

HBEPP

FIX ELECTRO PERMANENT MAGNETIC BEAM WITH BATTERY SUPPLY



LIFTING OF STEEL SHEETS
SAFETY FACTOR 3

Steel sheets and steel strips are often difficult to handle. When lifting with traditional chains, slings and hooks, the load tends to bend and deform, making transport unstable and dangerous. With the HBEPP electro permanent magnet beams, the load is lifted evenly from the top, without deformation or damage to the load.

PICK-UP CYCLE

Depending on the thickness of the steel plate, the PICK-UP force can be adjusted to ensure that only one plate is lifted.



Percentage of total force at PICK UP:
POSITION I = 15%
POSITION II = 25%
POSITION III = 35%
POSITION IV = 55%

SELECTION OF MAGNETIC MODULES

Depending on the dimensions of the material to be lifted, a number of corresponding magnetic modules can be selected via a 4-position switch.



INNOVATIVE BATTERY TECHNOLOGY

Because only a short pulse of electric current is required for magnetisation and demagnetisation, more than 300 cycles can be performed with one fully charged battery. The status of the battery is continuously monitored and clearly displayed.



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LIFTING OF STEEL SHEETS
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OPTION

Fork lift adaptation for
handling steel plates stored
outdoors.
Thanks to the integrated
rechargeable battery group, an
additonal power supply is not
necessary.



MODELS

PRODUCT	WEIGHT (KG)	BATTERY (VDC)	LENGTH (MM)		WIDTH (MM)		T (MM) MIN.	CAPACITY (KG)	EPM QTY
			MIN.	MAX.	MIN.	MAX.			
HBEPP-03-010	500	72	500	3000	500	1500	5	1000	4
HBEPP-06-030	950	72	500	6000	1200	2500	5	3000	6
HBEPP-06-060	950	72	500	6000	500	2500	5	6000	6
HBEPP-06-090	950	72	500	6000	500	2500	5	9000	6
HBEPP-06-120	1950	72	500	6000	500	2500	5	12000	6
HBEPP-09-080	1250	72	2500	9000	500	3000	5	8000	8
HBEPP-09-120	1750	72	2500	9000	500	3000	5	12000	8
HBEPP-12-050	1695	72	5000	12000	500	3000	5	5000	10
HBEPP-12-100	2010	72	5000	12000	500	3000	5	10000	10
HBEPP-12-180	2850	120	1700	12000	1000	3200	5	18000	16
HBEPP-16-200	4650	120	2000	16000	1500	3500	5	20000	16
HBEPP-16-250	4860	120	2000	16000	1500	3500	5	25000	16

Other dimensions on request

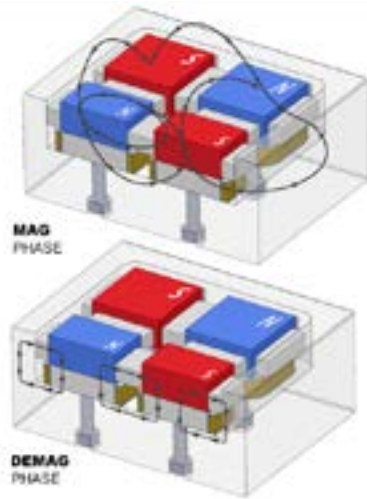


ELECTRO PERMANENT MAGNETIC TECHNOLOGY

FOR QUICK AND SAFE HANDLING OF STEEL PLATES AND -STRIPS

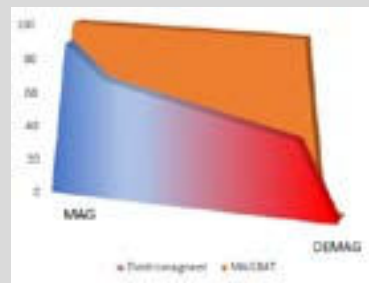


9 SAFETY FUNCTIONS



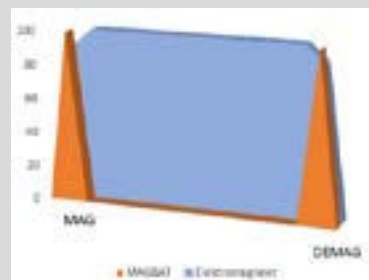
TECHNOLOGY

MAGBAT-Electro Permanent Magnets (EPM) offer 95% energy savings and superior safety compared to traditional electromagnets. They require power only during MAG and DEMAG phases, operating without power supply. The technology features an electro permanent magnetic circuit with alternating N/S poles, following the chessboard principle, in a magnetically neutral frame. Each pole includes a steel core surrounded by fixed polarity magnets (Neodymium). Beneath the steel core, a magnet with reversible polarity (AlNiCo) is surrounded by an electric coil. A short current pulse through the coil enables the magnetic field to move in and out of the system.



CONSTANT POWER

Because no continuous current flows through the electric coils, electro permanent magnets do not heat up and the force remains constant. This contrasts with electromagnets that require continuous current and heat up, resulting in a loss of power.



95% LOWER ENERGY CONSUMPTION

MAGBAT electro permanent magnets use electrical current for only a few seconds to reverse the polarity of the magnetic poles. This contrasts with electromagnets that continuously consume electrical power during the entire lifting process.

ADVANTAGES

- 100% safe. EPM only need electricity while activating or deactivating the magnet. The effective force is developed by permanent magnets.
- Predictable and constant force.
- More than 95% electricity savings compared to conventional electromagnets.
- No backup batteries required. The magnetic force remains in the event of a power failure.
- No heating of the magnet, longer life of the electric coils.
- No residual magnetism in the material.
- No interference with electronic environmental periphery.
- No moving parts, Low maintenance costs



ELECTRO PERMANENT MAGNETIC TECHNOLOGY

The electric current is only used to invert the magnetic field, while the effective force is generated by permanent magnets. In the event of a power failure, the magnetic force remains permanently present = 100% safe

SAFETY FACTOR 3:1

To lift safely, a possible air gap between the contact surface of the magnet, and the steel to be lifted, must be considered. That is why all our magnets are designed with a minimum safety factor of 3:1 measured at an air gap of 0.4 mm.

LANDING DETECTION

An inductive proximity switch detects when the magnet is suspended in the air, and prevents accidental demagnetisation.

RADIO REMOTE CONTROL

The magnet is operated from a safe distance. The operator should not come in the immediate vicinity of the load.

PICK-UP CYCLE

Lifting is done in 2 phases, whereby the workpiece is first lifted at a lower preset force, immediately followed by FULLMAG (100% of the total force)

KG	100% IV	PICK-UP Very thin	Generated force 17%
KG	100% IV	PICK-UP Medium/thin	Generated force 25%
KG	100% IV	PICK-UP Medium/large	Generated force 35%
KG	100% IV	PICK-UP Large	Generated force 55%
KG	100% IV	FULL - MAG Always	Generated force 100%

SPC-SYSTEM (SYSTEM PERFORMANCE CHECK)

The electronic system continuously monitors the proper functioning of the magnet. Any abnormal situation is reported immediately and indicated by an error code on the help screen. In this way, errors can be immediately analysed and resolved.

2 BUTTON OPERATION

To start the demagnetization cycle, 2 buttons (SAFE + DEMAG) must be pressed consecutively on the remote control.

LAMP BLOCK

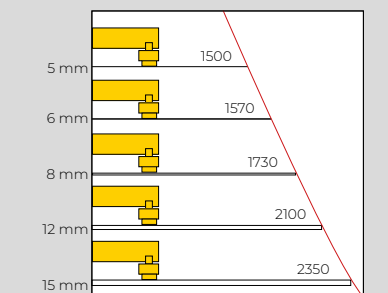
The status of the magnet is visually indicated by a clear LED lamp block. The load may only be moved when the green lamp lights up continuously!

- PICK-UP ● FULLMAG
- DEMAG ● ALARM

INSTRUCTION PANEL

With clear safety instructions for the user regarding:

- Maximum weight of the load in function of material thickness
- Maximum wing in function of the deflection of the material.



MAGBAT
THE SAFEST
LIFTING MAGNET
IN THE WORLD