Student Guide

English

Lotem 400 Operator

Lotem 400 Family
Lotem 400 Quantum Family

653-00173A

www.creo.com

Copyright

Copyright © 2003 Creo Inc. All rights reserved.

No copying, distribution, publication, modification, or incorporation of this document, in whole or part, is permitted without the express written permission of Creo. In the event of any permitted copying, distribution, publication, modification, or incorporation of this document, no changes in or deletion of author attribution, trademark legend, or copyright notice shall be made.

No part of this document may be reproduced, stored in a retrieval system, published, used for commercial exploitation, or transmitted, in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the express written permission of Creo Inc.

This document is also distributed in Adobe Systems Incorporated's PDF (Portable Document Format). You may reproduce the document from the PDF file for internal use. Copies produced from the PDF file must be reproduced in whole.

Trademarks

The Creo wordmark, Creo logo, and the names of the Creo products and services referred to in this document are trademarks of Creo Inc.

Adobe, Acrobat, and the Acrobat logo are registered trademarks of Adobe Systems Incorporated, and are registered in the U.S. Patents and Trademark Office and may be registered in other jurisdictions.

Apple, AppleTalk, AppleShare, EtherTalk, LocalTalk, Macintosh, and LaserWriter are trademarks of Apple Computer, Inc.

Microsoft, Windows, Windows 2000, and Windows NT are trademarks or registered trademarks of Microsoft Corp.

Xerox is a registered trademark of Xerox Corp.

Other brand or product names are the trademarks or registered trademarks of their respective owners.

FCC Compliance

The Creo equipment referred to in this document complies with the requirements in Part 15 of FCC Rules for a Class A computing device. Operation of the Creo equipment in a residential area may cause unacceptable interference to radio and TV reception, requiring the operator to take whatever steps are necessary to correct the interference.

Limitation of Liability

The product, software or services are being provided on an "as is" and "as available" basis. Except as may be stated specifically in your contract, Creo Inc. expressly disclaims all warranties of any kind, whether express or implied, including, but not limited to, any implied warranties of merchantability, fitness for a particular purpose and non-infringement.

You understand and agree that Creo Inc. shall not be liable for any direct, indirect, incidental, special, consequential or exemplary damages, including but not limited to, damages for loss of profits, goodwill, use, data or other intangible losses (even if Creo has been advised of the possibility of such damages), resulting from: (i) the use or the inability to use the product or software; (ii) the cost of procurement of substitute goods and services resulting from any products, goods, data, software, information or services purchased; (iii) unauthorized access to or alteration of your products, software or data; (iv) statements or conduct of any third party; (v) any other matter relating to the product, software, or services.

The text and drawings herein are for illustration and reference only. The specifications on which they are based are subject to change. Creo Inc. may, at any time and without notice, make changes to this document. Creo Inc., for itself and on behalf of its subsidiaries, assumes no liability for technical or editorial errors or omissions made herein, and shall not be liable for incidental, consequential, indirect, or special damages, including, without limitation, loss of use, loss or alteration of data, delays, or lost profits or savings arising from the use of this document.

Patents

This product is covered by one or more of the following U.S. patents:

RE37,376	5,283,140	5,517,359	5,699,740	5,969,872	6,134,393	6,283,589
4,456,924	5,291,273	5,519,852	5,708,736	5,973,801	6,136,509	6,295,076
4,500,919	5,323,248	5,526,143	5,713,287	5,986,819	6,137,580	6,299,572
4,558,302	5,325,217	5,532,728	5,742,743	5,995,475	6,147,789	6,318,266
4,743,091	5,339,176	5,561,691	5,764,374	5,996,499	6,158,345	6,340,817
4,992,864	5,343,059	5,568,595	5,764,381	5,998,067	6,159,659	6,352,816
5,049,901	5,355,446	5,576,754	5,771,794	6,003,442	6,164,637	6,353,216
5,079,721	5,359,451	5,579,115	5,785,309	6,014,471	6,180,325	6,366,339
5,081,617	5,359,458	5,592,309	5,802,034	6,016,752	6,181,362	6,371,026
5,103,407	5,367,360	5,594,556	5,813,346	6,031,932	6,181,439	6,377,739
5,111,308	5,384,648	5,600,448	5,818,498	6,043,865	6,186,068	6,387,597
5,113,249	5,384,899	5,608,822	5,854,883	6,060,208	6,189,452	6,396,422
5,122,871	5,412,491	5,615,282	5,861,904	6,063,528	6,191,882	6,396,618
5,124,547	5,412,737	5,625,766	5,861,992	6,063,546	6,204,874	6,407,849
5,132,723	5,420,702	5,636,330	5,875,288	6,072,518	6,208,369	6,414,755
5,150,225	5,420,722	5,649,220	5,894,342	6,090,529	6,214,276	6,422,801
5,153,769	5,459,505	5,650,076	5,900,981	6,096,461	6,217,965	6,435,091
5,155,782	5,473,733	5,652,804	5,934,196	6,098,544	6,252,522	
5,157,516	5,481,379	5,680,129	5,942,137	6,107,011	6,260,482	
5,208,818	5,488,906	5,691,823	5,946,426	6,112,663	6,266,080	
5,208,888	5,497,252	5,691,828	5,947,028	6,115,056	6,266,134	
5,247,174	5,508,828	5,696,393	5,958,647	6,121,996	6,267,054	
5,249,067	5,509,561	5,699,174	5,966,504	6,130,702	6,268,948	

Creo Inc.
3700 Gilmore Way
Burnaby, B.C., Canada
V5G 4M1
Tel: 1-604-451-2700
Fax: 1-604-437-9891

http://www.creo.com

653-00173A

5/13/03

Contents

Module i

Course Introduction 1

Course Description 1
Lotem 400 Operator Course Overview 2
Agenda 3
Student Learning Resources 4

Module 1

Lotem 400 Platesetter Environment 7

Lessons 7
Lesson 1: Identify Your Site Configuration and Workflow 8
Identifying Your Site Configuration 8
Understanding the Data Flow and the Communication Between Devices 9
Following the Environmental Specifications 9
Lesson 2: Identify External Parts of the Lotem 400 Platesetter 11
Identifying the Main External Parts of the Lotem 400 Platesetter 11
Lotem 400 Configurations 13
Lesson 3: Follow the Safety Guidelines 14
Following the Safety Guidelines 14

Module Review 16

Activity 1: What's Your Site Configuration? 16
Activity 2: Name Lotem 400 Main External Parts 16

Module Summary 17

Module 2

Getting Started 19

Lessons 19
Lesson 1: Turn the Platesetter On and Off 20
Turning the Platesetter On 20
Turning the Platesetter Off 21
Activity 3: Turn the Platesetter On and Off 22
Lesson 2: Identify the Main Components of the PC Controller Software 23
Identifying Components of the PC Controller Interface 23
Activity 4: Watch the Interactive Platesetter View 24
Identifying Status Indicators 24
Using the Operation Menu 25
Lesson 3: Open the Doors of the Semiautomatic Lotem 400 Platesetter 26
Opening the Front and Rear Doors from the PC Controller Software 26
Opening the Doors Manually 28

Activity 5: Open the Doors of the Semiautomatic Lotem 400 Platesetter 30
Lesson 4: Open the Doors of the Fully Automatic Lotem 400 Platesetter 31
Opening the Doors from the PC Controller Software 31
Opening the Doors Manually 34
Activity 6: Open the Doors of the Fully Automatic Lotem 400 Platesetter 35
Lesson 5: Identify the Safety Interlocks 36
Identifying the Safety Interlocks 36
Defeating the Laser Interlock Alarm 40

Module Summary 41

Module 3

Plates and Cassettes 43

Lessons 43
Lesson 1: Define Media 44
Understanding Thermal Plates Exposure 44
Understanding Plate Geometry 46
Edge Detection 47
Punching Plates Manually 47
Defining Media 48
Defining Media for the Lotem 400 Quantum Platesetter 48
Defining Media for the Lotem 400 Platesetter 51
Activity 7: Define New Media 53
Lesson 2: Place Plates into the Automatic Plate Loaders 54
Getting Acquainted with the Automatic Loaders: Single Cassette Unit (SCU) and Multi-Cassette Unit (MCU) 54
Working with the MCU PC Controller Software 55
Placing Plates in the MCU 56
Activity 8: Place Plates in the MCU 59

Module Summary 60

Module 4

Loading and Unloading Sequence 61

Lessons 61
Lesson 1: Load and Unload Plates: the Semiautomatic Lotem 400 Platesetter 62
Loading Plates From the Workflow Station 62
Loading Plates From the PC Controller Software 63
Observing the Loading Sequence Inside the Platesetter 67
Identifying Loading and Exposure Status in the PC Controller Screen 69
Unloading Plates 70
Activity 9: Load and Unload Plates: the Semiautomatic Lotem 400 Platesetter 72

Lesson 2: Load and Unload Plates: the Fully Automatic Lotem 400 Platesetter (with MCU) 73
Loading Plates From the Workflow Station 73
Loading Plates From the PC Controller Software 73
Observing the Loading Sequence Inside the Platesetter 76
Paper Disposal 78
Collecting the Paper From Paper Disposal Unit 79
Identifying Loading and Exposure Status in the PC Controller Screen 81
Unloading Plates 82
Activity 10: Load and Unload Plates: the Fully Automatic Lotem 400 Platesetter . 84

Module Summary 85

Module 5

Workflow 87

Lessons 87
Lesson 1: Identify Components of the Brisque to Lotem 400 Workflow 88
Overview of the Brisque to Lotem 400 Workflow 88
Lesson 2: Identify Components of the Prinergy to Lotem 400 Quantum Workflow 89
Overview of the Prinergy to Lotem 400 Quantum Workflow 89
Lesson 3: Identify Components of the Lotem 400 Expose with PS/M Workflow 90
Overview of the Lotem 400 Expose with PS/M Workflow 90

Module Summary 91

Module 6

Remote Support 93

Lessons 93
Lesson 1: Connect to the Response Center 94
What Is Remote Support? 94
Connecting to the Response Center 95
Disconnecting from the Response Center 99
Following Remote Support Safety Guidelines 104
Activity 11: Connect to and Disconnect from the Response Center 104

Module Summary 105

Module 7

Maintenance and Troubleshooting 107

Lessons 107
Lesson 1: Perform Maintenance 108
Lotem 400 Maintenance Checklist 109

Lesson 2: Troubleshoot Common Problems 111
Troubleshooting Index 111
Plate Loading Failures 113

Module Summary 115

Module A

Appendix: User Troubleshooting 117

Generic Troubleshooting Questions 117
Startup Problems 118
Calling Response Center for Support 119
Plate Loading Failures 119
Plate Unloading Problems 128
Exposure Failure Problem 130

Module S

Course Summary 131

Student Course Evaluation 133

MODULE

Course Introduction

Why you need to know this...

This module includes the course description, course agenda and the list of available documentation.

What you need to know...

Course Description

Course Description	An introductory course on the Lotem 400 platesetter, aimed at Creo customers and plate operators. At the end of this course the trainee will be able to operate the Lotem 400 platesetter, perform user maintenance, and troubleshoot common problems.
Duration	2 half day sessions
Target Audience	Lotem 400 customers and plate operators
Student Prerequisites	• Familiarity with the Output world and concepts • Familiarity with PC operations
Configurations	Lotem 400 platesetter, PC Controller software

Lotem 400 Operator Course Overview

The aim of this course is to teach Lotem 400 customers and plate operators how to operate the Lotem 400 platesetter independently, and how to perform basic maintenance and troubleshooting.

This course consists of seven modules, and should be taught in two sessions:

- The first session includes Lotem 400 platesetter basic operations (modules 1-6), and teaches you how to operate the platesetter effectively and independently.
  This session should be taught immediately after installation.

- The second session includes the basic maintenance and troubleshooting procedures (module 7). This session should be taught after you have gained some working experience with your platesetter. We recommend teaching this session about a week after the first session.

Agenda

Day/Time	Course Outline
Day 1	**Module 1: Lotem 400 platesetter environment** • Identify your site configuration and workflow • Identify external parts of the Lotem 400 platesetter • Follow the safety guidelines **Module 2: Getting started** • Turn the platesetter on and off • Identify the main components of the PC Controller software • Open the doors • Identify the safety interlocks **Module 3: Plates and Cassettes** • Define media • Place plates into the automatic plate loaders **Module 4: Loading and unloading sequence** • Load and unload plates **Module 5: Workflow** • Identify your workflow components **Module 6: Remote Support** • Connect to the Response Center
Day 2	**Module 7: Maintenance and Troubleshooting** • Perform maintenance • Troubleshoot common problems

Student Learning Resources

Document Name	Language	Part Number
Lotem 400 Quantum Family User Guide	English	399Z1R513A
	Multilanguage	399Z1R515A
Lotem 400 Family User Guide	English	399Z1N136C
	French	399Z1N138C
	German	399Z1N137C
	Spanish	399Z1N140C
	Italian	399Z1N139C
	Dutch	399Z1N141C
	Swedish	399Z1N142C
MCU for Lotem 400 Family User Guide	Multilanguage	653-00118A
Lotem 400 Quantum Family Safety Precautions for User	Multilanguage	399Z1R515A
Lotem 400 Family Safety Precautions for User	Multilanguage	653-00275A
Lotem 400 Family / Lotem 400 Quantum Family Site Preparation Guidelines	English	399Z1M151B
Lotem 400 Family / Lotem 400 Quantum Family Maintenance Guide for User	English	653-00268A
	French	653-00269A
	German	653-00270A
	Spanish	653-00272A
	Italian	653-00271A
	Dutch	653-00273A
	Swedish	653-00274A
Brisque to Lotem 800 II / Lotem Quantum Family Connectivity User Guide	English	399Z1R762B
	French	399Z3R469B
	German	399Z3R470B
	Spanish	399Z3R472B
	Italian	399Z3R471B
	Dutch	399Z3R473B
	Swedish	399Z3R474B

Document Name	Language	Part Number
Brisque to Lotem Family Connectivity User Guide	English	399Z3R084A
	French	399Z3R463A
	German	399Z3R464A
	Spanish	399Z3R466A
	Italian	399Z3R465A
	Dutch	399Z3R467A
	Swedish	399Z3R468A
Lotem 400 Xpose User Guide	English	653-00276A
	French	653-00277A
	German	653-00278A
	Spanish	653-00280A
	Italian	653-00279A
	Dutch	653-00281A
	Swedish	653-00282A
Prinergy to Lotem 800 II / Lotem Quantum Family Connectivity User Guide	English	399Z1R512B
	French	399Z3R193A
	German	399Z3R194A
	Spanish	399Z3R196A
	Italian	399Z3R195A
	Dutch	399Z3R197A
	Swedish	399Z3R198A

MODULE 1

Lotem 400 Platesetter Environment

Why you need to know this...

This module provides an overview of a typical Lotem 400 platesetter environment — a conventional site configuration, the flow of data, and the communication between the various components of the site; describes the main external parts of Lotem 400, and explains how to work safely within this environment.

Lessons

Lesson 1: Identify Your Site Configuration and Workflow

Lesson 2: Identify External Parts of the Lotem 400 Platesetter

Lesson 3: Follow the Safety Guidelines

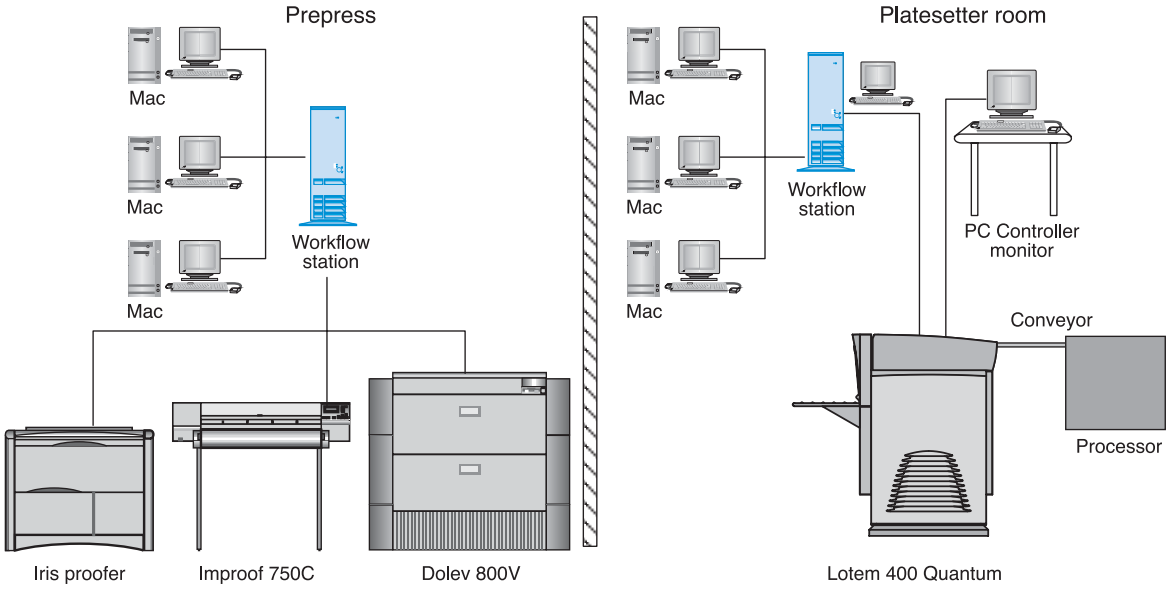
Lesson 1: Identify Your Site Configuration and Workflow

Why you need to know this...

Knowing how to identify the components of your site and your platesetter workflow enables you to better understand the communication and the flow of data between the various components.

What you need to know...

Identifying Your Site Configuration



Typical configuration at customer site

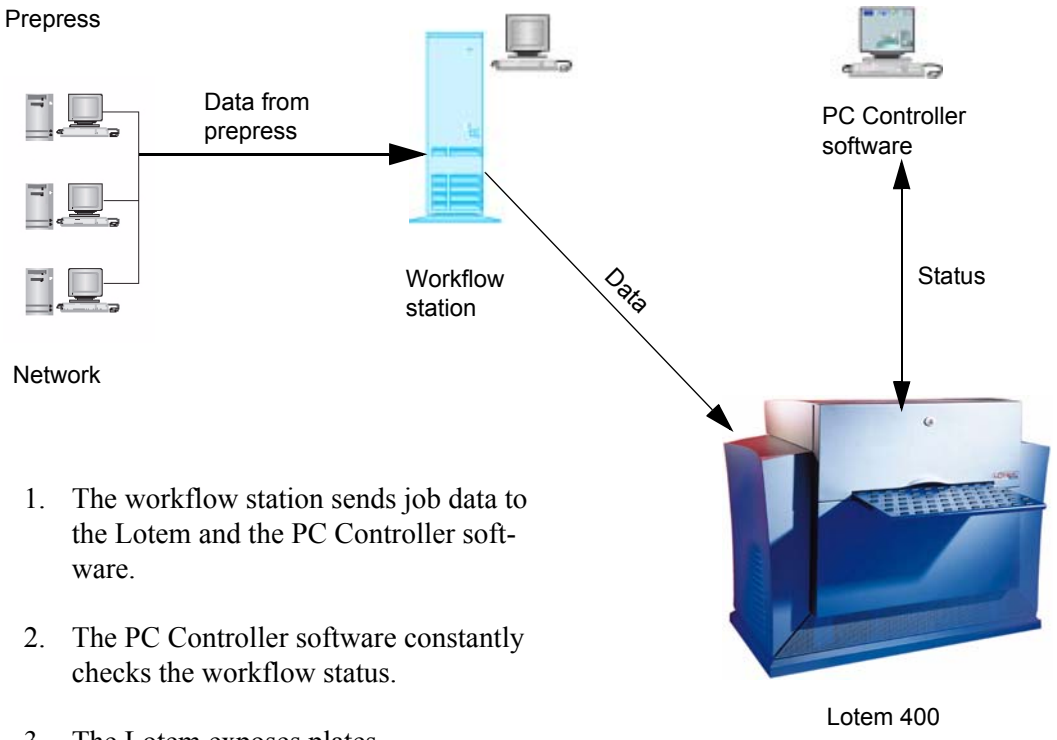
The platesetter room may include:

- **Lotem 400 platesetter**: The plate is loaded into the platesetter, exposed, and then unloaded onto the conveyor, which takes the exposed plate into the processor to be processed.
- **PC Controller**: The PC Controller software controls and monitors the platesetter operations.
- **Workflow station**: The workflow station processes jobs for the Lotem 400 platesetter.
- **Conveyor**: The conveyor moves the exposed plates to the processor.
- **Processor**: The processor chemically processes plates that need to be processed after being exposed. Once processed, plates can be transported to the printing press.

Note: The plate stacker (for collecting unloaded plates) is not shown in the figure.

Understanding the Data Flow and the Communication Between Devices

The figure below shows the flow of data and the communication between the workflow station and the Lotem platesetter.



1. The workflow station sends job data to the Lotem and the PC Controller software.
2. The PC Controller software constantly checks the workflow status.
3. The Lotem exposes plates.

Following the Environmental Specifications

There are some basic environmental specifications that must be met to ensure the proper operation of your platesetter.

Air Quality

Clean air is vital, as an unclean environment can cause hot spots on your plates as well as malfunctioning of your platesetter. Filters in the air conditioning system should be able to block 60% of all 10-micron dust particles.

Humidity

To control the static electricity of the plates, the humidity must be kept between 50% and 60%.

All plates are sensitive to static electricity, which can cause double feeding and jamming. Therefore, it is very important to make sure that the humidity in the platesetter room stays in the required range.

An industrial steam humidifier is necessary for meeting the humidity requirements.

Ultraviolet (UV) Light

Some plates, such as Kodak DITP, are sensitive to UV light. When such plates are used or when the Lotem 400 platesetter is directly connected to a plate stacker, you need an appropriate safe light.

Air Conditioning

The platesetter requires a constant temperature of 20-25°C (68-77°F). Therefore, the room must be sufficiently air conditioned at all times to provide heat dissipation for the platesetter and all the additional equipment in the room.

It is recommended that the air flow in the system room be maintained above normal air pressure to prevent dust from entering the room.

Recommended Equipment

To ensure that the environmental specifications are met, you should have the following equipment at the site:

- A thermometer and a hygrometer, permanently mounted in a central location
- Humidity and temperature recorder



See more information about site preparation and requirements in the *Lotem 400 Family, Site Preparation Guidelines*.

Handling Plates

Please consult your plate vendor for the recommended humidity and temperature ranges in which the plates should be stored. Heat and humidity may soften the coating of some plates and increase their sensitivity to marking.

Storing some types of plates at temperatures out of recommended range might reduce their sensitivity and possibly result in underexposed images.

Lesson 2: Identify External Parts of the Lotem 400 Platesetter

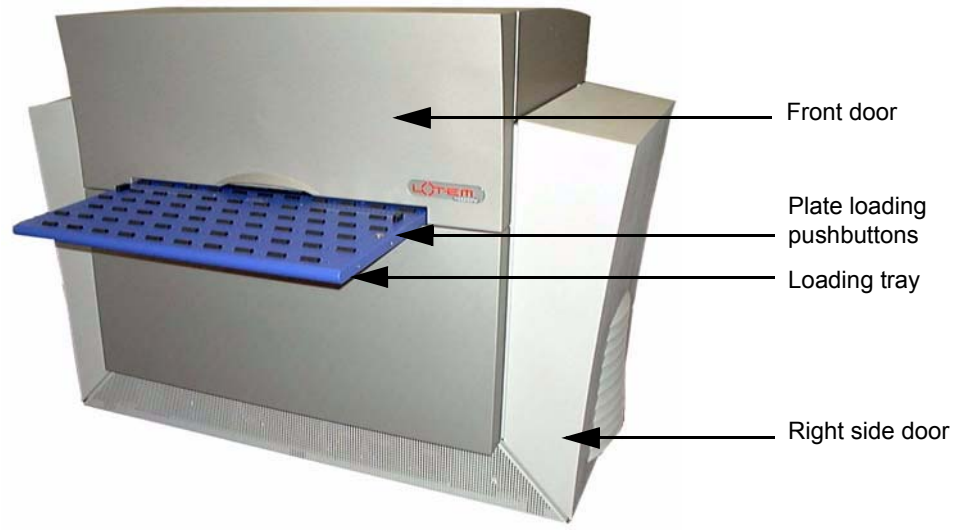
Why you need to know this...

Familiarity with the major parts of the Lotem 400 platesetter will help you operate the platesetter quickly and successfully.

What you need to know...

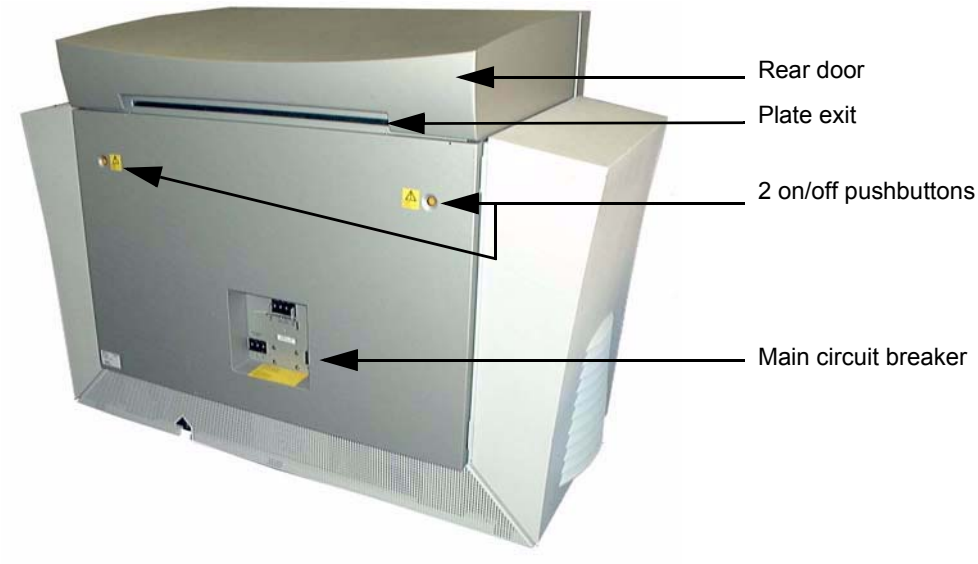
Identifying the Main External Parts of the Lotem 400 Platesetter

Front View



- **Plate loading pushbuttons**: Use these buttons to load plates while the platesetter is exposing a job that requires more then one plate.
- **Loading tray**: Use to load a plate into the platesetter.
- **Right side door**: Open this door to access the electronic box and PC Controller computer.

Rear View



- **Plate exit**: The plates exit from the indicated opening after they have been exposed.
- **Main circuit breaker**: The main circuit breaker connects the platesetter to the main power supply. Shutting off the main circuit breaker disconnects the platesetter from the main supply.
- **On/off pushbuttons**: Use these buttons to turn the platesetter on and off.

Lotem 400 Configurations

Lotem 400 comes in two models: semiautomatic and fully automatic

Semiautomatic Model

The semiautomatic model has a manual loading tray and is based on the continuous-loading concept: while one plate is being exposed, you place the second plate on the tray. After the exposed plate is unloaded from the drum, the second plate is automatically loaded.

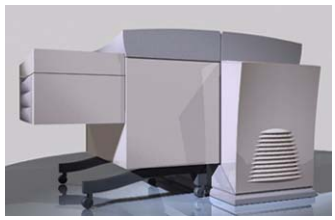


Manual loading tray



Fully Automatic Model

The fully automatic model comes with an automatic loader, either a single-cassette unit or a three-tray multi-cassette unit. The automated tasks include the loading of plates, removal of slip sheets, imaging, and automatic inline punching.



The fully Automatic Lotem 400 Platesetter: The single cassette unit and the multi-cassette unit look exactly the same.

Lesson 3: Follow the Safety Guidelines

Why you need to know this...

When working with the Lotem 400 platesetter you must be aware of possible laser exposure hazards, and how to avoid them. This lesson explains the safety precautions that you need to take to work safely with the Lotem 400 platesetter.

What you need to know...

Following the Safety Guidelines

The platesetter is equipped with a **highly hazardous laser system** that exposes the media. The platesetter as a whole is a **Class 1 laser product**, in accordance with the IEC825-1 and United States 21 CFR 1040 standards. This classification means that if the safety precautions are followed, operators and service engineers will not be able to access hazardous laser radiation.

WARNING: The laser beam and radiation of the platesetter contain visible and invisible components, both of which are hazardous to the eyes and skin. Even brief exposure to laser radiation, a laser beam, or its reflections of shiny or matte objects may cause permanent degradation or loss of eyesight. In the presence of flammable material, the laser beam is also a fire hazard!

Make sure that you follow the safety guidelines when you operate or performing maintenance on the Lotem 400 platesetter:

1. Keep all external doors and internal protective barriers of the platesetter complete, unchanged, and intact.

2. Never defeat the laser or any other interlock switch! Motor interlock switches may be defeated only by service personnel if necessary.

3. Never leave any object between the laser thermal head and the drum.

4. Do not, under any circumstances, remove any external door or panel, or internal protective barrier from the platesetter.

5. Do not operate the platesetter if there is any doubt regarding the safety issues described here. Contact your service engineer.

6. Follow the warnings posted on various parts of the platesetter according to the guidelines in the Safety Precautions for User guide.



Example of a warning label on the Lotem 400 platesetter.

Drum Safety Precautions

The drum revolves normally at 450 revolutions per minute. If an object hits the rotating drum, the object may get dislodged inside the platesetter and cause damage, force the upper doors to open, or penetrate through the doors.

WARNING: Do not insert your fingers or hands anywhere near the drum, as they may get caught in the narrow gaps in the drum area.

For specific locations of warning labels and detailed information about safety precautions see *Lotem 400 Family, Safety Precautions for User,* part number 399Z1R515A.

Module Review

Apply what you know...

Activity 1: What's Your Site Configuration?

Look around your site. Can you point out the following components and identify your site configuration?

Workflow station	☐	Brisque
	☐	Prinergy
	☐	Lotem 400 Xpose with PS/M
Platesetter	☐	Lotem 400 with a manual loading tray
	☐	Lotem 400 with a single cassette unit
	☐	Lotem 400 with a multi-cassette unit
	☐	PC Controller screen
	☐	Conveyor
	☐	Processor
	☐	Plate stacker

Activity 2: Name Lotem 400 Main External Parts

A. Point out the following external parts of the Lotem 400:

1. The front door
2. The area through which the plate enters the platesetter
3. The area through which the plate leaves the platesetter
4. The main circuit breaker

B. What would you open up in order to access the PC Controller computer?

_____

Module Summary

Having completed this module, you should be able to:

- Identify your site configuration
- Describe the data flow and the communication between the workflow station and the Lotem platesetter.
- Identify the main external parts of the Lotem 400 platesetter
- Follow the safety guidelines

MODULE 2

Getting Started

Why you need to know this...

Now that you have an overview of the Lotem 400 platesetter environment and are familiar with the platesetter and the general workflow, you can go on to the “getting started” operations.

This module will help you become familiar with some of the basic operations of the Lotem 400 platesetter before you actually start working with it. You will learn how to turn the platesetter on and off safely and open the platesetter doors. The module also introduces the PC Controller software interface.

Note: The semiautomatic Lotem 400 platesetter and the fully automatic model differ in the way the doors are opened. Lesson 3 illustrates the former, and lesson 4, the latter.

Lessons

Lesson 1: Turn the Platesetter On and Off

Lesson 2: Identify the Main Components of the PC Controller Software

Lesson 3: Open the Doors of the Semiautomatic Lotem 400 Platesetter

Lesson 4: Open the Doors of the Fully Automatic Lotem 400 Platesetter

Lesson 5: Identify the Safety Interlocks

Lesson 1: Turn the Platesetter On and Off

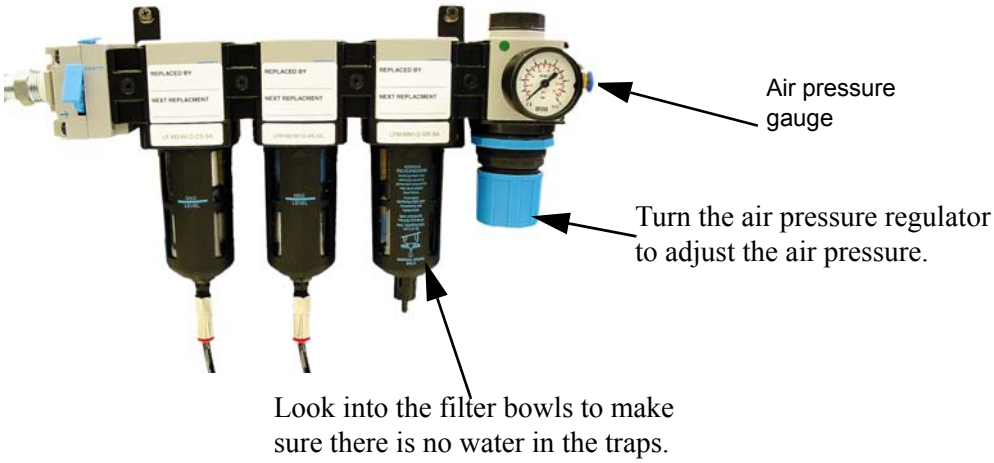
Why you need to know this...

By properly following the steps for turning the Lotem 400 platesetter on and off, you will ensure its smooth operation and will help prevent platesetter failures.

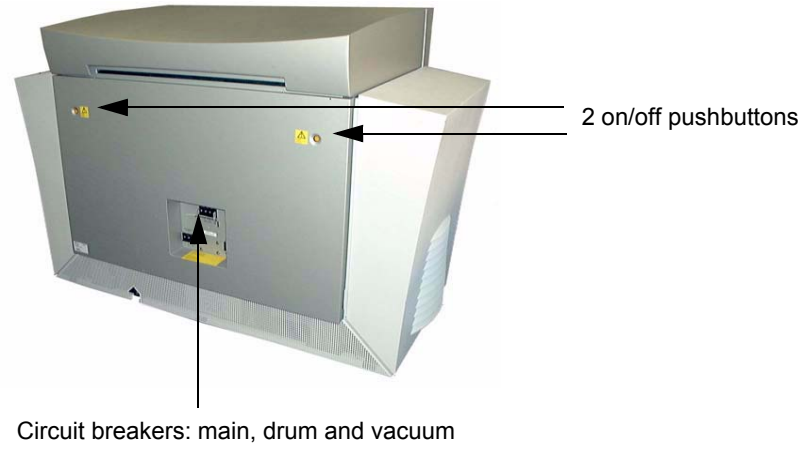
What you need to know...

Turning the Platesetter On

1. Check the air pressure gauge in the air pressure unit. Make sure that the air pressure is 6 atm 90 psi).



2. Make sure that the **main circuit breaker** is **on**, that is, set to "**1**." Make sure the **drum** and **vacuum circuit breakers** are on as well.



3. On the rear panel, locate the two yellow **on/off** pushbuttons. If either of the buttons is pushed in, press it to release it. When both buttons are released, they light up.

4. Verify that the PC Controller monitor is on. When you are asked for a password, type the password **scitex** or press **Esc**, and then press **ENTER**. Wait until the PC Controller software is loaded. Then, on the PC desktop, double-click the **Lotem 400** icon:

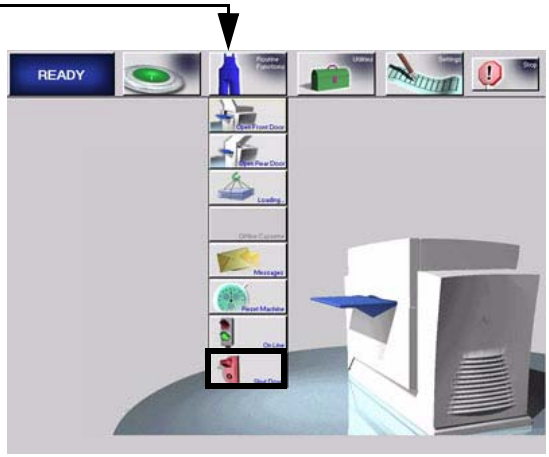




The platesetter is now ready for operation.

Turning the Platesetter Off

1. From the **Routine Functions** menu, select **Shut Down**.



2. In the Confirm dialog box, click **Shutdown**.



3. From the Windows **Start** menu, select **Shut Down** to shut down your computer. The following message appears: “`It is safe to turn off your computer`”.

4. Press the **On/Off** pushbutton at the rear panel of the platesetter.

The platesetter is now turned off.

Turning the Platesetter Off During Malfunctioning

When malfunctioning requires that you shut down the platesetter, you may need to perform a complete shutdown by turning off the main circuit breaker.

To shut down the platesetter completely, follow the procedure described in the previous section and turn off the main circuit breaker as well.

Apply what you know...

Activity 3: Turn the Platesetter On and Off

1. Check the air pressure gauge in the air pressure unit. If the air pressure setting is not correct, adjust it.

2. Turn on the platesetter, and load the PC Controller software.

3. When the PC Controller software is loaded, turn the platesetter off.

Lesson 2: Identify the Main Components of the PC Controller Software

Why you need to know this...

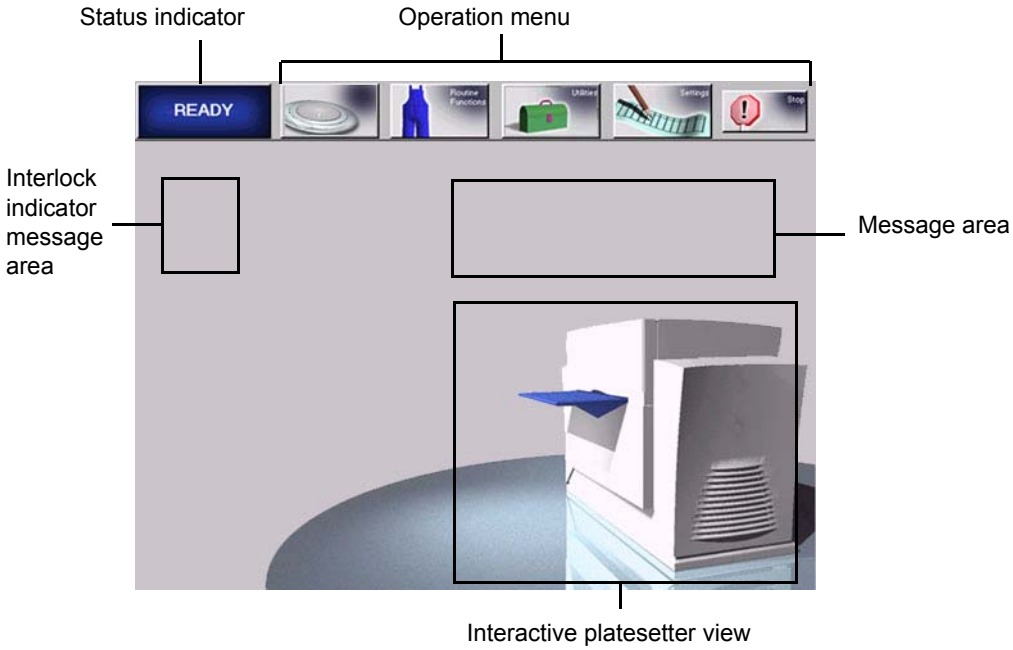
Understanding the main components of the PC Controller software will help you become familiar with the various operations of the Lotem 400 platesetter and enable you to monitor those operations.

What you need to know...

The PC Controller software is your interface with the Lotem 400 platesetter. The software monitors the operation of the platesetter, receives constant updates on the platesetter's status, and provides information about the platesetter. The PC Controller computer is located in the right side door of the platesetter.

Identifying Components of the PC Controller Interface

The main screen of the PC Controller software, shown here, indicates that the Lotem 400 platesetter is connected properly and ready for operation.



The interactive platesetter view is constantly updated by the platesetter and reflects its status at every stage of operation. You can follow the platesetter operations through the interactive view.

You can also open the doors interactively by clicking on the active door on the software. Move your mouse around the interactive view, and see which parts become active.

Apply what you know...

Activity 4: Watch the Interactive Platesetter View

- In the interactive platesetter view area, hold your mouse on the front door.
- When the door becomes green and active, click it.
- Watch the platesetter view change as the door opens. Note that an interlock indicator message appears.

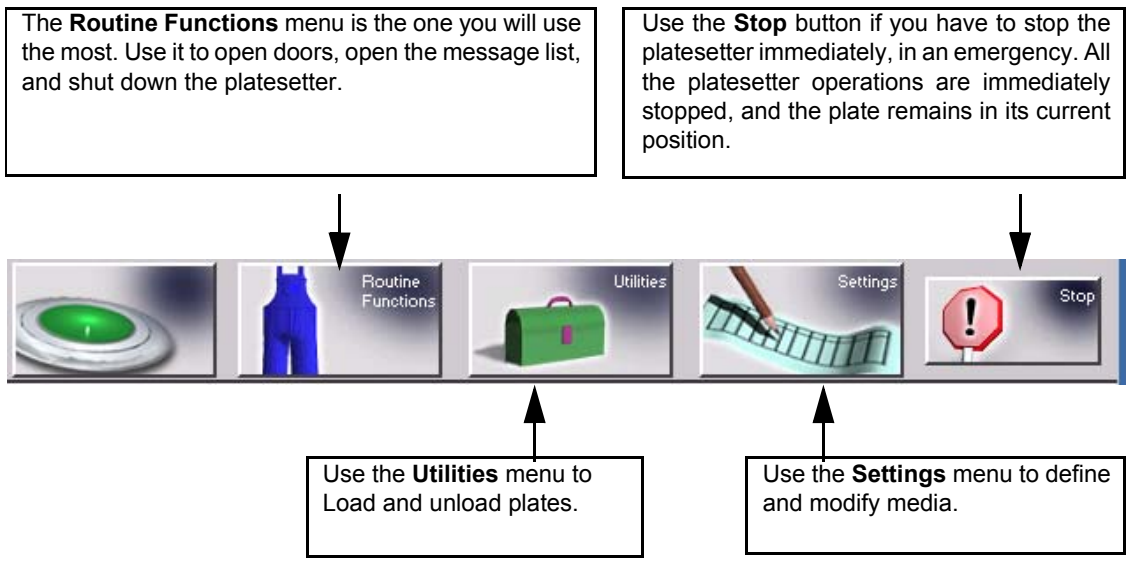
Identifying Status Indicators

The status indicator updates you on the platesetter status before and during operation.

Indicator	Description
	The platesetter is ready for operation and is in **On-Line** mode; you may load a plate and begin to expose it.
	The platesetter is starting up. All its components go to start position.
	The platesetter has stopped working and requires your intervention. An appropriate message appears in the message area.
	The platesetter is exposing the current job.
	A door is open or a panel has been removed (the interlock indicator appears in the main screen).
	The platesetter is ready for operation after a problem have been fixed. You can now select **On-Line** from the **Routine Functions** menu to set platesetter to **Ready** mode.

Using the Operation Menu

From the **operation** menu you can access all the operations that you need to perform when working with the Lotem 400 platesetter.



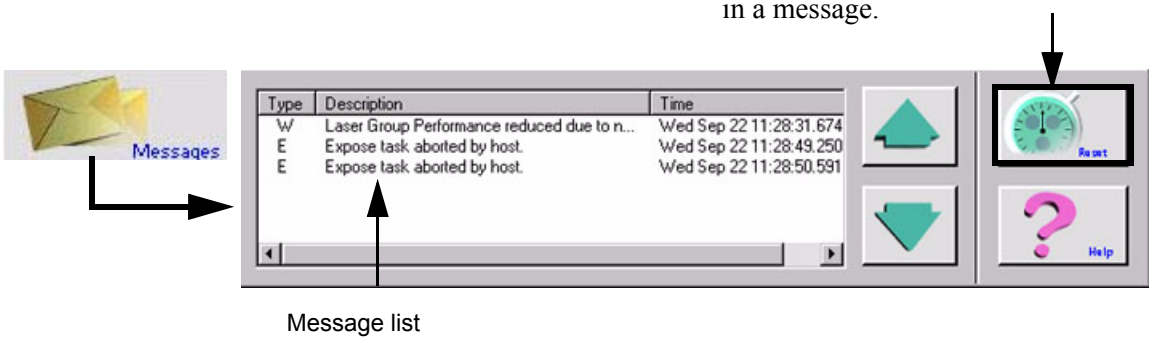
The **Message** list, displayed in the message area, describes problems that arise during the operation of the platesetter.

To display the Message list:

1. Open the **Routine Functions** menu, and select **Messages**.



2. You can use the **Reset** button to reset the Messages window after you solved the problem described in a message.



Lesson 3: Open the Doors of the Semiautomatic Lotem 400 Platesetter

Why you need to know this...

You may need to open the doors when you are:

1. Working with the remote support center to troubleshoot a problem
2. Performing maintenance

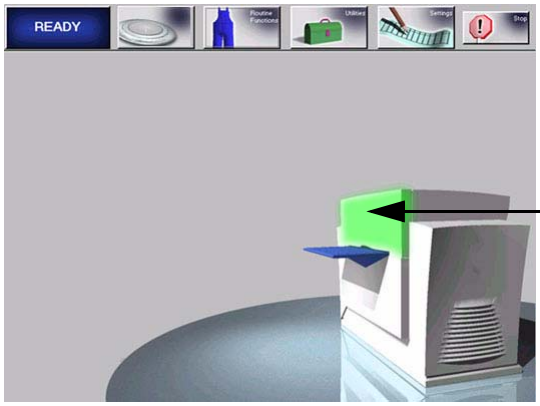
What you need to know...

Opening the Front and Rear Doors from the PC Controller Software

There are two ways to open the platesetter doors from the PC Controller software:

1. Choose one of the following two options:

   - Click the front or rear door in the interactive platesetter view. This method is the quicker of the two.



To open the door:
Hold your mouse over the door you want to open until the door becomes green, and then click to open it.

   - From the **Routine Functions** menu in the PC Controller software, select **Open Front Door** or **Open Rear Door**, as necessary.

     The door-locking mechanism is released for 30 seconds, during which you must perform step 2.



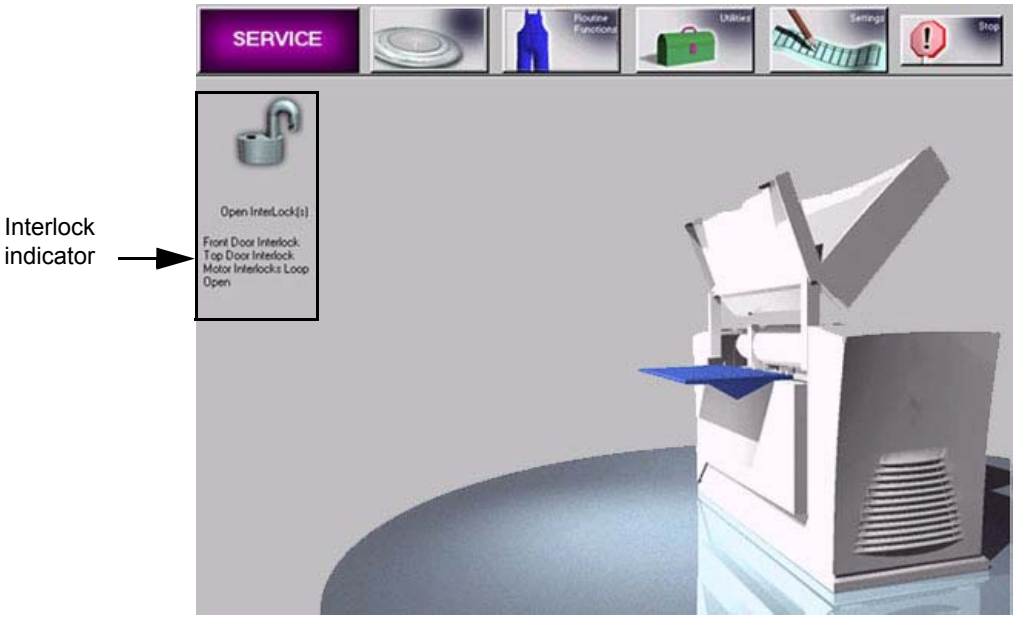




2. While the door-locking mechanism is released, push the center of the door slightly inward. The door opens slightly.

3. Lift the door to open it completely.

When the front or rear door is open, the safety interlocks are activated. As a result, platesetter systems such as the drum motor and the laser system do not operate. The platesetter is in **Service** mode (status indicator is purple) and the interlock indicator appears with the name of the open door.



Main screen with Service indicator, interlock indicators, and open doors

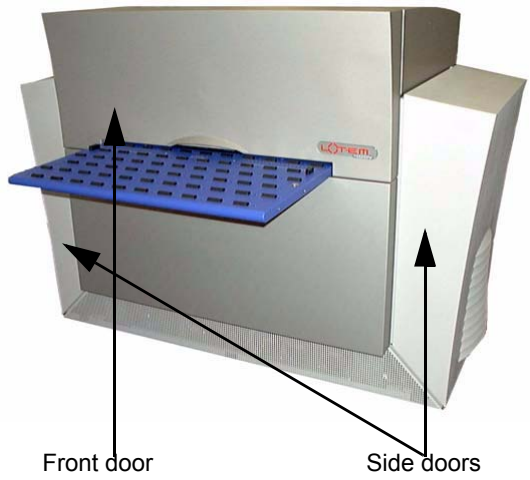
Opening the Doors Manually

In most cases, you use the PC Controller software to open the platesetter doors. However, if there is no electricity or for some reason you are not able to operate the platesetter through PC Controller, the Response Center may ask you to open the doors manually.

Lotem 400 platesetter, rear view



Lotem 400 platesetter, front view



Opening the Rear Door

The rear door should be opened first. Then the side doors and finally the front door should be opened.



To open the rear door:

1. Insert an Allen key (5/32 inches) into the two holes of the upper rear cover. Make sure to insert it at least 6 cm (2.5 inches). The pins of the door locking mechanism are released.

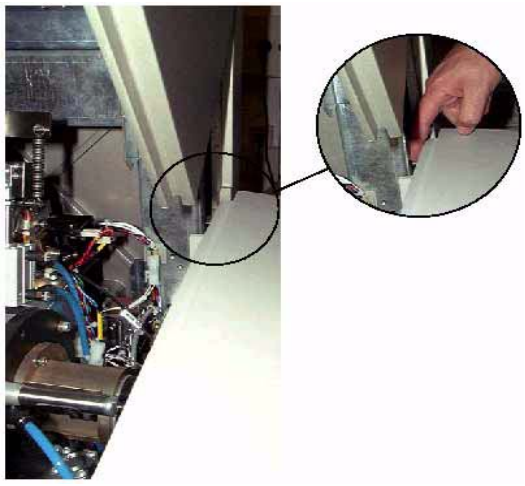
2. Pull the door open.

Opening the Side Doors

To open the side doors:

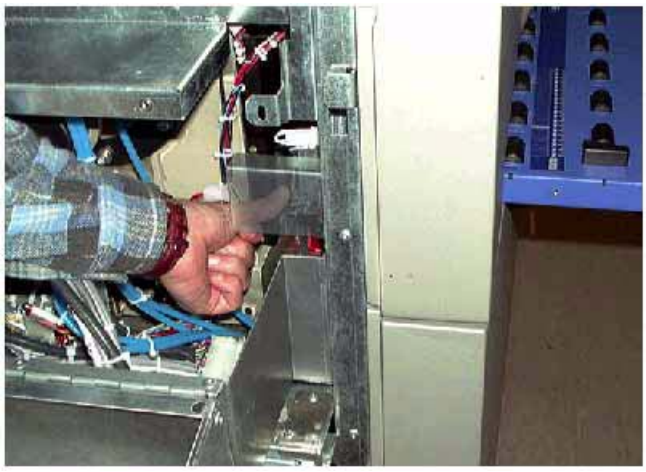
1. Press the spring latch for each door. The latch is located on the side of the door toward the front of the platesetter.

2. Pull the door open.



Note: The electronic box (E. box) is located on the right side door. The box contains various components, including the computer of the PC Controller software. You can access the CD and floppy disk drives from this box.

Opening the Front Door



The hook for opening the front door

When the rear and side doors are open, follow these steps to open the front door:

1. On the left side of the front door, push the hook up.

2. Repeat step 1 on the right side of the door.

3. Repeat step 1 and 2 again, to release the door completely.

4. Open the door.

Apply what you know...

Activity 5: Open the Doors of the Semiautomatic Lotem 400 Platesetter

- Open the front door using the Operation menu.
- Open the rear door by clicking the rear door in the interactive platesetter view.
- To insert a CD into the PC Controller computer, which door do you have to open?
  Open this door manually.

Lesson 4: Open the Doors of the Fully Automatic Lotem 400 Platesetter

Why you need to know this...

You may need to open the doors when you are:

1. Working with the remote support center to troubleshoot a problem
2. Performing maintenance

What you need to know...

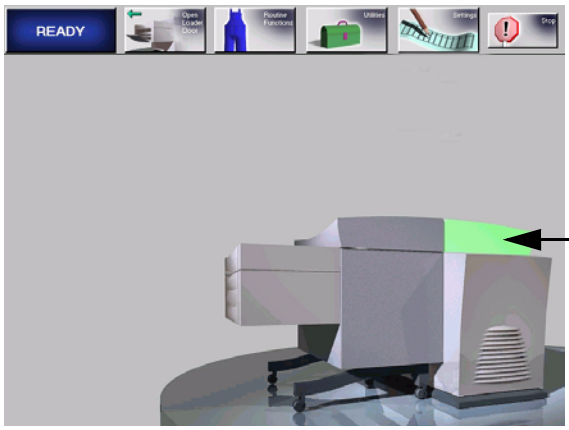
Opening the Doors from the PC Controller Software

Opening the Front and Rear Doors

There are two ways to open the platesetter doors from the PC Controller software:

1. Choose one of the following two options:

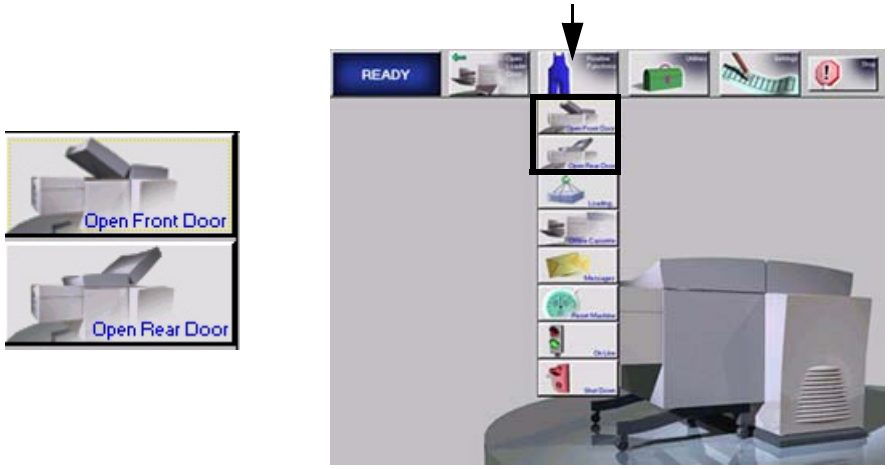
   - Click the front or rear door in the interactive platesetter view. This method is the quicker of the two.



To open the door:
Hold your mouse over the door you want to open until the door becomes green, and then click to open it.

   - From the **Routine Functions** menu in the PC Controller software, select **Open Front Door** or **Open Rear Door**, as necessary.

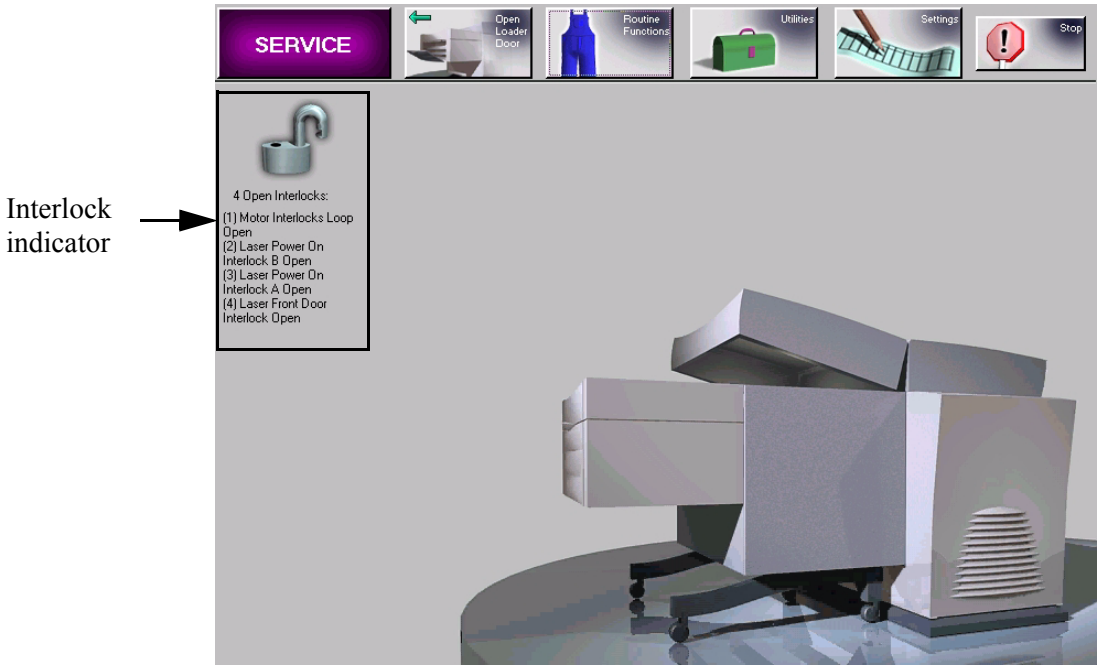
     The door-locking mechanism is released for 30 seconds, during which you must perform step 2.



2. While the door-locking mechanism is released, push the center of the door slightly inward. The door opens slightly.

3. Lift the door to open it completely.

When the front or rear door is open, the safety interlocks are activated. As a result, platesetter systems such as the drum motor and the laser system do not operate. The platesetter is in **Service** mode (status indicator is purple) and the interlock indicator appears with the name of the open door.



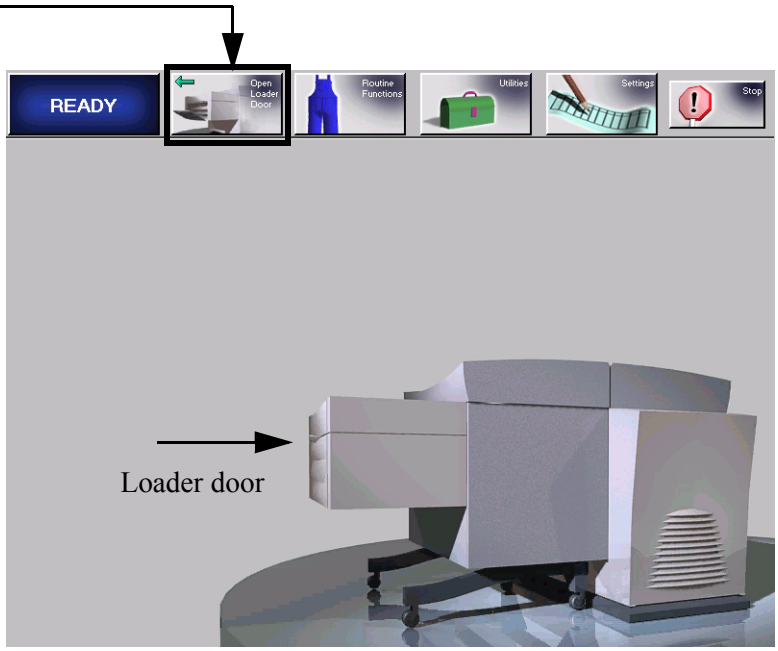
Main screen with Service indicator, interlock indicators, and open doors

Opening the Loader Door

To place plates in the automatic plate loader, you need to open the loader door.

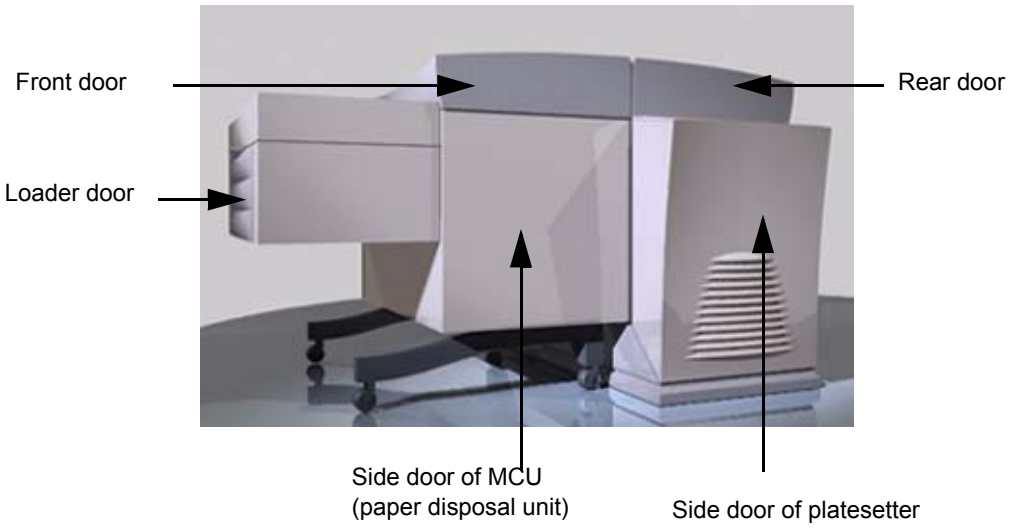
1. From the **Operation** menu, select **Open Loader Door** to release the locking pin on the door.

2. The loader door opens, and the status indicator displays **Service**.



Opening the Doors Manually

In most cases, you use the PC Controller software to open the platesetter doors. However, if there is no electricity or for some reason you are not able to operate the platesetter through the PC Controller, the Response Center may ask you to open the doors manually.



The rear door should be opened before the side doors.

Note: The front door of the MCU can be opened only through the PC Controller software. The door cannot be opened manually.

For a complete explanation of how to open the rear and side doors manually, see the section *"Opening the Doors Manually" on page 28* in lesson 3, earlier in this module.

Opening the Side Door of the MCU

You need to open the side doors of the MCU to empty the paper disposal bin.

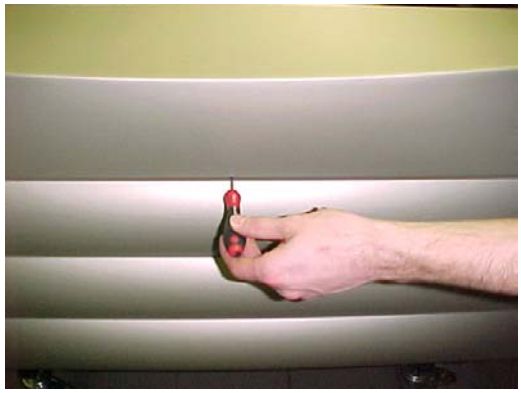


Note: You cannot open the MCU side door while a plate is being loaded on the drum. However, you can open the door while a plate is being exposed or unloaded.

The MCU side doors have a magnetic latch.
To open one of the doors, just pull the door from the bottom or the side to release the magnetic latch.

Opening the Loader Door

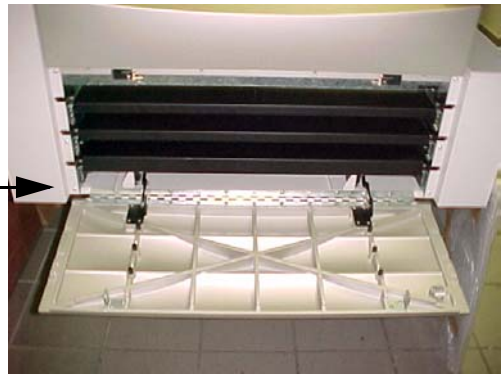
To open the loader door manually:



Insert a screwdriver into the hole under the upper cover of the loader door until you reach a spring.

The door automatically opens.

The open loader door



Apply what you know...

Activity 6: Open the Doors of the Fully Automatic Lotem 400 Platesetter

- Open the rear door using the Operation menu.
- Open the front door by clicking the front door in the interactive platesetter view.
- To insert a CD into the PC Controller computer, which door do you have to open? Open this door manually.
- Open the loader door manually.

Lesson 5: Identify the Safety Interlocks

Why you need to know this...

When one of the platesetter doors is opened or not closed properly, the safety interlocks are activated. The power is disconnected from all the platesetter's motors, thus stopping the platesetter's operation. You need to be familiar with the interlock locations and functions to identify operational failures easily and resume operation quickly.

What you need to know...

Identifying the Safety Interlocks

Safety interlocks are the major means of protection against the severe laser and mechanical hazards involved in the operation of the platesetter.

There are two interlock types in the Lotem 400 platesetter:

- A laser interlock which shuts off the power from the laser systems when one of the doors is open or one of the panels is removed. A buzzer indicates that the interlock has been activated.
- A mechanical interlock

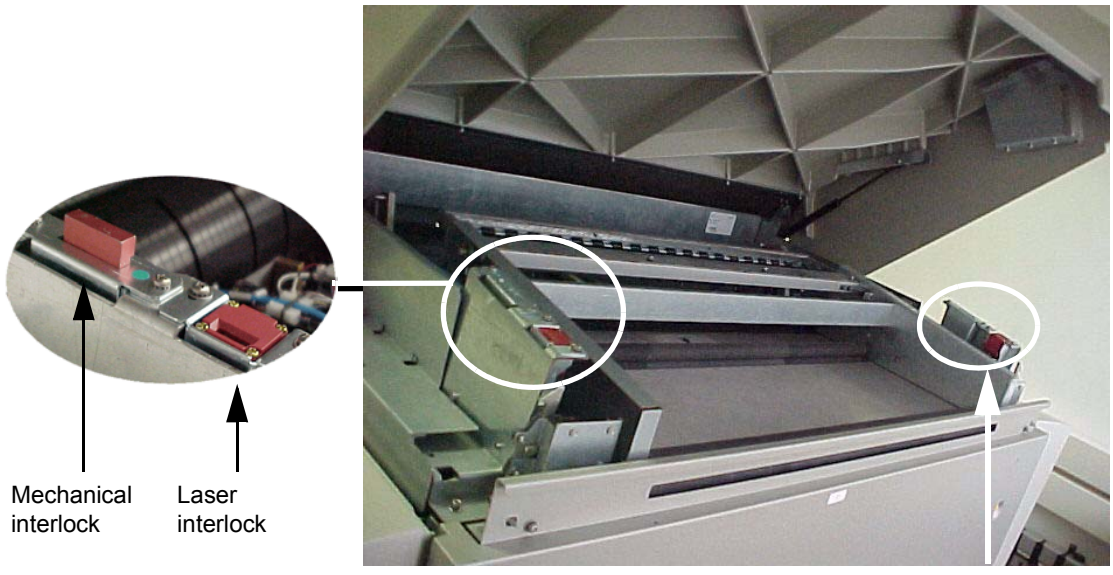
Note: Never defeat an interlock. Only authorized service personnel are allowed to defeat mechanical interlocks. Laser interlocks cannot be defeated.

Platesetter Interlock Functions and Locations

Interlock switches are designed to disconnect power from the laser system, drum motor, and other motors when:

- One of the doors is open
- The front or rear panel has been removed

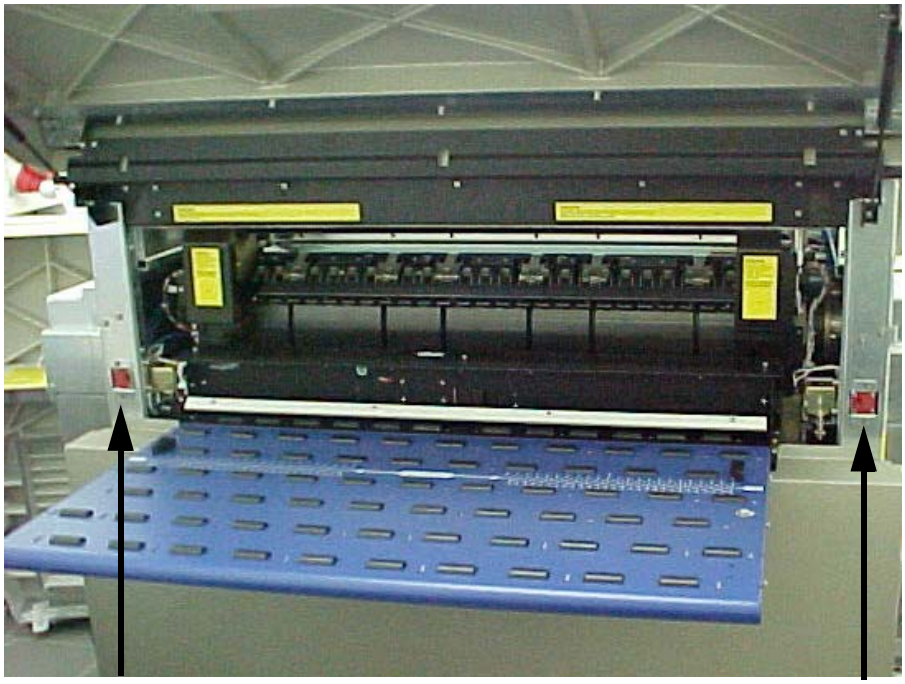
Interlock Location	Interlock Function	Type of Interlock Switches
Front door (loading area)	Disable lasers and motors	2 laser interlock switches
Front cover	Disable lasers and motors	1 laser interlock switch
Rear door	Disable lasers and motors	• 1 mechanical defeater • 1 laser defeater (Lotem 400 Quantum only)
Rear cover	Disable lasers and motors	1 laser interlock switch
Left platesetter door	Disable lasers and motors	1 laser interlock switch
Right platesetter door	Disable lasers and motors	1 laser interlock switch



Lotem 400 Quantum rear door

Laser defeater
(Lotem 400 Quantum only)

Front door



Laser interlock

Laser interlock

Left door of the platesetter



Laser interlock

Right door of the platesetter



Laser interlock

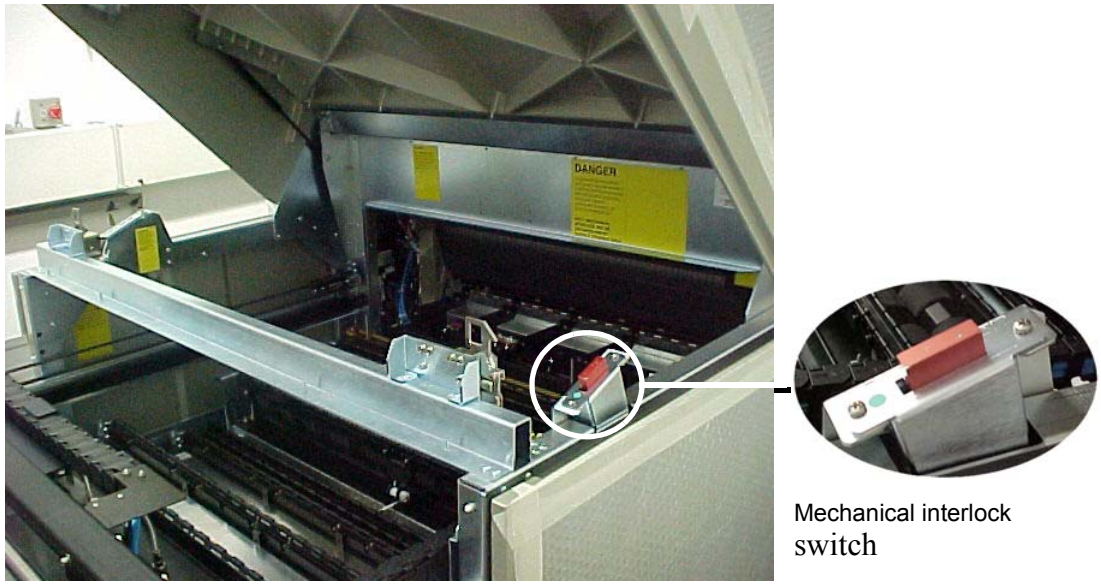
MCU Interlock Functions and Locations

Interlock switches are designed to disconnect power from the laser system, drum motor and other motors when:

- The left or right internal MCU covers are open
- The front door is open or the MCU (automatic loader) is disassembled from the platesetter
- The loader door is open

Interlock Location on MCU	Interlock Function	Type of Interlock Switches
Left internal cover	Disable lasers and motors	1 laser interlock switch 1 mechanical interlock switch
Right internal cover	Disable lasers and motors	1 laser interlock switch 1 mechanical interlock switch
Front door	Disable lasers and motors	1 laser interlock switch 1 mechanical interlock switch
Loader door	Disable motors	1 magnetic mechanical switch

Front door of MCU



Mechanical interlock switch

All the other interlocks in the MCU are internal and can be accessed only by Creo personnel.

Defeating the Laser Interlock Alarm

In some cases, the laser interlock alarm is triggered because one of the doors is not closed properly.

You can quickly try to defeat the laser interlock alarm by following this procedure:

1. Open the last door/s that were opened.
2. Perform a complete shutdown procedure, including closing the Main Circuit Breaker switch.
3. Restart the platesetter and launch the PC Controller software.
4. Close the doors you opened previously.
5. If the alarm is still on, contact the Creo Response Center for help.

Module Summary

Having completed this module, you should be able to:

- Turn the platesetter on and off
- Identify the main components of the PC Controller software
- Open the doors from the PC Controller software
- Open the doors manually
- Identify the safety interlocks

MODULE 3

Plates and Cassettes

Why you need to know this...

Before loading plates into the platesetter for exposure, you need to define the type of plates you will be using. To define the media correctly, you have to identify the type of plates you are using, their size, and their geometry.

Lesson 2 is for customers who have automatic plate loaders (the MCU or SCU).

In this lesson you will familiarize yourself with the automatic plate loaders (the MCU or SCU) and learn how to place the plates in them for loading and exposure.

Lessons

Lesson 1: Define Media

Lesson 2: Place Plates into the Automatic Plate Loaders

Lesson 1: Define Media

Why you need to know this...

To plan properly for the plate exposure process and define the appropriate settings for your press and plate, you need to understand certain aspects of plate geometry and image area.

What you need to know...

Understanding Thermal Plates Exposure

Thermal plates are imaged by heat. To produce the necessary heat (usually a few hundred degrees Celsius), an infrared laser with a wavelength of 830–1100 nanometers (nM) is required.

Two types of thermal plates are commonly used with platesetters: positive working plates and negative working plates.

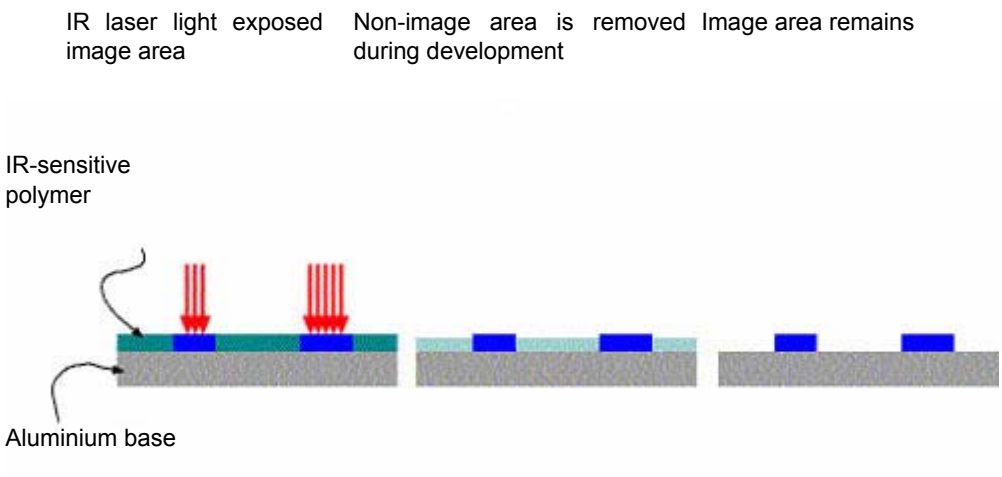
Positive Working Plates

The nonprinting (background) areas of a positive plate are exposed with an infrared (IR) laser. The plate is developed, and the exposed background areas are removed. The nonimaged, printed area remains.



Negative Working Plates

The printing image of a negative plate is exposed by an infrared (IR) laser. When the plate is developed, unexposed (background) area is removed. Image printing area remains.



Processless Plates

Processless plates require only imaging; because no external cleaning step is necessary after exposure, they are a practical solution for on-press imaging. However, some processless plates require debris removal systems and on-press cleanup using a fountain solution.

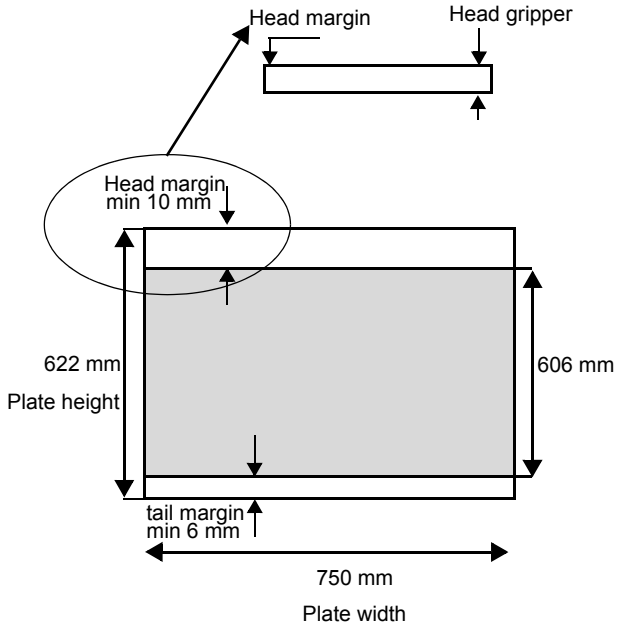
Understanding Plate Geometry

An understanding of plate geometry and the dimensions of the image area will help you plan for the plate exposure process and define the appropriate settings for your press, plate, and image offset.

The figure on your right is a negative working plate on which two strips of emulsion remain—10 mm at the head margin and 6 mm at the tail margin.

The **head margin** is the distance from the plate's edge to the beginning of the layout, or the exposed image.

The **tail margin** is the distance from the back edge of the plate to the edge of the image, or layout.



Supported Plate Sizes

The following plate sizes are supported by any Lotem 400 platesetter

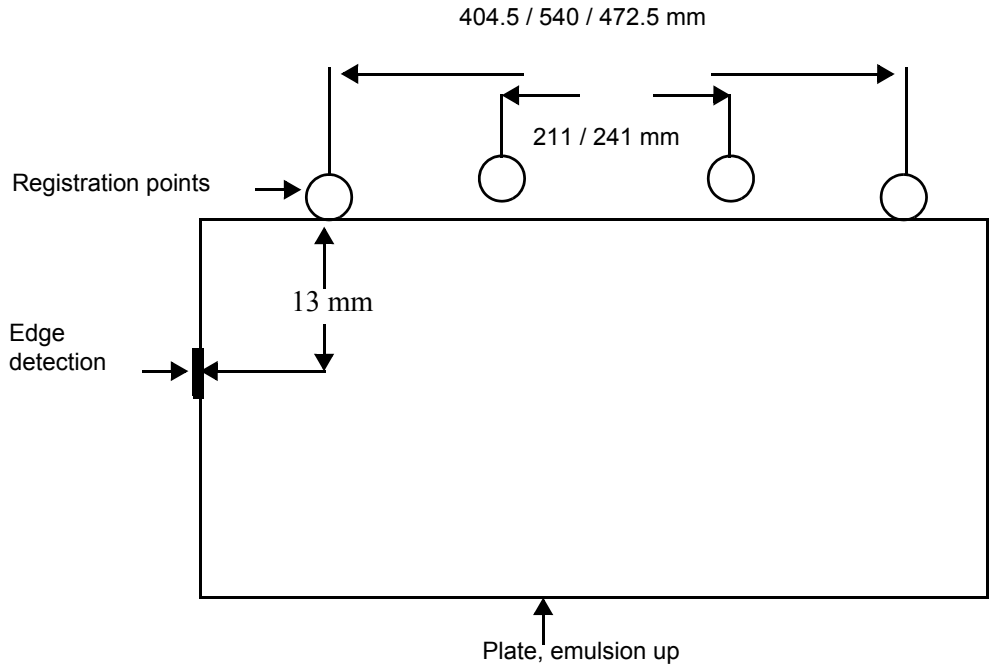
Maximum plate size	750 x 622 mm	29.5 x 24.4 inches
Maximum image area	750 x 606 mm	29.5 x 23.8 inches
Minimum plate size	311 x 228 mm	12.25 x 9 inches
Minimum image area	295 x 228 mm	11.6 x 9 inches

Edge Detection

In the Lotem 400 platesetter, the image is positioned in reference to the edge of the plate. Each time an exposure sequence begins, a laser-based detector starts searching the drum for the exact location of the plate's edge. Once the plate's edge have been identified, the exposure operation can begin at a certain point on the plate.

Punching Plates Manually

If you punch your plates manually after they are exposed, you need to know where the edge of the plate and the registration points are located so that you can set the punching parameters correctly. The following diagram will help you position the punches:



Defining Media

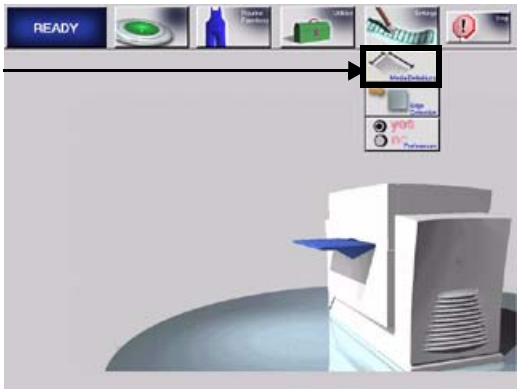
Before loading plates into the platesetter, you must define the type of media you are using. You can edit the parameters of media you have already defined or delete media you will no longer use.

Note: Definition of new media requires calibration of the platesetter. Therefore, you should consult with a Creo engineer before defining new plates from new manufacturers.

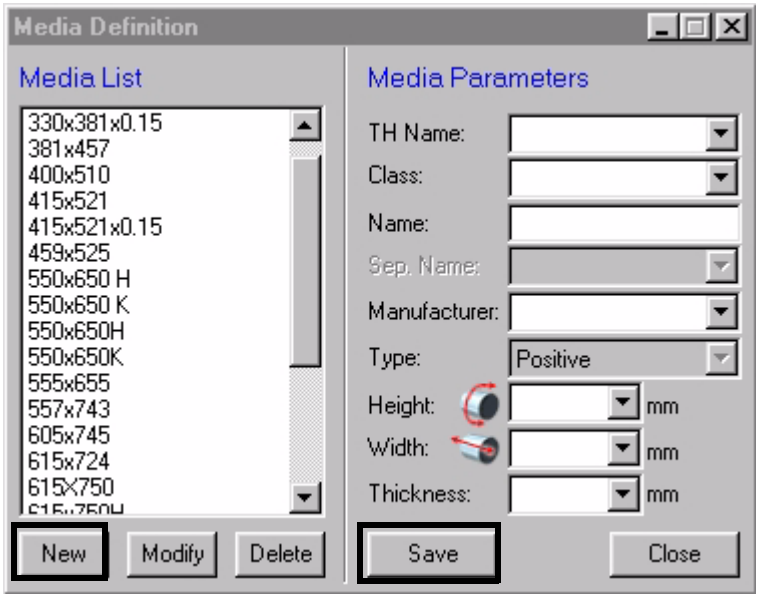
There is a slight difference in defining media for the Lotem 400 platesetter and for the Lotem 400 Quantum platesetter. Follow the procedure that is relevant for your configuration.

Defining Media for the Lotem 400 Quantum Platesetter

1. From the **Settings** menu, select **Media Definitions** to open the Media Definition dialog box.



Plates and other media that have been defined are listed under **Media List**.



Note: The plate names in the window above are just examples. The platesetter supports plates of various specifications from various vendors.

2. Click **New**.

3. In the **TH Name** box, select a TH name from the list of predefined media.

4. In the **Class** box, select the type of media you are using.

5. In the **Name** box, type a name for the plate. For example, you might choose a name based on the type of plate or the user name. Recommended media name includes the manufacturer name.

6. In the **Manufacturer** box, select a name from the list or type the name of the manufacturer.

7. In the **Type** box, check whether pre-defined exposure appears (according to the TH name chosen earlier).

8. In the **Height** box, select the height of your plate or type a value in millimeters.

9. In the **Width** box, select the width of your plate or type a value in millimeters.

10. In the **Thickness** box, select the thickness of your plate as listed on the packaging or type a value in millimeters. It is recommended that you verify the plate thickness with a micrometer. The range should be between 0.15 mm and 0.3 mm.

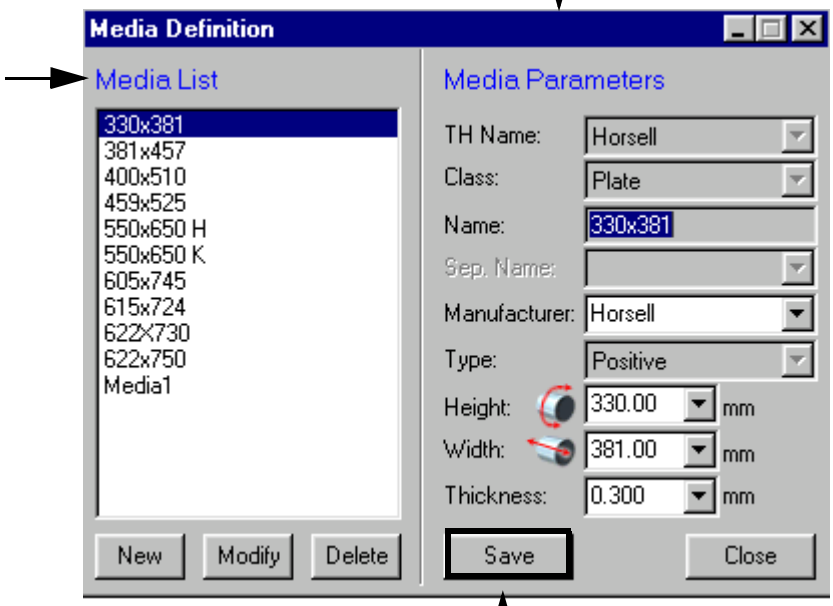
11. Click **Save** to save the new plate.
    The new plate name appears in **Media List**.

12. Repeat these steps to define each plate you intend to use.

To modify plate parameters:

2. Under **Media Parameters**, change the settings as necessary.

1. Under **Media List**, select the plate whose parameters you want to modify. The parameters appear under **Media Parameters**.



3. Click **Save** to save the new parameters.

Note: You can not modify parameters for plates that are currently loaded on the drum.

To delete a plate:

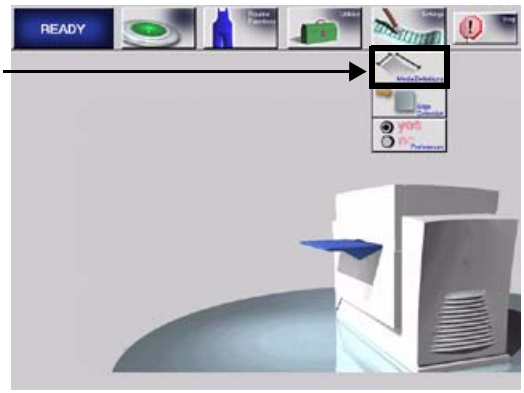
- Under **Media List**, select the plate you want to delete, and then click **Delete**.

To change the name of a plate:

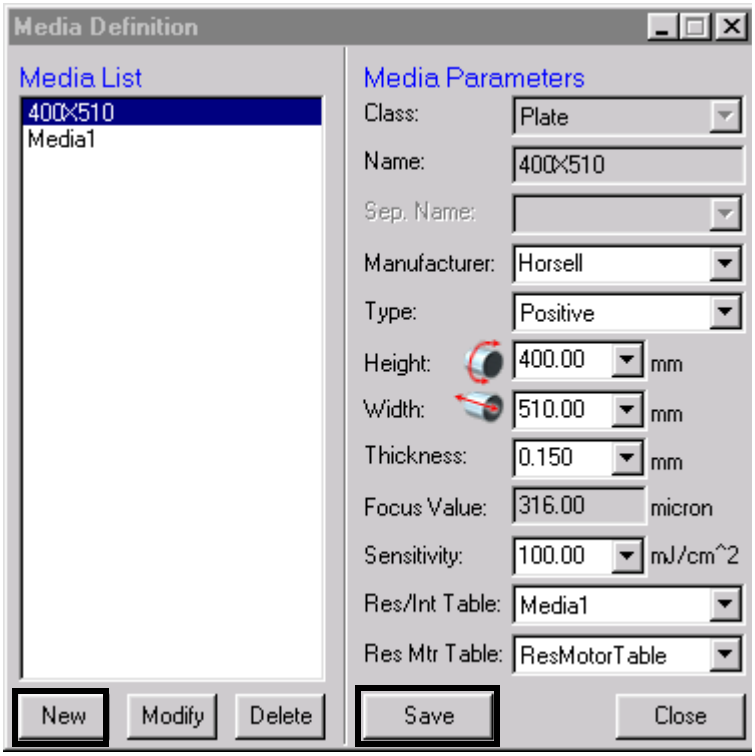
- Delete the plate, and define it again as a new plate.

Defining Media for the Lotem 400 Platesetter

1. From the **Settings** menu, select **Media Definitions** to open the Media Definition dialog box.



Plates and other media that have been defined are listed under **Media List**.



2. Click **New**.

3. In the **Class** box, select the type of media you are using.

4. In the **Name** box, type a name for the plate. For example, you might choose a name based on the type of plate or the user name. Recommended plate name includes the manufacturer name.

5. In the **Manufacturer** box, select a name from the list or type the name of the manufacturer.

6. From the **Type** box, select **Positive** or **Negative**. This parameter is important for the Exposure type. For example, for a positive plate (that is, negative working plate), choose **Positive** and perform a negative exposure.

7. In the **Height** box, select the height of your plate or type a value in millimeters.

8. In the **Width** box, select the width of your plate or type a value in millimeters.

9. In the **Thickness** box, select the thickness of your plate as listed on the packaging or type a value in millimeters. It is recommended that you verify the plate thickness with a micrometer. The range should be between 0.15 mm and 0.3 mm.

Note: Definition of new media requires calibration of the platesetter. Therefore, you should consult with a Creo engineer for the calibration of the following parameters: **Focus Value, Res/Int Table and Res Mtr Table**.

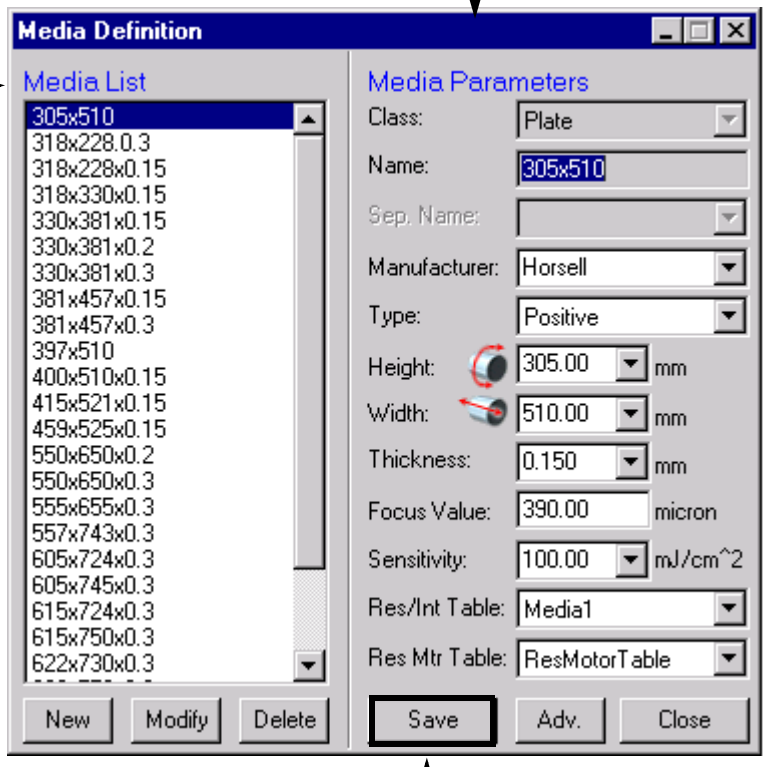
10. Click **Save** to save the new plate.
    The plate name appears under **Media list**.

11. Repeat these steps to define each plates you intend to use.

To modify plate parameters:

2. Under **Media Parameters**, change the settings as necessary.

1. Under **Media List**, select the plate whose parameters you want to modify. The parameters appear under Media Parameters.



3. Click **Save** to save the new parameters.

Note: You can not modify parameters for plates that are currently loaded on the drum.

To delete a plate:

- Under **Media List**, select the plate you want to delete, and then click **Delete**.

To change the name of a plate:

- Delete the plate, and define it again as a new plate.

Apply what you know...

Activity 7: Define New Media

Define new media according to the plates you will be using on-site.

Fill in the following information about the plates and then define them:

- Manufacturer:_____
- Type of exposure:_____
- Height: _____
- Width: _____
- Thickness: _____

Save the settings for the new plate.

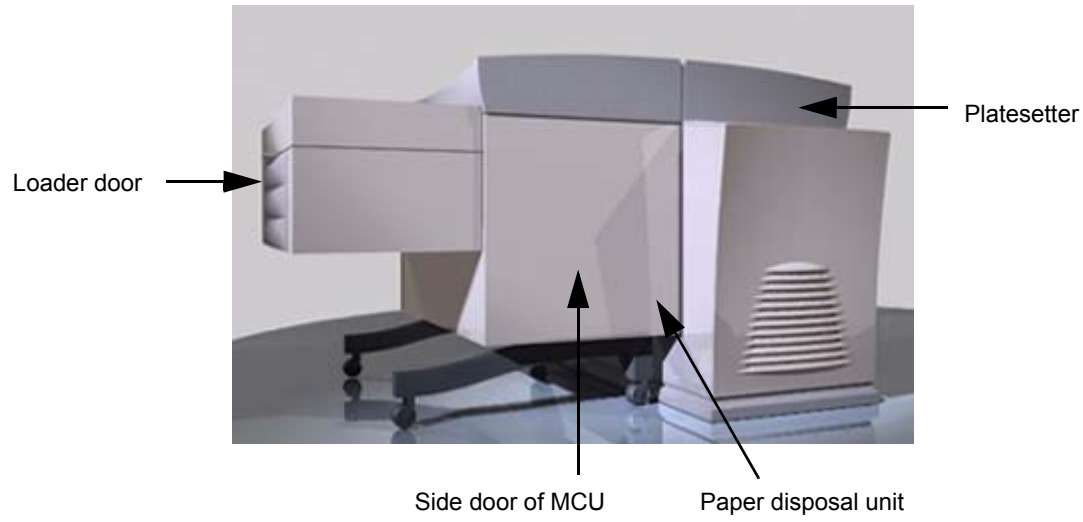
Lesson 2: Place Plates into the Automatic Plate Loaders

Why you need to know this...

If your platesetter has an automatic loader unit, you must learn how to place the plates into the loader after you define them. Once the plates are on the loader, they can be automatically loaded into the platesetter for exposure.

What you need to know...

Getting Acquainted with the Automatic Loaders: Single Cassette Unit (SCU) and Multi-Cassette Unit (MCU)



With an automatic plate loader, plate handling is fully automated and no user intervention is required.

The SCU has one cassette, and the MCU has three cassettes, each of which can hold different plates then the other cassettes. The cassette can contain up to 50 plates that are 0.3 mm thick or up to 70 plates that are 0.15 mm thick.

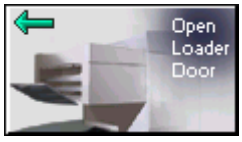
The MCU and SCU for the Lotem 400 platesetter support the removal of slip sheets.

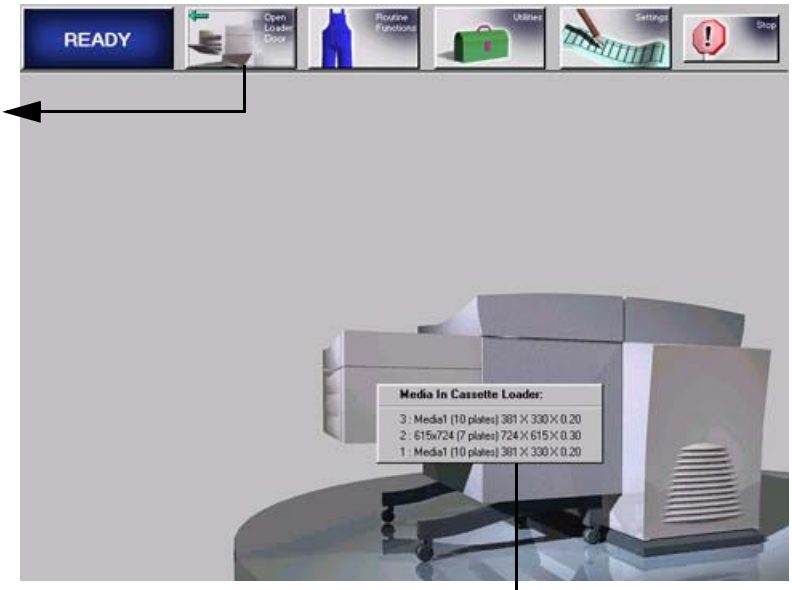
The sheets are automatically removed, as described in the section *"Paper Disposal" on page 78,* module 4, Loading and Unloading System.

The SCU and MCU loaders are operated similarly. This lesson focuses on the MCU.

Working with the MCU PC Controller Software

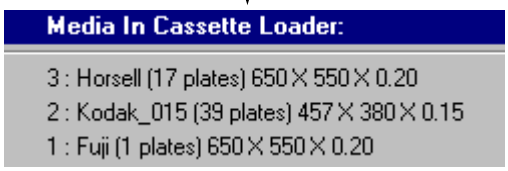
The software that comes with the Lotem 400 MCU is similar to the Lotem 400 PC Controller software. The main differences are as follows:





- To open the door for placing plates in the MCU, you click the **Open Loader Door** button.

- To view the contents of the cassettes, you right-click the MCU in the interactive online platesetter display.



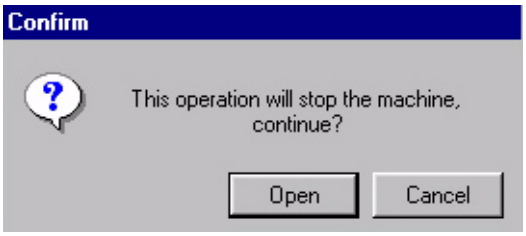
Note: To view updated information on the cassette contents, you must right-click each time you need that information. The Media In Cassette Loader window gives on-the-spot information and is not updated unless you right-click again on the MCU.

Placing Plates in the MCU

Note: The edges of the plates are sharp. Therefore, it is strongly recommended that you wear protective gloves when you handle plates.

Placing Plates in the MCU While Exposure Is in Progress

To place a plate in the MCU, you must first open the door of the MCU. If you press the **Open Loader Door** button while the platesetter is exposing, the following message appears:



- If you click **Cancel**, the exposure operation continues and the door does not open.
- If you click **Open**, the exposure operation stops and the job enters the failure queue. The status indicator switches to Service, and you can open the door of the MCU.

Note: While you are placing plates in the MCU, the platesetter remains in **Service** status, and the jobs in the workstation queue are put on hold. Therefore, you must resubmit the jobs to resume the queue when you finish loading the plates.

Placing Plates in the MCU While the Platesetter Is Not in Operation

1. Open the loader door.

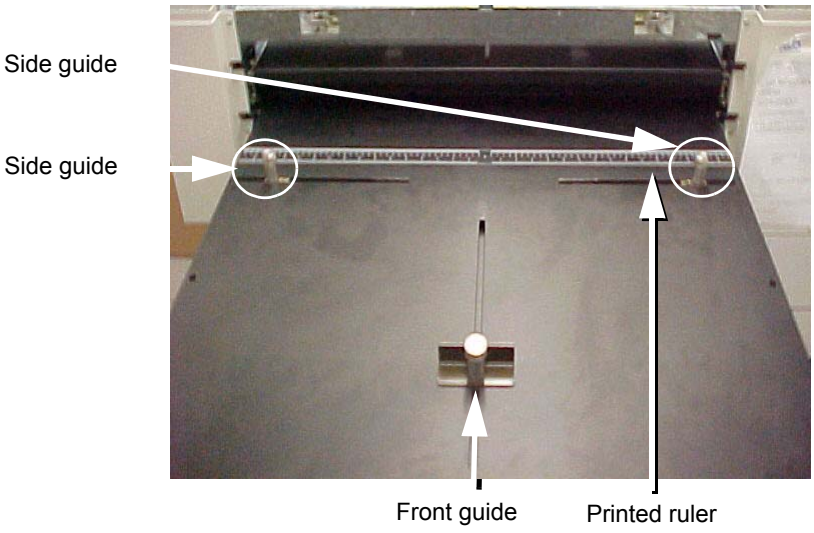
See the section *"Opening the Loader Door" on page 33*, in Module 2, Getting Started,

2. Pull out one of the three cassettes.
   When the cassette is extended all the way out, stoppers lock it in place.

Note: The two upper cassettes can extend all the way out; the lower one can extend only 2/3 of the way.

3. Place your plates into the cassette. Be sure to center the plates in the cassette. Note the printed ruler inside the cassette—this ruler should help you center the plates. Move the front guide and the two side guides as necessary.

Note: Avoid pressing the guides too hard against the plate. The plate could get stuck and then it may not be loaded properly into the platesetter.

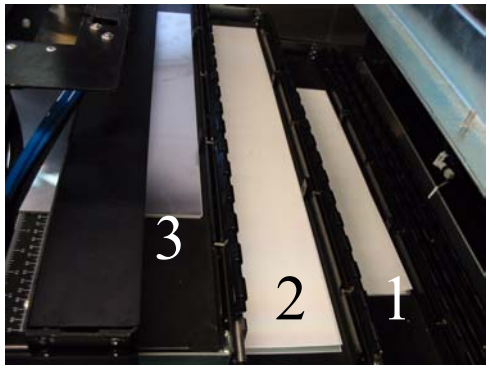


Note: When you load the lower cassette, moving one of the side guides causes the other guide to move as well. However, for the upper cassettes, you need to adjust each side guide separately; use the printed ruler to help you center the plate properly.

4. Press the latch on each side of the cassette to release the stoppers, and push the cassette into the MCU.

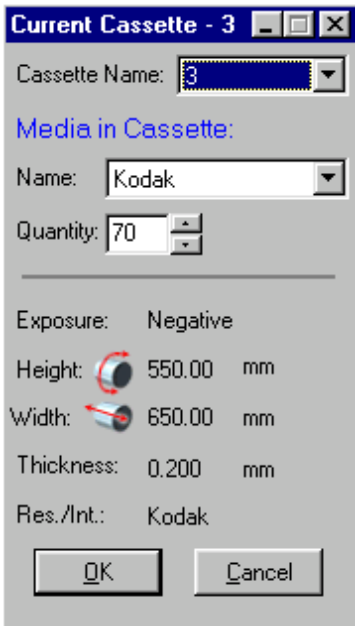


The MCU automatically identifies the number of the cassette that has been inserted. The cassettes are numbered 1, 2 and, 3, where 3 is the highest cassette and 1 is the lowest. When the cassette closes, in the PC Controller window the Current Cassette dialog box opens and displays the number of the cassette you just loaded.



5. In the Current Cassette dialog box, select the name of your plate and the quantity. Click **OK** to close the dialog box

.



6. If necessary, load plates into the other cassettes. The Current Cassette dialog box opens automatically when a cassette is inserted. Then, repeat step 5.

Note: When more than one cassette contains plates of the same type and size, the total number of plates is calculated. When one cassette is empty, the system automatically loads plates from other cassettes that contain the same type and size.

7. Close the door of the MCU.
   The status of the platesetter changes back to what it was before you opened the door of the MCU. To resume the jobs that were put on hold during plate loading, you must resubmit the jobs from the workstation.

Tips for Loading Plates and Using the Cassette Trays

- When you place a pack of plates into a cassette, separate the plates first and air them out briefly to prevent them from sticking together.
- After placing plates in a cassette, align them (like a block of paper in a printer). Plates that are not aligned properly in the cassette might cause some loading problems like Plate Centering Failures or Plate Didn't Reach Drum Position.
- Since the lowest tray has an easily adjustable sliding centering system and takes less time to load than the other trays, it is the best tray to use when you change your plate sizes frequently.
- To view the contents of the cassette, right-click the interactive platesetter view in the PC Controller software.



Apply what you know...

Activity 8: Place Plates in the MCU

Place plates in the MCU, as follows:

1. Place several plates of the same size in the lowest tray (tray#1). Be sure to use the side guides in the cassette to center the plates.
2. Select the plate name and quantity in the Current Cassette dialog box.
3. Place several plates of another type (if available) in tray#3. Be sure to use the printed rulers on the cassette to center the plates.
4. Select the plate name and quantity in the Current Cassette dialog box.

Module Summary

Having completed this module, you should be able to:

- Identify the different kinds of thermal plates
- Use plate geometry to set the parameters for your plates, press, and image offset
- Define and modify parameters for media
- Place plates into the automatic plate loaders

MODULE 4

Loading and Unloading Sequence

Why you need to know this...

To expose plates, you must learn how to load them correctly into the platesetter. Performing the loading and unloading sequence properly will ensure a successful exposure operation and will minimize loading and unloading failures.

Understanding the plate loading and unloading sequence will help you become familiar with the components that are involved. You will be able to better identify failures, if they occur, and fix them with the help of the support center.

Lesson 1 describes the loading and unloading sequence in the semiautomatic Lotem 400 platesetter.

Lesson 2 describes the sequence in the fully automatic Lotem 400 platesetter.

Lessons

Lesson 1: Load and Unload Plates: the Semiautomatic Lotem 400 Platesetter

Lesson 2: Load and Unload Plates: the Fully Automatic Lotem 400 Platesetter (with MCU)

Lesson 1: Load and Unload Plates: the Semiautomatic Lotem 400 Platesetter

Why you need to know this...

This lesson will lead you, step by step, through the loading and unloading operations and will show you how to identify the loading and exposure status in the PC Controller software.

What you need to know...

You can load plates into the platesetter in two ways:

- From the workflow station, as part of the exposure request. This method is the more common one.
- In the PC Controller software. After the plates are loaded, you send the exposure request from the workflow station.

In both methods, first, you place the plates manually on the loading tray (as described later in this module) and then, submit your loading request, either from the workflow station or from the PC Controller software.

Loading Plates From the Workflow Station

The workflow station can perform a complete exposure operation without your handling plate-loading separately in the PC Controller software. You just need to place a plate on the tray and define your exposure request at the workflow station.

When you send an exposure request for a job that includes more then one separation, you have to load one plate for each separation. For example, if you send a request to expose a job with three separations, you have to load three plates. Since you can load only one plate at a time, a message asking you to load another plate appears after the first one is loaded.



After you place the second plate on the loading tray, you can use one of the following methods:

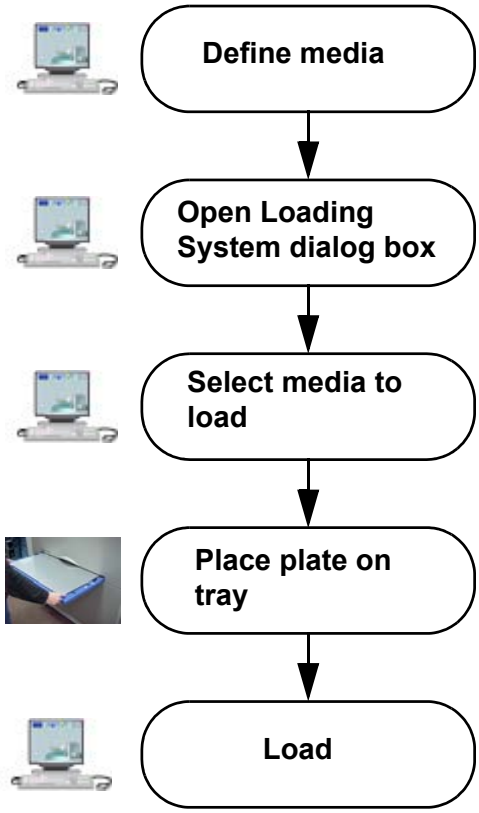
- Click **OK** in the Wait For User dialog box.
- Press the Loading plate pushbutton on the loading tray, and hold it until the message disappears from the PC Controller screen.



Loading plate pushbutton

Loading Plates From the PC Controller Software

The following diagram describes the loading sequence for the Lotem 400 platesetter.

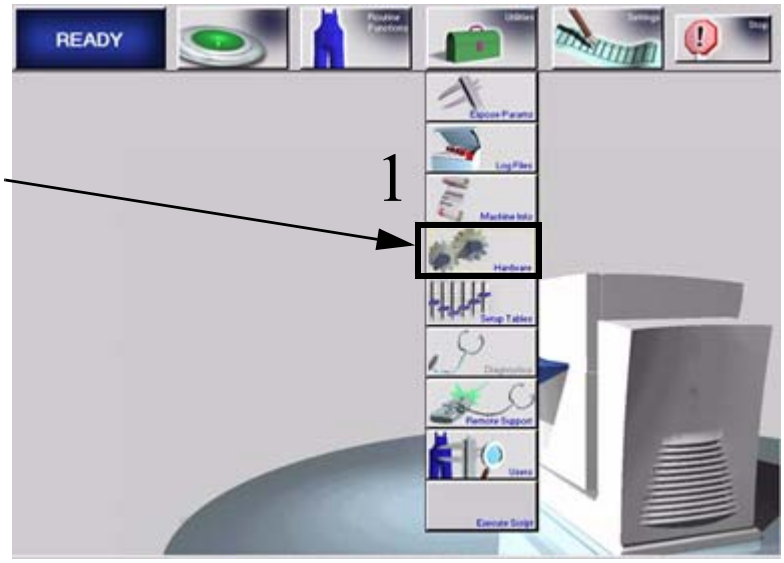


Defining media is the first step in the loading sequence. Since you learned how to define media in the previous module, this lesson begins with the second step, opening the Loading System dialog box.

Opening the Loading System Dialog Box

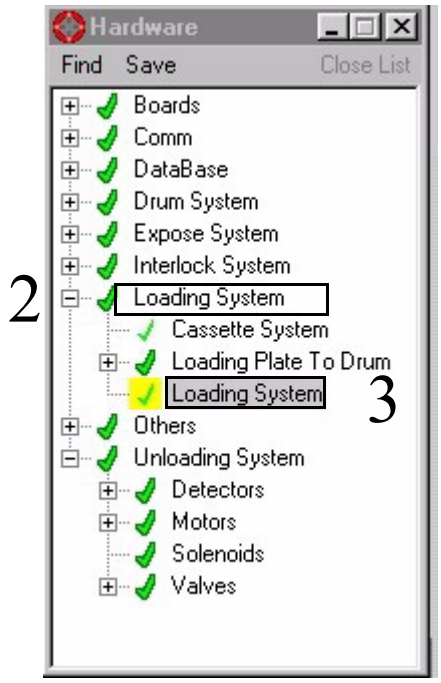
In the Loading System dialog box you define the loading parameters and activate the loading and unloading operations.

1. From the **Utilities** menu, select **Hardware**.



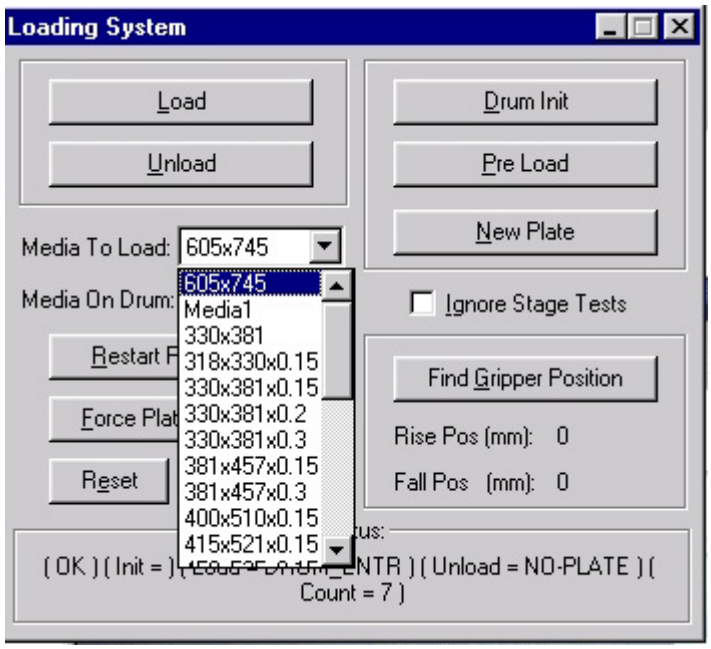
2. In the Hardware dialog box, double-click **Loading System** to expand the list.

3. In the expanded list, double-click **Loading System** to display the Loading System dialog box.



Selecting the Type of Media to Load

1. In the Loading System dialog box, open the **Media To Load** list.
   All the media you defined earlier appear in the list.



2. Select the type of media you want to use for the loading operation.

Placing the Plate on the Loading Tray

Note: The edges of plates are sharp. Therefore, it is recommended that you wear protective gloves when you handle plates.

1. Pick up the plate you want to load, and remove the paper sheets covering it.

2. Place the plate on the loading tray with the emulsion side down. Be sure to center the plate on the loading tray. The printed rulers on the loading tray should help you center the plate.

3. Push the plate inwards until both edges reach the loading stopper door inside the platesetter.



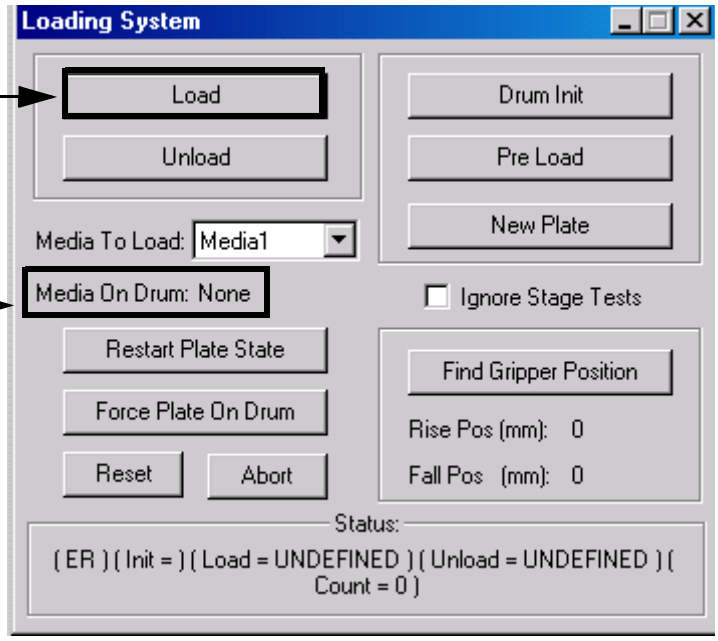
Loading the Plate

Note: Before submitting a loading request, make sure that a plate hasn't already been loaded onto the drum. The Loading System dialog box should say **Media On Drum: None**.
One of the most common loading failures is double loading.

For troubleshooting information on loading plates see, *"Lesson 2: Troubleshoot Common Problems" on page 111*.

Click **Load** to begin the loading sequence.

Make sure there isn't any plate on the drum.

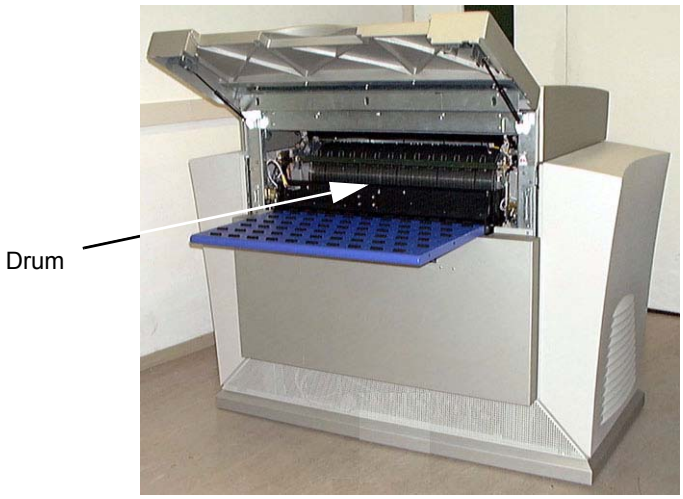


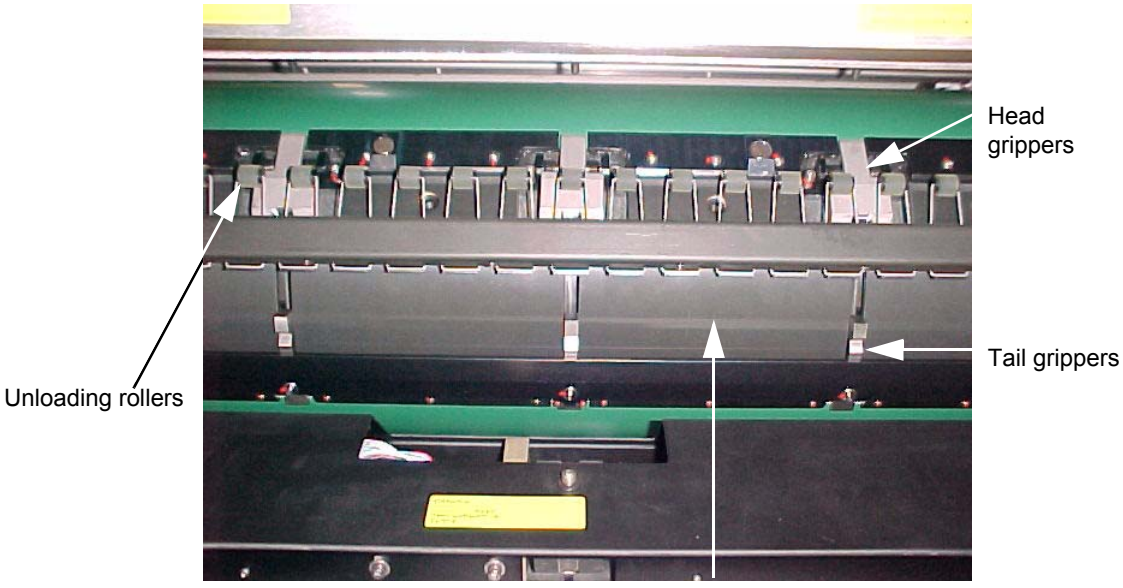
The platesetter begins the loading sequence and loads the plate onto the drum.

Note: The instructor will now show you the loading sequence inside the platesetter. Before you click **Load**, ask the instructor to open the platesetter's front door.

Observing the Loading Sequence Inside the Platesetter

In this section, the door of the platesetter will be open and you will see how the plate is loaded onto the drum. Observing the loading sequence will give you a better understanding of the loading operation and will allow you to identify loading failures quickly and easily.

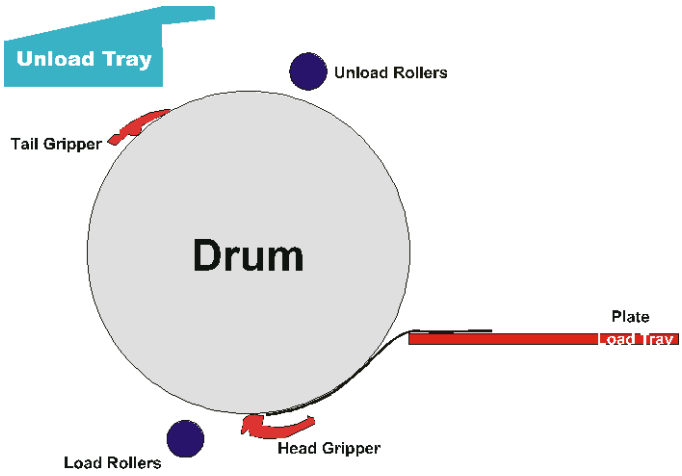




Note: You will not usually be able to observe a plate being loaded inside the platesetter due to the interlock system. This is a special case intended only for demonstration.

The head and tail grippers are located on the drum. During the loading operation, they grasp the plate and attach it to the drum.

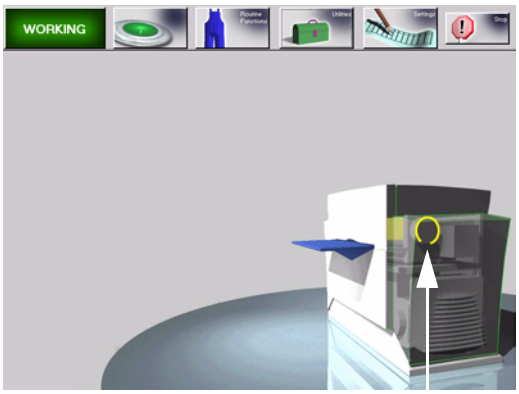
When you click **Load** in the Loading System dialog box, the drum starts rotating. The plate rolls from the loading tray toward the drum. The head grippers grasp the plate, and the loading rollers attach the plate to the drum.



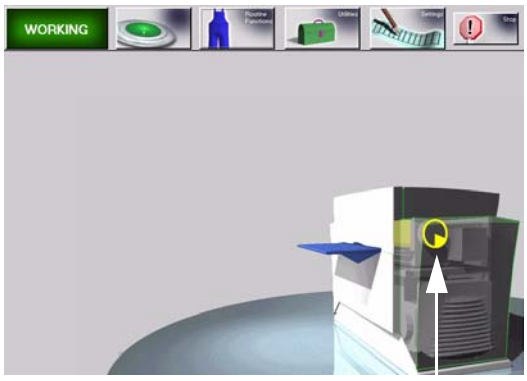
As the drum continues rotating, the tail grippers grasp the plate and lock it on the drum. The plate is now loaded on the drum and is ready for exposure.

Identifying Loading and Exposure Status in the PC Controller Screen

During loading and exposure, you can track the status of the operations in the PC Controller screen.



Track the loading status here.

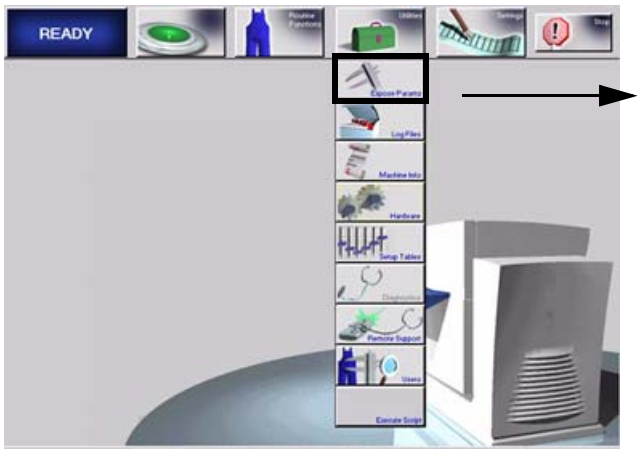


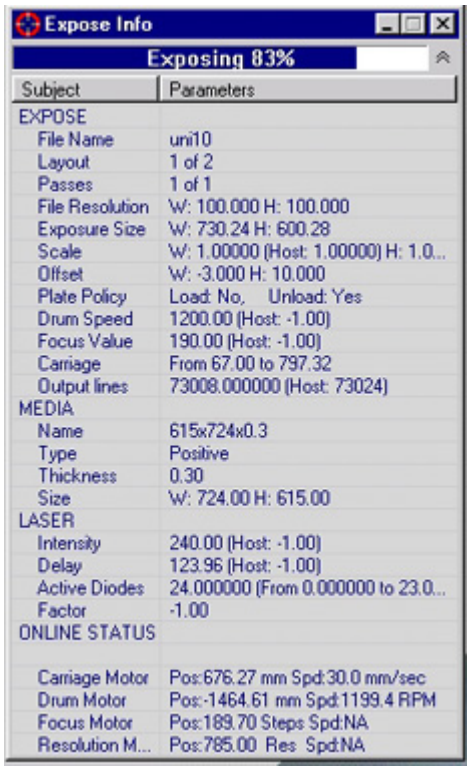
Track the exposure status here.

Exposure Information and Status

To see detailed information about the exposure operation and its status:

1. From the **Utilities** menu, select **Expose Params**.
   The Expose Info window appears.





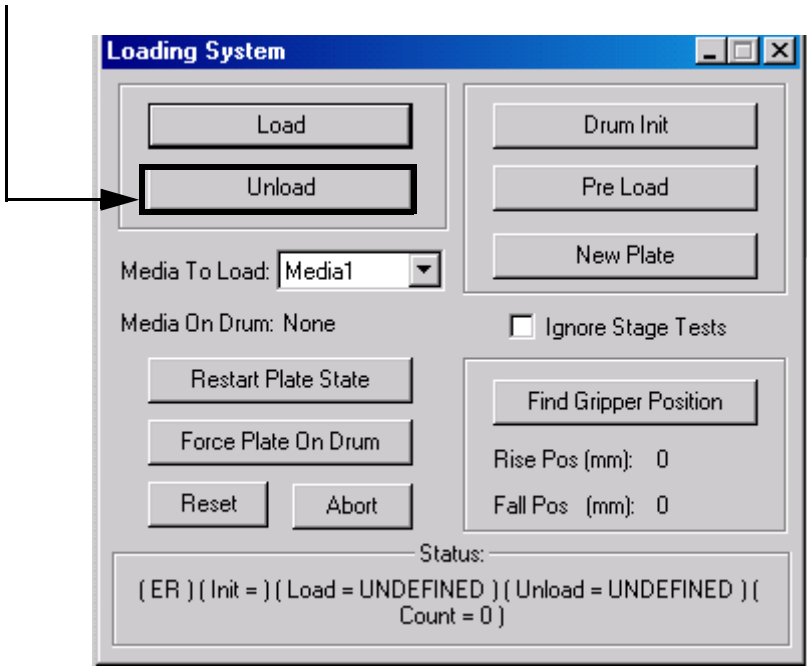
Unloading Plates

To manually unload plates from the PC Controller software, choose one of the following options:

A. Unloading from the Loading System dialog box:

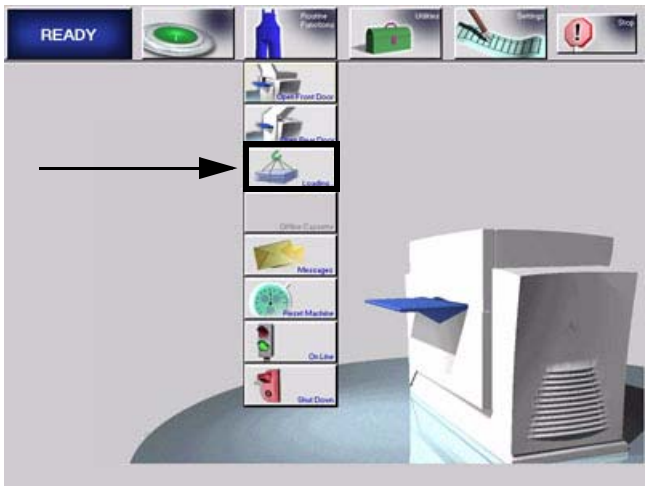
1. Open the Loading System dialog box as described earlier in this lesson, in the section *"Opening the Loading System Dialog Box" on page 64*.

2. In the Loading System dialog box, click **Unload**.



B. Unloading from the Routine Functions menu:

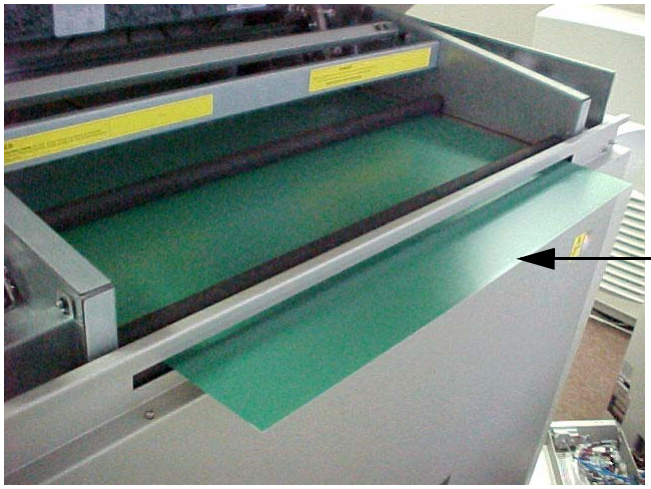
1. From the **Routine Functions** menu, select **Loading**.



2. Select **Unload Media**.



The platesetter unloads the plate.



If you have a conveyor and a processor at your site, the plate will unload directly into the conveyor, which will transfer it to the processor.



Apply what you know...

Activity 9: Load and Unload Plates: the Semiautomatic Lotem 400 Platesetter

1. Pick up a plate of the type that you use at your site, and load it via the PC Controller software, as described earlier in this lesson.

2. Before you click the **Load** button, make sure there isn't a plate on the drum already.

3. In the PC Controller software, track the loading status.

4. After the plate has been loaded onto the drum, unload it.

Lesson 2: Load and Unload Plates: the Fully Automatic Lotem 400 Platesetter (with MCU)

Why you need to know this...

After you place plates in the MCU and activate the loading process, the plates are loaded onto the drum of the platesetter for exposure. In this lesson you will learn how to load plates from the MCU into the platesetter, and how to unload them.

What you need to know...

Plates are usually loaded from the MCU into the Lotem 400 platesetter as part of an exposure request from the workflow station. After placing the plates in the MCU, you define the loading and exposure parameters at the workflow station. However, there will be times when you need to load plates directly from the PC Controller software, and only then activate the exposure process.

Loading Plates From the Workflow Station

With the MCU, you can submit jobs requiring a plate that is different from the one currently in use.

The PC Controller software automatically checks whether the requested plate size exists in one of the cassettes.

If the requested plate is available, it is loaded from the cassette when this job is ready to be processed.

If the requested plate is not available, the job is aborted. A warning message appears at the workflow station and in the PC Controller software, and the workflow application proceeds to the next job in the queue.

See more information on workflow to Lotem connectivity on:
Brisque to Lotem Family Connectivity User Guide
Prinergy to Lotem 800 II / Lotem Quantum Family Connectivity User Guide

Loading Plates From the PC Controller Software

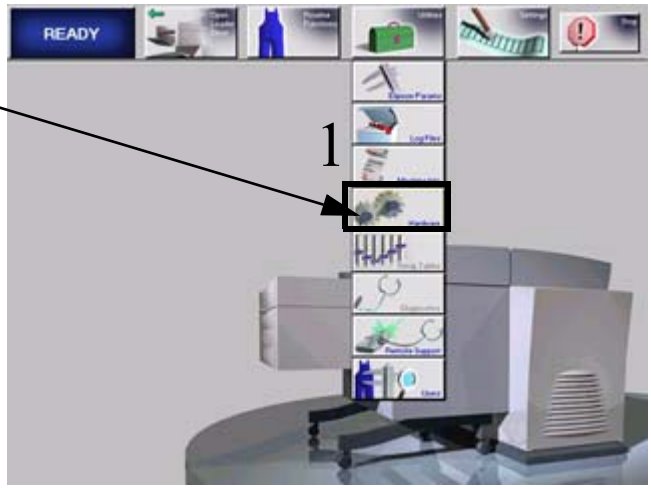
After you define your media and place plates into the MCU, you need to perform the following steps to load plates:

1. Open the Loading System dialog box.
2. Select the media you want to load and the punching parameters.
3. Initiate the plate-loading process.

Opening the Loading System Dialog Box

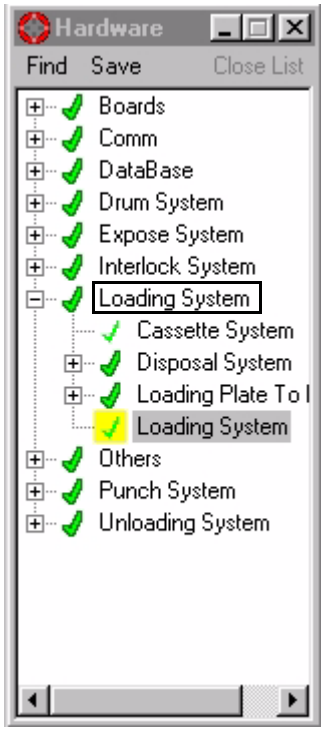
In the Loading System dialog box you define the loading parameters and activate the loading and unloading operations.

1. From the **Utilities** menu, select **Hardware**.



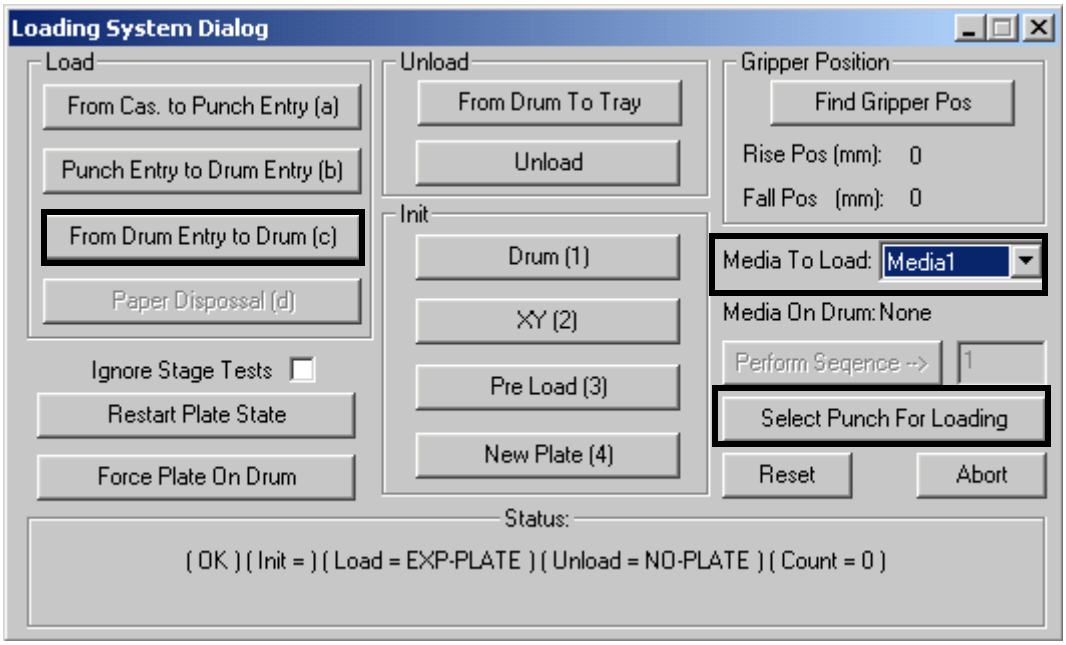
2. In the Hardware dialog box, click **Loading System** to expand the list.

3. In the expanded list, double-click **Loading System** to display the Loading System dialog box.



Selecting the Type of Media to Load, Selecting the Punch, and Loading

1. In the Loading System dialog box, open the **Media To Load** list.
   All the media you defined earlier appear in the list. The cassette number does not.



2. If you want the platesetter to punch the plate during the loading operation, click the **Select Punch For Loading** button.

3. Click the **From Drum Entry to Drum (c)** button to load the plate. (Only engineers use the first two buttons (a and b)).
   The platesetter starts the loading sequence and load the plate on the drum.

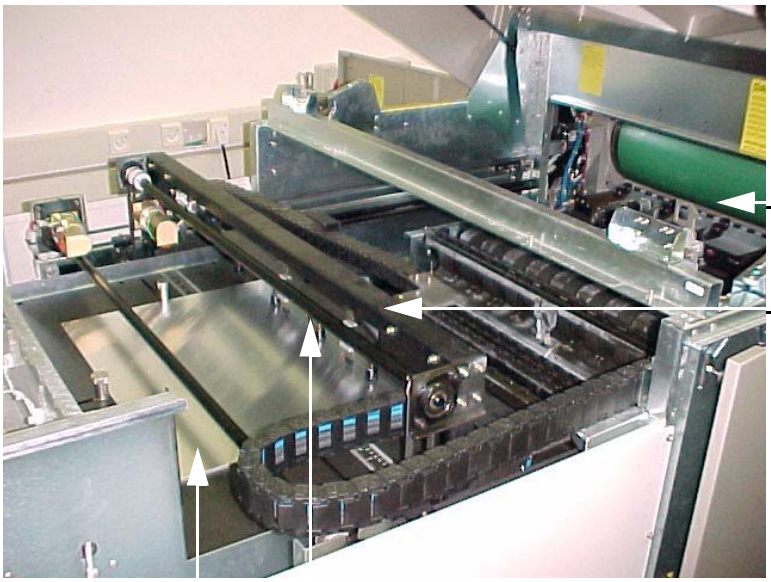
Note: Before submitting the loading request, make sure that there isn't a plate loaded on the drum. The Loading System dialog box should indicate: **Media On Drum: None**.
One of the most common loading failures is double loading.

See more information on loading plates troubleshooting in, *"Lesson 2: Troubleshoot Common Problems" on page 111.*

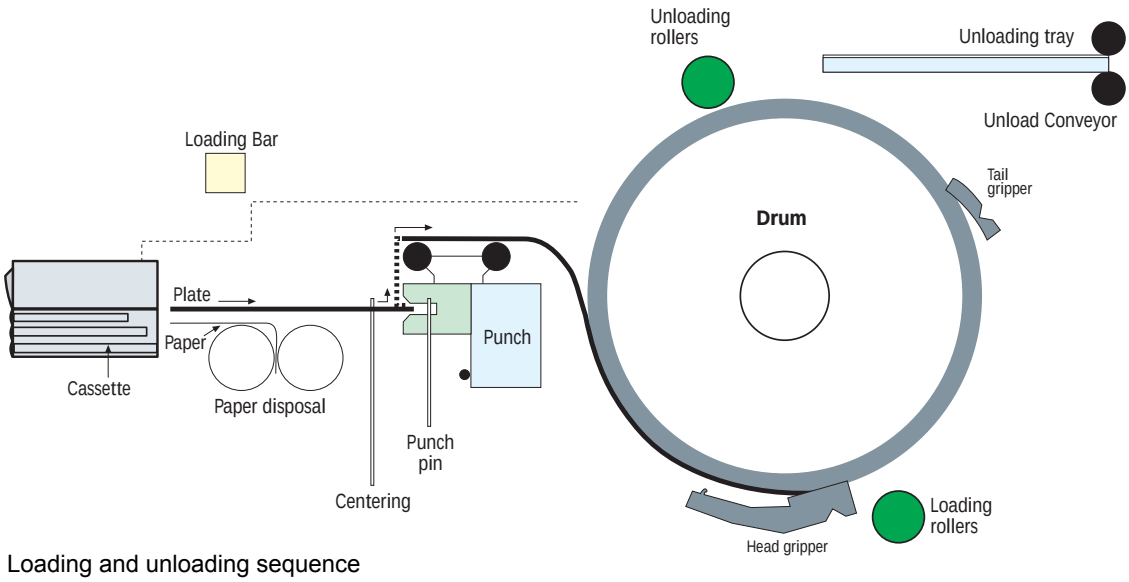
Note: The instructor will now remove the top cover of the MCU and show you the loading sequence inside the platesetter. This demonstration is for instructional purposes only. Do not ever remove the cover of the MCU when loading is in progress.

Observing the Loading Sequence Inside the Platesetter

In this section, the door of the platesetter will be open and you will see how the plate is loaded onto the drum. Observing the loading sequence will give you a better understanding of the loading operation and will allow you to identify loading failures quickly and easily.



Lotem 400 with MCU, with the top cover of the MCU removed removed.



Loading and unloading sequence

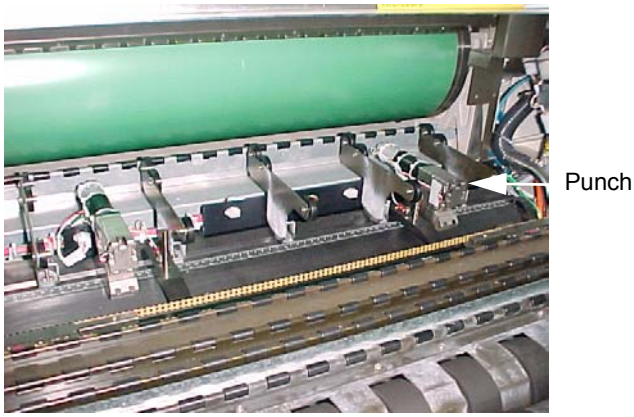
After you submit a loading request, the loading sequence proceeds as follows:

1. The loading bar moves toward the cassette. A detector determines whether there is a paper sheet or a plate on the cassette.

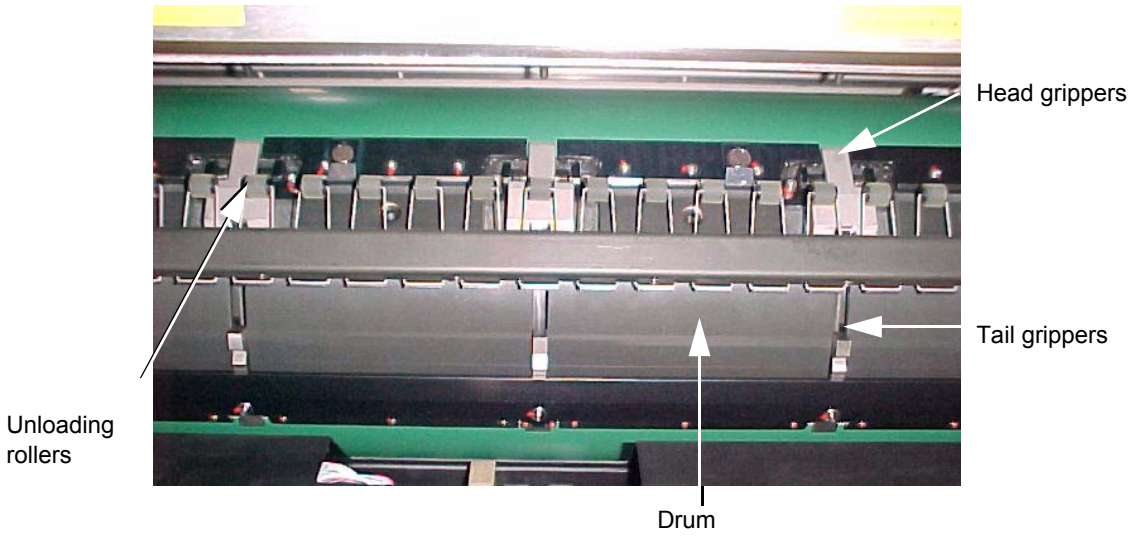
2. If paper is detected, tweezers grab it and move it to the paper disposal bin. The loading bar goes back to the cassette to pick up the plate.

   If a plate is detected, suction cups on the loading bar pick up the plate and move it toward the centering system. The plate is then centered.

3. The loading bar pulls the plate toward the punch system, where the plate is punched.



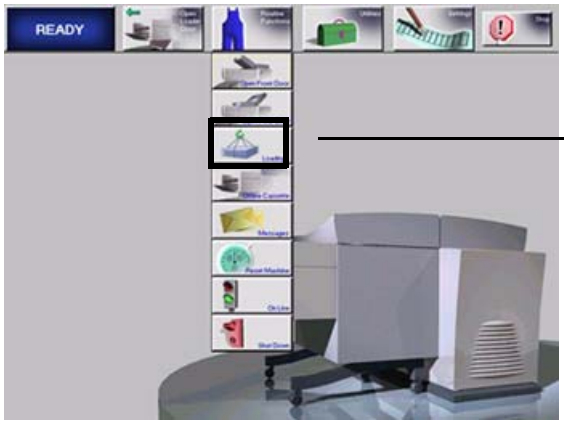
4. The loading bar moves the plate toward the drum for loading. The head grippers grasp the plate, and the loading rollers attach the plate to the drum. As the drum continues rotating, the tail grippers grasp the plate and lock it on the drum. The plate is now loaded and ready for exposure.

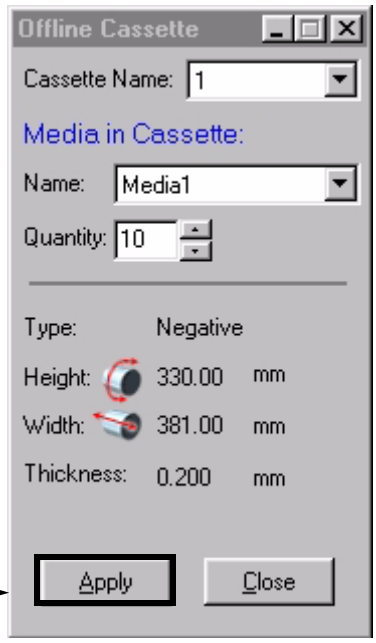


Note: You will not usually be able to observe a plate being loaded inside the platesetter due to the interlock system. This is a special case intended only for demonstration.

Selecting Media During Plate Exposure

The Offline Cassette dialog box enables you to define plates while exposure is in progress.To change the media offline while the platesetter is working:





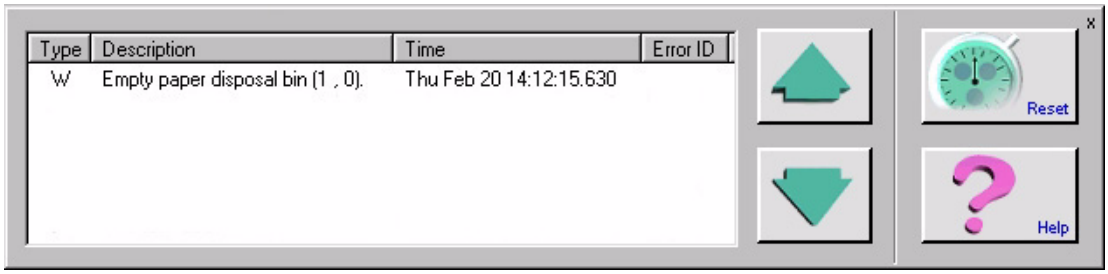
1. From the **Routine Functions** menu, click **Loading** to open the Offline Cassette dialog box.

2. Enter the parameters for the desired media, and click **Apply**.

Paper Disposal

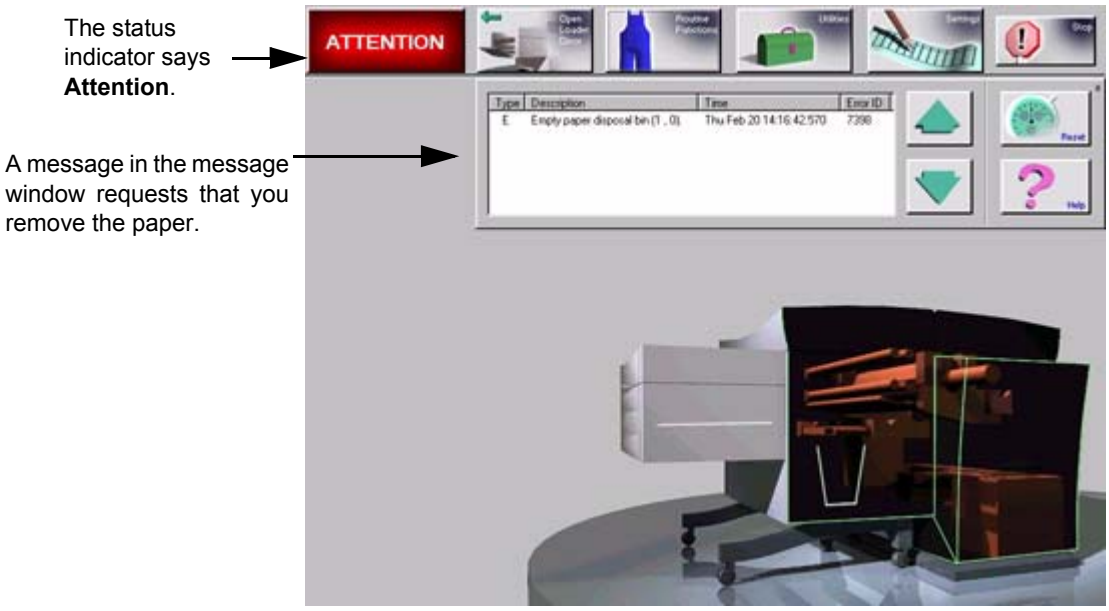
The plates used in the MCU for the Lotem 400 platesetter have a slip sheet. The paper is automatically separated from the plate when the plate is loaded into the platesetter, and the paper is collected in the paper disposal unit. The unit is located behind the left and right side door of the MCU.

A counter in the PC Controller software counts the number of slip sheets inside the paper disposal unit. When the unit reaches 30 slip sheets, a warning message appears in the message window:

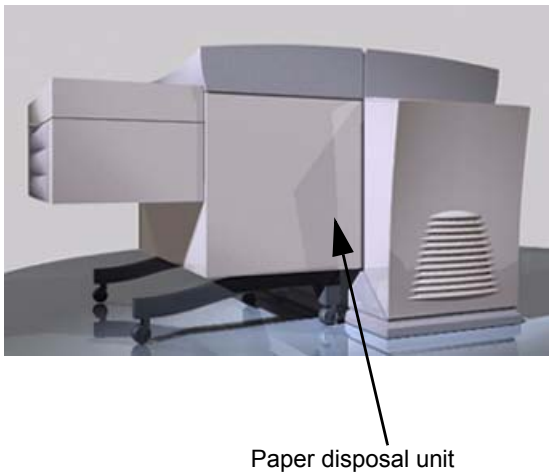


You can either empty the paper at this time or continue working until the unit is full and the platesetter stops. It is recommended that you empty the paper when the first warning message appears.

When the counter reaches 50 slip sheets, the paper disposal unit is full and must be emptied. The following indicators appear:



Collecting the Paper From Paper Disposal Unit





Pulling the side door of the MCU

Note: You cannot open the paper disposal door while a plate is being loaded, but you may open the paper disposal door during the exposure and unloading processes.

To empty the paper disposal unit:

1. Open one of the side doors of the MCU: pull the door from the bottom or the side to release the magnetic latch.

Note: When a door of the MCU opens, the platesetter status switches to Service and the paper disposal motor interlock is activated.

2. Pull out the paper.

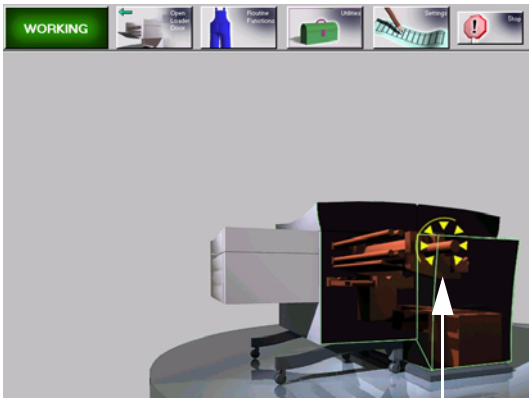


3. Reset the status of the platesetter: In the Message dialog box, click the **Reset** button, and when prompted, click **Yes**.

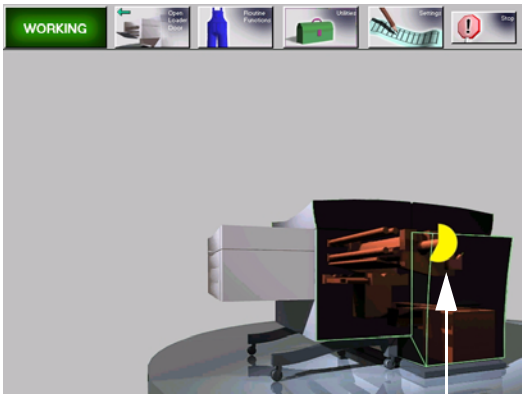
The platesetter status switches to **Ready**, **Off-line**, or **Working**, depending on the status before the paper disposal unit became full.

Identifying Loading and Exposure Status in the PC Controller Screen

During loading and exposure, you can track the status of the operations in the PC Controller screen.



Track the loading status here.

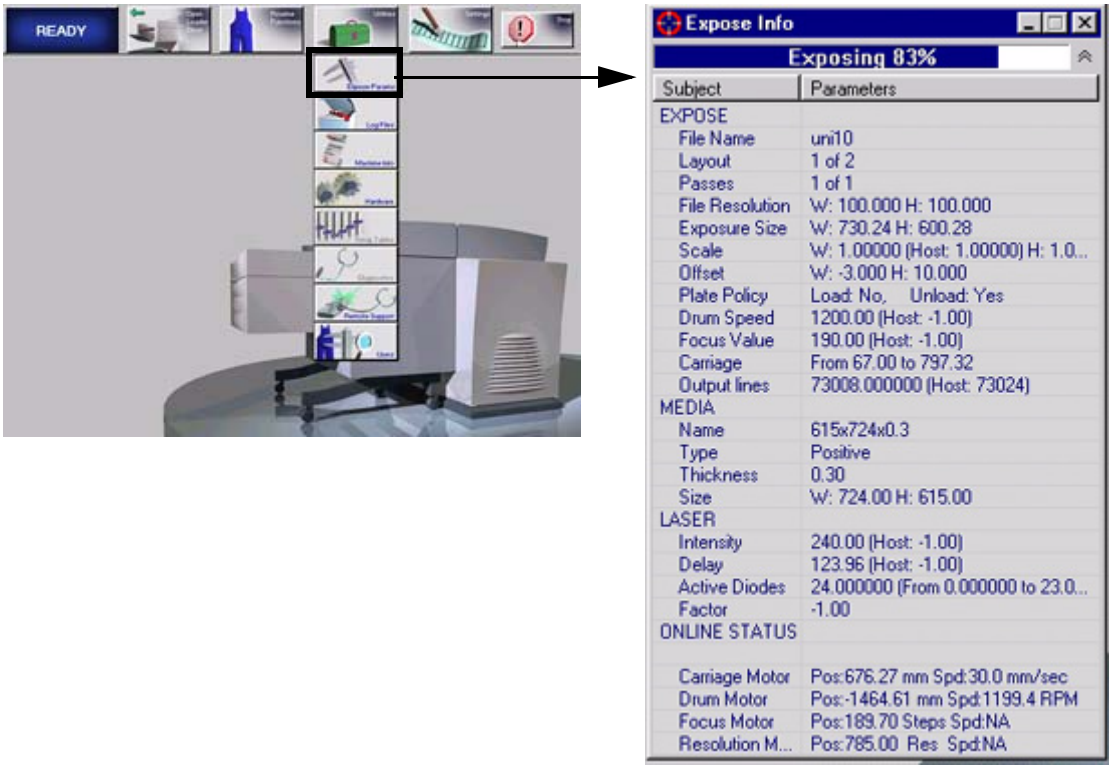


Track the exposure status here.

Exposure Information and Status

To see detailed information about the exposure operation and its status:

1. From the **Utilities** menu, select **Expose Params**.
   The Expose Info window appears.



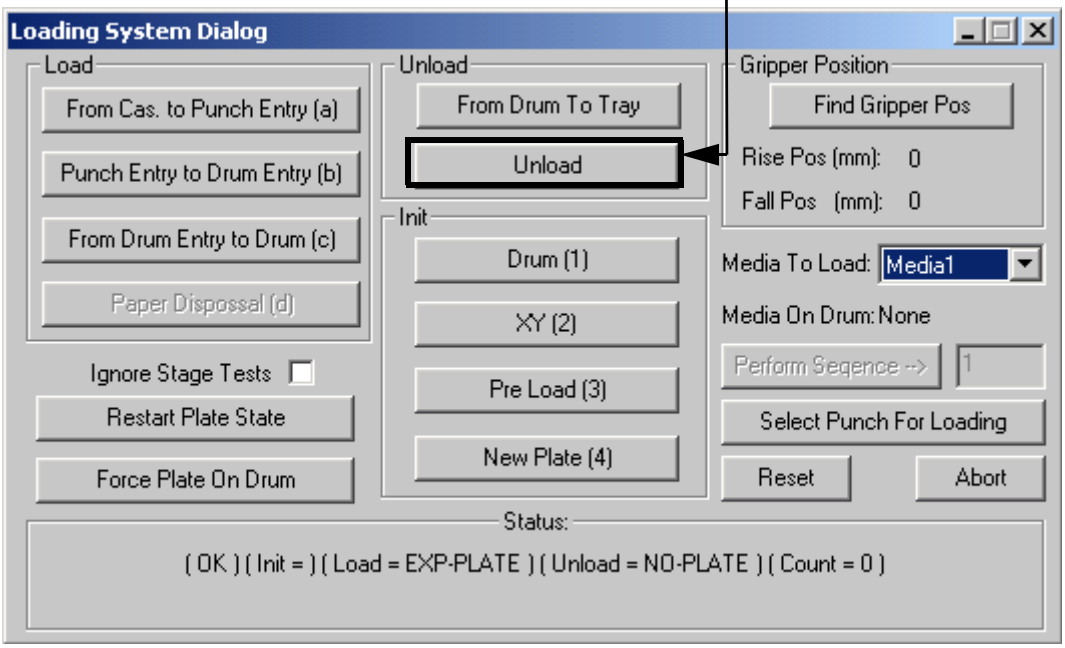
Unloading Plates

To manually unload a plate from the PC Controller software, choose one of the following options:

A. Unloading from the Loading System dialog box:

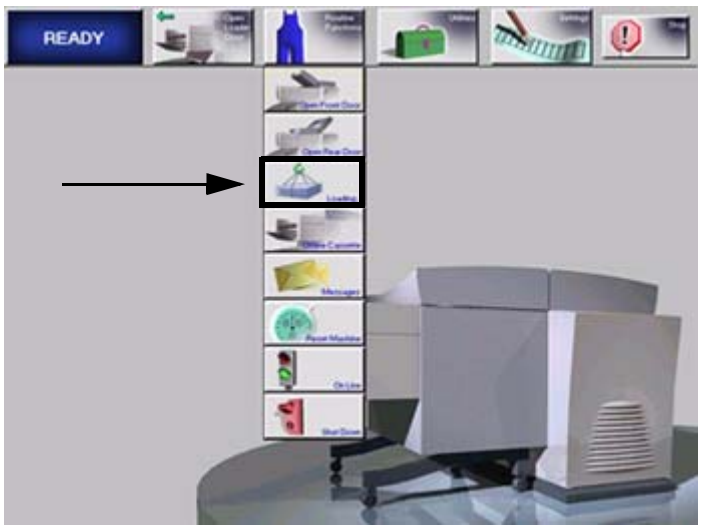
1. Open the Loading System dialog box as described earlier in this lesson, in the section *"Opening the Loading System Dialog Box" on page 74*.

2. In the Loading System dialog box, click **Unload**.



B. Unloading from the Routine Functions menu:

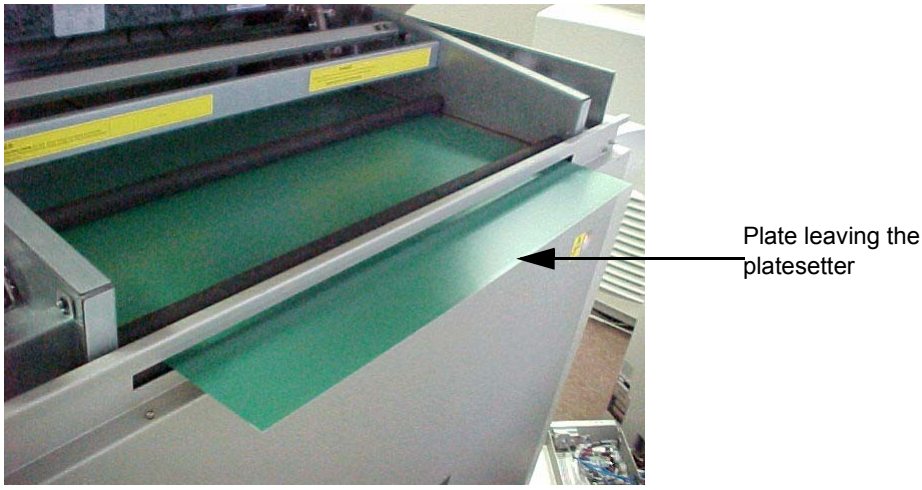
1. From the **Routine Functions** menu, select **Loading**.



2. Select **Unload Media**.



The platesetter will now unload the plate.



If you have a conveyor and a processor at your site, the plate will unload directly into the conveyor, which will transfer it to the processor.



Apply what you know...

Activity 10: Load and Unload Plates: the Fully Automatic Lotem 400 Platesetter

1. Open the Loading System dialog box.
2. Select the media you want to load and the punch parameters.
3. Load the plate.
4. In the PC Controller software, track the loading status.
5. After the plate has been loaded, open the paper disposal unit and remove the paper sheets.
6. Unload the plate.

Module Summary

Having completed this module, you should be able to:

- Load and unload plates
- Identify the components involved in loading and unloading
- Identify loading and exposure status in the PC Controller software
- Remove paper from the paper disposal unit (if you have a fully automatic Lotem 400)

MODULE 5

Workflow

Why you need to know this...

Your Lotem 400 platesetter is connected to one of the Creo workflow stations: Brisque, Prinergy, or PS/M. This module gives you a short overview on the connectivity workflow between your platesetter and your workflow station—how they are connected, and how they work together.

Select the lesson that applies to your configuration.

Lessons

Lesson 1: Identify Components of the Brisque to Lotem 400 Workflow

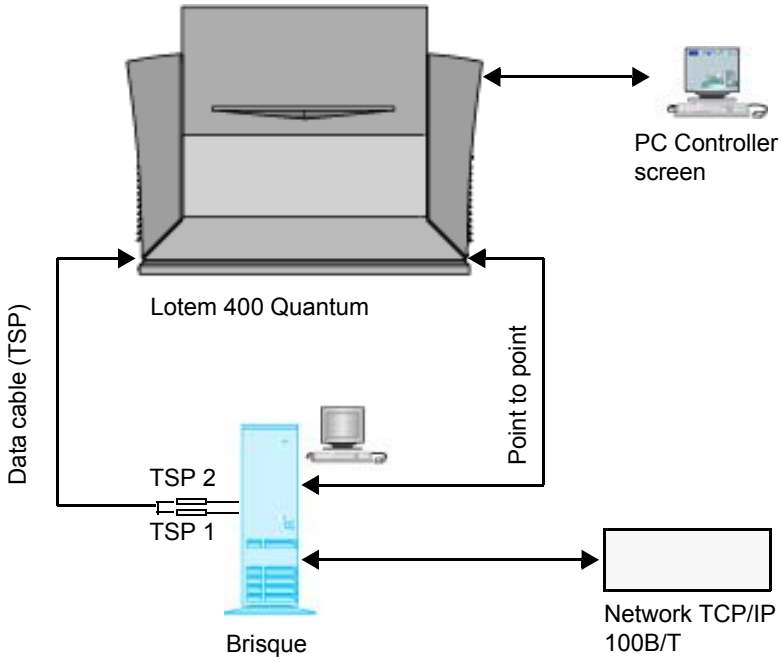
Lesson 2: Identify Components of the Prinergy to Lotem 400 Quantum Workflow

Lesson 3: Identify Components of the Lotem 400 Expose with PS/M Workflow

Lesson 1: Identify Components of the Brisque to Lotem 400 Workflow

What you need to know...

Overview of the Brisque to Lotem 400 Workflow



The Brisque to Lotem 400 configuration consists of a Lotem 400 platesetter that is connected to a Brisque workstation via a TSP cable.

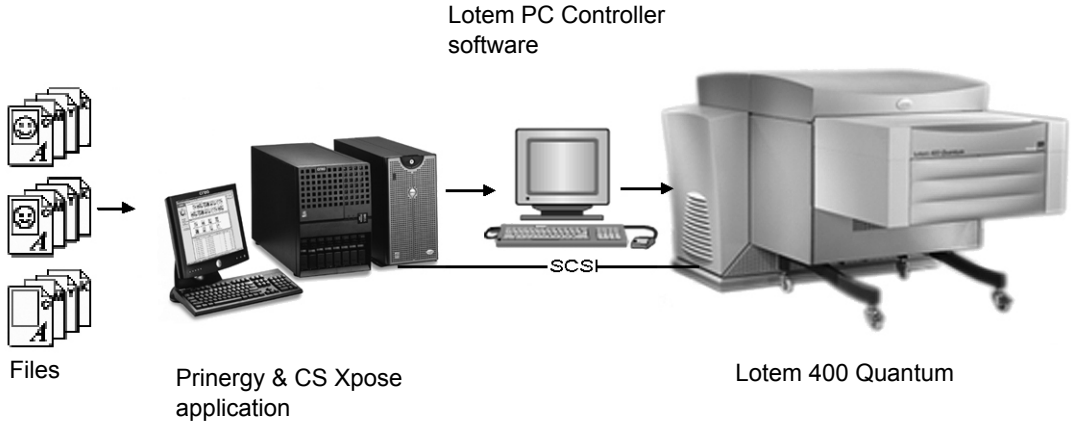
The Brisque workstation sends job data to the Lotem 400 platesetter and the PC Controller software via a TSP cable or over the network. The TSP cable enables commands to be transmitted from the Lotem platesetter to the Brisque workstation and transfers information such as device specifications, media definitions, press formats, and job definitions.

The PC Controller software constantly checks the workflow status. Information is transferred continuously from the platesetter to the PC Controller software, and vice versa.

Lesson 2: Identify Components of the Prinergy to Lotem 400 Quantum Workflow

What you need to know...

Overview of the Prinergy to Lotem 400 Quantum Workflow



The Prinergy to Lotem 400 Quantum configuration consists of a Prinergy workstation and Lotem 400 platesetter connected by a SCSI cable.

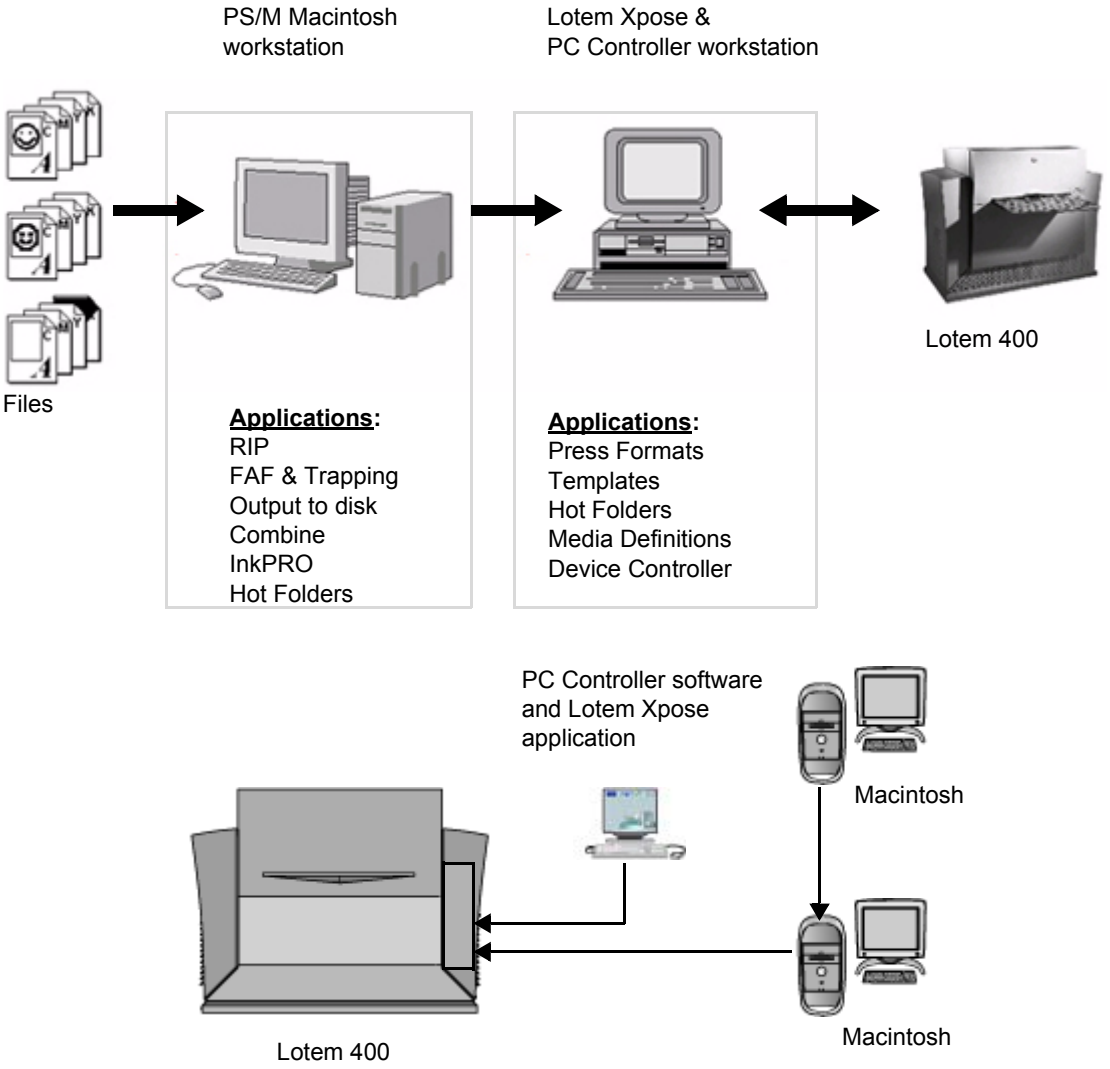
The CS Xpose application resides on the Prinergy workstation as a stand-alone application and serves as the pipeline between the Prinergy workstation and the Lotem 400 Quantum platesetter. Using a SCSI connection, CS Xpose takes rasterized data generated from the Xpose job ticket processor (JTP) and downloads the data to the Lotem PC Controller software for exposure or proofing.

The PC Controller software applies exposure, layout, and media parameters to the job before it is exposed by the Lotem 400 Quantum platesetter.

Lesson 3: Identify Components of the Lotem 400 Expose with PS/M Workflow

What you need to know...

Overview of the Lotem 400 Expose with PS/M Workflow



The Lotem 400 Expose with PS/M configuration consists of a Lotem 400 platesetter that connects to a Macintosh-based PS/M digital front end.

The PS/M application RIPs, traps, and prepare files for proofing before the files are exposed by the Lotem 400 platesetter. The files generated on the PS/M are copied over the network to the Lotem 400 and the Lotem Xpose application in the PC Controller software.

The job is then exposed by the Lotem 400 platesetter via the Lotem Xpose application.

Module Summary

You should now be able to describe the connectivity workflow between your platesetter and your workflow station.

MODULE 6

Remote Support

Why you need to know this...

Remote support enables the Creo Response Center to access your applications and setup from an off-site location. This option is very useful for solving problems quickly and efficiently.

To activate the remote support option, you must follow the procedures outlined in this module and adhere the remote support safety guidelines.

Lessons

Lesson 1: Connect to the Response Center

Lesson 1: Connect to the Response Center

What you need to know...

What Is Remote Support?

Remote support enables the Creo Response Center to access your Lotem 400 platesetter and control its operations through the PC Controller software.

Advantages of Remote Support

The ability to access your Creo applications from a remote location has many advantages:

- The response time for service calls is faster.
- Site downtime is greatly reduced.
- If a problem must be fixed on-site, the Response Center can identify it in advance and send an engineer with the necessary information and equipment.
- Operators can receive training from their own location and view demonstrations of operations through the PC Controller software.

Requirements for Remote Support

There is only one basic requirement for remote support: a modem connected to a telephone line.

A separate telephone line dedicated to remote support is recommended. Since you need to talk to the Response Center during the remote support connection, two telephone lines should be available.

The software required for the remote support connection is supplied with the Lotem platesetter and installed during the Lotem installation.

Connecting to the Response Center

Note: The activation of remote support on the Lotem platesetter should be performed only upon request by the Response Center. During the connection, you should keep communicating by phone with the Response Center staff and follow their instructions.

During the remote support session, do not touch your mouse or keyboard unless you are required to do so by the Response Center.

See the safety guidelines for remote support later in the section, *"Following Remote Support Safety Guidelines" on page 104*.

There are two ways to activate remote support on the Lotem:

- From the PC Controller software. This method is shorter and is the recommended way to connect.
- Manually. Use this method if your platesetter is not operating and the PC Controller software is thus inactive.

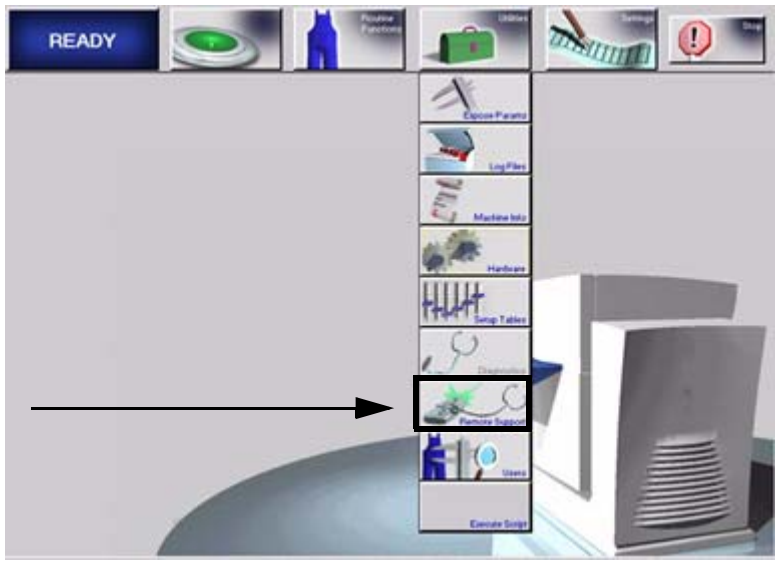
Note: Lotem 400 Quantum users: in both methods, Lotem 400 Quantum users are required to activate an additional application, **Splot**.

After you activate remote support (by means of either method), the **Remote Applications** dialog will appears on your screen and remains there through the whole remote support session (see page 99). Do not click **Quit Remote Session** unless you really want to stop the remote support session.

Activating Remote Support from the PC Controller Software

1. Turn on the modem that is connected to the workflow station, and verify that it is connected to a phone line.

2. From the **Utilities** menu, select **Remote Support**.

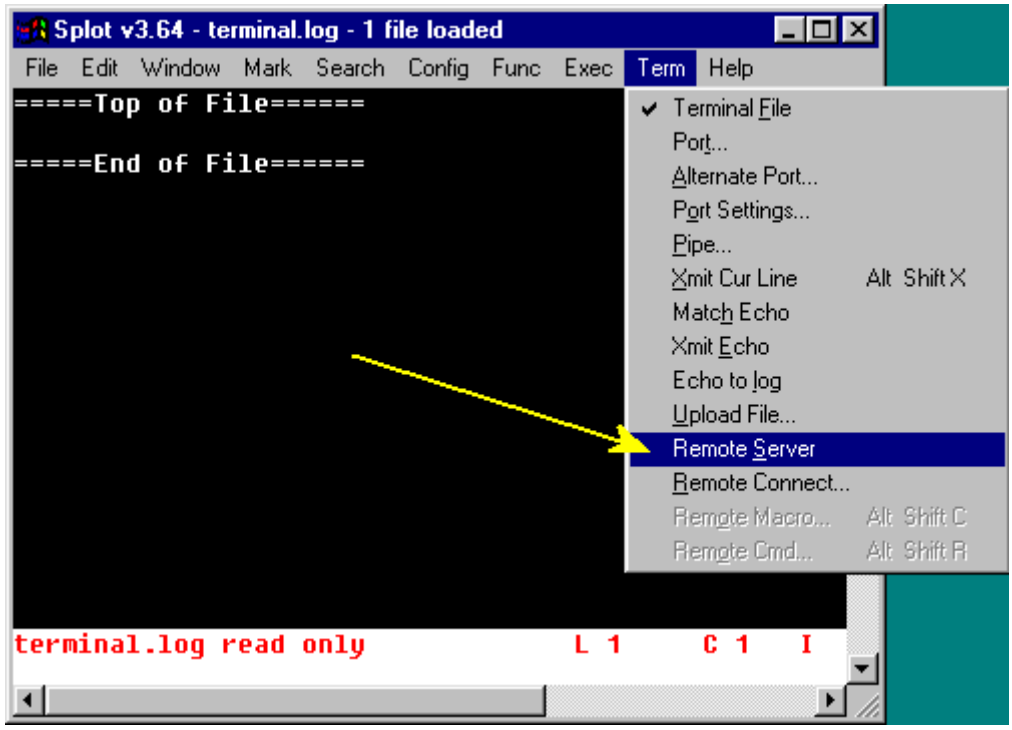


3. If you have a Lotem 400 Quantum, activate the **Splot** application:

   a. Double-click the **Splot** icon on the desktop.



   b. From the **Term** menu of the Splot application, select **Remote Server**.



Activating Remote Support Manually

Manual activation is necessary if the PC Controller software is not operational.

To establish the remote support connection manually, you need to start three applications: VNC, NetMeeting, and Splot for the Lotem 400 Quantum. Follow these steps:

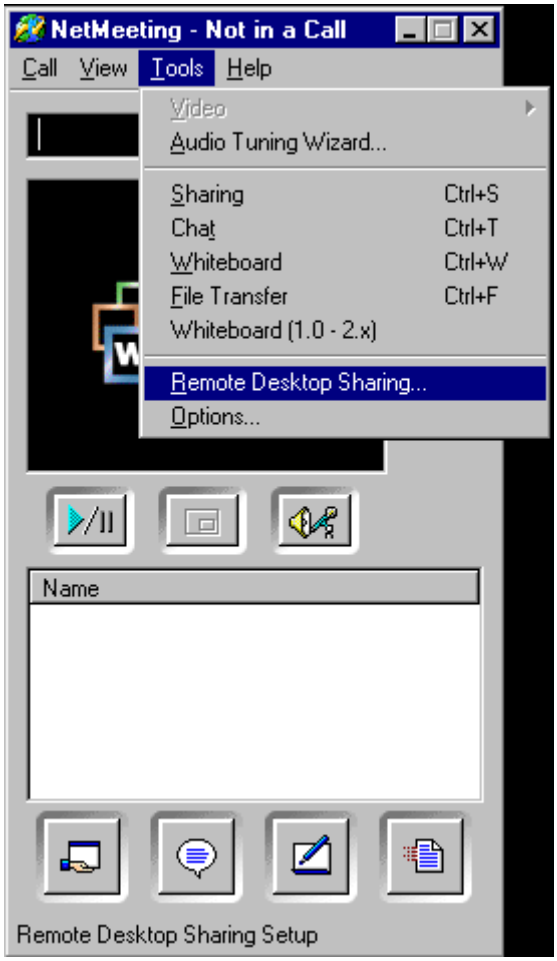
1. Turn on the modem that is connected to the workflow station, and verify that it is connected to a phone line.

2. Activate the VNC application: from the **Start** menu, select **Programs > Vnc > Run WinVNC (App Mode)**.

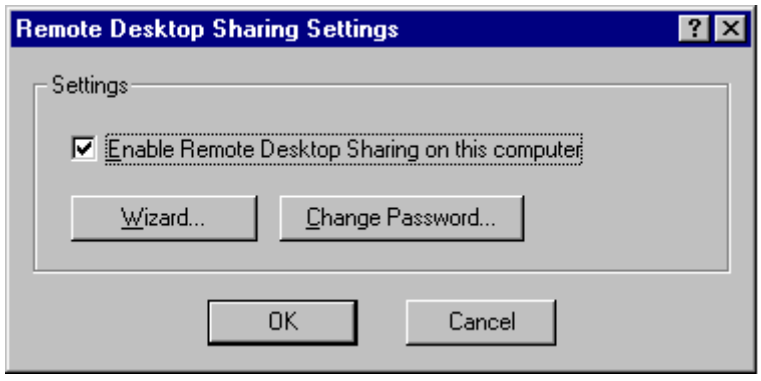
3. Activate the NetMeeting application:

   a. From the **Start** menu, select **Programs > NetMeeting**.

   b. From the **Tools** menu, select **Remote Desktop Sharing**.



   c. In the Remote Desktop Sharing Settings dialog box, select the Enable Remote Desktop Sharing check box**,** and click **OK**.



d. From the **Call** menu, select **Exit and Activate Remote Desktop Sharing**.

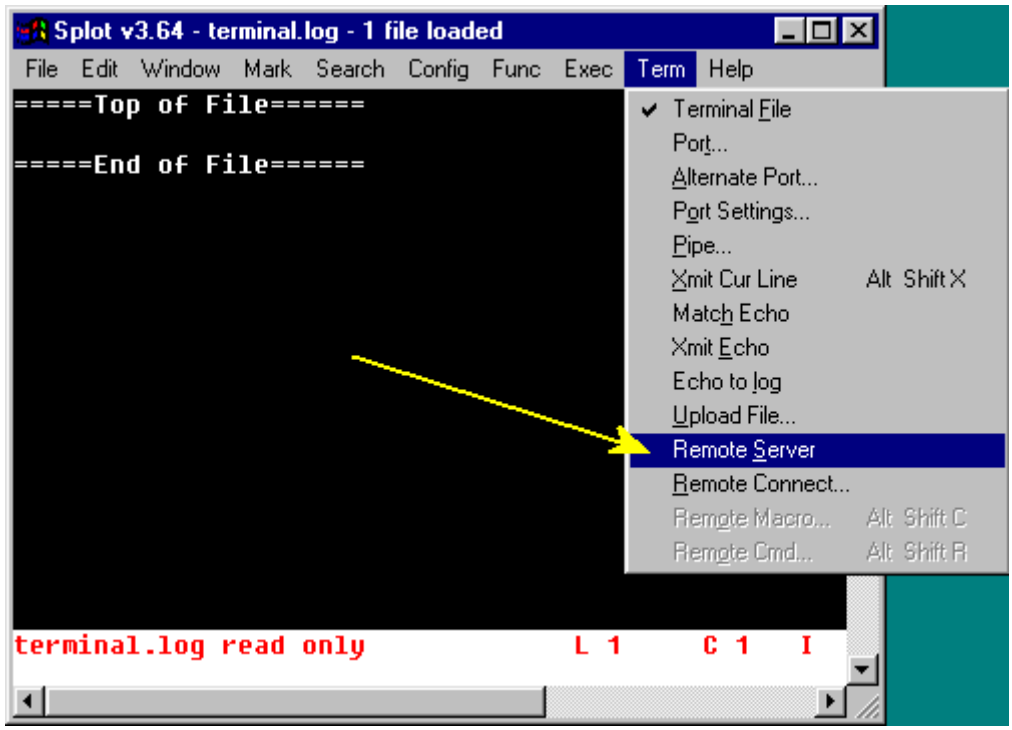


4. If you have a Lotem Quantum, activate the **Splot** application.

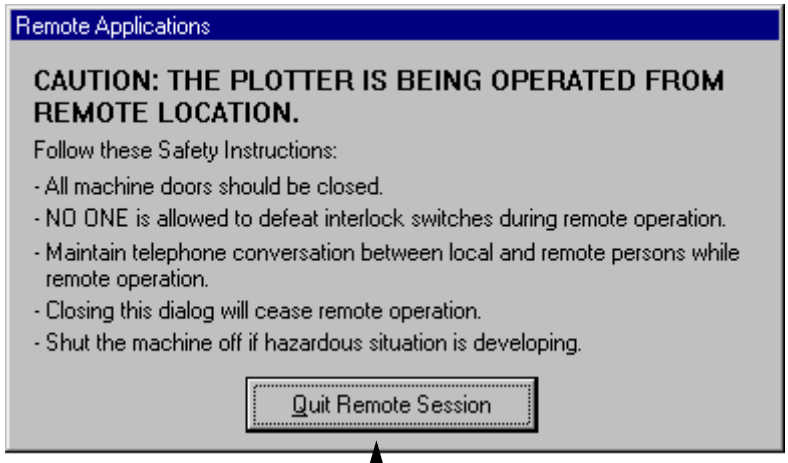
a. Double-click the **Splot** icon on the desktop.



b. From the **Term** menu of the Splot application, select **Remote Server**.



Disconnecting from the Response Center



Click here to quit the remote support session.

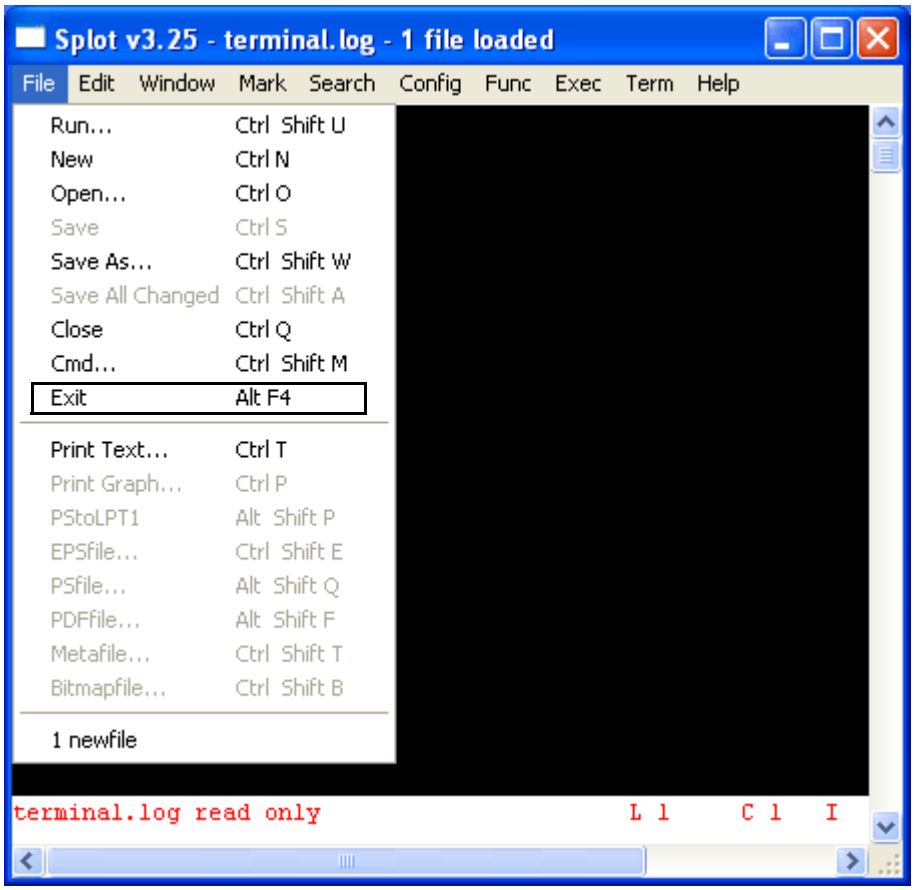
It is extremely important to disconnect properly from the Response Center once the session is over. Failure to disconnect causes the NetMeeting and VNC applications to be automatically launched every time the platesetter is turned on.

You can disconnect from the Response Center in one of two ways: through the PC Controller software or manually.

Disconnecting from Remote Support Through the PC Controller Software

1. On your keyboard, press the **ESC** key.
2. In the Remote Applications dialog box, click **Quit Remote Session**.
3. Close the Splot application, as follows:

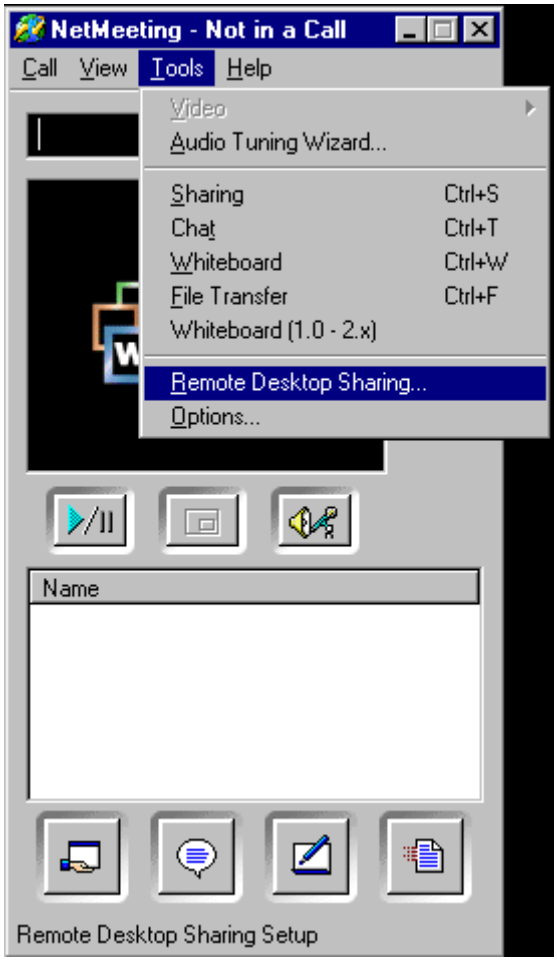
From the **File** menu, select **Exit**.



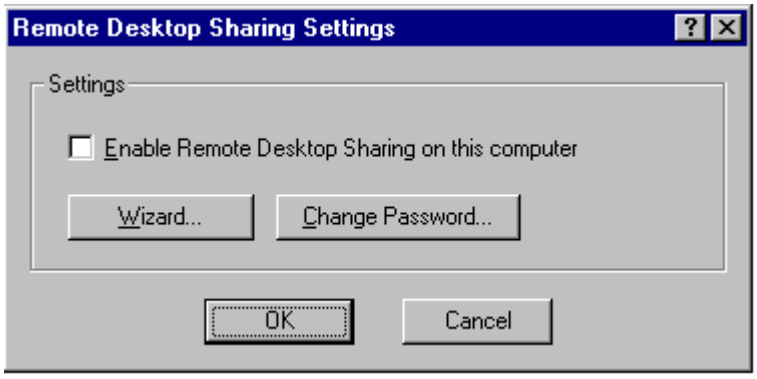
4. Turn the modem off.

Disconnecting from Remote Support Manually

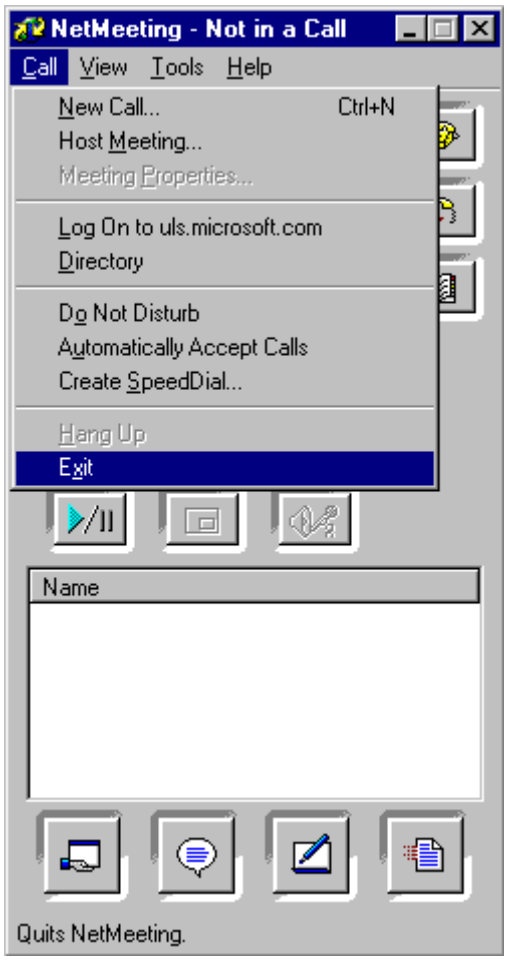
1. On your keyboard, press the **Esc** key.
2. Disconnect from the NetMeeting application:
   a. From the Windows **Start** menu, select **Programs > NetMeeting**.
   b. From the **Tools** menu, select **Remote Desktop Sharing**.



c. In the Remote Desktop Sharing Settings dialog box, click the **Enable Remote Desktop Sharing on this computer** check box to deselect it, and click **OK**.



d. From the **Call** menu, select **Exit**.



3. Disconnect from the VNC application: In the status bar, right-click the VNC icon, and then select **Close VNC**.



Note: If the VNC icon is not in the status bar, press **CTRL+ALT+DEL**. In the list of processes, select VNC, and then click End Process.

4. **Lotem Quantum users**: Close the Splot application: open the File menu and select **Exit**.

See also *Close the Splot application, on page 100*

5. Turn off the modem.

You have now disconnected from the Response Center.

Following Remote Support Safety Guidelines

Remote support can be a very useful tool for solving problems at your site. However, to ensure your safety and the safety of those around you, you need to follow certain safety guidelines during remote support sessions.

When you connect to the remote support center, observe the following guidelines for your safety:

1. A certified operator should approve the remote support activity and should be near the platesetter, prepared for the session.
2. All the platesetter's doors should be closed, with no cheaters in use.
3. The operator should stay nearby and pay attention to the behavior of the machine throughout the session.
4. The operator should know how to and be able to terminate the process if necessary.
5. Remote support activity should not be used if the platesetter's problem is related to the interlocks or any other safety-related parts.
6. A chat session or a phone conversation should be conducted between the site and the Response Center during the whole remote support session.



Apply what you know...

Activity 11: Connect to and Disconnect from the Response Center

1. Call your local Response Center (the instructor should give you the number).
2. Activate a remote support session from the PC Controller software.
3. Ask the remote support center to perform some basic operations on your PC Controller screen, and verify that the remote support activity is proceeding correctly.
4. When you finish your session, disconnect from the Response Center through the PC Controller software.
5. Activate remote support again, but this time, use the manual method. Make sure you stay online with the Response Center and verify that you are connected and that the remote support activity is proceeding correctly.
6. Disconnect manually from the Response Center.

Module Summary

Having completed this module, you should be able to:

- Describe the advantages of remote support
- Connect to the Response Center from the PC Controller software and manually
- Disconnect from the Response Center from the PC Controller software and manually
- Follow the remote support safety guidelines

MODULE 7

Maintenance and Troubleshooting

Why you need to know this...

This module contains a list of the maintenance procedures for the Lotem platesetter and provides an index that directs you to information for troubleshooting common problems.

Lessons

Lesson 1: Perform Maintenance

Lesson 2: Troubleshoot Common Problems

References

For a complete description of maintenance procedures see *Lotem 400 Family / Lotem 400 Quantum Family Maintenance Guide for User.*

For detailed troubleshooting information see *Module A, “Appendix: User Troubleshooting” on page 117.*

Lesson 1: Perform Maintenance

Why you need to know this...

Performing regular maintenance on your platesetter ensures optimal performance and reduces the likelihood of problems.

What you need to know...

The table later in this section outlines the maintenance procedures required for all the Lotem 400 platesetter configurations.

Some procedures are applicable to all the Lotem 400 models, and other procedures are for specific models only. For example, if you have a fully automatic Lotem 400 Quantum platesetter, you need to perform all of the procedures listed in the first section of the table and also the procedures for the fully automatic Lotem 400 platesetter and the Lotem 400 Quantum platesetter.

On the training CD-ROM, there is a PDF file with the Lotem 400 maintenance checklist. We recommend that you print this checklist, tape it to your platesetter, and fill in the dates on which you or a Lotem operator performs maintenance. Be sure to mark the dates for the next maintenance.

Lotem 400 Maintenance Checklist

Most of the maintenance procedures described in this lesson should be performed every 1-2 weeks. The frequency depends on how often you use your platesetter.

Procedure	Frequency	Performed by	Date	Next maintenance
All Lotem 400 platesetters				
Checking the air pressure	Every 1-2 weeks			
Checking the air filters	Every 1-2 weeks			
Replacing the air filters (performed by a Creo engineer)	Every 6 months			
Cleaning the drum vacuum holes	Every 1-2 weeks			
Cleaning the drum surface	Every 1-2 weeks			
Cleaning the edge detection strip	Every 1-2 weeks			
Semiautomatic Lotem 400 platesetters				
Cleaning the loading tray	Every 1-2 weeks			
Fully automatic Lotem 400 platesetters				
Cleaning the centering and short pins	Every 1-2 weeks			
Cleaning the disposal rollers	Every 1-2 weeks			
Cleaning the unloading rollers	Every 1-2 weeks			
Emptying the punch disposal	Every 6 months			
Lotem 400 Quantum platesetters				
Replacing the cooling air filter unit	Every 1 month			

Lesson 2: Troubleshoot Common Problems

Why you need to know this...

Working with the Lotem 400 platesetter, as with any other machine, you may occasionally encounter problems. In most cases, you can solve such problems by yourself. The troubleshooting index in this lesson lists the most common problems and tells you where to find the information for solving them. We give special emphasis on plate loading failures because they are very common.

Solving problems by yourself reduces downtime. Therefore, we recommend that you take advantage of the troubleshooting index and your user guide to find out how to solve problems when they arise. If you don't solve a problem with these resources, contact your local Response Center.

What you need to know...

Troubleshooting Index

The page numbers refer to the Troubleshooting appendix in this training guide.

Problem	Description	Solution
Startup		
The PC does not boot		See page 118
Windows does not start	Files are missing or corrupted.	See page 118
Windows does not start	There is a problem with the boot disk.	See page 118
Plate Loading in fully automatic Lotem 400 platesetter (with MCU)		
Releasing stuck plates	Plate may get jammed inside the platesetter during plate loading.	See page 120
Double loading	Double loading may have occurred. Check by opening the front door and looking into the loading area.	See page 122
The punch is stuck	The plate may be stuck in the punch. Open the front door and check.	See page 124
The plate did not reach punch position	Plate loading fails with error message: `Plate did not reach punch position.`	See page 125
The vacuum did not grab plate	Plate loading fails with error message: `Vacuum did not grab plate.`	See page 126

Problem	Description	Solution
Plate Loading in the Semiautomatic Lotem 400		
Drum related errors	Plate loading fails with one of the following error messages: • `Drum did not reach position` • `Load gripper is protected by load gripper protector` • `Drum fly-off`	See page 125, page 127
Illegal plate size	Plate loading fails with error message: `Illegal plate size.`	See page 127
Illegal gripper width	Plate loading fails with error message: `Illegal gripper width.`	See page 127
Plate unloading		
Plate does not unload		See page 128
Unload failure after plate restart		See page 129
Exposure		
Exposure does not start	Exposure does not start at all and the error message relates to the Host.	See page 130

Plate Loading Failures

Restart Plate State and Force Plate on Drum Operations

When certain plate-loading problems occur, a message in the PC Controller software might ask you to click the **Restart Plate State** button. This message indicates that the software does not know what the status of the loading system is. The Restart Plate State operation resets the loading status to a state where there is no plate on the drum.

If there is a plate on the drum the **Force Plate On Drum** button forces the software to recognize the plate. You can use this button if you are positive that a plate has been loaded on the drum properly and you want to proceed with the exposure operation.

Before clicking the **Force Plate On Drum** button, make sure that:

1. There is indeed a plate on the drum and it has been loaded properly
2. The **Media On Drum** status in the Loading System dialog box is **None**.
3. The plate on the drum has the same media definitions as listed in the **Media To Load** list on the Loading System dialog box. If not, change the settings in the **Media To Load** list to match those of the plate that you are using.

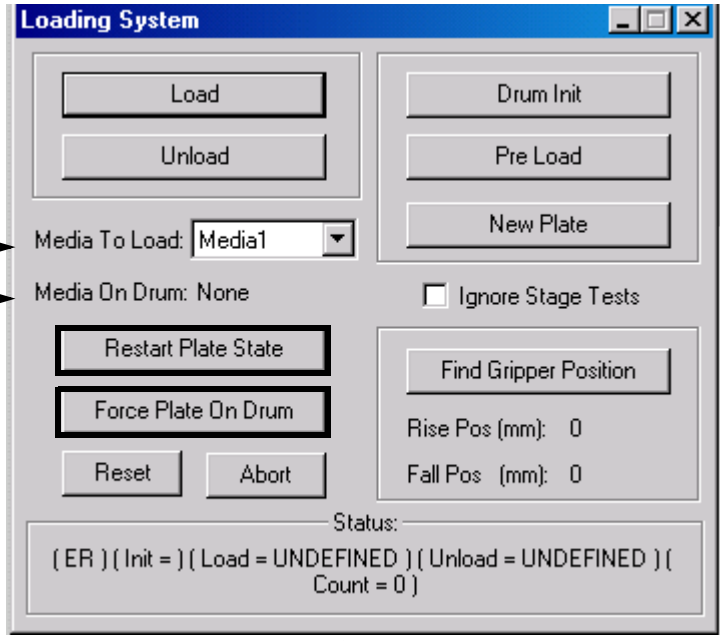
The Restart Plate State and the Force Plate On Drum buttons are located on the Loading System dialog box.



To open the Loading System dialog box for the semiautomatic Lotem 400 see Module 4, Loading and Unloading System, *"Opening the Loading System Dialog Box" on page 64*.

To open the Loading System dialog box for the fully automatic Lotem 400 see Module 4, Loading and Unloading System, *"Opening the Loading System Dialog Box" on page 74.*

Semiautomatic Lotem 400 Loading System dialog box



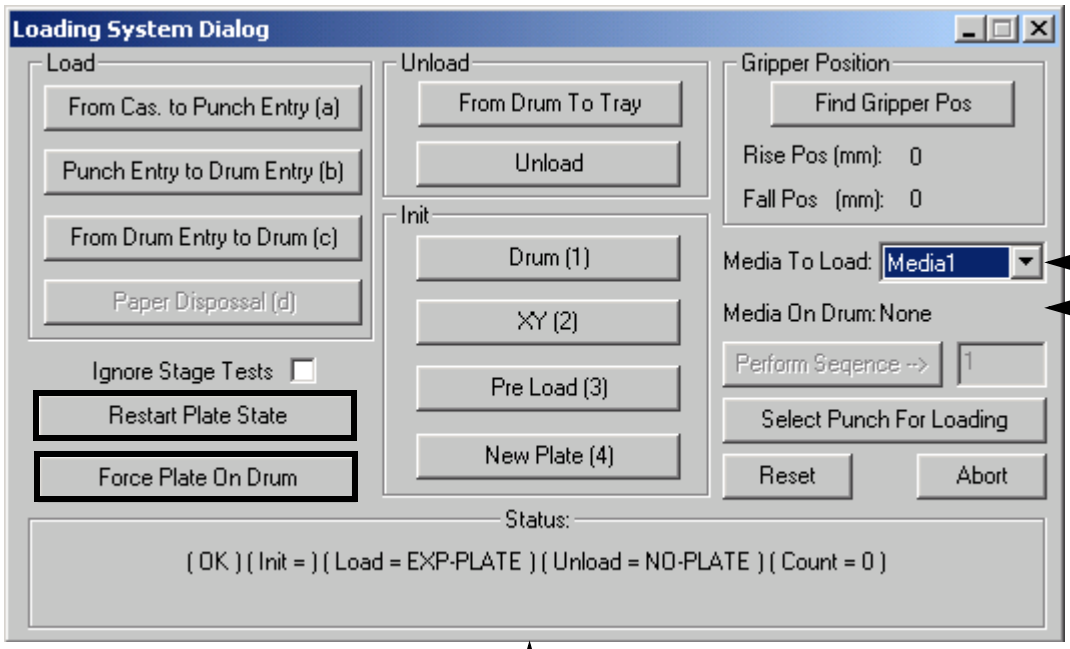
Make sure that these definitions describe the plate that is on the drum.

Make sure Media On Drum is None.

Loading status

Fully Automatic Lotem 400 Loading System dialog box

Make sure that these definitions describe the plate that is on the drum.



Loading status

The Media On Drum status now indicates that there is a plate on the drum.

Module Summary

Having completed this module, you should be able to:

- Identify the maintenance procedures that you need to perform on your Lotem 400 platesetter
- Troubleshoot common problems

MODULE A

Appendix: User Troubleshooting

Generic Troubleshooting Questions

There are several troubleshooting steps that you should complete before calling the Response Center. These steps will help you save time by enabling you to solve problems independently. You will find these steps are fully explained in the relevant troubleshooting document. Ideally, the customer will have completed these steps before calling the Response Center, and also reviewed the following questions and written the answers down. If after completing these steps you find that the problem is not resolved, please answer the following questions before calling the Response Center. Write down your answers and have them available during your call.

The questions are as follows:

- When was the last time the machine worked properly?
- What was done since then? For example:
    - Was the machine moved?
    - Was the machine cleaned?
    - Was a new batch or type of plates used?
- Was an error message displayed on screen? If yes, what did it say (include numbers, if any).
- What is the software version?
- Does the problem happen all the time (with all plates), or just some of the time? For example:
    - With a particular plate brand, type and/or size?
    - Only when a few plates are left in the cassette?
- Does the problem seem to be a random occurrence?
- What are the temperature and humidity levels in the plate storage room? For example:
    - Do they adhere to the plate manufacture’s guidelines? If not: In what ways?
- Does the temperature fluctuate radically?

Startup Problems

Following are the most common start up problems:

- PC does not boot
- Windows does not start
- Windows does not launch
- Lotem application aborts

PC Does Not Boot

1. Verify that all power circuit breakers are in the **ON** position.
2. Verify that both **ON/OFF** power buttons at the rear of the platesetter (yellow pushbuttons) are in the **out** position and lit.
3. Verify that the PC monitor power is **ON**.

Windows Does Not Launch

Windows does not launch and the error message relates to missing or corrupted files.

1. Continue the startup and follow the screen instructions. Wait until the Windows startup is complete. Then perform Windows shutdown and reboot the PC.
2. If the startup fails and the PC hangs:
    - Press **F1** during initial startup and choose **Safe Boot**.
    - Run a system check/test from **Accessories Disk/ ToolScan/ Disk**.
3. In some cases, Scan Disk will not resolve the problem. In such cases, the following files may need to be loaded onto your hard disk: first Windows, then drivers, and finally the Lotem application. Please contact your service representative for details before you proceed.

Windows Does Not Start

When Windows does not start and the error message relates to boot disk/diskette:

1. Open the rear door by inserting a long screwdriver into the holes (on both left and right sides).
2. Open the right side door and make sure that a diskette was not left inside the diskette drive.

Calling Response Center for Support

Whenever you need to call Creo service representative for help, the following information should be supplied. This information is important for addressing your problem.

- In case of an error in the PC controller software, write down the first five (5) error messages that are listed in the Message window of the PC controller main window.
- In case of error in the Brisque application, write down the Brisque error number and message.
- In case of loading/unloading failure, write down the plate location, if known.
- Write down the Brisque Job information (Job type, number of separations, Screen set that is used and LW/CT resolution).

Plate Loading Failures



CAUTION: When handling the plates, especially if you need to release them, be sure to wear protective gloves as the plate edges are sharp.

The following are the most common plate loading failures:

- Plate is stuck
- Double Loading
- Drum related errors
- Punch is stuck

The following are the most common error messages:

- Error Message: `Plate did not reach punch position`
- Error Message: `Vacuum didn't grab plate`
- Error Message: `Drum Fly-off`
- Error Message: `Illegal plate size`
- Error Message: `Illegal gripper width`

The following sections describe the actions that you should take when the above failures occur.

Releasing Stuck Plates

Plates may get jammed inside the platesetter during plate loading. As explained in "Loading Plates From the Workflow Station" on page 62, the message sent from the workstation to the PC controller requests you to load a plate of specified size and thickness. If you load a plate with an incorrect height value, the plate will get jammed and cannot be properly loaded onto the drum. In this case, you will need to manually remove the jammed plate. Special precautions are required when performing this procedure.

Note: Before removing a plate, remove objects or clothing that might get caught in the revolving drum or other moving parts, such as, ties and jewelry. Fold long sleeves and gather long hair.

Before removing a plate, switch off the **main drum power** switch on the Distribution box.

Note: It is recommended to release the entire plate **as one piece**; do not attempt to cut the plate.

Note: Released plates must be disposed; you may **not re-use** the plate.

Note: Plate remnants left in the platesetter may cause mechanical and laser radiation hazards!

When plate loading fails because of incorrect plate size, the Status indicator is **Attention** and the message window opens with the message "`Illegal plate size`".

To manually release the stuck plate:

1. You first need to open the upper door from the main window: to interactively open the door, click on the rear door on the Platesetter online view. Alternatively, click **Open Rear Door** from **Routine Functions** menu.

2. When the rear door is open, stand at the rear side of the platesetter and rotate the drum forward, towards the front of the platesetter.

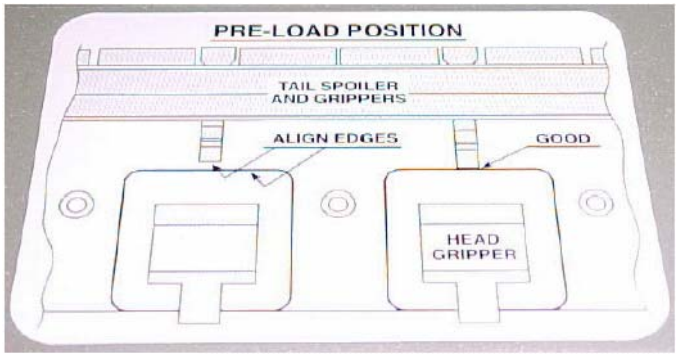
3. Rotate the drum until you can see the detached edge of the plate, that is, the edge that is **not held** by the tail grippers.

4. Hold the detached edge of plate and gently pull it towards you until you can see the other edge of the plate, that is, the edge that is **held** by the head grippers.

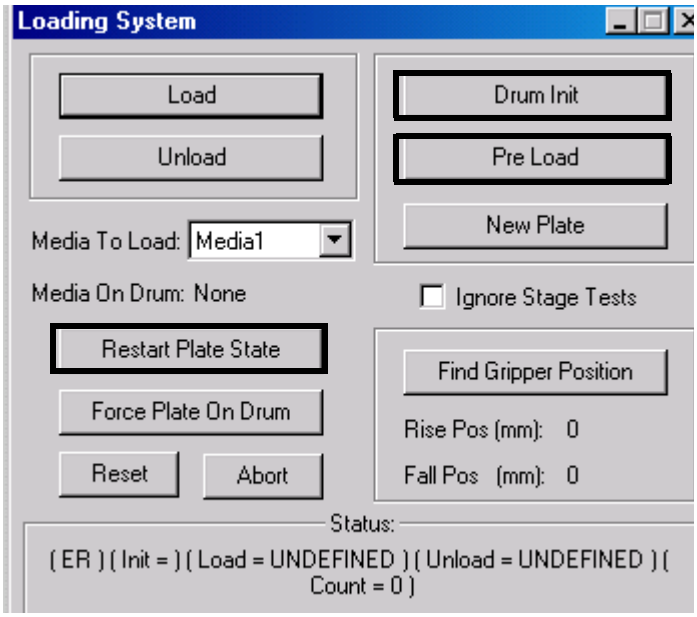
5. To release the plate from the head grippers: hold both sides of plate (left and right) and pull the plate abruptly towards you.

6. Verify that the tail gripper did not move. If it did, then move it to the **Preload** position (0). To do this,

   a. Drag the tail gripper to the preload position (as shown in the picture below).



   b. Open the **Loading System** dialog box, as described in “Opening the Loading System Dialog Box” on page 64.



   c. In the Loading System dialog box, click **Restart Plate State**.

   d. Click **Drum Init**.

   e. Click **Pre-load** to move the tail gripper to the correct position according to the defined plate size.
   The status indicator shows **Ready** (blue).

7. Close the rear door.

8. Close the loading system and hardware windows.

9. Click the **Reset** button in the message window, and then **Reset** in the Confirm message that appears.



Platesetter status is now **Ready** and you can proceed and load the correct plate size.

Double Loading



Tip: Open the front door and look into the loading area in order to find out whether double loading has occurred.

1. If the plates are in the cassette to punch area:
   - Gently try to push them back into the cassette.
   - If this is not possible, open the upper cover, remove the plates and place paper in between them and then place the plates back into the cassette.
   - In the Hardware window, select **Loading System/Loading System** to open the Loading System window.
   - In the window, click **Restart Plate State**.
2. If plates are stuck halfway on the drum:
   - Open the rear door.
   - Then using your hands, slowly rotate the drum away from you (towards the cassette) until you can see the plate tail edge. (A metallic noise might be heard, which is caused by the edge being dragged on the roller system.)

3. If the plates are held by a tail gripper(s):



Tail gripper

- Release the tail gripper(s) from the plate by pressing the grippers down and pushing the tail bar away from the plate.
- Hold the edges of the plate which was released from the tail gripper and pull the plate towards you until the head gripper is visible.
- Then, press on one or two head grippers while pulling the plates abruptly.
- Completely remove the plates from the drum.
- In the Hardware window, select **Loading System/Loading System** to open the Loading System window.
- In the window, click **Restart Plate State**.
- Move the gripper to Preload position (see *Lotem 400 Family User Guide, Module 3, Plate Handling, Releasing Stuck Plates*). Open the loading system and define a plate and press pre-load.

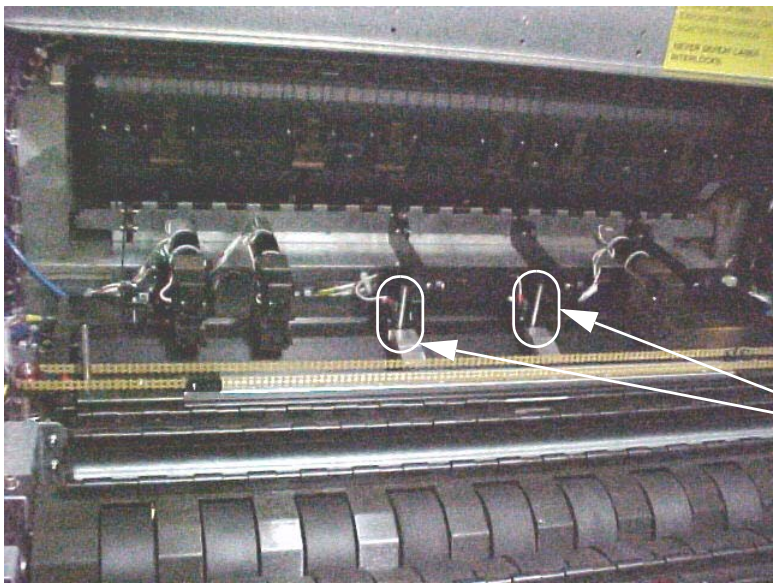
4. Occasionally, a batch of plates may be problematic and a source for excessive static electricity. This may cause plate-loading problems.



Tip: To minimize the probability of double loading, make sure the room temperature is maintained between 21 to 25 degrees, and humidity is approximately 55%.

Punch is Stuck

If the punch gets stuck while punching a plate, try the following:



Punch system

1. Remove the plate. If you cannot remove it, the punch pin may still be in its low position in the punch.

2. If this is the case, you need to release the punch:

- Make sure the doors are closed.

- In the Hardware window, select **Punch System/Punch Motor/ Punch Motor xx** (where xx is the punch number) and **Punch System/Detector/ Punch Motor #Home Pos.Det.**

  The punch numbers proceed from left to right.

- If you are not sure which punch needs to be released, open the front door and remove the plate and close the door. Then activate the punches one by one by clicking **Start**, to see which is the problematic punch. If the Home Position does not change to **ON,** then that is the problematic punch.

- If the plate is stuck and you cannot remove it, then activate the punches one by one by clicking **Start**, to see which is the problematic punch. If the Home Position does not change to **ON,** then that is the problematic punch.

If you discover a problematic punch, contact your service representative.

Drum Related Errors

Plate loading fails with drum related error: `Drum did not reach position` or `Load Gripper is protected by Load Gripper Protector`. There may be several causes to this error message. Check the following possibilities:

1. Verify that all covers and panels are properly closed. Make sure that no interlock is active (that is, an interlock indicator does not appear on the main application window, and the machine status is not **Service**).

2. Verify that the air compressor supply to the platesetter is adequate (minimum setting of the air compressor should be 6 Bar).

3. From the Hardware window, select **Loading System/Loading System**. In the Loading System dialog box, click **Drum Init**.

Error Message: Plate Did Not Reach Punch Position

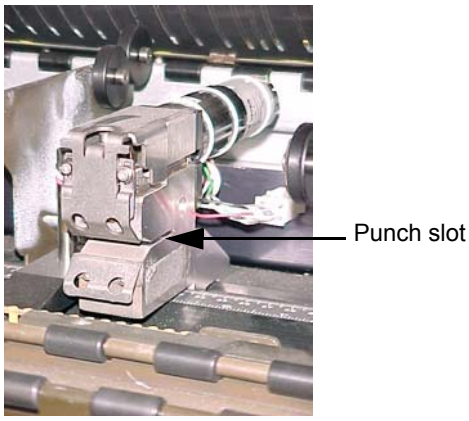
Plate loading fails with error message: `Plate did not reach punch position`.

1. Verify that the plates are properly centered in the cassette (both side brackets touch the plate sides) and the rear bracket is approximately 1 mm from plate edge.

2. Check if the plate edge is bent, cut or coated with glue. This may cause the short pins to fail a plate reading when the pins are supposed to touch the plate (these are the centering system pins and/or the pins near the punch blocks). Try rotating the plate 180 degrees. This may help to verify if the plate edge is the cause of the problem.

3. Open the front door of the MCU and look through the MCU towards the punch block units.

4. If you can see a punch pin in the middle of the punch slot, this means that a plate may get stuck on its way to the punch. In this case, contact your service representative.

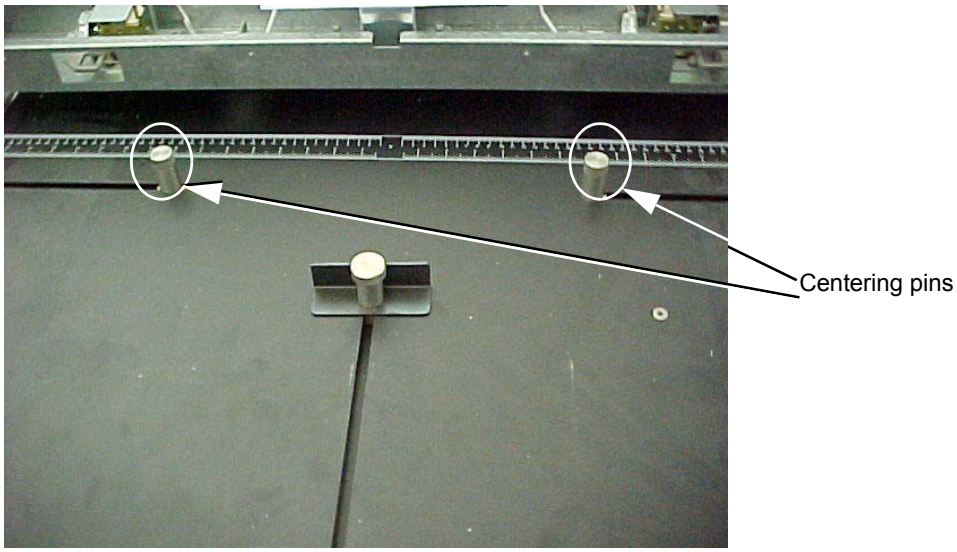


Error Message: Vacuum Did Not Grab Plate

Plate loading fails with error message `Vacuum did not grab plate`. Open the front door and check the plate location. The cause and solution to this problem depends on plate location:

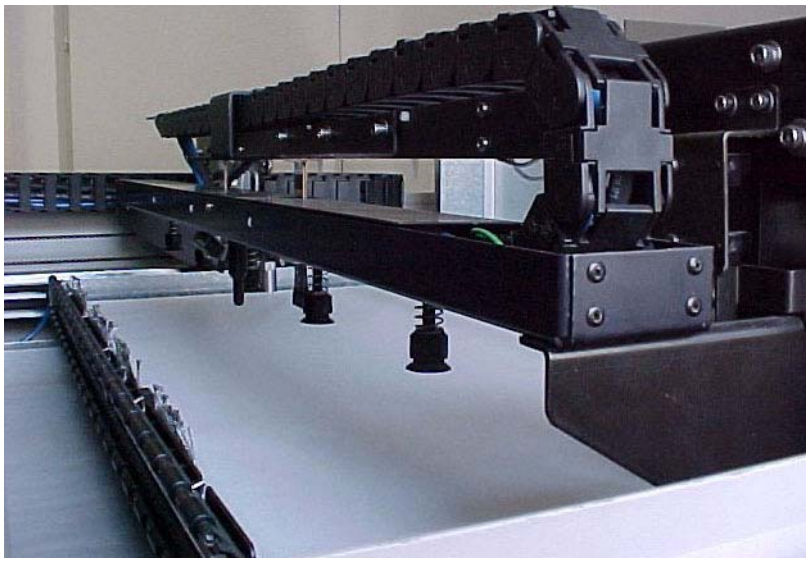
1. Verify that the air compressor supply to the platesetter is adequate (minimum setting of the Air compressor should be 6 Bar).

2. Open the cassette door. If you can see the plate inside the cassette, verify that the plate edge is not under the two side brackets. In this case, the plate cannot be loaded. Try to reposition the plate in the cassette or add more plates into the cassette.



Centering system

3. Verify that the loading bar is horizontal to the plate (see below). Push the bar toward the drum until it touches the two vertical metal brackets. The loading bar should be parallel to the brackets on both axes. If it is not parallel, contact your service representative.



Loading bar

4. If the plate is partially out of the cassette, check that all the Vacuum suction cups on the XY bar are intact, complete and are not torn. If there is a problem with the suction cups, contact your service representative.

5. If the plate is halfway onto the punch blocks, examine the front edge of the plate. If there are bends or dents in the plate, these may be as a result of the plate hitting one of the punch blocks as it is loaded from the cassette. Remove the plate and rotate it in the cassette.

Error Message: Drum Fly-off

1. Open the rear door, and manually remove the plate.

2. Move all tail grippers to the end of their slots (near the head grippers). Make sure that the tail grippers are not moved beyond the head gripper holes.

3. Verify that the load/unload rollers are in their proper position (they did not separate from the springs).

4. Close the doors.

5. From the Hardware window, select **Loading System/ Loading System**, and click the following: **Restart Plate State**, **Drum** and **New Plate**.

6. Resend the job from the Brisque.

Error Message: Illegal Plate Size

There may be several causes to this error message. Check the following:

- Measure the plate in the cassette.

- Verify that the plate size defined in the Off-line/Current Cassette dialog box is the plate size that was actually loaded into the cassette. Plate size should be within +/-1 mm of the dimensions defined in the Media Definition dialog box.

- Clean the centering pins.

- Check the plate edges, where the centering pins touch, see if there are bumps, dents, dirt, glue etc....- this could prevent any electrical contact from occurring.

Error Message: Illegal Gripper Width

There may be several causes to this error message. Check the following possibilities:

1. Make sure no paper accompanied the plate to the centering system.

2. Open the front door and manually remove the plate from the drum. For instructions, see *Double Loading* on page 122.

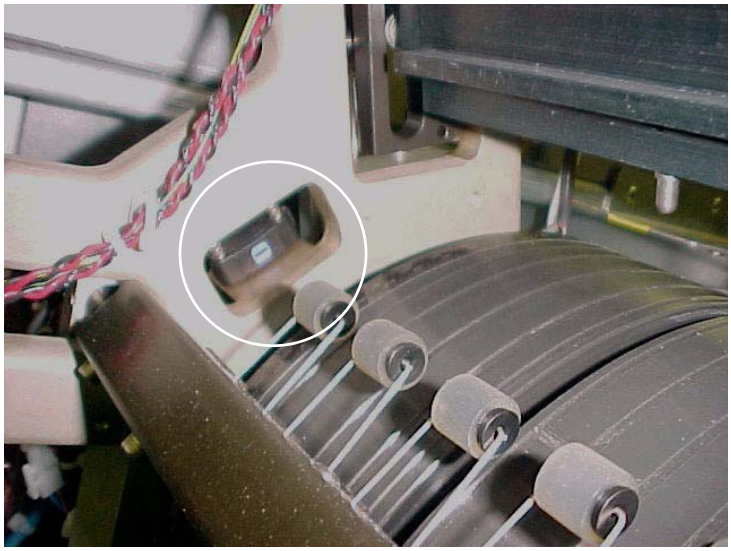
3. Move all tail grippers to the end of their slots (near the head gripper). Make sure not to move them beyond the head gripper holes.

4. Close the front door.

5. From the Hardware window, select **Loading System/Loading System**.

6. In the Loading System window that is displayed, click **New Plate**.

7. Clean the Side to Side detector located on both sides of the drum chassis using a dry cloth (see below).



Side to side detector

Plate Unloading Problems

Plate unloading problems may be caused by one of the following:

- Plate does not unload from the platesetter
- Unload failure after plate restart

Plate Does Not Unload

1. Make sure that the previous plate entered the processor correctly.

2. If it did not, this plate may be blocking the conveyor sensor. Verify that the processor is in **Ready** state, and clear any error message on the processor panel.

3. If there is still a problem, contact the processor technician.

4. Move the previous plate into the processor. Then, from the **Routine Functions** menu, click **Unload Plate** to manually unload the current plate.

5. Check that there are no error messages relating to Vibration or Fly Off. If there are such messages, please contact your service representative.

6. Try to manually unload the plate. Then load and unload a different plate size. If this goes smoothly then there may be a specific problem with the original plate size.



Unloading system

7. Load the plate into the processor. Then examine the plate to see if it was partially exposed, or not exposed at all. If it was partially exposed, this can indicate a problem with the exposure sequence and not a plate-unloading problem.

Unload Failure After Plate Restart

If you have a problem performing **Restart Plate State** while there is a plate on the drum, then you will not be able to expose the plate or unload it, because Restart Plate State resets the plate status to **No plate on drum**. To resolve this problem, click **Force Plate On Drum** to force the system to acknowledge the plate on the drum. Then, you can either expose the plate or unload it.



Important: Never use **Force Plate On Drum** before performing a visual check that there is actually a plate on the drum.

Exposure Failure Problem

Exposure Does Not Start

Exposure does not start at all and the error messages relates to the Host.
There may be several causes to this error message.

1. Verify that the Data cable is securely connected to the Brisque.

2. Check that the Network or the Point-to-Point cable between the platesetter and the Brisque is properly connected.

3. Verify the machine is ON and in **READY** mode.

Note: Make sure there is no error message on the PC Controller.

4. On Brisque, go to **Devices >Platesetter**; select **Lotem > Lotem 400**.

5. Click the **Reconfigure** button.

6. In the **Que Manager**, a red blinking icon appears on the upper part of the dialog box indicating an error. From the **Tools** menu, select **Operate Control** > **Plate Expose**> **Lotem 400.**

7. Click **OK**.
   If the blinking icon disappears, then send another expose job. If not, in the **In Que** area, select the problematic error message. Double-click it to receive an explanation of the problem.

MODULE S

Course Summary

Having completed this course, you should be able to:

- ☐ Identify your site configuration and workflow
- ☐ Identify external parts of the Lotem 400 platesetter
- ☐ Follow the safety guidlines
- ☐ Turn the platesetter on and off
- ☐ Identify the main components of the PC Controller software
- ☐ Open the doors of the Lotem 400 platesetter
- ☐ Identify the safety interlocks
- ☐ Define media
- ☐ Place plates into the automatic plate loaders
- ☐ Load and unload plates
- ☐ Identify your workflow components
- ☐ Connect to the Response Center
- ☐ Perform Maintenance
- ☐ Troubleshoot common problems

Student Course Evaluation

Our goal is to make this course as relevant and effective as possible for our customers. Therefore, we highly value your feedback. Please complete this evaluation form.

Your name:	Course:
Company name:	Course date:
Phone:	Trainer name:
Title:	On-site/Creo classroom

Subjects taught during the course (mark the appropriate check boxes):

☐	Site configuration and workflow	☐	Defining media
☐	External parts of the Lotem 400 platesetter	☐	Placing plates into the automatic plate loaders
☐	Safety guidelines	☐	Loading and unloading plates
☐	Turning the platesetter on and off	☐	Workflow components
☐	Main components of the PC Controller software	☐	Connecting to the Response Center
☐	Opening doors for the Lotem 400 platesetter	☐	Performing maintenance
☐	Safety interlocks	☐	Troubleshooting common problems

Course organization:

	Excellent	**Good**	**Average**	**Poor**	**Very Poor**
Addressed your objectives					
Topics organized in the most logical order					
Exercises reinforced “need to know” topics					
Improved your confidence with the product					
	Too Long				**Too Short**
Pace of the course					
Time spent on theory					

Time spent on practice and exercises					
Length of course					

Instructor evaluation:

	Excellent	Good	Average	Poor	Very Poor
Demonstrated a good knowledge of product					
Gave clear and full explanations					
Was open to questions and discussions					
Was concerned with your needs					
Kept sessions lively and interesting					

Course material:

	Excellent	Good	Average	Poor	Very Poor
Well written and easily understood					
Contained useful information					
Design & structure is appropriate for course					

Training administration:

	Excellent	Good	Average	Poor	Very Poor
Pre-course information					
Classroom					
Equipment					
Lunch and refreshments					

On a scale from 1 *(Very bad)* to 6 *(Excellent)*, how would you score this training?

_____

Are there any subjects you think should be added or further expanded in the course?

_____

_____

_____

Are there any exercises that you think should be added to the course?

_____

_____

_____

www.creo.com | creo™