



The Megnajet Labjet is a syringe based fluid delivery system developed from the core functionality of Megnajet's highly successful integrator series controller, the MISC. It is ideal for OEM integrators and ink and fluid manufacturers who wish to use or test their inks and fluids in an industrialised system without the overhead of a full tank based ink system. Customers are able to easily transfer their findings to a full tank based system as the same advanced technology is used throughout the Megnajet family of products.

Labjet differs from traditional syringe based systems due to its active hydraulic meniscus pressure control. This means no more adjusting pressures and moving syringes while printing to maintain the perfect meniscus pressure at the print head as your fluid level changes. Labjet senses the fluid level and automatically adjusts itself meaning you can run full scale printing trials in a lab style setting. This self adjustment is especially important with high specific gravity fluids (for example nanoparticle based fluids) where very small level changes greatly affects the head meniscus and ultimately the end product quality.

### The Labjet unit features:

- Extremely compact and ideal for integration into drop watcher rigs and other compact systems.
- Hassle free syringe changing by a simple ½ turn quick release syringe mount. This allows the low cost UV compatible syringes to be quickly and easily refilled, swapped or discarded.
- Head maintenance is simple and controllable due to the system's ability to actively control meniscus pressure and also control adjustable timed ramping purges at pressures up to 950 mbar as part of its primary functionality.
- Built in brushless air pump- no need for external air sources or vacuum pumps.
- Integrated failsafe chamber automatically shuts down the system on tank overfill due to setup or pipework failure.
- Requires single low voltage 24V dc 1 amp input (supplied).
- Galvanically isolated communications interface and fully opto-isolated PLC compatible I/O interfacing.
- Industrial grade galvanically isolated RS422 communications interface allowing setup and monitoring from any RS422 enabled device capable of generating ASCII strings such as PC, PLC, HMI or other embedded systems.
- All parameters are stored on the device allowing for hostless operation.
- Simple open source ASCII interface (for PLC and motion controller interfacing) and .NET client/server DLLs (with example code) available to allow OEMs simple and seamless integration into their end user applications.
- Fluid manager software with a feature rich GUI, which can be self branded.

## Technical specifications

Physical	
Weight	700g
Tank volume	Max 30ml
Physical dimensions	140mm x 200mm x 65mm
Fluid connections	8mm OD 6mm ID standard 6mm OD and 4mm ID option

Compliance	
CE compliant RoHS compliant WEEE compliant	

Electrical	
Supply voltage	24 V
Supply power rating	1 A (dependent on options supplied)
Communication Interface	4 wire RS 422 / 485 interface (supports multi dropping of devices; maximum of 15 nodes)
	Optional USB to RS 422 communication gateway adapter. Supplied with Megnajet communications pack.

Software integration interface	
Open source ASCII interface. Optional .NET DLL SDK available on request.	

Operating conditions	
Operating temperature	5-65°C (40-149°F)
Storage temperature	5-100°C
IP rating	IP50

Connectivity to print heads	
Head type	All gravity feed print heads
Number of print heads supported	1
Maximum meniscus pressure	-200 mbar
Maximum purge pressure	950 mbar
Suggested distance from print head to unit	Greater than 200mm

Megnajet user interface	
Supported OS versions	Win XP, Win 7, Win 8, Win 10 (Requires .NET 4 or higher)

### Standard kit

This includes power supply, communication lead, 2 additional syringes and 2 spare failsafe bottles.



### Additional standard options

Degas vacuum source and external inline heater.

For further details, please contact us via our website or the email address below.

[www.megnajet.com](http://www.megnajet.com)

[enquiry@megnajet.com](mailto:enquiry@megnajet.com)