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# Magnetic clamping technique

System RIVI MAGNETICS



**For thermoplastics, elastomers, duroplastics,  
pressure die casting and metal forming**



## M-TECS 130 for thermoplastics up to 130°C



M-TECS magnetic clamping systems provide evident benefits:

Injection moulds, even if not standardised, can be easily and swiftly changed without need for retooling. As a result of a clamping force which is evenly distributed all over the clamping surface, tool wear is considerably reduced which means lower tool maintenance costs. With no moving parts, the system itself is basically maintenance-free. It is suitable for fitting onto existing injection moulding machines or incorporating into new machines.

M-TECS 130 being stable up to 130°C largely covers the whole temperature range that may occur in the thermoplastics processing industry. The magnetic poles have been designed to build up an actual clamping force of 5-12 kg/cm<sup>2</sup>. Highest quality materials are used for the long pole design which is based on a double-magnet technique. Its outstanding power concentration makes the system much stronger than any comparable magnetic plates.

### Applications:

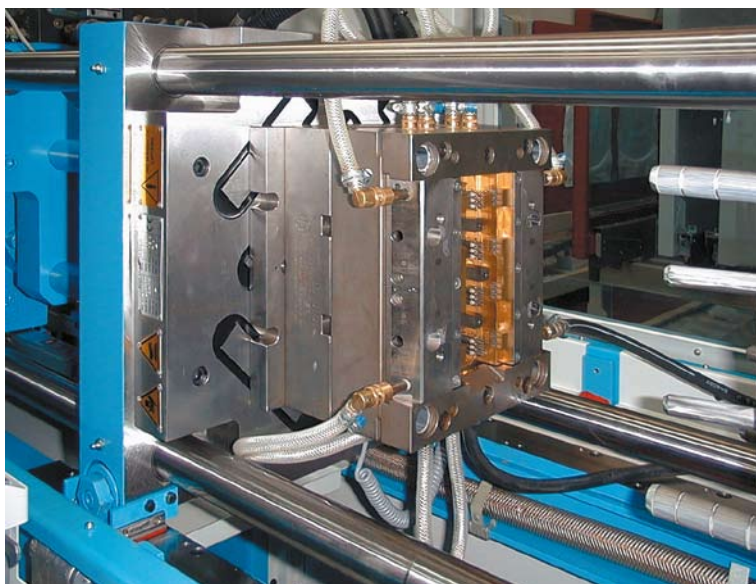
- Thermoplastics processing
- Processing of large workpieces, bumpers, dash boards etc.
- Model machines and small-lot production

### Special features:

- ◆ Double-magnet technique
- ◆ Long pole design
- ◆ M-TECS power concentration

### Technical data M-TECS 130

Max. temperature	130°C
Spec. magnetic force	8 kg/cm <sup>2</sup>
Effective magnetic force	5-12 kg/cm <sup>2</sup>
Magn. penetration depth	15-20 mm
Plate thickness	47 mm
Fastening	as per Euromap
Available for machines of between 300 kN and 50,000 kN. Larger systems on request.	



# M-TECS 210, for elastomers, duroplastics and pressure die casting up to 240°C



# HILMA

## Applications:

- Processing of rubber and duroplastics
- Production of O-rings and rubber parts
- Manufacture of fibre-reinforced components (SMC, GMT)

## Special features:

- ◇ Resistant to temperatures of up to 240°C
- ◇ Double-magnet technique
- ◇ Long pole design
- ◇ M-TECS power concentration
- ◇ Two designs: standard version for presses  
power version for injection moulding presses

## Technical data M-TECS 210

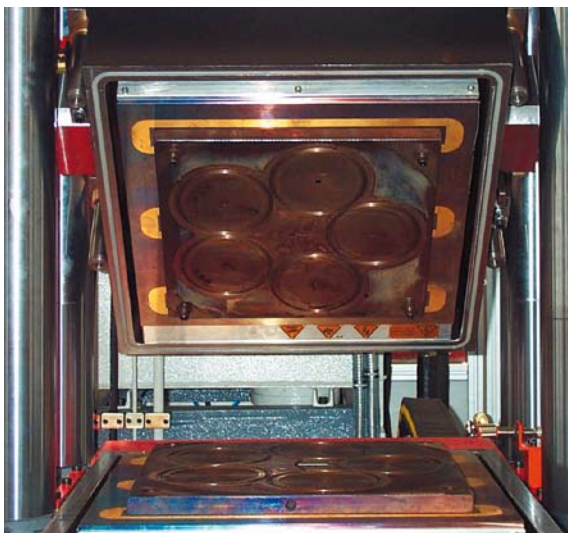
Max. temperature	210°C (240°C on request)
Spec. magnetic force	18 kg/cm <sup>2</sup>
Effective magnetic force	single: 2-7 kg/cm <sup>2</sup> , double: 5-12 kg/cm <sup>2</sup>
Magn. penetration depth	15-20 mm
Plate thickness	47-85 mm (85 mm including heating plate)
Fastening	as per Euromap
For presses and injection moulding presses of any size, vertical and horizontal, with or without heating	



M-TECS 210 opens up brand new paths for the rubber and the duroplastics processing industries. With no downtime or waiting time to cool down or heat up tools, retooling times can sometimes be cut by hours. Using the advanced magnetic clamping technique, moulds can be changed even when they are hot as the operator will not make contact with them at all. This is both convenient and safe.

The magnetic plates have a complete metal surface. With no T-slot between the heating and the tool, temperatures inside the tool are quite homogeneous, which gives an enhanced production quality.

A real highlight is the magnetic clamping plate M-TECS 210 with an integral heating plate. Basically, M-TECS 210 is available in various designs, with or without heating, for presses, injection moulding machines or for vacuum techniques.



Subject to technical modification

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**A convincing technique to rely upon.**

Basically, the electric permanent magnet clamping system is firmly kept in place even in the case of a power failure: electricity is required for just 1-2 seconds to first magnetise the system. Then permanent magnets generate the required magnetic clamping force so that the system operates independently of any power source.

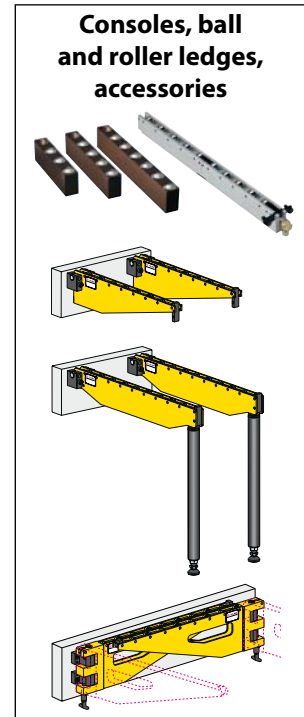
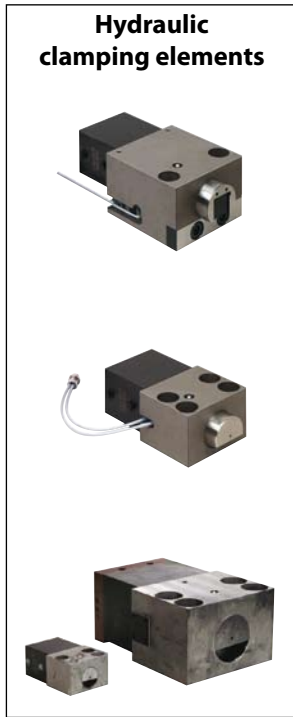
Only for releasing the mould is electric power required again (for 1- 2 seconds) in order to demagnetise the clamping plate. The integrated electronic controls monitor the magnetic force and the tool centre and protect the system from overheating.

**Guaranteed adaptability to any power level and any system design.**

Both M-TECS 130 and M-TECS 210 have been CE tested and comply with the provisions of the applicable machine guidelines 98/37EEC, 73/23 EEC, EMC 89/336.

The magnetic plates can be designed to fit various tool systems. With their highly flexible layout, they may be adapted to suit a large range of sizes and shapes. Each pole can be considered as an independent power source.

M-TECS 130 and M-TECS 210 are available in standard or special designs.



Magnetic clamping technique by



**Partners with expertise.**



Clamping technology, assembly and handling technique, linear systems, power units



Intelligent zero clamping systems



Innovative rotary table systems



Gray cast and nodular iron castings complex and machined



Flexible clamping systems  
Machine vices  
Die clamping systems  
Magnetic clamping technique

We are members of the Römheld Group, and we benefit from numerous synergies which result from co-operation between companies specializing in various branches of technology. In our relationships we are globally orientated and we act as partners with industrial customers in many countries worldwide.

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