



Pre-installation guide

ImageXpress® Micro Confocal High-Content Imaging System

Welcome to the family of Molecular Devices® ImageXpress® System users. This document provides you with the necessary information to prepare your facility for the installation of your new ImageXpress Micro Confocal High-Content Imaging System.

Environment requirements

The ImageXpress Micro System and all options are designed to operate indoors under laboratory conditions (15° to 30°C; 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.

Most low-magnification applications will tolerate non-optical tables that can be purchased from companies specializing in

industrial furniture, such as:

- Anthro (<http://www.anthro.com>)
- RDM (www.rdm-ind.com)
- SteelSentry (<http://www.steelsentry.com>)

For high-magnification or vibration-sensitive applications, we suggest a sturdy table such as an optical breadboard from vendors such as:

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

Molecular Devices sales representatives may have recommendations for specific tables; however, it is the user's responsibility to verify weight capacity and general sturdiness of product from third party vendors. An optical table will reduce the

vibration transmitted to the instrument, allowing better imaging performance in relatively poor vibration environments. We do not recommend air or hydraulic isolation tables.

Avoid installing the instrument with the following lab conditions or situations:

- Avoid installation in or next to a room where there is high-motion equipment, like elevators, air conditioners, and heaters.
- Avoid placement directly in the path of air vents. Sudden temperature changes and air-flow vibrations can degrade performance.
- Avoid placement near external vibration caused by trains or excessive vehicle traffic.
- Avoid placement in any room with noticeable vibration on floors or walls.
- Avoid placement less than 5 m (15 ft) away from refrigerators.
- Avoid placement less than 2 m (6 ft) away from doors.
- Avoid using a table that is mechanically attached to a wall.
- Avoid sharing a table with shakers, stirrers, mixers, or centrifuges.

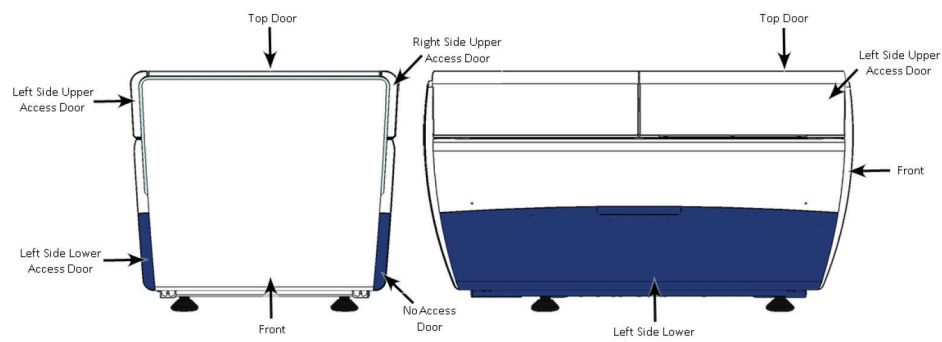


Figure 1. Instrument front and sideways installation orientation options.

Space and table requirements

A table or lab bench suitable for the size and weight of the instrument is required. The size and weight for the instrument portion of the ImageXpress Micro System are provided in Table 1. The size and weight of the ImageXpress Micro system components are provided in Table 2.

ImageXpress Micro System can be purchased with Environmental Control (EC), Phase Transmitted Light (TL), Environmental Control and Phase Transmitted Light (EC/TL), or Fluidics and Environmental Control (Fluidics/EC). Note that the Fluidics and Phase Transmitted Light options are not compatible with each other. The height and weight of the ImageXpress Micro System are increased by the addition of the Transmitted Light or Fluidics options.

To minimize vibrations, the power and options controller, light source and computer should not be placed on the same table as the ImageXpress Micro instrument. Often these items are placed on the floor below the instrument. The optimal configuration is to keep components within 1.2 meters/4 feet of the instrument as cables are approximately 1.8 meters/6 feet in length. The acquisition computer for the system can be used with multiple monitors, so ample desk space for monitor placement is needed.

The instrument should be accessible on the front and sides to allow access to objectives and filters. With the fluidics option, you will also need access on the front and sides to replace the tip box exchange. In addition, you will need access to the rear of the instrument so that the tip waste bin can be removed and emptied.

The ImageXpress Micro Confocal instrument can be installed in two orientations. Sideways installation is the recommended orientation as it allows easier access to the left side 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.

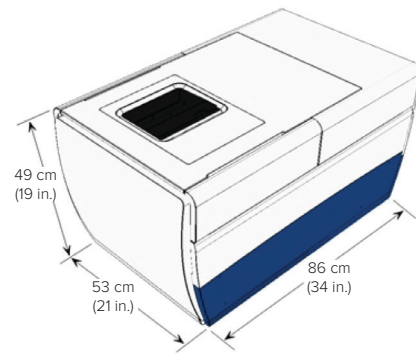


Figure 2. Instrument height, width, and depth.

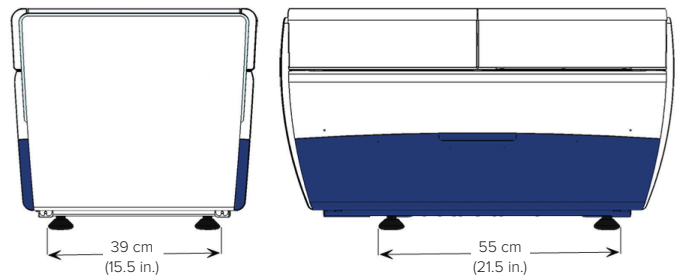


Figure 3. Distance between the outside edges of the instrument feet.

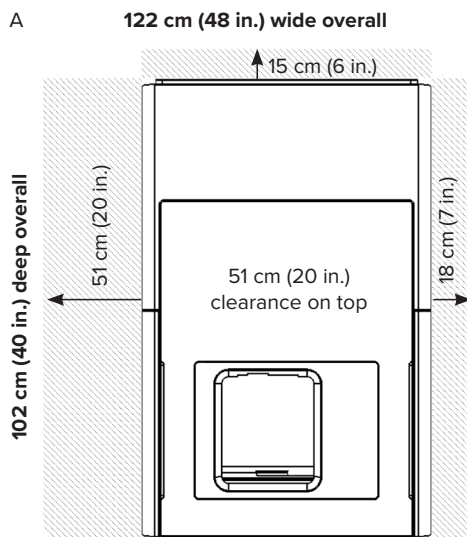
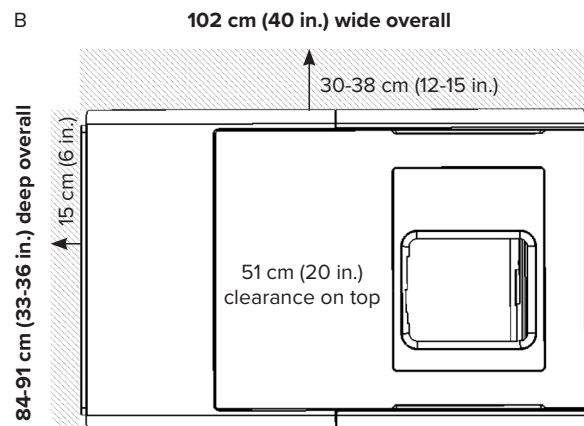


Figure 4. A. Front installation.



B. Sideways installation. Molecular Devices recommends sideways installation to allow optimal access to the upper & lower side door.

Dimensions (cm/in.)	Width	Height	Depth	Weight (kg/lb)
Instrument, no option	53/21	49/19	86/34	104/230
Instrument with TL/EC option	53/21	83/33	86/34	109/240
Instrument with Fluidics/EC option	53/21	107/42	86/34	143/315
Instrument with TL option	53/21	83/33	86/34	109/240
Instrument with EC option	53/21	48/19	86/34	104/230

Table 1. Size and weight of the ImageXpress Micro System instrument and base unit with options.

Dimensions (cm/in.)	Width	Height	Depth
Acquisition Computer for ImageXpress System	20/8	43/17	53/21
ImageXpress Micro Systems Power and Options Controller	27/11	20/8	51/20
Water Immersion Controller	26.7/10	26.7/10	25/9.87
Light source (approximate size)	18/7	13/5	25/10
Monitor, 27"	64/25	64/25	41/16
Monitor, 22"	51/20	51/20	25/10

Table 2. Size and weight of the ImageXpress Micro Confocal System components.

Power requirements

- Direct connections to all international supply voltages available.
- Use the included IEC power cord to connect the external ImageXpress Micro Systems Power and Options Controller to a GROUNDED power receptacle that is rated for 15 A.
- For systems that do not include the EC option, input voltage range is from 100 VAC to 240 VAC, 50/60 Hz, 12 amps maximum.
- For systems that include 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.
- Fluctuations must be within $\pm 10\%$ of the nominal voltage.
- When using a power strip, the computer should be connected to a different power strip than the ImageXpress Micro Systems Power and Options Controller that connects to the instrument and light source.

It is recommended, but not required, that separate circuits for the instrument, light source, and computer are maintained. To limit the risk of interruption during power loss, an uninterruptible power supply (UPS) can be used to provide backup power and power line conditioning for the instrument and computer.

The power requirements for the individual components are listed in Table 3. To determine the power consumption (watts) or apparent power (volt-amperes or VA) for the ImageXpress Micro System, add together the power of all applicable components. For example, the power consumption of a system without options and with 2 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.

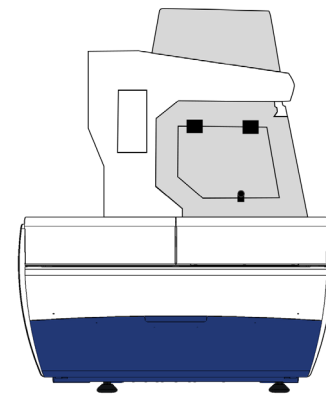


Figure 5. Instrument with Fluidics/EC option.

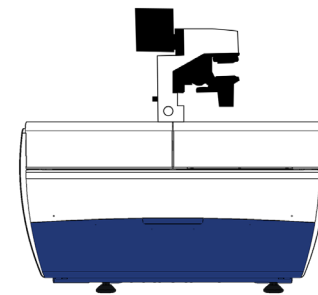


Figure 6. Instrument with TL/EC option.

Power Requirement	Watts	VA	Power Cables
Instrument, no option	200	211	1
Instrument with TL/EC option	500	532	1
Instrument with Fluidics/EC option	425	472	1
Instrument with TL option	300	322	1
Instrument with EC option	400	421	1
Light Source	220	232	1 (connects to power and options controller)
Computer	120	133	1
Monitor, 27" (each)	40	44	1
Monitor, 22" (each)	20	22	1

Table 3. Power requirement for the ImageXpress Micro System.

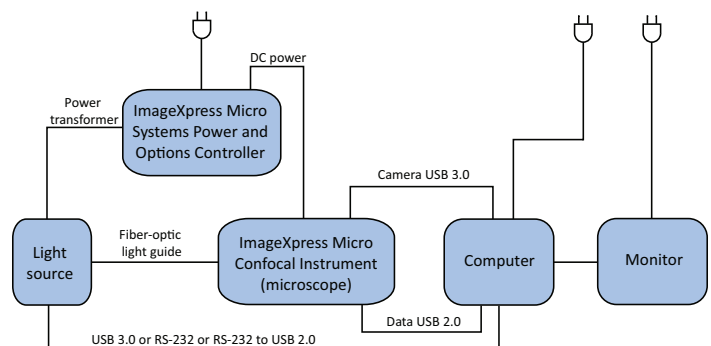


Figure 7. ImageXpress Micro Confocal System components without options.

Installation supplies

Users must provide the following to assist in instrument installation:

- Sturdy table, at least 94 cm (37 in.) by 61 cm (24 in.), with 39 in. of vertical clearance, and rated for over 104 kg (230 lbs.) with minimal vibration
- Table clearance of 102 cm (40 in.) wide, 84-91 cm (33-36 in.) deep and with 100 cm (39 in.) of vertical clearance for sideways installation
- Additional space or a separate table or workstation for computer keyboard, mouse, and monitor(s)
- If the fluidics option is included, the table should be rated for another 45 kg (100 lb)
- Power strip (optional)
- Online power conditioning UPS (optional)
- Network cable and 1 Gigabit network connection (Wireless network is not available on the workstation)
- If the fluidics option is included, use only Molecular Devices pipette tips (part number 9000-0761 (200 µL capacity) for 96-well applications and 9000-0763 (25 µL capacity) for 384-well applications)

Additional installation requirements for EC option

- CO₂/air mixture (for example, 5% CO₂/95% air) from a tank or house supply as appropriate for your application
- CO₂ 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 CO₂ regulator
- 6mm (¼ in.) adapter for the CO₂ regulator

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

Table 4. CO₂ Mixtures for different equipment combinations.

Contact Us

Phone: [+1-800-635-5577](tel:+18006355577)
Web: www.moleculardevices.com
Email: info@moldev.com

Check our website for a current listing of worldwide distributors.

Facility receiving requirements

Only Molecular Devices personnel are authorized to open the crate(s).

The system arrives in two crates for standard system or three crates if an option is included. Shipping crate dimensions and weights are shown in Table 4. Crates must be stored inside and protected from environmental extremes until equipment is removed. The instrument crate requires 3 m (10 ft) of clearance on one side to allow removal of the instrument from the crate.

Due to its weight, the instrument must be moved to installation site on a rolling cart (included) that is approximately 61 cm (24 in.) wide x 92 cm (36 in.) long.

Dimensions (cm/in.)	Width	Height	Depth	Weight (kg/lb)
Instrument crate	134/53	112/44	81/32	280/620
System components crate	77/30	77/30	56/22	50/110
TL or TL/EC crate, if applicable	77/30	77/30	56/22	50/110
Fluidics/EC crate, if applicable	115/45	86/34	122/48	90/200

Table 5. Shipping crate dimensions and weight.

Support and service

For support or service, please contact us at:

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

Email: support@moldev.com