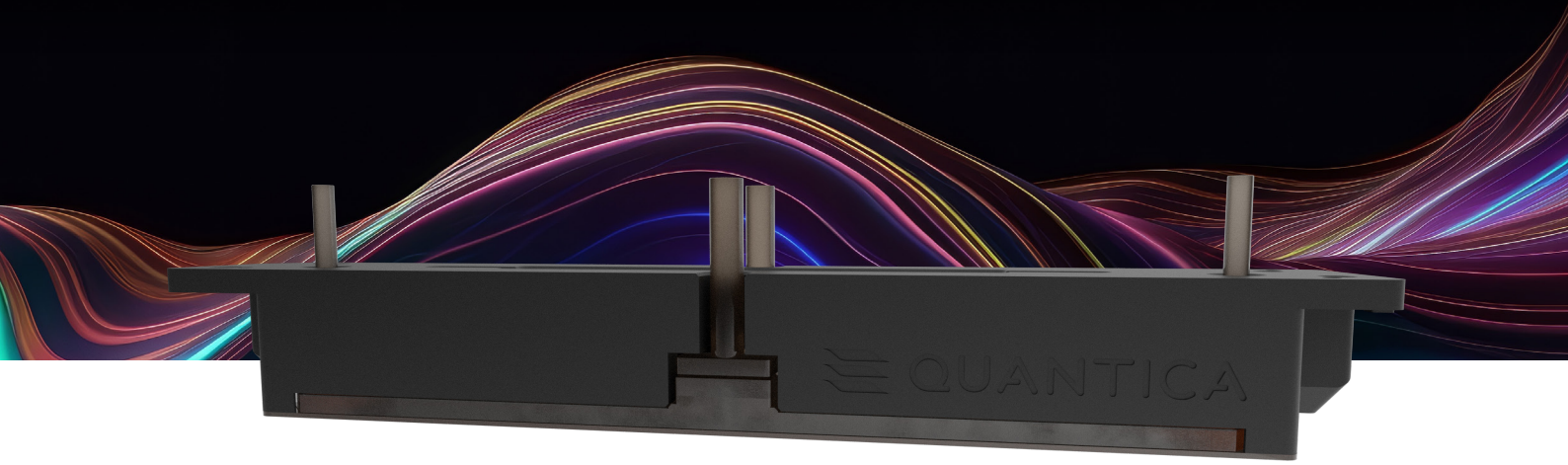
QUANTICA

High-Performance, Multi-Material Additive Manufacturing



NovoJet™ Printhead

Printhead partnership with XAAR

At the heart of our transformative additive manufacturing technology lies the groundbreaking NovoJet printhead. This innovative piece of engineering serves as the linchpin that propels us into uncharted territories in materials with its remarkable ability to jet a wider range of viscosities. Broader viscosity range enables us to jet materials with enhanced functional properties, such as high toughness, temperature resistance, conductivity, biocompatibility, UV resistance, flexibility, and more.

NovoJet™ OPEN

The NovoJet OPEN is a benchtop 3D printer designed for application development and material experimentation. It's built for research institutes and industrial labs, offering the unique ability to explore new material combinations. With the capacity to use up to 7 different materials simultaneously, this open printer empowers manufacturers and material developers to make their own decisions about materials and printing settings. It's all about sparking innovation and advancing materials science.

JetPack

The JetPack, a crucial tool for jetting trials and jetting optimization. This device allows you to easily test and validate material compatibility with NovoJet's high viscosity printheads. It integrates with the JetXpert dropwatching system, making it an invaluable asset for material researchers and developers. With the JetPack, you gain the power to explore and validate new materials.

Compatible with imageXpert

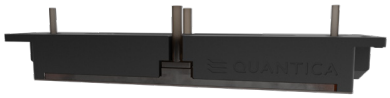
Services

In addition to our products, we offer a range of services including material testing, material validation, waveform development, printing algorithm design, specialized training, and tailored application development. These services enhance your research and development capabilities and can potentially lead to future partnerships.

NovoJet Printhead Specs

Type	Drop on demand piezoelectric actuator
Nozzle count	96
Rows of Nozzles	1
Nozzle Diameter	50 µm
Nozzle Pitch	1.27 mm
Fluid Viscosity Range (Jetting temp)	1 mPa•s – 250 mPa•s * ** ***
Operation Temperature	15 °C-80 °C
Frequency	8kHz
Flow Type	Back of nozzle high flow recirculation
Surface Tension	30-750 mN/m
Nozzle Plate	Polyimide

- Ability to handle wide range of material viscosities
- Ability to handle particle suspension up to 70% with particle size up to 5 um D90
- Opens the door to new printing possibilities



NovoJet OPEN Printer Specs

Print Area	210 mm (Y) x 210 mm (X) x 100 mm (Z)
Machine Dimensions	1060 X 660 X 700 mm
Repeatability	0.02 mm
Maximum Power	2.4 kW
Voltage	100-120/200-240 VAC 50/60 Hz
Operating conditions	Temperature 18 – 25 °C (64 – 77 °F); relative humidity 30 – 70% (non-condensing)
Print Module	User-fillable print cartridges, integrated reservoir and heater. Material circulation and piezo driven inkjet printhead
Material Compatibility	Oligomeric materials, solvent-based inks, water-based inks, and more
UV curing module wavelength	365 nm and 395 nm
Software	Proprietary build management software and printer control software

- Open system that gives users access to process parameters
- Potential for scale-up from R&D to low-volume industrial production
- Ability to print with your own materials

*actual jettability depends on other physical attributes of the fluids such as shear thinning, stability of viscosity at jetting temperature and over time, elasticity, solids concentration, particle size distribution, particle dispersion ** as measured in viscosimeter at jetting temperature (80°C max). The ink system may require significant time to stabilize temperature and flow in some circumstances *** specification subject to change

A three-material print (Rigid, Flex, Support) combining a certified DLP dental material with a flexible additive manufacturing resin. Featuring halftoning, digital material, and high mechanical properties.

For more information, visit us at q3d.io

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