

## Capabilities brochure

### Automated handling

Hirst offer semi-automated and fully automated systems covering all aspects of integration, either with you directly or with your production automation partner. A fully automated approach ensures maximum throughput, easy compliance with health and safety standards around magnetic fields and the highest process yield.

The processes are as follows:

- **Insert the assembly into the magnetiser fixture** - ensuring precise alignment, sometimes clamps are employed to ensure part location during magnetising. Conveyers, hoppers and robotic options can be used depending on the application.
- **Magnetise the assembly** - using a single or multi-shot process or step and repeat for more complex assemblies such as axial flux rotors.
- **Verify the magnetisation process** - using Gaussmeter probes or Fluxmeters attached to the magnetising fixture or via search secondary sensing coils.
- **Remove the part** - extract the part from the fixture and move it the next part of the production process.

All Hirst magnetisers are ideally suited for integration into automated production cells due the wide range of communication and control interfaces available such as SCPI, PLC and CANopen. Hirst also has extensive experience of automating the demagnetisation process.

### Application examples



MCS D-800J Demagnetising system on an automotive production line to remove residual magnetisation



M4kj workstation with custom fixture and high throughput conveyor system with 1.2 second duty cycle running 24hrs a day – 4 parallel lines



Custom demagnetisation system with conveyor feed front and back



M3000- 40kj Magnetiser with custom skewed multipole fixture for IPM motor applications with IFM06 fluxmeter and embedded gaussmeter feedback



M800-400kj Magnetising system with handling equipment and custom 2 pole fixture for magnets used in the recycling industry weighing up to 1 Tonne



Above a M12kj workstation with custom fixture for medium IPM motor production – semi-automatic system



Above a custom 2 pole fixture for use with a M800-400kj magnetiser for manufacturing 1.4 tonne magnets for use in recycling applications



MCSD-500J and IFM02 fluxmeter running automated hopper-based sensor magnetiser

If your project required production line integration, please [contact us](#).



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

Hirst Magnetic Instruments Ltd reserves the right to make changes to any specifications or performance implied in this product brochure without notice – please refer to [www.hirst-magnetics.com](http://www.hirst-magnetics.com) for the latest version.

Automated handling capabilities guide v1.4 09.8.22