EAS®
CHANGE SYSTEMS

Time is money

Magnetic clamping solutions

UK

Time saving solutions

www.EASchangesystems.com

Save time and money
with electropermanent magnetic clamping solutions from EAS

Why EAS change systems?

EASchangesystems has installed hundreds of electropermanent magnetic clamping systems worldwide. This extensive experience ensures quality.

Pressmag systems are specifically engineered for use on injection molding machines in combination with molds.

To meet the industry's particular requirements, our innovative Pressmag design takes into account all the application needs;

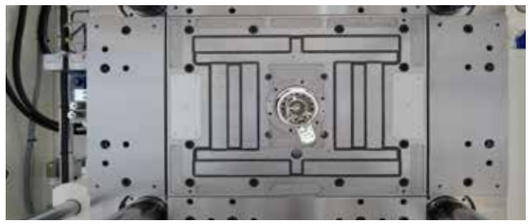
- Daylight opening
- Holding force and opening force
- Temperature range

Adding the size of the machine into the equation, it is clear that these requirements are not met by just one system. **EAS offers a range of magnetic clamping solutions.**

Pressmag solutions

The EAS SP system is the preferred solution for smaller injection molding machines. This comprises the EAS-Y-MAG, the Pressmag SP100 and the Pressmag SP150. For machines bigger than 400 tons, the Pressmag HP system offers long-pole technology.
The Pressmag LP system offers, next to the long-pole design, special touchscreen controls for accurate and reliable operating surveillance with an constant clamping force measurement.

Pressmag SP



Pressmag HP

Pressmag LP

Save valuable time

Avoid the need of standardized machine back-plates for vertically loaded molds.

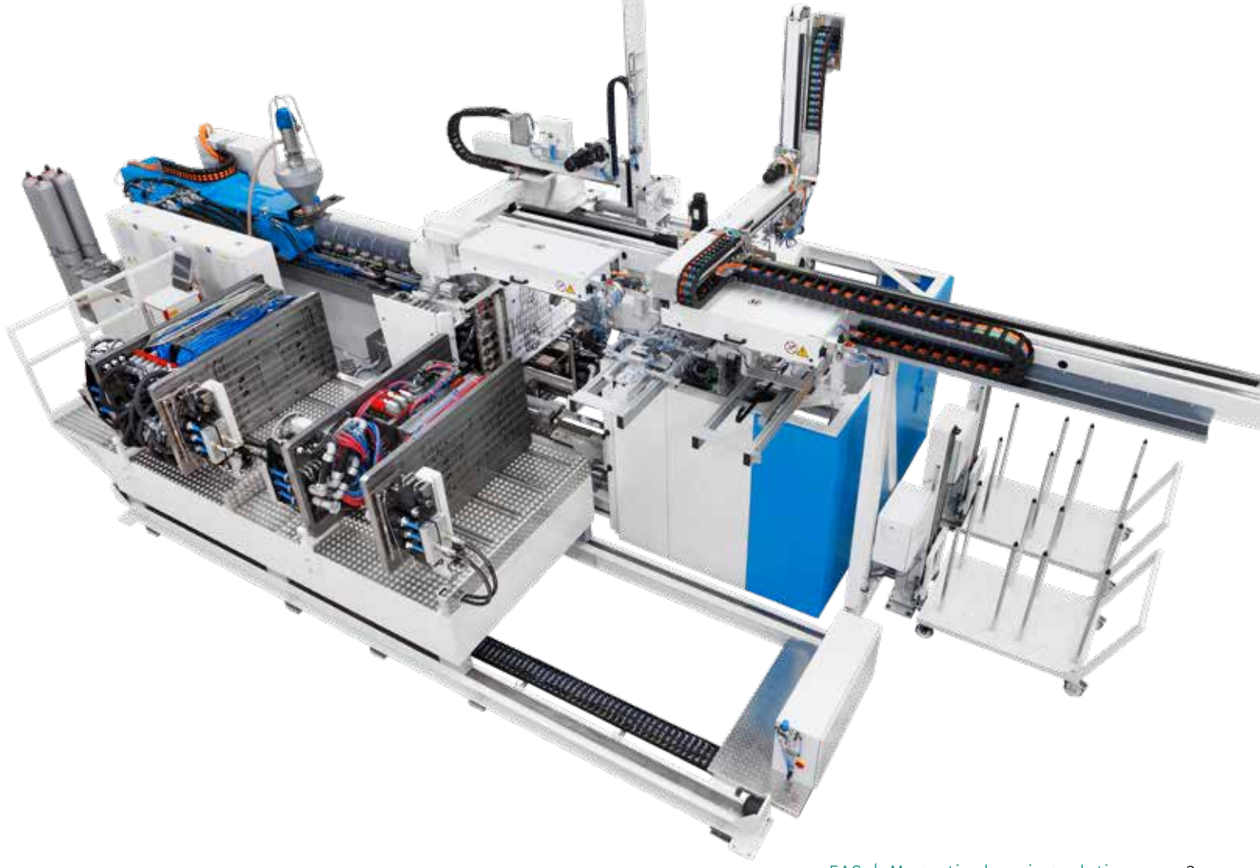
Reduce inventory costs by up to 60%

Reduce manufacturing costs up to 20%

Reduce labor costs up to 40%

Optimize operator safety

Reduce machine downtime up to 15%



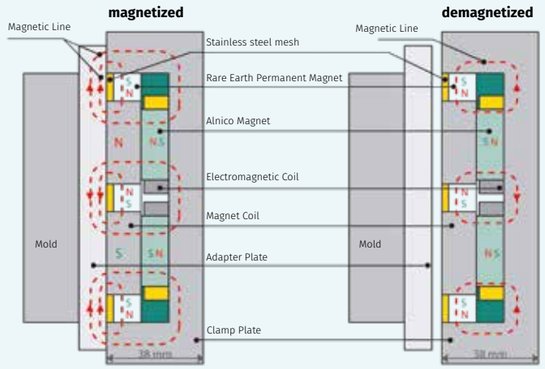
Electropermanent
magnetic clamping optimized
with Pressmag solutions

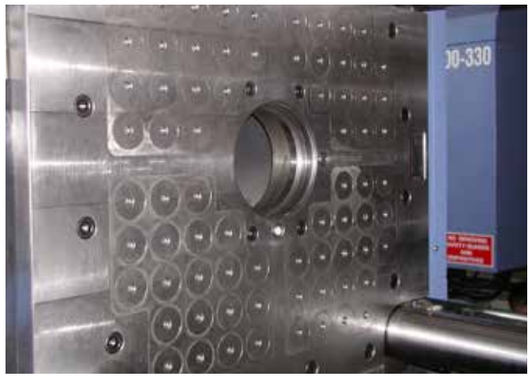
Square pole technology

To ensure highest clamping forces at all times, Pressmag SP systems have small poles. This also enables maximum versatility around ejector and mounting holes.

Smaller square poles for smaller machines:
- **Have higher overall clamping force**
- **Maximize daylight opening between the platens**
- **Are easier to position around ejector holes**

By using the maximum number of mounting points available, EASchangesystems ensures the secure mounting of the Pressmag SP system.





Pressmag SP150 on a 3000 kN (300 t) machine

Pressmag SP

Electropermanent magnetic Pressmag SP systems have a 47 mm (1.85") square base and feature a pole to pole design - alternating north - south poles. This provides more clamping force towards the center of the platens on small machines and thinner 38mm Pressmag plate for minimum loss of daylight.

Pressmag SP100 is designed for a max temperature of 100 °C (212 °F) and features square poles with resin sealing. Pressmag SP150 has laser-cut stainless steel mesh seals and covers the complete system, providing an easy-to-clean, perfectly flat all steel surface. The Pressmag SP 150 is designed for high temperature applications up to 150 °C (302 °F).

EAS-y-MAG

EAS-y-MAG systems consist of two standard plates with square poles and resin sealing for a maximum temperature of 100°C (212°F) . These standard plates are available for machine sizes of 500, 750, 1000, 1500 and 2000 kN (50, 75, 100, 150 and 200 tons). Available with the E 70.0 standard control interface or with a simple control - IL 1 interface.

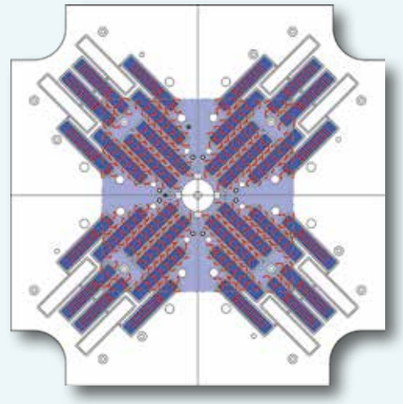
EAS-y-MAG:
EAS-y-MAG 75 for a 750 kN (75 t) machine

Long pole technology

The EASchangesystems long pole technology is used on larger machines because the magnetic flux (the holding force) is always concentrated on the mold. Even when the pole is only partially covered.

Longer poles for bigger machines:
- **Have higher holding forces**
- **Minimizes stray flux**
- **Minimize the air gap**

The frame of the Pressmag LP system is very stiff, preventing bending of the plate, thus minimizing an air gap resulting in no loss of holding forces and machine shut down.



Pressmag HP on a 32000 kN (3200 t) machine

Pressmag HP

For machines bigger than 4000 kN (400 t), the Pressmag HP offers long pole technology. This ensures highest magnetic flux concentration and superior clamping forces, with only 55 mm (2.16") plate thickness.

Like the Pressmag LP system, the electropermanent Pressmag HP is a compensated system. When activated, the long pole becomes the north pole and the frame plate becomes the south pole. Clamping the mold in place, the Neodynium rare-earth and AlNiCo magnets stay active until deactivation, and the clamping force remains absolutely constant. Even in case of power outage!

Pressmag LP

The latest generation Pressmag LP system is ideally suitable for use on large, 4000-45000 kN (400-4500 t) capacity injection molding machines operating in max. 100°C (212° F) mold temperature environments The long pole shape of the Pressmag LP is oval, as opposed to the rectangular pole shape of the Pressmag HP. These pre-assembled plug in oval pole design facilitates the easy on-site exchange of poles. Furthermore this system offers a plate thickness of 55 mm (2.16") with touch screen controls and metal-to-metal clamping surface. This feature enables exact force measurement.

Pressmag LP on a 9000 kN (900 t) machine

Pressmag LP advantages:

- **New state of the art MAGTCU 13 controls** with touch-screen display for accurate and reliable system monitoring
- **meets latest ISO standards** for injection molding machines
- **System clamping force remains absolutely constant** in case of power outage
- System **automatically adapts** to varying electrical power conditions (amperage, voltage and frequency)
- **Automatic diagnostic function** of control unit's internal components/sensors for easy troubleshooting• Quick and Easy to install - instant availability
- **Can be used on new and existing** injection molding machines
- **Simple and safe** to operate

Pressmag solutions for **maximum safety and control** according to VDMA,SPI & ISO standards

Pressmag features

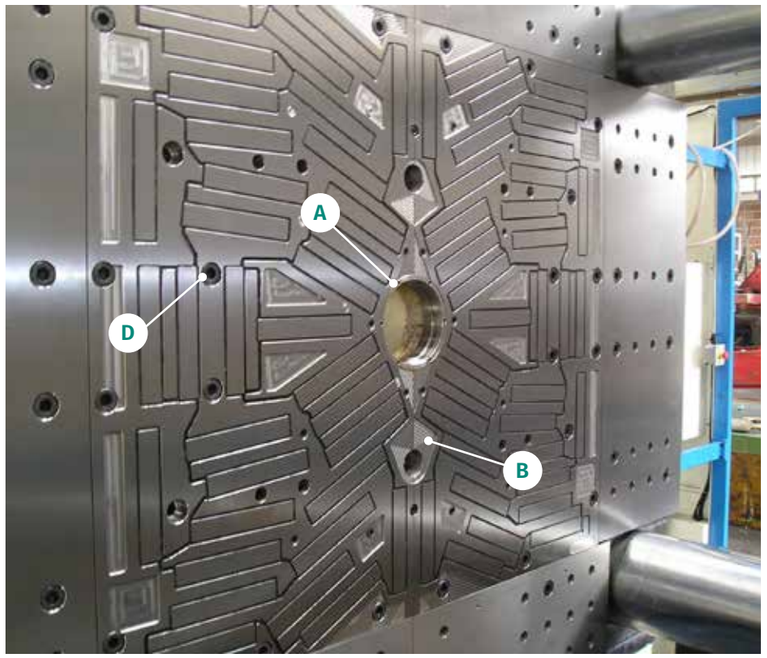
A. Centering rings
For molding machines with capacities of up to 2000 kN (200 t), Pressmag SP systems are delivered without replaceable centering rings. If required, these are available as an option and must be requested separately.
All other Pressmag systems come with a replaceable, hardened centering ring to facilitate quick and precise mold set-up. The ring also ensures that the Pressmag plates are mounted correctly onto the molding machine.

B. Sensors
Pressmag HP systems are equipped with two proximity sensors and a temperature control sensor. The proximity sensor gives a signal if there is an air gap that becomes too big - or when no mold is detected. It is also used to stop the machine. A flux sensor can be supplied on request. It detects a change in the magnetic flux if an alloy steel mold is used that cannot be clamped. It also serves as an additional level safety when used with the proximity sensors.

Pressmag systems for molding machines with capacities of less than 2000 kN (200 t) are supplied with one proximity sensor for each plate.

C. Junction box
Machined into the body of the plate, the junction box becomes an integral part of platens. Sealed and waterproof, it can be opened to give access to cable connections.

D. Mounting and/or ejector holes
In accordance with international standards; Euromap, SPI and JIS, each Pressmag system is fitted with mounting and ejector holes. Threaded holes located on top of the plate allow for lifting eyes to be installed to simplify installation.



Certification

EASchangesystems controls are designed and built especially for Pressmag solutions.They ensure safe and troublefree operation of your injection molding or die change operation. The Pressmag control units meet the latest ISO, VMA and SPI standards.

The interface between injection molding machine and our Pressmag systems is defined as follows:
- E 70.0 when existing molding machines are retrofitted
- E 70.1 for new machines with controls already integrated into the machine controls

Simplified Control Unit IL1

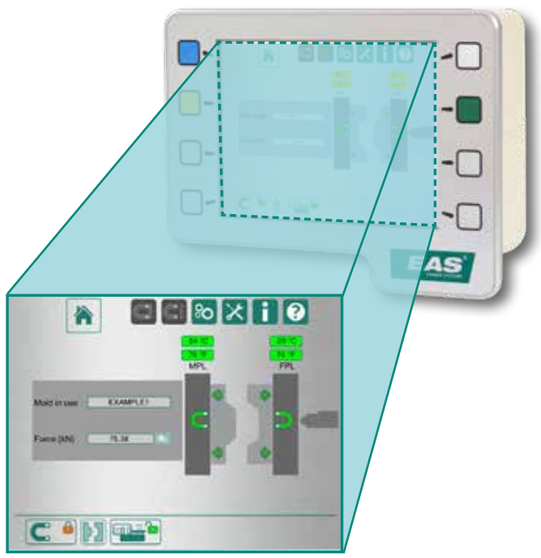
- For operating Pressmag SP and Pressmag HP
- When machine interface does not conform Euromap E 70
- Includes simple e-stop safety

IL1 Control Unit

Standard Control Unit SCU

- For operating Pressmag SP and Pressmag HP
- Conform Euromap E 70 interface
- With SAFE functions (forced two-handed operation)

SCU Control Unit



MAGTCU 13 Control Unit

Touch Screen Control Unit MAGTCU 13

- Suitable for Pressmag SP and Pressmag LP
- Multiple levels of access for total operating staff security
- Accurate and reliable system monitoring thanks to state of the art 8” touch-screen display/controls to quickly measure:
  - The magnetizing status on fixed and movable plates
  - The magnetic flux on the fixed and movable plates.
  - The clamping force measurement on each mold available as an option
  - Status of the proximity sensor
  - Status of the system alarm
  - Status of temperature sensor
- Removable SD-card for offline system troubleshooting
- System automatically adapts to varying electric power conditions
- Automatic diagnostic function of control unit’s internal components and sensors.

Technical characteristics

	Pressmag SP			Pressmag HP	Pressmag LP
	EAS-Y-MAG	SP 100	SP 150		
Machine clamping force kN (t)	500-2000 (50-200)	500-4000 (50-400)	500-4000 (50-400)	2000-45000 (200-4500)	2000-45000 (200-4500)
Magnetic force per pole kN (t)	2,2 (0,22)	2,2 (0,22)	2,2 (0,22)	25,0 (2,5)	21 (2,1)
Plate thickness	38 mm (1,5")	38 mm (1,5")	38 mm (1,5")	55 mm (2,16")	55 mm (2,16")
Max working temperature *1	100°C (212°F)	100°C (212°F)	150°C (302°F)	100°C (212°F)	100°C (212°F)
Magnetic flux depth	20 mm (.78")	20 mm (.78")	20 mm (.78")	25 mm (.98")	25 mm (.98")
Proximity sensor range	0,2 mm (.0078")	0,2 mm (.0078")	0,2 mm (.0078")	0,2 mm (.0078")	0,2 mm (.0078")
Standard voltages	380/415VAC,50/60Hz	380/415VAC,50/60Hz	380/415VAC,50/60Hz	380/415VAC,50/60Hz	380/480VAC,50/60Hz
Ejector holes	standard	standard	standard	standard	standard
Centering rings	no	>2000kN (200t)	>2000kN (200t)	standard	standard
Control unit	IL1 or standard SCU	IL1, standard SCU or MAGTCU13	IL1, standard SCU or MAGTCU13	standard SCU	Touch screen MAGTCU13
Temperature sensor	no	standard	on request	standard	standard
Proximity sensor	1 per plate	1 per plate ≤2000kN (200t) 2 per plate >2000kN (200t)	1 per plate ≤2000kN (200t) 2 per plate >2000kN (200t)	2 per plate	2 per plate
Magnetic flux sensor	no	no	no	no	standard
Force measurement	no	no	no	no	optional
Pole sealing	resin	resin or metal	metal	resin	metal

**1. Pressmag HP on request available to 120°C(248°F)*
**3. T mounting screws on request*

Rotating tables

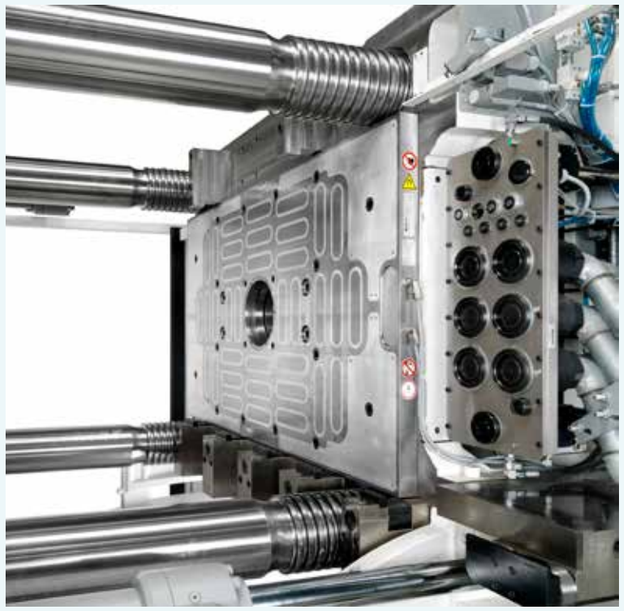
Magnetic clamping solutions are also available for multi-color rotating platen presses, and tie barless molding machines. EASchangesystems offers other specialized applications for die-casting machines, rubber and ceramic presses.

Installation

On new machines, the machine manufacturer will install and connect the Pressmag system. For installation on existing machines, the professional installation team of EASchangesystems will glady install and control the system on premises, thus ensuring a complete and proper installation.

Horizontal mold change on injection molding machines

For horizontal mold change operations, EASchangesystems offers - in addition to magnetic Pressmag clamping solutions - a wide selection of time-saving rollers (driven and non-driven), mold-change tables and transportation vehicles, multi-couplers, plus mold locking devices for standardized mold back plates.



QDC

EAS offers you the best-fitted solution, combining our experience with your needs. From a single die change product to a complete automated concept, we are your turnkey supplier.

Pre-rollers
Easier loading, while minimizing the risks. EAS pre-rollers provide economical and safe side-changing of your dies.

Less downtime thanks to your faster tool change, in turn leading to your higher output.

Die lifters
Minimize the force needed to position your dies. Die lifters function based on rolling systems. Rolling makes your die move smoothly into position on, or out of the press. Depending on the weight of your dies, rolling is done by just a single ball, ball bearings for multidirectional movement or cylindrical bearings –rollers- for inline movement.

Die change car
Big dies require added muscle to ensure safe, accurate and efficient transfer. Drive, lift and transfer dies manually, or with an electrically driven die change car.

Both solutions speed up your die change process.
Contact EAS to choose your most suitable die change cart.

Die change table
The transfer process can be automated even further with a rail guided die change car or table. These efficient solutions are equipped with positioning devices and the push/pull system is adapted to your requirements.

Not sure which is the right die change solution for your needs? Contact our product specialists, our team is happy to help.

Contact us at EAS headquarters:
+31 318 477 010, sales@EASchangesystems.com

From hours to minutes

The application depicted below, from a leading automotive equipment supplier, shows a fully automated horizontal mold change setup from EASchangesystems.

After installation, the complete changeover time went from several hours to less less than three minutes for a 40 ton mold!

EAS®
CHANGE SYSTEMS

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