SAFE USE OF MECHANICAL LIFTING MAGNETS

Applies to: Eclipse, Probst, Tecnomagnete, Yale, Armstrong, HPM/TPM/LM Series and all permanent mechanical lifting magnets

✅ Purpose

Mechanical lifting magnets provide a safe and efficient method of lifting ferrous metal plates, billets, bars, and components without slings or clamps.
They use a permanent magnet with a mechanical ON/OFF lever system to grip the load securely.
This leaflet provides safe-use guidance to prevent accidental release, overloading, tipping, and magnetic failure.

⚙️ Before Use

• Inspect the magnet – Check body, handle, lever, safety lock, lifting eye, and bottom pole faces for cracks, corrosion, or damage.
• Verify SWL – Ensure the magnet's rated capacity exceeds the weight of the load.
• Check load thickness – Magnets have reduced capacity on thin plate. Confirm minimum thickness requirements.
• Inspect load material – Only ferromagnetic materials (mild steel, cast iron, etc.) are suitable.
• Check surface condition – Rust, paint, dirt, or scale will reduce magnetic holding strength. Clean before lifting.
• Inspect bottom pole faces – Ensure they are clean, dry, and free of pitting or scoring.
• Verify contact area – Load surface must be flat and smooth enough for full contact.
• Check lever lock – Ensure locking mechanism works correctly and holds the lever firmly in the ON position.
• Confirm temperature rating – Magnets must not be used on hot materials unless rated for elevated temperatures.
• Ensure operator competence – Only trained personnel should use mechanical magnets.

📏 During Operation

• Position magnet centrally on the load.
• Engage the magnet by pulling the lever fully into the ON position until the safety lock clicks.
• Lift slowly to allow magnet to fully energise and test grip.
• Keep the load vertical — avoid side pulls or dragging which reduce holding strength.
• Maintain exclusion zones around suspended loads.
• Keep hands and body clear from between magnet and load.
• Use tag lines to control long or flexible materials.
• Lift only one item at a time — avoid double-plate lifting.
• For long plates, use multiple magnets with a lifting beam.
• Monitor for vibration, shock loading, or impact — these can reduce magnetic grip.
• Lower load slowly before switching the magnet OFF.

🚫 Do Not

• Exceed magnet SWL or ignore derating for thin plate.
• Use magnets on stainless steel, aluminium, copper, or non-ferrous materials.
• Lift coated, greasy, or heavily rusted plates without cleaning.

• Use magnets on curved, uneven, or rough surfaces beyond manufacturer allowances.
• Place hands beneath magnet or load during attachment.
• Shock load, tilt, or swing loads.
• Use on hot materials unless magnet is rated for high temperature.
• Lift people or stand under suspended loads.
• Use magnets with damaged pole faces or faulty lever locks.

🧰 After Use
• Lower load fully and set lever to the OFF position.
• Clean pole faces using a non-abrasive method.
• Inspect lever lock, body, and eye bolt for wear or cracks.
• Wipe magnet dry — moisture reduces future holding strength.
• Store magnet on a clean, level shelf away from metal debris.
• Tag out any damaged or weakened magnets.
• Maintain LOLER inspection records.

⚠️ Safety Reminders
• Always use magnets on clean, flat, ferromagnetic surfaces only.
• Never rely on magnets for lifting people or non-rated items.
• Remember: **Thin plate = reduced holding power**.
• Maintain exclusion zones and communicate clearly.
• Only trained personnel should operate lifting magnets.
• Conduct pre-use checks before every shift.
• Follow manufacturer guidance for derating factors and load types.

📞 Support and Maintenance
For service, inspection, and spare parts, contact your local Lifting Gear and Safety Depot

Depot List

Bristol: 0117 9714883
Avonmouth: 0117 9550456
Newport: 01633 334450
Port Talbot: 01639 540007
Pembroke: 01646 574000
Plymouth: 01752 474488
Fareham: 01329 550988
Redruth: 01209 703990