

# Electromagnets and electropermanent magnets for plates and packs handling



*GAUSS MAGNETI designs and manufactures since 1972 special rectangular electromagnets for plates and packs, keeping into account the customer strong requirements for optimal managing of the available space in plant, for high movements speed and for possibility to handle one or more plates at the same time*

*They are mainly used for the following applications:*

- Unloading of plates from production line (also hot materials up to 600°C);
- Loading and unloading of lorries, rail containers, ships;
- Stocking in stores or warehouses;
- Loading and unloading of cut plates.

*The careful study of the magnetic field lines allows handling single and multiple plates, depending on the operator's need, granting also the highest efficiency and safety during transport.*

*Safety is achieved not only by using a high magnetic force, but also by a correct load arrangement under a sufficient magnets number, depending on the bending of the load itself.*

*Special versions for high temperature materials (up to 600°C) are also available.*

*Main technical features of our electromagnets are:*

- No needs of wood spacers between the bundles;
- No damage to the material due to handling with mechanical lifting systems;
- No aisles required between plate stacks;
- No need to limit the stack height to that of a man;
- Faster handling speed with handling cost reduction;
- Reduction of risks for personnel due to remote handling controls;
- Better use of the storage areas by increasing available space.
- Possibility of vertical sheet metal thanks to special execution.





*The magnets can be used individually, multiple under a fixed or an extensible beam allowing the magnets distance to be adjusted according to the plates dimensions. These electromagnets can also be used for handling packs with iron hoops able to stand the load.*

*The electromagnets are fed:*

- *from the mains through our electronic equipment with 4-quadrants digital converter allowing magnetic flux setting, counter-excitation for fast load release, coil temperature control by means of thresholds (important in high-temperature magnets), automatic switching to batteries, buffer batteries (Pb or Ni-Cd), automatic battery charging system and continuous control of the batteries charge condition.*



*Gauss Magneti has also successfully developed the electropermanent magnets technology.*

*Electropermanent magnets hold their magnetization also in case of mains failure or cable break, so they do not need buffer batteries or mechanical safety forks.*

*Their peculiarity lies in that they are activated by a current pulse lasting few seconds and that they hold their magnetization till a second current pulse – opposite the first one – deactivates them.*

*Besides the obvious advantage of handling safety, they also assure the highest reliability being actually exempt from internal Joule heating.*

*Coming on the market of high performance magnetic materials has also allowed for electropermanent magnets a weight and dimensions reduction preserving the same capacity.*

*Thanks to Gauss Magneti technology, plates thinning is possible also with electropermanent magnets both manually by the operator and automatically by means of PLC.*

*Special versions for high temperature materials (up to 600°C) are also available.*

*At last they can be used individually or combined under a beam.*



**MAGNETIC EQUIPMENTS FOR HANDLING AND SEPARATION TECHNOLOGY**



**CISQ/IMQ/CSQ 9190.GAUS - UNI EN ISO 9001:2008**

**GAUSS MAGNETI SRL - Via S. Scaroni, 27 - 25131 FORNACI - BRESCIA - ITALY**  
 Cap. Soc. € 400.000,00 i.v. - P.I. e C.F. IT 03535610178 - REA: BS 414240 - R.I. BS 03535610178

E-mail: [info@gaussmagneti.it](mailto:info@gaussmagneti.it) - [www.gaussmagneti.it](http://www.gaussmagneti.it)

**DIVISIONE SEPARAZIONE:** Tel. 030 2680641 / 030 3582801 - Fax 030 3580517  
**DIVISIONE SOLLEVAMENTO:** Tel. 030 3580375 / 030 3580696 - Fax 030 3580846