



TECNOMAGNETE

Permanent-electro magnetic systems

EN

TECNOLIFT line - Magnetic lifting systems



**LIMITED
CARBON FOOTPRINT**

“ *The effects of climate change have been right in front of our eyes for a long time, which is why the issues of protecting our Planet are increasingly being discussed.*

Any choice or action taken every day by each one of us has an impact on the environment, an ecological footprint that leaves a deep mark on future generations as well. ”

MAG AUTOBLOK TECNOMAGNETE has always been sensitive to this important aspect of our lives by actively contributing to the technological transition of magnetic systems used in industrial production processes from lifting ferrous loads to clamping workpieces on machine tools.

The use of innovative **permanent-electro magnetic** systems instead of traditional, 'energy-intensive' electromagnetic systems contributes to the reduction of electricity consumption of user companies.



Comparison of the energy consumption of the two technologies considering 100 movements per day (same capacity)

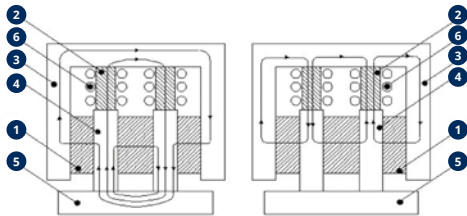
	Electromagnet	Permanent-Electro
Liftings a day	100	100
Average electrical consumption time per handling cycle	3 minutes	10 seconds (MAG and DEMAG cycles)
Average consumption time per day	5 hours	0.28 hours
Electrical consumption of product (kW/h)	15 kW/h	18 kW/h
Energy consumed per day	75 kW / day	5 kW / day
Energy consumed per year	22.500 kW	1.500 kW
Electricity cost in Italy	0,3 €/kWh	0,3 €/kWh
Working days per year	300 days	300 days
Cost of energy consumed in 1 year	6.750 €/year	450 €/year
Cost of energy consumed in 3 years	20.250 €/year	1.350 €/year
Equivalent CO2 emission in one year (*)	11.925 Kg	795 Kg

(*) conversion factor 0,53 Kg of CO2 for each kWh consumed

Hence, a lower energy burden and a lower environmental impact if one considers that electro-permanent magnetic technology does not require the aid of expensive safety batteries (in the event of a power failure), which entails high environmental costs for both their production and disposal.



Permanent-electro magnetic technology is extremely safe as it does not depend on electricity for the generation and maintenance of the magnetic force, which is solely produced by the action of the permanent magnets installed inside the lifting modules. Electricity is only used for a few seconds to channel the magnetic flux from the inside of the magnetic modules (DEMAG state) to the outside (MAG state) by passing through the section of steel load to be lifted. The two states MAG and DEMAG maintain their condition for an unlimited time even in the absence of electricity.

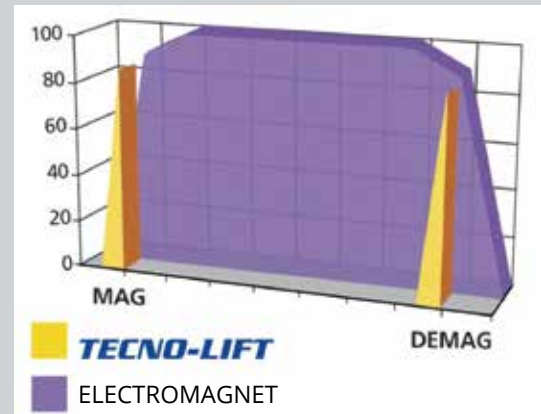


- 1 Permanent magnet Neodymium
- 2 Permanent-magnet (reversible) Al.Ni.Co
- 3 Frame of the module (neutral outside)
- 4 Magnetic pole (magnetic collector)
- 5 Steel load to lift
- 6 Reversing coil of Al.Ni.Co magnet

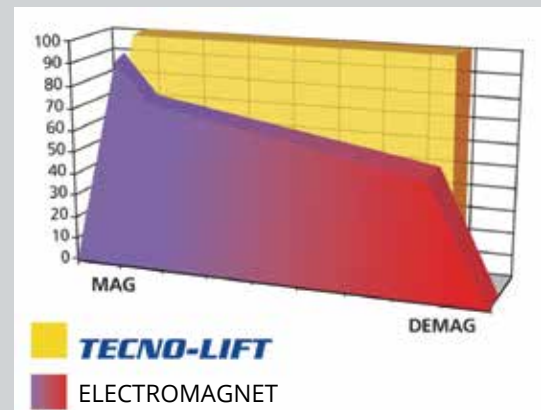
The obvious advantages of permanent-electro magnetic technology are:

- Total safety
- Energy saving
- Elimination of battery backup units
- Reduced weight on the overhead crane and ease of installation
- Reliability over time thanks to limited circulation of electrical current within the modules
- Constant performance during the working day thanks to the elimination of the Joule effect




TECNOLIFT: limited dependence on electric current for the generation and keeping of magnetic force



TECNOLIFT: consistent performance over time

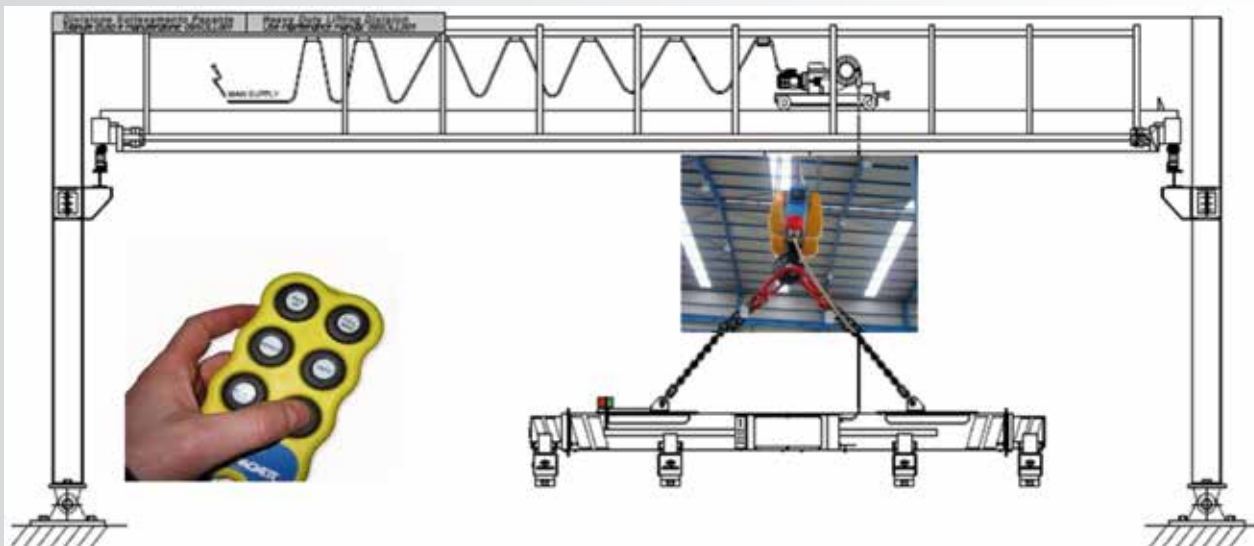


Permanent-electro magnetic lifters most commonly used for handling steel sheets and blocks

	Model	WLL*	Max size load	Optional
	SMH 50	5 tons	3500 x 6000 mm	 MFR Magnetic force reading system
	SMH 100	10 tons	3500 x 6000 mm	
	SMH 150	15 tons	3500 x 6000 mm	
	SMH 200	20 tons	3500 x 6000 mm	
	SMH 300	30 tons	3500 x 6000 mm	
	SMH 400	40 tons	3500 x 6000 mm	
	SMH 500	50 tons	3500 x 6000 mm	
*Minimum thickness 30 mm				
	BF 2/50X	5 tons	3500 x 6000 mm	 SRM Manual system for 90° rotation of cross-beams
	BF 2/65	6,5 tons	3500 x 6000 mm	
	BF 2/80X	8 tons	3500 x 6000 mm	
	BF 2/100X	10 tons	3500 x 6000 mm	
*Minimum thickness 5 mm				
	TM 4/100X	5 tons	3500 x 12000 mm	 SRM Manual system for 90° rotation of cross-beams
	TM 4/130X	10 tons	3500 x 12000 mm	
	TM 4/160X	15 tons	3500 x 12000 mm	
	TM 4/200X	20 tons	3500 x 12000 mm	
	TM 4/250X	25 tons	3500 x 12000 mm	
*Minimum thickness 5 mm				
	TM 6/160X	16 tons	3500 x 16000 mm	 SRM Manual system for 90° rotation of cross-beams
	TM 6/200X	20 tons	3500 x 16000 mm	
	TM 6/250X	25 tons	3500 x 16000 mm	
	TM 6/300X	30 tons	3500 x 16000 mm	
*Minimum thickness 5 mm				
	TB 4/35	3,5 tons	3500 x 6000 mm	 TB Tilting system 0 - 87°
	TB 6/35	3,5 tons	3500 x 12000 mm	
	TB 2/60	6 tons	3500 x 6000 mm	
	TB 4/90	9 tons	3500 x 12000 mm	
	TB 4/120	12 tons	3500 x 12000 mm	
	TB 6/180	18 tons	3500 x 18000 mm	
*Minimum thickness 5 mm				



Easy to install and simple to use (Plug & Play)



- The control unit on board is operated by radio-control as part of the supply to simplify the installation
- It only requires the connection to the power supply by a simple plug/socket (400 V. 50/60 Hz)
- The radio control gives all operational and safety functions in a simple and intuitive way



Applications examples



Permanent-electro telescopic beam TM6/200 series



Permanent-electro module SMH 300 series



Permanent-electro COMBI series for loading/unloading cutting machines in a single operation (plasma, laser ...)



Permanent-electro MULTI series for lifting multiple and single sheets of different thicknesses

Overview on other permanent-electro magnetic solutions for lifting applications





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