3D Printing
Xaar’s innovative inkjet technology and expertise
Transforming your 3D Printing solution from prototype to production

**Your perfect 3D Printing partner**

Xaar is the world’s leading independent manufacturer of piezo-based drop-on-demand inkjet technologies, and its printheads are trusted in industrial markets around the globe – where they are proven to work in the most challenging manufacturing environments, with minimal downtime and maintenance requirements.

Xaar offers:
- An extensive printhead portfolio, ensuring a good fit for a wide range of applications and fluid types
- Easy to integrate system components, including ink supply systems and drive electronics, reducing the time-to-market for OEMs
- Partnerships, for ongoing product and materials development for 3D Printing using inkjet technology to meet the needs of the market.

**Achieve more with Xaar:**

**3D Printing process knowledge**
Expertise in inkjet 3D Printing processes including Photopolymer Jetting (PPJ), Binder Jetting and High Speed Sintering.

**Experienced support**
Worldwide technical support from a team of highly skilled engineers who deliver a professional and highly supportive service and who will work in partnership with you every step of the way.

**Fully scalable technology**
Multiples of Xaar’s inkjet printheads can be integrated for high throughput and a wide print swathe.

**Diverse fluid options**
An industrial printhead portfolio that is compatible with a broad range of fluid types and award-winning High Laydown Technology which enables printing of high viscosity fluids as well as increased print productivity.

**Unique TF Technology**
Unrivalled printhead reliability with TF Technology. By ensuring continuous ink flow, TF Technology improves printhead temperature control while preventing sedimentation and nozzle blocking, particularly in fluids with large particles, even at a high flow rate.

**Greyscale capability**
Versatility through variable drop capability: small drops ideal for printing fine-detailed 3D parts or larger drops perfect for faster build.

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**1 Fluid evaluation**
- Complex rheology testing
- Ink development guidance
- Fluid physicals measurement
- Materials compatibility testing

**2 Jetting optimisation**
- Printhead waveform configuration
- Application and fluid optimisation
- In-flight droplet visualisation

**3 Sample production**
- Pre and post jetting treatments
- Measurement of sample properties
- Drop deposition configuration options

**4 Applications development**
- Provision of Xaar Inkjet Development System
- Laboratory scale integration and testing support
- Education and training

**5 Continued support**
- Application improvements
- Product support and advice
- Application evaluation and testing
- Future development and enhancement support

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Are you a 3D Printing machine manufacturer or an integrator who is looking to:
- lower development costs?
- get solutions to market quicker?
- introduce printers that deliver real value to your customers?
- get ahead of your competitors?
# Xaar printhead portfolio

## Xaar 128
- **Nozzle density:** 185 npi
- **Drop volume:** 40 or 80 pL
- **Fluid types:** 
- **Maximum greyscale levels:** 2

## Xaar 501
- **Nozzle density:** 180 npi
- **Drop volume:** 8 to 40 pL
- **Fluid types:** 
- **Maximum greyscale levels:** 6

## Xaar 502
- **Nozzle density:** 180 npi
- **Drop volume:** 15 to 75 pL
- **Fluid types:** 
- **Maximum greyscale levels:** 6*

## Xaar 1003
- **Nozzle density:** 360 npi
- **Drop volume:**
  - GS6: 6 to 42 pL
  - GS12: 12 to 84 pL
  - GS40: 40 to 160 pL
- **Fluid types:** 
- **Maximum greyscale levels:** 5*, 8

## Xaar 1003 AMp
- **Nozzle density:** 360 npi
- **Drop volume:** 1 to 3 pL
- **Fluid types:** 
- **Maximum greyscale levels:** 8

## Xaar 1003 AMx
- **Nozzle density:** 360 npi
- **Drop volume:** 6 to 42 pL
- **Fluid types:** 
- **Maximum greyscale levels:** 6

## Xaar 2002
- **Nozzle density:** 720 npi
- **Drop volume:** 6, 12 or 40 pL
- **Fluid types:** 
- **Maximum greyscale levels:** 8

*Dependent upon printhead model and ink type

*GS40 variant only

**Fluid type key:**
- Solvent
- UV
- Oil
- Soluble salts

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**TF TECHNOLOGY**

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