

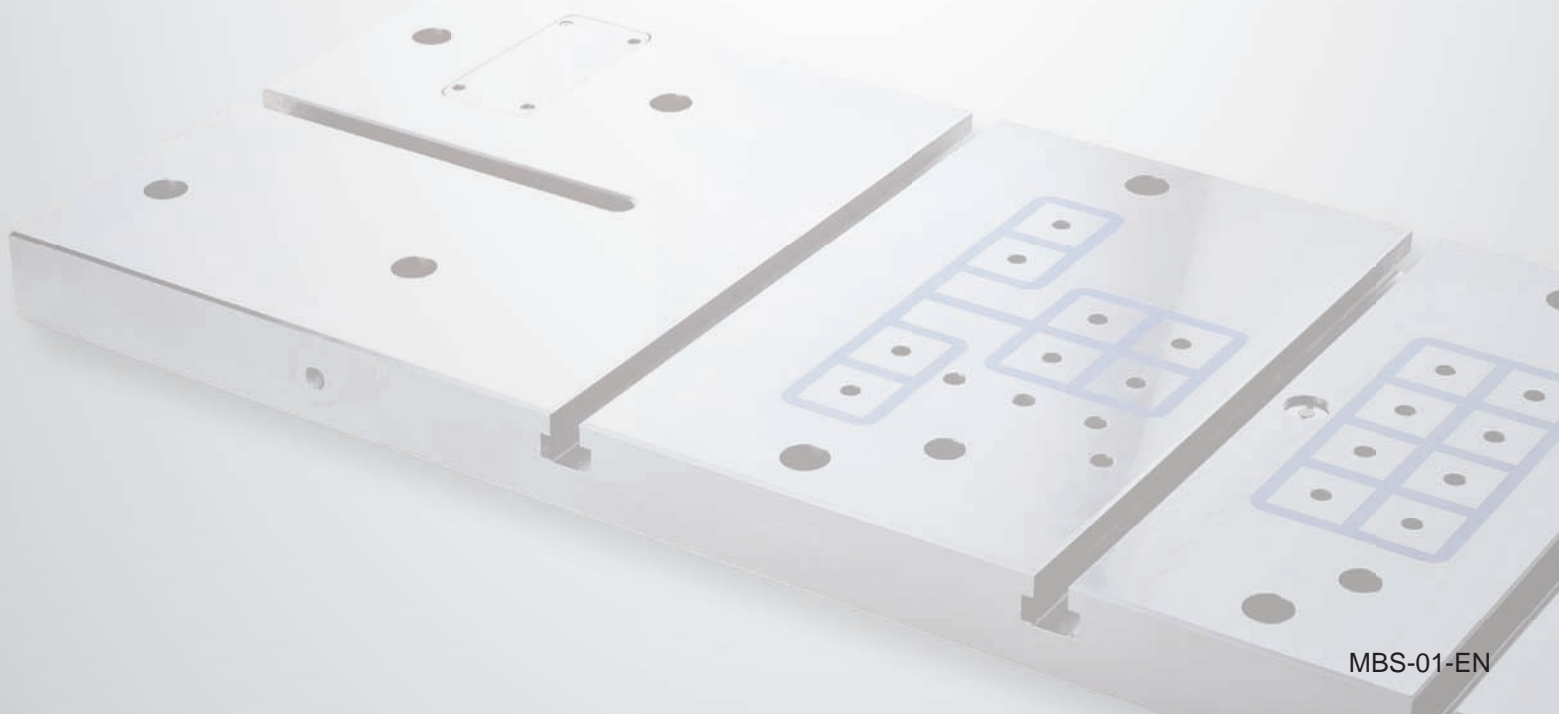
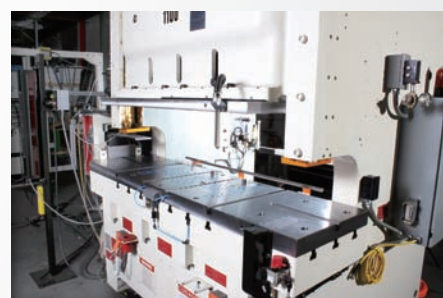
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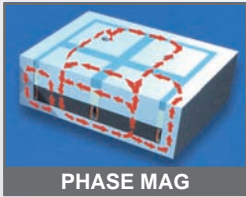
MBS

**ELECTRO-PERMANENT MAGNETIC
QUICK DIE CLAMPING SYSTEM
FOR STAMPING PRESSES**

- ✓ FAST
- ✓ EASY TO USE
- ✓ SAFE
- ✓ FLEXIBLE



ADVANCED TECHNOLOGY



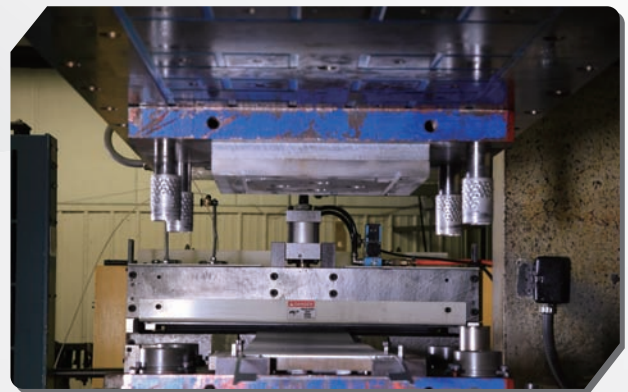
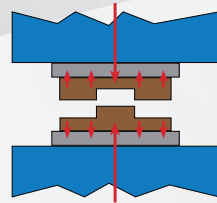
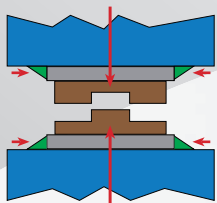
The electro-perm system does not use power once energized so a loss of power does not cause a loss of holding force. The technology, a safe and reliable magnetic circuit, is widely used on work holding, material handling, and mold / die clamping.

The same, practical technology is used in metal stamping presses. The advanced double magnet circuit is composed of square poles machined into a solid block of steel. Each pole generates a constant, uniform and predefined force regardless of who turns the system on. This force is proportional to the number of poles in contact with the die surface.

MBS does not magnetize the entire die, the magnetic flux penetrates the die only 20mm deep. The die face and part cannot become magnetized, allowing for scrap removal, and proper die operation without interference. In a few seconds with the simple press of a button, it is possible to clamp or unclamp the die in complete safety. Even during a power failure, the system remains operative, with constant clamping force.

UNIFORM CLAMPING ▼

This uniform clamping force allows repeatability and constant quality of the stamping process by eliminating any flexing of die shoe.

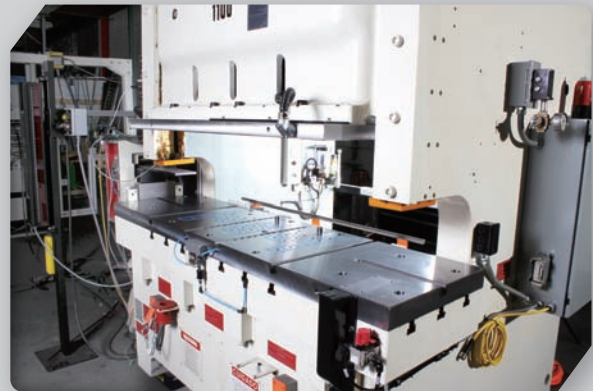


NO DIE MODIFICATIONS ▼

MBS is suitable for dies of any shape and size, with no modification. Die standardization is not necessary: savings in engineering time and overall cost.

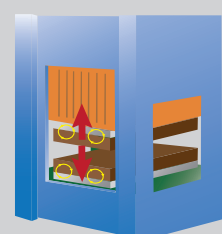
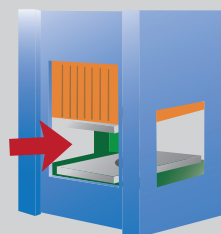
FLEXIBLE ▼

Locating devices are easy to add, scrap holes can be used, bolster extensions can be added. Dies on parallels can be held with the special parallel pole design T-slots in the lower can be added to enable a wide variety of die lifter configurations.



USER FRIENDLY ▼

One operator, with no tools, can operate all the die-clamping procedure easily and in total safety, outside the press.



“SAFETY FIRST” SYSTEM ▼

Electro-permanent system does not lose holding force with loss power. A spring safety key switch must be turned to the enable mode at the same time the mag or de-mag button is pushed eliminating the possibility to mag or de-mag inadvertently.

Bottom dead center interlock prevents de-mag unless press is closed. Proximity switch puts press into e-stop if a die separates from the magnet and insures the die is flat enough with no air gaps to be properly held.

CSS system checks the internal wiring in the magnet and controller to insure correct system magnetization is achieved.

MSD system checks the magnetic field to insure the die is magnetic and no mechanical damage to the system has occurred during a die change and double checks the air gap check of the proximity switch.



CONTROL UNIT ▼

MBS control interface is small and installs easily. The system uses several safety devices to avoid accidental mag or de-mag:

- The buttons must be activated simultaneously (SAFE function).
- The interlock key to prevent mag / demag by unauthorized personnel.
- Bottom dead center channel enable.

MBS Technical characteristics

Model	80		50	
Magnetic strength for each pole (*)	1000 daN	2200 lb	370 daN	830 lb
Size of the square poles sides	80 mm	3.14"	50 mm	1.96"
Thickness of the module	51 mm	2.0"	35 mm	1.37"
Max working temperature (mold contact face)	120 °C	248 °F	120 °C	248 °F
Depth of magnetic flux	20 mm	0.78"	10 mm	0.39"
Proximity sensor threshold value	0,2 mm	0,0078"	0,2 mm	0,0078"
Standard voltages	230/400/460 VAC, 50/60 Hz			
Electrical input	32 kVA			
Fixing holes and locating ring	EUROMAP / SPI / JIS			



COMPLETELY CUSTOMIZABLE ▼

Reference pins can be added to speed-up the positioning of the die.

The lower magnet can have a through hole for scrap removal. The UR("U-Rail") version is made in separate parts, for free and flexible positioning on the machine platen to insert "U channel lifters" of different sizes.

Magnets can be made of different thickness to accommodate shut height issues. The TS ("T-Slot") version is standard equipped with 2 T-Slots on lower module, to insert lifters.

EASY TO INSTALL ▼

MBS is easy to install: using bolts to mount magnetic plates to existing T-slots or tapped holes. Its modularity allows adaptability for any need. No modifications to the press are required. MBS is made to fit your press. The new reduced thickness of the modules allows to save daylight. Bigger dies can be used in smaller presses.

FAST AND EASY ▼

One operator, with no tools, can operate all the die-clamping easily and in total safety, while staying outside the press. Load the die, close the press and press the button for the upper, then the lower.

SAFE AND UNIFORM ▼

The MBS technology is not affected by electrical breakdowns; the die will stay in position even without power supply, with the same strength indefinitely. This uniform clamping force allows repeatability and constant quality of the stamping process by eliminating any flexing of die shoe.



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Technical Changes

The data and illustrations in this catalogue are not binding and only provide an approximate description. We reserve the right to make changes to the product delivered compared with the data and illustrations in this catalogue, e.g. in respect of technical data, design, fittings, material and external appearance.

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