PRE-INSTALLATION GUIDE

ImageXpress Confocal HT.ai

High-Content Imaging System

Welcome to the family of ImageXpress system users. This document provides you with the information required to prepare for the installation of your new ImageXpress® Confocal HT.ai High-Content Imaging system.

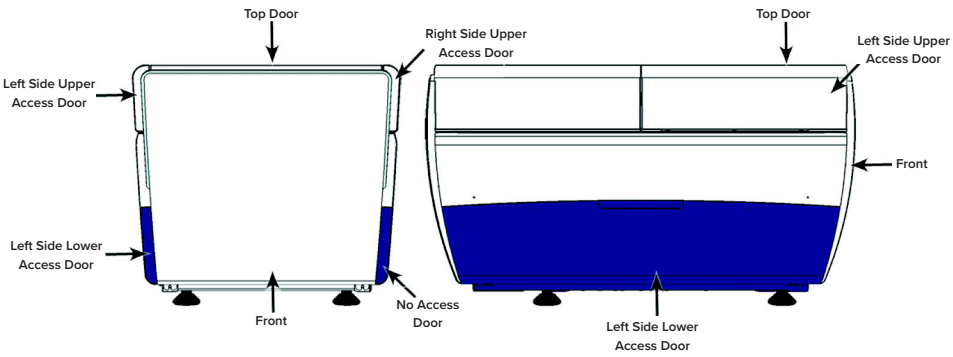
Environmental Requirements

The ImageXpress Confocal HT.ai system and its options are designed to operate indoors under laboratory conditions from 15°C to 30°C (59°F to 86°F) with 35% to 50% non-condensing humidity.

As with any precision optical instrument, take care to maintain a low-dust, low-vibration environment. Temperature and humidity extremes can compromise performance.

Avoid installing the instrument with the following lab conditions:

- Avoid installation in or next to a room where there is high-motion equipment, including vacuum pumps, centrifuges, elevators, air conditioners, or heaters.
- Avoid installation directly in the path of air vents. Sudden temperature changes and air-flow vibrations can degrade performance.
- Avoid installation near external vibration caused by trains or excessive vehicle traffic.
- Avoid installation in any room with noticeable vibration on the floors or walls.
- Avoid installation less than 5 m (16.4 ft) from a refrigerator.
- Avoid installation less than 2 m (6.5 ft) from a door.
- Avoid installation on a table that is mechanically attached to a wall.
- Avoid installation on a table with shakers, stirrers, mixers, or centrifuges.



MOLECULAR DEVICES

Space and Table Requirements

The ImageXpress Confocal HT.ai system requires a table or lab bench suitable for the size and weight of the instrument and its options. The system is available with the following options:

- Environmental Control (EC)
- Phase Contrast Transmitted Light (TL)
- Environmental Control & Transmitted Light (EC/TL)

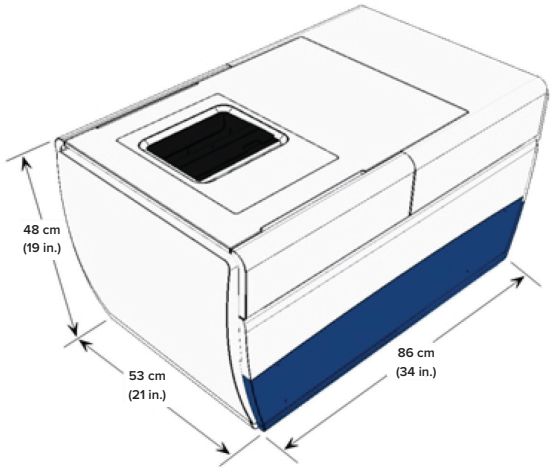
The height and weight of the ImageXpress Confocal HT.ai system are increased by the addition of the Transmitted Light option.

The size and weight of the ImageXpress Confocal HT.ai system are as follows:

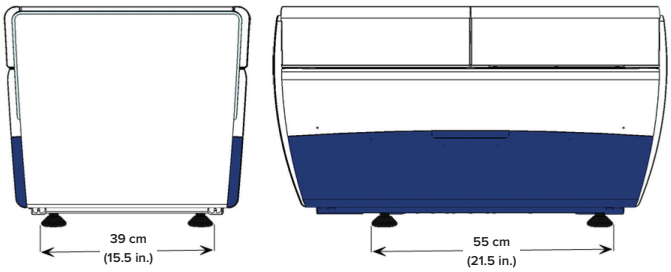
System	Width	Height	Depth	Weight
Instrument, no options	53 cm (21 in.)	48 cm (19 in.)	86 cm (34 in.)	104 kg (230 lb)
Instrument with EC/TL	53 cm (21 in.)	83 cm (33 in.)	86 cm (34 in.)	109 kg (240 lb)
Instrument with TL	53 cm (21 in.)	83 cm (33 in.)	86 cm (34 in.)	109 kg (240 lb)
Instrument with EC	53 cm (21 in.)	48 cm (19 in.)	86 cm (34 in.)	104 kg (230 lb)

The dimensions of the ImageXpress Confocal HT.ai system components are as follows:

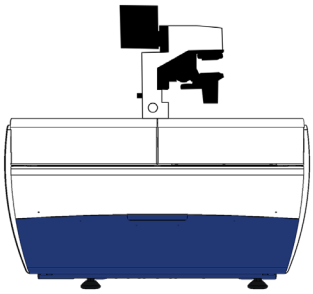
Component	Width	Height	Depth
Acquisition Computer	20 cm (8 in.)	43 cm (17 in.)	53 cm (21 in.)
ImageXpress Systems Power and Options Controller	28 cm (11 in.)	20 cm (8 in.)	51 cm (20 in.)
Water Immersion Controller	26.7 cm (10 in.)	26.7 cm (10 in.)	25 cm (9.87 in.)
Laser Light Source (approximate size)	32 cm (12.5 in.)	23 cm (9 in.)	15 cm (6 in.)
Monitor, 27"	61.3 cm (24.1 in.)	54 cm (21.3 in.)	21.5 cm (8.5 in.)
Monitor, 22"	49.9 cm (19.7 in.)	37.9 cm (14.9 in.)	23.3 cm (9.2 in.)



Instrument Dimensions



Distance Between the Outside Edges of the Instrument Feet



Instrument with EC/TL Option

Most low-magnification applications tolerate non-optical tables, which can be purchased from vendors specializing in industrial furniture such as:

- Ergotron (www.ergotron.com/en-us/anthro)
- RDM (www.rdm-ind.com)
- SteelSentry (www.steelsentry.com)

For high-magnification or vibration-sensitive applications, we recommend a sturdy table, such as an optical bread-board, which can be purchased from vendors such as:

- Newport (www.newport.com)
- Kinetic Systems (www.kineticsystems.com)
- TMC (www.techmfg.com)

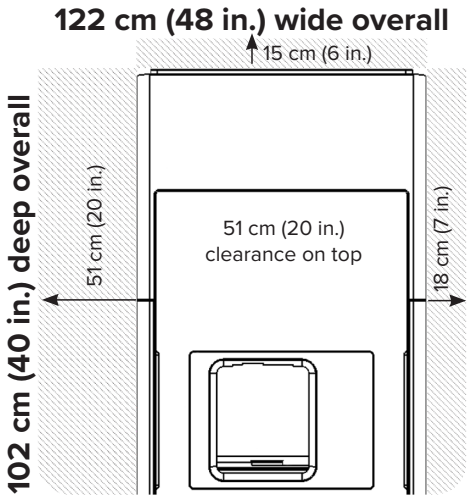
It is the user's responsibility to verify weight capacity and sturdiness of products from third-party vendors. An optical table reduces the vibration transmitted to the instrument, allowing for better imaging performance in relatively poor vibration environments. We do not recommend air or hydraulic isolation tables.

To minimize vibration, the ImageXpress Systems Power and Options Controller, light source, and computer should not be placed on the same table as the ImageXpress Confocal HT.ai instrument. Often these items are placed on the floor below the instrument. The optimal configuration is to keep these components within 1.2 m (4 ft) of the instrument as cables are approximately 1.8 m (6 ft) in length. The Acquisition Computer can be used with multiple monitors, so ample desk space for monitor placement is needed.

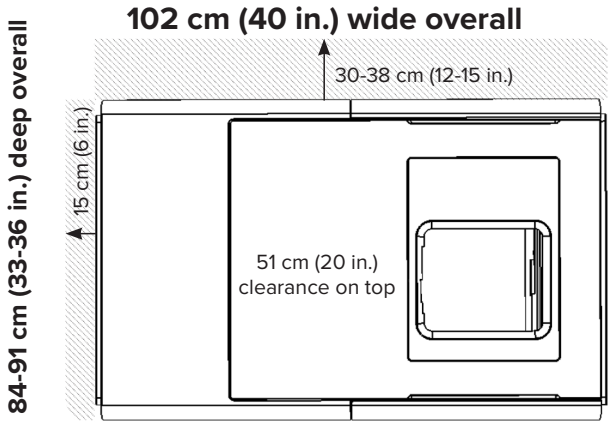
You will need access to the front and the sides of the instrument to change objectives and filters.

The instrument can be installed in two orientations: front or side. We recommend side installation to allow access to the left side access doors. Space for the instrument as well as adequate clearance around the instrument is necessary for user and service access.

Set up the Water Immersion Controller so the base of the controller is level with the instrument.



Front Installation

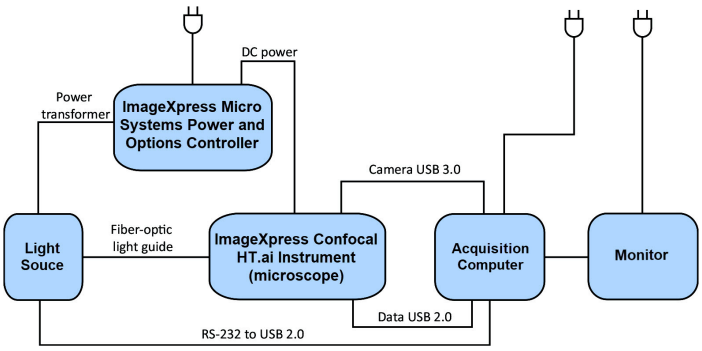


Side Installation (for best access to upper and lower side door)

Power Requirements

Consider the following power requirements for the ImageXpress Confocal HT.ai system:

- Direct connections to all international supply voltages available.
- Use the included IEC power cord to connect the external ImageXpress Systems Power and Options Controller to a GROUNDED power receptacle rated for 15 A.
- With the EC option, input voltage range is either 100-120 VAC, 50/60Hz, 12 amps maximum or 200-240 VAC, 50/60Hz, 12 amps maximum. The appropriate version is specified at time of order.
- Without the EC option, input voltage range is from 100 VAC to 240 VAC, 50/60 Hz, 12 amps maximum.
- Fluctuations must be within 10% of the nominal voltage.
- When using a power strip, connect the computer to a different power strip than the ImageXpress Systems Power and Options Controller that connects to the instrument and light source.
- We recommend that you maintain separate circuits for the instrument, light source, and computer.



ImageXpress Confocal HT.ai System without Options

The power requirements for the ImageXpress Confocal HT.ai system and components are as follows:

Component	Watts	VA	Power Cables
Instrument, no option	200	211	1
Instrument with TL option	300	322	1
Instrument with EC option	400	421	1
Instrument with TL/EC option	500	532	1
Light Source (connects to Power and Options Controller)	220	232	1
Computer	120	133	1
27” Monitor (each)	40	44	1
22” Monitor (each)	20	22	1

To determine the power consumption (watts) or apparent power (volt-amperes or VA) for your ImageXpress Confocal HT.ai system, add the power requirements of all applicable components. For example, the power consumption of a system without options and with two large monitors is 620 watts (200 + 220 + 120 + 40 + 40). The maximum power requirement of any configuration is 920 watts. Most of the additional power for the EC option is needed for the EC heater.

To limit the risk of interruption during power loss, use an uninterruptible power supply (UPS) to provide backup power and power line conditioning for the instrument and computer. We recommend the UPS capacity should be 20% higher than the power requirement for your system.

Facility Receiving Requirements

Do not open the crates upon receipt. Only Molecular Devices personnel are authorized to open the crates.

The system arrives in two crates for the standard system or three crates if an option is included. The instrument crate requires 3 m (10 ft) of clearance on one side to allow for removal of the instrument from the crate.

Due to its weight, the instrument must be moved to the installation site on the included 61 cm (24 in.) by 92 cm (36 in.) rolling cart.

The size and weight of the crates are as follows:

Crate	Width	Height	Depth	Weight
Instrument Crate	134 cm (53 in.)	112 cm (44 in.)	81 cm (32 in.)	280 kg (620 lb)
System Component Crate	77 cm (30 in.)	77 cm (30 in.)	56 cm (22 in.)	50 kg (110 lb)
TL Crate or EC/TL Crate, if applicable	77 cm (30 in.)	77 cm (30 in.)	56 cm (22 in.)	50 kg (110 lb)

Installation Requirements

You must provide the following items to assist in instrument installation:

- Sturdy table or lab bench at least 94 cm (37 in.) by 61 cm (24 in.) and rated for over 104 kg (230 lb) with minimal vibration.
- Table clearance of 102 cm (40 in.) wide and 84-91 cm (33-36 in.) deep with 100 cm (39 in.) of vertical clearance (for side installation).
- Additional space for computer keyboard, mouse, and at least one monitor.
- Network cable and 1 gigabit network connection. (Wireless network is not available on the workstation.)
- Online power conditioning UPS (optional).
- Power strip (optional).

Additional Installation Requirements with EC Option

- CO_2/air mixture (for example, 5% CO_2 / 95% air) from a tank or house supply as appropriate for your application.
- CO_2 regulator that can supply 1.38 bar (20 psi).
- Appropriate length of 6 mm (¼ in.) O.D. tubing to connect the instrument and the CO_2 regulator.
- 6 mm (¼ in.) adapter for the CO_2 regulator.

The CO_2 mixtures for different equipment combinations are as follows:

Installed Equipment	CO_2 Mixture
Standard plate holder, no gas mixer	5% CO_2 / 95% air
Robo EC, no gas mixer	7.2% CO_2 / 92.8% air
Either plate holder with gas mixer	100% CO_2

Documentation

The Molecular Devices Knowledge Base includes complete documentation for the ImageXpress Confocal HT.ai system, along with technical notes, software upgrades, safety data sheets, and other resources. To access the Knowledge Base, go to support.moleculardevices.com.

Support and Service

Molecular Devices provides comprehensive support and service solutions for the ImageXpress Confocal HT.ai system supported by a global network of factory trained engineers. To contact us, go to:

Web: www.moleculardevices.com/service-support
www.moldev.com/support
Email: support@moldev.com

Contact Us

Web: www.moleculardevices.com
Email: info@moldev.com
Check our website for a current listing of worldwide distributors.

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