

ImageXpress Micro Widefield High Content Screening System pre-installation guide



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 Widefield High Content Screening System.

Space requirements

The space and weight dimensions for the ImageXpress Micro System and all options are provided in Table 1 and Figure 2. In addition to the base unit, the ImageXpress Micro System can be purchased with Environmental Control (EC), Transmitted Light (TL), Environmental Control and Transmitted Light (EC/TL), or Fluidics and Environmental Control (Fluidics/EC). Note that the Fluidics and Transmitted Light options are not compatible with each other. The Catalyst Express robot is compatible with all of the available ImageXpress Micro System configurations. The height and weight of the ImageXpress Micro System are increased by the addition of the Transmitted Light or Fluidics options, as detailed in Table 1 and Figure 2. When installing the ImageXpress Micro System with a Catalyst Express robot, plan to accommodate the robot's space and weight on the same table as the ImageXpress Micro System. See Figure 2 for an example of a Catalyst Express and ImageXpress Micro System setup. (Please note the additional ~2-inch gap between the robot and the ImageXpress Micro System.)

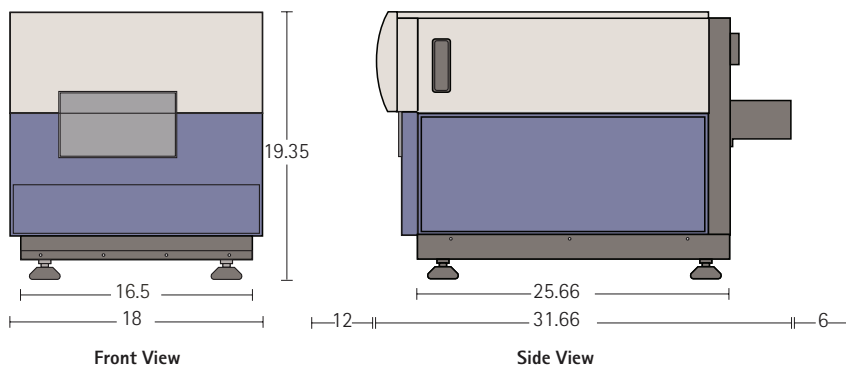
The system is equipped with a dual monitor (22", 20.25" W x 18.5" H each) computer system, so ample desk space for monitor placement is needed. The computer workstation also needs to be within 6 feet of the system. The system should be placed on a sturdy table at least 36" (91 cm) deep and have 4 to 6" (10–15 cm) clearance between the wall and the back of the instrument. There should also be a minimum of 12" (30.5 cm) clearance in front of the instrument for filter cube cassette removal. If the Fluidics option is purchased, the customer should plan to make at least two sides of the instrument accessible for tip exchange. The rear of the instrument should be accessible so that the tip waste bin can be removed and emptied. Most low-magnification applications will tolerate non-optical tables that can be purchased from companies specializing in industrial furniture, such as RDM (www.rdm-ind.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 pricing and weight capacity from third party vendors. An optical table will reduce the vibration sensitivity by approximately one order of magnitude, allowing better image performance in relatively poor vibration environments. However, we do not recommend air or hydraulic isolation tables. Most importantly, instruments need to be installed in a low vibration environment. Below are lab conditions or situations to avoid:

- Installation in or next to rooms where high-motion equipment resides, such as elevators, heaters and air conditioners
- Placement near external vibration caused by trains or excessive vehicle traffic
- Placement in any room with noticeable vibration on floors or walls
- Sharing tables with shakers, stirrers, mixers, centrifuges
- Placement less than 15 ft. away from refrigerators
- Placement less than 6 ft. away from doors
- Tables mechanically attached to walls

ImageXpress Micro System dimensions (Figure 1)



Schematics of space requirements for the ImageXpress Micro System base unit. Dimensions shown in inches.

Table 1 lists space and weight requirements for the ImageXpress Micro System base unit and options. ImageXpress Micro System options increase the height and weight of the base unit. Dimensions for the Catalyst Express robot are only for the robot.

Table 1. Space and weight requirements for ImageXpress Micro System

	W (in.)	D (in.)	H (in.)	Weight (lbs.)	W (cm)	D (cm)	H (cm)	Weight (kg)
ImageXpress Micro System Base Unit	18	31.7	19.4	180	46	80.5	49	82
ImageXpress Micro System with TL/EC	18	31.7	32.3	190	46	80.5	82	88.5
ImageXpress Micro System with Fluidics/EC	18	31.7	42.2	255	46	80.5	107	116
ImageXpress Micro System with TL	18	31.7	32.3	190	46	80.5	82	88.5
ImageXpress Micro System with EC	18	31.7	19.4	180	46	80.5	49	82
Catalyst Express Robot	22	32.5	30.2	167	56	83	77	76

The accessories listed in Table 2 will require nearby table or floor space. (See Figure 3.)

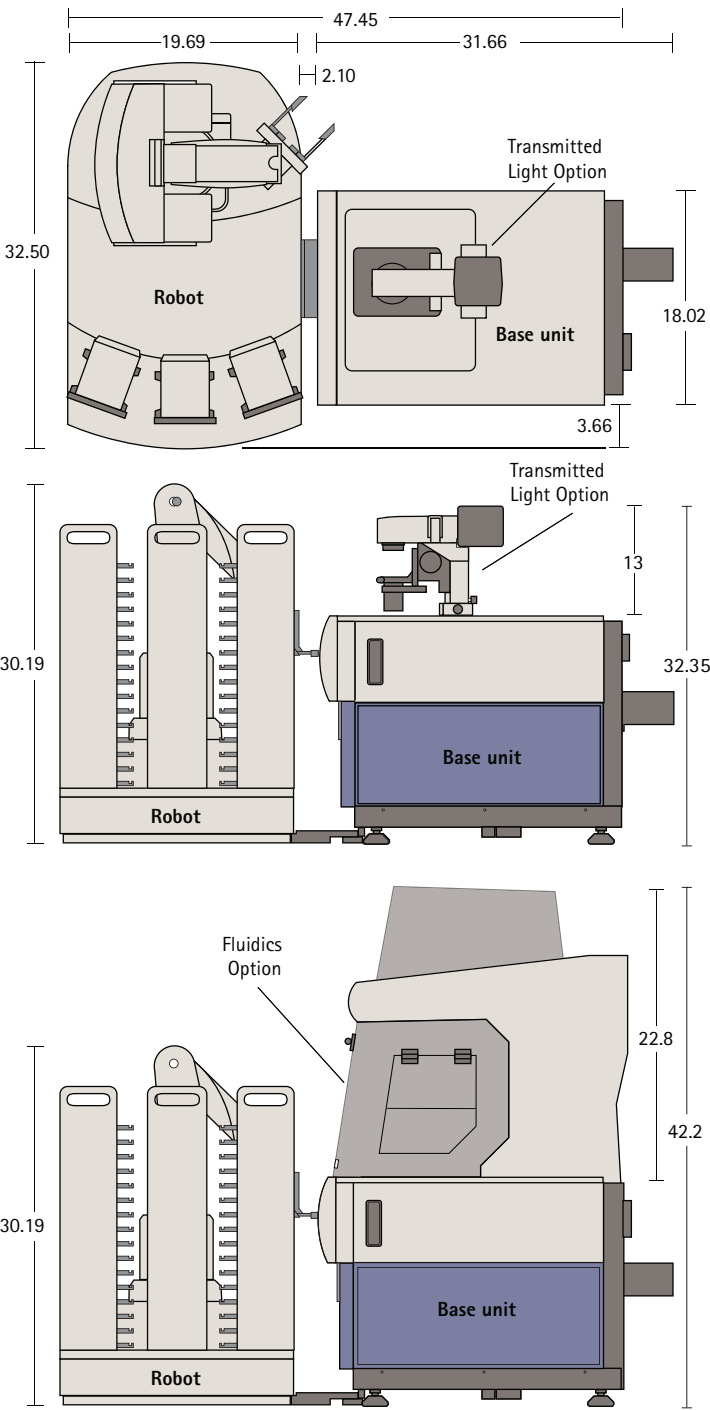
Table 2. Space requirements for ImageXpress Micro System accessories

		W (in.)	D (in.)	H (in.)	W (cm)	D (cm)	H (cm)	Cabling (to ImageXpress Micro unless specified)	Power cables
Computer for ImageXpress System		Dimensions may vary						USB and camera	2
Computer for robot		Dimensions may vary						COM and power	2
Instrument power supply		6	19	6	15	48	15	Power cable	1
Light source	Xenon (standard)	11	9	12.5	28	23	32	Liquid light guide	1
	Solid State (XL model)	11	7.4	4	28	19	10	Liquid light guide	1
	Solid State power supply	4.3	8	2	11	20	5	Light source power supply	1
Camera	CCD (standard)	4	7.5	2.5	10	19	6	Camera power cable	1
	sCMOS (XL model)	1.8	3.5	1.3	4.7	8.5	3.4	Camera power cable	1
Options control box (Fluidics, Transmitted Light and/or Environmental Control)		9	22	6	23	56	15	Cables, warm air duct, and CO ₂ line to ImageXpress System and serial to computer	1

Power requirements

The ImageXpress Micro System can be directly connected to all international supply voltages. The input voltage range is from 100–240 VAC and the input frequency range is from 50–60 Hz. Fluctuations must not exceed ±10% of the nominal voltage. The ImageXpress Micro System requires 5–6 power

ImageXpress Micro System robot access (Figure 2)



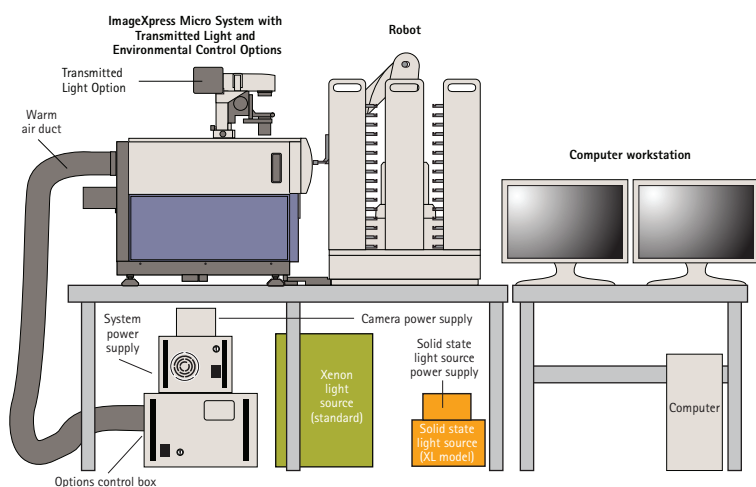
Schematics of space requirements for the ImageXpress Micro System with Transmitted Light or Fluidics options and Catalyst Express robot (purchased separately). Dimensions shown in inches.

outlets. (See Table 2.) If the robot option is purchased, an additional four outlets are needed—two for robot, two for computer that controls the robot. Also it is necessary to establish communication between the robot controlling computer and the ImageXpress Micro System's acquisition computer, either with a Ethernet hub, or by putting both computers in the same internet domain. A power strip (not provided) may be needed for the computer, monitor and other components. It is not recommended that a power strip be used for the ImageXpress Micro System itself. If a power strip is used, do not connect the computer to the same power strip as the ImageXpress Micro System power supply and light source. It is recommended, but not required, that separate circuits for the instrument, light source, computer, and robot are maintained. The recommended configuration would include an online uninterruptible power supply (UPS not provided), such as a SURTA2200XL Smart-UPS RT 2200VA from APC (www.apc.com), for the base instrument and camera. The power requirements for the individual components are listed in Table 3.

Table 3. Power requirements

Component		Watts	
		Standard	XL
ImageXpress Micro System base unit		400	400
Computer		690	690
Monitors (two at 35 W each)		70	70
Light source		300	288
Camera		240	100
Total operating unit		1700	1548
Options	(TL and/or EC or Fluidics/EC)	960	960
	Catalyst Express robot	960	960
	Computer for robot control	300	300
	Monitor for robot control	35	35
	Total with all listed options	3955	3803

Space requirements (Figure 3)



Schematic of ImageXpress Micro System illustrating space requirements for various components. Standard light source components indicated by ■ and XL model-specific component indicated by ■. Computer and monitor for robot are not shown. Drawing is not to scale.

It is recommended that these sensitive components be powered via UPS. The TL and Fluidics Options are not compatible with each other. Most of the power draw on the TL/EC comes from the EC.

Installation supplies

Users must provide the following to assist in instrument installation:

- Sturdy table, at least 36" deep, rated for over 250 lbs. (113 kg) without shaking
- If Catalyst Express robot will be installed, then the table must be rated for an additional 200 lbs. (91 kg)
- Ethernet hub or internet connection for communication between acquisition computer and robot controlling computer
- If the fluidics option will be purchased, the tables should be rated for another 100 lbs. (45 kg)
- Power strip (optional for accessories)
- Online UPS (recommended)
- 1 Gigabit network connection

Note: Fluidics is only supported when using Molecular Devices pipette tips. Use part number 9000-0761 (200 μ L capacity) for 96-well applications and part number 9000-0763 (25 μ L capacity) for 384-well applications.

Installation supplies required for Environmental Control Option

- A tank or house CO₂/air mixture (e.g., 5% CO₂/95% air) as appropriate for your application
- CO₂ regulator that can supply 20 PSI (138 kilopascal)
- Tubing (1/4"; 6 mm O.D.) of appropriate length to go between options control box and CO₂ regulator
- Adapter for CO₂ regulator that can accept the 1/4" (6 mm) tubing from the ImageXpress Micro System Base Unit

Shipping crate

- Dimensions: 33" (W) x 42" (D) x 65" (H)
- 84 cm x 107 cm x 165 cm
- If Transmitted Light and/or Environmental Control Options are purchased, an additional crate measuring 43" (W) x 30" (D) x 30" (H) (109 cm x 76 cm x 76 cm) will be included.
- If the Fluidics option is purchased, an additional crate measuring 58" (W) x 30" (D) x 34" (H) (147 cm x 76 cm x 86 cm) will be included.
- If robot option is purchased, an additional crate measuring 28" (W) x 42.5" (D) x 37" (H) (71 cm x 108 cm x 94 cm) will be included.
- Only Molecular Devices personnel are authorized to open the crate(s).

Note: The optimal configuration is to keep components within 4' (1.2 m) of the instrument as cables are approximately 6' (1.8 m) in length. To minimize vibrations, the power supply, light source, options control box and computer should not be placed on the same table as the ImageXpress Micro System Base Unit.

ImageXpress Micro System installation customer contact information

Please complete the following form and fax to Molecular Devices Customer Service at 408-747-3694. (North America only. Outside North America, the form should be faxed to your regional Molecular Devices distribution office.)

Company Name: _____

Address: _____

City: _____ State: _____ Zip: _____

End User (Primary Contact): _____

Title: _____

Phone No.: _____ Mobile No.: _____ Email: _____

Secondary Contact: _____

Title: _____

Phone No.: _____ Mobile No.: _____ Email: _____

Special Account Considerations: _____

ImageXpress Micro System installation schedule

Name: _____ Company: _____

The following checklist is a guide to ensure all customer site preparations are performed in the sequence required to support the installation and training process. The timeline is approximate and is for planning purposes only. Actual delivery times may vary. Before submitting this form, please initial and date Step 5 when the requirements are in place.

Step	Time Line	Action To Be Performed	Responsible Party		
1	Week 1	Sales Order generated	Sales		
2		Pre-Installation letter(s) sent to customer	Sales		
3		Customer contacted to review installation requirements	Sales		
4		Customer orders necessary consumables/hardware	Customer		
5		Room requirements completed: Space, Power, IT infrastructure	Customer	Initial _____	Date Complete _____
6	Week 5	ImageXpress Micro System shipped	Molecular Devices		
7	Week 6	Tentative installation dates set	Field Service, Customer		
8		Customer receives consumables/hardware	Customer		
9		ImageXpress Micro System arrives at customer site verified (Crates to be opened by Molecular Devices FSE only)	Field Service, Customer		
10		Installation date confirmed	Field Service, Customer		
11	Week 7	ImageXpress Micro System installed	Field Service		
12		Training dates set	Application Scientist, Customer		
13	Week 8+	Operator training performed	Application Scientist		

Contact Us

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 Check our website for a current listing of worldwide distributors.

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