



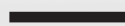
MAGBAT

EUROPE



HBEPP

**ELECTRO PERMANENT
MAGNETIC BEAM
POWERED BY BATTERY**



LIFTING OF STEEL SHEETS



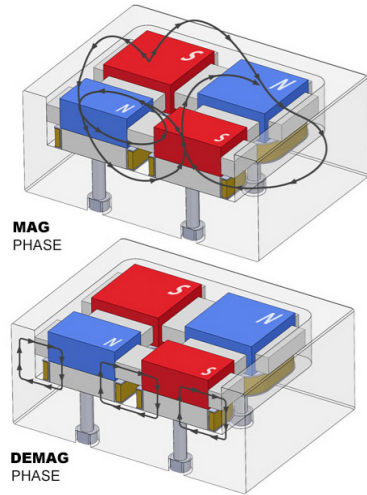
HBEPP

ELECTRO PERMANENT MAGNETIC BEAM POWERED BY BATTERY



FOR FAST AND SAFE HANDLING OF STEEL SHEETS

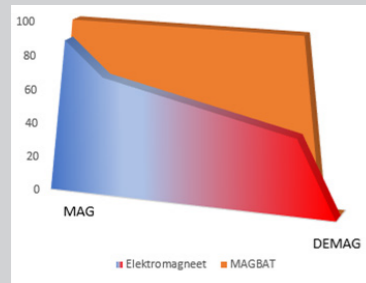
SAFETY FACTOR 3



TECHNOLOGY

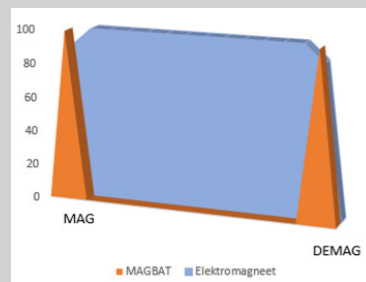
MAGBAT Electro Permanent Magnets (EPM) consume 95% less power and are totally safe, compared to traditional electromagnets. They only need electrical power during the MAG and DEMAG phases. This power is supplied by an integrated, rechargeable battery group. During operation, no power supply is required. The technology consists of an electro permanent magnetic circuit with alternating poles N/Z, arranged according to the chessboard principle, which are placed in a magnetic neutral frame.

Each pole consists of a steel core surrounded by magnets with a fixed polarity (Neodymium). Below the steel core is a magnet with reversible polarity (AlNiCo), around which an electric coil is wound. When we send a short current pulse through the electric coil, the magnetic field moves from inside to outside the system (and vice versa).



CONSTANT POWER

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



95% LOWER ENERGY CONSUMPTION

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

ADVANTAGES

- 100% safe. EPM only needs electricity when switching the magnet on and off. The effective force is developed by permanent magnets.
- Predictable and constant force.
- More than 95% electricity savings compared to conventional electromagnets.
- Power is supplied by a built-in rechargeable battery group. **NO POWER CABLE REQUIRED!**
- No heating of the magnet, longer life of the electric coils.
- No residual magnetism in the material.
- No interference with electronic periphery.
- No moving parts, low maintenance costs



9 SAFETY FUNCTIONS

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 and associated cam, mounted on the harp shackle of the hoisting chain, prevents accidental demagnetizing in the air.

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

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

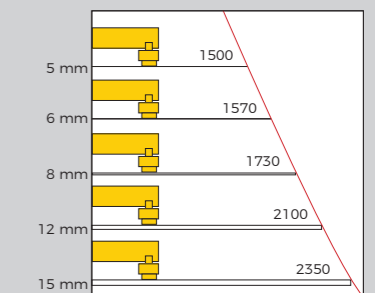
SPC-SYSTEM (SYSTEM PERFORMANCE CHECK)

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.



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

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

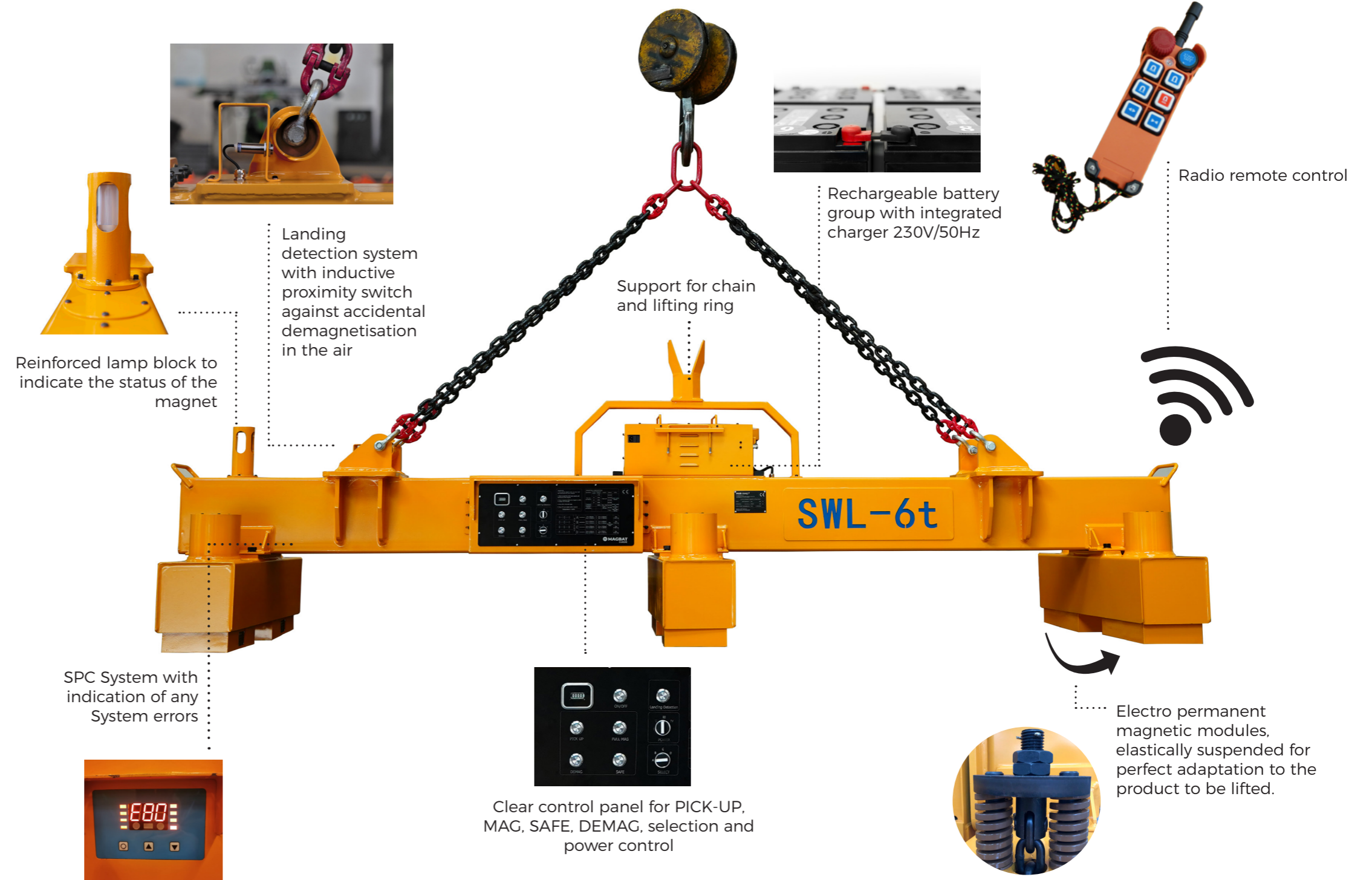
Because only a short pulse of electric current is required for magnetisation and demagnetisation, more than 300 cycles can be performed with one fully charged battery. The status of the battery is continuously monitored and clearly displayed.



HBEPP ELECTRO PERMANENT MAGNETIC BEAM POWERED BY BATTERY



**FOR FAST AND SAFE HANDLING
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SAFETY FACTOR 3**

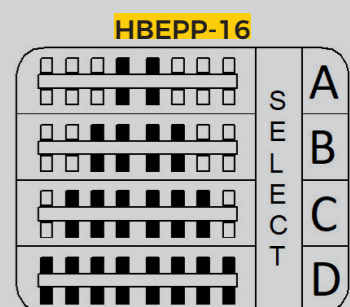
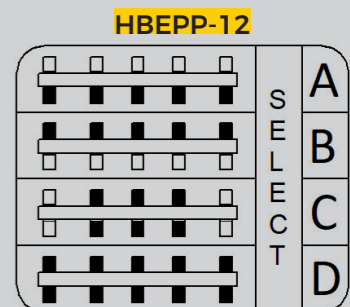
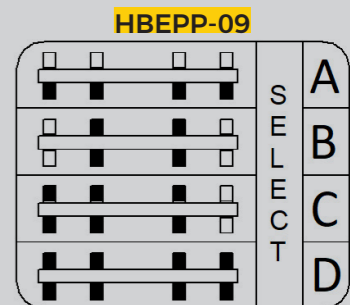
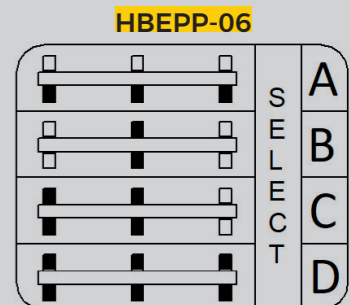
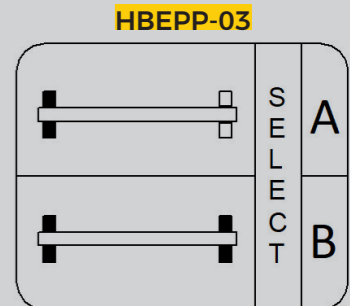
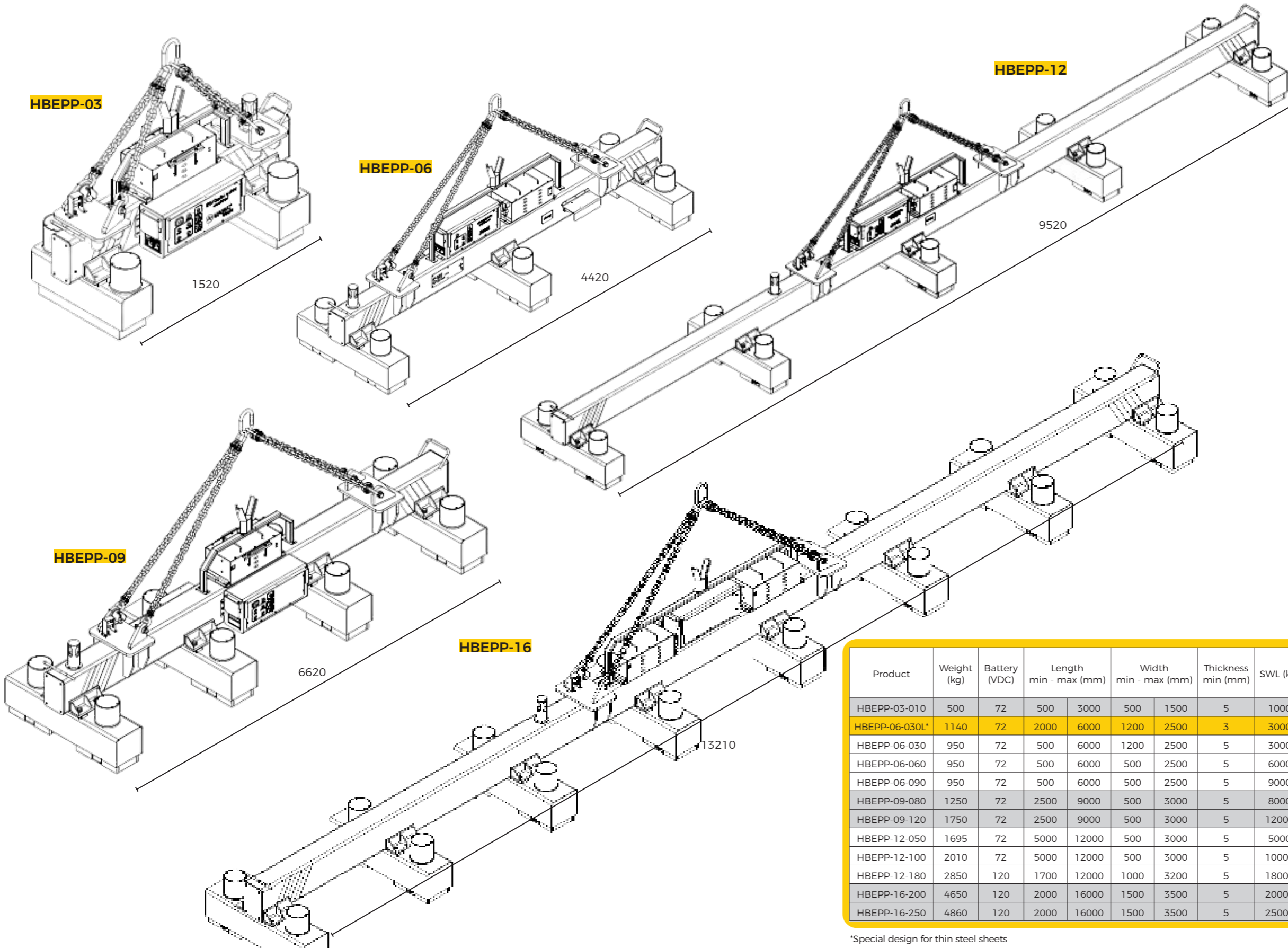


SERIE: HBEPP

LIFTING OF SINGLE STEEL SHEETS

INDEPENDENT SELECTION OF THE MAGNETIC MODULES

According to the graphic below, a number of magnetic modules can be selected depending on the dimensions of the steel plate.



Product	Weight (kg)	Battery (VDC)	Length (mm)		Width (mm)		Thickness min (mm)	SWL (kg)	EPM
			min	max	min	max			Qty
HBEPP-03-010	500	72	500	3000	500	1500	5	1000	4
HBEPP-06-030L*	1140	72	2000	6000	1200	2500	3	3000	8
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-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

*Special design for thin steel sheets



MAGBAT-Europe is a leader in electro permanent magnet technology, focusing on the development and production of magnetic quick change systems for moulds and dies, magnetic clamping plates for metalworking machines, industrial lifting magnets and customer-oriented magnetic solutions.

With continuous focus on R&D, our philosophy is to pursue a fair win / win policy with our customers, create added value for employees, increase benefits for our customers, and make safe operation as a priority.

The unique advantages of the MAGBAT products are safety, energy saving, high efficiency, and environmental friendliness.

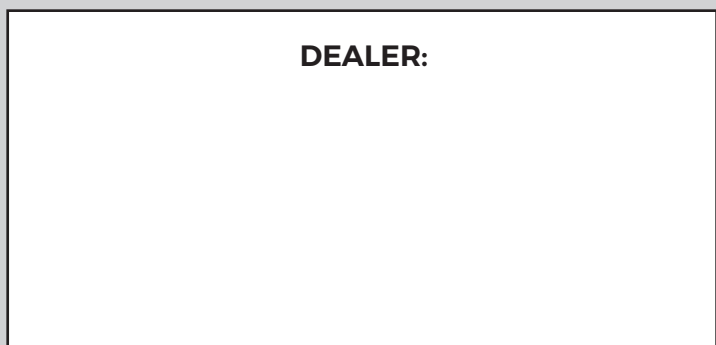
Our products are used in various sectors such as: steel construction, machine construction, shipbuilding, steel trade, railway and rolling material, injection moulding companies and various other industries.

We strictly adhere to the requirements of the quality certification standard ISO 9001: 2015.

From our headquarter in Oudenaarde (BE) we take care of the distribution, technical support, and after-sales service of our products

All these arguments make MAGBAT-Europe the most reliable partner for electro permanent magnetic equipment for industrial applications.

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We reserve the right to make adjustments and technical improvements.