HP Latex 1500 Printer

Site Preparation Guide

Edition 2

Legal notices

Table of contents

1 Introduction

System configuration

Your printer is supplied almost fully assembled and ready for the simple installation procedures described in detail in the installation guide. It comes complete with printheads and a printhead cleaner roll.

Documentation

The following manuals are provided with your printer, and can also be downloaded from http://www.hp.com/go/Latex1500/manuals/:

- Introductory information
- Limited warranty
- Legal information
- Site preparation guide
- Site preparation checklist
- Installation guide
- User's guide

Site preparation overview

This guide should assist in the following planning considerations:

- Modifications to the installation area
- Site accessibility
- Emergency exits
- Planning the print production area
- Mechanical, electrical and environmental specifications
- Computer and network connectivity
- Contracting a specialist mover with a forklift and/or suitable moving equipment; needed only if the site does not comply with the specifications to download the printer with the provided ramps
- Contracting an electrician

All information in this guide is provided on the assumption that installation planners and personnel are familiar with:

- Architectural and planning requirements
- Applicable laws, regulations and standards

NOTE: It is important to read the information provided in this guide thoroughly and ensure complete compliance with all installation and operation prerequisites, safety procedures, warnings, cautions, and local regulations.

Customer responsibility

Planning the site and printer environment

You are responsible for all preparations of the physical site, and you must complete the following tasks:

- Prepare the site for unloading. See Unloading area on page 20.
- Make sure the route from the unloading site to the installation site meets specifications. See Route from unloading site to installation site on page 20.
- Make sure you have the necessary equipment to handle the printer, as well as a specialist mover who is familiar with your site and the information provided in this guide. See Moving equipment on page 21.
- Meet the requirements for second floor installations (if necessary). See Above ground floor installation on page 23.
- Configure the building's electrical system used to power the printer to meet the printer's requirements and the Electrical Code requirements of the local jurisdiction of the country where the equipment is installed. A qualified electrician is required to power up the printer on the day of installation. See Electrical configuration on page 6.
- Provide an adequate air supply for the pneumatic spindles. See Air supply requirements (pneumatic spindle) on page 11.
- Meet temperature and humidity requirements and ensure proper ventilation for the printer. See Ventilation on page 12 and Environmental specifications on page 12.
- Supply all necessary emergency equipment. See Safety installations on page 14.

RIP installation

If you have bought HP RIP software for your printer:

- You must ensure that a computer is available on which to install the RIP.
- For full functionality, you are recommended to ensure that the computer is connected to the Internet.
- You must ensure that the HP RIP software has arrived by the agreed date of printer installation.

If you have bought non-HP RIP software for your printer:

NOTE: This guide does not provide information about your RIP solution.

- You must install the RIP on a suitable computer and ensure that it is fully functional by the agreed date of printer installation.
- For full functionality, you are recommended to ensure that the computer is connected to the Internet.
- You must ensure that a RIP specialist and a network specialist are present on the agreed date of printer installation.

Networking

You are responsible for all networking requirements, and you must complete the following tasks:

NOTE: In order to perform remote support, the printer must have access to the internet using the LAN connection.

- Have an adequate network ready for the day of installation. See Computer and networking requirements on page 16.
- Provide a CAT-6 LAN cable to connect the printer to your LAN on the day of installation.

Printing supplies for testing and training

You are responsible for providing the following printing supplies:

- Seven ink cartridges, for the six colors and the optimizer (no cartridges are supplied with the printer)

  NOTE: In addition, you are recommended to have a second set of seven ink cartridges, four printheads, and one HP 871 Latex Cleaning Roll, in case any replacements are needed.

- Compressed air supply for the pneumatic spindle. See Air pressure supply on page 11.
- Some rolls of substrate for printing; preferably the substrate type that you plan to use most in future

Return the site preparation checklist

The checklist must be completed and returned to your reseller or service representative a minimum of two weeks before the day of installation.

NOTE: Any delays during installation that are caused by an unprepared site will be charged to the customer. Take care that your site is properly prepared to ensure a smooth and easy installation.

Recycle the disposable ink bag and HP 871 Latex Cleaning Roll

These items require disposal according to local regulations. For further information, please refer to the MSDS document about your printer's ink, available from http://www.hp.com/hpinfo/community/environment/productinfo/psis_inkjet.htm.

Recycle the printheads

The printheads require disposal according to local regulations. For further information, please refer to the MSDS document about your printer's ink, available from http://www.hp.com/hpinfo/community/environment/productinfo/psis_inkjet.htm. Within some countries covered by the 'HP Planet Partners Returns', HP is offering a recycling program. For full details of this program, please visit http://www.hp.com/recycle/.

Dispose of liquid waste

Dispose of liquid waste in compliance with all applicable federal, state, and local regulations.

The waste profile datasheet contains the required information for an adequate disposal. This document is located here: https://hplatexknowledgecenter.com/applications/wasteprofiles/.

2 Site preparation

Planning for printer installation

This chapter covers the main topics related to efficient planning and preparation of the site. Take into consideration any structural modifications required and the time required for submission and approval of plans to the relevant local authorities. Secure temporary storage for the shipping crate prior to equipment installation may also be necessary.

⚠ CAUTION: All cables connected to the printer should be contained within suitable conduits; these may be overhead or channeled into the floor, as appropriate. Tripping over loose wires or cables can cause personal injury and/or damage to the equipment.

Installation time schedule

The best method to ensure a smooth and trouble-free installation process is proper site preparation. The following time schedule estimate is based on the assumption that all system components have been delivered in proper working order and all site preparation and planning requirements have been met and completed, in accordance with the specifications provided in this guide. The installation process is divided into two phases:

	Time to completion
Installation and system configuration	1.5 full working days
Operation and maintenance training	2.5 full working days

Although the optimal time schedule requires approximately 4 working days, it may be necessary to schedule additional time for either phase. Please plan ahead for any special circumstances that may occur during the installation process, and do not plan for production during installation and training.

If the RIP software is bought from HP, the training will cover the normal use of the RIP. The following aspects of RIP usage will be covered:

HP Scitex ONYX Thrive 211 RIP

- RIP-Queue
- Configure the printer (Quickset, Device output, Media, Page size, Properties)
- Main items of the Job Editor (Printer and media selection, Preview and size, Tiling setup, Color correction, Print)

The Media Manager will not be covered.

HP Scitex CALDERA GRAND RIP V10

- Server Administration (Server, Configure, Connection)
- GrandRIP+ (Main, Tool, Settings)
- Spooler
- Image Work Directory (Image positioning and scale setting on the page, and so on)

Profile creation will not be covered.

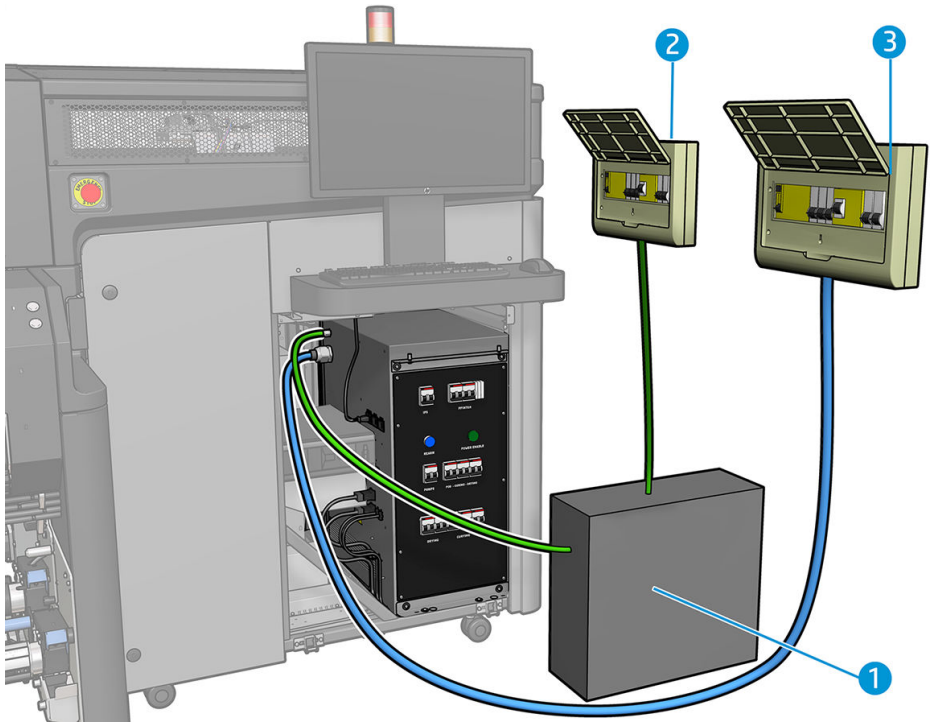
System operation requirements

Electrical configuration

NOTE: An electrician is required for the setup and configuration of the building electrical system used to power the printer and also for printer installation. Make sure that your electrician is appropriately certified according to local regulations and supplied with all the information regarding the electrical configuration.

The HP Internal Print Server can be powered with a single-phase line that can be used with an Uninterruptible Power Supply (UPS). The UPS must be rated to meet the power requirements of the printer, and should be in accordance with the wiring standards of the country of installation.

The printer requires the following electrical components to be supplied and installed by the customer, according to the Electrical Code requirements of the local jurisdiction of the country of installation.



1. Uninterruptible Power Supply (UPS) for single-phase control line (optional)

   NOTE: The HP Internal Print Server power can be obtained by making a connection inside the electrical cabinet.

2. Power Distribution Unit (PDU) including single-phase branch circuit breaker (optional)
3. Power Distribution Unit (PDU) including three-phase branch circuit breaker depending on the power configuration

NOTE: Remember that you are required to follow the local laws, regulations, and standards that apply to the electrical installation of your printer.

NOTE: The printer is not supplied with any power cable.

Power distribution unit (PDU)

The PDU must be rated to meet the power requirements of the printer, and should be in accordance with the Electrical Code requirements of the local jurisdiction of the country where the equipment is installed.

Power specifications

Configuration 1: 380–415 V line-to-line three-phase configuration

Power specifications

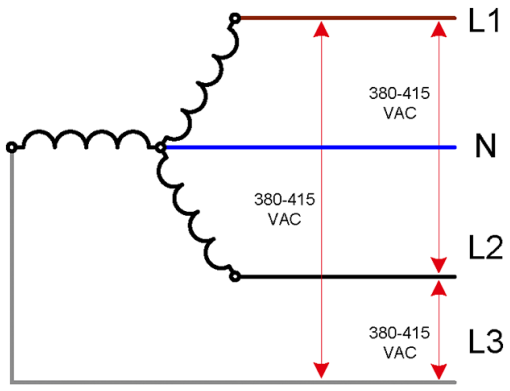
Number of power wires	5 (L1/L2/L3/N/PE)
Input voltage (line to line)	380–415 V
Input frequency	50/60 Hz
Power consumption (typical)	8–10 kW
Maximum load current (per phase)	30 A

Branch circuit-breaker specifications

Three-phase	4 poles, 32/40 A

Power-cable specifications

Configuration	5 wires, L1/L2/L3/N/PE
Wire	Strained Cu minimum, 6mm2 or 10AWG
Terminals	Lines, ferrule terminals, PE, M8 ring terminal
External diameter range	22.0–33.0 mm



Configuration 2: 200–240 V line-to-line three-phase configuration

Power specifications

Number of power wires)	4 (L1/L2/L3/PE)

Power specifications (continued)

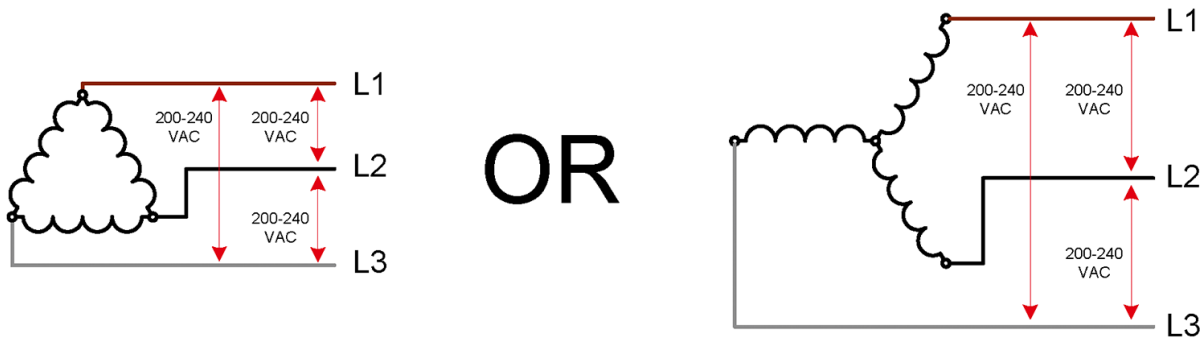
Input voltage (line to line)	200–240V
Input frequency	50/60 Hz
Power consumption (typical)	8–10 kW
Maximum load current (per phase)	48 A

Branch circuit-breaker specifications

Three-phaseP	3 poles, 50/60 A

AC Power-cable specifications

Configuration	4 wires, L1/L2/L3/PE
Wire	Strained Cu minimum, 10 mm² or 6 AWG
Terminals	Lines, ferrule terminals, PE, M8 ring terminal
External diameter range	22.0–33.0 mm



Configuration 3: 380–415 V line-to-line three-phase configuration with single- phase control

Power specifications

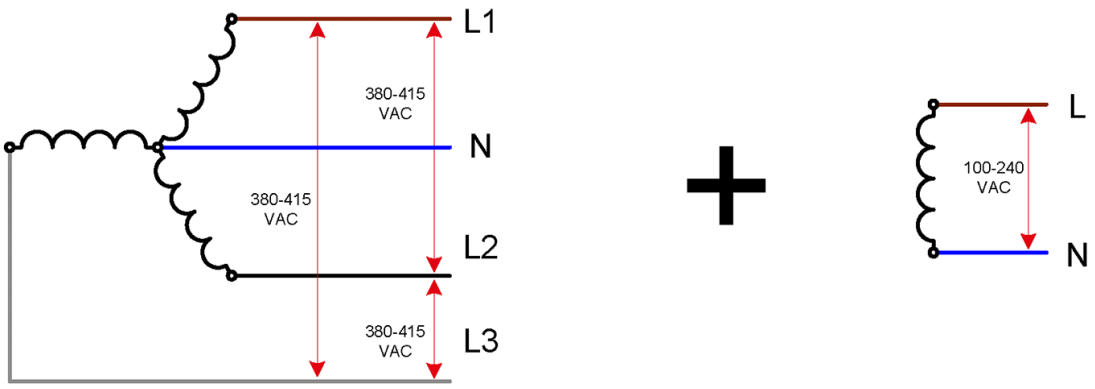
	Three-phase line	Single-phase control
Number of power wires	5 (L1/L2/L3/N/PE)	3 (L/N/PE)
Input voltage (line to line)	380–415 V	100–240 V
Input frequency	50/60 Hz	50/60 Hz
Power consumption (typical)	8–10 kW	0.5 kW
Maximum load current (per phase)	30 A	10 A

Branch circuit-breaker specifications

Three-phase	4 poles,32/40 A
Two-phase control	2 poles, 15/16/20 A

Power-cable specifications

	Three-phase line	Single-phase line
Configuration	5 wires, L1/L2/L3/N/PE	3 wires, L/N/PE
Wire	Strained Cu minimum, 6 mm2 or 10 AWG	Strained Cu minimum, 1.5 mm² or 16 AWG
Terminals	Lines, ferrule terminals, PE, M8 ring terminal	Lines, ferrule terminals, PE, M4 ring terminal
External diameter range	22.0–33.0 mm	5.0–11.0 mm



Configuration 4: 200–240 V line-to-line three-phase configuration with single- phase control

Power specifications

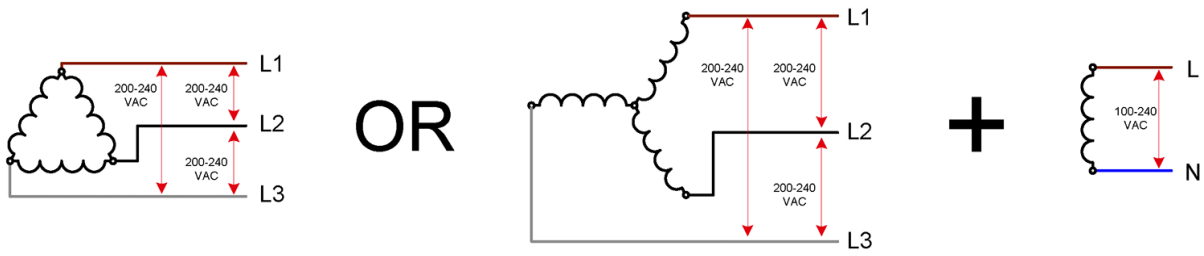
	Three-phase line	Single-phase control
Number of power wires	4 (L1/L2/L3/PE)	3 (L/N/PE)
Input voltage (line to line)	200–240 V	100–240 V
Input frequency	50/60 Hz	50/60 Hz
Power consumption (typical)	8–10 kW	0.5 kW
Maximum load current (per phase)	48 A	10 A

Branch circuit-breaker specifications

Three-phase	3 poles, 50/60 A
Two-phase control	2 poles, 15/16/20 A

Power-cable specifications

	Three-phase line	Single-phase line
Configuration	4 wires, L1/L2/L3/PE	3 wires, L/N/PE
Wire	Strained Cu minimum, 10 mm² or 6 AWG	Strained Cu minimum, 2.5 mm² or 16 AWG
Terminals	Lines, ferrule terminals, PE, M8 ring terminal	Lines, ferrule terminals, PE, M4 ring terminal
External diameter range	22.0–33.0 mm	5.0–11.0 mm



Circuit breakers (required)

The circuit breakers must meet the requirements of the printer and should be in accordance with the Electrical Code requirements of the local jurisdiction of the country where the equipment is installed.

The printer requires one or two branch circuit breakers, depending on the installation.

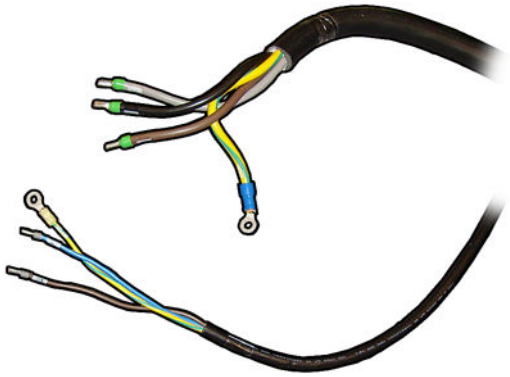
NOTE: The printer has built-in Residual-Current Circuit Breakers (RCCB), also known as Ground Fault Circuit Interrupters (GFCI), with 30 mA sensitivity. If local laws require an external RCCB or GFCI for earth fault protection, install a device with sensitivity of 100 mA or higher, with appropriate rated current for the supply configuration, and ensure that other protective devices for earth fault protection upstream from the one supplying the printer are always greater than the one selected for the printer.

WARNING! The rated short-circuit breaking capacity of the circuit breakers in the printer is 6 kA. This shall be coordinated with the branch circuit breaker in PDU (Power Distribution Unit) if so required by the Electrical Code of the local jurisdiction.

WARNING! Ensure that the printer's built-in Residual-Current Circuit Breakers (RCCB) or Ground Fault Circuit Interrupters (GFCI) operate in the case of a current leakage fault to the product chassis, even when an isolation device (such as an isolating transformer) will be used to supply power to the printer.

Power cables

No power cable is provided with the printer. The cables that you use must meet the minimum specifications for the chosen configuration explained for each configuration.



PE connections for mains power should be made through an M8 stub.

The power cable for PC power can be routed from above the right of the top cover; it can be routed from the ceiling.

Powerline disturbances

Reliable operation of your printer depends on the availability of relatively noise-free AC power.

- In order to ensure optimum performance and reliability, your printer should be protected from variations in line voltage, which are common to production printing environments. Lighting, line faults, or the power switching commonly found in machinery in factory environments can generate line transients that far

exceed the peak value of the applied voltage. If not reduced, these micro-second pulses can disrupt system operation.

- If the power line supplying the installation site is a public low voltage line shared with other users, the power line impedance Zmax must be less than 51 mΩ, to comply with European standard EN/IEC 61000-3-12. If other users on the same power line report any flickering of incandescent light bulbs, contact your electricity supplier to verify that the power network has an impedance lower than the one specified above.
- This equipment complies with EN/IEC 61000-3-12 provided that the short-circuit power Ssc is greater than or equal to 3MVA at the interface point between the user's supply and the public system. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a short-circuit power Ssc greater than or equal to 3MVA.
- It is recommended to include overvoltage (OVP) and transient protection on the power supply to the printer.
- All electrical noise generating equipment, like fans, fluorescent lighting, and air-conditioning systems, should be kept separate from the power source used for your printer.

Grounding

The printer must be connected to a good quality, dedicated ground line in order to avoid electrical risk. Please note your obligation to comply with the National Electrotechnical Code (NEC) in the county of installation.

The following grounding tasks must be fulfilled to meet the site preparation requirements:

- Grounding wires should be insulated and at least equal in size to the phase conductors.
- Ground impedance must be less than 0.5 Ω.
- The installation of a single point and dedicated ground.
- Power stabilizer equipment that is supplied by three uninterrupted phase wires and one uninterrupted copper ground wire from the main building service panel. These should run in the same conduit and should be at least equal in size to the phase wires.

Air supply requirements (pneumatic spindle)

Air pressure supply

The pneumatic spindle requires an air compressor or pressurized air line that must be provided by the customer.

TIP: HP recommends that you use an air compressor with a pressure gauge that measures in bars.

Air supply specifications

Air pressure	5.5 bar (80 psi) (required)
Minimum airflow	30 liters/minute (1.06 cubic feet/minute)
Lubricator (not required)	Not recommended
Air filter (recommended)	Recommendation: 5 µm, auto-drain, 99.97% coalescing efficiency
Regulator (required)	Regulator with pressure gauge

Pneumatic connector

The printer comes with an air gun that you must attach to your air supply. In order to connect your air supply to the air gun, you must meet the following requirements:

- 6.35 mm (0.25 in) female connector, BSP or NPT thread
- PTFE tape to secure the connection and prevent air leaks

⚠ WARNING! Take care when using the air gun. When used for cleaning purposes, make sure to use it according to the local regulations since additional safety provisions may apply

Room and spacial requirements

Environmental specifications

The temperature, humidity, and temperature gradient during operation and during storage must be kept within the standard ranges to ensure the correct operation of the printer. Failure to keep these environmental conditions within the standard ranges may cause image quality problems or damage sensitive electronic components.

	Temperature range	Humidity range	Temperature gradient
Operating for optimal print quality	20 to 25°C (68 to 77°F)	30 to 60% Relative Humidity	10°C/h (50°F/h) or less
Operating for standard printing	15 to 30ºC	20 to 70%	10°C/h (50°F/h) or less
Not operating (in transport or storage), ink in tubes	5 to 55°C (41 to 131°F)	90% Relative Humidity at 55°C (131°F)	10°C/h (50°F/h) or less
Not operating (in transport or storage), no ink in tubes	–25 to 55°C (–13 to 131°F)	90% Relative Humidity at 55°C (131°F)	10°C/h (50°F/h) or less

Maximum operating altitude: 3000 m (10000 ft)

In addition to controlling the temperature, humidity, and temperature gradient, there are other environmental conditions that must be met during site preparation:

- Do not install the printer where it will be exposed to direct sunlight or a strong light source.
- Do not install the printer in a dusty environment. Remove any accumulated dust before moving the printer into the area.

Ventilation

Ensure that the room in which the system is installed meets local environmental, health, and safety (EHS) guidelines and regulations.

Adequate ventilation needs to be provided to ensure that potential airborne exposure is adequately controlled, according to Safety Data Sheets. Consult the Safety Data Sheets available at http://www.hp.com/go/msds/ to identify the chemical ingredients of your ink consumables. Airborne materials can be identified and quantified by using established indoor air-quality testing protocols.

HP performs these assessments during the development phase for all products. HP testing shows that, during printer operation, the concentrations of airborne contaminants measured in the workspace are consistently well below key occupational exposure limits. This observation is based on exposure assessments that model very active productivity at customer facilities.

Customers should recognize that actual levels in their facilities are dependent on workspace variables they control such as room size, ventilation performance, and duration of equipment use.

HP's assessment concluded, based on the available scientific information, that airborne materials are not expected to present a health hazard as long as you provide a minimum of 10 ACH (air changes per hour) of fresh air ventilation and a minimum room volume of 100 m^3.

These specifications are valid for one HP printer printing a black area-fill print (high ink density) and fast print modes. If there is other equipment in the room or different printing conditions, the ventilation rate should be recalculated accordingly.

In addition to the workspace benefit provided by general room ventilation, heavy use of the printer may require localized ventilation in order to provide a more comfortable working environment. See also Local exhaust on page 13.

Air conditioning

In addition to fresh air ventilation, to avoid health hazards, you should maintain the operating conditions specified in the Environmental specifications on page 12, to avoid operator discomfort and equipment malfunction. Air conditioning in the work area should take into account that the equipment produces heat. Typically, the printer's power dissipation is: 10 kW (34.1 kBTU/h).

⚠ CAUTION: The air conditioning units should not blow air directly onto the printer.

Local exhaust

Intensive use of this printer system may necessitate the use of localized ventilation in order to provide a more comfortable working environment. The installation of a localized exhaust system for a printer enables the capture of airborne contaminants and heat near their source of generation, and subsequently removes them efficiently from the building through contained and relatively low-volume air flow.

A workspace health and safety professional can provide guidance on the design and use of this auxiliary ventilation equipment.

Local exhaust specifications

- Airflow: 325 m^3/h ±5%
- Pressure: −30 Pa to −10 Pa

These parameters should be measured at the local-exhaust printer connection.

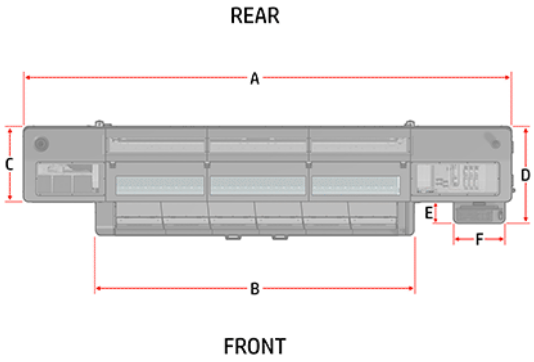
HP recommends not using ABS, PC, Steel, or EG Steel materials for the local exhaust installation. PVC, SS, PP, or aluminum are better options.

Load bearing

The load-bearing characteristics of the floor in the print production area must be sufficient to withstand the weight of your printer. To calculate the load bearing characteristics of the print production floor, you must consult a structural engineer.

Printer weight with crate	2000 kg (4409 lb)
Printer weight without substrate	1200 kg (2646 lb)
Load on each foot	600 kg (1323 lb)

Your printer has four wheels used to move the printer and three feet that must be lowered to touch the ground and support the printer. The following diagram shows where the feet and wheels touch the ground, in case you need extra reinforcements.



In the table below, the number or letter in the left column corresponds to the diagram above.

A	5.7 m (224.4 in)
B	3.73 m (146.8 in)
C	1.12 m (44.1 in)
D	1.37 m (53.9 in)
E	0.25 m (9.8 in)
F	0.60 m (23.6 in)

Floor surface

The floor surface should have the following characteristics:

- Horizontal surface
- Solid, smooth, and level
- No holes or indentations
- Static-free surface (no carpet)
- Easy to clean
- Durable
- Free from strong vibrations
- Concrete

Lighting

Whenever your printer is in operation, the print production area should be well lit to provide the operator with optimal conditions for checking the color and alignment during print production. If there is not enough natural light, artificial lighting will be required.

Designing the print production area

Safety installations

Fire fighting equipment

You must provide two fire extinguishers for the site. Make sure the extinguishers are placed where they are easily accessible in case of fire.

- A fire extinguisher certified for electrical fires must be in the print production area.
- A fire extinguisher must be placed in the substrate storage area, due to the large amount of solid combustibles (substrates).

Emergency exits and first aid stations should also be considered.

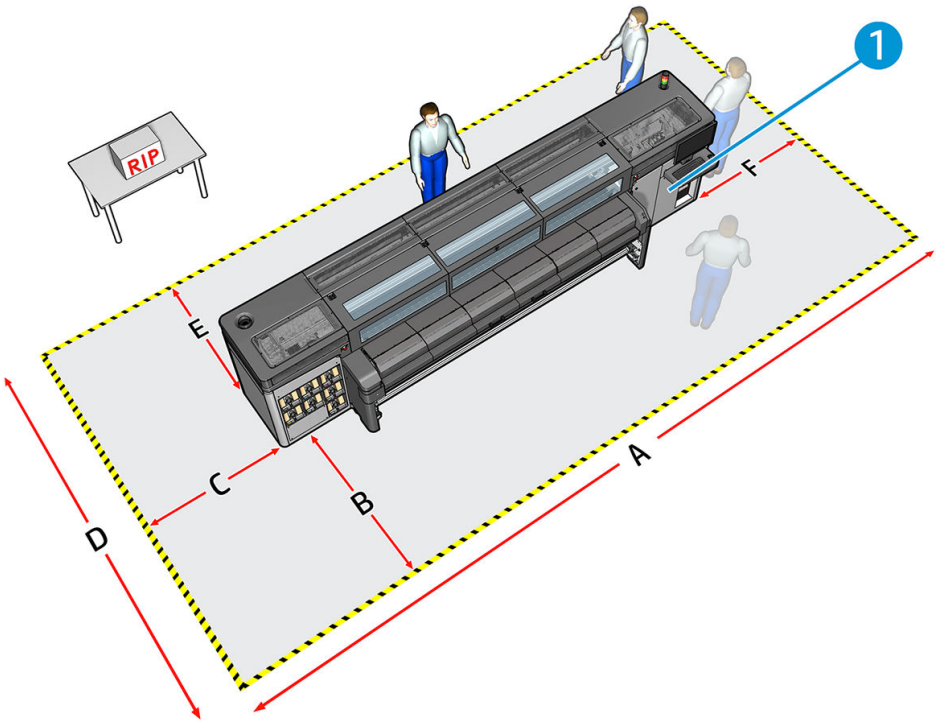
Optimal room layout

Your printer requires enough space to perform the following tasks:

- Print
- Use the HP Internal Print Server
- Replace a substrate roll
- Service the printer or replace printer components
- Ensure the printer is well ventilated

Your printer has the following dimensions:

Weight	1200 kg (2645.5 lb)
Width	5.72 m (225.2 in)
Depth	1.37 m (53.9 in)
Height	1.53 m (60.2 in)



1. Electrical connection.

In the table below, the letter in the left column corresponds to the room layout illustration above.

	Measurement
A	8.725 m (28 ft 7.5 in)

	Measurement
B	1.5 m (4 ft 11 in)
C	1.5 m (4 ft 11 in)
D	4.27 m (14 ft 0.1 in)
E	1.5 m (4 ft 11 in)
F	1.5 m (4 ft 11 in)

The ceiling of the room should be at a minimum height of 2.5 m (8 ft 3 in) above the floor.

⚠ WARNING! The zone surrounding the printer should be considered a restricted access area and signaled accordingly. Only trained personnel should be operating within this area.

Storage area for materials

When planning a storage area for materials used with the printer, thought should not only be given to safety and convenience, but also to the fact that if inks and substrates are not stored in the appropriate temperature and humidity conditions, print results may be adversely affected.

The storage area should be of sufficient size to accommodate adequate stocks of substrate rolls and inks. The storage area should be located near the print production area to minimize the lifting and maneuvering of heavy materials.

The storage area should have a covered roof. It should be dry, well ventilated and able to provide protection from direct light. It is important that temperature and humidity are maintained within values specified for each substrate type.

NOTE: Allow enough (environmentally controlled) space to store the printheads. This is indicated by the directional arrows on the printhead boxes.

Storage conditions for substrate rolls

Keep substrate rolls in their sealed wrapping material while they are placed in storage.

Store substrate rolls vertically to avoid the migration of plasticizers in some materials.

Move substrates from the storage area to the print production area at least 24 hours before use, so that they can reach the required moistness and operating temperature.

NOTE: HP substrate rolls have a 12 month warranty when the substrate rolls are stored under optimal conditions. The warranty term varies depending upon the material and the manufacturer.

Computer and networking requirements

Requirements

- Print Care network functionality requires an **Outbound** connection to all the following addresses **without** a proxy. This means that an open internet connection allowing traffic on ports 80, 443 and 21 is needed.

URL	HTTPS 443	HTTPS 80	FTP 21	Used For
http://www.hp.com		X	X	Print Care / Production Analyzer Content and Data Connectivity
https://spcastweb01p.saas.hp.com	X	X		
http://spcw01.saas.hp.com		X		

NOTE: If needed, please instruct the customer IT to create routing rules that route around the proxy for these addresses.

- ActiveX must be installed on the computer. Install ActiveX if requested to do so.

  The anti-virus application must be configured not to block ActiveX controls.

  ActiveX must be enabled in Internet Explorer:

  Select **Tools**> **Internet Options**> **Security tab**. Then select the Internet zone and click **Custom Level**.

  Under **ActiveX** controls and **plug-ins**, enable:

  - Allow previously unused ActiveX controls to run without prompt
  - Automatic prompting for ActiveX controls
- A minimum upload speed of 256 bps is required.

HP provides the following system components:

HP-provided components

- HP Internal Print Server
  - PC and power cord. PC LAN card connections: 2 Ethernet ports, one for the e-box LAN cable to connect the printer to the PC, and the other to connect to the network
  - Monitor and power cord
  - Keyboard
  - Mouse
  - Windows 7 Embedded
  - HP Internal Print Server software
  - HP Scitex Print Care software
  - Symantec Antivirus
  - Webcam
- 1 Gb Ethernet cables

Customer-provided components

- Ethernet LAN (minimum 100 Mb/s, optimum 1 Gb/s) connection
- RIP station and software
- CAT-6 LAN cable long enough to connect the printer to the network

RIP requirements

There are two RIPs offered by HP that may be used with the printer:

- HP Scitex ONYX Thrive 211 RIP: product number D9Z41A
- HP Scitex Caldera Grand RIP v10 Software: product number L5E74A

The software and hardware requirements of these RIPs are as follows.

HP Scitex ONYX Thrive 211 RIP (v 12)

- Main Workstation requirements:
  - Operating System: Microsoft Windows 7 Professional operating system (SP1 or higher) Windows 8 Professional

    NOTE: 32-bit operating systems have a hardware limit of 4 GB of RAM. You are recommended to use 64-bit operating systems for high-volume workflows.
  - Processor: Intel Core i7 or equivalent
  - RAM: 4 GB/processing core
  - Hard drive
  - Multiple hard drives
    - 1 – Dedicated system drive
    - 1 – Dedicated drive for ONYX Thrive (500+ GB free space)
  - Network Connectivity: Gigabit Ethernet for TCP/IP printers

    NOTE: Firewall and antivirus must be disabled or configured to allow ONYX applications and printer ports (515, 1947, 8889, 9100 and 10000). There may be other ports needed, please see device manufacturer for details.
  - Monitor: 1280 × 1024 pixels, 16-bit color
  - USB port for security key
  - DVD-ROM drive
- Distributed Workstation requirements:
  - Microsoft Windows 7 Professional operating system (SP1 or higher), Windows 8 Professional

    NOTE: 32-bit operating systems have a hardware limit of 4 GB of RAM. You are recommended to use 64-bit operating systems for high-volume workflows.
  - Processor: Intel Core i7 or equivalent
  - RAM: 4 GB/processing core
  - Hard drive: 250 GB free
  - Network connectivity: Gigabit Ethernet for TCP/IP printers

    NOTE: Firewall and antivirus must be disabled or configured to allow ONYX applications and printer ports (515, 1947, 8889, 9100 and 10000). There may be other ports needed, please see device manufacturer for details.
- Thrive Production Manager requirements:
  - Macintosh, Windows PC, or mobile device with HTML Web browser

For further details of Onyx configuration, see http://www.onyxgfx.com/system-specifications/.

HP Scitex CALDERA GRAND RIP V10 (minimum configuration)

- Linux:

  - Operating system: Caldera Debian x64 (recommended)
  - Processor: Intel Core i3, i5 or i7
  - RAM : 4 GB or 8 GB (recommended). Minimum 1 GB per core, recommended at least 2 GB per core.
  - HDD : 250 GB
  - Monitor / video card : 1280 × 1024 resolution
- Mac:
  - Operating system : OS 10.8, 10.9, 10.10
  - Hardware: Intel Core i3 ,i5, or i7 based Mac mini, iMac, or Mac Pro. MacBook Air and MacBook Pro not supported. PPC based hardware (G5, G4, ...) not supported.
  - 4 GB or more. Minimum 1 GB per core, recommended at least 2 GB per core.
  - HDD: 250 GB
  - Monitor: Resolution at least 1280 × 1024

For further details of Caldera configuration, see:

- http://www.caldera.eu/en/support.php?page=operating_system
- http://www.caldera.com/product/grandrip/

External color profiling

In order to build color profiles for your printer, an external color sensor is needed. Make sure to choose an external spectrophotometer that is compatible with your RIP.

During the installation training, it is the customer's responsibility to have a RIP specialist available to create color profiles.

3 Shipment arrival preparation

Unloading area

A suitable unloading area will need to be designated that will be easily accessible to the delivery truck. This will require sufficient space to unload the large crate in which your printer is shipped. When planning this area, consider the following:

- Height and width of entrance to unloading area
- Ramps used to access the unloading area
- Height and size of unloading dock (if applicable)

Route from unloading site to installation site

The route between the unloading area of the printer and the installation site, including any corridors and doorways through which the printer must be transported, is important to proper site preparation and must be planned before the arrival of the printer. This pathway must be clear when the printer arrives. Regarding ground floor room access, transport of the bulky printer components requires:

Doorway, ceiling, and corridor specifications

	Printer	Crate
Minimum doorway width	1.55 m (61 in)	1.9 m (74.8 in)
Minimum ceiling height	1.85 m (72.9 in)	2 m (78.8 in)
Minimum corridor width	1.55 m (61 in)	1.9 m (74.8 in)
Minimum corridor width for a 90° turn	3.9 m (154 in)	3.9 m (154 in)

⚠ WARNING! After being removed from the crate, the printer can be moved up or down a ramp of no more than 3% inclination.

TIP: Decide when you will remove the printer from the crate. It is recommended that the shipping crate be unpacked as close as possible to the printer's final destination. Usually, the printer is removed from the crate before moving it to the installation site.

Disassembling the crate requires an electric screwdriver that must be plugged into a power outlet, so make sure that a power outlet is available near the site where you plan to disassemble the crate.

Shipment items

All printer components will arrive in a single crate. The dimensions and weight of the crate and printer are as follows:

	Width	Depth	Height	Weight
Crate (printer inside)	5.86 m (231 in)	1.81 m (71.3 in)	1.91 m (75.2 in)	2000 kg (4409 lb)
Printer	5.72 m (225.2 in)	1.37 m (53.9 in)	1,67 m/1,53 m, no beacon (66 in/60.2 in, no beacon)	1200 kg (2645.5 lb)

Tools and manpower required for installation

The installation process requires 4 capable people in case ramps are used. In case a forklift is used, only 2 people are needed, usually the installer and the operator. Additionally a certified electrician is required to configure the electrical system.

Check with the installation specialist before delivery to make sure you do not have to supply any tools.

Moving equipment

Ground floor installation

It is highly recommended to lower the printer with the ramps as indicated in the installation guide. In exceptional cases, where ramps cannot be used due to a physical barrier, follow the alternative instructions indicated carefully.

⚠ CAUTION: Unloading and moving the printer and all system components is the customer's responsibility and not HP's. Failure to provide the required moving and lifting apparatus could result in personal injury or damage the printer during installation.

Lower the printer with ramps

- Minimum room space to lower 4,5 m beside the crate, 6,4 m total
- Minimum manpower: 4 people
- Flat floor or max 3% inclination

In case any specification cannot be met, use a forklift to lower the printer. Please follow the instructions carefully:

- The forklift can be ordered as a service kit (K4T88-67290), and is also attached to the reseller Kit.

The use of specialist moving and lifting equipment is required during the unloading, unpacking and installation of your printer.

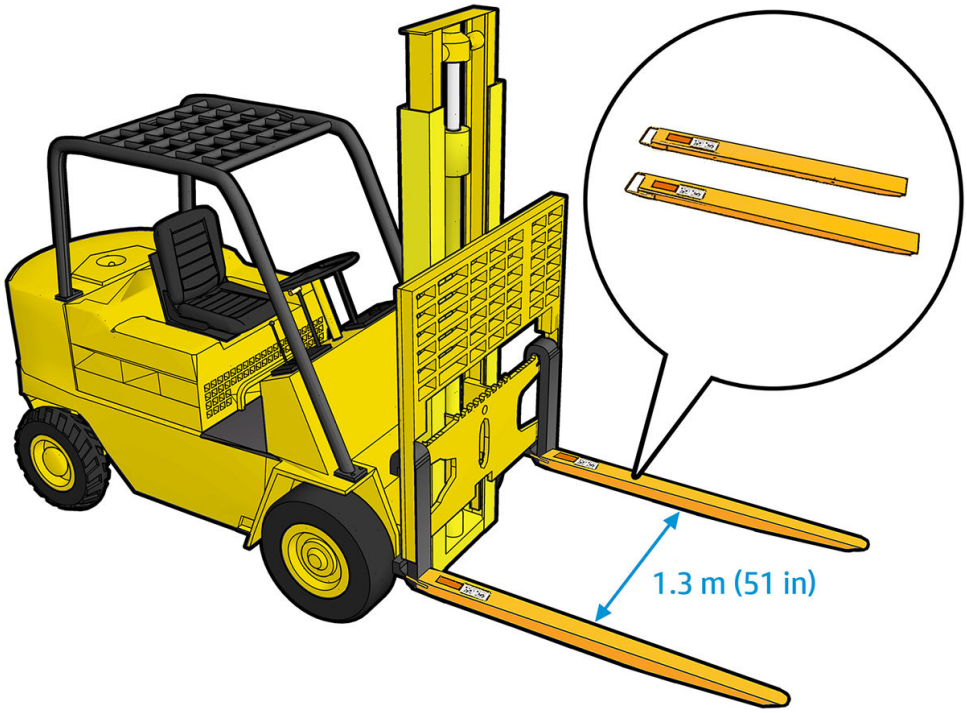
Advanced booking for the services of a machinery moving contractor/rigger must be made. It is important to confirm that the hired moving specialist and moving equipment will be available when the printer is delivered.

The following equipment is recommended:

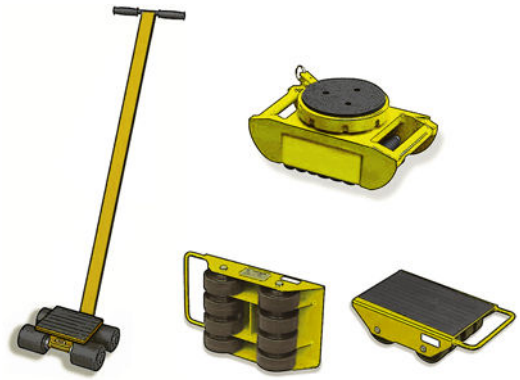
- Wide, heavy-duty forklift (required)

Forklift specifications

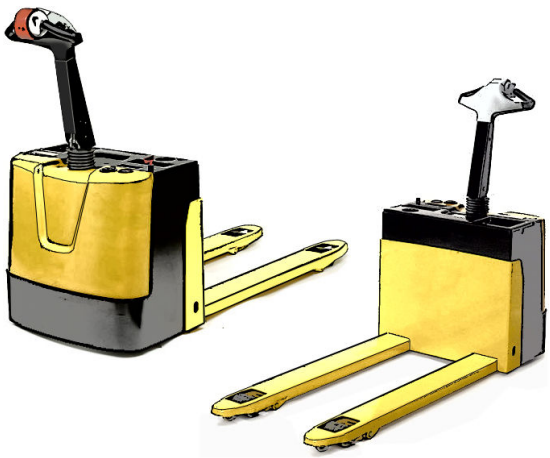
	Weight	Minimum fork length	Inner distance between forks
Forklift	6000 kg (13228 lb)	2 m (79 in) for crated printer 1.5 m (59 in) for printer only	1.3 m (51 in)



- Two skates to move the crate (optional)



- Electric pallet jack (optional)



- Manual pallet jack (optional)

Above ground floor installation

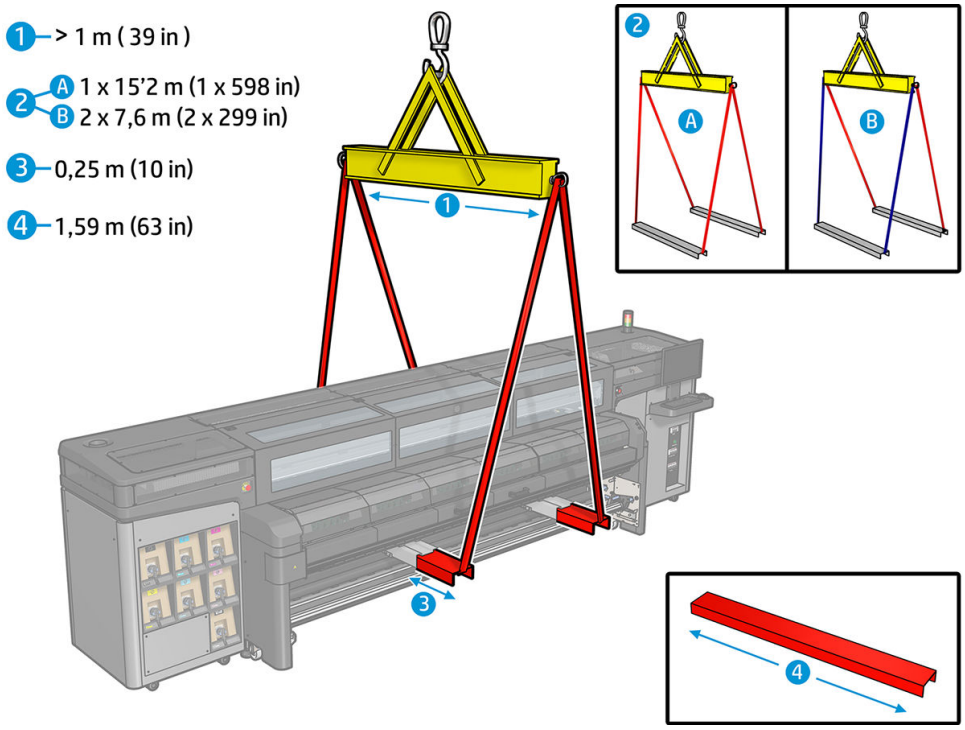
⚠ CAUTION: Unloading and moving the printer and all system components is the responsibility of the customer and not HP. Failure to provide the required moving and lifting equipment could result in personal injury or damage the printer during installation.

Above ground floor installation requires a crane and special lifting gear in addition to the standard moving equipment. At some installation sites, it may be necessary to remove the crate packaging before lifting the printer with the crane. The following section describes the equipment and configurations needed to lift the printer with a crane.

Crane attachment to lift the printer with a spreader beam

When you lift the printer with a spreader beam, the lifting bars and spreader beam must be long enough so that the lift cables do not touch the printer. The following graphic illustrates how to lift the printer with a spreader beam.

⚠ CAUTION: When lifting the printer with a crane, extra caution should be taken to ensure that the cables do not apply pressure to the scan beam or any other printer component.



Waste disposal

Printer packaging can be reused for moving the printer at a later date.

The crate and packaging material that comes with the printer can also be disposed of. Most of the waste will be wood materials. Consult with your local authorities to determine the correct manner in which to dispose of waste.