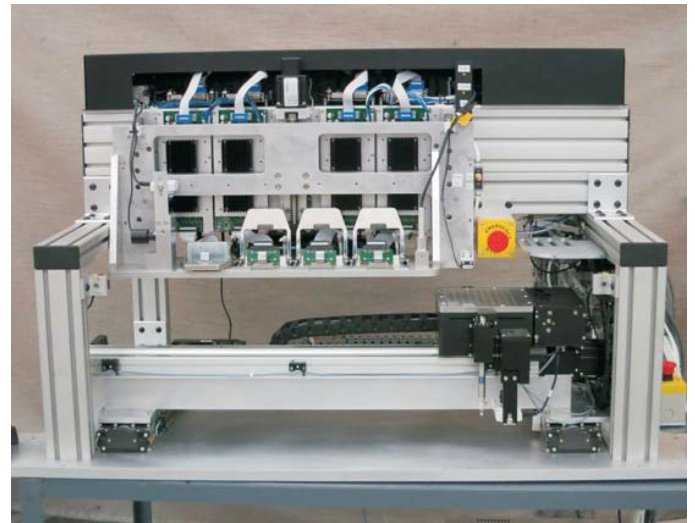


I-Jet 4100

The I-Jet 4100 provides tri-dimensional printhead positioning for accurate drop placement and materials deposition. Ideally suited for configurable 3D materials deposition, the I-Jet 4100 can also be utilized for printed electronics, biology, and other applications requiring a high degree of material placement accuracy. The system features three cameras. The fiducial camera ensures precise printhead alignment and saber angle adjustment. The substrate camera allows you to view items that have been printed. The Drop Observation camera (DOBS) provides high quality droplet ejection analysis, giving you a qualitative measure of trajectory and velocity, enabling you to develop and hone the firing waveforms of your inks and jettable materials.

The I-Jet 4100 is equipped with GUI software that features full control scripting language, waveform and cleaning cycle editors, and bitmap file support. The system is ideal for depositing a wide range of inks and fluids, including water-based, solvent, UV curable, and biological, onto a multitude of substrates, such as plastic, paper, glass, ceramics, and silicon.



The I-Jet 4100 accommodates up to four printheads, with the ability to use up to four different, unique fluids. The optional glove box control ensures a clean printing and deposition environment. The printheads featured are the DMC-11601 and the DMC-11610. They deliver optimum performance for a vast range of fluids and materials. The I-Jet 4100 also provides process repeatability, excellent jetting accuracy, and a broad range of materials compatibility.

The I-Jet 4100 is a highly precise fluid jetting deposition tool. With its advanced features, the I-Jet 4100 enables you to focus on the functional aspects of your project by reducing your development time. Featuring a print area of 150 mm x 150 mm (5.91" x 5.91"), the I-Jet 4100 delivers all of the functionality of an ink jet printer, as well as XYZ printhead staging, built-in camera for drop evaluation and analysis, nozzle alignment, printhead cleaning station, and a heated vacuum platen.

The I-Jet 4100 is the ideal development tool for materials deposition, jetting analysis, and any project where a high degree of analytical analysis and jetting accuracy is required, and provides time-saving benefits so you can focus on your materials project.

SYSTEM OVERVIEW

- ✚ XYZ tri-directional staging jetted materials deposition system
- ✚ User-fillable piezoelectric ink jet printheads
- ✚ Up to four (4) printheads
- ✚ Up to four (4) inks/fluids, with sequential printing
- ✚ Three cameras provide full range of system observation and control
- ✚ Variable printing resolution
- ✚ PC-controlled, with graphical user interface (GUI) application software
- ✚ Wide range of fluid materials compatibility
- ✚ Heated vacuum platen
- ✚ Printhead maintenance and cleaning station
- ✚ Includes PC, monitor, and software

PRINTHEADS AND CARTRIDGES

- ✚ DMC-11601 and DMC-11610
- ✚ Piezoelectric jetting device with integrated reservoir and heater
- ✚ 1.5 ml (0.05 oz.) fluid capacity

CAMERAS

- ✚ Drop Observation camera for jetting analysis and waveform adjustment for proper droplet formation
- ✚ Fiducial camera enables precise printhead alignment and saber angle adjustment
- ✚ Substrate camera for viewing printed items

CONTROL PC AND SOFTWARE

- ✚ Full control scripting language
- ✚ Editors – waveform and cleaning cycle
- ✚ Bitmap (monochrome) files

MAINTENANCE

- ✚ Print cartridge with single use, user-fillable reservoir
- ✚ Nozzle blotting material for cleaning station

SYSTEM SPECIFICATIONS

Print Parameters

- Printable area: 150 mm x 150 mm (5.91" x 5.91")
- Substrate: Up to 25 mm (1") thickness

System Positional Accuracy:

- X axis +/- 26 μ m
- Y-axis +/- 1 μ m
- Repeatability: +/- 1 μ m

Substrate Holder:

- Vacuum Platen

Temperature Adjustable

- Ambient to 60°C (140°F)

System Footprint:

- Printer (L x D x H):
1.3 m x 0.84 m x 0.76 m (51" x 33" x 30")
- Cabinet (L x D x H):
0.76 x 0.33 x 0.76 m (30" x 13" x 30")

Weight

- Printer: 175 kg (385.8 lbs.)
- Cabinet: 50 kg (110.2 lbs.)

Power

- 100 – 240 VAC 50/60 Hz, 2.5 kW max.

Operating Temperature Range

- 15° – 40°C (59° – 104°F)
@ 5% – 80% RH non-condensing

Operating Altitude

- Up to 2,000 m (6,562 ft.)

Printhead Number of Nozzles:

- 16 nozzles, 254 μ m spacing, single row
- Broad range of materials compatibility

Printhead Drop Volume:

- DMC-11601: 1 picoliter nominal
- DMC-11610: 10 picoliter nominal

