Advantages of magnetic die clamping for stamping presses

MAGNETIC DIE CLAMPING SYSTEM

QUAD STAMP

Easy to Activate:

Die clamping quick / easy / safe

Suitable for dies of any size

And other advantages...

TECNOMAGNETE®

Safety through Power

Unbeatable die clamping time!

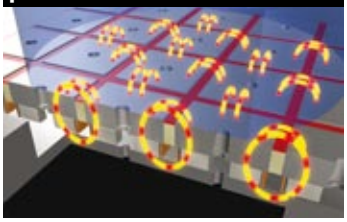
A quick die clamping system changes the entire production process allowing for lean production and small batches. Quad Stamp is in the heart of this change with no hidden time to fix clamps, make adjustments or test between 2 production batches.

Made up of 2 magnetic modules, it's easy to install, and integrate into the existing machine and controls.

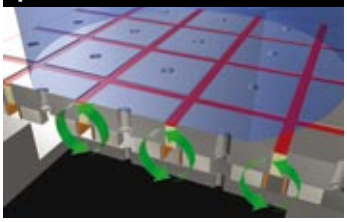
Permanent-electro technology

The Quadsystem, a safe and reliable magnetic circuit, was born from an ingenious idea in 1974. First used on machine tools, then material handling ferrous loads,

phase MAG



phase DEMAG



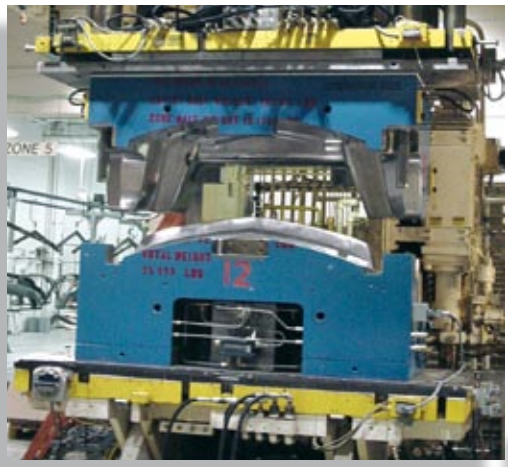
and to clamp molds in IMMs.
The same, practical technology is used in metal stamping presses.

The patented double magnet circuit Quadsystem 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

Quad Stamp **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 pressing 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.

Easy to install

QUAD STAMP 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. Quad Stamp 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

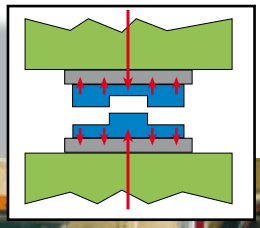
One operator, with no tools, can operate all the die-clamping easily and in total safety, while staying outside the press.
Load the die, close the press and press the button for the upper, then the lower.

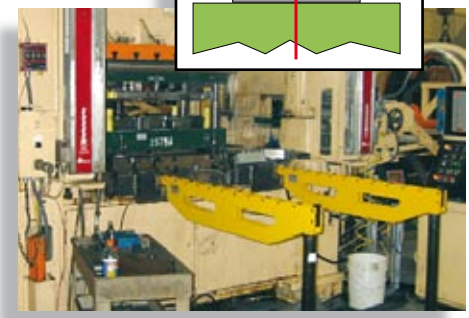
Smart control It is only possible to demagnetize the upper when press is at BDC (150-210 degrees)

Safe and Uniform

The Quadsystem 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.

The system is "error-proof": all the safety systems installed





supervise all the operations and in case of failure stop the press.

- UCS current saturation control device

- FCS system for magnetic flux detection
- Proximity sensors to check die presence and its correct positioning on magnet

Easily adaptable on all presses

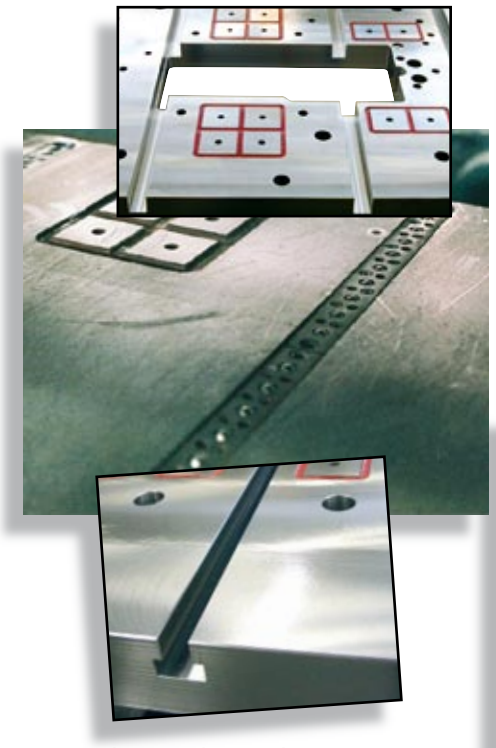
The fastest die setup

High clamping force, always available

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.

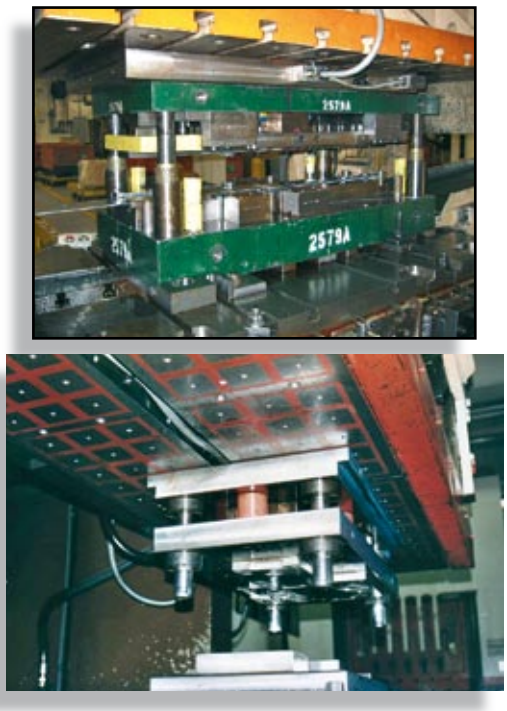
The UR (“U-Rail”) version is made in separate parts, for free and flexible positioning



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.

No die modifications

Quad Stamp s suitable for any die of any shape and size, without modification.
Die standardization is not necessary, saving engineering time and overall cost.



If the die is not magnetic or when the contact surface die/magnet is too small, the die can be equipped with a common steel backplate

Control unit

Quad Stamp 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.

On request Quad Stamp is supplied with IPC interactive power control push-button. Through a touch-screen it is possible to control all the system functions and display the actual force generated by the magnet on each different die.

Made to Order

Adaptable to a range of die sizes at no cost

User friendly

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QUAD STAMP

Technical characteristics

Quad Stamp is available in 2 versions, QS62 and QS80. QS62 is designed for presses with closing force up to 180T, when QS80 is suitable for bigger dimensions which have no limit and have been used on 8000 ton presses.
The clamping forces generated by the systems are around 10% of the closing force of the machine; this allows an unbeatable operative safety margin. With Quad Stamp is easy to achieve the maximum efficiency and a fast return on investment.

Tecnomagnete's commercial network and our experience are at your disposal for any comparison in terms of convenience and efficiency.

	Model			
	QS62 TS	**QS62 UR**	**QS80 TS**	**QS80 UR**
Pole dimension	62x62mm	62x62mm	80x80mm	80x80mm
Force/pole	600kg	600kg	1000kg	1000kg
Upper module thickness	45mm	45mm	54mm	54mm
Lower module thickness	54mm	45mm	64mm	54mm
2 T-slots on lower module	standard	-	standard	-
Central hole for scrap removal on lower module	standard	standard	standard	standard
Clamping holes	standard	standard	standard	standard
Control Unit type	ST100P	ST100P	ST400	ST400
UCS saturation control system	standard	standard	standard	standard
Voltage	200-230V / 50-60 Hz	200-230V / 50-60 Hz	200-480V / 50-60 Hz	200-480V / 50-60 Hz
FCS flux detection system	-	-	standard	standard
Digital push-button for MAG/DEMAG cycles	built-in	built-in	remote	remote
Machine enable	standard	standard	standard	standard
IPC - touch screen control	-	-	on request	on request
Additional enable key DCM (Die Change Mode)	standard	standard	standard	standard
Control unit-modules connection, interface and power supply cables	standard	standard	standard	standard
Proximity sensors (1 each module)	standard	standard	standard	standard
Set of fixing bolts	standard	standard	standard	standard
Instruction book and CE certification	standard	standard	standard	standard

Headquarters:
TECNOMAGNETE spa
20020 Lainate (MI) Italia, Via Nerviano 31
Tel. +39 02.937.591, Fax +39 02.935,708.57
e-mail: info@tecnomagnete.it

www.tecnomagnete.com

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QUAD STAMP - ENG 11/08