

# DemonJet Pro

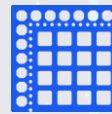
## Low Volume Manufacturing Inkjet Printer



The DemonJet Pro printer was specifically developed for low volume manufacturing of printed electronics. The printer integrates all the important features required for manufacturing: high throughput\*, camera-based registration, software automation, repeatable & accurate printing, drying and sintering. This affordable printer supports the printing of up to thousands of conductive parts and is capable of printing up to 10 inks in the same printing session.



The parallel channels are used to deposit multiple types of inks at high precision, thus increasing the manufacturing capacity and flexibility. The printer supports a large variety of substrates that can be printed on, including: plastics, glass & ceramics in almost any rigid or flexible form.



High  
Throughput\*



Camera-based  
Registration



Software  
Automation

The DemonJet Pro capabilities support new process combinations to be explored and new printed products and devices to be manufactured. All of this while making the printing process more efficient, precise and affordable. Having all these capabilities enables developers and manufacturers alike, to design & rapidly manufacture a substantial number of conductive devices.

### Key Advantages

- Manufacture up to hundreds of parts per hour\*
- Print multiple, identical or variable designs at the same time
- Multi layer support for printing variable thicknesses
- High resolution, camera-based registration
- Fully automated software and single setup for the entire process
- Large printing area:  
427 x 635 mm (16.8 x 25")

\* Throughput tested for hundreds of units per hour, depending on units' size & design  
Specifications are subject to change without notice.

All pictures shown are for illustration purpose only.

# from Design to Manufacturing in one session & with one tool

## More Prototyping and R&D Flexibility

The DemonJet Pro printer allows both design & manufacturing groups to “mix & match” manufacturing parts and processes. This feature enables the manufacturing of multiple, variant designs in the same printing session. Drying or sintering can be applied at any chosen stage, as well as printing additional fluid materials.

## Outstanding Precision

The printer offers high printing precision with lines as narrow as 70  $\mu\text{m}$ . To ensure high performance, the printer incorporates an internal optical registration system which can also be used to visually compare the printed version to the input file without removing the substrate from the printer.

## More Printing in One Session

The printer's large table, allows for several substrates of the same type to be placed, printed and then tested. Printing can also be done on large substrates.

## Key Features & Specifications

- # of nozzles: 360 x 10 channels
- Camera-based registration & inspection
- Print Up to 10 inks per session
- Dryer: IR lamp
- Sintering: IR lamp
- Printed size: up to 427 mm x 635 mm (16.8" x 25")

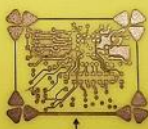


### Finally, conductive digital printing achieves industrial standard

Design → Prototyping → Mass Production!

#### until now impossible

- 360° solution: inks, printers & printing strategy
- Width and pitch down to 70 $\mu\text{m}$
- Signal and Power lines printed in a single session
- Unprecedented throughput



Test the lines



Silver on FR4 printed sample, sintered in-situ (IR lamp).  
Resistivity as low as 8-10  $\mu\Omega\text{cm}$ .

## Specifications

<b>Printing method</b>	Epson Micro Piezo™ TFP print head
<b>Resolution</b>	360 x 360 dpi and up to 2880 x 1440 dpi
<b>Minimum droplet size</b>	3.5 pL
<b># of inks per printing session</b>	Up to 10
<b># of nozzles</b>	360 x 10 channels
<b>Maximum substrate size</b>	440 x 640 mm (17.3'' x 25.2'')
<b>Printed size</b>	up to 427 x 635 mm (16.8'' x 25'')
<b>Speed</b>	14 minutes - full plate (1.1 sqm/h 1,705 sq. in./H)
<b>Position accuracy</b>	Maximum: $\pm 5 \mu\text{m}$
	Average: $\pm 2.1 \mu\text{m}$
<b>Repeatability</b>	Standard deviation, $1\sigma$ : $\pm 2.1 \mu\text{m}$
<b>Size accuracy</b>	Maximum: $\pm 6 \mu\text{m}$
	Average: $\pm 2.1 \mu\text{m}$
<b>Supported substrate thickness*</b>	Maximum 3.7 mm / 0.145''
<b>Substrate materials**</b>	PET, ITO, Glass, PI, Other
<b>Dryer</b>	IR lamp
<b>Sintering</b>	IR lamp
<b>Power</b>	<ul style="list-style-type: none"> <li>• 220-240 VAC 50Hz + Ground. Line circuit breaker 16 Amp. (for 220 Volt countries)</li> <li>• 110-120 VAV 60/Hz + ground. Line circuit breaker 20 Amp. (for 110 Volt countries)</li> </ul>
<b>Size</b>	180 cm x 118 cm x 108 cm (L x H x W) / 70.8'' x 46.4'' x 42.5''
<b>Weight</b>	450 Kg / 992 lb

\* For thicker substrates please contact us

\*\* For other substrates please contact us