- Printhead mounting plates may be purchased with or without a complete drawing pack. The drawing pack includes information and CAD models that may be used in the design of the user's own head mounting system.
- All fixings and adjustment mechanisms are available in small quantities as spares or in larger quantities for production.
- The capping/purge plate is fitted with O rings that are accurately positioned to press against the nozzle orifice surround on each printhead. The capping/purge plate is fitted with location pins, to ensure correct positioning, and cam type clamps that can be adjusted to give the correct pressure to seal against the printheads while holding the plate securely in position.
- Nothing touches the nozzle so there is no risk of damage or blocking. Within each O ring is a recess that captures any ink that is expelled from the head during maintenance. There is also a drain port that can be connected to a waste ink collection system.
- The capping /purge plates can be used in several different ways according to specific requirements:
- Features a simple sealing plate, with the drain ports sealed, to protect the heads from damage or drying (according to ink type)
- Features a purge station where the heads can be located for routine purging. A simple waste ink collection system may be connected to the drain ports to capture ink expelled from the nozzle during maintenance procedures.
- Or with a vacuum system, to provide a purge system where ink is drawn out from the head under vacuum.

Development Kit range

	No. of Printheads	Head types supported	Grey levels supported	Colours supported
MonoKit 512	2	All KM512 variants in X & Y chassis	4	1
MonoKit Mixed	2 (only 1 printhead may be used at a time)	All KM512 variants in X & Y chassis All KM1024 variants	8	1
MonoKit 1024	2	All KM1024 variants	8	
MonoKit 1024i	2	All KM1024i MHE	8	1
ColourKit 512	4	All KM512 variants in X & Y chassis	4	
ColourKit 1024	4	All KM1024 variants	8	4
ColourKit 1024i	4	KM1024i MHE	8	4

Industrial Inkjet Ltd
www.industrialij.com
KONICA MINOLTA
www.konicaminolta.com

Industrial Inkjet Ltd, Unit 3, Meridian
Buckingway Business Park
Swavesey, Cambs, CB24 4AE, UK
Tel: +44 1954 232023
Fax: +44 1954 230566

Industrial Inkjet Ltd *Making inkjet work*

Development Kits for use with Konica Minolta printheads

IIJ offers a range of development kits that contain the necessary control electronics and software to drive Konica Minolta printheads. The IIJ range of development kits has been designed for use by:

Machine builders and system integrators
For the machine builder or integrator, the development kits provide a fast and cost effective way to start working with Konica Minolta printheads. If the rapid introduction of new product is a key objective, then an IIJ development kit could be just what is required.

- Focus resource on the value that inkjet adds to the product range rather than on learning to use the technology.
- Test system components before the overall system design is completed.
- Carry out reliability testing on transport, ink systems and other components before the hardware and software design is finished.
- Some companies find that the control hardware, software and user interface fit their requirements so well that they can be included in the final product design with little or no modification.

Ink developers and manufacturers
Learning how to design control systems or electronics adds no value to ink development, so it is important to have the right development tools if unnecessary delays are to be avoided.
Each kit is supplied with components that can be used to build a simple syringe type ink system.
Control software can be upgraded to include utilities designed specifically to speed up the
process of optimising printhead settings.

Software upgrade options include automated routines to evaluate a diverse range of pulse shapes quickly and efficiently. This is particularly useful when assessing multiple ink formulations. Kits contain the main components required to build an inkjet printing system.

Control software
High functionality with graphical user interface including full control of all printhead parameters (pulse wave form, drive voltage, head temperature etc), image design (dynamic data, machine readable codes and ODB support), image /colour adjustment (ColourKit and MonoKit Mixed only).

Power Supply Unit
Dual high quality, noise resistant supplies mounted in an enclosure with power indicator and uniquely identified connectors to ensure that critical connections are made correctly.

Print Manager Board
Provides I/O functionality, RIP management and signal generation for the Head Personality Board.

Head Personality Board
Generates 5v supply and manages hardware interface to the Konica Minolta ICB.

Cables
All cables required to connect kit components, plus USB 2.0 lead to connect control PC (not supplied) to the Print Manager Board. The kits do not include printheads or ICBs which should be purchased directly from Konica Minolta.

Industrial Inkjet Development Tools

Industrial Inkjet Ink Systems

Industrial Inkjet ink systems are designed for use with high resolution piezo printheads. They provide precisely controlled ink flow essential for optimum printhead performance. The ink systems are available in a range of configurations according to the number of printheads and ink colours supported.

The Control Unit and Ink Unit are conveniently mounted in separate enclosures. In normal use the Control Unit enclosure can remain locked, preventing any unnecessary access, while the Ink Unit enclosure is easily opened to allow ink supplies to be replenished as required. The Control Unit contains the control PCB, power supply, vacuum pump, damper vessel and control valves. All the components that are in direct contact with the inks / fluids are housed in the separate Ink Unit enclosure.

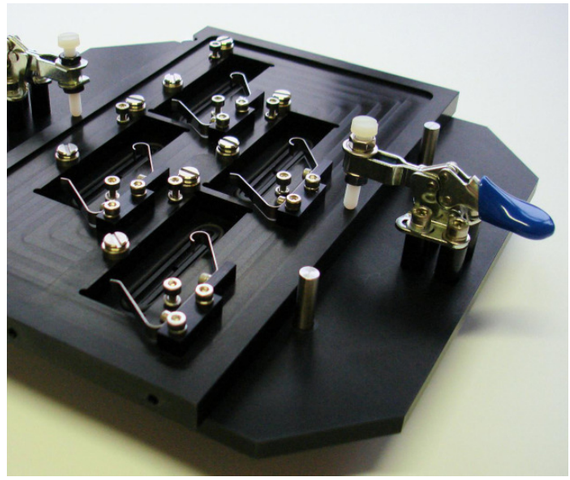
- Precise meniscus vacuum control ensures reliable printhead operation and consistent print quality.
- Allows a flexible approach to printer or machine design because the ink feed tanks that supply the printheads do not have to be mounted below the level of the printheads.
- Clearly visible coloured LEDs provide constant feedback on the status of the ink system alerting the operator to any events requiring attention.
- Suitable for stand-alone use or full integration.
- Easy to use with simple access for refilling ink.
- Continuous printing through ink refilling process which makes these systems suitable for use during the design and development phase, for long-term print reliability testing, or as part of final machine design.
- Semi-automatic purge function makes routine head maintenance simple.
- Constructed from chemically inert materials, including FEP and PTFE, the ink systems provide reliable performance with an extremely wide range of fluids.

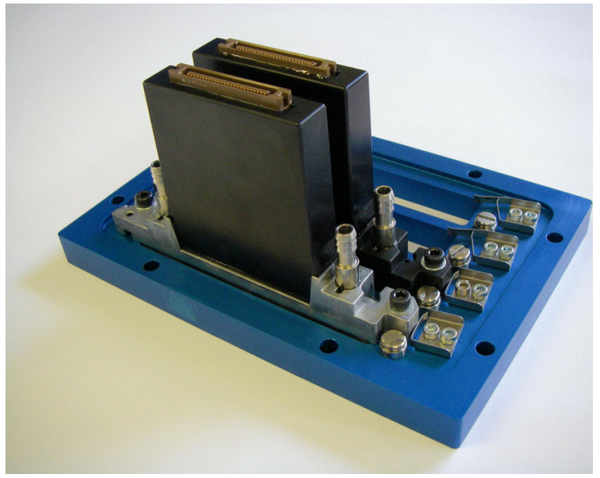
The header tank can be located up to 1m from, and 500mm above, the printhead and up 3m from the ink unit. Each header tank can feed up to four printheads. This performance allows designers to optimise the physical configuration of the print/jetting system without constraints. The following table shows the ink systems that are available as standard:

Colours	Heads / colour	Description
1	1	Mono 1 head ink system
1	2	Mono 2 head ink system
4	1	CMYK 4 head ink system
4	2	CMYK 8 head ink system
1	1	White 1 head ink system
1	2	White 2 head ink system

Ink System Availability

Each ink system is supplied complete with all necessary hoses, cables and connector to allow the system to be connected to the printheads. Each installation has different requirements therefore brackets and fixings required to mount the Ink Unit and Control Unit are not included. IIJ can design and manufacture these to meet specific needs. Custom designed ink systems are also available. Please contact Industrial Inkjet to discuss particular requirements and request a quotation.





Printhead Mountings and Capping /Purge Plates

IIJ offers a range of ready-made printhead mounting systems which enable Konica Minolta printheads to be mounted and aligned quickly and easily. The mounting plates are complemented by a range of capping plates. Using the mounting and plate configuration that most closely resembles the final system design will enable testing of key print set up parameters and identification of optimum storage and maintenance conditions without the use of CAD or design resource.

The mounting has been designed to make the most of the ultra-slim Konica Minolta 1024 printhead and shows how closely the KM1024 printheads and adjustment mechanisms can be packed. Such efficient packing as this means the print engine size can be minimised making it easy to install while maximising print quality. Above left shows a printhead mounting plate with its purge plate attached.

Ready made, proven mounting systems and designs help to save time and resources and also reduce risk. Modify IIJ's existing designs to achieve the desired result quickly and easily.
The mounting plate's design provides protection against printhead "crashes" as each head is recessed slightly to minimise the chance of the nozzles coming into contact with the substrate.
Made from black anodised aluminium alloy with stainless steel fixings, the mounting plates are suitable for a wide range of inks and also minimise the potential for reflected UV light.
The mounting plates are designed to be clean in use with minimal recesses that could trap ink.
Unique adjustment system makes it easy to position and align printheads within ± 10 microns.

- **Control software -** High functionality with graphical user interface including full control of all printhead parameters (pulse wave form, drive voltage, head temperature etc), image design (dynamic data, machine readable codes and ODB support), image /colour adjustment (ColourKit and MonoKit Mixed only).
- **Power Supply Unit -** Dual high quality, noise resistant supplies mounted in an enclosure with power indicator and uniquely identified connectors to ensure that critical connections are made correctly.
- **Print Manager Board -** Provides I/O functionality, RIP management and signal generation for the Head Personality Board.
- **Head Personality Board -** Generates 5v supply and manages hardware interface to the Konica Minolta ICB.
- **Cables -** All cables required to connect kit components, plus USB 2.0 lead to connect control PC (not supplied) to the Print Manager Board. The kits do not include printheads or ICBs which should be purchased directly from Konica Minolta.