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Site Requirements

Overview

Introduction

This chapter describes the correct working environment for the XyflexPro system. In order to ensure a smooth installation and trouble free operation, all necessary site modifications should be made prior to installing or attempting to run the system.

In This Chapter

This chapter contains the following topics.

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Overview	2-1
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System Location

Introduction

This section describes the work area environment and physical requirements of the XyflexPro system. See Figures 2-2 (7100 models) and 2-3 (7200 models) for detailed drawings and dimensional data.

Environment

- The system should be placed on a level floor away from excessive heat and moisture.
 - The system should be placed away from any direct, unregulated, ambient lighting in order for the vision system to operate properly.
-

Dimensions For 7100 And 7200 Models

The system's minimum required space is based on the XyflexPro 7200 which is the larger of the two models. Dimensions reflect maximum dimensions with open doors and extended consoles.

Minimum space required:

- Depth = 92.24 inches (2342.89 mm)
- Width = 54.71 inches (1389.63 mm)
- Height = 86.14 inches (2188.13 mm)

Consult the facilities layout in Figure 2-2 (7100) or Figure 2-3 (7200) for complete dimensional data.

Floor Loading For 7100 And 7200 Models

The weight of the XyflexPro System is approximately:

7100 -1595 lbs. (723.49 kg)

7200 -2000 lbs. (907.20 kg)

Plan floor loading requirements accordingly.

Safety Labels And Terms

Usage

Safety labels are used to identify potentially hazardous conditions or materials that are encountered during system setup and operation. International symbols (pictograms) are used to identify the hazard type. Labels are affixed to the equipment in the vicinity of the potential hazard and appear throughout this guide. Labels appearing in the manual are accompanied by a “signal” word that indicates the severity of the hazard.

SEMI S13-0298 classifies hazard severity via specific signal words.

Classification of Hazards

Caution - Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

Warning - Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Danger - Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

Definitions

The following pictograms are used on the labels that are affixed to the machine. Each label contains a “signal” word which indicates the type and/or severity of consequences associated with the exposure or operation.

Some or all of the following labels may be used depending on optional equipment supplied.



Attention

Attention - Indicates a practice or recommendation which, if ignored, could cause damage or malfunction of the system.

Is also used to provide supplementary information or clarification of a specific statement or procedure.



Caution

Caution - General caution statement.



Hand Cut Hazard

Caution - Moveable axes or sharp edges are present.



Keep Hands Clear

Caution - Keep hands clear - Moving parts.



Pressurized Device

Caution - Release air pressure before servicing.



Consult Manual

Caution - Consult manual before performing this operation.



Eye Protection Required

Caution - Eye protection required.



Chemical Hazard

Caution - Chemical hazard - Consult Material Safety Data Sheet (MSDS) for hazards listing.



Laser Hazard

Caution - Laser in use.



Protective Gloves Required

Caution - Wear protective gloves.



Burn Hazard

Warning - Burn Hazard - Hot surface -Allow to cool before servicing.



Poison

Warning - Hazardous materials.



Hazardous Voltage

Danger - Danger of electrical shock or burn - Disconnect power before servicing.



Exposed Belt Drive

Danger - Exposed belt drive - Lockout and Tagout before servicing.



Equipment Starts Automatically

Danger - Equipment starts automatically. Lockout and Tagout before servicing.

Safety Features

Introduction

The following safety features are intended to protect personnel from injury, while protecting the machine from damage. See Figure 1-1 for locations.

Protective Covers

Protective covers have been designed to fully encase the machine (except the conveyor openings). The covers restrict access to any moving parts, dangerous voltages, pneumatic pressures, or dispensing materials used in the machine.

Safety Relay Circuit

This circuit is directly hard wired to the controllers that drive all axis and conveyor motion and will disable any and all motion on the machine if the safety door is opened.

Safety Door Interlock Switches

Interlock switches prevent the safety door from being opened while the machine is operating. The control system continuously checks the status of the **door closed** and **door locked** signals.

The interlock is spring loaded; even in a machine power-off condition, the door remains locked. A reset must be performed, and power applied to the machine, before the operating system will permit the door to open.

Emergency Stop Palm Switches

Emergency stop (**E-Stop**) palm switches are the fastest and most effective method of halting machine operation in the event of a malfunction. **E-Stop** switches are located at the front and rear of the machine. All electrical power and pneumatic pressure to the machine is terminated when an **E-Stop** switch is pressed, except the uninterruptible power supply (UPS). This allows the computer to remain on until the operator shuts it down or until the automatic shutdown feature of the computer activates.

Main Power Switch (Lockout/Tagout)

The main power (**Lockout/Tagout**) switch allows service personnel to disable all electrical power and pneumatic pressure to the machine for repair or maintenance. A long-stemmed padlock can be inserted to ensure that power cannot be inadvertently applied to the machine.

Safe Touch Controls

The lower access panel on the front of the machine does not require interlocks or access panel locks. The layout of components has been designed such that no voltages or other hazards can be reached without manually removing covers within this compartment.

Access Panel Locks

Access panel locks are designed to eliminate casual opening of panels wherever a dangerous condition can exist. A Phillips screw driver is required to operate the locks before access can be achieved.

Pneumatic Dump Valve

The pneumatic dump valve works in conjunction with the three emergency stop palm switches. Whenever an **E-Stop** switch is pressed, the spring-loaded dump valve opens, discharging all pneumatic pressures safely within the machine.

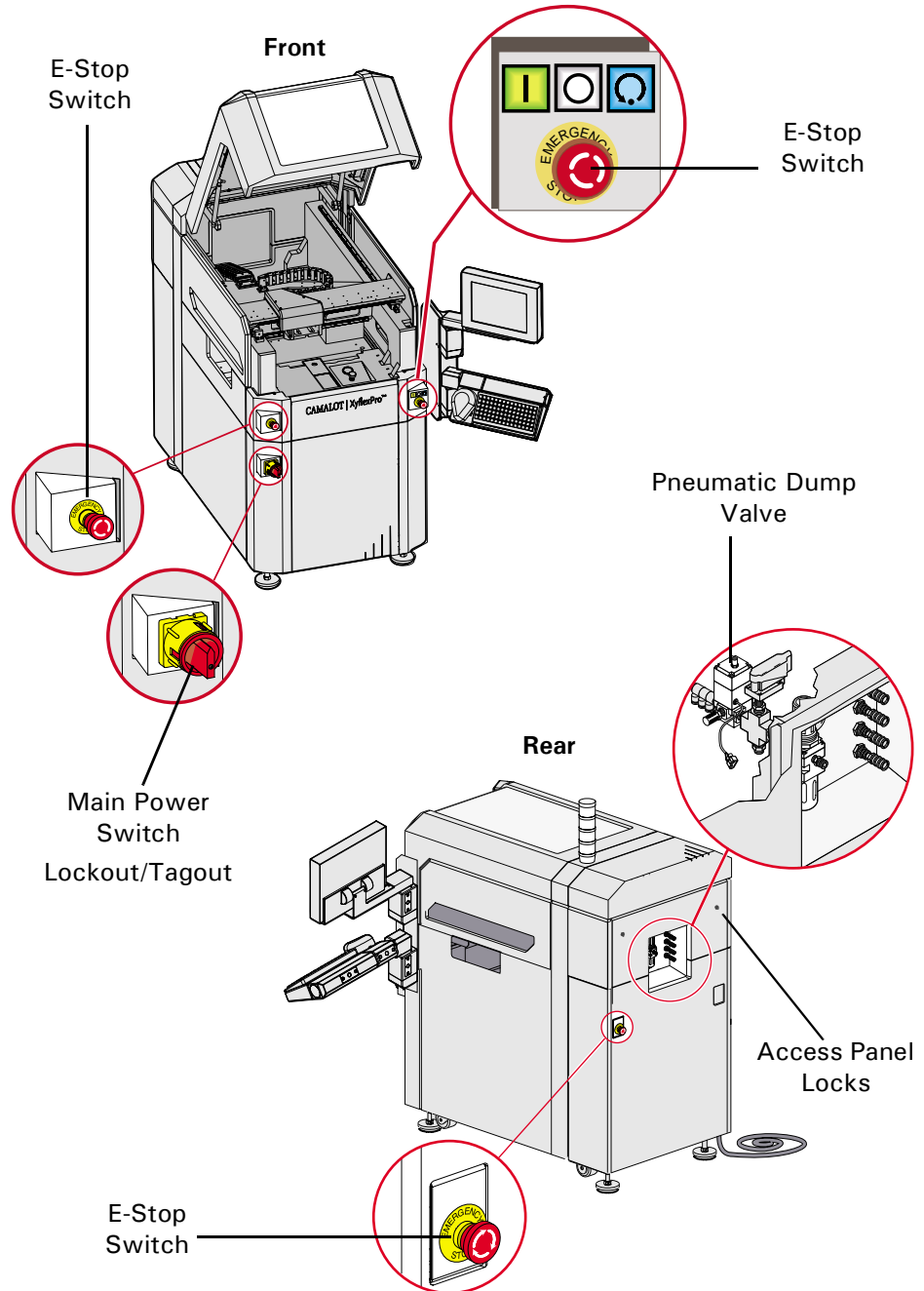


Figure 1-1

Material Handling

Introduction

Many materials used in the dispensing process, during cleaning and lubrication are potentially hazardous.

Dispensing Material Disposal

Used (empty) syringes and dispense material that was deposited onto a rag or wipe during the dispense unit purging process should be fully cured and then disposed of in accordance with National and Local regulatory requirements.

Material Safety Data Sheets (MSDS)

Material Safety Data Sheets (MSDS) are provided by manufacturers and distributors of hazardous substances. There is no single standard MSDS form, therefore many different types of MSDS forms may be used. What is consistent, is the type of information included on each MSDS form.

It is required that all personnel have ready access to the MSDS.

A table is provided in the **Maintenance and Repair Guide** for identifying potentially hazardous materials. We have listed materials supplied in the machine support kit for you and inserted the appropriate MSDS sheet(s) following the table for your convenience.

In order to keep the table current, you will need to add all other materials that are present in your environment and insert the appropriate MSDS.

Site Requirements

Overview

Introduction

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System Location

Introduction

This section describes the work area environment and physical requirements of the XyflexPro system. See Figure 2-2 for detailed drawings and dimensional data.

Environment

- The system should be placed on a level floor away from excessive heat and moisture.
 - The system should be placed away from any direct, unregulated, ambient lighting in order for the vision system to operate properly.
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Floor Loading For 7100 And 7200 Models

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Plan floor loading requirements accordingly.

Air Supply

Pressure

The system requires 10 cubic feet per minute (0.17 m³/min) 5 micron filtered dry air.

Required air pressure is 80 to 100 pounds per square inch (psi) (5.5 to 6.8 kgf/cm²).

Air Quality



Attention

Damage due to improper air supply is not covered by the warranty. The air supply must be free from oil and water.

The air supply must be oil and water free.

The material that is being dispensed may be contaminated if the air is not clean and completely dry.

Connection

The Inlet connector requires a 0.38 inch (9.65mm) O.D. inlet line.

Electrical Power

Line Voltage

The system requires one of the following service inputs depending on the installed options:

- 208 VAC at 15 amps, 50/60 Hz, single phase.
- 220 VAC at 15 amps, 50/60 Hz, single phase.
- 230 VAC at 15 amps, 50/60 Hz, single phase.
- 240 VAC at 15 amps, 50/60 Hz, single phase.

The voltages listed above are transformer tap settings and are preset at the factory, depending on the destination of the XyflexPro system. Changing transformer tap settings should only be done by a Speedline Camalot trained technician or qualified personnel. Refer to the electrical schematics for proper connections to the transformer and required voltage.

Connection

XyflexPro systems are shipped with approximately 10 feet of 14 gauge, 3 - conductor power cable. No receptacle is supplied.

Conductor Size

The electrical service conductor size shall be:

- 14 /3 type ,SO - for Domestic
- 14/3 type, HAR - for International

Ground shall conform to IEC (International Electrotechnical Commission), 204-1, Third Edition 1992-09, Section 5.

Line Voltage Transients

The electrical power distribution system supplied with this equipment will operate on standard power lines, however electric transients, which are rapid deviation from the ideal sine wave greater than the magnitude of the power line, must be eliminated or reduced.

Voltage impulses are not to exceed 1.5 milliseconds (ms) in duration with a rise and fall time between 500 nanoseconds (ns) and 500 microseconds (ms) and peak value not more than 200 % of the rated root mean square (rms) supply voltage.

Voltage dips are not to exceed 20% of the peak voltage of the supply for more than one cycle. There shall be more than 1 second (s) between successive dips.

Lightning Protection

The power lines should be equipped with lightning protection.

System Grounding

A grounding stud is located behind the front door on the left-hand wall into the frame. See Figure 2-1. System grounding is provided in the machine with a ground terminal.

At the time of installation, PE (Potential Earth) grounding must be done in accordance with IEC 204-1, Third Edition, 1992-09, Section 8. This is to keep electrical noise and electrical differential potentials under control in large systems.

All of these ground connections are in addition to the ground leads carried through various signal cables and the ground conductors contained in the power cables. The ground wire in the power cable must also be connected to the ground, usually through the conduit of the electrical distribution system. This is a non-current carrying ground, not a neutral. The power cable conduit must not be used as the only ground connection.

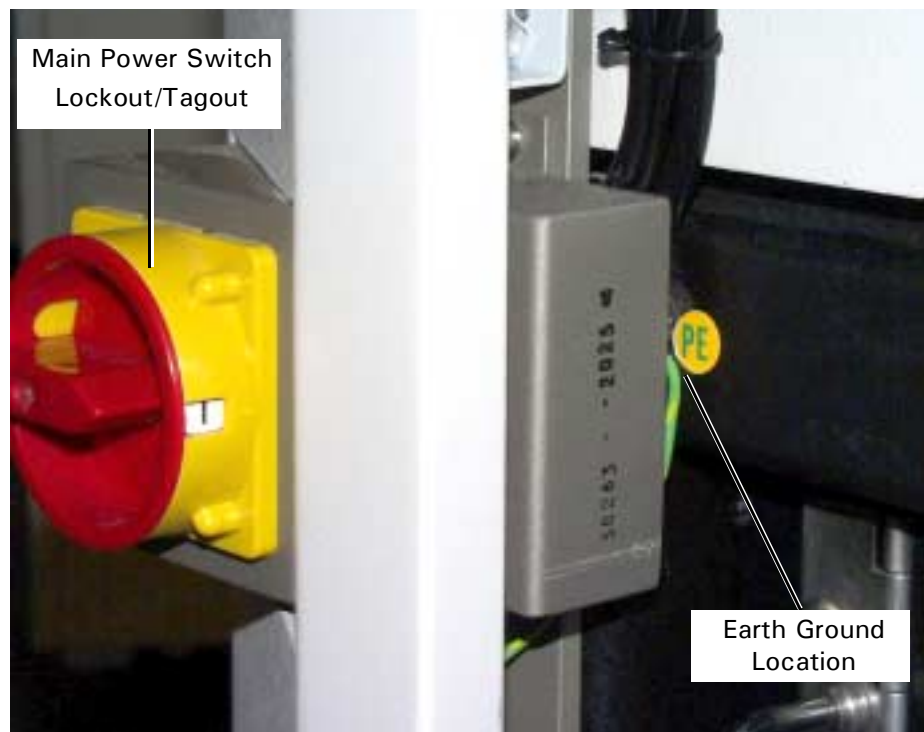


Figure 2-1

Static Protection

A static mat may be placed in front of the machine to prevent static problems. If used, make sure that the mat is grounded as specified by the manufacturer's instructions.

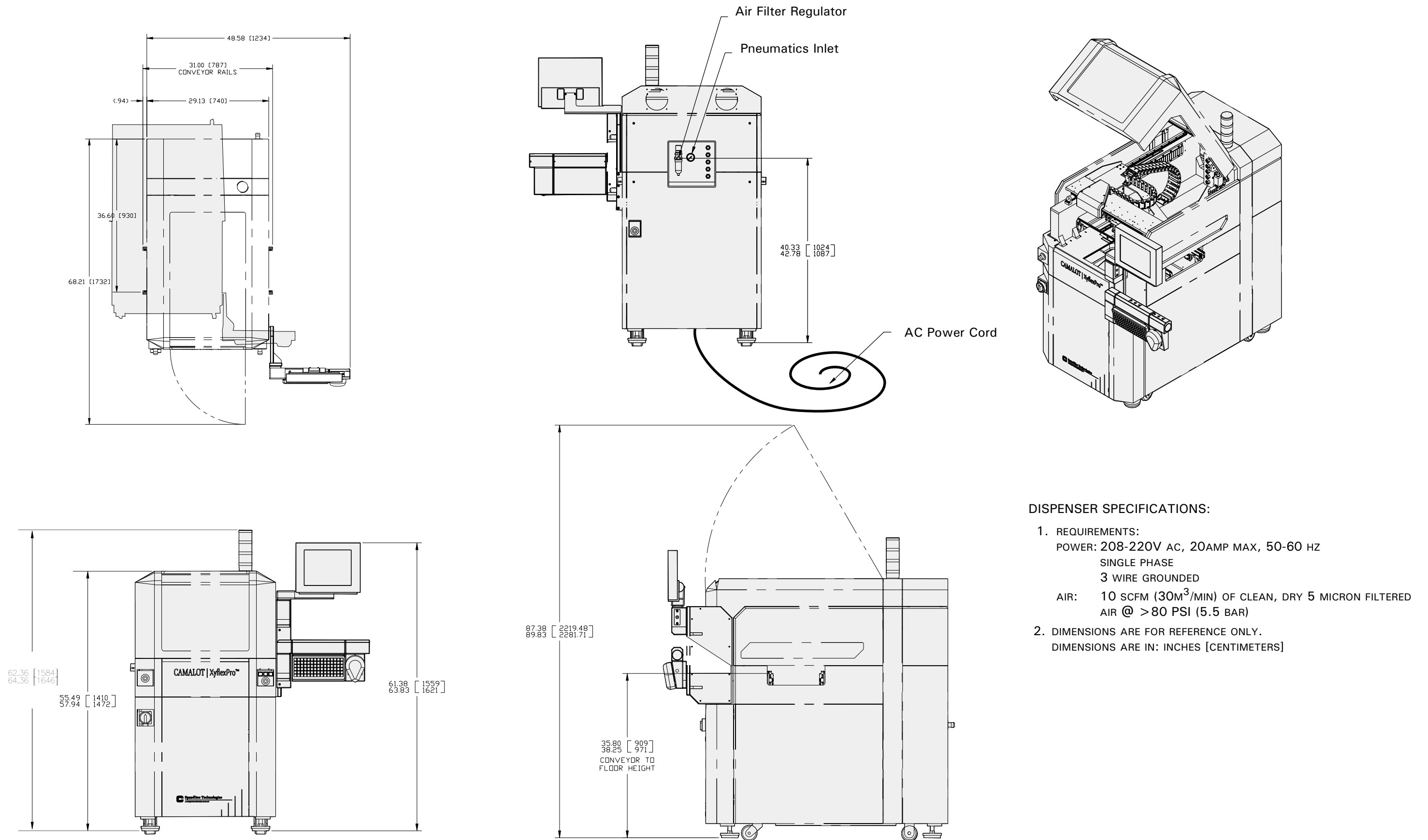
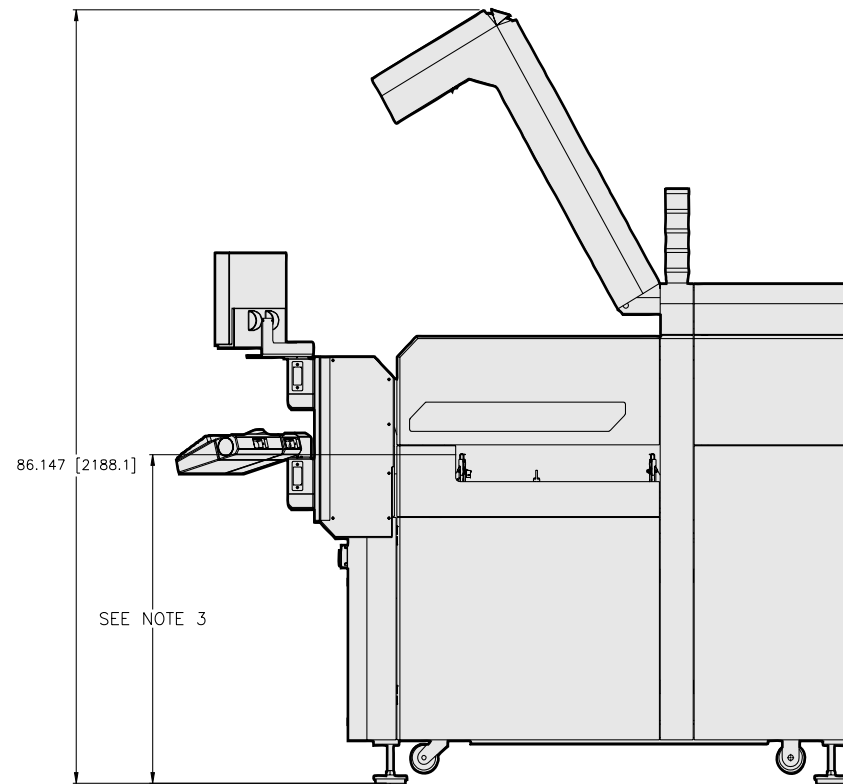
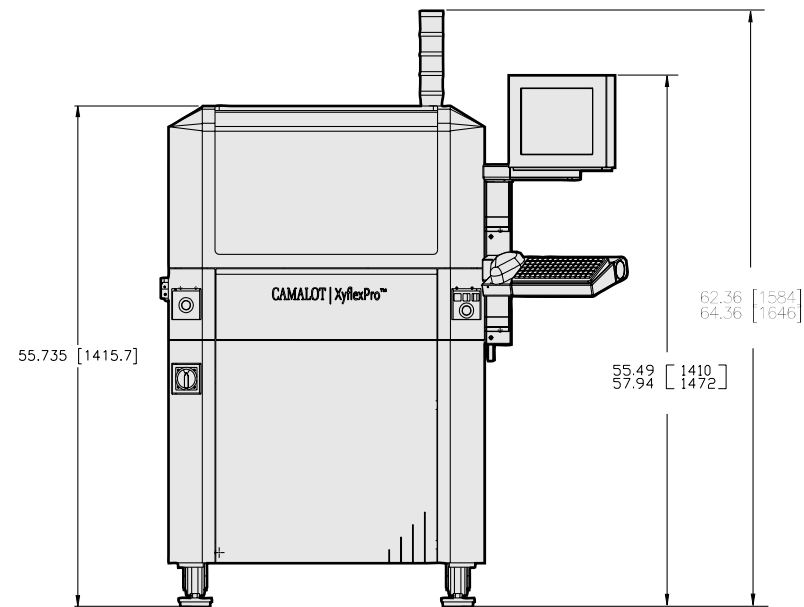
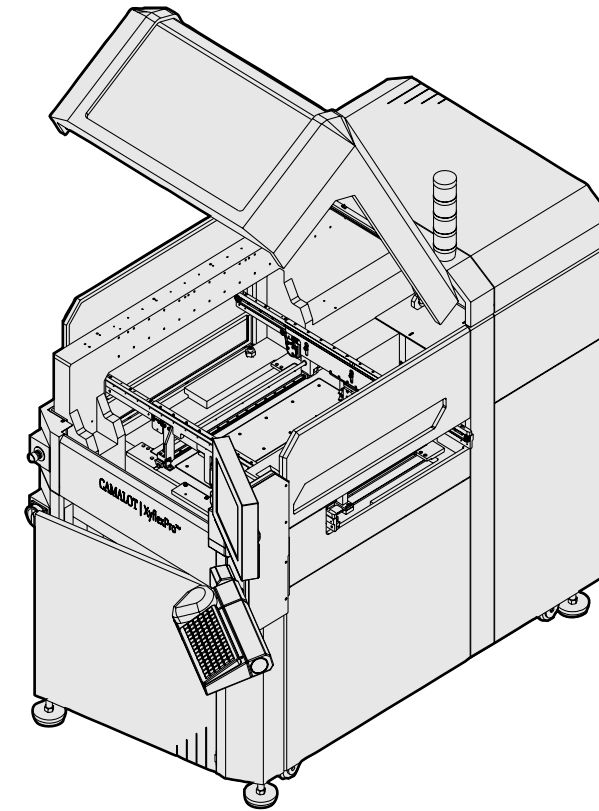
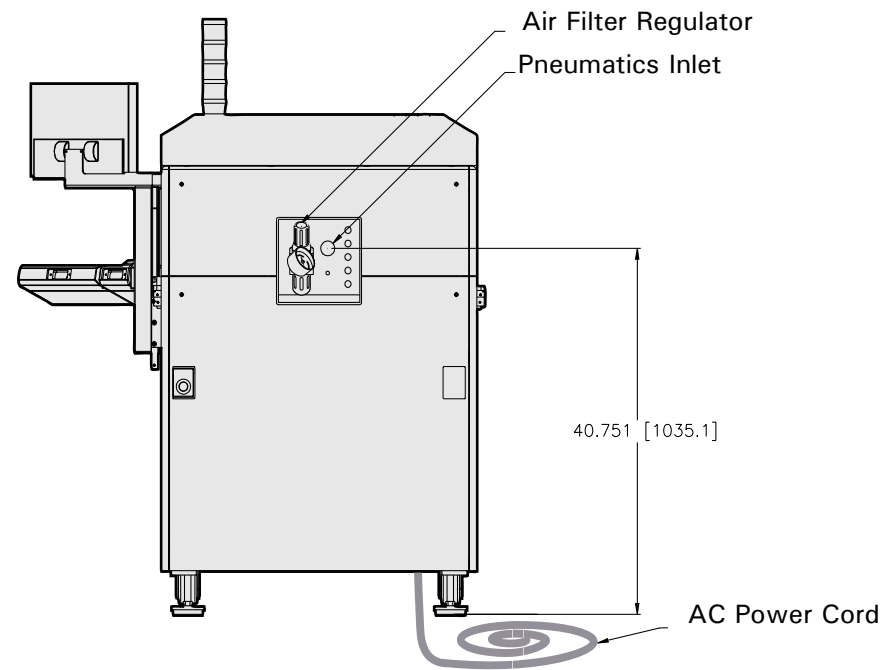
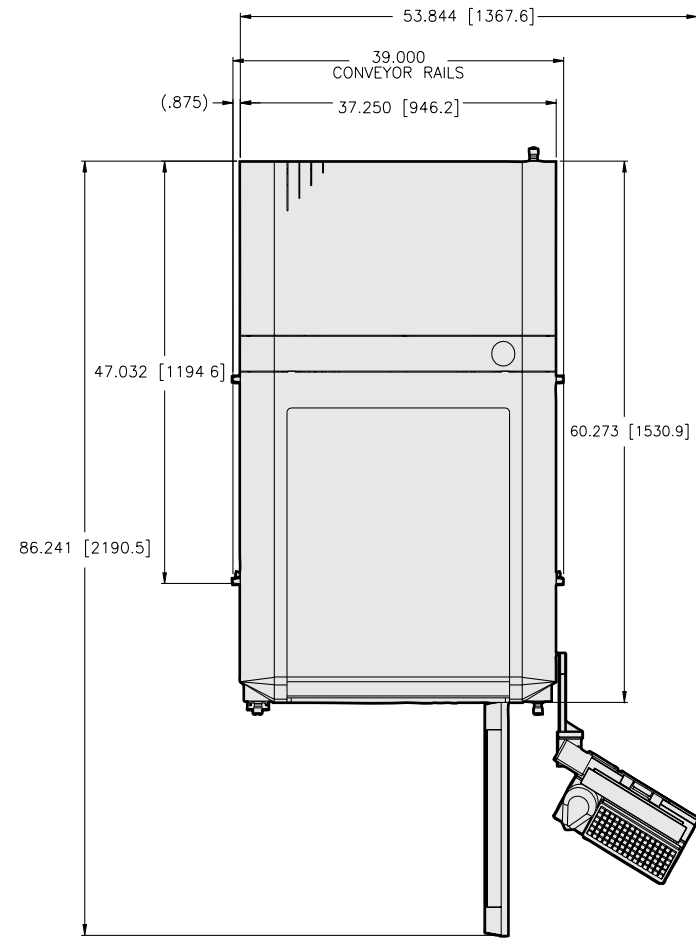


Figure 2-2



DISPENSER SPECIFICATIONS:

1. REQUIREMENTS:
 - POWER: 208-220V AC, 20AMP MAX, 50-60 HZ
 - SINGLE PHASE
 - 3 WIRE GROUNDED
 - AIR: 10 SCFM (30M³/MIN) OF CLEAN, DRY 5 MICRON FILTERED AIR @ >80 PSI (5.5 BAR)
2. DIMENSIONS ARE FOR REFERENCE ONLY.
DIMENSIONS ARE IN: INCHES [CENTIMETERS]

Figure 2-3

System Installation

Overview

Introduction

This chapter contains information you will need in order to uncrate, position and install the XyflexPro system.

Additionally, this chapter contains procedures to relocate the system after the original installation.

In This Chapter

This chapter contains the following topics.

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Uncrating The System

Overview

Introduction

This section details the procedure for uncrating the XyflexPro.

Uncrating



Attention

A fork lift truck with a minimum 6000 pound (2727.3 Kg) rating and 72 inch (1828.9 mm) length forks is required for lifting the system.

The crate panels are screwed together with drywall screws. Locate each screw and remove panels in the sequence listed below:

1. Remove the top crate panel.
 2. Remove front panel.
 3. Remove side panels.
-

Removing System From Crate Pallet

The system is mounted to two foam lined wooden slats which are in turn fastened to the pallet. These act as shock absorbers in shipping. To free the machine from the pallet:

1. Remove four large wood screws from the shock absorbing mount to crate bottom. See Figures 3-1 and 3-2.

Shock mounts will remain attached to the machine.

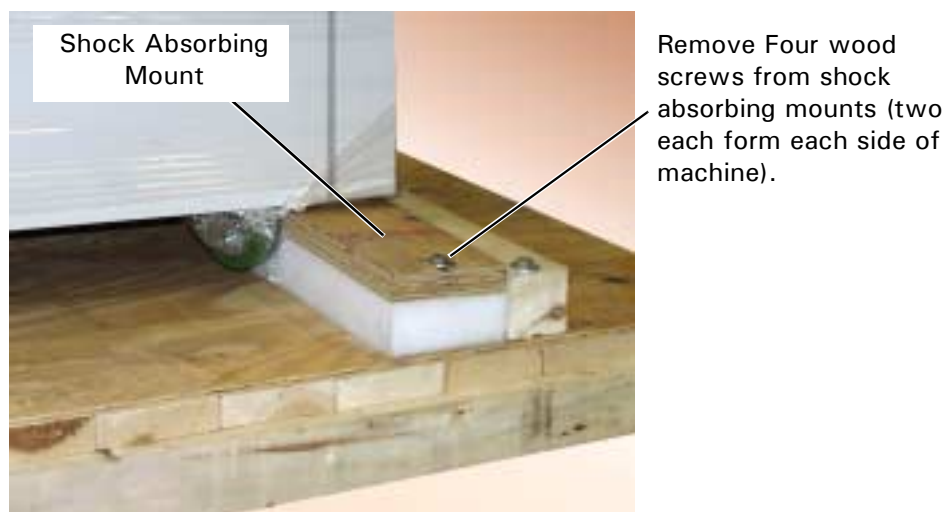
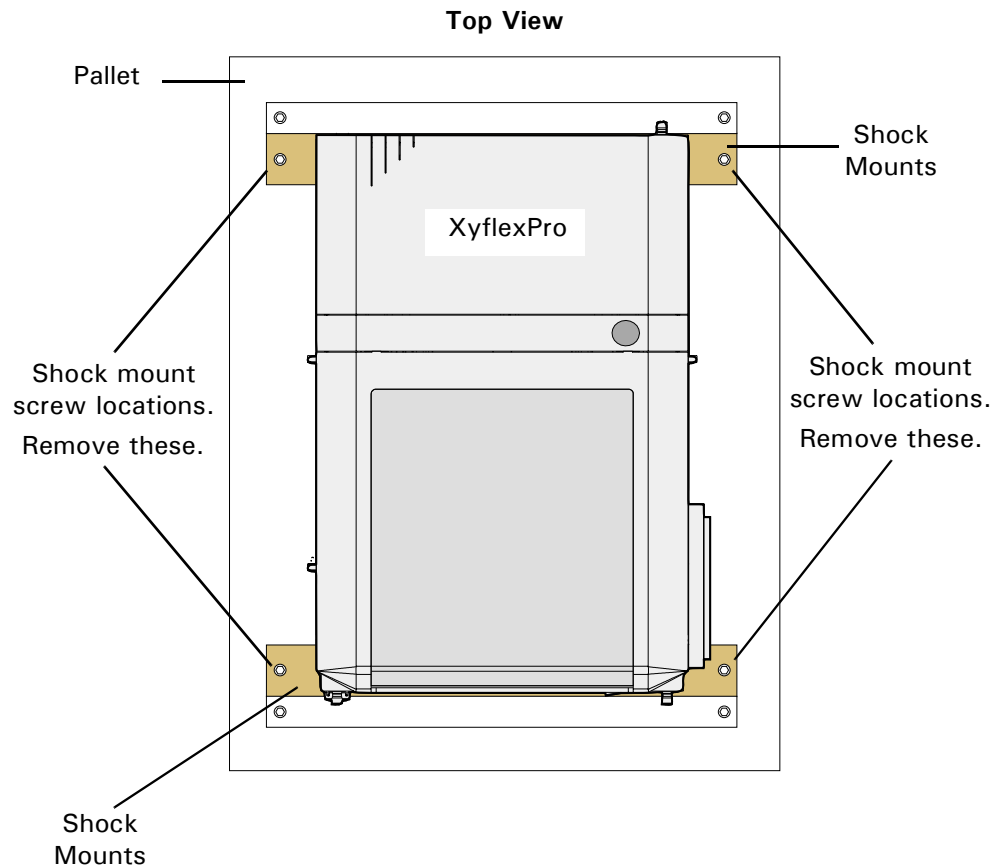


Figure 3-1

**Figure 3-2**

The machine can be lifted with the panels and doors attached. There is no danger of damage from the lift trucks forks or pallet jacks.



Attention

When lifting the machine ensure lift truck forks are as close to the shock mounts as possible.

2. Slip fork truck forks under the machine from either side. Take care not to crush the console and keyboard if approaching the machine from its right side.
3. Lift system up and away from pallet.

Keep machine suspended on the lift truck forks to remove shock mounts.



Attention

Shock mounts are attached using two bolts each at each end of the shock mounts.

4. Remove shock mounts and hardware as follows:
 - a. Remove circular foam inserts from underneath all four ends of the shock mounts. This exposes the recessed bolts which attach the shock mounts to the frame.
 - b. Remove the two bolts from each end of the shock mounts.
5. Install leveling feet at each of the four locations where the shock mount bolts were removed. See Figure 3-3
6. Ensure the leveling feet are fully inserted (threaded into the base of the frame as far as possible).

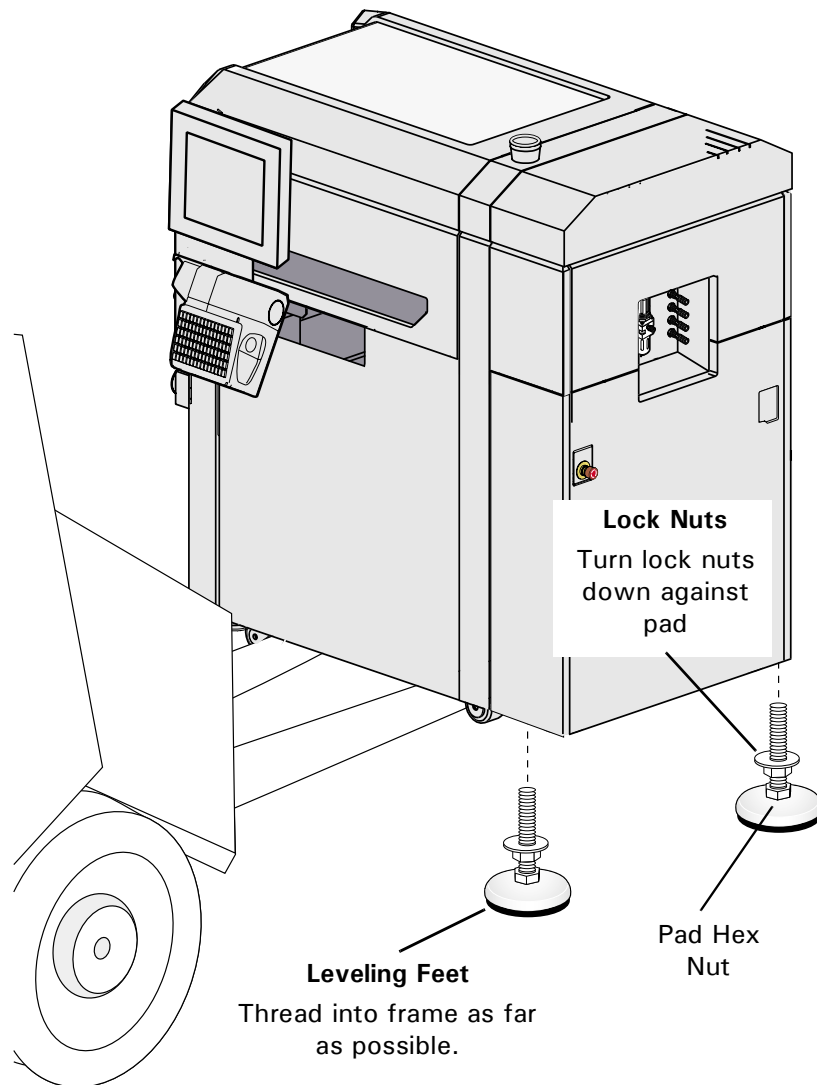


Figure 3-3

System Placement

Overview

Introduction

This section details the procedures for moving and positioning the XyflexPro system.

Shipping Notes

The XyflexPro is shipped with all cosmetic panels (skins) in place. Access to fork lifts is still accessible with the skins attached.

Casters are provided for manual movement of the system.

Recommended Placement

The system should be placed on a level floor away from excessive heat and moisture. In order for the vision system to function properly the system should be placed away from any direct, unregulated, ambient lighting.

Moving the System Into Place

Moving With A Forklift



Attention

A fork lift truck with a minimum 6000 pound (2727.3 Kg) rating and 72 inch (1828.9 mm) length forks is required for lifting the system.

The system can be lifted and moved by lift trucks or pallet jacks without removing the skins.

Lift truck forks can be inserted under the machine form either side between the casters and as close to the casters as is possible without damaging them. See Figure 3-4.



Attention

If lifting from the console side, take care to leave some room to prevent crushing the console.

Lift Machine From Side Only

If lifting from console side, take care not to damage console.

Ensure forks are spread close to the casters as possible.

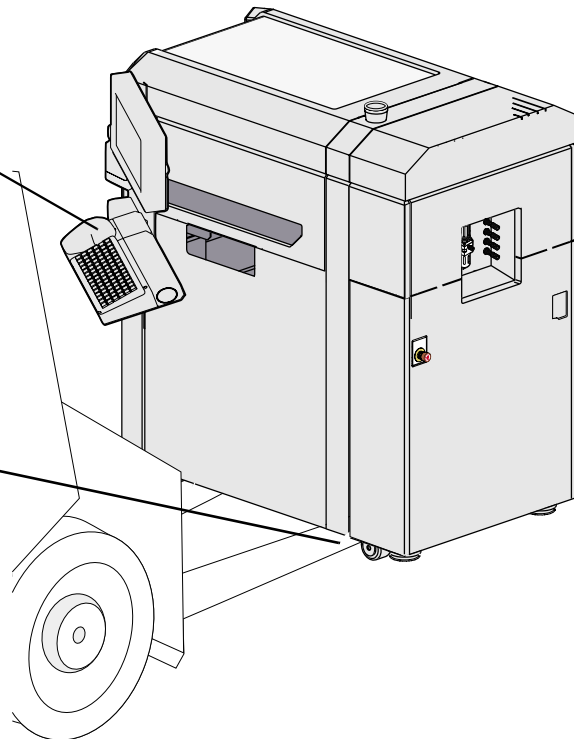


Figure 3-4

1. Lift the system and move to a permanent position.

2. Loosen the locking nuts on the shafts of the leveling pads. See Figure 3-5 and refer to section titled - **Leveling And Height Adjustment**.

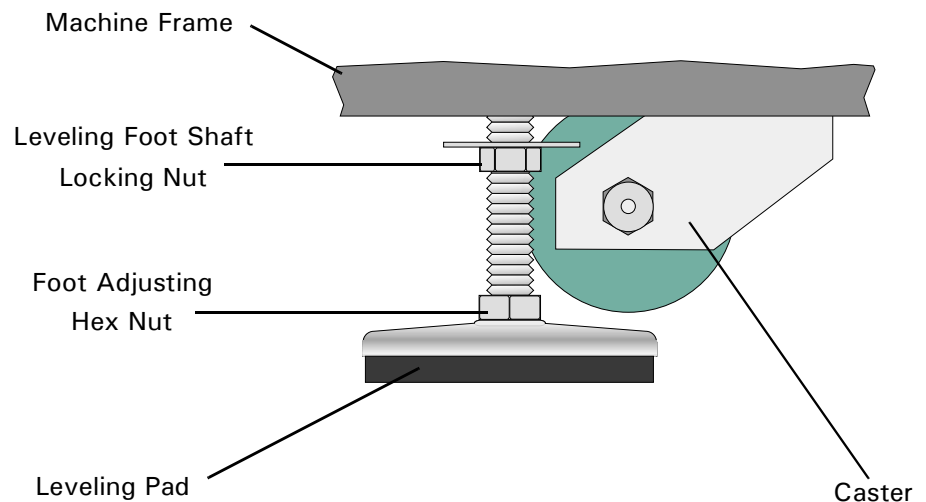


Figure 3-5

If a conveyor height of 38 inches is required, riser plates should be placed under each leveling foot before lowering the system.

3. Carefully lower the system into position.

Moving With A Pallet Jack



Attention

The pallet truck must be rated for a minimum 6000 pounds (2727.3 Kg) and must be equipped with forks which are 72 inches (1828.9 mm) in length and 27 inches (685.8 mm) in width.

1. Position the forks so that they are centered under the load area.
2. Lift the system and move to a permanent position.
3. Loosen the locking nuts on the shafts of the leveling pads. See Figure 3-5 and refer to section titled - **Leveling And Height Adjustment**.

If a conveyor height of 38 inches is required, riser plates are placed under each leveling foot before lowering the system. Carefully lower the system into position.

Leveling And Height Adjustment

1. Using the hex drive on top of the leveling pad shaft, adjust each corner until the system is at the correct height and level. See Figure 3-5.
2. Re-adjust each leveling foot as necessary
3. Tighten the locking nuts against the frame at all four corners.



Attention

In geographic areas that are prone to seismic activity, the system should be fastened to the floor. Otherwise, damage to the system could result.

For seismic prone areas fasten the system to the floor utilizing the threaded locations provided in the front and rear of the machine shown in Figure 3-6.

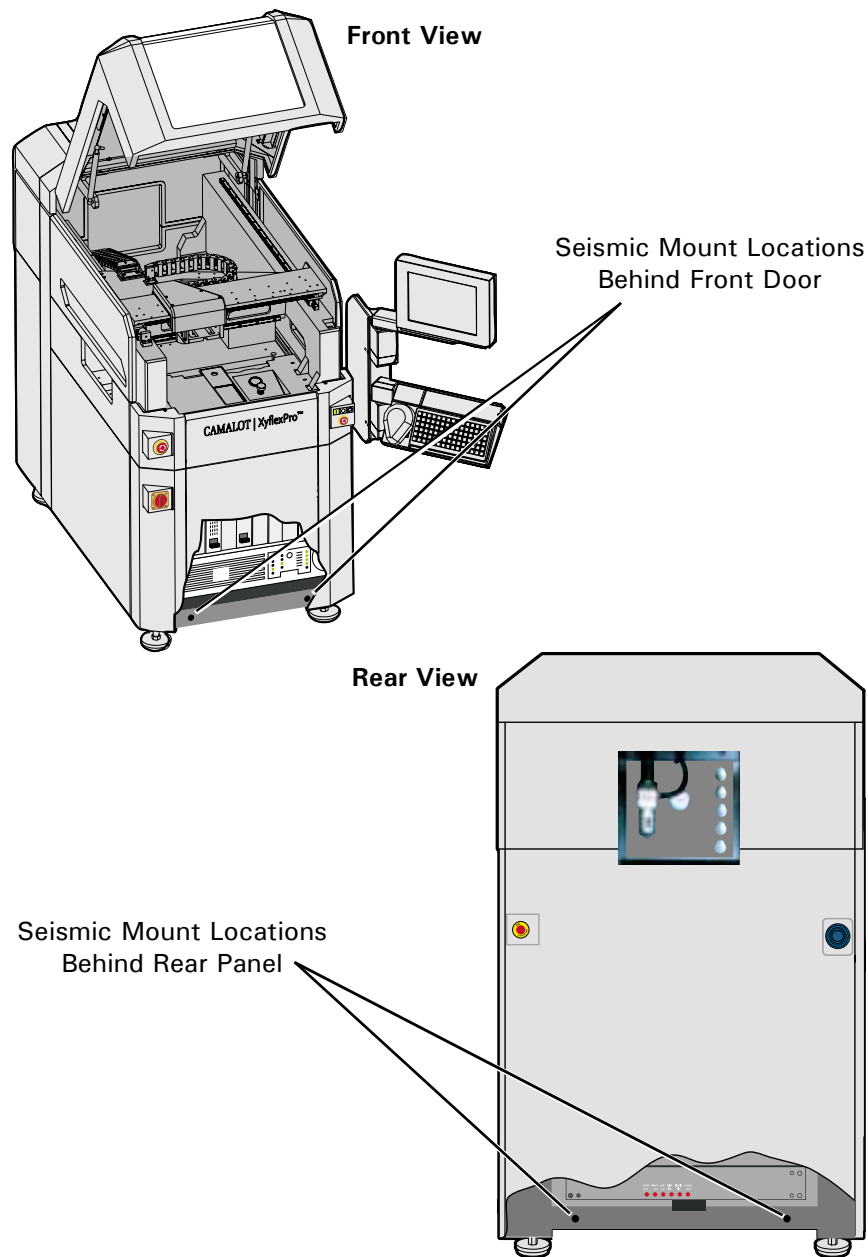


Figure 3-6

Location Setup

Overview

Introduction

This section contains procedures for removing the shipping hardware.

Packing Materials And Shipping Hardware

Procedure

1. Remove all shipping wrap and bubble pack from the machine including the console and keyboard which are retracted against the machine to facilitate shipping.

The safety door may be opened manually in case a power failure or during initial installation of the system.

2. Open the safety door (top cover) as follows:
 - a. Insert the small diameter end of the special manual release tool (P/N 35757) from the support kit through the small access hole in the right side of the upper skin. See Figure 3-7.

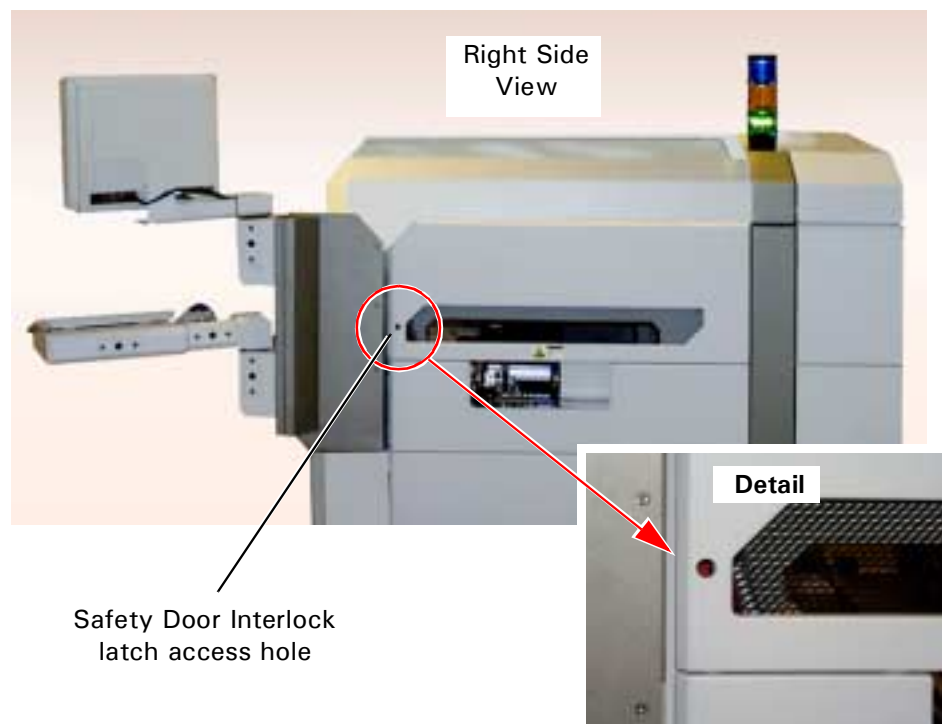


Figure 3-7

- b. Insert the tapered end of the manual release tool into the access hole in the right side of the safety door. See Figure 3-7.
 - c. Push the tool straight in until the end engages the lock mechanism.
 - d. While lifting the door, move the tool straight down until the lock releases.
3. Raise the safety door.
 4. Remove the gantry shipping bracket by removing the three (3) mounting screws. The shipping bracket is painted red and is marked by a red tag. See Figure 3-8.

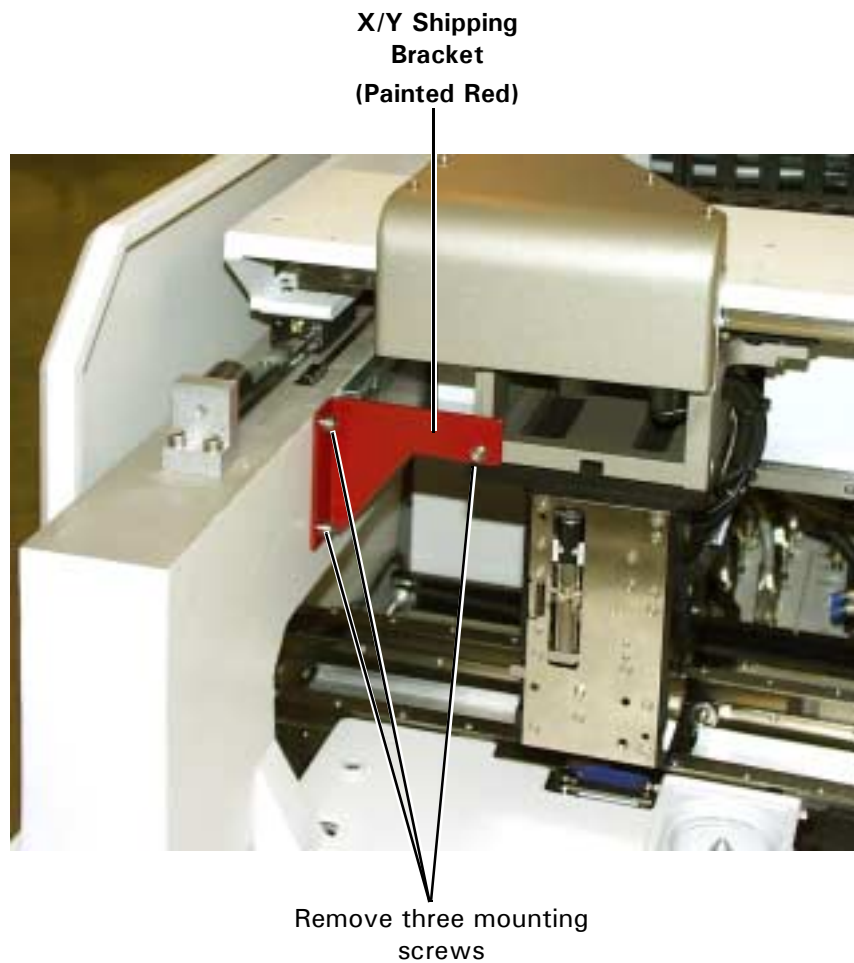


Figure 3-8

Assembly Of The Light Tower

Procedure

1. Assemble the light tower assembly to the light tower base by aligning the white line on bottom lens with the white line on the base. See Figure 3-9.

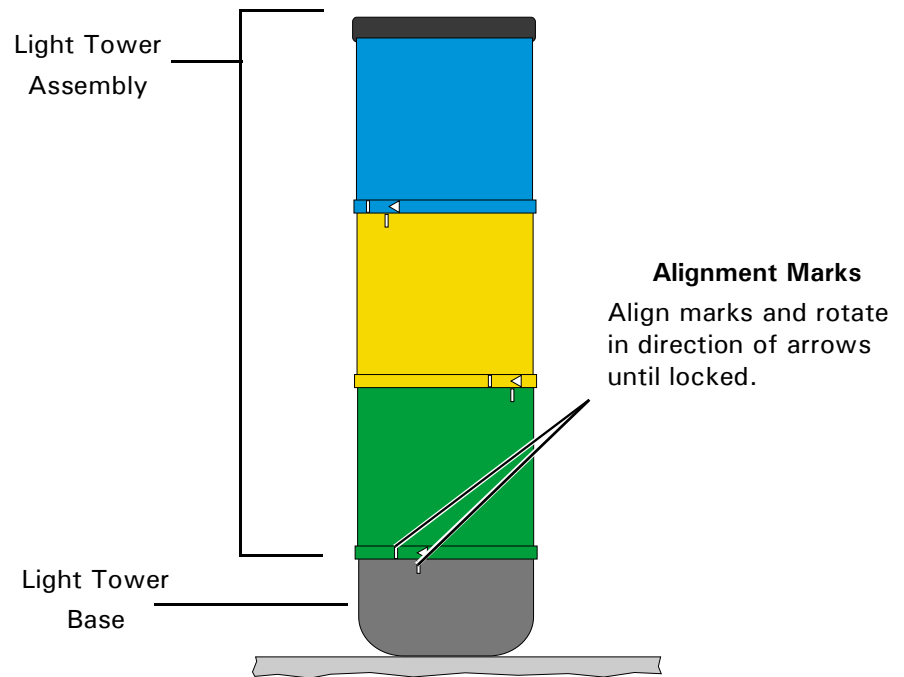


Figure 3-9

2. Twist the light assembly in direction of arrows to lock in place.

System Connections

Overview

Introduction

Refer to Figure 3-10 for the locations of the various connections on the back of the system.

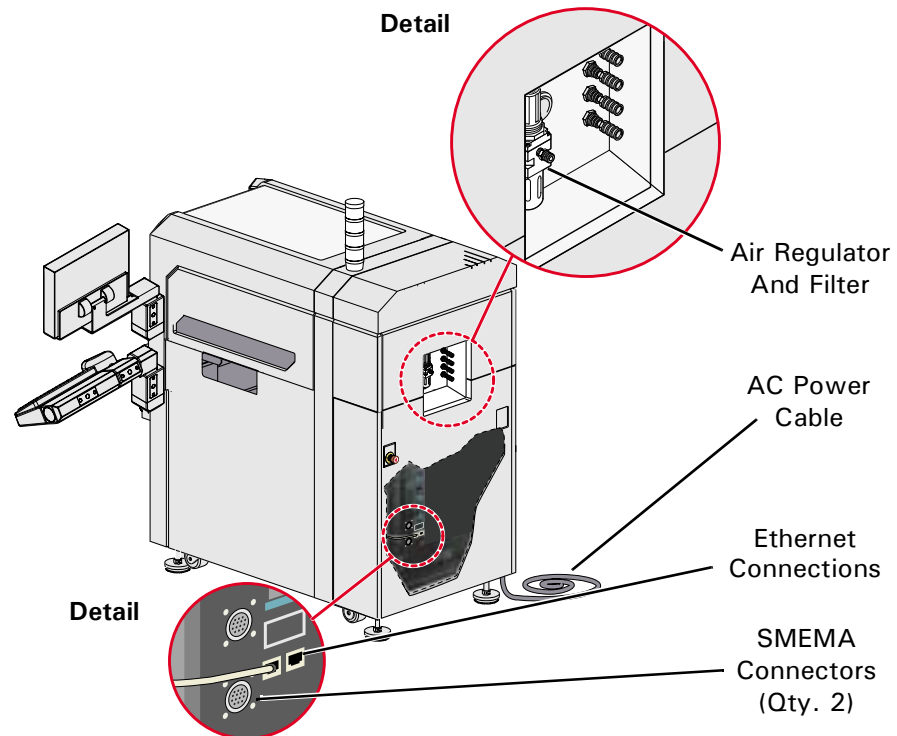


Figure 3-10

Procedure

1. Connect the air supply line to the air source on the regulator.
2. Remove rear panel.
3. Connect the ethernet cable to ethernet connector behind the rear panel.
4. Connect SMEMA connectors from up and down stream systems to connectors labeled PL1 UPSTREAM and PL2 DOWNSTREAM.
5. Connect the AC power cord to an appropriate electrical source.

System Earth Reference

Verify that the entire system is indeed referenced to earth at one and only one point (the system earth reference point). This point is well defined and labeled with the mark PE (Potential Earth) See Figure 3-11. System grounding is provided in the machine with a ground terminal.

At the time of installation, PE (Potential Earth) grounding must be done in accordance with IEC 204-1, Third Edition, 1992-09, Section 8. This is to keep electrical noise and electrical differential potentials under control in large systems. All of these ground connections are in addition to the ground leads carried through various signal cables and the ground conductors contained in the power cables. The ground wire in the power cable must also be connected to the ground, usually through the conduit of the electrical distribution system. This is a non-current carrying ground, not a neutral. The power cable conduit must not be used as the only ground connection.

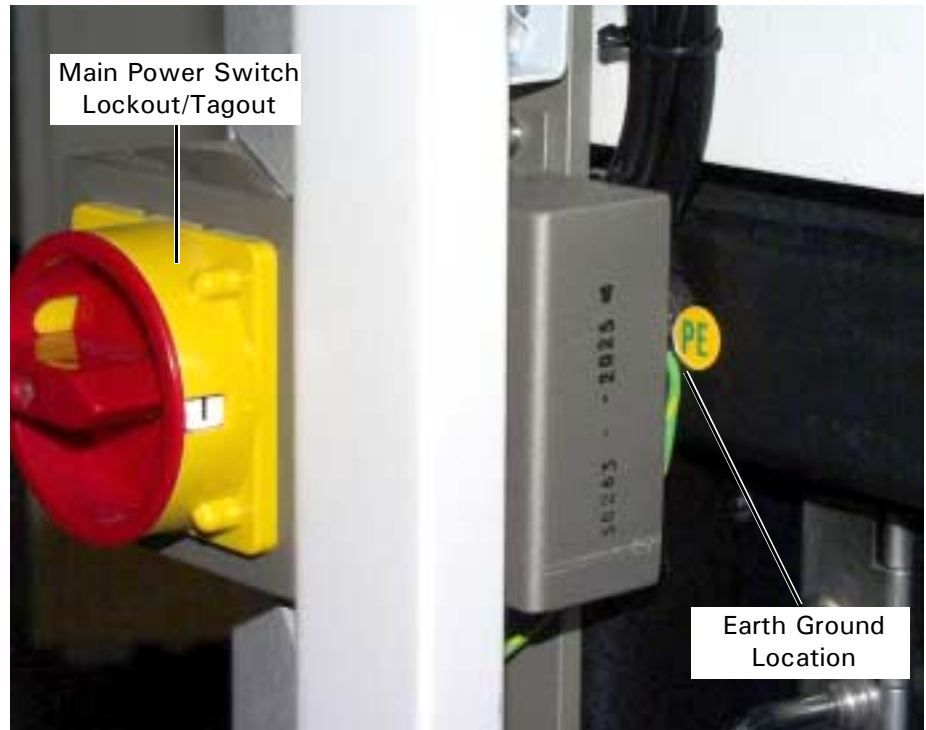


Figure 3-11

Relocating The System

Overview

Introduction

If it is necessary to move or relocate the system, follow the procedures in this section. Reinstallation procedures are the same as for a new installation.

Procedure

1. Open and raise safety while the machine is still powered.
 2. Turn main power switch to off.
 3. Disconnect AC power cable, air supply, SMEMA and Ethernet cables.
 4. Thread the leveling feet into the frame high enough to clear any uneven floor surfaces.
 5. Install the red shipping bracket unto the gantry to prevent movement. Refer to section titled - **Packing Materials And Shipping Hardware** for proper mounting location.
-

Repositioning Information

Introduction

The procedures for moving, positioning and leveling the machine are the same as for a new installation.

Refer to the section titled - **Moving The System Into Place**.
