

Product Brochure

Magnetiser M series workstation range (M1kj, M4kj, M8kj and M12kj)

The M series workstation range of production magnetisers are designed to be used in manual production or integrate into semi-automated and fully automated production lines. These powerful 800V magnetisers are touch screen controlled and fully programmable with admin passcode lock to prevent accidental or unauthorised operator changes. The Hirst workstation range was first introduced in the 1960s and this 5th generation product range was launched in 2018.



Key benefits

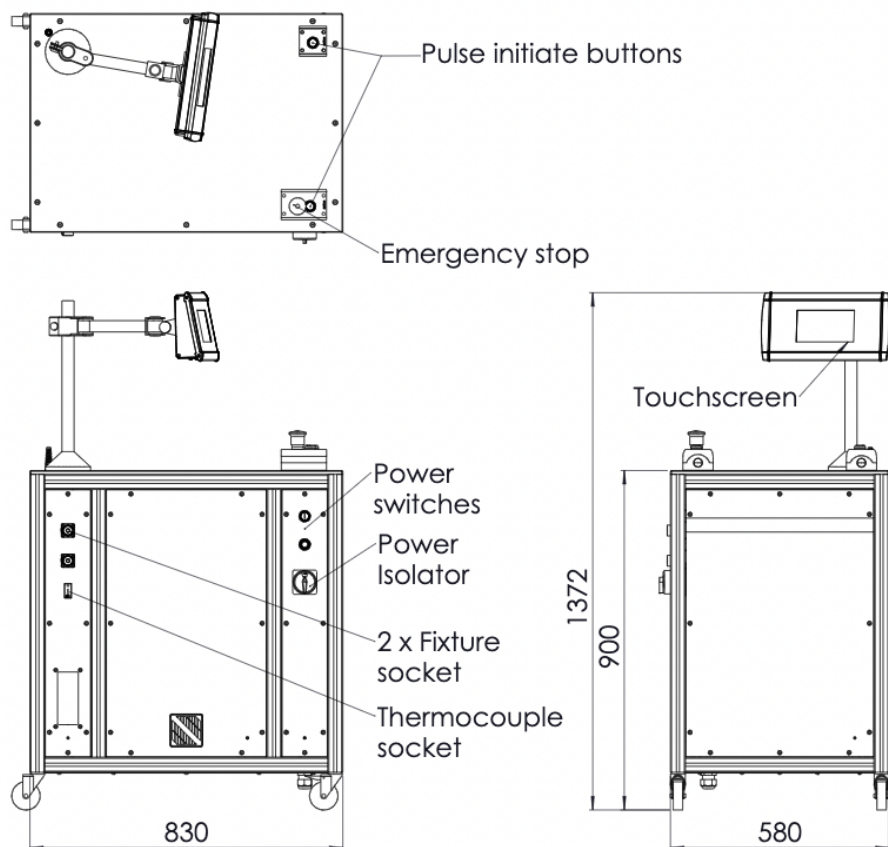
- **Powerful Magnetiser** – 1kj to 12kj with a maximum voltage of 800V.
- **Compact size** – Workstation with sufficient space for coil fixtures to be mounted on the work top.
- **Reliable** – 5th generation product used in production lines around the world.
- **Easy-to-use** - Adjustable position 7" touch screen display with admin programmable display and simple production interface (Pulse switch, Abort switch, Display showing status).
- **Magnetising fixtures** - Custom fixtures can be designed by Hirst for the application.
- **Single fast swap connector** – to allow multiple fixtures to be used (if not built in).
- **Communications** - A range of industry standard connectors two RS232 ports inc SCPI and CANopen interfaces connection to Hirst gaussmeters and Fluxmeters and PCs / Computers.
- **Production line integration** – Can be used in manual, semi-automated and fully-automated production lines
- **High Security** - Admin passcode lock for production applications to protect production setting from operator changes.
- **Safety** – Interlock and emergency stop, internal protection circuits prevent damage (inc temperature on fixture and fixture plugged in, auto energy dump under emergency stop).

Applications

- Designed for the factory floor and magnetisation to saturation for all types of magnetic assemblies.
- Audio – single shot magnetisation of loudspeakers.
- Electric motors – multi-shot magnetisation of small and medium motor assemblies.
- Consumer – single magnet assemblies.
- Industrial – valve actuators and product assemblies

Technical Data

Modes	Production Magnetiser
Maximum voltage	Up to 800V
Magnetiser Energy	1kj, 4kj, 8kj and 12kj versions
High Voltage resolution	1V (0.1%)
Coil connections	Fast swap connector – 30 second switch over
Number of fixtures that can be connected	Single (multi-coil fixture option)
Output Configurations	Magnetiser
Communications and interfaces	Serial connection - 2x RS232 9 way 'D' inc SCPI and 1x 9 way 'D' CAN bus (CANopen), Thermocouple for fixture temperature monitoring
Integration	Standalone and easy integration with Hirst GM08 gaussmeters, IFM06 fluxmeter and other automation systems
Display and controls	Adjustable position 7" touch screen display with admin programmable display and simple high reliability production interface (Pulse switches x2, Emergency Stop and Display showing status)
Colours and materials	Steel and Aluminium case
Dimensions / Weight	1372 x580 x830 mm approx. / 80kg
Operating Temperature Range	+5° C to +40° C
Power Supply	Single Phase 220/240VAC 50-60Hz 16A or 110VAC option Max 3m cable length



Schematic of M series workstation magnetiser -1kj- 12kj

Warranty and Calibration

Supplied calibrated with 1 year warranty. A calibration is required every year to maintain the highest levels of performance – Hirst has a dedicated team of installation and service engineers, available to travel worldwide to install and support equipment, service contracts are available. See website for details.

Accessories and Application examples



M8k magnetiser workstation with 2 pole custom fixture for loudspeaker production with light guard safety enclosure.



Toy production – a M4k workstation with custom fixtures and high throughput integrated conveyor system with 4 parallel lines on a 1.2 second duty cycle running 24hrs a day.



Custom M12kj magnetiser workstation with custom fixture for a valve actuator application.



Above a M12kj workstation with custom fixture for medium IPM motor production.



Hirst Magnetic Instruments has been active in providing solutions for 60 years in magnetics and magnetic measurement. Hirst manufactures precision hand-held gaussmeters, Fluxmeters, demagnetisers, bench top & workstation industrial magnetisers, industrial production-line magnetisers, pulse field magnetometers (PFMs) for developing and characterising magnetic materials.

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