Kodak

# Magnus 400 Controller

## Software
Version 1.01.391.003 to 1.02.392

## Upgrade Procedure
English

731-00949B-EN Rev B

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# Introduction

This procedure describes how to upgrade from the Kodak® Magnus™ 400 Controller version 1.01.391.003 software to version 1.02.392. It also includes the electronic and hardware improvements for version 1.02.392.

See also: Magnus 400 Controller Version 1.02.392 Release Notes.

## Prerequisites:

- Either Update 2 or Update 3 for Magnus 400 Controller 1.01.391.003:
  - For platesetters with a thermal 2 head (TH2)—Update 2 CD (651-00444B)
  - For platesetters with a laser diode array (LDA) head—Update 2 CD or Update 3 CD (651-00565A)
- For platesetters with a multi-cassette unit (MCU) configuration—FCO 512-00364A Spring Spoiler for Magnus 400 (719-00698A)
- For platesetters with a Lotem Interface (LIF) board (without a Turbo Screening Process [TSP])—the Kodak Xpo™ 3.1.31 software
- Magnus 400 Accessories CD (651-00628A)

  **Note:** This prerequisite is for platesetters in the field that do not have the image disk with version 1.14 of the operating system.

  Before you install the Magnus 400 Controller 1.02.392 software, you must first install the files from the Magnus 400 Accessories CD.

# Hardware

**Important:** Before you install the Magnus 400 Controller 1.02.392 software, you must finish all electronic and hardware installations. When you perform these changes, make sure to observe safety regulations.

The Magnus 400 Controller 1.02.392 software includes the following hardware improvements:

- The short-pin guides were redesigned and are now level to the punch-entry height.
- Two microswitches were added to detect when a plate is near the short pins.
- A bracket was added on the short-pin guides to hold the microswitches.
- The short-pin wiring connections are now routed to the two microswitches.
- Washers were removed from the suckers to prevent plate skewing.
- Washers were added to the XY bar to tilt the XY bar so that thin plates do not touch the punch roller guides or the punch's top wires.
- The SmartED board was replaced with new embedded software on the SmartED_2 board.
- A Universal Debris Removal Cabinet (UDRC) cable and detector were added to monitor debris removal functionality.

# Upgrade Kit

Table 1: 1.02.392 Upgrade Parts

| Part and Description | Part Number | Quantity |
|---|---|---|
| **Boards** | | |
| SmartED_2 board | 503-00397A | 1 |
| **MCU** | | |
| Slotted rubber tube | 252-12897A | 1 |
| **Shortcut Assembly** | | |
| Shortcut pin base-II LT assy | 500-04311A | 1 |
| Shortcut pin base-II RT assy | 500-03874A | 1 |
| Shortcut pin assy-II for wide plate | 500-03875A | 2 |
| Wiring (white-orange crossover) | 252-01917A | 1 |
| Terminal Dis F 11" #18 | 196F10008 | 4 |
| **UDRC** | | |
| UDRC BP cable | 220-01933A | 1 |
| UDRC BP nozzle vacuum detector and wiring | 220-01932A | 1 |
| Blue polyure hose ×270 cm, OD=6 mm, ID=4 mm | 344F10131 | 1 |
| Straight-fit 6-to-6 mm fast connector | 344B25700 | 1 |
| Elbow (90-degree) connector | 344A06040 | 1 |
| **Software** | | |
| Magnus 400 Accessories CD | 651-00628A | 1 |
| Magnus 400 Version 1.02.392 CD | 651-00640B | 1 |

# Upgrading to the Magnus 400 Controller 1.02.392 Software

**Important:** Before you install the Magnus 400 Controller 1.02.392 software, you must finish all electronic and hardware installations. When you perform these changes, make sure to observe safety regulations.

This section describes how to upgrade to the Magnus 400 Controller 1.02.392 software on the Magnus 400 and Magnus 400 Quantum platesetters. It includes procedures for replacing or installing electronics and hardware, and for installing the software.

## Installing Electronics and Hardware

This section includes the following procedures:


- *Replacing the SmartED Board* on page 4—for platesetters with LDA heads only
- *Configuring the UDRC BP* on page 5
- *Replacing the Short-Pin Guides* on page 14
- *Tilting the XY Bar* on page 17
- *Preventing Plates in Cassette 1 From Sliding Back Into the Cassette* on page 22


### Replacing the SmartED Board

**Attention:** The procedure applies only to platesetters with the LDA head.

The SmartED board has been modified and the new SED_2 board (part number 503-00397A) replaces the former SmartED board that was used in earlier versions of the Magnus 400 Controller software.

**Note:** After you replace the SmartED board with the new SED_2 board, return the SmartEd board to logistics.

1. Shut down the Magnus 400 Controller software and turn off the platesetter.
2. Open the rear and left side doors of the platesetter.

3. On the SmartED board, disconnect connector J2 and the two orange edge-detection cable connectors.

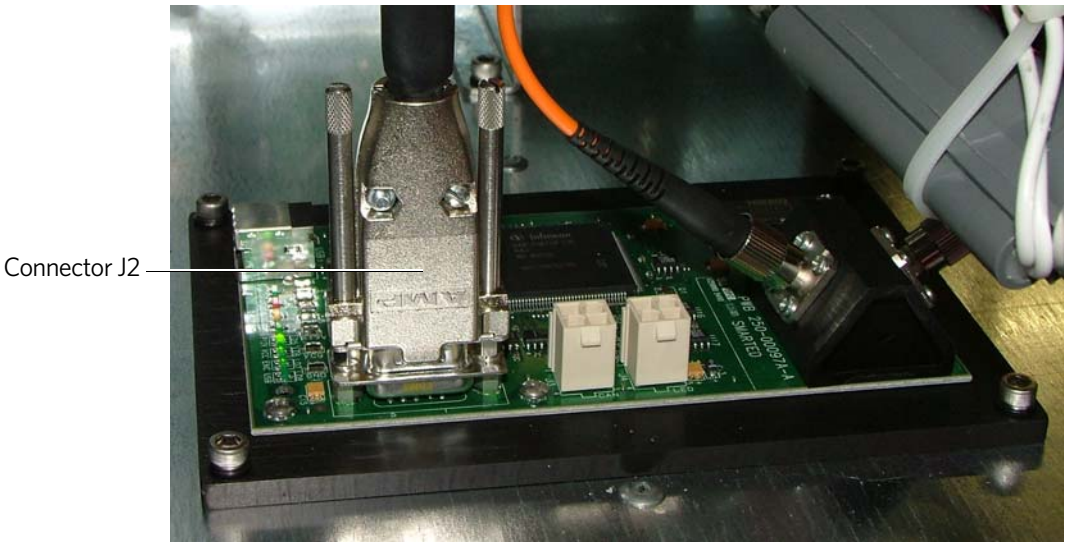



Figure 1: Disconnecting SmartED board connections

4. On the right side of the rear door, remove the four cross-head screws that secure the SmartED board to the mainframe.
5. Remove the SmartED board.
6. Insert the new SED_2 board (503-00397A).
7. Insert the four cross-head screws that secure the SmartED board to the mainframe and tighten.
8. Reconnect connector J2 and the two orange edge-detection cable connectors to the SED_2 board.

## Configuring the UDRC BP

The Magnus 400 Controller 1.02.392 software supports a new UDRC Base Particulate filter only (BP) configuration that includes a vacuum detector sensor, which alerts the operator to the status of the UDRC. To implement the UDRC BP configuration, you must install the new UDRC BP cable and the nozzle vacuum detector and wiring, and make sure to update the registry accordingly.

This section includes the following procedures:

- *Installing the UDRC BP Cable* on page 6
- *Installing the Nozzle Vacuum Detector and Blue Hose* on page 9
- *Configuring the UDRC in the Registry* on page 13

## Installing the UDRC BP Cable

**Note:** When you install the Magnus 400 Controller 1.02.392 software, in the Machine Type dialog box, make sure to select **BP** as the UDRC type. See step 5b in Installing the Magnus 400 Controller 1.02.392 Software on page 28.

A new UDRC BP cable (part number 220-01933A) is available for use with the Magnus 400 Controller 1.02.392 software. The cable is a forked cable with a connector to the UDRC unit at one end of the cable, and a connector (with grounding cable) that connects to connector J5 and a connector that connects to the 4-pin UDRC connector at the other end of the cable.

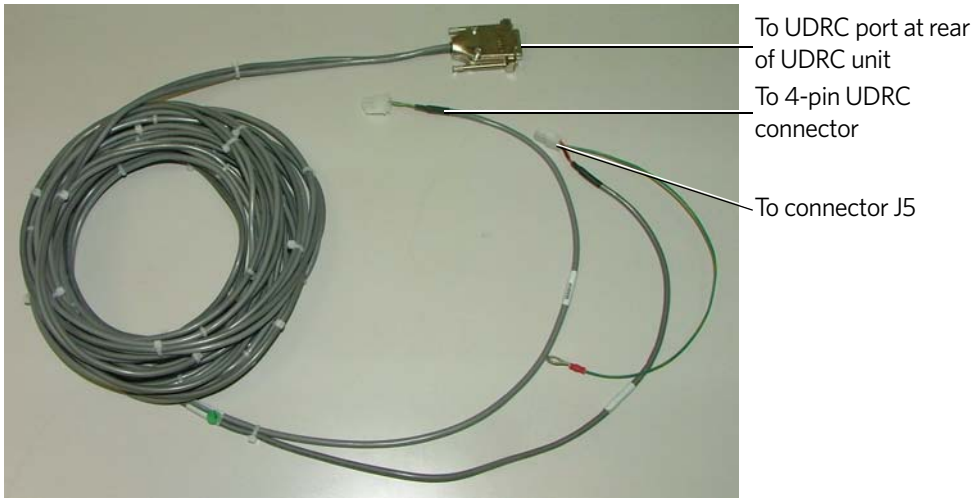



Figure 2: UDRC BP cable and connectors

1. Shut down the Magnus 400 Controller software and turn off the platesetter.
2. Open the rear door and remove the rear panel.
3. Disconnect and remove the old UDRC cable:
   a. At the rear of the UDRC, disconnect the UDRC cable connection.
   b. On the left side of the rear panel, on the distribution box, disconnect connector J5.
   c. Remove the old UDRC cable.

4. Install the new UDRC BP cable:

   a. At the rear of the UDRC, connect the UDRC BP connector to the URDC port.




Figure 3: Connecting the UDRC BP cable

   b. On the other end of the UDRC cable, connect the J5 connector and grounding cable to connector J5 on the distribution box.

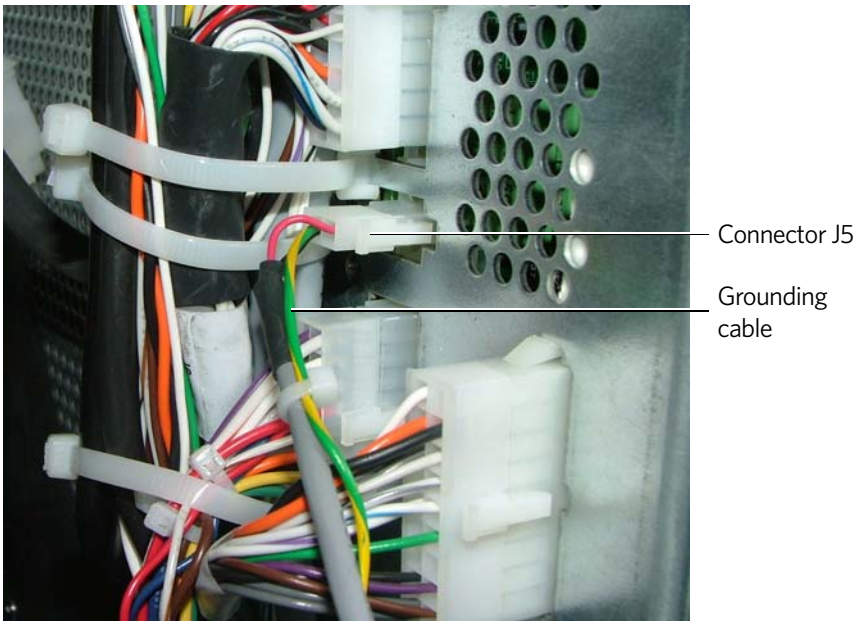



Figure 4: Connecting connector J5

c. On the grounding point outside the D-box, secure the end of the grounding cable to the grounding point.

d. In the drum-motor area, connect the other connector to the 4-pin UDRC connector.

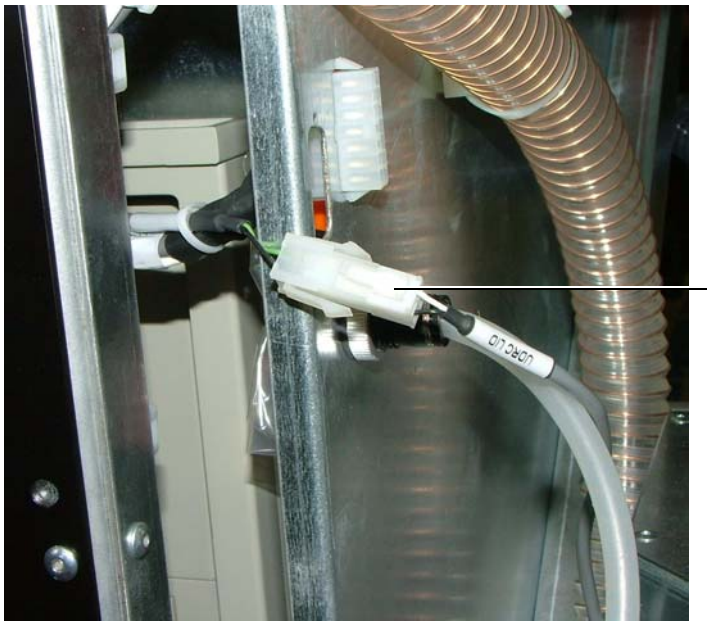



Figure 5: Connecting the 4-pin UDRC connector

## Installing the Nozzle Vacuum Detector and Blue Hose

**Note:** To install the blue hose on Magnus 400 Quantum platesetters, you will need the straight-fit fast connector (part number 344B25700) that is supplied with the kit.

**To install the nozzle vacuum detector:**

1. Open the right door of the platesetter.
2. Open the drum-motor panel.
3. Remove the old vacuum detector (part number mbx 5100).
4. Insert the new nozzle vacuum detector (part number 220-01932A).

**To install the blue hose on a platesetter with an LDA head:**

1. Remove the unload system.
2. On the nozzle, remove the black plug.
3. On the blue hose, insert one end of the elbow connector (part number 344A06040) into the blue hose (part number 344F10131) and insert the other end into the nozzle.

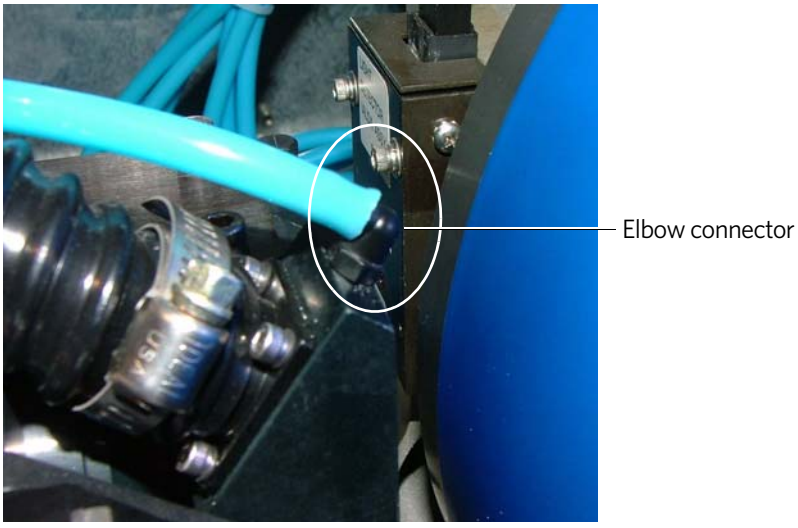



Figure 6: Connecting the blue hose to the nozzle

4. Route the other end of blue hose through the carriage chain and under the base of the carriage chain back toward the drum-motor area.

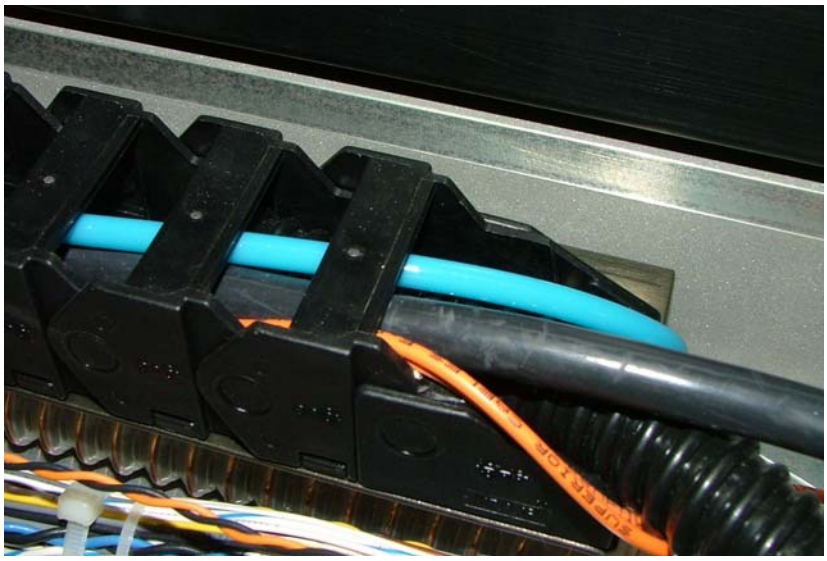


Figure 7: Routing the blue hose through the carriage chain

5. Connect the blue hose to the nozzle vacuum detector.

**Note:** There are two connector outlets on the nozzle vacuum detector. Make sure to connect the blue hose to the connector facing the detector's black wires, as shown in Figure 8.




Figure 8: Connecting the blue hose to the nozzle vacuum detector

**To install the blue hose on platesetters with a TH2 head:**

1. Repeat steps 1 to 3 in the previous procedure.
2. When the blue hose is routed through the carriage chain and near the left side of the rear panel, cut the blue hose in half.

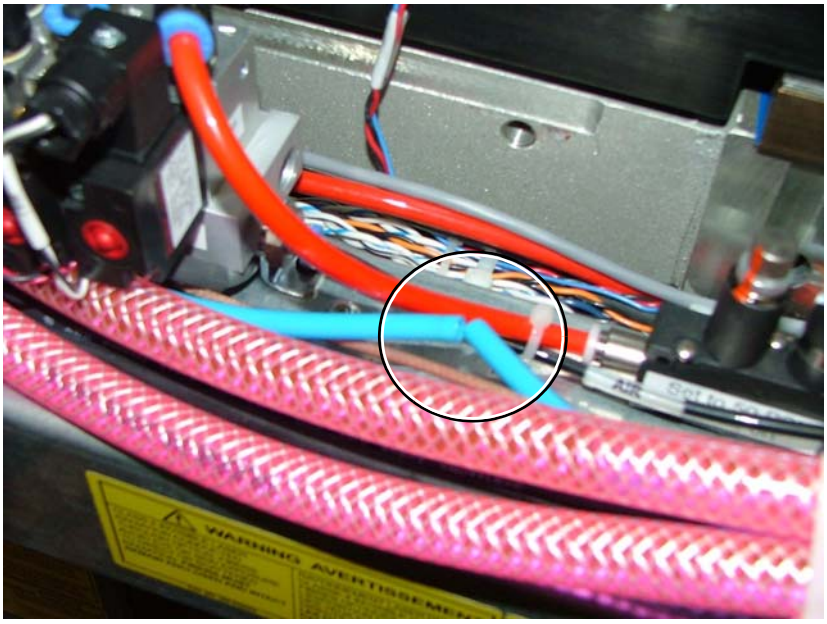


Figure 9: Cutting the blue hose

3. Insert one end of the straight-fit fast connector into the cut end of the blue hose that is still connected to the nozzle.
4. Insert the other end of the straight-fit fast connector into the blue hose (344F10131)that is supplied with the kit.

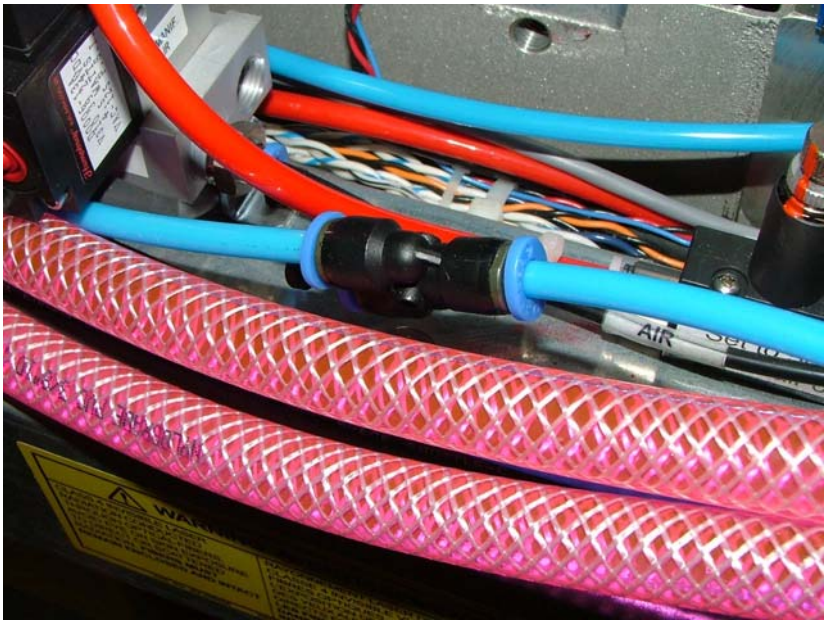



Figure 10: Connecting the straight-fit fast connector

5. Route the blue hose under the base of the carriage chain and back toward the drum-motor area.

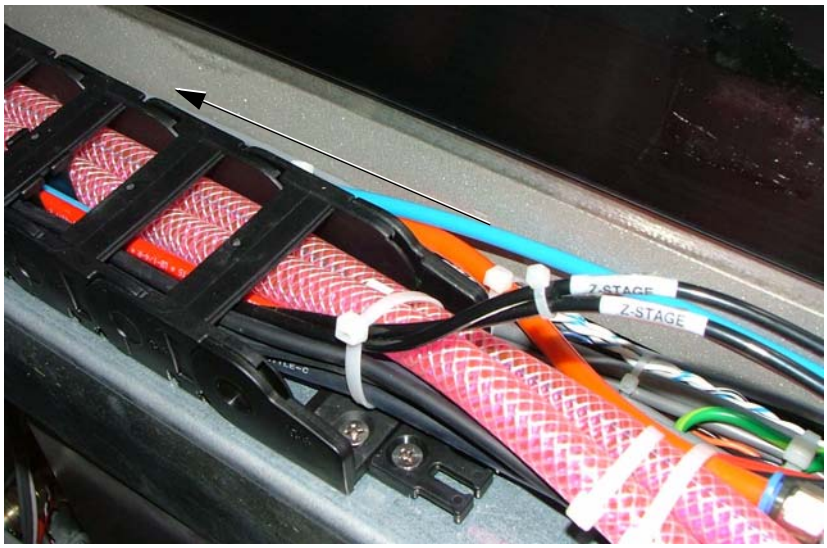



Figure 11: Routing the blue hose back toward the drum-motor area

6. Connect the blue hose to the nozzle vacuum detector.

**Note:** There are two connector outlets on the nozzle vacuum detector. Make sure to connect the blue hose to the connector facing the detector's black wires, as shown in Figure 12.




Figure 12: Connecting the blue hose to the nozzle vacuum detector

## Configuring the UDRC in the Registry

The Magnus 400 Controller 1.02.392 software supports a new UDRC BP configuration that includes a nozzle vacuum detector and wiring (220-01932A), which alerts the operator to the status of the UDRC. To implement the UDRC BP configuration, you must install the new UDRC BP cable (part number 220-01933A) and the nozzle vacuum detector and wiring, and make sure to update the registry accordingly.

You can configure the UDRC either during the software installation (see step 5b in *Installing the Magnus 400 Controller 1.02.392 Software* on page 28) or later in the registry.

If the UDRC is not configured as type BP, you can use the UDRC together with the platesetter, but you will not be alerted to its status during operation.

**To configure the UDRC parameter in the registry:**

1. In the Magnus 400 Controller software, select **Utilities > Hardware**.
2. In the Hardware tree, go to **Others > Magnus400**.
3. Right-click **Magnus400** and select **Properties**.
4. In the Properties: Magnus400\MACHINE dialog box, locate the **UDRC installed** parameter and change the value to **1**.

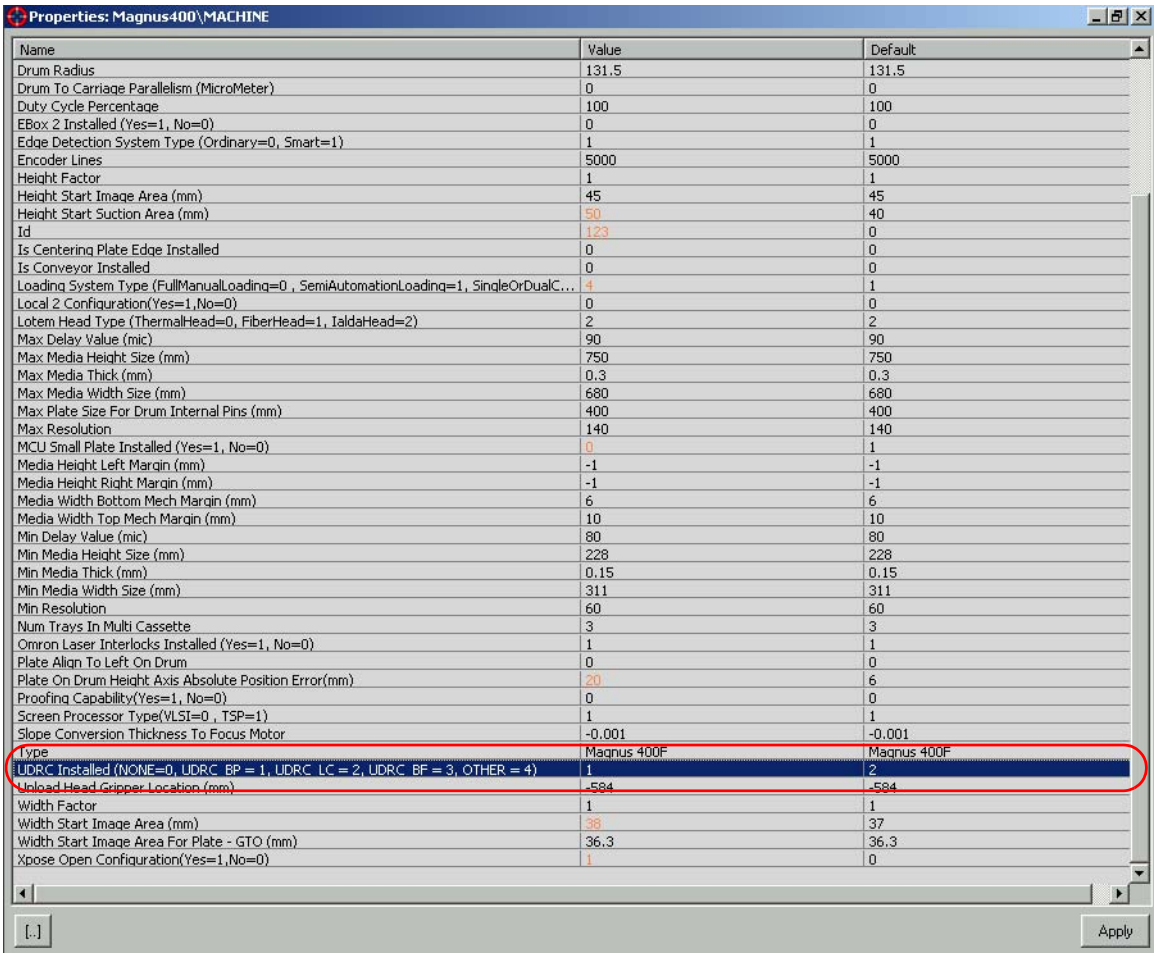



Figure 13: Changing the value of the UDRC installed parameter

# Replacing the Short-Pin Guides

New short-pin guides were designed to improve the loading process. The new short-pin guides have a taller base and are aligned according to the punch-entry height. Microswitches are included with the two inner short-pin guide assemblies (part number 500-03874A). The two outer short-pin guide assemblies are marked with an X on each assembly (part number 500-03875A).

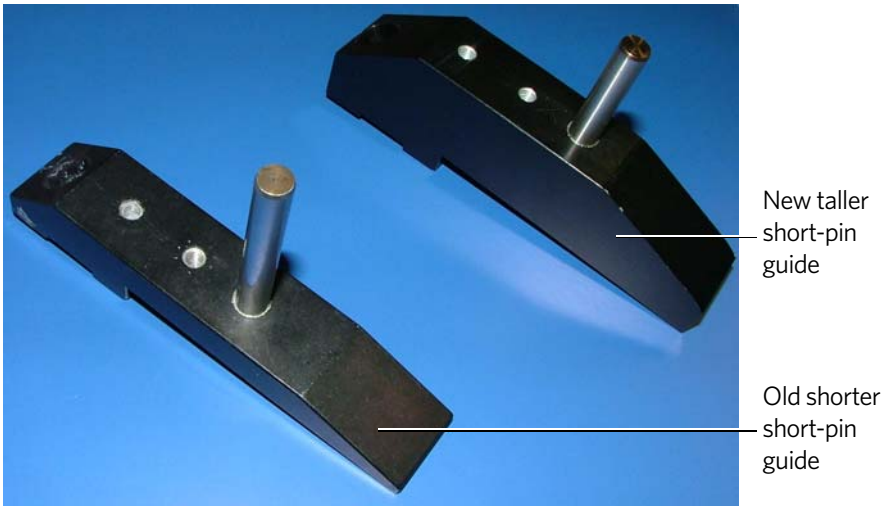



Figure 14: Short-pin guides

1. Disconnect the harness wiring from the old inner short-pin guides, and then remove the wiring from the outer short-pin guides, and then remove the guides.
2. Insert the two inner short-pin guide assemblies with the microswitches (500-03874A).

   **Attention:** When you insert the short-pin guide assemblies, make sure that the microswitch on the assembly is positioned on the right-outer and left-outer sides of the short pins.
3. Insert the two outer short-pin guide assemblies (500-03875A—marked with an X).

4. Route the white-orange crossover wire (part number 220-01917A) that is supplied with the assembly between the two microswitches, and connect the terminal lugs at each end of the crossover wire to the upper terminal legs on the microswitches.

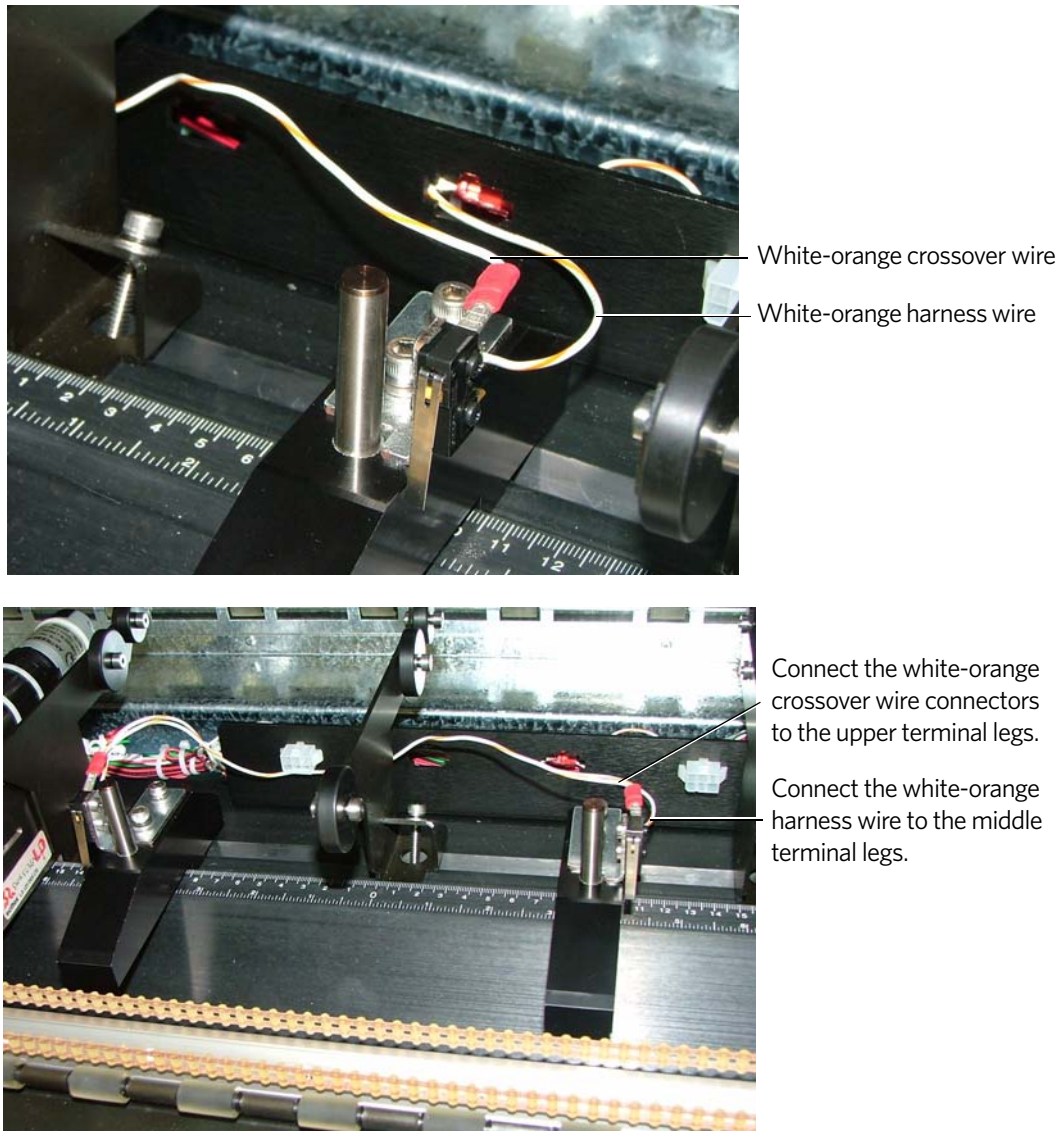



Figure 15: Connecting wires to the microswitches

5. Cut off the two external round connectors on the white-orange harness wire, and then securely bind and wrap the exposed wires with electrical tape.

6. Attach each of the two internal wire ends to a terminal lug supplied with the kit (part number 196F10008).

   **Note:** Press the wire against the terminal lug to attach it.

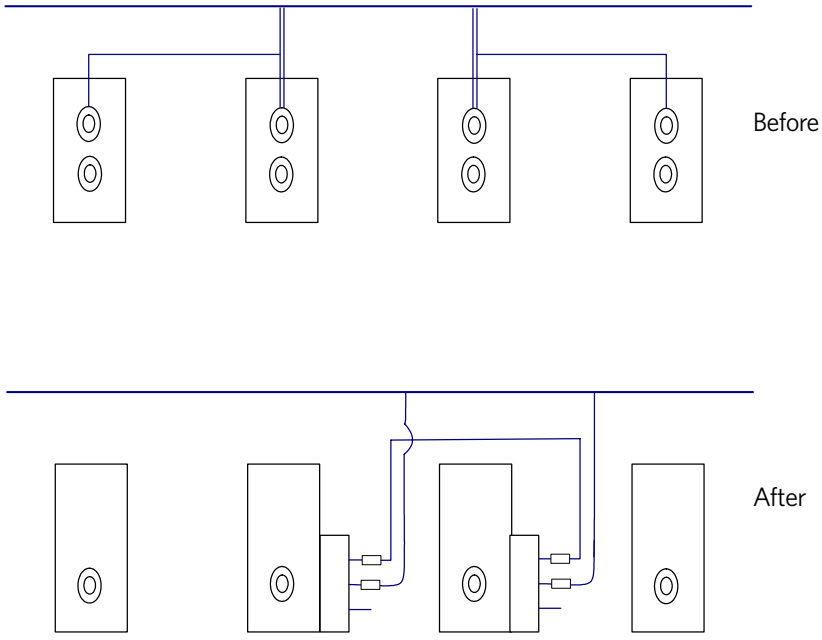



Figure 16: Microswitch wire connections

7. Connect one of the terminal lugs to the middle terminal leg on one microswitch, and connect the other terminal lug to the middle terminal leg on the other microswitch.

   **Note:** Do not connect any wires to the lower terminal leg on the microswitches.

# Tilting the XY Bar

Thin plates might touch the punch roller guides or top wires. To make sure thin plates are transported smoothly to punch entry, washers were added to the XY bar.

**Note:**

1. Remove the three screws that secure the top cover to the XY bar, and remove the top cover. (The third screw, which is located near the right end of the top cover, is not shown.)



Figure 17: Removing the top cover screws

2. Remove the washers from the suction cups. There are six suction cups on the XY bar; the two middle cups do not have washers.

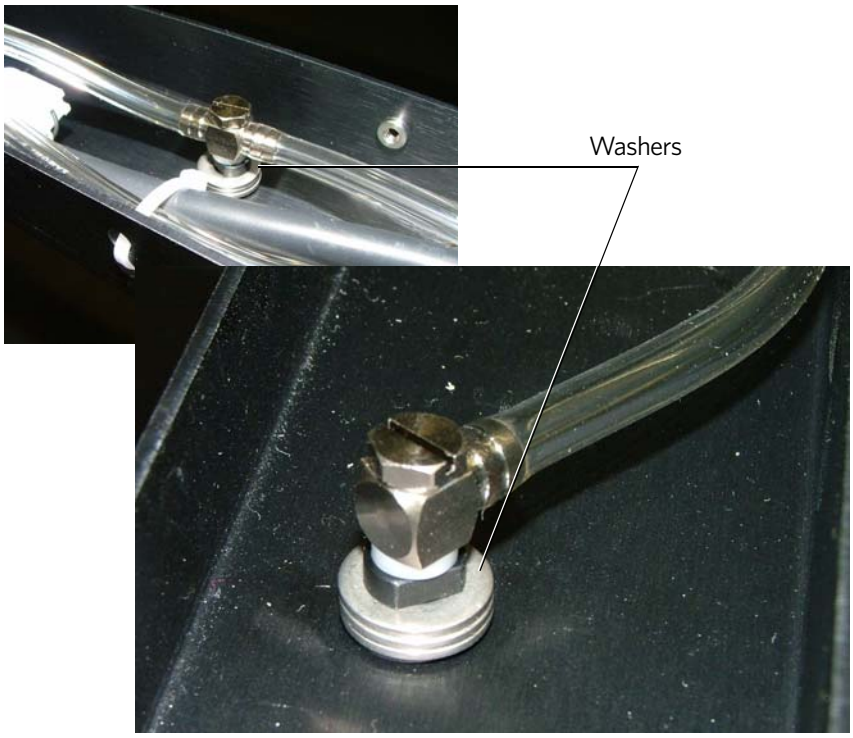



Figure 18: Removing the washers

3. On the left side of the XY bar, remove the front screw that secures the XY bar to the support and loosen the rear screw.

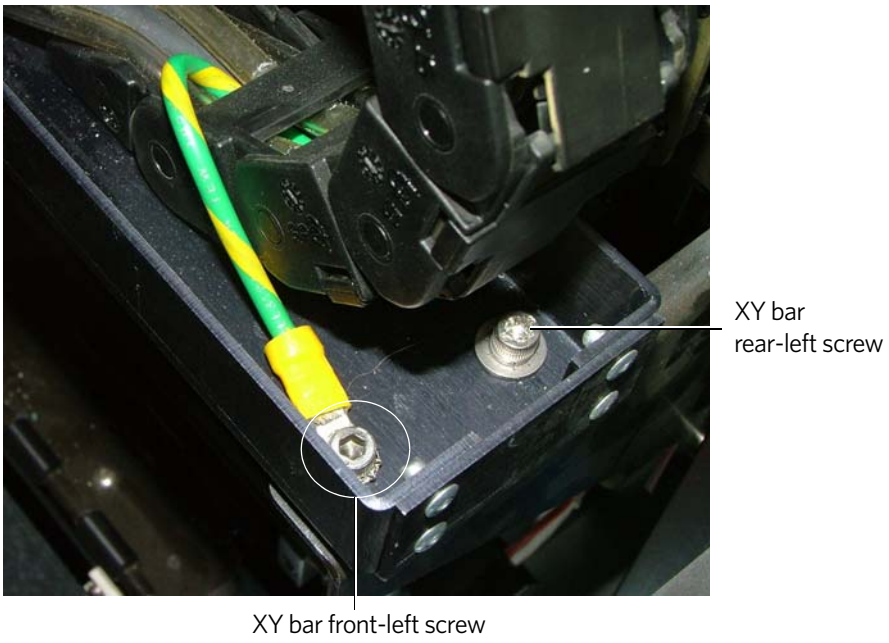



Figure 19: Removing the front-left screw

4. On the right side of the XY bar, remove the front screw that secures the XY bar to the support and loosen the rear screw.

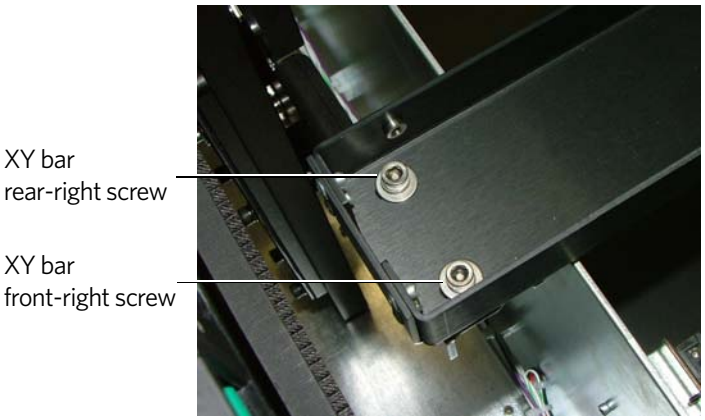



Figure 20: Removing the front-right screw

5. On the left side of the XY bar, insert two washers between the XY bar and the support, and then do the same on the right side of the XY bar.

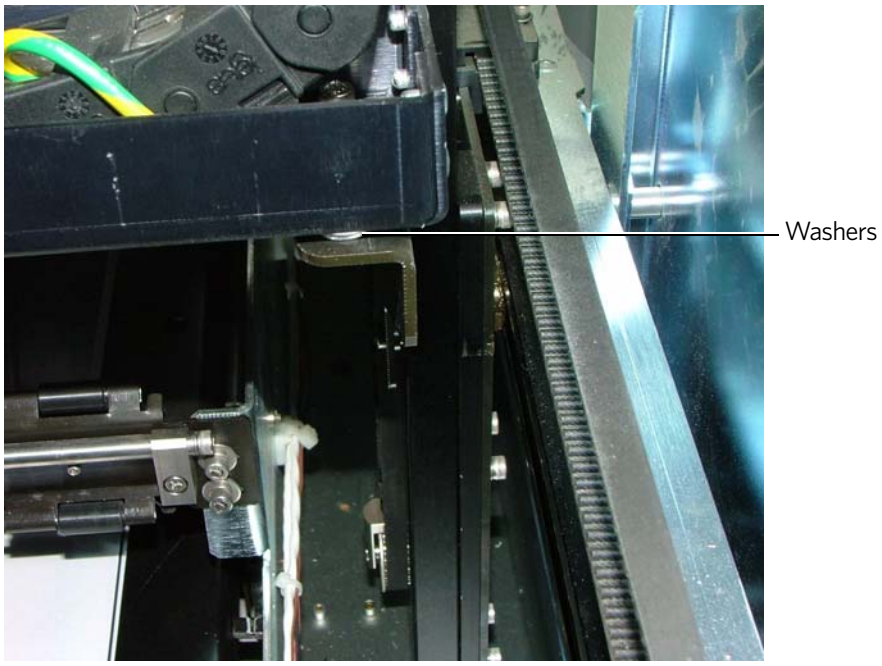



Figure 21: Inserting washers

6. Return the two front screws that secure the XY bar to the support and tighten, and then tighten the two rear screws.
7. Verify that the suction cups are tilted toward the direction of the loading sequence.
8. Return the three screws that secure the top cover to the XY bar, and tighten.
9. In the Magnus 400 Controller software, select **Utilities > Hardware > Loading System > Load Plate > From Punch Entry To Drum Entry Stage** and change the value of the **X Near to Drum (mm)** parameter to **900**.

10. Select **Utilities > Hardware > Loading System > Load Plate > Punch Entry To Drum Entry Stage** and adjust the value of the relevant **Y In Drum** parameter to the lowest possible value.
    - For 0.3-mm (0.012 in.) plates, the lowest possible value is 35.
    - For other plates, the lowest possible value is 20.

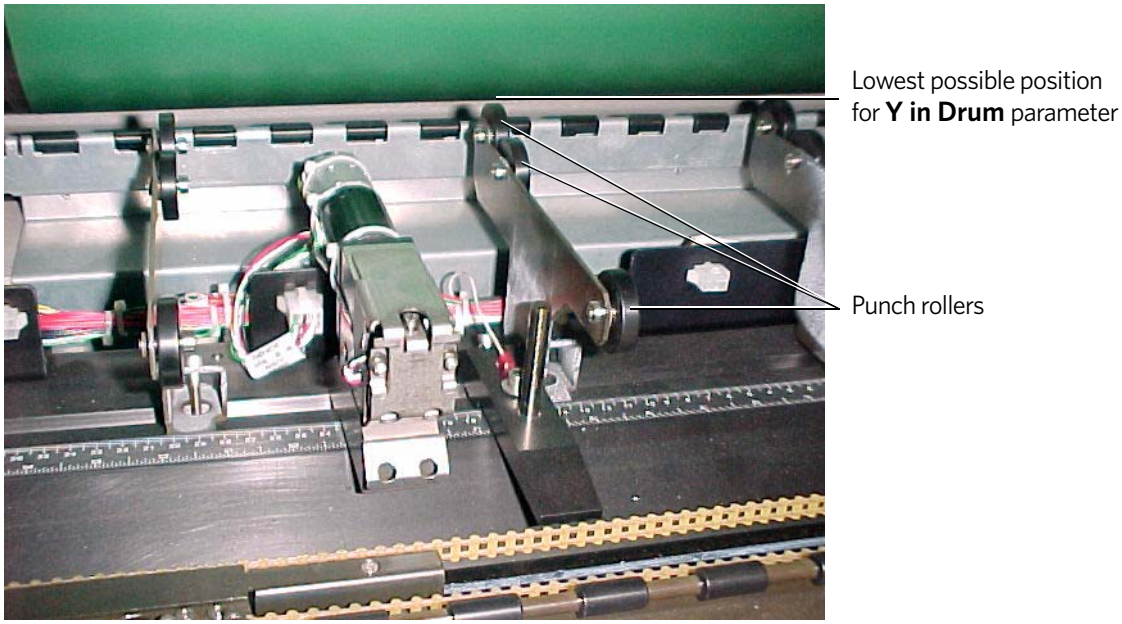



Figure 22: Punch rollers

11. Load a plate that is 0.14 mm or 0.15 mm (0.005 in. or 0.006 in.) thick, and verify that it does not touch the punch rollers.

# Preventing Plates in Cassette 1 From Sliding Back Into the Cassette

During the loading sequence, plates that are 680 mm (26.77 in.) long slide back into cassette 1 when released by the XY bar.

➢ To prevent the plates in cassette 1 from sliding back into the cassette, wrap the slotted rubber tube (part number 252-12897A) around the roller and secure it with tie wraps.

**Note:** Make sure that the tie wraps do not scratch the plate.

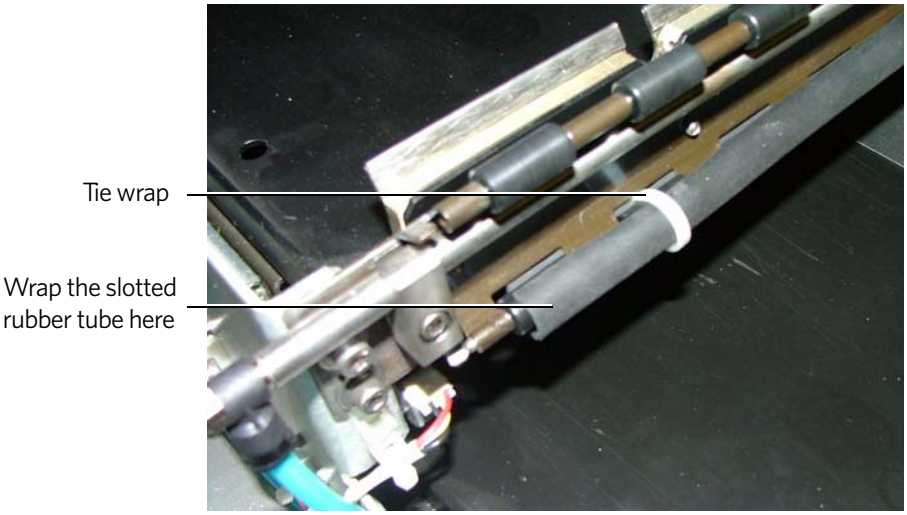
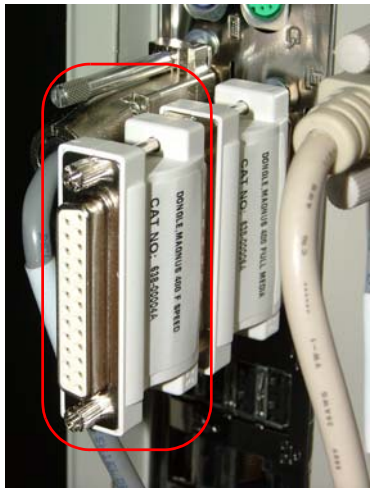



Figure 23: Wrapping the slotted rubber tube around the cassette roller

# Installing the Magnus 400 Controller Software

**Important:** Before installing the software, you must connect a feature dongle to the parallel port on the computer. Use the following table to identify the correct dongle for your platesetter.



Dongle 638-00004A



Dongle 638-00006A

| Platesetter | Dongle Part Number |
|---|---|
| Magnus 200S | Not applicable |
| Magnus 200F | 638-00004A |
| Magnus 400S | 638-00006A |
| Magnus 400F | 638-00004A + 638-00006A |
| Magnus 400F Quantum | Not applicable |

**Important:** To upgrade the Magnus 400 Controller software from version 1.01.391.003 to 1.02.392, you must first install the **Magnus 400 Accessories** CD (651-00628A), before installing software version 1.02.392.

**Note:** Before you install the Magnus 400 Controller 1.02.392 software, you must finish all electronic and hardware installations. See Installing Electronics and Hardware on page 4.

This procedure includes the following sections:

- *Installing Files From the Magnus 400 Accessories CD* on page 24

  **Note:** For platesetters in the field that do not have the image disk with version 1.14 of the operating system.

- *Installing the Magnus 400 Controller 1.02.392 Software* on page 27
- *Installing Firmware Files* on page 30

# Installing Files From the Magnus 400 Accessories CD

**Note:** If an image disk with version 1.14 of the operating system is installed on your platesetter, proceed to Installing the Magnus 400 Controller 1.02.392 Software on page 27.

The Magnus 400 Accessories CD (651-00628A) contains additional software that must be installed prior to installing the new Magnus 400 version software.

This section includes the following procedures:

- *Before You Begin*
- *Installing Dot Net*
- *Installing Creo Feature License* on page 25
- *Installing Service Shell 2.6 Service Pack 2* on page 25

## 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 Cold Start Installation Guide (731-00804A-EN).

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

2. On the Operations toolbar, verify that the status indicator is **Ready**.
3. In Magnus 400 Controller, open the rear and right side doors of the platesetter.
4. Quit the Magnus 400 Controller software, Kodak Service Shell, and any other software that might be open on your client workstation.

## Installing Dot Net

1. On the computer inside the platesetter, insert the **Magnus 400 Accessories** CD into the CD-ROM drive.
2. On the Windows desktop, double-click **My Computer**.
3. In the My Computer window, double-click drive **F:** (SWSetup).
4. In the SWSetup window, double-click the **LicensingServer** folder.
5. In the LicensingServer window, double-click the **Win2000_dotnetfx.01.exe** file.
6. When the `Would you like to install Microsoft .NET Framework 1.1 Package?` message appears, click **Yes**.

   After a few moments, the License Agreement window appears.
7. Select the **I agree** check box and click **Install**.
8. When the `Installation of Microsoft .NET Framework 1.1 is complete.` message appears, click **OK**.

   You have successfully completed *Installing Dot Net*.

## Installing Creo Feature License

1. In the LicensingServer window, double-click the **CreoFeatureLicensingServer.exe** file.

   The InstallShield Wizard Welcome dialog box appears.

2. Click **Next**.

3. When the `Please remove all USB SuperPro dongles before continuing.` warning message appears, verify that no dongles are connected to the USB ports and click **Next**.

   The Destination Folder dialog box appears with the correct path of the folder to which you want to install the license: **C:\Creo\FeatureLicense**.

4. Click **Next**.

   The Ready to Install the Program dialog box appears.

5. Click **Install**.

   After the software is successfully installed, the InstallShield Wizard Completed dialog box appears.

6. Click **Finish**.

7. When the following message appears, click **No**.
   `You must restart your system for the configuration changes made to Creo Feature Licensing Server to take effect. Click Yes to restart now or No if you plan to restart later.`

8. In the LicensingServer window, double-click the **database.bat** file.

   A DOS window appears and immediately closes, and three XML files are installed.

   You have successfully completed *Installing Creo Feature License*.

## Installing Service Shell 2.6 Service Pack 2

1. On the Windows desktop, double-click **My Computer**.

2. In the My Computer window, double-click drive **F:** (SWSetup).

3. In the SWSetup window, double-click the **Service Shell** folder.

4. In the Service Shell window, double-click the **Service Shell Host-CTP.exe** file.

5. When the `Service Host software seems to be running. Do you want to shut down and continue the installation?` message appears, click **Yes**.

   The InstallShield Wizard Welcome dialog box appears.

6. Select **Upgrade/Reinstall** and click **Next**.

   The Does This Workstation Require Multi Language Support? dialog box appears.

7. Select the **No** check box and click **Next**.

   The Service Shell Host installation starts. After the software is successfully installed, the InstallShield Wizard Complete dialog box appears.

8. Click **Finish**.

9. Select the **No, I will restart my computer later** check box and click **OK**.

   You have successfully completed installing the Service Shell Host.

10. Return to the Service Shell window and double-click the **Service Shell Client-CTP.exe** file.

    The InstallShield Wizard Welcome dialog box appears.

11. Select **Upgrade/Reinstall** and click **Next**.

12. The Service Shell Client installation starts. When the `The service shell scripts were copied to the Backup\Script directory prior to the install.` message appears, click **OK**.

    The InstallShield Wizard Complete dialog box appears.

13. Click **Finish**.

    The Restart dialog box appears.

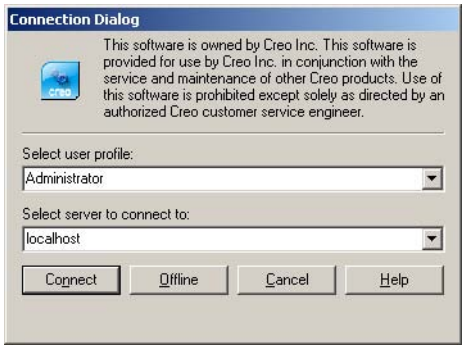
14. Select the **Yes, I want to restart my computer now.** check box and click **OK**.

15. After the computer restarts, remove the **Magnus 400 Accessories** CD from the CD-ROM drive.

16. If you have a service dongle, on the computer inside the platesetter, connect the service dongle to the USB port.



The Connection Dialog dialog box appears.






17. If you do not have a service dongle, perform the following steps:

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

       The Service Shell Login window appears.

    b. In the **Please enter a valid password to continue** box, type the appropriate password and click **Login**.

       The Connection Dialog dialog box appears.

       **Note:** The password is updated periodically. To obtain the correct password, contact the system administrator.

18. Click **Connect**.

    The Service Shell workspace appears.

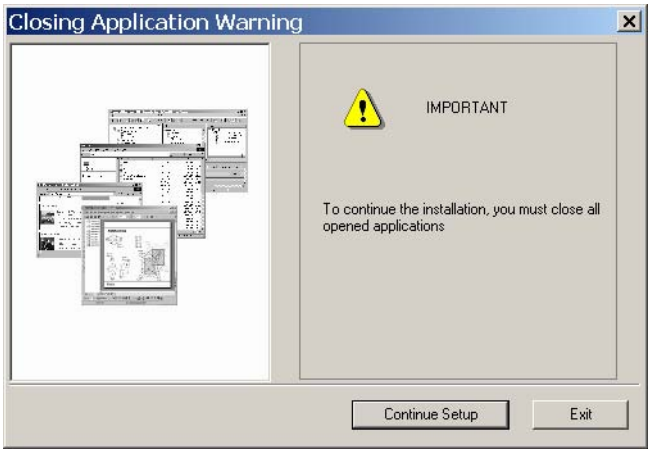
19. Quit Service Shell and remove the service dongle.

    You have successfully completed *Installing Service Shell 2.6 Service Pack 2*.

## Installing the Magnus 400 Controller 1.02.392 Software

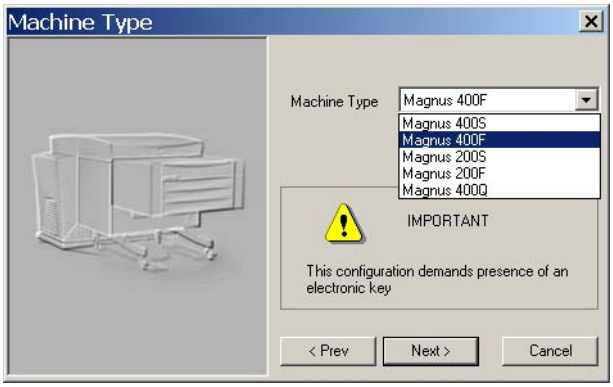
After you have successfully installed the software from the Magnus 400 Accessories CD, you need to install the Magnus 400 Controller 1.02.392 software.

1. Insert the **Magnus 400 Version 1.02.392** CD (651-00640B) into the CD-ROM drive. When the Closing Application Warning dialog box appears, verify that all software is closed and click **Continue Setup**.



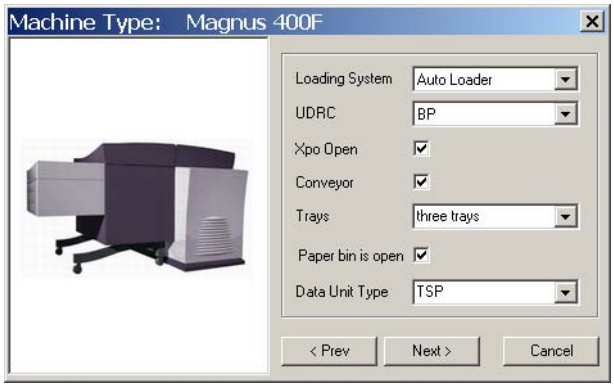

2. When the Magnus Family Installation Setup dialog box appears, click **Next**.
3. Type the following customer information, and then click **Next**.
   - User Name: (your user name)
   - Company: Kodak (or customer's name)
   - Serial Number: (Magnus 400 Controller platesetter serial number)

   The Machine Type dialog box appears.



4. In the Machine Type list, select the platesetter that you are installing, and click **Next**.

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



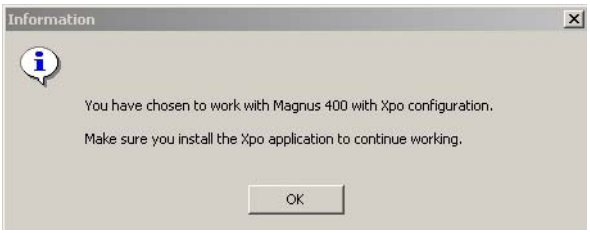

5. Perform the following steps, and then click **Next**.

   a. In the **Loading System** list, select either **Semi Automatic** or **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. See Installing the UDRC BP Cable on page 6 and Installing the Nozzle Vacuum Detector and Blue Hose on page 9.

   c. If you are working with a Magnus 400 platesetter with the Xpo software, select the **Xpo Open** check box. When the following message appears, click **OK**.




   d. If your configuration includes a conveyor, select the **Conveyor** check box.

   e. In the **Trays** list, select either **one tray** or **three trays**.

   f. If the paper bin cover is removed, select the **Paper bin is open** check box.

   g. In the **Data Unit Type** list, select **TSP**.

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

After the software is successfully installed, the Reboot dialog box appears.




6. Select **Yes, I want to restart my computer now.** and click **Finish**.
7. Remove the **Magnus 400 Version 1.02.392** CD from the CD-ROM drive and restart the computer.

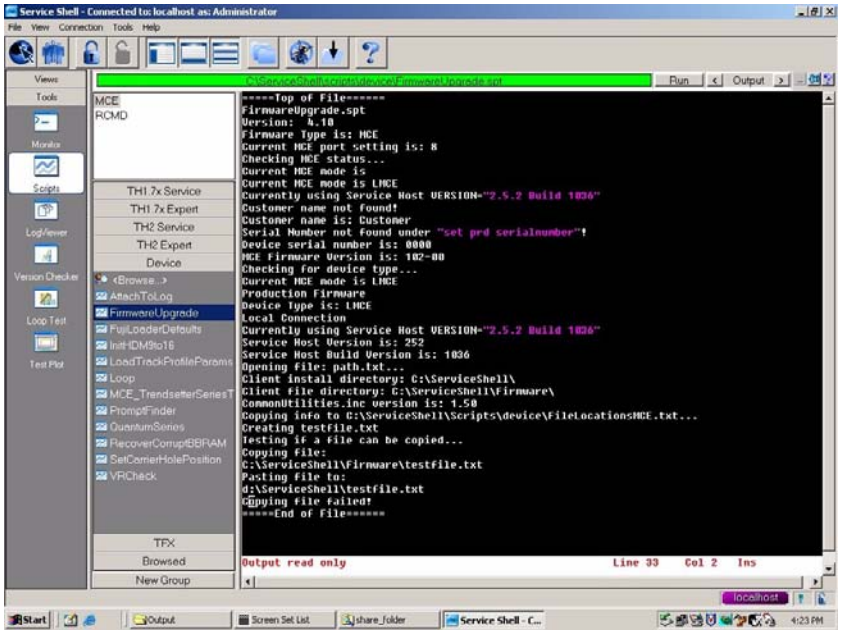
   **Important:** Proceed to the next section, Installing Firmware Files on page 30. Do not start the Magnus 400 Controller software until you have successfully installed the firmware files.

   You have successfully completed *Installing the Magnus 400 Controller 1.02.392 Software*.

# Installing Firmware Files

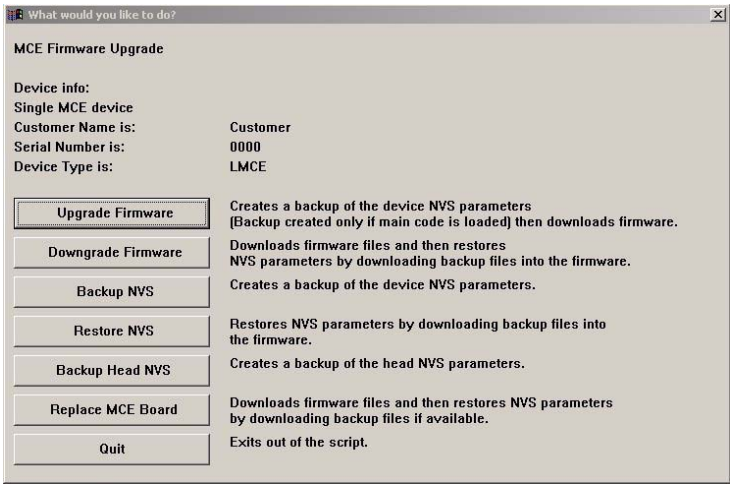
1. Start Service Shell.
2. On the left panel in the Service Shell workspace, click **Monitor**.
3. At the command prompt, type `fw dir`.
   - For platesetters with an LDA head (LMCE firmware), the following application files should appear:
     - Main: 1.04.01
     - Lca: 70.89
     - Boot: 1.16.01
     - Post: 1.06
   - For platesetters with a TH2 head (TMCE firmware), the following application files should appear:
     - Main: 1.40.00
     - Lca: 2.28
     - Boot: 1.16.01 or 1.16
     - Post: 1.06
     - TH2: 1.05d

     **Note:** To view the TH2 file, at the command prompt, type `th2 "ver`.
4. If you do not have the appropriate firmware files installed, on the Windows desktop, click the **Service Shell Client** icon.




5. On the left panel in the Service Shell workspace, select **Tools > Scripts > Device** and double-click **Firmware Upgrade**.
6. When the `Do you want to run the following script?` message appears, click **Yes**.

After a few moments, the MCE Firmware Upgrade dialog box appears.

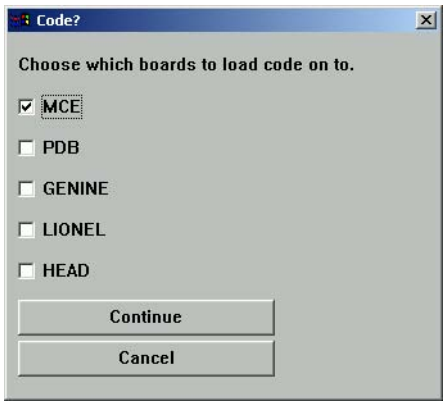



7. For platesetters with an LDA head, following these steps:

   **Note:** For platesetters with a TH2 head, proceed to step 8.

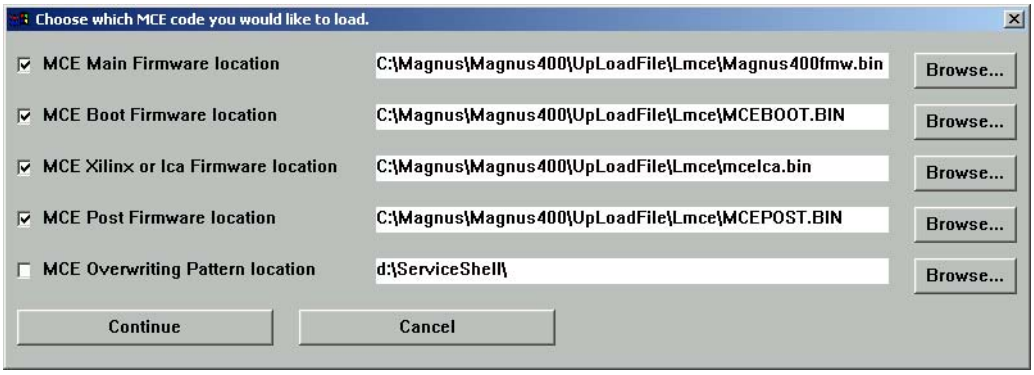
   a. Click **Upgrade Firmware**.

      The Code? dialog box appears.




   b. Select **MCE** and click **Continue**.

The Choose which MCE code you would like to load dialog box appears.




c. Select the first four check boxes only:

- **MCE Main Firmware location**: Click **Browse** to locate and select the **Magnus400fmw.bin** file.
- **MCE Boot Firmware location**: Click **Browse** to locate and select the **MCEBOOT.bin** file.
- **MCE Xilinx or Ica Firmware location**: Click **Browse** to locate and select the **mcelca.bin** file.
- **MCE Post Firmware location**: Click **Browse** to locate and select the **MCEPOST.bin** file.

d. Click **Continue**.

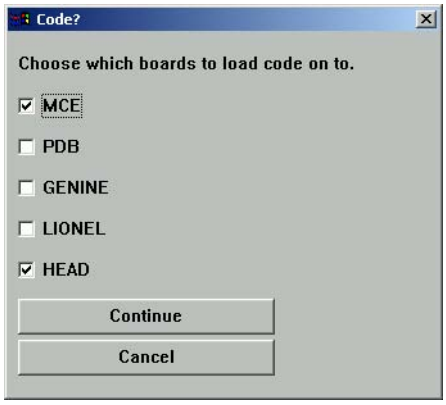
The files are copied to **C:\Magnus\Magnus400\UploadFile\Lmce** and the MCE Firmware Upgrade dialog box appears.

e. Proceed to step **9**.

8. For platesetters with a TH2 head:

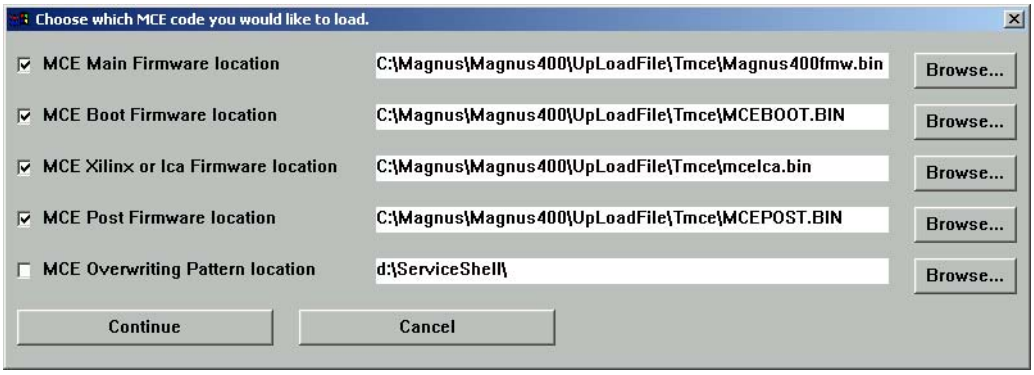
a. Click **Upgrade Firmware**.

The Code? dialog box appears.




b. Select the **MCE** and **HEAD** check boxes, and click **Continue**.

The Choose which MCE code you would like to load dialog box appears.

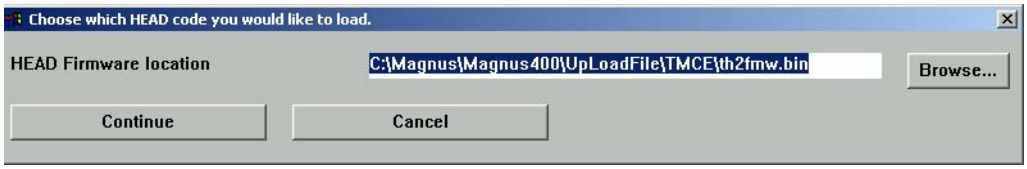



c. Select the first four check boxes only:

- **MCE Main Firmware location**: Click **Browse** to locate and select the **Magnusfmw.bin** file.
- **MCE Boot Firmware location**: Click **Browse** to locate and select the **MCEBOOT.bin** file.
- **MCE Xilinx or Ica Firmware location**: Click **Browse** to locate and select the **mcelca.bin** file.
- **MCE Post Firmware location**: Click **Browse** to locate and select the **MCEPOST.bin** file.

d. Click **Continue**.

The files are installed from **C:\Magnus\Magnus400\UploadFile\Tmce** and the Choose which HEAD code you would like to load dialog box appears.




e. Click **Browse** to locate and select the **th2fmw.bin** file.

f. Click **Continue**.

The file is copied to **C:\Magnus\Magnus400\UploadFile\Tmce** and the MCE Firmware Upgrade dialog box appears.

9. Click **Continue**.
10. Click **Quit**.
11. On the left panel in the Service Shell workspace, click **Device Monitor**.
12. At the command prompt, type `fw dir` and press ENTER.

13. Verify that the following firmware versions appear:
    - For platesetters with an LDA head (LMCE firmware):
      - Main: 1.04.01
      - Lca: 70.89
      - Boot: 1.16.01
      - Post: 1.06
    - For platesetters with a TH2 head (TMCE firmware):
      - Main: 1.40.00
      - Lca: 2.28
      - Boot: 1.16.01 or 1.16
      - Post: 1.06
      - TH2: 1.05d

      **Note:** To view the TH2 file, at the command prompt, type `th2 "ver`.
14. At the command line, type `Set drum maxacc` and press ENTER.

    The following information appears:

| Group | Parameter | Active | Default |
|---|---|---|---|
| Drum | MaxAcc | 11.00 | 8.00 |

15. To change the **MaxAcc** value to 12, at the command prompt, type `Set drum maxacc 12` and press ENTER.
16. Quit the Service Shell workspace and start the Magnus 400 Controller software.

- Restore the database, and then manually enter the non-default values, but not the MCU loading parameters.

  **Note:** For a detailed list of the MCU loading parameters, see MCU Loading System Parameters on page 37.

# Testing the Loading Assembly Functionality

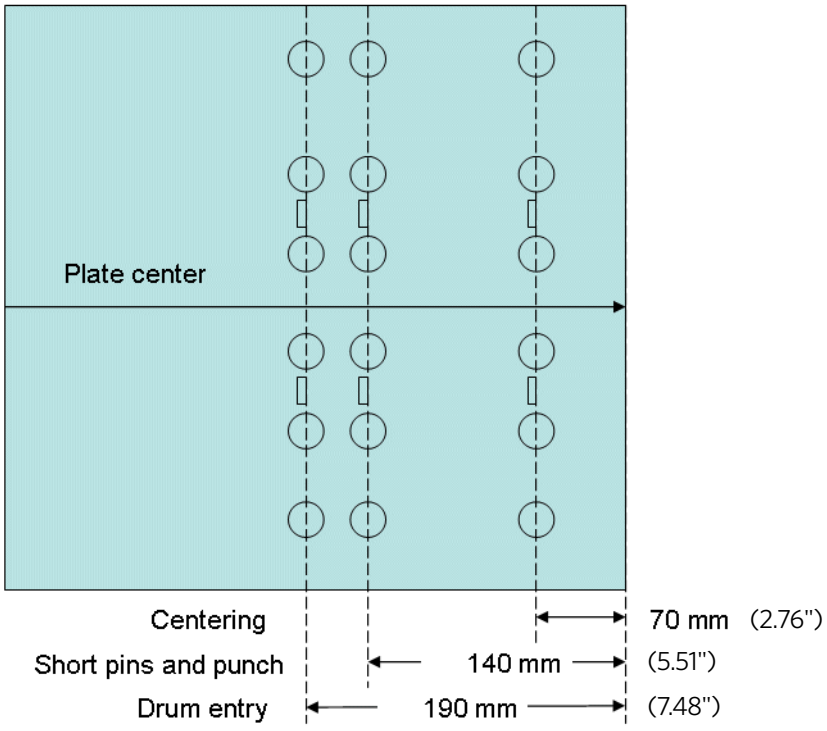
After you finish the electronic and hardware installations and the software installations, you need to test the loading assembly functionality.

To verify that the loading assembly is working properly, check the following functionalities:

- Plate-picking functionality (for all cassettes)
- Load plate-to-drum functionality

1. On platesetters with MCU, adjust the plate-picking positions according to the following diagram.

   **Note:** For more information about plate-picking positions, see the Magnus 400 MCU Plate-loading Sequence Reference Guide (731-00835A).




2. In the Magnus 400 Controller software, send a file to expose and check the quality on the plate.

# Appendix A: MCU Loading System Parameters

The MCU loading system parameters for the Magnus 400 Controller 1.02.392 software are listed in tables on the following pages. The parameters, which are grouped according to the series of movements (stages) performed by the platesetter during the loading sequence, are located in the registry at the following locations:

- Table 2: Loading system setup parameters: **\Magnus400\IO OBJECTS\Loading System\Loading System Setup**
- Table 3: Cassette entry to punch entry parameters: **\Magnus400\IO OBJECTS\Loading System\Load Plate\From Cassette To Punch Entry Stage**
- Table 4: Punch entry to drum entry parameters: **\Magnus400\IO OBJECTS\Loading System\Load Plate\From Punch Entry To Drum Entry Stage**
- Table 5: Drum entry to drum parameters: **\Magnus400\IO OBJECTS\Loading System\Load Plate\From Drum Entry to Drum Stage**
- Table 6: Paper disposal parameters: **\Magnus400\IO OBJECTS\Loading System\Load Plate\Paper Disposal Stage**

**Note:** For more information about the MCU plate-loading sequence, see the Magnus 400 With MCU Plate-loading Sequence Reference Guide (731-00835A).

# Loading System Setup

Table 2: Loading system setup parameters

| Parameter | Default | Minimum | Maximum |
|---|---|---|---|
| Centering HP Speed | 25 | 20 | 25 |
| Enable FlyOff Detection(0=No, 1=First Loading, 2=Always) | 1 | 0 | 2 |
| Enable Pre-Loading Detectors Check [Yes=1,No=0] | 1 | 0 | 1 |
| High Speed | 15 | 15 | 15 |
| Is Mask Air Pressure Check No=1/Yes=0 | 0 | 0 | 1 |
| Load Head Gripper Location (mm) | -218 | -222 | -214 |
| Max Media Height Size For Small Plate | 250 | 220 | 300 |
| Max Media Width Size For Small Plate | 350 | 300 | 400 |
| Min Media Height For Operate All Valav (mm) | 635 | 600 | 700 |
| Min Media Height For Operate Middle Valav (mm) | 330 | 300 | 400 |
| Normal Speed | 5 | 5 | 5 |
| Sleep After Extra to Bar Flag Det [mSec] | 500 | 0 | 3000 |
| X HP Speed | 15 | 10 | 15 |
| Y Extra to Bar Flag Det For 0.15 (mm) Rel | 7 | 5 | 12 |
| Y Extra to Bar Flag Det For 0.3 - 0.2 (mm) Rel | 10 | 5 | 12 |
| Y Extra to Bar Flag Det Speed | 5 | 3 | 5 |
| Y HP Speed | 15 | 10 | 15 |
| Y Max Up (mm) | 1 | 0 | 2 |
| Y to Bar Flag Det Speed | 5 | 3 | 6 |
| Y To Read Paper Metal Det [mm] Rel | -15 | -30 | -6 |
| Enable Detecting no Plate | 0 | 0 | 1 |

# Cassette to Punch Entry

Table 3: Cassette to punch entry parameters

| Parameter | Default | Minimum | Maximum |
|---|---|---|---|
| Centering Speed | 1 | 1 | 5 |
| Centering Wait Dis (mm) Rel | 10 | 0 | 20 |
| Max Media WSize Ramp Up After Punch [mm] | 625 | 600 | 650 |
| Measure Centering Tolerance (mm) | 3 | 1 | 4 |
| Min Media Width Size To Operate Paper Disposal During Loading Plate [mm] | 450 | 400 | 600 |
| Min Media WSize Ramp Up After Punch [mm] | 550 | 500 | 600 |
| Min Plate High Size For Centtering wait distance[mm] | 751 | 700 | 760 |
| Number of Plate BackWard Seperations | 3 | 1 | 5 |
| Prepare Y to catch Plate Speed | 2 | 2 | 2 |
| Sleep in Punch Short Detctor [Msec] | 500 | 500 | 2000 |
| Time To Sleep After Plate Seperation [mSec] | 500 | 0 | 2000 |
| Time To Wait In PUnch Before Stop Paper Dis[Msec] | 500 | 0 | 3000 |
| Wait For Fufu For Tray2 msec | 500 | 0 | 3000 |
| Wait For Fufu msec | 500 | 0 | 3000 |
| X Backward For 0.15 plate [mm] Rel | 16 | 5 | 20 |
| X Backward For 0.2 plate [mm] Rel | 16 | 5 | 20 |
| X Backward For 0.3 plate [mm] Rel | 16 | 5 | 20 |
| X Do Plate Sep Speed | 2 | 2 | 2 |
| X for Centering (mm) | 820 | 800 | 840 |
| X for Centering Final (mm) | 833 | 810 | 855 |
| X for Centering Speed | 15 | 10 | 16 |
| X Pick Up Plate Before in Punch (mm) | 760 | 750 | 770 |
| X Plate Forward in Cassette For 0.15 (mm) Rel | 1 | 1 | 3 |
| X Plate Forward in Cassette For 0.2 (mm) Rel | 2 | 1 | 3 |
| X Plate Forward in Cassette For 0.3 (mm) Rel | 2 | 1 | 3 |
| X Position in Cassette For Cst 1(mm) | 320 | 310 | 325 |
| X Position in Cassette for Cst 2(mm) | 175 | 160 | 180 |

| Parameter | Default | Minimum | Maximum |
|---|---|---|---|
| X Position in Cassette for Cst 3(mm) | 30 | 22 | 33 |
| X Pre Extra To Short Pins For 0.15 (mm) Rel | 48 | 20 | 54 |
| X Pre Extra To Short Pins For 0.2 (mm) Rel | 48 | 20 | 54 |
| X Pre Extra To Short Pins For 0.3 (mm) Rel | 48 | 20 | 54 |
| X To Fufu Off Cassette 1 (Rel) | 110 | 50 | 200 |
| X To Fufu Off Cassette 3 (Rel) | 200 | 100 | 300 |
| Y Above Air Nozzle In Tray 1(mm) | 181 | 178 | 184 |
| Y Above Air Nozzle In Tray 2(mm) | 110 | 107 | 113 |
| Y Above Air Nozzle In Tray 3(mm) | 37 | 34 | 40 |
| Y After Plate Seperation [mm] Rel | 7 | 3 | 10 |
| Y Down After Centering to catch Plate For 0.15 (mm) Rel | 7 | 3 | 10 |
| Y Down After Centering to catch Plate For 0.3 - 0.2 (mm) Rel | 7 | 3 | 10 |
| Y Down After Centering to catch Plate Speed | 2 | 2 | 6 |
| Y for Centering (mm) | 89 | 85 | 90 |
| Y In Punch Speed | 15 | 10 | 16 |
| Y Movement for 0.15 plate [mm] Rel | 0 | 0 | 4 |
| Y Movement for 0.2 plate [mm] Rel | 0 | 0 | 4 |
| Y Movement for 0.3 plate [mm] Rel | 0 | 0 | 4 |
| Y Plate High Up In Cassette For 0.15 (mm) | 0 | 0 | 5 |
| Y Plate High Up In Cassette For 0.2 (mm) | 0 | 0 | 5 |
| Y Plate High Up In Cassette For 0.3 (mm) | 0 | 0 | 5 |
| Y Plate High Up In Cassette Speed | 1 | 1 | 3 |
| Y Plate Up In Cassette_1 (mm) | 140 | 135 | 150 |
| Y Plate Up In Cassette_2 (mm) | 75 | 70 | 85 |
| Y Plate Up In Cassette_3 (mm) | 20 | 15 | 30 |
| Y Prepare To Take Out Plate From Cst 1(mm) | 160 | 158 | 162 |
| Y Prepare To Take Out Plate From Cst 2(mm) | 70 | 68 | 72 |
| Y Prepare To Take Out Plate From Cst 3(mm) | 25 | 23 | 27 |
| Y Ramp Position mm | 90 | 85 | 95 |

| Parameter | Default | Minimum | Maximum |
|---|---|---|---|
| Y to bar flag det. Speed In Cassette | 13 | 10 | 15 |
| Y to short pins (mm) | 88 | 85 | 90 |
| Y to short pins Speed | 10 | 5 | 10 |
| Y Up For Centering (mm) Rel | -15 | -20 | -10 |

# Punch Entry to Drum Entry

Table 4: Punch entry to drum entry

| Parameter | Default | Minimum | Maximum |
|---|---|---|---|
| Centering Extra To Hold Plate For 0.15 (mm) Rel | 0.2 | 0 | 0.5 |
| Centering Extra To Hold Plate For 0.2 (mm) Rel | 0.4 | 0 | 1 |
| Centering Extra To Hold Plate for 0.3 (mm) Rel | 0.5 | 0 | 1 |
| X After DoPunch For 0.15 | 705 | 700 | 710 |
| X After DoPunch For 0.2 | 705 | 700 | 710 |
| X After DoPunch For 0.3 | 705 | 700 | 710 |
| X Extra To Short Pins For 0.15 (mm) Rel | 3 | 2 | 4 |
| X Extra To Short Pins For 0.2 (mm) Rel | 3 | 2 | 4 |
| X Extra To Short Pins For 0.3 (mm) Rel | 3 | 2 | 4 |
| X Move X Upto Wheels For 0.15 (mm) | 0 | –10 | 10 |
| X Move X Upto Wheels For 0.2 (mm) | 0 | –10 | 10 |
| X Move X Upto Wheels For 0.2 (mm) | 0 | –10 | 10 |
| X Near to Drum For 0.15 Seq (mm) | 900 | 880 | 910 |
| X Near to Drum For 0.2 Seq (mm) | 900 | 880 | 910 |
| X Near to Drum For 0.3 Seq (mm) | 900 | 880 | 910 |
| X Pick Up Plate Before In Drum (mm) | 760 | 755 | 765 |
| X Prepare In Drum Speed | 15 | 10 | 15 |
| X Speed Extra To Short Pins | 3 | 2 | 4 |
| Y In Drum For 0.15 (mm) | 10 | 0 | 35 |
| Y In Drum For 0.2 (mm) | 30 | 0 | 35 |
| Y In Drum For 0.3 (mm) | 35 | 0 | 35 |
| Y Min Media WSize to Go Up After Punch [mm] | 550 | 400 | 700 |

| Parameter | Default | Minimum | Maximum |
|---|---|---|---|
| Y Prepare To Drum Speed | 15 | 10 | 15 |
| Y Up After DoPunch for 0.15 | 85 | 75 | 90 |
| Y Up After DoPunch for 0.2 | 85 | 75 | 90 |
| Y Up After DoPunch for 0.3 | 85 | 75 | 90 |
| Y Up For Backward After Centering (mm) Rel | –15 | –20 | –10 |
| Y Up Prepare To Drum | –4 | –12 | –2 |

# Drum Entry to Drum Stage

Table 5: Drum entry to drum stage parameters

| Parameter | Default | Minimum | Maximum |
|---|---|---|---|
| Drum To Plate After Extra For 0.15 (mm) | 1 | 0 | 2 |
| Drum To Plate After Extra For 0.2 (mm) | 1 | 0 | 2 |
| Drum To Plate After Extra For 0.3 (mm) | 1 | 0 | 2 |
| Thickness For 0.15 Seq (mm) | 0.15 | 0.15 | 0.15 |
| Thickness For 0.2 Seq (mm) | 0.2 | 0.2 | 0.2 |
| Thickness For 0.3 Seq (mm) | 0.3 | 0.3 | 0.3 |
| X In Drum Final For 0.15 Plates (mm) Rel | 6 | 0 | 16 |
| X In Drum Final For 0.2 Plates (mm) Rel | 6 | 0 | 16 |
| X In Drum Final For 0.3 Plates (mm) Rel | 6 | 0 | 16 |
| X In Drum Final Speed | 1 | 1 | 3 |
| X In Drum For 0.15(mm) | 1006 | 1000 | 1012 |
| X In Drum For 0.2(mm) | 1006 | 1000 | 1012 |
| X In Drum For 0.3(mm) | 1006 | 1000 | 1012 |
| X In Drum Speed | 5 | 4 | 10 |
| X Run Away From Plate On Drum | 300 | 1 | 700 |
| Y After Extra to Drum (mm) | 0 | 0 | 10 |
| Y Before Extra to Drum (mm) Rel | 0 | 0 | 10 |
| Y Down After Plate Drop Abs (mm) | 30 | 10 | 35 |
| Y Up Before Back Abs (mm) | 16 | 10 | 25 |

# Paper Disposal Stage

Table 6: Paper Disposal parameters

| Parameter | Default | Minimum | Maximum |
|---|---|---|---|
| Delay For Y Up (Mili Sec) | 1000 | 0 | 2000 |
| Operate Vacuum During Paper Disposal | 0 | 0 | 1 |
| Time To Sleep After Extra In cassette [mSec] | 500 | 0 | 2000 |
| Time To Wait For Clips are Full Open [mSec] | 500 | 0 | 1000 |
| X Paper Disposal Final(mm) | 640 | 620 | 680 |
| X Paper in disposal (mm) | 640 | 600 | 645 |
| X Paper in disposal speed | 5 | 2 | 10 |
| X Paper Position In Cassette For Cst 1(mm) | 322 | 317 | 348 |
| X Paper Position In Cassette For Cst 2(mm) | 170 | 160 | 195 |
| X Paper Position In Cassette For Cst 3(mm) | 32 | 24 | 60 |
| X Prepare To Paper Disposal (mm) | 600 | 560 | 620 |
| X Prepare To Paper Disposal Speed (mm) | 30 | 20 | 40 |
| Y Down To Paper Disposal Speed | 12 | 5 | 15 |
| Y Down To Paper Disposal(mm) | 128 | 100 | 135 |
| Y Extra to catch paper (mm) Rel | 4 | 3 | 8 |
| Y High Up Speed | 10 | 5 | 10 |
| Y Prepare To Paper Disposal(mm) | 80 | 70 | 100 |
| Y to Bar Flag Det. Speed For Paper | 5 | 1 | 10 |
| Y Up After Extra To Catch Paper (mm) Rel | 5 | 2 | 6 |
| Y Up Before Down To Paper Disposal (mm) | 0 | -20 | 0 |
| Y Up for Init Catcher (mm) Rel | -25 | -30 | -24 |