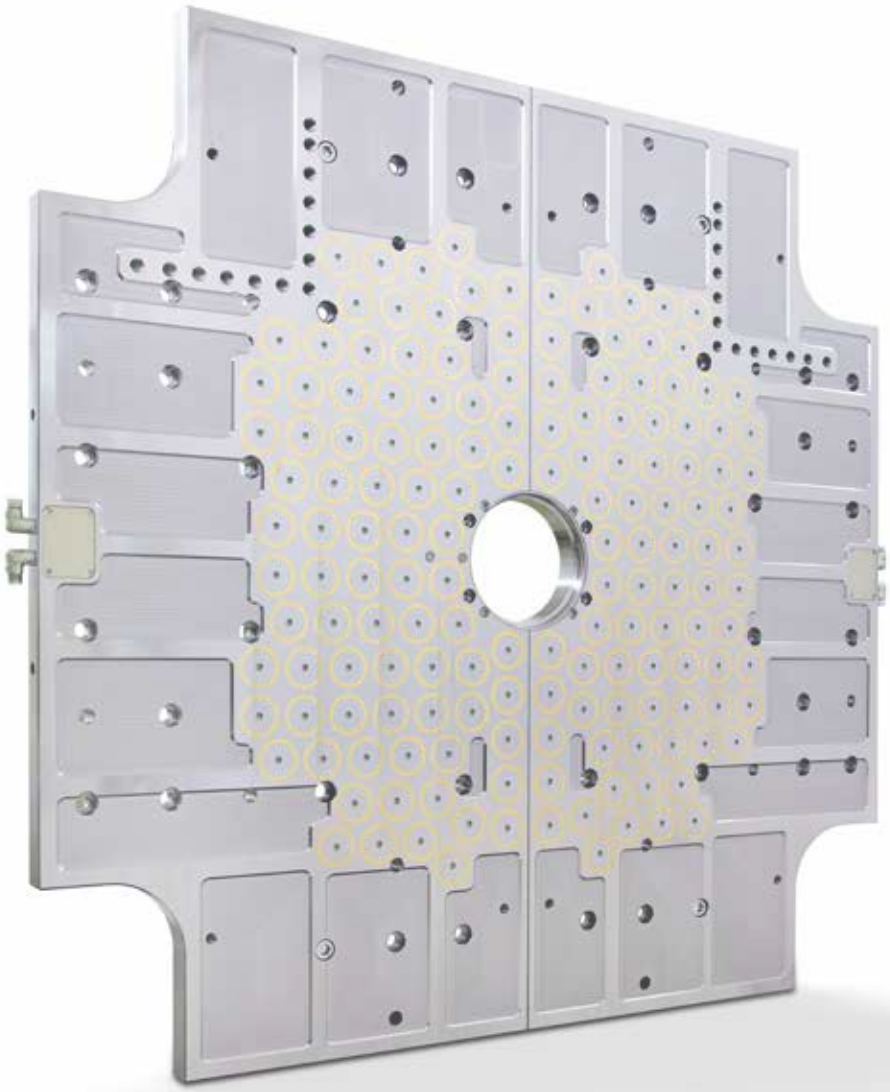
FAST MOVING TECHNOLOGY

STÄUBLI

Magnetic clamping QMC 122

IMAG technology | Plastics industry

High performance, safety and ease of use, IMAG takes up the challenge!



Find all Stäubli solutions for the plastics industry on:
www.quick-mold-change.com



High performance, innovation and reliability are core values for all our developments

In line with the industry of tomorrow, Stäubli clamping solutions are already designed to meet the needs of industry 4.0.

Our efficient, connected magnetic clamping systems give you the flexibility you need to increase the number of small batches.

Adaptable to all injection presses and mold sizes, magnetic clamping does not require any modification of existing molds. Answering the need for frequent production changes, it is widely acclaimed for its versatility and simple implementation. This technology optimizes productivity.

Safety for production, staff and the work environment

The QMC 122 system guarantees compliance with the most recent and demanding safety norms as standard: EN201: 2009, directive 2014/35/UE and 2014/30/UE.

- Each magnetic module used in the QMC 122 plate is fitted with a search coil to detect any flux changes, even if minimal.
- Through the display of the clamping force of each half mold on the IMAG interface, the operator effectively controls the clamping/declamping process.
- The detection of any major incident immediately stops the machine via the press safety interface.

Service

For Stäubli, the quality of a solution goes beyond just technical solutions. Whether it is for system installation, theoretical and practical user training or after-sales service, we have dedicated teams who provide each of our customers with the same quality of service, to meet their expectations wherever they are.

- Maximum **safety**
- **Display** of the clamping force
- **Detection of mold movements**
- **Magnetization** in less than 1 second*
- **Very low energy consumption**
- **Uniform clamping** → significantly reduced mold wear
- 2-year **warranty**

* up to 160 modules.

Safety functions

Color screen, precise messages, validation of procedures… constant improvements made to the IMAG interface have strengthened the reliability of clamping and interaction with the operator.

IMAG Editor

The IMAG Editor software can be used to calculate the clamping force for each mold in advance.

With this information any problems can be anticipated before production is started.

Display of the clamping force and comparison with the opposing forces of the press: the clamping force of each half-mold is measured and displayed in real time on the IMAG screen. If it is too low, a message immediately alerts the operator.

Detection of mold movements: the honeycomb design provides optimal rigidity and maximizes the quantity of magnetic poles acting on the mold. Each individual "pot" is fitted with a very precise search coil. The mold is thus monitored at all points and the slightest movements are detected.

Mold referencing: each mold is identified and its initial clamping force recorded, thus allowing the monitoring of clamping performance.

During subsequent use, any variation is detected and signalled by the system to the operator who can carry out preventive maintenance.

Another major innovation: automatic control of tipping or sliding of the mold (referencing of molds allows the system to record their weight and dimensions and compare them with the clamping force).

Temperature control and permanent display: a message and an alarm alert the operator in the event of excessive plate temperature.

Fully controlled clamping/unclamping operations

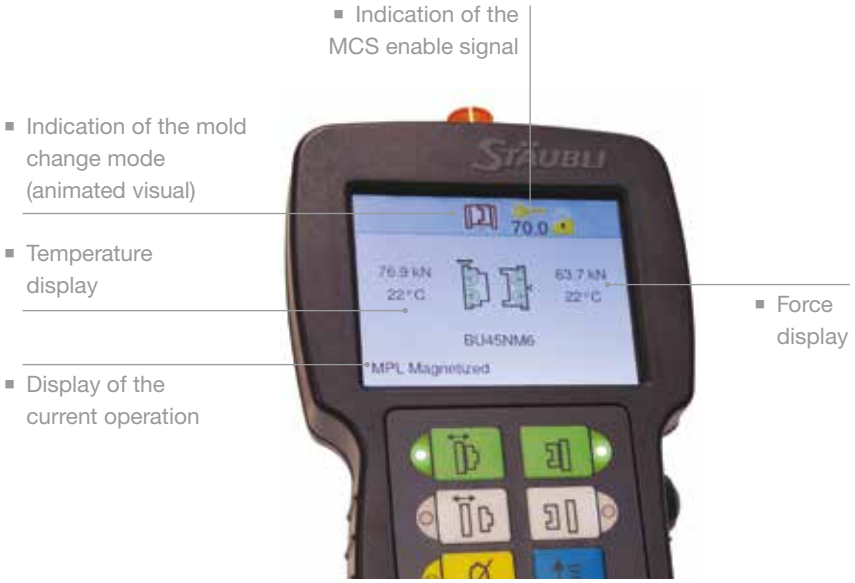
The IMAG allows the operator to confirm very easily and without any possible omission all the safety points necessary in advance of clamping/unclamping operations.

- "Press ready" signal when the door is closed
- Mold changing mode
- Mold locked
- Crane attached

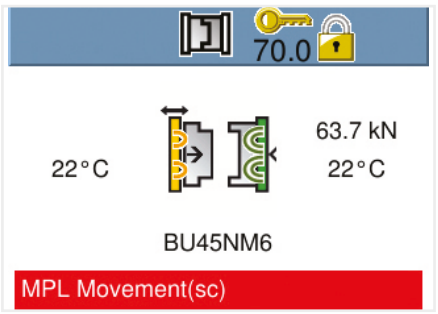
More functions

- 3 user levels, codes dependent on the authority level:
  - Service mode (Stäubli technician): installation, setting parameters and maintenance
  - Chief operator mode: access to the history, date, language, PIN code, machine forces, setting parameters
  - Operator mode: all the information necessary for mold changing
- Access to the history of operations carried out
- User interface available in numerous languages: Brazilian, Chinese, Czech, Dutch, English, French, German, Hungarian, Italian, Japanese, Korean, Polish, Romanian, Russian, Slovenian, Spanish, Swedish and Turkish.

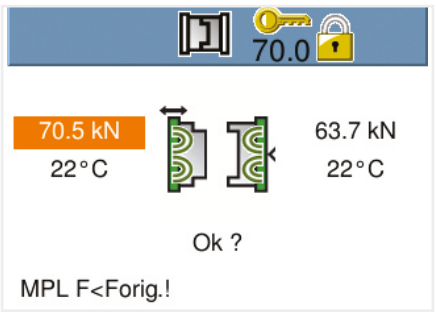
To ensure perfect coordination between the press and its clamping system, the IMAG integrates and displays signals from the machine according to Euromap and SPI AN-145 (mold change mode, MCS available).



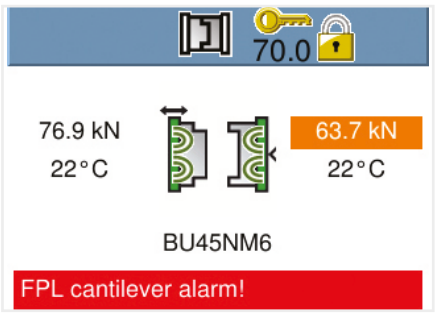
The system can also be fully integrated in the manufacturer's interface: please ask us.



Screen with message
"alert mold movement"

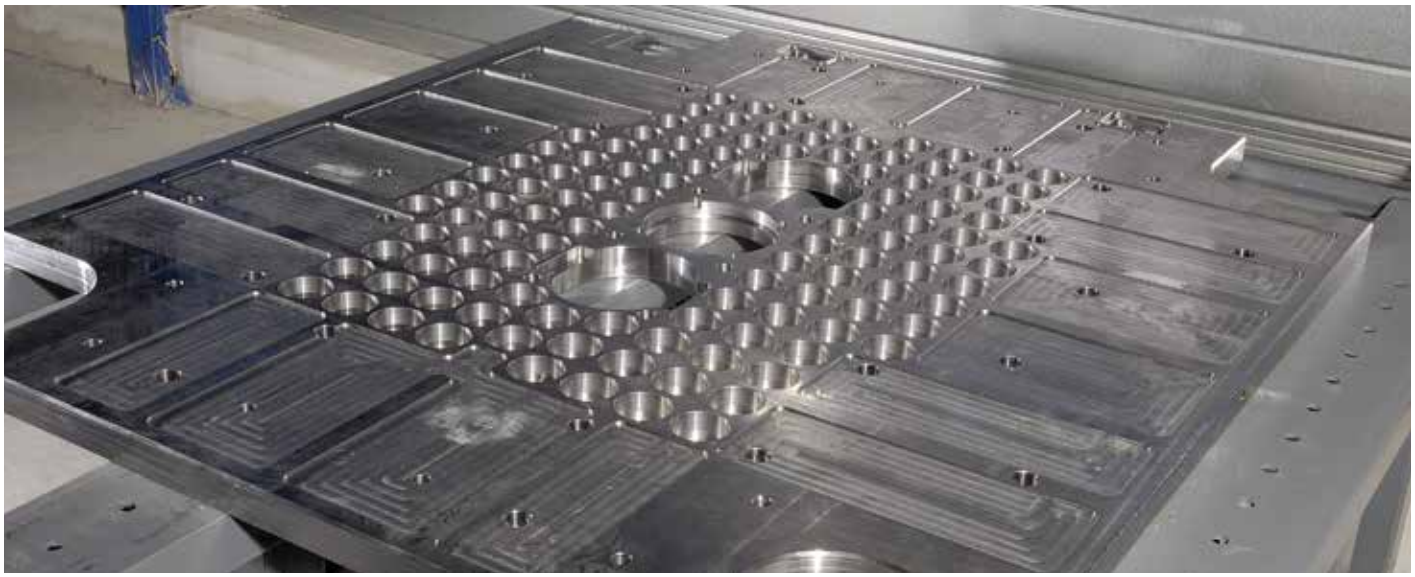


Screen with message
"clamping force lower than the initial force"



Screen with message
"alert risk of tipping"

Innovative design and industrialization process



Each plate meets the customer's specifications

The modular design adapts to the press, the molds used and all other specificities.

Fixing points, shape of the plate, centering ring: any specific machining is possible.

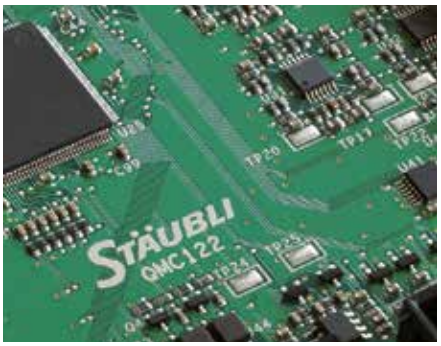
QMC 122 technology is suitable for press sizes from 50 to in excess of 4000 tons.

Stability and strength

Our magnetic plates, which are particularly rigid due to their all-metal "well" construction, provide a constant clamping force during production. The reinforced insulation of the electrical parts, in particular the connectors, ensures the system is reliable even in the most demanding conditions.

The industrial manufacturing process provides very accurate measurement of the clamping force (not possible to achieve when assembling the components of the magnetic plate manually) and eliminates any risk of assembly errors.

Knowledge and use of the most modern electronic technology



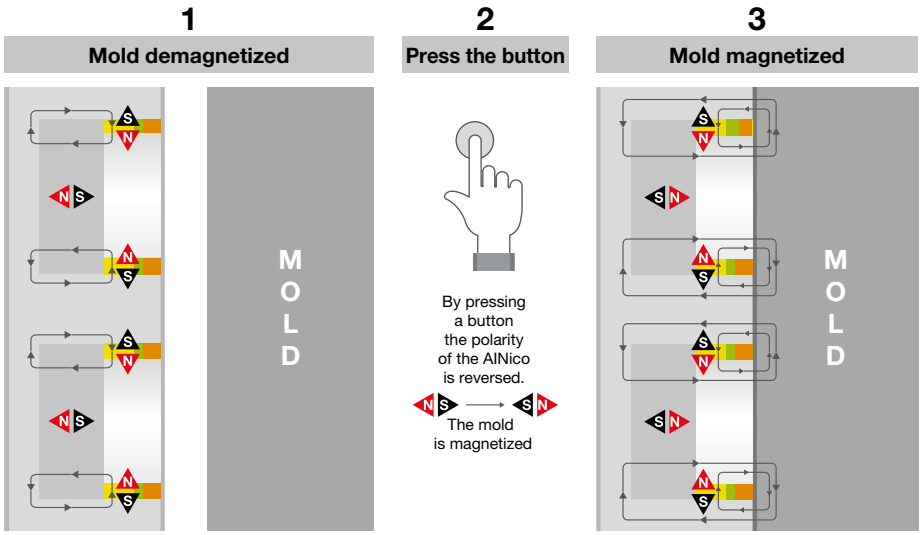
As we control the entire design and manufacture of our magnetic clamping systems, from the development of the controller through to the industrialization of the plates, you have the assurance that our solutions are 100% Stäubli.

The choice of the magnetic technology, the choice of a reactive technology

The magnetic technology is fast, simple and requires no work on the molds. It is especially suitable for frequent mold changes and molds with non-standard dimensions. Magnetization and demagnetization operations are carried out by simply pressing a button (for example, magnetization in less than 1 second for 160 magnetic modules).

- Independent circular magnetic modules
- Possibility of clamping molds with thin back plates (min. 20mm) without interference with the moving parts of the mold and / or with the sensors (limited magnetic flux penetration)
- Concentration of the magnetic modules in the center of the plate:
  - compatibility with a wide range of molds by integrating the injector hole positions
  - prevention of mold distortion on opening
- Optimized press opening space thanks to reduced plate thickness (52mm)

QMC 122 systems consume little energy. Electricity supply is only necessary for magnetization and clamping is guaranteed even in the case of Power failure.

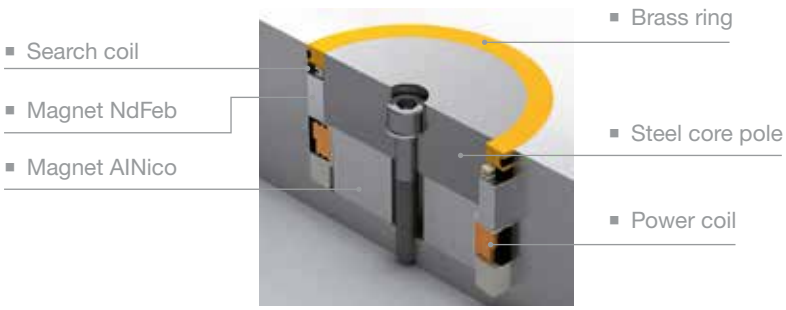


Pole size (in)	Ø 2.36
Plate thickness (in)	2
Maximum working temperature (°F)	212
Supply voltages (V) - others on request	200 to 480
Frequency (Hz)	50 or 60
Machine clamping Force clamping of the machine (T)	50 to 4000
Ejection holes according to the specifications	

Mounted on all of our systems, in standard

- Temperature sensor on each plate
- Force measurement → Flow sensor on each pole
- Removable centering ring, fixed side and -if necessary - moving side
- Fixing screw

For other operating conditions: please contact us.



PATENTED

US PATENT 6.489.871
6.363.153 / 7.782.164
and other countries

RL2310603A

■ Stäubli Units ○ Representatives/Agents

Global presence of the Stäubli Group

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