

Redefining Solder Paste Application – Essemtec Reaches 1.1 Million Dots per Hour

A new Benchmark in digital solder paste jetting.

Essemtec, the Swiss manufacturer of adaptive SMT and dispensing solutions, announces a major performance upgrade to its **Jet-on-the-Fly High Speed solder paste jetting technology**, now achieving **1.1 million dots per hour**. This new milestone sets a **benchmark for high-mix, low-to-mid volume production**, redefining how manufacturers approach precision solder paste application.

Designed for **flexibility, accuracy, and digital manufacturing efficiency**, Essemtec's solder paste jetting solution is available on all platforms — the **Spider** and **Tarantula** dispensing systems, and the **FOX Ultra** and **PUMA Ultra All-in-One** machines.

With Essemtec's intelligent **Gerber file import**, users can move **from digital design to production in no time**, as recipes can be automatically prepared for any new project, eliminating manual programming and setup delays.

Two Ways to Use Solder Paste Jetting

Complement Your Stencil Printer – For Complex or Selective Applications

- Eliminate stepped stencil designs
- Apply solder exactly where needed
- Perfect for ultra-fine pitch and special components

Replace the Stencil Printer Entirely – For a Fully Digital, Stencil-Free Process

- No tooling, no cleaning, no delays
- Less waste, instant product changeover
- Ideal for high-mix SMT lines and prototype-to-production workflows
- Solder Paste application in cavities or different Z-levels seamlessly

Technical Performance

The upgraded Jet-on-the-Fly system delivers **up to 1.1 million dots per hour** at peak frequency. In real production conditions, users can achieve an **average of 350,000 dots per hour** on typical boards and **up to 665,000 dots per hour** on dense **BGA patterns**. Each dot can be dispensed with **volumes between 1.8nL to 80nL**, ensuring perfect repeatability and accuracy across every pad and component.

With jetting performance capable of **feeding Pick & Place systems up to 50,000 cph**, Essemtec's solder paste jetting technology offers unmatched process integration — from prototyping to full-scale production.

Meet Essemtec at Productronica

Experience Essemtec's high-speed solder paste jetting in live demos at **Productronica 2025 – Booth A3.261** – Munich, Germany

"This performance leap takes solder paste jetting to a whole new level — combining speed, flexibility, and automation to empower modern electronics manufacturing," said Olivier Carnal, Essemtec General Manager.

To learn more and watch our latest video on high speed solder paste Jetting visit:

<https://essemtec.com/en/news/news-detail-en/-/-/redefining-solder-paste-application-essemtec-reaches-11-million-dots-per-hour/>

Our Focus – Your Solution.

