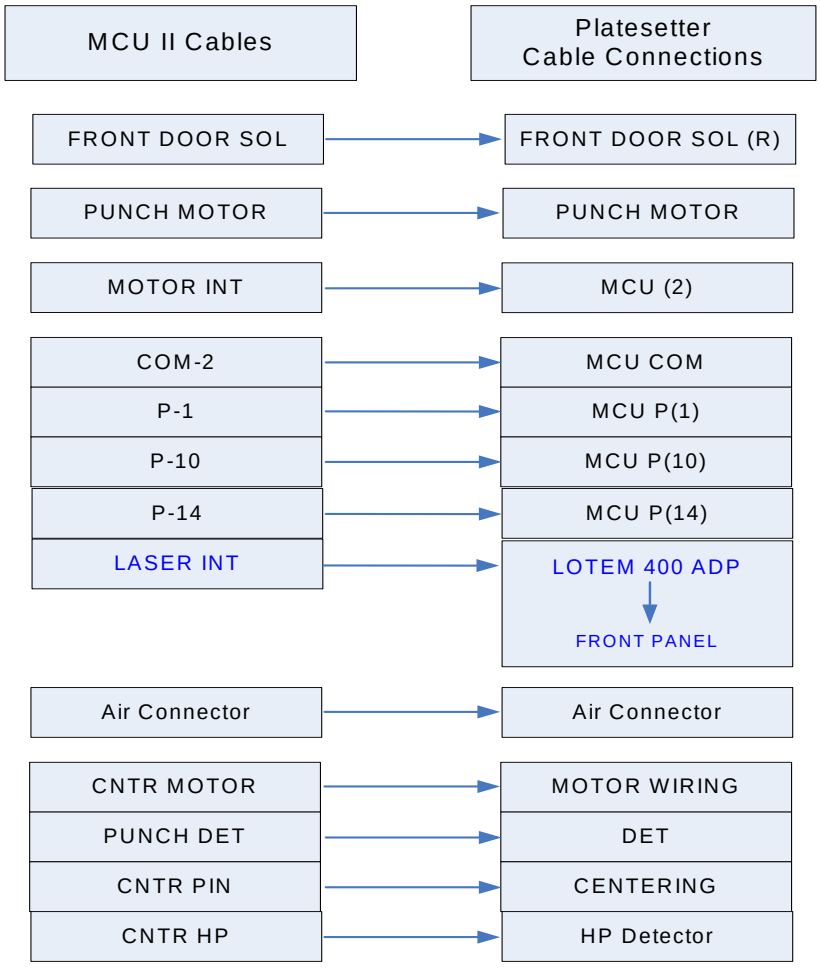
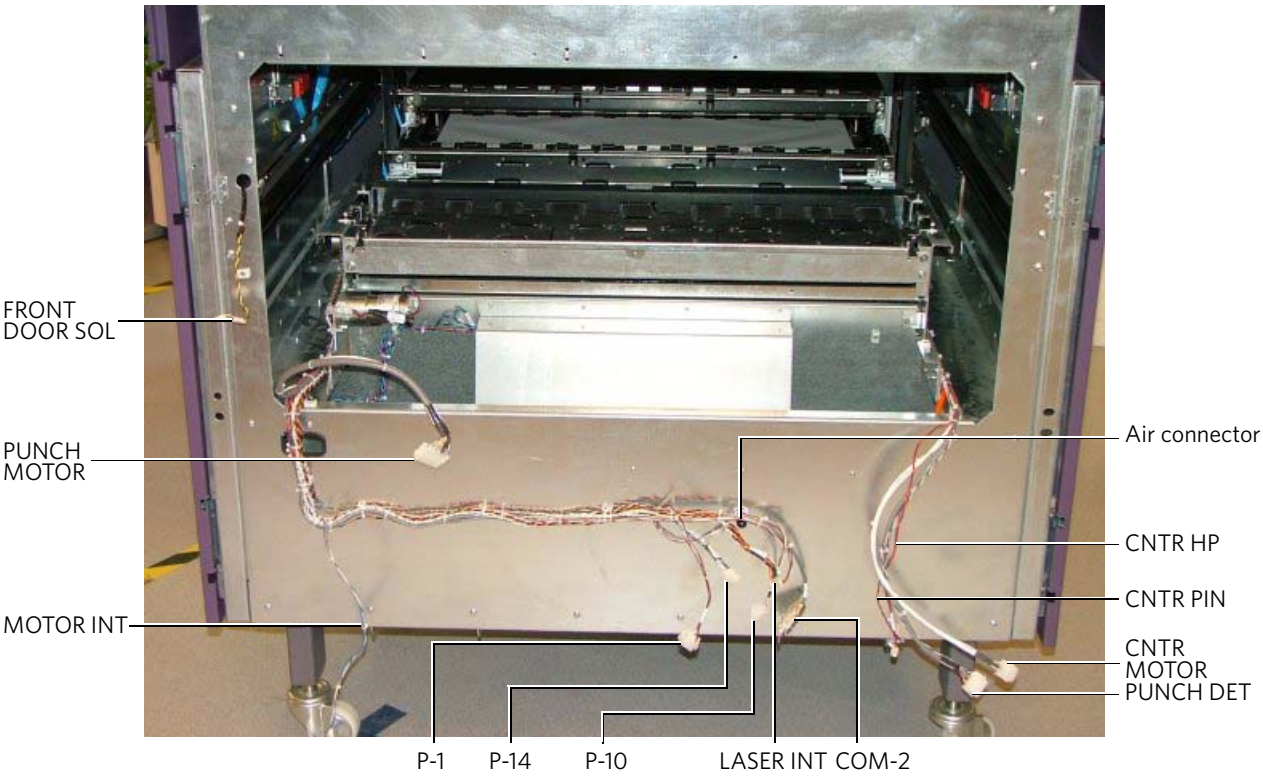
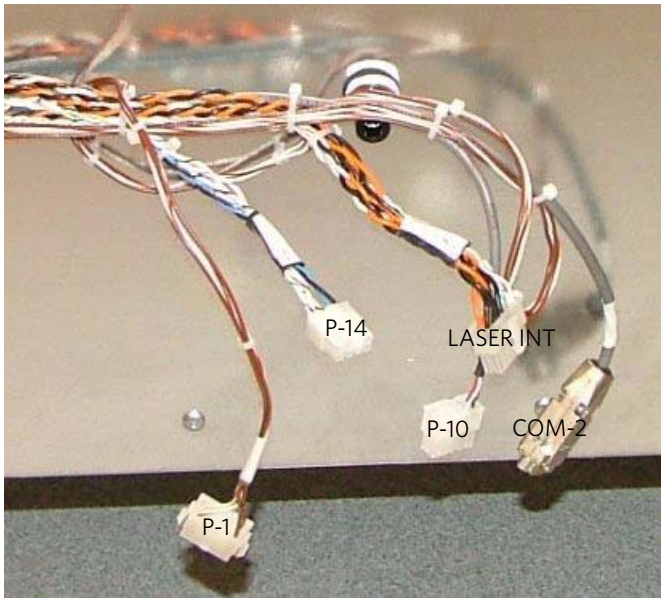
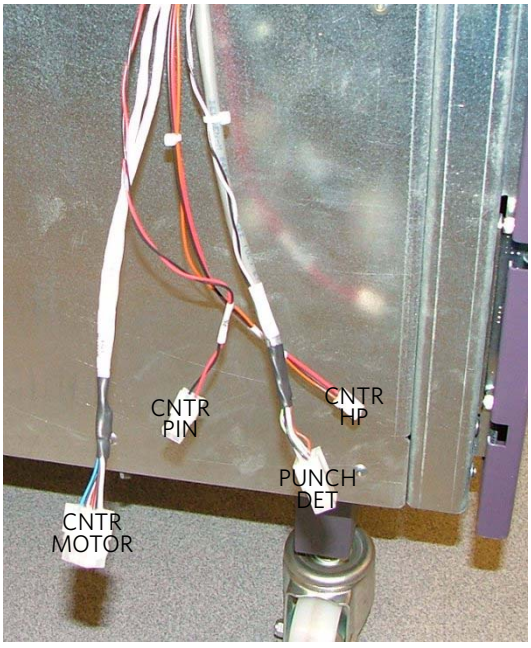



Figure 15: MCU II-ready cable connections




Inset—rear center view




Inset— rear right view

Figure 16: MCU II-ready cables, rear view

**Note:** To enable easy access, move the MCU II-ready to an angle that is approximately 45° from the platesetter.

1. Verify that the platesetter is level. See the *Magnus 400 II Hardware Installation Guide* (731-01207A) or the *Magnus 400 II Quantum Hardware Installation Guide* (731-01208A).
2. From the rear (loading direction) of the MCU II, connect the yellow-black FRONT DOOR SOL solenoid cable to the corresponding FRONT DOOR SOL (R) cable on the platesetter. This cable is wrapped inside the MCU II, so you must release it first. See *Removing the Plate Driver Assembly, Interlocks and Lockers* on page 31.

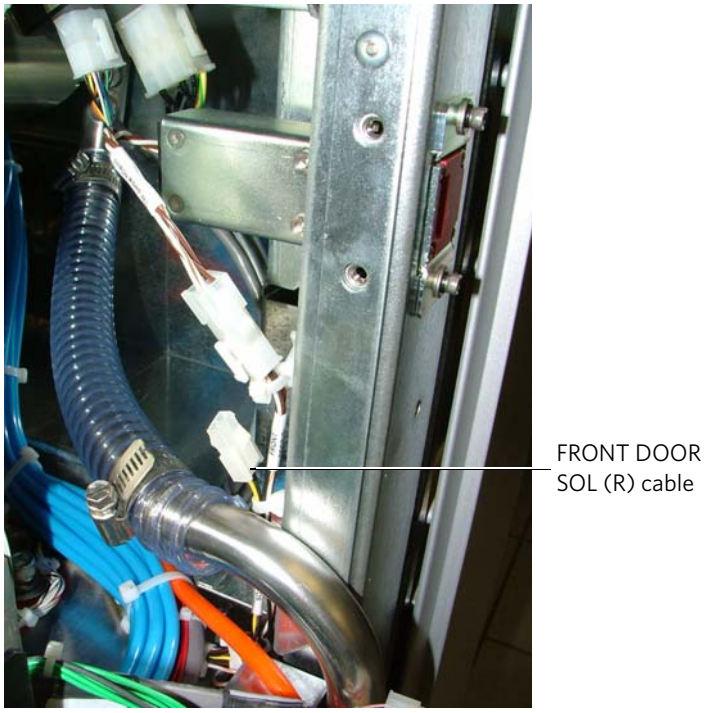



**Figure 17: Solenoid (door) cable connection, right-side platesetter view**

3. Connect the Molex® PUNCH MOTOR connector on the MCU II to the PUNCH MOTOR connector on the platesetter.

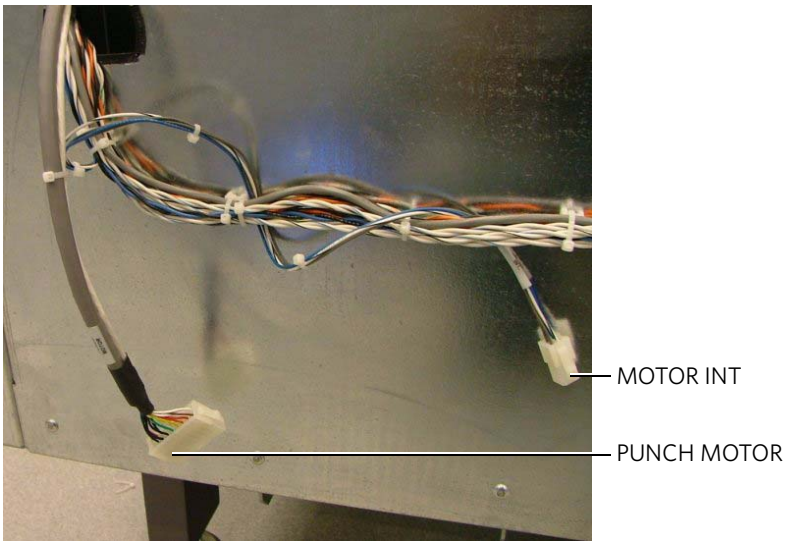



Figure 18: Cables and interlocks, rear-left-side MCU II view

4. On the front-right side of the platesetter, disconnect the MCU jumper from the MCU(2) Molex connector.

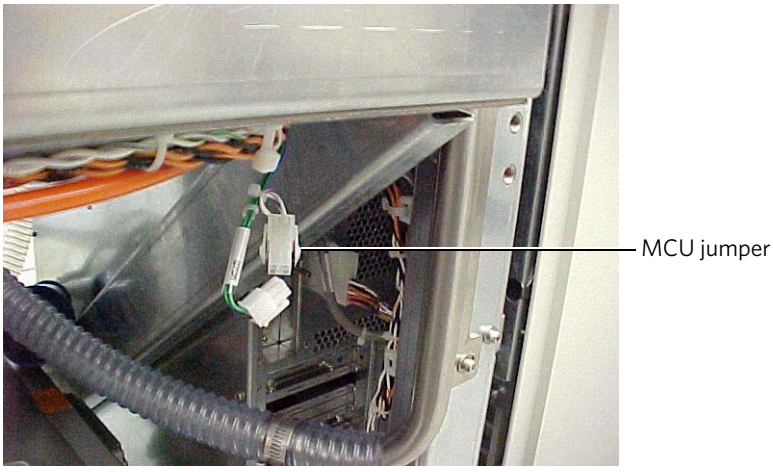



Figure 19: MCU jumper

5. Connect the MCU II MOTOR INT Molex connector to the MCU(2) Molex connector on the platesetter that you disconnected from the jumper.

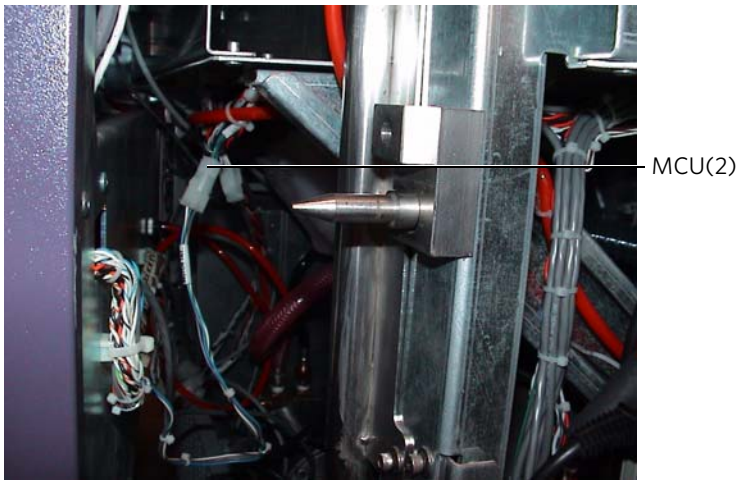



Figure 20: MOTOR INT connector connected to MCU(2) connector

6. From the platesetter, connect the MCU COM communication cable (intertwined with the punch harness) to the COM-2 connector on the MCU II.

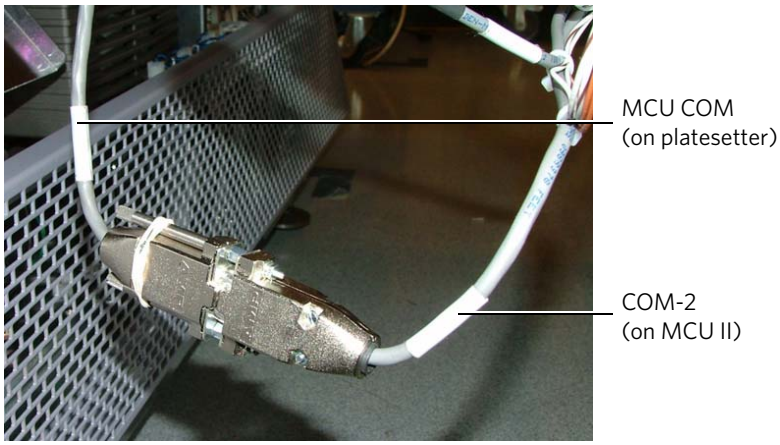



Figure 21: COM-2 connection

7. From the rear center of the MCU II, connect the four Molex connectors (P-1, P-14, P-10, and LASER INT) to the platesetter. See Figure 16 on page 13.
   a. Connect P-1 on the MCU II to MCU P(1) on the platesetter.
   b. Connect P-10 on the MCU II to MCU P(10) on the platesetter.
   c. Connect P-14 on the MCU II to MCU P(14) on the platesetter.
   d. On the front-left side of the platesetter, disconnect the FRONT PANEL Molex connector from the Omron interlock.
   e. Connect the LASER INT cable on the MCU II to the LOTEM 400 ADP Y-connector on the platesetter.

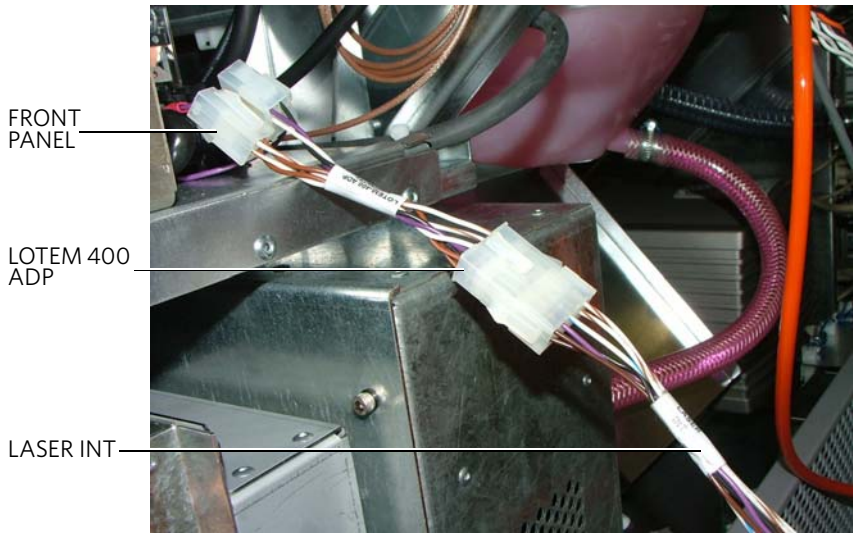



Figure 22: Connecting the MCU II LASER INT cable to the LOTEM 400 ADP Y-connector on a Magnus 400 II Quantum platesetter

8. From the rear right (loading direction) of the MCU II, connect the following cables. See Figure 16 on page 13.

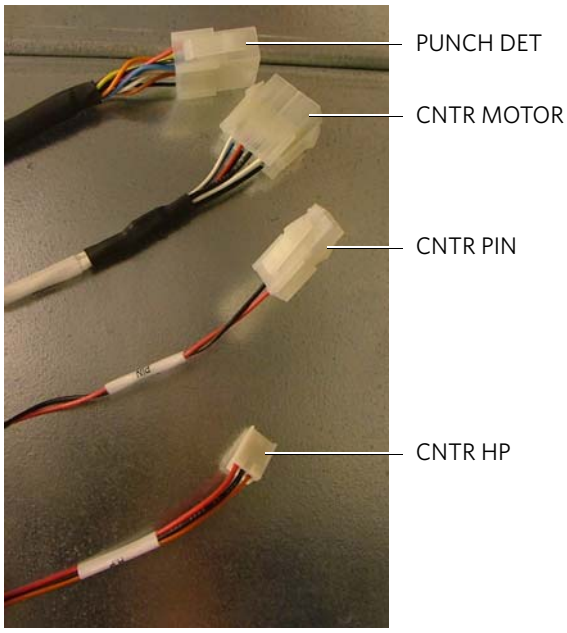



**Figure 23: Connecting the cables from the rear right of the MCU II to the platesetter**

- Connect the PUNCH DET detector cable to the punch system's DET Molex connector on the platesetter. See Figure 16 on page 13.
- Connect the CNTR MOTOR cable to the centering system's MOTOR WIRING connector. See Figure 16 on page 13.

  **Note:** To prevent the centering motor pin from breaking, route the CNTR MOTOR cable through the platesetter and cable tie guide on the MCU II to the centering motor pin connection, as shown in Figure 24.

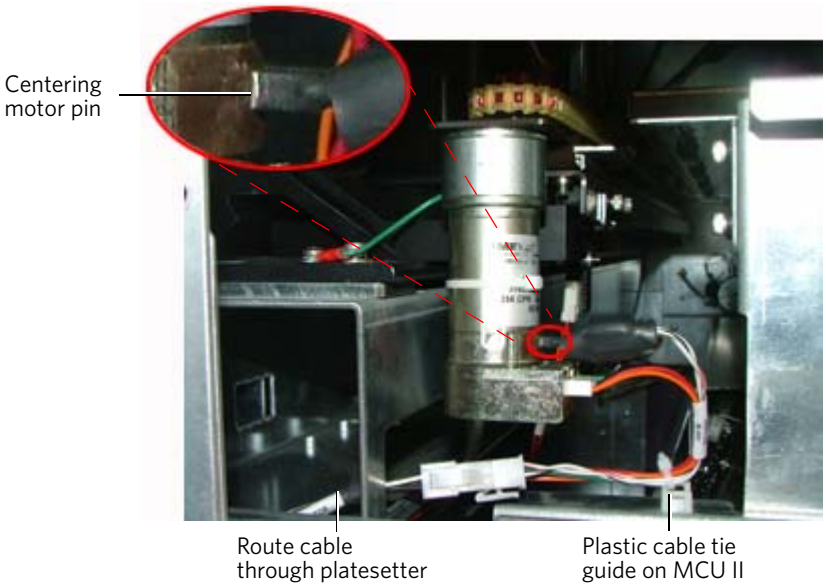



**Figure 24: Routing the CNTR MOTOR cable through the platesetter and cable tie guide on the MCU II to the centering motor**

- Connect the centering motor grounding to the screw on the punch beam.
- Connect the CNTR PIN cable to the CENTERING Molex connector that attaches to the centering pins. See Figure 16 on page 13.
- Connect the CNTR HP cable to the centering system's HP detector on the platesetter. See Figure 16 on page 13.

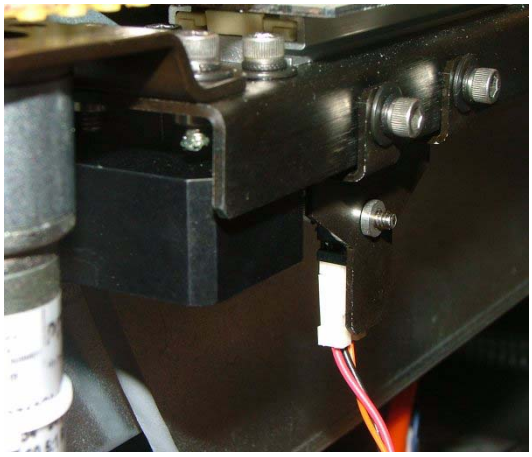


Figure 25: Connecting the CNTR HP cable to the HP detector

## Connecting the Air Pressure Pipe

**Note:** For upgrades, see *Connecting the Air Pressure Pipe* on page 38.

1. Plug one end of the air pressure pipe into the air pressure outlet in the wall.
2. At the front-left of the platesetter, connect the other end of the long air pipe to the MCU II air outlet. Use cable ties to secure the air pipe to the other cables.



Figure 26: Connecting the air pipe to the MCU II air outlet

## Connecting the CPU

1. On the platesetter, open the right side door of the computer (PC) assembly.

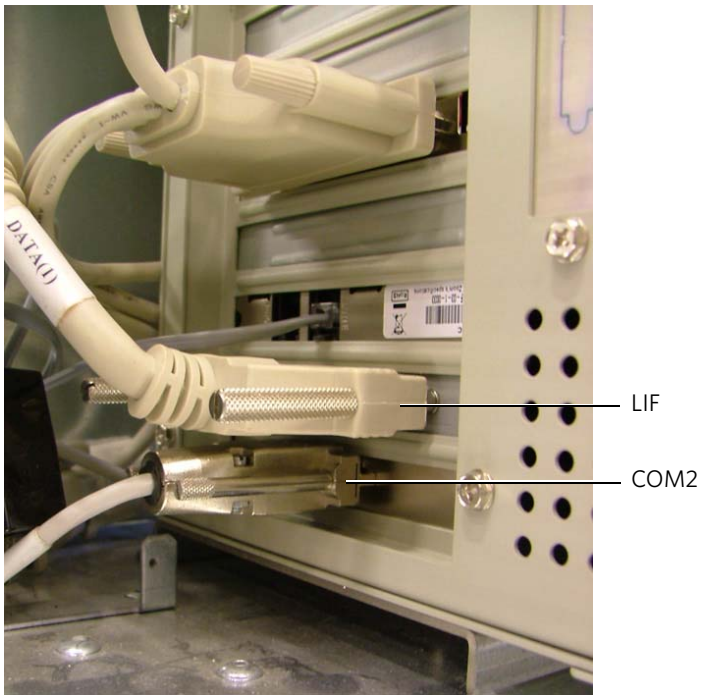



Figure 27: COM2 connection

2. Connect the COM-2 cable to the COM2 port.

# (Optional) Installing Punches

To install punches, see *Installing Punches* on page 52.

# Completing the Connection Process

1. Check that all the cables are neatly tied with white cable ties so that they do not block the XY system.
2. When you finish connecting the MCU II to the platesetter, stick the MCU II safety labels in the relevant language on the MCU II according to the illustrations in the Magnus 400 II and Magnus 400 II Quantum Safety Precautions for Service guide (731-01211A).
3. Verify that the Stop Motors button is released and ready for operation. If the Stop Motors button is pushed in, turn it to the right or left to release it.

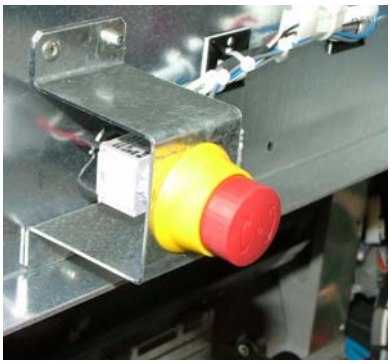


Figure 28: Stop Motors button

# Leveling the Magnus 400 II/Magnus 400 II Quantum With MCU II

1. Carefully move the MCU II closer to the platesetter.

   **Attention:** While moving the MCU II, do not disconnect or damage the cables.

2. Place a level on the center front of the device, as shown, and then on the right and left sides to verify that the MCU II is level on both axes.

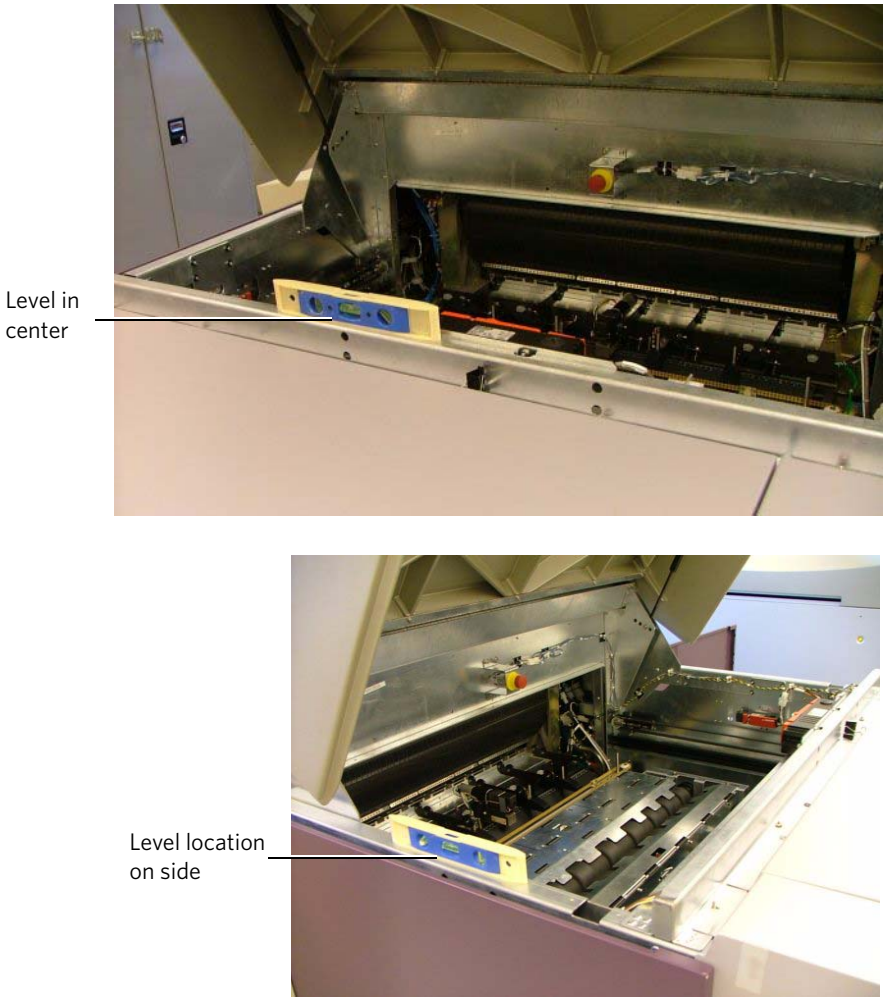



**Figure 29: Levels, center and right side**

3. Open the side doors of the MCU II.

4. To connect the MCU II to the platesetter, adjust the height and level of the MCU II using its four wheels. Verify that the platesetter and the MCU II are exactly the same height so that the location pins on the Magnus 400 II slide into the holes in the mainframe of the MCU II without touching the edges of the holes.

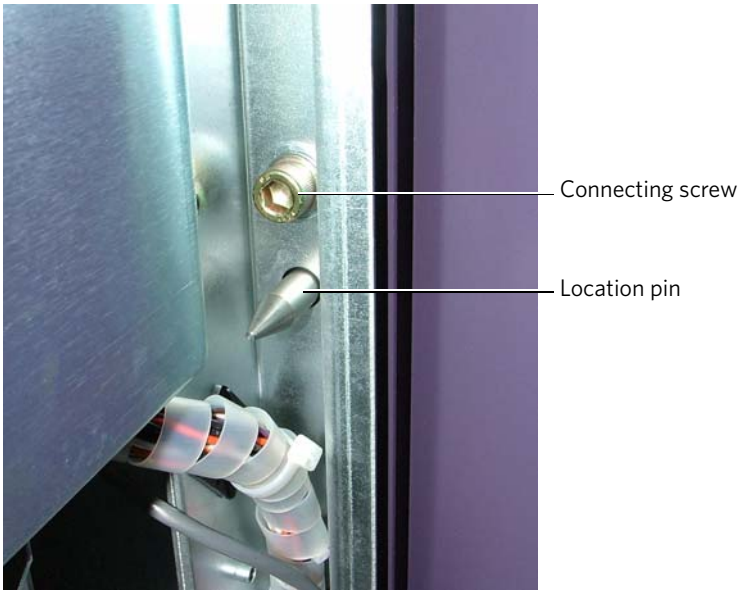



Figure 30: Leveling the MCU II to the height of the location pins

5. Verify that the distance between the top of the platesetter (rear door) and the top of the MCU II (front door) is between 23 and 25 mm (0.91 and 0.98 in.).

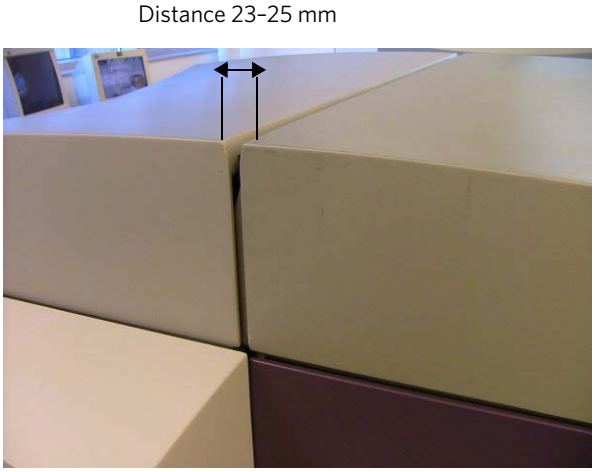



Figure 31: Front and rear doors of the platesetter and MCU II

6. To verify that the weight of the MCU II is evenly distributed on all four wheels, jiggle each wheel. If the wheels wobble, readjust the height of the MCU II, and then use a level to verify leveling.
7. Tighten the two connecting screws (part number 380A12140) on each side of the MCU II mainframe. See Figure 30.
8. Push the stoppers down on the front wheels of the MCU II to lock it in place. See *Installing the MCU II Wheels* on page 6.

# Installing the MCU II External Paper Bin




Figure 32: External paper bin on MCU II

1. Remove the wrapping from the external paper pin frame, and set aside the steel rods.



Figure 33: External paper bin frame

2. Lift up the external paper bin frame, and insert the steel rods into the four holes on the bottom of the frame.



Figure 34: Inserting the steel rods into the external paper bin frame

3. Attach the wraparound canvas to the external paper bin frame.
   - At the front of the frame, attach the window flaps by securing them to the frame with the Velcro® fasteners.

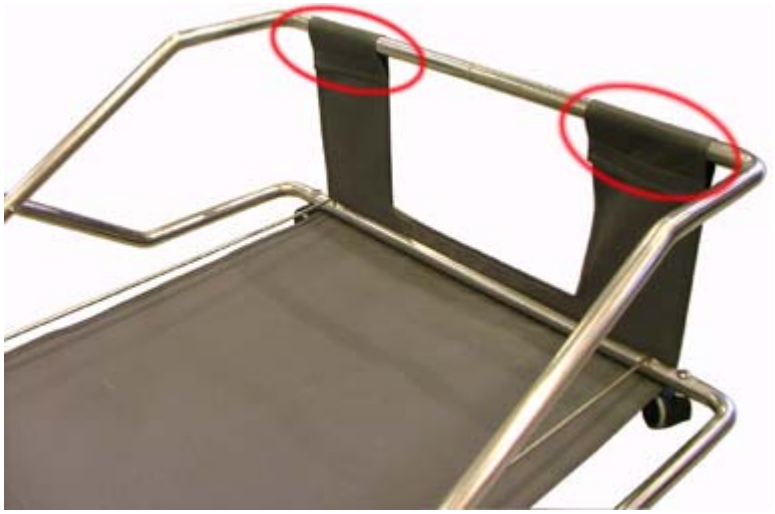


Figure 35: Attaching the canvas window flaps to the front of the external paper bin

- At the rear of the external paper bin, attach the partition by securing it to the frame with the Velcro fastener.



Figure 36: Attaching the partition to the rear of the external paper bin

# Installing a Magnus 400 II/Magnus 400 II Quantum MCU II-Ready Platesetter

After you finished installing the MCU II, to complete the installation, you need to install the platesetter (remove shipping safeguards, connect external components, connect network communication cables, and so on). See the relevant hardware installation guide: Magnus 400 II Hardware Installation Guide (731-01207A) or Magnus 400 II Quantum Installation Guide (731-01208A).

# Testing the Magnus 400 II/Magnus 400 II Quantum With MCU II Configuration

This section describes the tests that you must perform, and provides a final checklist of procedures for the customer.

## Testing the Centering System

**Note:** Before you begin the tests described in this section, attach all translated labels (attached to the platesetter) in the language required.

1. Load a plate in cassette 1 (lowest cassette) of the MCU II. Make sure that the plate is centered in the cassette.
2. Insert the cassette and close the MCU II loader door.

3. In the Magnus 400 Controller software, load the plate onto the drum.
4. Open the rear door and make sure that the distance between the plate and the edge of the drum is the same on both the left and right sides, with no more than 1 mm (0.04 in.) tolerance.
5. If the distance between the plate and the edge of the drum on the left and right sides varies by more than 1 mm, adjust the centering system assembly.

## Testing Customer Plates

For each cassette, test each plate type that the customer intends to use to verify that all plate types load properly.

1. Load a plate on the drum.
2. Operate all punch motors.
3. Check that all the punches are adjusted properly, according to customer requirements.
4. Expose a test file and check registration.

## Customer On-site Training Checklist

Explain the following basic operations to the customer, using the Visual Reference Guide (VRG) as reference. Before leaving the site, verify that the customer understands and can perform the following operations:

- Observing safety precautions
- Operating the Magnus 400 Controller software
- Loading plates on all trays
- Removing plates from the XY system
- Removing paper from the paper disposal
- Initiating the XY system
- Exposing and media definition setup
- Performing preventive maintenance (PM)
- Troubleshooting common customer-level problems

## Equipment Supplied by Customer

Verify that the customer has, or is aware that it is the responsibility of the customer to supply the following equipment:

- Plate-measuring tool
- Plates
- Desk for monitor

# Upgrading a Semiautomatic (Manual) Platesetter to an Automatic Platesetter with MCU II or SCU II

This section describes how to upgrade the platesetter from its manual configuration to the MCU II or SCU II configuration.

After you finish the hardware upgrade, you need reinstall the Magnus 400 Controller with the correct configuration for MCU II, and then compare the non-default parameters on the MCU II-ready platesetter with the non-default parameters document attached to the MCU II. See *Upgrading the Magnus 400 Controller Software for MCU II or SCU II* on page 40.

## Backing Up Manual Configuration Information

This section describes how to back up the registry and database information on your current platesetter.

If you are upgrading a Magnus 400 II Quantum platesetter to the MCU II or SCU II configuration, you must also back up the non-volatile storage (NVS) parameters.

**Note:** If you are not upgrading a manual platesetter, proceed to *Assembling the Light Guard and Location Pin* on page 34.

### Before You Begin




1. On the Microsoft® Windows® desktop, double-click the **MachineBackup** icon to save the registry and database files. See *Saving the Registry and Database Files* in the Magnus 400 II and Magnus 400 II Quantum Cold Start Software Installation Guide (731-01206A).

   **Note: For the Magnus 400 II Quantum platesetters (with TH2 heads), in addition to saving the registry and database files, you must also save the nonvolatile storage (NVS) parameters. See Saving NVS parameters.**

2. On the Operations toolbar, verify that the status indicator is **Ready**.
3. To enable access to the computer (PC), in the MCU II software, open the rear and right side doors of the platesetter.
4. Quit the Magnus 400 Controller software, Service Shell, and any other software that might be open on your client workstation.

# Removing Parts and Assemblies

**Note:** If you are not upgrading a manual platesetter, proceed to *Assembling the Light Guard and Location Pin* on page 34.

1. Before you remove any parts or assemblies from the platesetter, verify that the platesetter is leveled properly on all four legs. See the relevant Magnus 400 II or Magnus 400 II Quantum hardware installation guide.
2. Shut down the Magnus 400 II system.
   a. Turn off the platesetter.
   b. Disconnect the platesetter from the main power supply.
   c. Turn off the air supply.

## Removing the Front Panel and the Loading Tray

1. Open the front door. (Use the manual opening procedure as described in the *Magnus 400 II Hardware Installation Guide*.)
2. Remove the front panel.
3. Remove the harness from the support brackets.

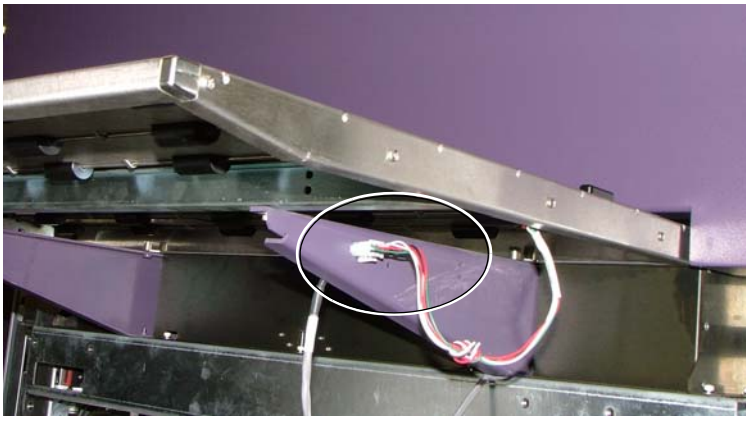


Figure 37: Support bracket harness

4. Disconnect the Molex connector from its location on the support brackets.
5. Remove the two spring screws located on the top part of tray, near the platesetter frame.

6. Remove the two hex screws from each support bracket, and then remove the tray.

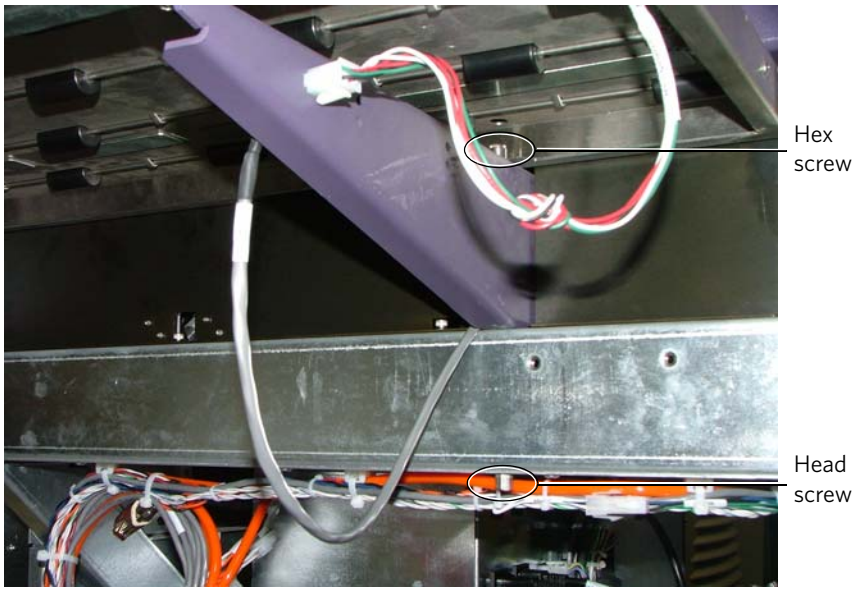



Figure 38: Removing loading tray

7. Remove the two bottom hexagonal head screws from each bracket, and then remove the support brackets.

## Removing the Front Door

**WARNING:** The front door is very heavy. Two people are required to remove the front door.

1. Remove the nine screws that secure the front door to the mainframe (four on the left side, four on the right side, and one in the center).



Figure 39: Front door screws, front view with door removed

2. Loosen, but *do not remove* the two screws that secure the front door support pistons, and then slide the door up to remove it.

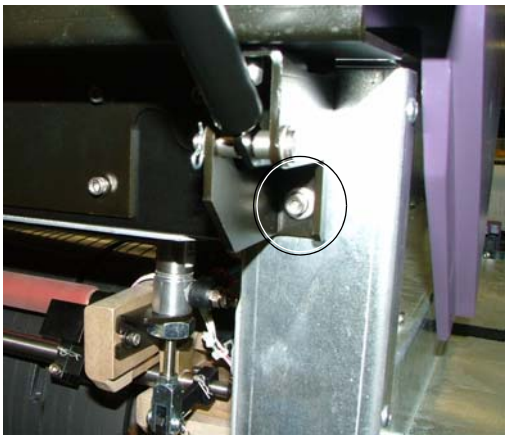


Figure 40: Front door support screw

3. Remove the two screws that secure the front door support pistons to the mainframe.

## Removing the Plate Driver Assembly, Interlocks and Lockers

**Attention:** Before proceeding, verify that the air supply to the platesetter is turned off.

1. Disconnect the harness Molex connector (labeled LOADING) from the platesetter, as shown in Figure 41.
2. To take apart the plate driver assembly:
   a. Remove the seven screws (two on the left side, two on the right side, and three in the center), as shown in Figure 41.

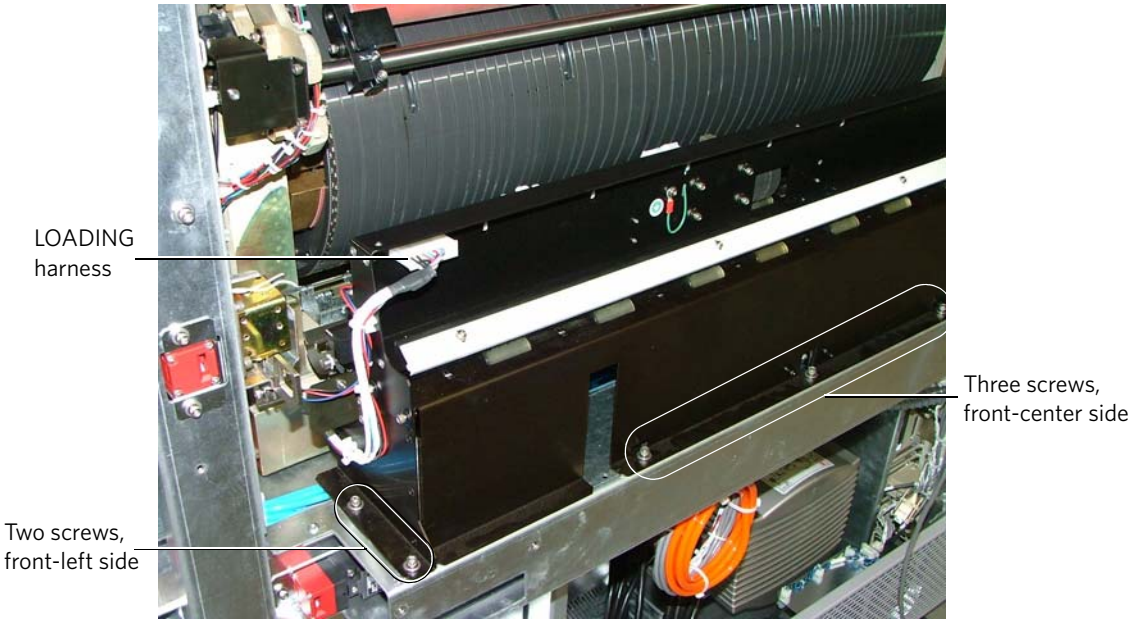



Figure 41: Plate driver assembly

b. Lift up the plate driver assembly, and then disconnect the two air pipes from the cylinder.

c. Remove the plate driver assembly.

3. To verify that air does not escape during operation, fold the edges of the air pipes that you disconnected in step 2b and close the adjusting screw in the manifold.
4. Remove the left and right door lockers, as shown in Figure 42 and Figure 43.
5. On the front-left side of the platesetter, roll up the wiring, and then attach it to the harness.

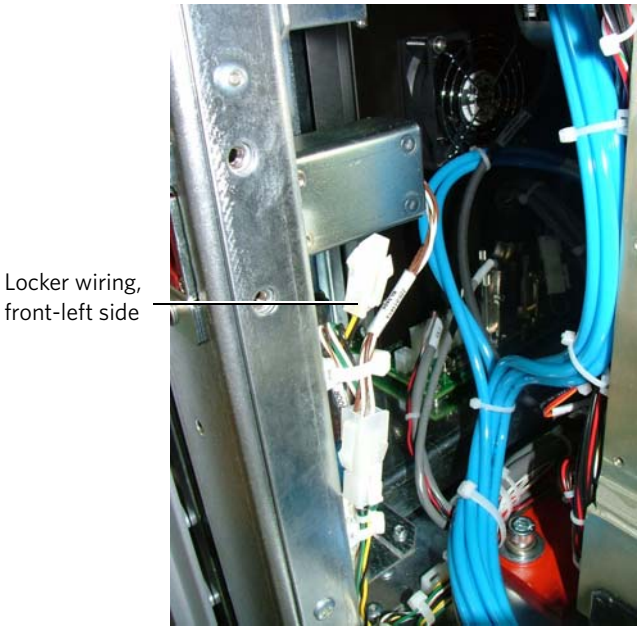



Figure 42: Front view, lower-left side

6. On the right side of the platesetter, leave the locker wiring loose (to connect to the MCU II).

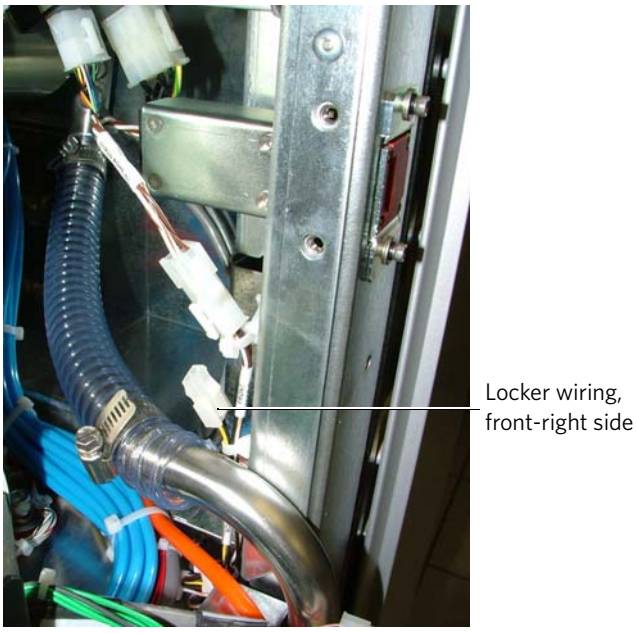



Figure 43: Front view, lower-right side

# Installing Parts and Assemblies

The procedures in the following sections describe how to assemble the necessary parts and assemblies to upgrade the MCU II to MCU II-ready status.

## Assembling the Light Guard and Location Pin

1. Attach the new upper light guard as shown in Figure 44, with the top part of it hanging over the screws, and then tighten the screws in the five existing holes.

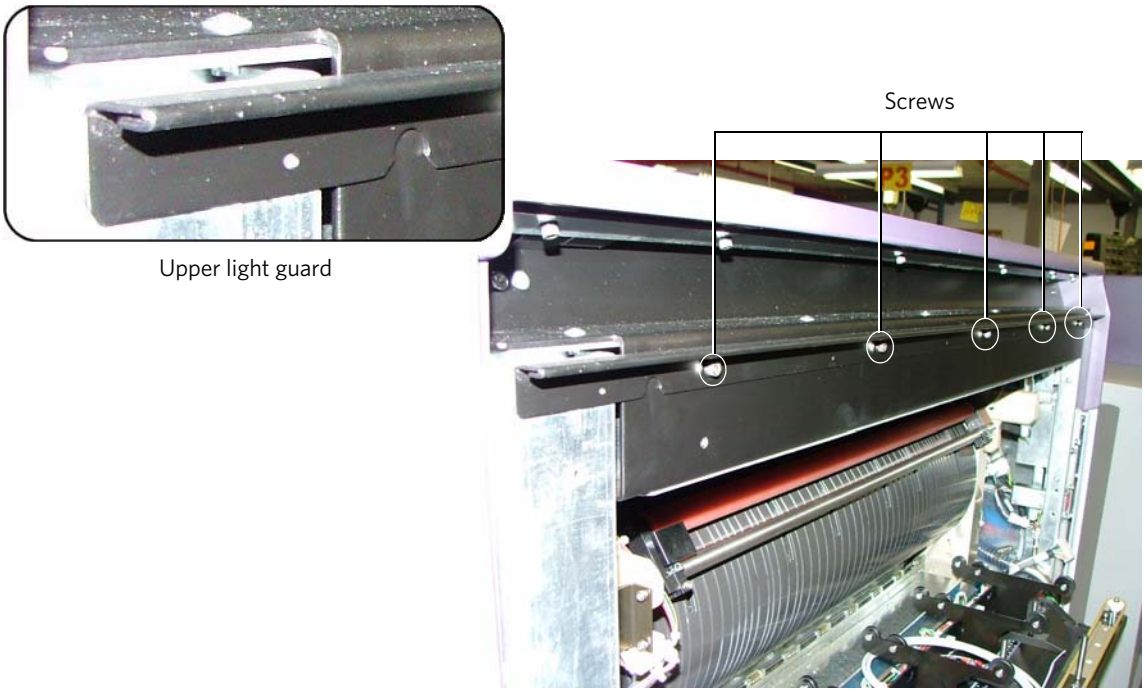



Figure 44: Attaching the upper light guard

2. Assemble the location pin together with the left and right base.

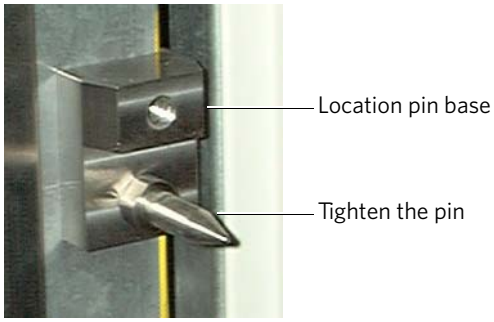



Figure 45: Location pin

# (Optional) Replacing the Drum Vacuum Adapter

**Note:** This procedure is for upgrades only. If you are not upgrading a manual platesetter, proceed to page 36.

1. On the right side of the platesetter, remove the existing drum vacuum hose adapter.

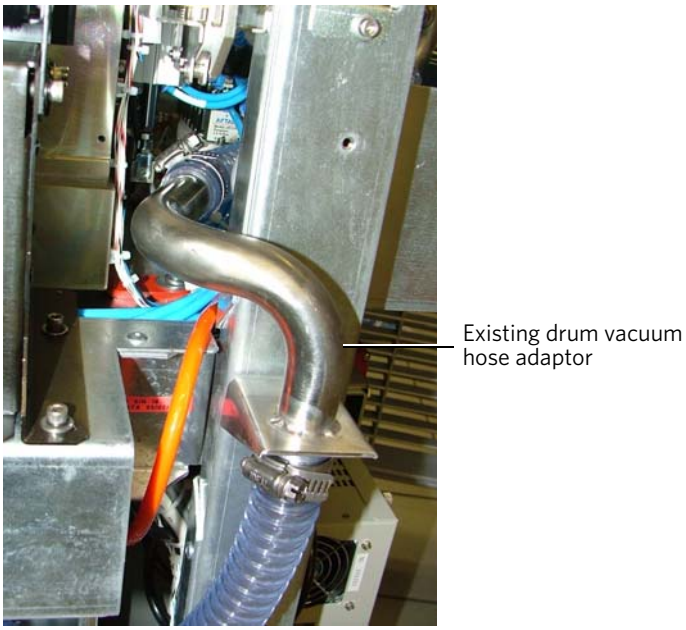



Figure 46: Removing the existing drum vacuum hose adaptor

2. Install the longer drum vacuum hose adapter (from the kit) and secure it in place on both sides of the adapter with cable ties.

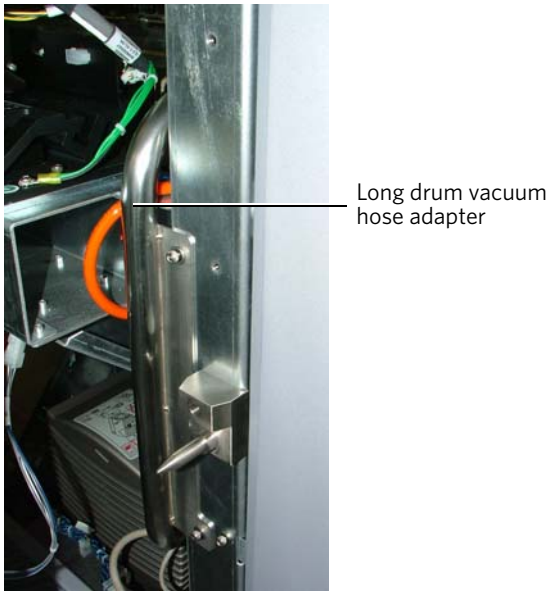



Figure 47: Installing the long drum vacuum hose adaptor

# Assembling the Punch and Centering System

**Note:** All Magnus 400 II MCU or SCU II-ready platesetters are released from the factory with the punch and centering system assembled.

1. Connect the punch beam adaptors to the left and right sides of the platesetter, as shown in Figure 48.
   - Attach the left punch beam adaptor with two conical head screws, and then tighten both screws.
   - Attach the right punch beam adaptor with three conical head screws, and then tighten all three screws.

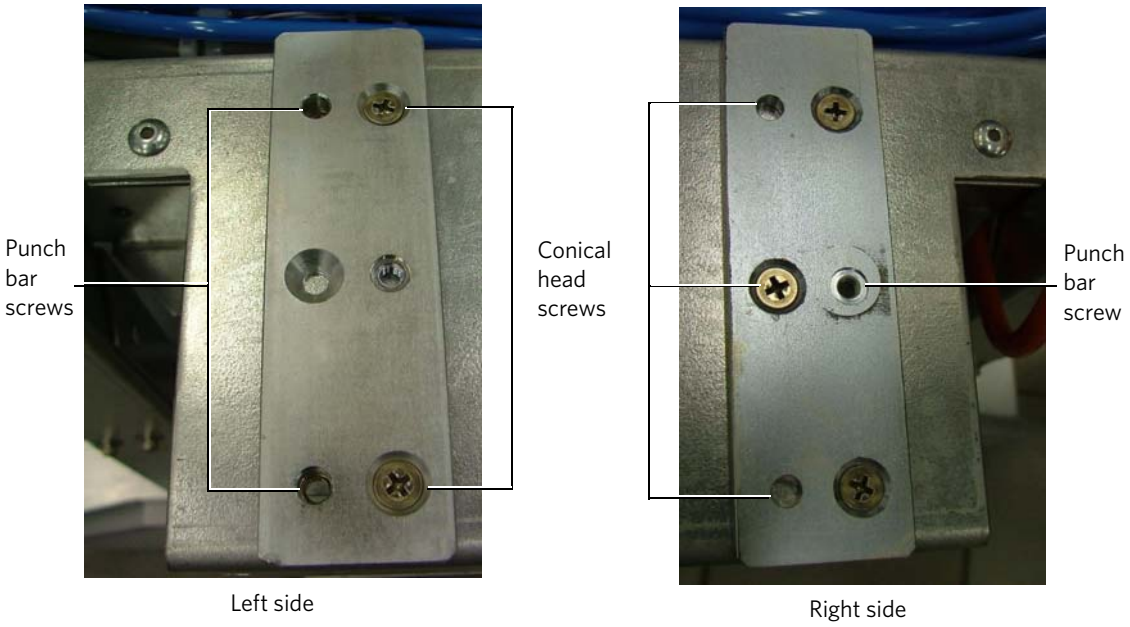



**Figure 48: Punch** beam adaptors

2. Place the punch and centering beam on top of the spacers, with the chain facing the front.
3. Insert the three punch bar screws, but do not tighten the screws.
   - On the left, insert two punch bar screws, as shown in Figure 48.
   - On the right, insert one punch bar screw, as shown in Figure 48.
4. Measure the distance between the punch and centering system, and the optomech on the left and right sides. The distance should be the same on both sides, with a tolerance of ±0.5 mm (0.02 in). Adjust if required.

   **Note:** The holes are large enough to swivel the punch and adjust it so that it is parallel to the drum.

5. When the punch and centering system is correctly positioned, tighten the three punch beam screws (two on the left side and one on the right side), as shown in Figure 49 and Figure 50.




Figure 49: Punch beam screws, left-side view

6. From the right side of the punch beam, connect the green grounding cable to the punch beam.

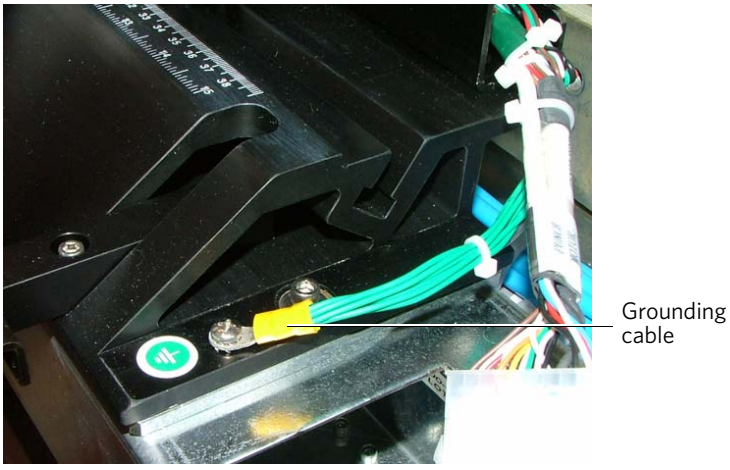



Figure 50: Grounding cable attached to punch beam

7. Connect the centering motor cable to the centering motor cable connector and the grounding to a screw on the punch beam.

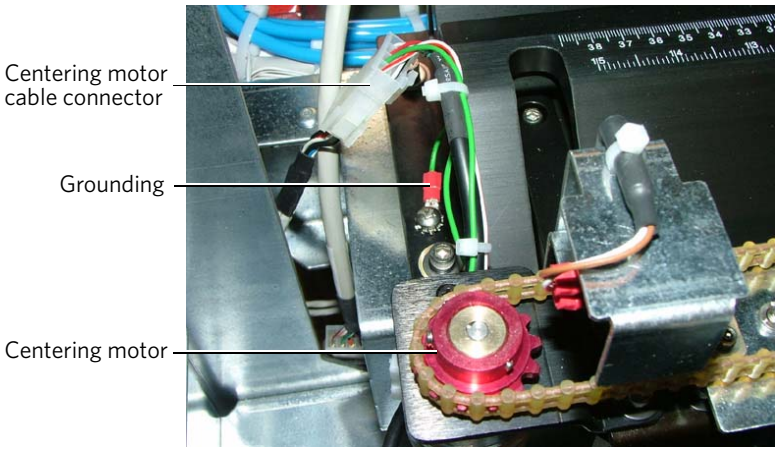



**Figure 51: Centering motor**

# Installing Punches

To install punches, see *Installing Punches* on page 52.

# Connecting the Upgraded MCU II to the Platesetter

See *Installing the MCU II-Ready to the Platesetter* on page 12.

**Note:** For upgraded MCU IIs, when connecting the air pressure pipe, follow the instructions in the following procedure.

## Connecting the Air Pressure Pipe

1. Plug one end of the air pressure pipe into the air pressure outlet in the wall.
2. Cut an 8-cm (3.15-in.) piece of air pipe.

3. On the rear-right side of the platesetter, attach one end of the 8-cm (3.15-in.) air pipe to the main air pressure outlet.




Figure 52: Connecting the air pipes

4. Connect the other end of the 8-cm (3.15-in.) piece of air pipe to a Y connector, as shown in Figure 52.
5. Connect a long piece of air pipe to the other side of the outlet on the Y connector, and route it toward the front of the platesetter.

# Upgrading the Magnus 400 Controller Software for MCU II or SCU II

After the MCU II is properly connected to the platesetter, continue with the software update for MCU II.

If your upgrade configuration includes punches, after installing the Magnus 400 Controller software, you need to define the punches in Magnus 400 Controller. See *Defining Punches* on page 56.

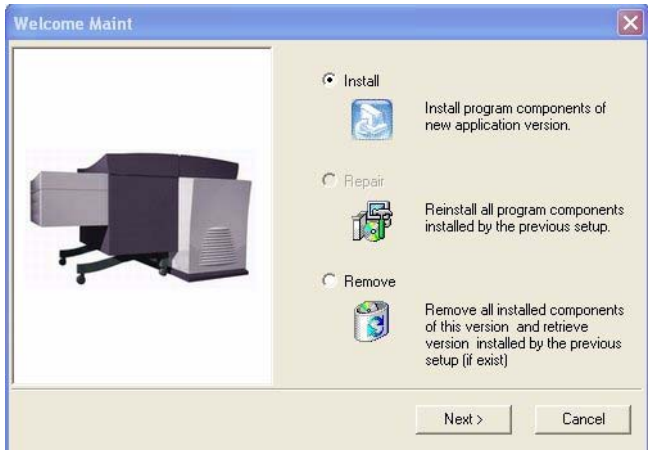
## Installing the Software on a Magnus 400/Magnus 400 II Platesetter

This section describes how to install the Magnus 400 Controller software on Magnus 400 LDA and Magnus 400 II LDA configurations.

1. Insert the **Magnus 400 Controller Version 1.05.394** CD (651-00902A) into the CD-ROM drive. When the Closing Application Warning dialog box appears, verify that all software is closed, and click **Continue Setup**.

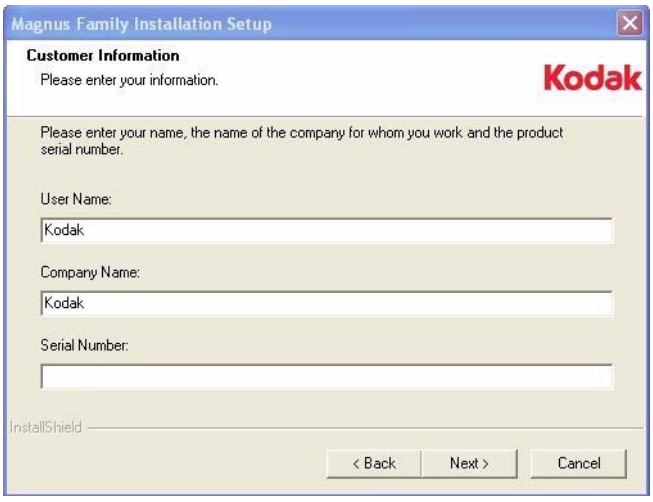



2. When the Welcome Maint dialog box appears, select **Install**, and click **Next**.



3. When the Magnus Family Installation Setup dialog box appears, click **Next**.

   The Customer Information screen appears.

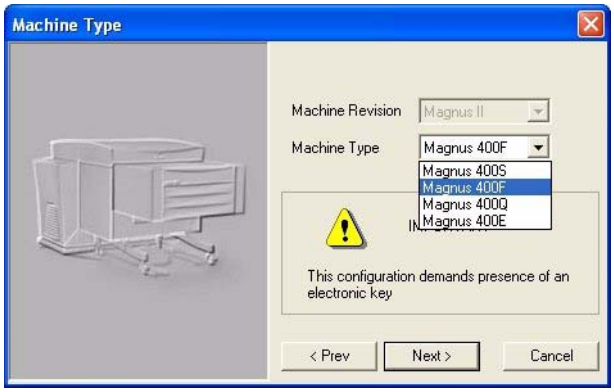



4. Type the following customer information, and click **Next**.
   - User Name: Kodak (or customer's name)
   - Company Name: Kodak (or customer's name)
   - Serial Number: (the Magnus 400/Magnus 400 II platesetter serial number)

   The Machine Type dialog box appears.



5. Perform the following steps:
   a. In the **Machine Revision** list is predefined and cannot be changed.
   b. In the **Machine Type** list, select the platesetter configuration that you are installing.




   c. Click **Next**.

      The Machine Type dialog box is refreshed, and the selected platesetter type appears in the title bar.

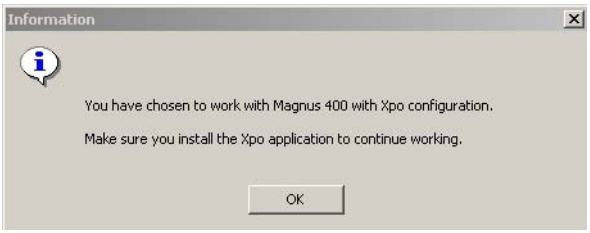



6. Perform the following steps:
   a. In the **Loading System** list, select **Auto Loader**.
   b. In the **UDRC** list, select either **None**, **BP**, or **Other**.

      **Note:** If you select BP, verify that the UDRC BP cable and the nozzle vacuum detector and wiring are installed on the platesetter.

   c. The **Xpo Open** check box is predefined and cannot be changed.
   d. In the **Conveyor** list, select either **none** or **Standard**.
   e. In the **Trays** list, select **three trays** (for MCU II) or **one tray** (for SCU II).
   f. In the **Data Unit Type** list, **LIF** is predefined and cannot be changed.
   g. Click **Next**.

A progress indicator appears, and then the following message appears.




h. Click **OK**.

The Magnus 400 Controller software takes a few minutes to load.

After the software is successfully installed, the Reboot screen appears.




7. Remove the **Magnus 400 Controller Version 1.05.394** CD from the CD-ROM drive and close all open platesetter doors.
8. Select **Yes, I want to restart my computer now**, and click **Finish**.
9. Install the Xpo 3.2 software. See Downloads on the Xpo for Magnus 400/ Lotem 400 Xpose site on TechPlanet.

   **Important:** Proceed to the next section, Verifying Firmware Versions on a Magnus 400/Magnus 400 II Platesetter on page 44. Do not start the Magnus 400 Controller software until you verify that the correct firmware versions are installed.

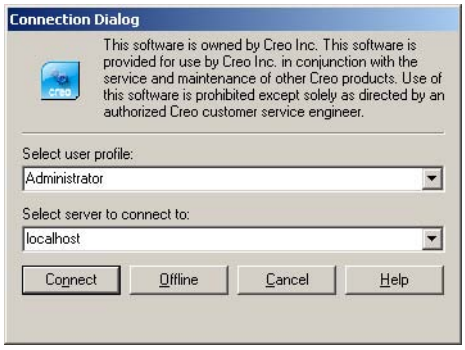
### Verifying Firmware Versions on a Magnus 400/Magnus 400 II Platesetter

**Note:** To use Service Shell 3.5, you must insert a service dongle.



1. On the Microsoft Windows desktop, double-click the **Service Shell Client** icon.

   The Connection Dialog dialog box appears.




2. Click **Connect**.

   The Service Shell workspace appears.

3. On the left panel in the Service Shell workspace, click **Device Monitor**.

4. At the `LMCE>>` command prompt, type `fw dir` and press ENTER.

   For platesetters with an LDA head (LMCE firmware), the following application versions should appear:

   - `MCE_MAIN: 1.04.01`
   - `MCE_LCA: 70.89`
   - `MCE_BOOT: 1.16.01`
   - `MCE_POST: 1.06`

5. Quit the Service Shell workspace and start the MCU II <9.9.9> software.

6. If you do not have the correct firmware versions installed, see the *Magnus 400 II and Magnus 400 II Quantum Cold Start Software Installation Guide* (731-01206A).

7. Verify that values of the plate-loading and paper disposal parameters that are configured on the platesetter are within the minimum-maximum range for these parameters. See *MCU/MCU II Loading System Parameters* on page 31.

8. Start the Xpo software and verify that the correct version is installed on the platesetter, and then perform reconfig.

## Defining Punches

If you installed punches with your upgraded configuration, you need to define the punches in the Magnus 400 Controller. See *Defining Punches* on page 56.

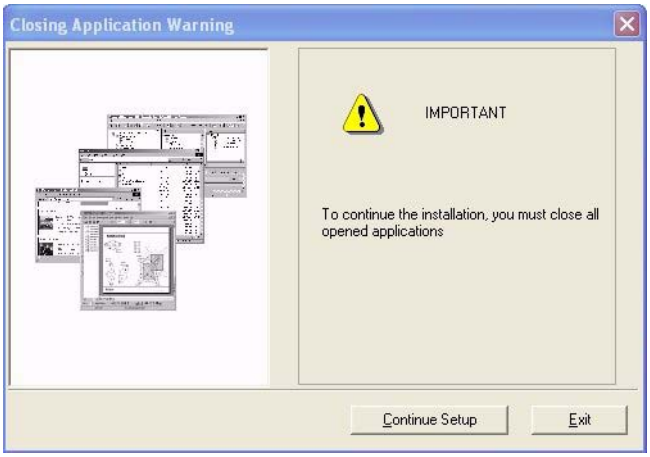
## Testing the Magnus 400 II With MCU II Configuration

See *Testing the Magnus 400 II/Magnus 400 II Quantum With MCU II Configuration* on page 26.

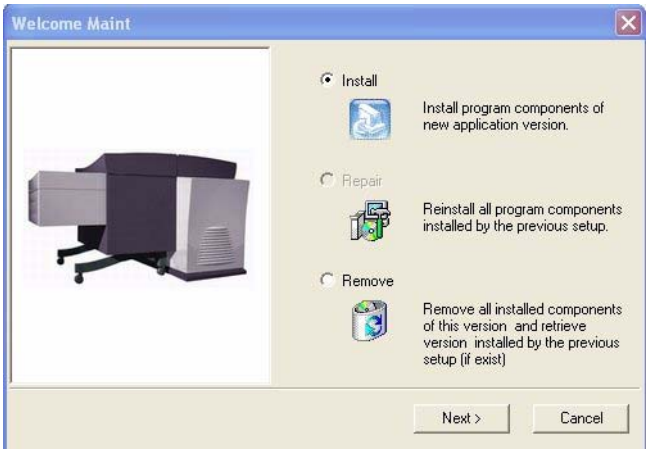
# Installing the Software on a Magnus 400 Quantum/Magnus 400 Quantum II Platesetter

This section describes how to install the Magnus 400 Controller software on Magnus 400 Quantum and Magnus 400 II Quantum configurations.

1. Insert the **Magnus 400 Controller Version 1.05.394** CD (651-00902A) into the CD-ROM drive. When the Closing Application Warning dialog box appears, verify that all software is closed, and click **Continue Setup**.




2. When the Welcome Maint dialog box appears, select **Install**, and click **Next**.



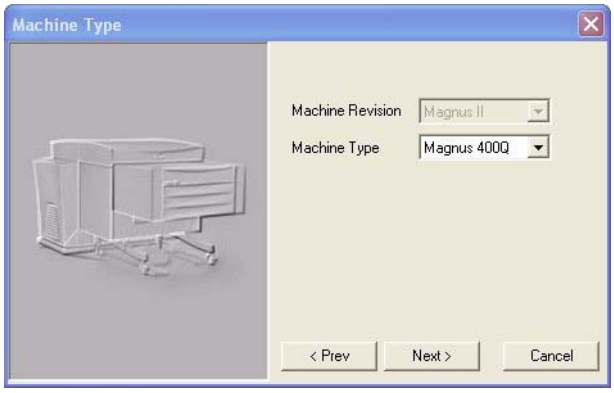
3. When the Magnus Family Installation Setup dialog box appears, click **Next**.

   The Customer Information screen appears.

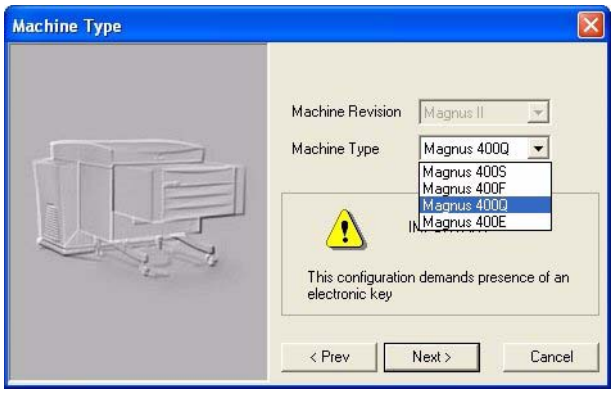



4. Type the following customer information, and click **Next**.
   - User Name: Kodak (or customer's name)
   - Company Name: Kodak (or customer's name)
   - Serial Number: (the Magnus 400/ Magnus 400 II Quantum platesetter serial number)

   The Machine Type dialog box appears.



5. Perform the following steps:
   a. In the **Machine Revision** list is predefined and cannot be changed.
   b. In the **Machine Type** list, select the platesetter that you are installing.




   c. Click **Next**.

      The Machine Type dialog box is refreshed, and the selected platesetter type appears in the title bar.




6. Perform the following steps:
   a. In the **Loading System** list, select **Auto Loader**.
   b. In the **UDRC** list, select either **none**, **BP,** or **Other**.

      **Note:** If you select **BP**, verify that the UDRC BP cable and the nozzle vacuum detector and wiring are installed on the platesetter.

   c. In the **TH Config** list, select either **2400** or **2540**.
   d. In the **Conveyor** list, select **none** or **Standard**.
   e. In the **Trays** list, select **three trays** (for MCU II) or **one tray** (for SCU II).
   f. Click **Next**.

   The Magnus 400 Controller software takes a few minutes to load.

After the software is successfully installed, the Reboot screen appears.




7. Remove the **Magnus 400 Controller Version 1.05.394** CD from the CD-ROM drive and close all open platesetter doors.
8. Select **Yes, I want to restart my computer now**, and click **Finish**.

   **Important:** Proceed to the next section, Verifying Firmware Versions on a Magnus 400 Quantum/Magnus 400 II Quantum Platesetter on page 48. Do not start the Magnus 400 Controller software until you verify that the correct firmware versions are installed.

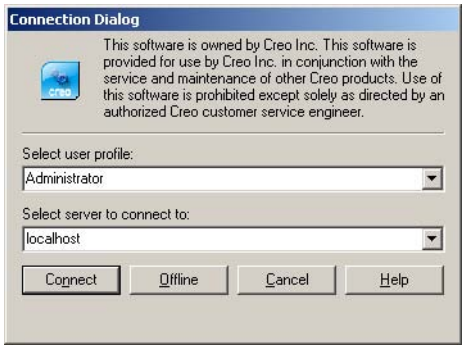
## Verifying Firmware Versions on a Magnus 400 Quantum/Magnus 400 II Quantum Platesetter

**Note:** To use Service Shell 3.5, you must insert a service dongle.



1. On the Windows desktop, double-click the **Service Shell Client** icon.

   The Connection Dialog dialog box appears.




2. Click **Connect**.

   The Service Shell workspace appears.
3. On the left panel in the Service Shell workspace, click **Device Monitor**.

4. At the `Quantum>>` command prompt, type `fw dir` and press ENTER.

   For platesetters with a thermal 2 imaging head (TMCE firmware), the following application versions should appear:

   - `MCE_MAIN: 1.40.02`
   - `MCE_LCA: 2.28`
   - `MCE_BOOT: 1.16.1`
   - `MCE_POST: 1.06`

5. To view the thermal 2 imaging head application version, at the `Quantum>>` command prompt, type `th2 "ver.`
   The following application version should appear:

   - `TH2: 1.05d Release`

6. Quit the Service Shell workspace and start the Magnus 400 Controller software.
7. If you do not have the correct firmware versions installed, see the *Magnus 400 II and Magnus 400 II Quantum Cold Start Software Installation Guide* (731-01206A).
8. Verify that values of the plate-loading and paper disposal parameters that are configured on the platesetter are within the minimum-maximum range for these parameters. See *MCU/MCU II Loading System Parameters* on page 31.

## Defining Punches

If you installed punches with your upgraded configuration, you need to define the punches in the Magnus 400 Controller. See *Defining Punches* on page 56.

## Testing the Magnus 400 II Quantum With MCU II Configuration

See *Testing the Magnus 400 II/Magnus 400 II Quantum With MCU II Configuration* on page 26.

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# Appendix A:  Installing Punches

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# Installing Punches

Punches are available in three different widths to accommodate single, double, and triple punch requirements with long punch guides.



| Double/triple punch 69 mm (2.72 in.) | Double/triple punch 50 mm (1.97 in.) | Double punch 30 mm (1.18 in.) | Single punch 30 mm (1.18 in.) |
|---|---|---|---|

**Figure 53: Punch types**

1. Locate the spare T nut in the center of the punch beam, and then proceed to step 4.

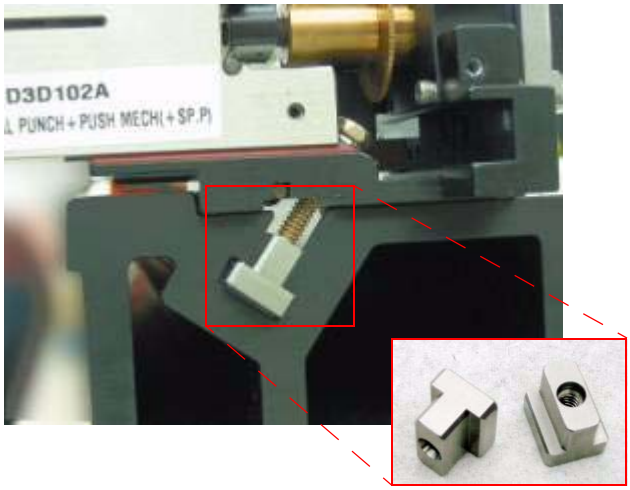



**Figure 54: T nut**

2. If a spare T nut is not available in the center of the punch beam, mark the location of each of the existing punches.
3. Remove the two punches on the left side of the middle punch, and remove the middle punch.

4. Insert a T nut into the groove, and slide it to the middle of the punch beam where the new punch will be installed.



Figure 55: Inserting a T nut into the punch beam

5. On the punch beam, install the punch according to the customer's punch configuration and tighten the hex screw into the locking nut.

**Note:** Use the customer's reference plate with emulsion side up to determine the correct punch positions.

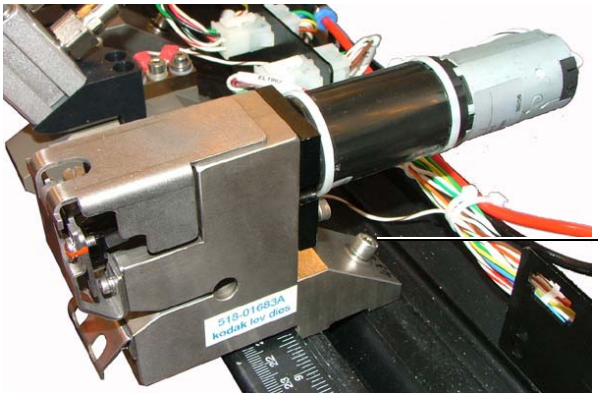



Figure 56: Installing a punch on the punch beam

6. Connect the punch connector to the punch Molex™ connector.

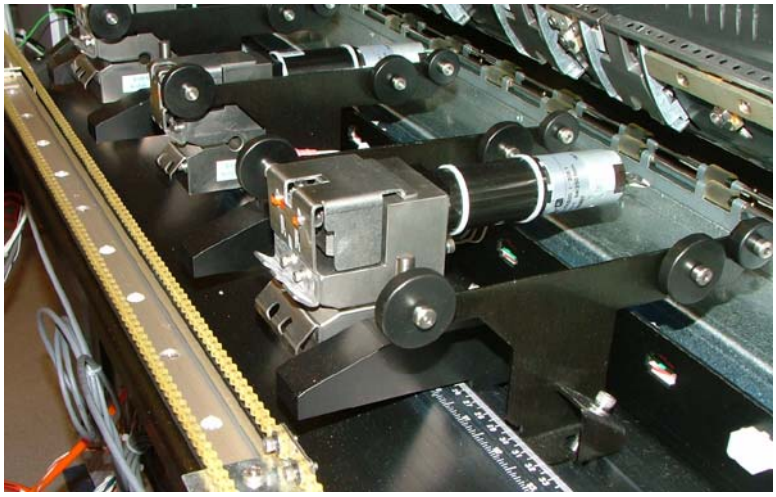


Figure 57: Punches installed on punch beam

7. Make any final adjustments to the punch system after you assemble the Magnus 400 II.

## (Optional) Changing the Location of the Detector Wiring

**Note:** When two punches are positioned too close to each other, you need to change the location of the punch detector wiring before adjusting the punch detector.

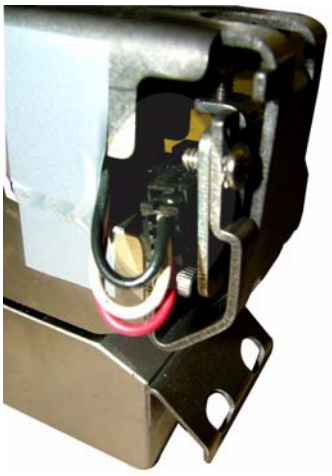


Figure 58: Punch detector wiring in Molex connector

1. Disconnect the Molex® connector that contains the punch detector wiring from the punch detector.
2. On the punch, remove the two #3 screws that help to secure the detector holder to the punch, and set aside.
3. Remove the two #2 screws that help secure the detector holder to the punch, and set aside.

4. Turn the punch detector upside down, and reconnect the Molex connector and wiring to the punch detector.

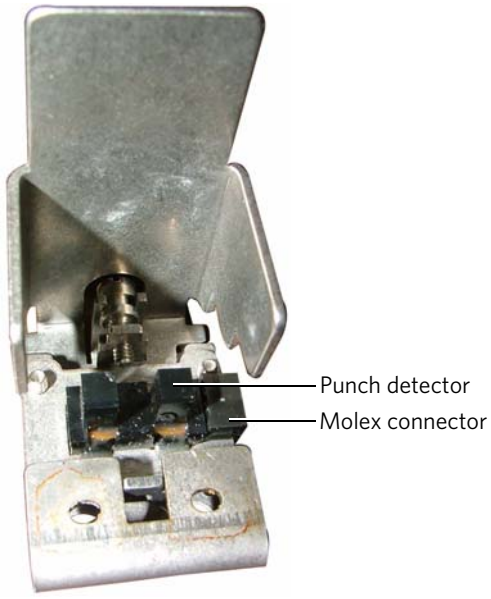



Figure 59: Upside down view of punch detector

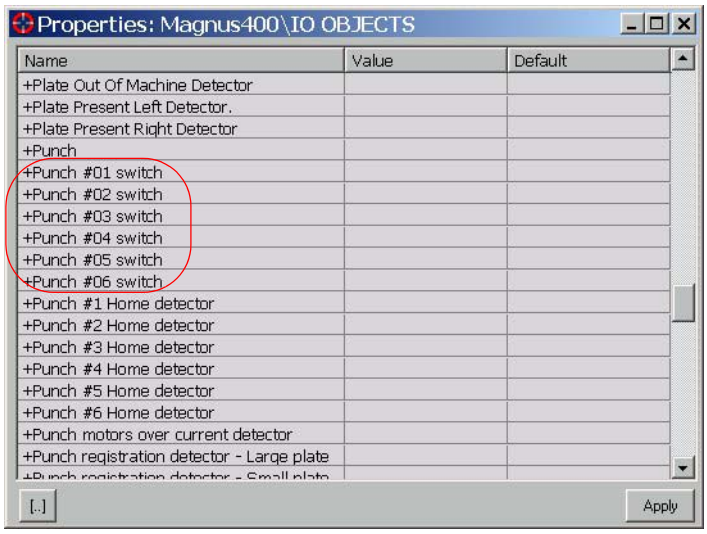
5. Insert the two #2 screws, and tighten.
6. Insert the two #3 screws, and tighten.
7. (Optional) On the side of the punch, place a sticker over the exposed wires so that they do not interfere with the smooth operation of the punches.

# Defining Punches

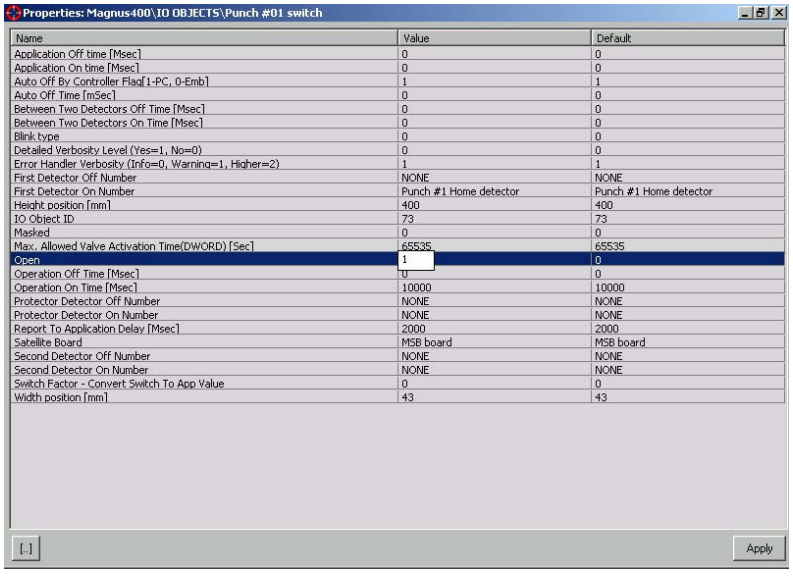
The MCU II accommodates up to six punches, including the center punch. The number of punches that you need to define depends on the customer's configuration.

**Note:** In some cases, the Magnus 400 II/Magnus 400 II Quantum with MCU II is delivered with the punch system installed. If this is the case, proceed to *Testing the Magnus 400 II/Magnus 400 II Quantum With MCU II Configuration* on page 26.

1. Start the Magnus 400 Controller software, and then click anywhere in the Magnus 400 Controller workspace and press CTRL+U to enter Expert mode.
2. In the Magnus 400 Controller software, select **Utilities > Hardware > Others** and right-click **Magnus400**, and select **Properties**.
3. In the Properties: Magnus 400 dialog box, double-click **+IO OBJECTS**.




4. In the Properties: Magnus 400\IO OBJECTS dialog box, double-click each punch that is defined in the customer's configuration, and then double-click the **Open** parameter. Change the Value to **1**, and click **Apply**.

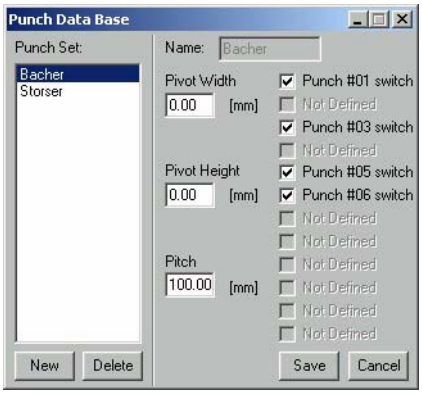


5. For your changes to take effect, restart the Magnus 400 Controller software.

## Defining a Custom Punch System in the Database

1. In the Magnus 400 Controller software, select **Utilities > Hardware > Database**, and double-click **Punch**.
2. In the Punch Data Base dialog box, select the check box next to each punch that you want to include in the custom punch system, and then select the punch set name that you want to use for the custom punch set.

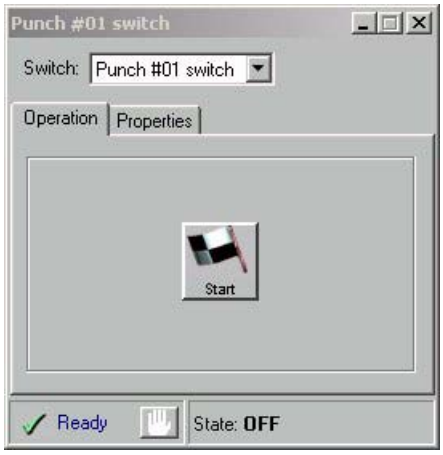
   **Note:** You can add new punch set names, as required—for example, to define a specific set of customer punches or for a specific customer configuration.




3. Click **Save**.

# Testing the Defined Punches

1. In the Magnus 400 Controller software, open all the punches that you defined in the system and their corresponding punch detector dialog boxes:
   - For the punches, select **Utilities > Hardware > Punch Conveyor System > Punch System > Punch System Switches** and open the first punch switch that is defined in the system—for example, Punch #01 switch.




   - For the punch detectors, select **Utilities > Hardware > Punch Conveyor System > Punch System > Punch System Detectors** and open the relevant punch detector—for example, Punch #1 Home detector.




2. In the Punch switch dialog box, click **Start**.

   The status in the Punch detector dialog box should change from **ON** to **OFF** and back to **ON**. This indicates that the punch home position is working correctly. If not, see *(Optional) Adjusting a Punch Detector* on page 59.

3. Repeat steps 1 and 2 for each punch defined in the system.

# (Optional) Adjusting a Punch Detector

**Important:** When adjusting a punch detector, do not touch the two #3 screws.

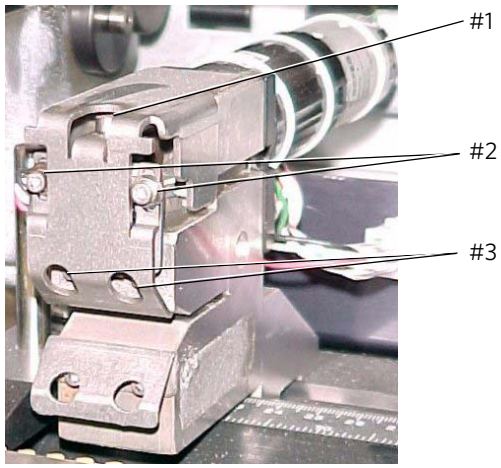



Figure 60: Punch and screws

1. On the punch, loosen the two #2 screws.
2. In the Magnus 400 Controller software, select **Utilities > Hardware > Punch System > Punch Motors**. Double-click the relevant punch motor, and click **Start**.




3. Rotate screw #1 clockwise, until the punch motor is running smoothly without interruption, and then rotate the screw counterclockwise, until the punch motor stops.
4. After the motor stops, thoroughly rotate screw #1 counterclockwise another one and a half rotations.
5. Tighten the two #2 screws.
6. Activate the punch, and verify that it is working properly. Make sure that the punch rod is not blocking the punch plate slot.

## Fine-Tuning the Distance Between Punches

**Note:** Always use the zero mark on the punch beam as your reference point when performing the fine adjustment.

1. Load a plate and perform punch.
2. Adjust the final punch positions according to the punch results.