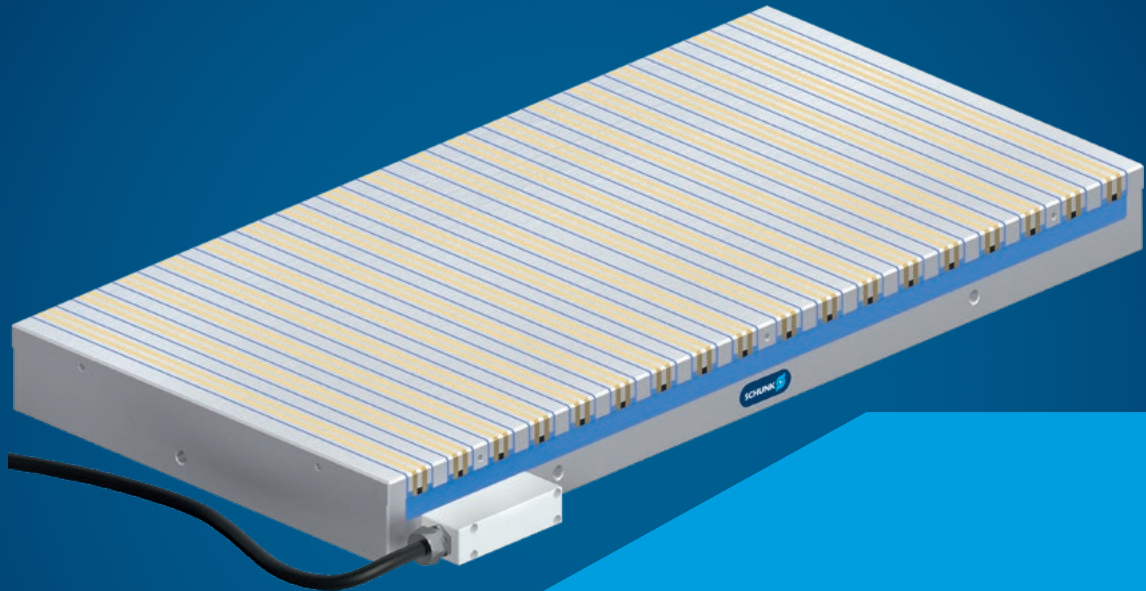


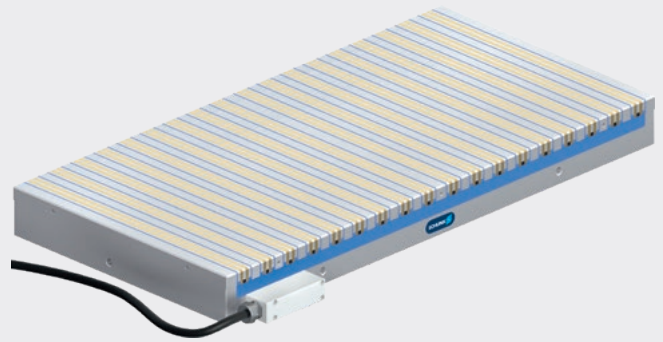


MAGNOS MSC-PM60D

Magnetic clamping technology for grinding applications of large workpieces

Electropermanent magnetic chucks with large parallel pole pitch for clamping of medium-sized and large workpieces on grinding machines

MAGNOS magnetic chucks for grinding applications are longitudinally or transversely poled magnetic chucks. Due to the combination of permanent magnets and electric coils, they are ideally suited for the use during grinding. Due to their low overall height, low weight, and the resulting lower table load, the plates with parallel pole technology are universally applicable. MAGNOS MSC-PM60D magnetic chucks are connected to the control unit via a lateral connector. Due to their large pole pitch, large workpieces can be securely clamped without the magnetic chucks becoming significantly hot.

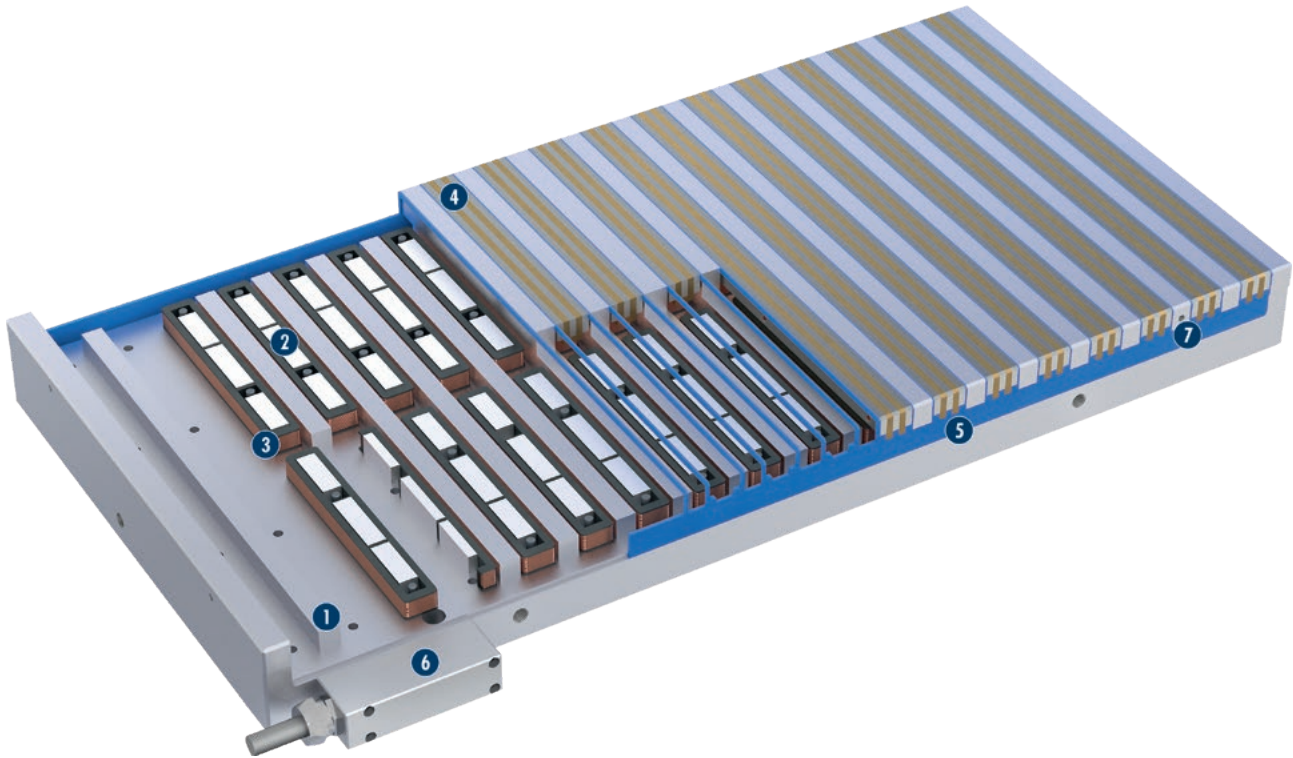


Advantages – Your benefits

- + Even permanent magnetic clamping force across the entire workpiece**
Low deformation and vibration clamping of the workpieces
- + Low vibration clamping**
Improved surfaces and significantly increased precision
- + Deformation-free clamping**
No deformation and internal forces in the workpiece due to the clamping force
- + Mono-block design**
Compact and robust design with high rigidity
- + Clamping within a few seconds**
Shortest possible setup times and a resulting increase in productivity
- + Low magnetic field height**
Prevents a magnetization of the machining tools

Function MSC-PM60D

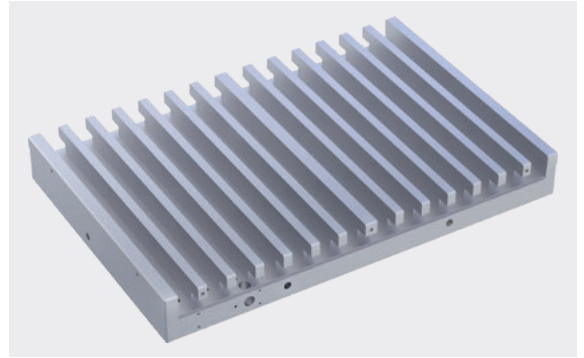
MSC-PM60D magnetic chucks are autarchical, that means they require only a short electrical pulse for MAG/DEMAG process. The pulse allows the AlNiCo magnets to be reversed in the base body. The magnetic field is guided into the workpiece via the steel poles. The bigger the pole pitch, the deeper the magnetic field penetrates into the workpiece. Large pole pitch for large workpieces, small pole pitch for thin workpieces.



- | | |
|--|---|
| <p>1 Stable base body
For optimum clamping results with an additional coating against corrosion</p> <p>2 Invertible AlNiCo-magnets
Embedded in the coil – for activating or deactivating of the magnetic chuck</p> <p>3 Coil body, insulated version
For transmitting pulses for activation or deactivation of the magnetic chuck</p> | <p>4 Support segments
Consisting of steel/brass segments for transmitting the magnetic field to the workpiece</p> <p>5 Synthetic resin casting
For sealing the magnetic chuck and sealing cavities</p> <p>6 Connection housing
For fixed connection with the control unit</p> <p>7 Thread for stops
Prepared in the base body</p> |
|--|---|

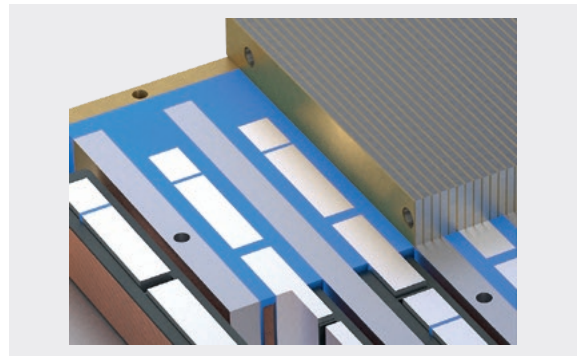
Stable base body

The stable base body is made in monoblock design in the latest machining centers. Its stability, rigidity and robustness prevent vibrations from forming in later operation, thus ensuring outstanding machining results, and a long service life for the magnetic chuck.



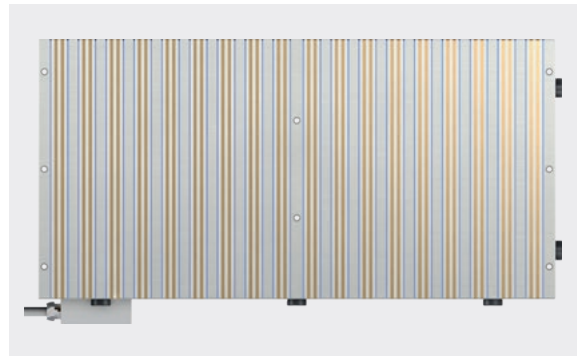
Synthetic resin filling

The synthetic resin filled under vacuum ensures a unique insulation and magnetic life span of each plate. By means of this special high-end sealing process, the spaces between the poles are filled with high-strength synthetic resin. This resin protects the interior components of the magnetic chuck from corrosion. For low thermal expansion, strips of brass are laid in the spaces between the poles before casting.



Additional mounting bores (optional)

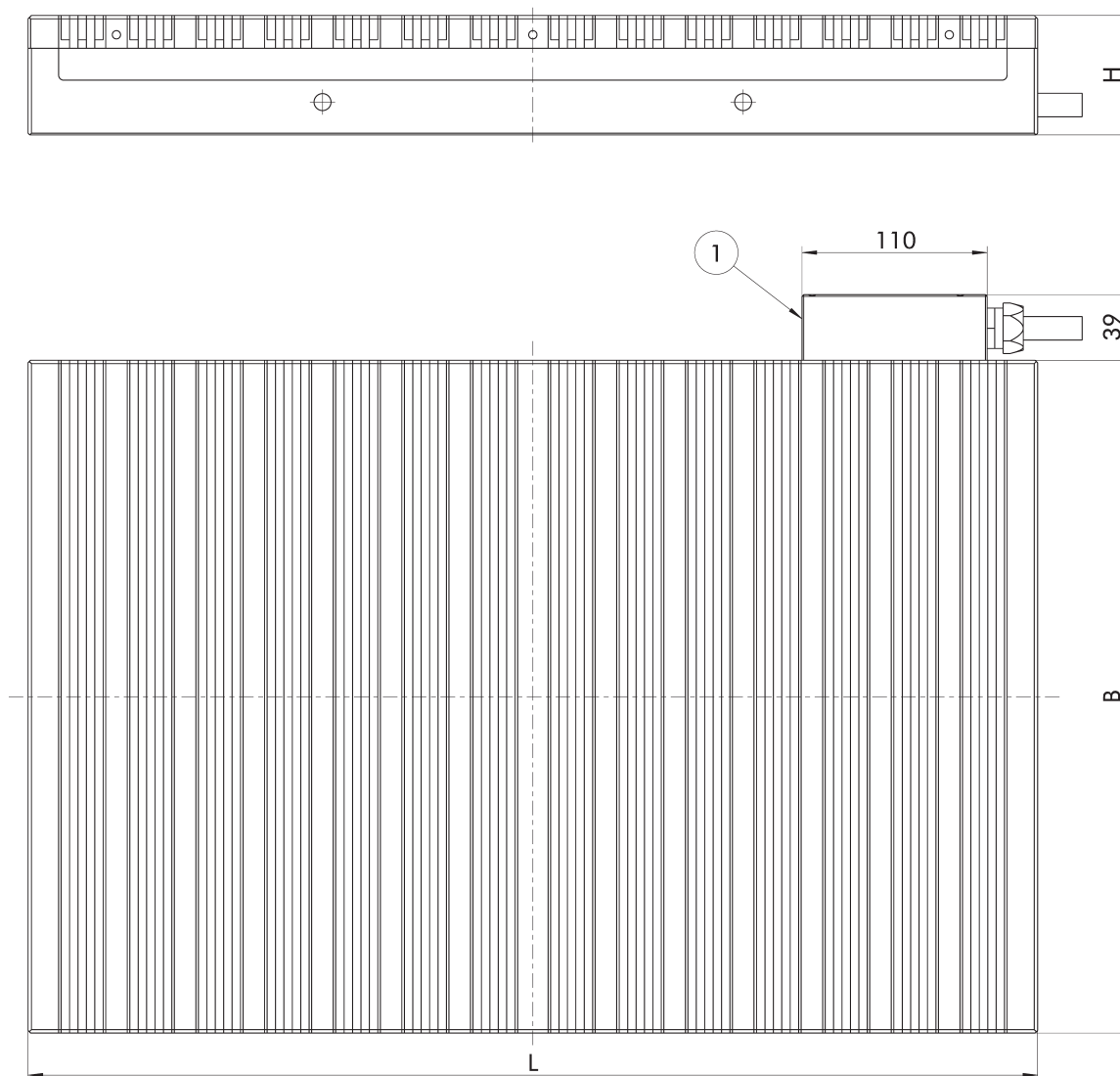
On each magnetic chuck, as many additional bores as desired can be introduced. This can be for instance mounting holes suitable for the machine table or holes for stops. For each magnetic chuck, there is a drawing and a drilling plan. Using these drawings, bores can be subsequently introduced in the magnetic chuck as per the customer's specific requirements.



KEH P control unit

All parallel pole magnetic chucks can be actuated via the control unit KEH P. The advantage of this control unit is that it is fitted directly in the control cabinet over a DIN bar and can be connected to the machine control. In addition, the holding force can be regulated in eight stages. This enables an alleviated alignment of the workpiece before machining.





Subject to technical changes.

① Connection housing with fixed cable connection

Technical data

Description	ID	Length L [mm]	Width B [mm]	Height H [mm]	Connection	Number of channels	Weight [kg]
MSC-PM60D 300 x 150	0422003	300	150	71	4-PIN	1	32
MSC-PM60D 450 x 160	0422007	450	160	71	4-PIN	1	35
MSC-PM60D 400 x 200	0422011	400	200	71	4-PIN	1	33
MSC-PM60D 600 x 200	0422019	600	200	71	4-PIN	1	57
MSC-PM60D 500 x 300	0422027	500	300	71	4-PIN	1	60
MSC-PM60D 600 x 300	0422031	600	300	71	4-PIN	1	85
MSC-PM60D 800 x 300	0422035	800	300	71	4-PIN	1	118
MSC-PM60D 1000 x 300	0422039	1000	300	71	4-PIN	1	155
MSC-PM60D 600 x 400	0422043	600	400	71	4-PIN	1	120
MSC-PM60D 700 x 400	0422047	700	400	71	4-PIN	1	138
MSC-PM60D 800 x 400	0422051	800	400	71	4-PIN	1	160
MSC-PM60D 1000 x 400	0422055	1000	400	71	4-PIN	1	205
MSC-PM60D 1200 x 400	0422059	1200	400	71	4-PIN	1	245
MSC-PM60D 800 x 500	0422063	800	500	71	4-PIN	1	195
MSC-PM60D 1000 x 500	0422067	1000	500	71	4-PIN	1	255
MSC-PM60D 1200 x 500	0422071	1200	500	71	4-PIN	1	304

Scope of delivery

Magnetic chuck, operating manual, CE declaration of conformity

Notes

General note

Magnetic chucks with AlNiCo magnets and fully metallic surface.

Field of application

For medium-sized to large workpieces.

Magnetic chucks of the same height

The magnetic chucks are height-adjustable ± 0.5 mm by default.

Equal-height magnetic chucks are available on request.

Cable connection

The magnetic chucks are equipped with a fixed cable connection and a 5 m of cable.

Further technical data

Pole pitch	Mains voltage	Min. material thickness	Min. workpiece size	Cable length fixed connection	IP protection class of fixed connection	Max. working temperature
[mm]	[V]	[mm]	[mm]	[m]		[°C]
5 + 5	400/460	4	40 x 40	5	68	80

Accessories

Control unit 400 V/50 Hz

Matching hand-held remote control
HABE SC (ID 0422263).
Fits on DIN rail in machine cabinet.



Suitable for	Description	ID
MSC-PM60D	KEH P01 400V/50Hz	0422349
MSC-PM60D	KEH P02 400V/50Hz	0422350

Control unit 460 V/60 Hz

Matching hand-held remote control
HABE SC (ID 0422263).
Fits on DIN rail in machine cabinet.



Suitable for	Description	ID
MSC-PM60D	KEH P01 460V/60Hz	0422353
MSC-PM60D	KEH P02 460V/60Hz	0422354

Manual gaussmeter

For determining the residual magnetism
in the workpiece after machining.

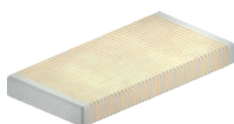


Suitable for	Description	ID
MSC-PM60D	MG10	0422950

Laminated blocks/laminated plates

Laminated plate

For milling contours and special forms.



Suitable for	Description	Length mm	Width mm	Height mm	ID
MSC-PM60D	MSC-PS10 200x100	200	100	21	0422092
MSC-PM60D	MSC-PS10 250x130	250	130	21	0422093
MSC-PM60D	MSC-PS10 300x150	300	150	21	0422094
MSC-PM60D	MSC-PS10 350x150	350	150	21	0422095
MSC-PM60D	MSC-PS10 400x200	400	200	21	0422096
MSC-PM60D	MSC-PS10 500x200	500	200	21	0422097



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