



The Megnajet Colour Cube fluid systems are designed as a highly compact system for use principally in CMYK single head width gravity head print engine applications where space is at a premium. Our latest member to join the popular LC range of products, the Colour Cube offers a feature rich design that allows OEMs and integrators the ability to add reliable industrialised fluid control functionality into their compact multi fluid designs, without losing the precision and advanced level of control expected by Megnajet's customers. This is an ideal choice for production and rapid development projects where an integrated single unit can individually control 4 different fluids.

The Colour Cube units features:

- Compact four fluid independently controlled chamber design.
- Robust industrialised self monitoring design for long term field reliability, including configurable auto shutdown protection which monitors for unexpected conditions and intelligently protects the system.
- Uses media isolated high compatibility diaphragm pumps and valves for extended service life.
- Available with built in brushless air pump for standalone operation, or our latest distributed pressure network (DPN) control system, which gives a more cost effective solution by use of a centralised remote banked air system.
- Integrated head shut off valves for head maintenance and instant isolation in power loss situations.
- Hard purge capability configurable up to 800 mbar as standard, making head maintenance simple and controllable.
- Integrated hydraulic meniscus measurement system automatically compensates the meniscus pressure as fluid levels inside the fluid reservoir change during usage.
- Options available to ensure fluid compatibility for all jettable fluid types including high viscosity fluids.
- Integrated failsafe chamber automatically shuts down the system on tank overflow due to setup or pipework failure.
- Low voltage 24V dc at as low as 1 amp (depending on attached accessories).
- 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.
- Fully opto-isolated PLC compatible I/O interfacing for traditional systems monitoring.
- All parameters are stored on the device allowing for hostless operation.
- Simple open source ASCII interface (for PLC and motion controller interfacing) and .NET 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.

Available in Standard and Customised versions

Technical specifications

Physical	
Weight	3kg
Tank volume	100ml per fluid
Physical dimensions	150mm L x 153mm W x 156 D
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) per colour
Communication interface	4 wire RS 422 / 485 interface
	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 end shooter heads
Number of print heads supported	1 per fluid
Maximum meniscus pressure	-300 mbar
Suggested distance from print head to unit	Greater than 200mm
Max purge pressure	800mbar

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

Additional standard options

Degas vacuum source, external inline heater, developer interface cable kits (including comms adapter and external medical grade power supply).

Customisation

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

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

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