

HM5

FIX ELECTRO PERMANENT MAGNETIC BEAM



LOADING AND UNLOADING CUTTING
MACHINES IN ONE MOVE

SAFETY FACTOR 3

HM5 - electro permanent magnetic beams are used to load the cutting machine, AND to unload the cutted parts + frame from the cutting machine in 1 movement. Depending on the min. size of the cut pieces, these beams are produced according to the customer's requirements.

FAST RETURN ON INVESTMENT
The HM5 electro permanent magnetic beam reduces the downtime of your machine and it creates extra production capacity so that extra orders can be accepted.

ERGONOMIC—INCREASED SAFETY
It is no longer necessary for the operator to climb on and off the machine to unload it. This creates better working conditions and increased safety.

FLEXIBILITY
Depending on the zone to be cleared, the operator has the option of selecting a specific zone.

CALCULATION EXAMPLE ROI
Cutting capacity per per day: 10 steel plates
Cost/hour: e.g. 50 €

Time to load + unload the machine: 20 minutes
Downtime per day: 200 minutes = 3.3 hours

Time to load + unload the machine with HM5 = 3 minutes
Downtime per day: 30 minutes = 0.5 hours

Profit per day = 140 €
Additional production capacity per day = 2.8 hours
Profit per year = 140 € x 220 days = 30,800 €
Extra production capacity per year = 616 hours



OXY & PLASMA CUTTING

PRODUCT	LENGTH MAX.	WIDTH MAX.	THICKNESS (MM)		MIN.CUTTED PIECES (MM)	CAPACITY (KG)
			MIN.	MAX.		
HM5-03-015/P	3000	1500	5	40	250x250	1500
HM5-06-040/P	6000	2000	5	40	250x250	4000
HM5-06-060/P	6000	2500	5	40	250x250	6000
HM5-09-085/P	9000	3000	5	40	250x250	8500
HM5-12-115/P	12000	3000	5	40	250x250	11500

Other dimensions on request

LASERCUTTING

PRODUCT	LENGTH MAX.	WIDTH MAX.	THICKNESS (MM)		MIN.CUTTED PIECES (MM)	CAPACITY (KG)
			MIN.	MAX.		
HM5-03-015/L	3000	1500	1,5	30	80x80	1000
HM5-06-020/L	6000	1500	1,5	30	80x80	2000
HM5-06-030/L	6000	2000	1,5	30	80x80	3000
HM5-09-040/L	9000	2000	1,5	30	80x80	4000

Other dimensions on request

OXY CUTTING

PRODUCT	LENGTH MAX.	WIDTH MAX.	THICKNESS (MM)		MIN.CUTTED PIECES (MM)	CAPACITY (KG)
			MIN.	MAX.		
HM5-03-040/O	3000	2000	5	80	300x300	4000
HM5-06-100/O	6000	2500	5	80	300x300	10000

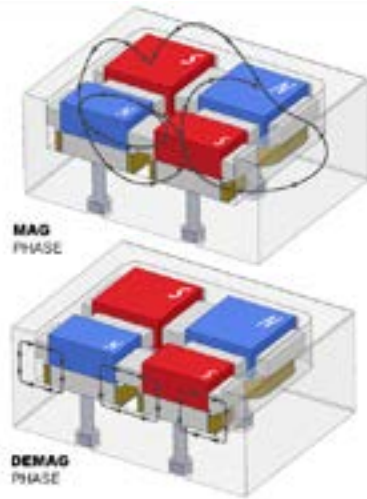
Other dimensions on request

ELECTRO PERMANENT MAGNETIC TECHNOLOGY

FOR QUICK AND SAFE HANDLING OF STEEL PLATES AND -STRIPS

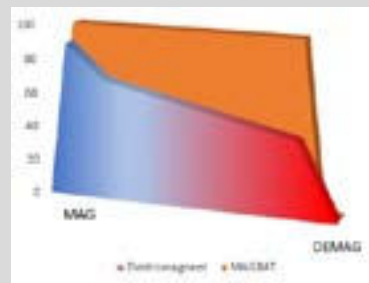


9 SAFETY FUNCTIONS



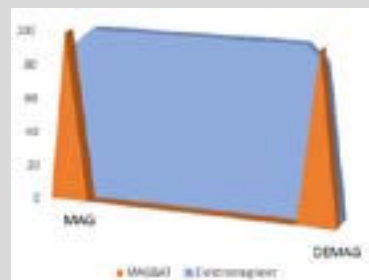
TECHNOLOGY

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

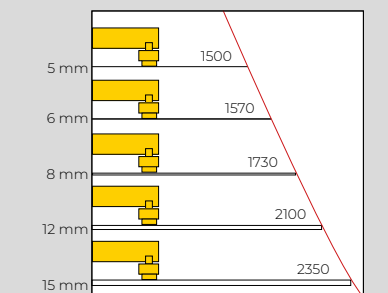
SPC-SYSTEM (SYSTEM PERFORMANCE CHECK)

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