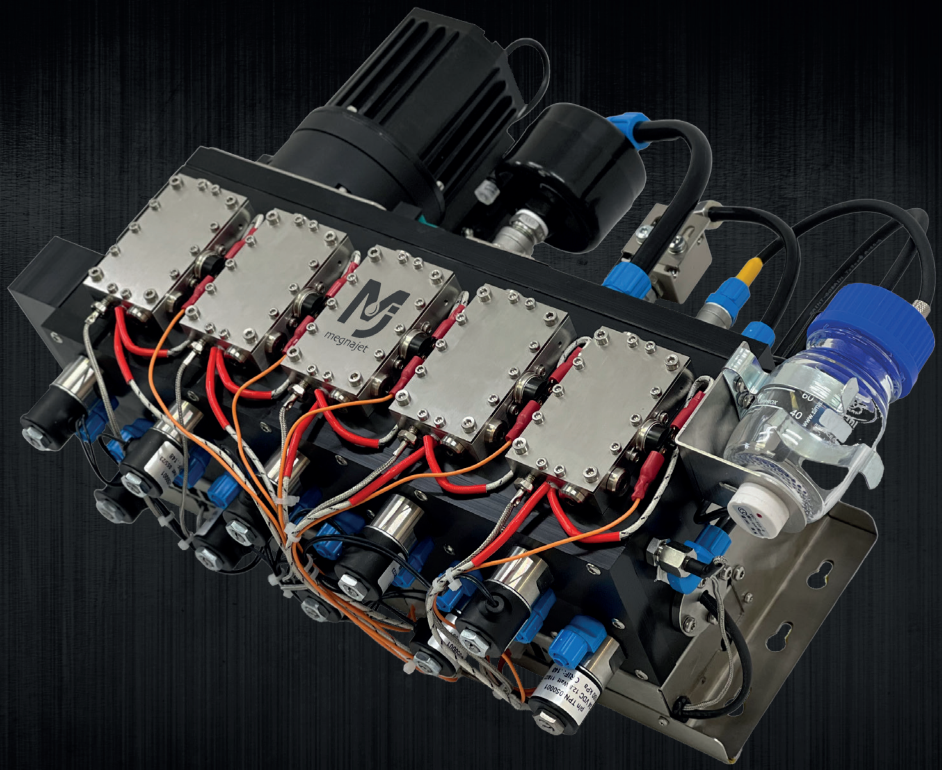

JetSource HFR Core

Fluid Management System

The JetSource HFR Core fluid management system is ideal for delivering a large volume of conditioned fluid at the right flow rate, temperature and pressure for very high productivity jetting or multi-printhead applications.

This system is designed for efficient heating for high productivity, whilst dual heating and sensing enables precise temperature regulation. With over 900 watts of heating, the JetSource can quickly reach the desired temperature ensuring fast startups and maintain it in high duty.

In addition, the JetSource HFR Core responds quickly to a change in print duty in order to maintain stable pressure control when ejecting large volumes of fluid.

This fluid management system is suitable for applications such as printing embellishments, braille, gloss effects, coatings and adhesives as well as high productivity additive manufacturing.

Highlights

High productivity fluid supply

Delivers a continuous supply of fluid for high productivity jetting and recirculation.

Advanced heating design

Combining dual heating and optimised tank volume ensures continuous supply of conditioned fluid for high duty applications.

High speed pressure stabilisation

Fast response to a change in print duty in order to maintain stable pressure control when ejecting large volumes of fluid.

Usage

Large Machine

Recirculating

Pressure fed

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Technical specifications

Physical	
Product dimensions (WxDxH)	• 488 x 377 x 175 mm
Tank volume	• 1000 ml
Fluid connections	• 8 mm OD 6 mm ID standard • 6 mm OD and 4 mm ID option
Weight	• 16.0 kg

Electical	
Supply voltage	• 24 V
Supply power rating	• 47 A (Core module/5 outlets)
Communication	• Ethernet communications

Operating conditions	
Operating temperature	• 5 - 60°C (40 - 149°F)
Storage temperature	• 5 - 100°C (40 - 212°F)
IP rating	• IP50

Connectivity to printhead	
Printhead type	• Pressure fed through flow
Number of printheads outlets	• 5 (Please contact Megnajet for wider applications)
Maximum flow rate	• 4 L per minute
Maximum in feed pressure	• 500 mbar
Maximum return pressure	• -400 mbar
Maximum purge pressure	• 950 mbar (derived from second air source)

Software	
Integration	• Open source ASCII interface • Optional .NET DLL SDK available on request
Supported OS	• Win XP, Win 7, Win 8, Win 10 (Requires .NET 4 or higher)

Product customisation

Units can be customised to suit fluid type and application, including (but not limited to) the use of alternate body materials (e.g. FDA approved food grade acetal; choice of gasket material (e.g. FKM, peroxide cured EPDM and FFKM); and customisations to user software.

Compatible system components

- Degassing Pump Assembly
- 1.5L Remote Fill Pump.

Product information

- Purge capability, allowing simple and controllable head maintenance
- Hydraulic meniscus measurement automatically adjusts meniscus pressure during use compensating for duty giving uniform delivery of fluid to the printhead
- System material options cater for more specialised fluids, such as food grade, aggressive solvents and high density particulates
- Integrated failsafe chamber automatically shuts down the system on tank overflow preventing wider system damage and also enables easy fault finding
- Internal closed loop heater for in-tank fluid temperature control plus support for external in-line heater up to 65°C (±1°C) allows tight control of viscosity to the printhead
- Single 24V system voltage makes for safer integration and usage plus low energy consumption
- Opto-isolated PLC compatible I/O interfacing allowing traditional systems monitoring, giving flexibility in design
- System parameters are stored within the Fluid Management System allowing for standalone operation
- Open-source interface, libraries and example code allows simple integration into customer systems
- Fluid Management software supplied with the system allows a high level of control to meet application requirements
- Brand customisation for both the main body of the Fluid Management System and software enables a bespoke, more integrated feel to the product and bolsters customer servicing and spares channels.

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