assfalg TOOLS

- LIFTING MAGNETS
- MAGNASLOT
- MAGNETIC TOOLS

assfalg MAGNETS

assfalg MACHINES

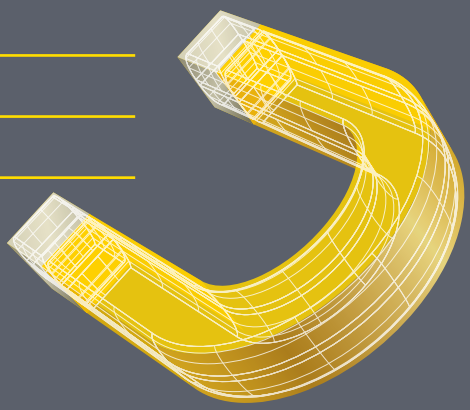
- CLAMPING MAGNETS

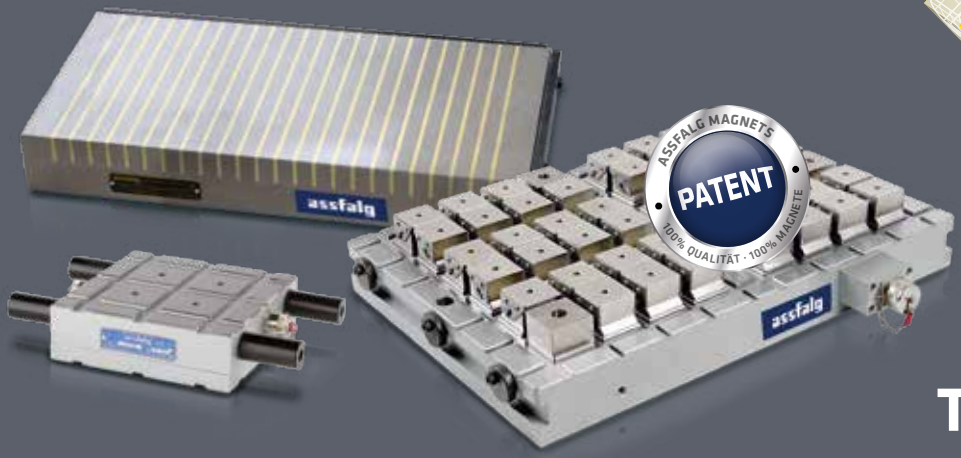
# Clamping magnets

## Maximum adhesive force for safe processing

with unimagined production reserves

- 5-side machining in one clamp
- minimum set-up times and increase of productivity
- increase in accuracy and tool life






**The Ace for Metal**

MAGNETS MACHINES TOOLS

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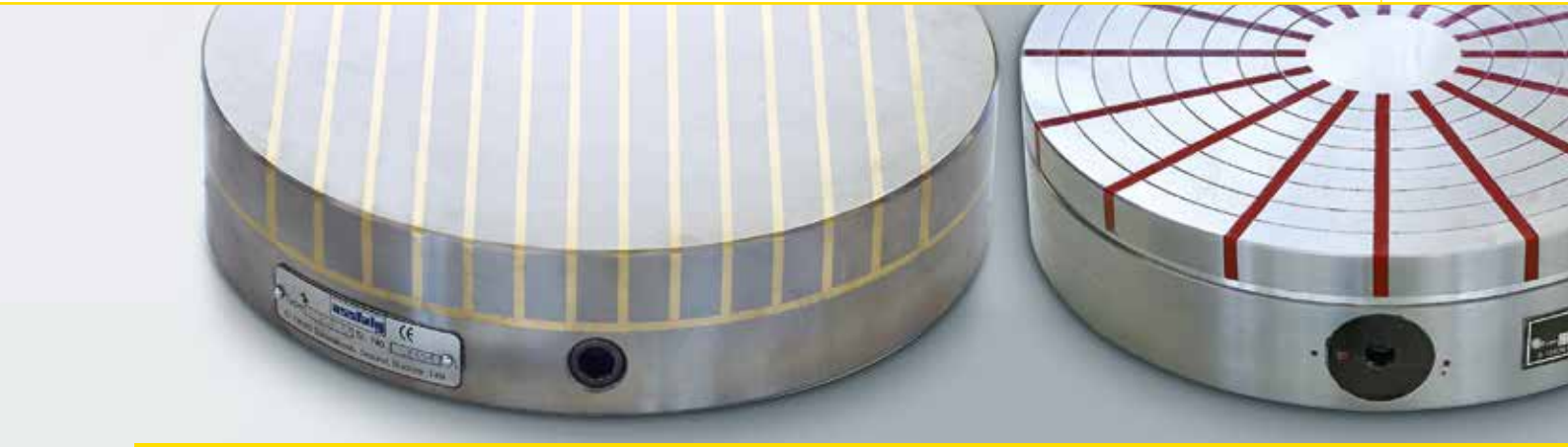
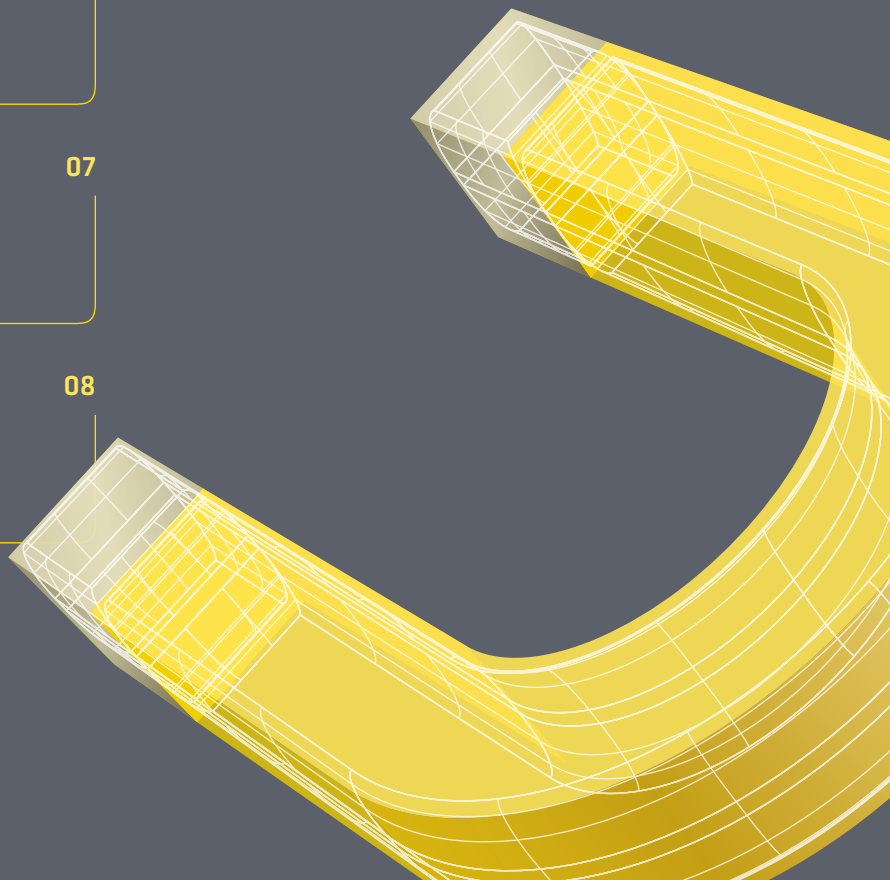


## Permanent Magnets 03



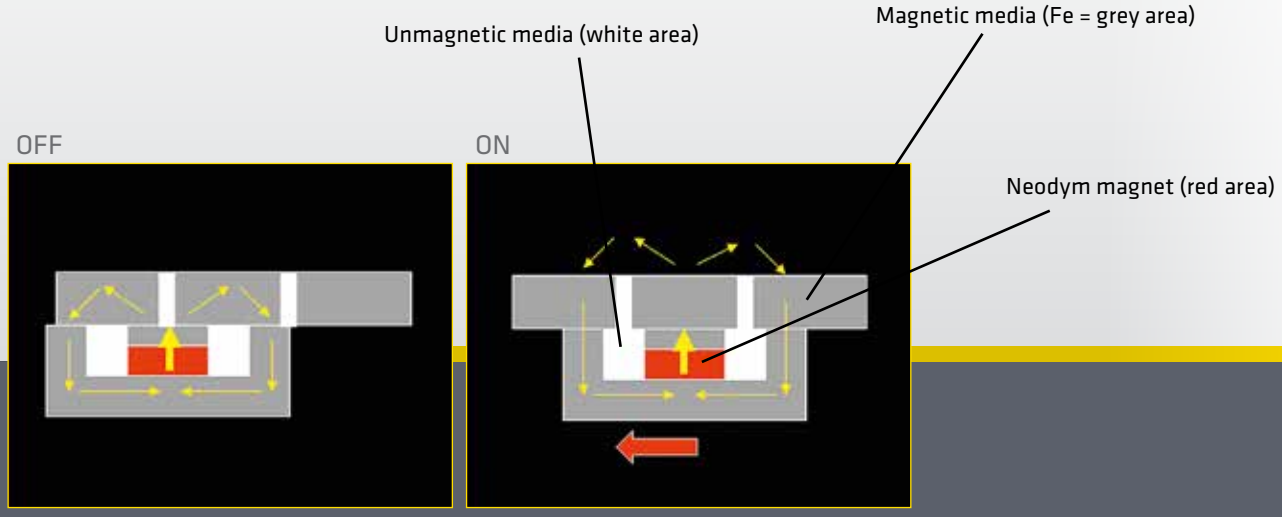



## Electropermanent Magnets 09 | Permanent Magnets 21

# Permanent Magnets

## How do Permanent Magnets work?

When switching ON/OFF the Permanent Magnet System inside will be moved against the pole surface. When the magnet is OFF the magnetic flux will be shortcircuited by the pole surface (Graphic 1).
When switching ON the magnet, the magnetic flux will flow through the pole surface and the workpiece on top will be attracted and close the magnetic flux circle (Graphic 2).




Graphic 1

Graphic 2

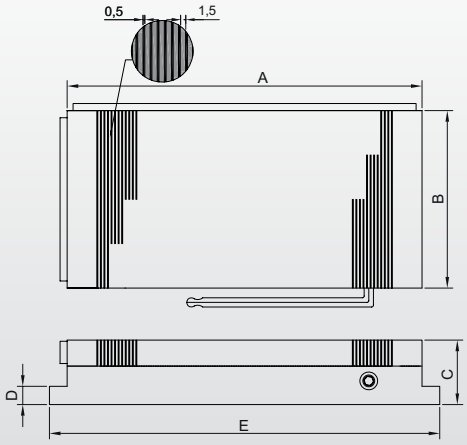
### Features

- Permanent Magnets are independent from any power source, portable and fail-safe
- The clamping force and size of a permanent magnet system is limited by the internal mechanical friction
- A Permanent Magnet can be destroyed or demagnetized by external, very large magnet fields or heat > 80°C

# Microfine


## Permanent Magnetic Chucks

The Microfine is an extremely economical Permanent Magnetic Chuck which can be manually switched.
It has a very flat magnetic field and is suitable for grinding and EDM.
It is used for our Microsine.




## Application

- **Universal use, especially for grinding and EDM, but also for finish milling**
- **Especially for small and thin, but also for thick workpieces if surface is clean and even**

## Features

- Design with low height, but high adhesive force
- The contact surface can be machined up to 2mm and drilled up to max. 8 mm depth
- Liquid-tight
- Can be switched ON/OFF mechanically
- Workpieces can be clamped stress-free and fast
- 5-side processing, as only one side is magnetically clamped
- Low magnetic penetration depth because of a flat magnetic field due to fine pole pitch – not very good for bridging air gaps
- Adhesive force: 80 N/cm² with pole pitch 1.5 + 0.5 mm

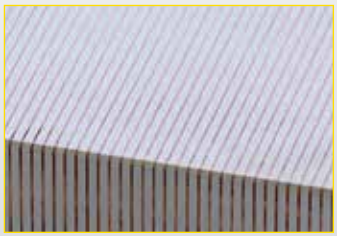
## Technical data

| | Dimensions [mm] | | | | | Weight | No. |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | [kg] | |
| MF 1510 | 150 | 100 | 48 | 16 | 170 | 5 | 41731 |
| MF 2512 | 250 | 125 | 48 | 16 | 270 | 11 | 41732 |
| MF 3015 | 300 | 150 | 48 | 16 | 320 | 16 | 41733 |
| MF 3515 | 350 | 150 | 48 | 16 | 370 | 18 | 1969 |
| MF 4515 | 450 | 150 | 53 | 16 | 470 | 24 | 5093 |
| MF 3020 | 300 | 200 | 53 | 16 | 320 | 22 | 17007 |
| MF 4020 | 400 | 200 | 53 | 16 | 420 | 30 | 22221 |
| MF 5020 | 500 | 200 | 53 | 16 | 520 | 37 | 39408 |
| MF 5025 | 500 | 250 | 53 | 16 | 520 | 47 | 33730 |
| MF 6030 | 600 | 300 | 58 | 16 | 620 | 76 | 32502 |

# Microsine

## Permanent Magnetic Sinetables


Magnet Sinetables are very helpful for angle works on  grinding or milling machines, particularly in mould shops..
The standard Microsine has the swivel axis in length and is equipped with Microfine.
There are also Microsine sinetables with swivel axis in width, or in length and width. Any chuck can be taken in place of Microfine.




### Application

- Universal use, particularly for finishing operations
- For dry and wet machining

### Features

- Liquid-tight
- The standard Microsine is  equipped with Microfine Magnetic Chuck
- The magnetic field is flat and the flux penetration in the workpiece is little
- The Microfine surface can be machined down by 2mm and partially drilled up to 8mm
- Workpieces can be fastly clamped with wanted inclination, stress-free
- Tilting angle is precisely set by sinustable and gauge blocks
- 5-side machining as only one side is clamped magnetically
- Adhesive force: 80 N/cm2 with pole pitch 1.5 + 0.5 mm
- Swifel range 0 – 45° (on request 0 - 60°)
- Surface hardened

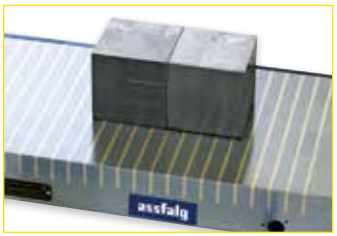
### Technical data

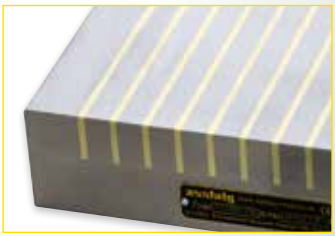
| | Dimensions [L×W] | No. | No. |
|---|---|---|---|
| | [mm] | [swivel axis = length] | [swivel axis = length + width] |
| MF SI 1710 | 175 x 100 | 42461 | 42468 |
| MF SI 3015 | 300 x 150 | 11045 | 27748 |
| MF SI 4515 | 450 x 150 | 63101 | 63100 |
| MS SI 6030 | 600 x 300 | 41795 | on request |
| ... | other sizes on request | | |

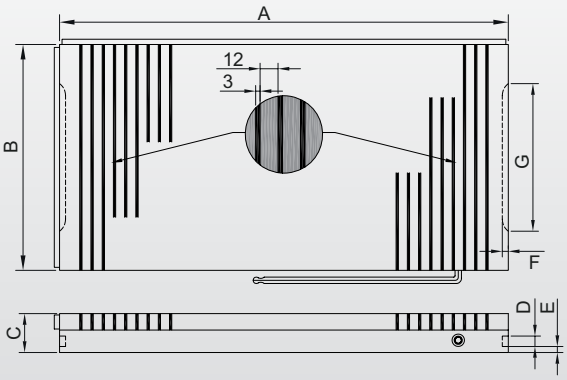
# Permamax


## Permanent Magnetic Chucks

The Permamax is an extremely strong Permanent Magnetic Chuck - manually switched ON/OFF.
It can be used universally for small and large, thin and thick workpieces on machine tools - especially for milling.






### Application

- Universal use, especially for milling of small and big workpieces ( >30 × 15 × 6 mm)
- For thin, ferromagnetic workpieces from 0.8 mm thickness, as well as for thick workpieces

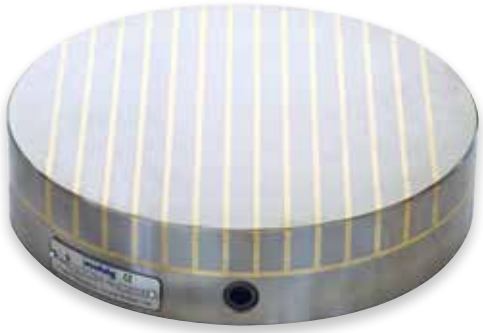
### Features

- Liquid tight
- Surface can be machined down by 2mm and partially drilled up to 8mm
- Switched ON/OFF mechanically
- Workpieces can be clamped stress-free and fast
- 5-side processing, as only one side is magnetically clamped
- High power and flat magnetic field (max. 10mm penetration into workpiece)
- Adhesive force: up to 140 N/cm² with pole pitch 12 + 3 mm (highest power is concentrated within 20 mm from edges)

### Technical data

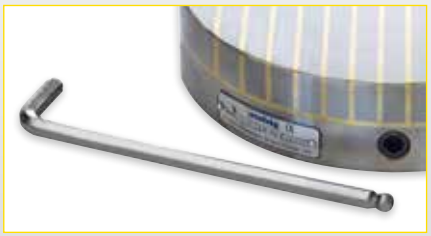
| | Dimensions [mm] | | | | | | | Weight | No. |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | [kg] | |
| PM 1610 | 160 | 100 | 52 | 14 | 12 | 8 | 60 | 6 | 57998 |
| PM 2515 | 250 | 150 | 52 | 14 | 12 | 8 | 90 | 15 | 57999 |
| PM 3015 | 300 | 150 | 52 | 14 | 12 | 8 | 90 | 18 | 5088 |
| PM 3020 | 300 | 200 | 52 | 14 | 12 | 8 | 120 | 24 | 58000 |
| PM 4020 | 400 | 200 | 52 | 14 | 12 | 8 | 120 | 32 | 58001 |
| PM 6020 | 600 | 200 | 52 | 14 | 12 | 8 | 120 | 49 | 58002 |
| PM 5030 | 500 | 300 | 52 | 14 | 12 | 8 | 190 | 61 | 58003 |
| PM 6030 | 600 | 300 | 52 | 14 | 12 | 8 | 190 | 73 | 58005 |

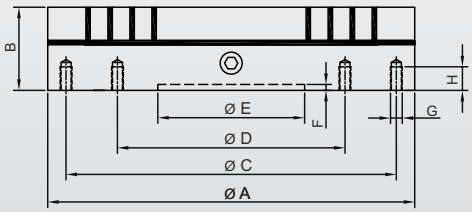
# Permamax

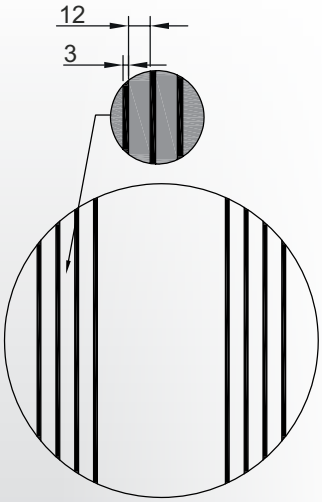


## Permanent Magnetic Chucks

The round Permamax is a very strong Permanent Magnetic Chuck with parallel pole pitch. It is manually switched.
It is universally suitable for all kind of ferromagnetic workpieces.






### Application

- Universal use, also for small workpieces
- Best suitable for flat grinding, internal or external grinding or turning or hard turning

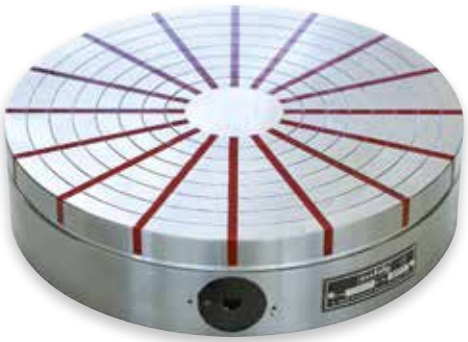
### Features

- High power and liquid-tight
- The surface can be machined down by 2mm and partially drilled up to 8 mm depth (5 mm at D ≤ 130 mm)
- Mechanically switchable
- Workpieces can be clamped stress-free and fast
- All-around processing as only one side is clamped magnetically
- Adhesive force: up to 140 N/cm² with pole pitch 12 + 3 mm

### Technical data

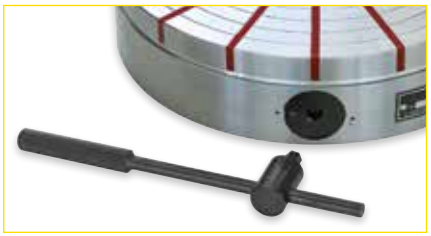
| | Dimensions [mm] | | | | | | | | Weight | No. |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | [kg] | |
| PMR 10 | 100 | 55 | – | 75 | 50 | 5 | M6 | 12 | 3 | 57990 |
| PMR 16 | 160 | 55 | 120 | 80 | 50 | 5 | M6 | 12 | 9 | 57991 |
| PMR 20 | 200 | 55 | 180 | 110 | 60 | 5 | M6 | 12 | 13 | 57992 |
| PMR 25 | 250 | 55 | 220 | 140 | 80 | 5 | M6 | 12 | 21 | 57993 |
| PMR 30 | 300 | 55 | 260 | 180 | 150 | 6 | M6 | 16 | 30 | 57994 |
| PMR 35 | 350 | 55 | 300 | 220 | 170 | 6 | M8 | 16 | 41 | 57995 |
| PMR 40 | 400 | 55 | 340 | 260 | 200 | 8 | M8 | 16 | 84 | 57996 |

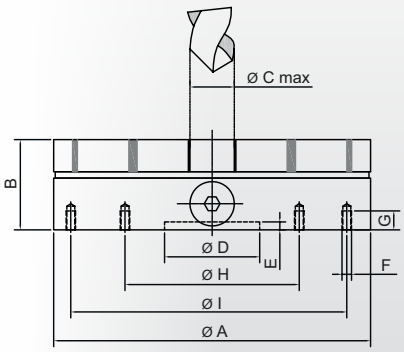
# Neostar

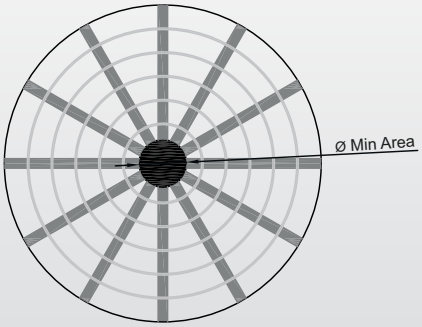


## Permanent Magnetic Chucks

The Neostar is a very strong round Permanent Magnetic Chuck with radial pole pitch. It is manually switched.
It is designed for ferromagnetic discs, rings and cylindric workpieces with approx. 80 mm diameter and more. A through hole in the center can be drilled.






### Application

- Universal use, particularly for internal and external grinding of cylinders, turning and hard turning
- Excellently suitable for clamping rings

### Features

- Liquid-tight
- Can be switched ON/OFF mechanically
- The center is not magnetic and can be drilled through up to the dia. “C”
- Workpieces can be clamped stress-free and fast
- All-around processing as only one side is clamped magnetically
- High power and flat magnetic field (penetrates max. 10mm into workpiece)
- Adhesive force: up to 140 N/cm²

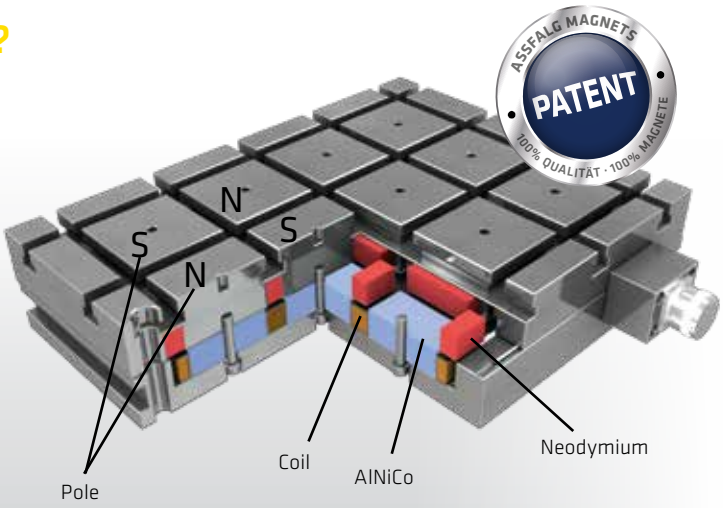
### Technical data

| | Dimensions [mm] | | | | | | | | Boreholes in F | Pole | Weight | No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | G | H | I | [mm] | | [kg] | |
| NS 10 | 100 | 55 | 18 | 50 | 2 | 12 | - | 75 | 4 x M6 | 10 | 3 | 2814 |
| NS 13 | 130 | 57 | 20 | 50 | 5 | 12 | – | 100 | 4 x M6 | 10 | 6 | 4275 |
| NS 16 | 160 | 57 | 24 | 50 | 5 | 12 | 80 | 120 | 4 x M6 | 10 | 9 | 5007 |
| NS 20 | 200 | 57 | 30 | 60 | 5 | 12 | 110 | 180 | 4 xM6 | 12 | 14 | 16350 |
| NS 25 | 250 | 70 | 42 | 80 | 5 | 12 | 140 | 220 | 4 x M6 | 16 | 27 | 12056 |
| NS 30 | 300 | 73 | 42 | 150 | 6 | 16 | 180 | 260 | 4 x M8 | 16 | 41 | 37501 |
| NS 35 | 350 | 73 | 56 | 170 | 6 | 16 | 220 | 300 | 4 x M8 | 20 | 55 | 37502 |
| NS 40 | 400 | 75 | 56 | 200 | 8 | 16 | 260 | 340 | 4 x M8 | 20 | 75 | 37169 |
| NS 50 | 500 | 81 | 75 | 200 | 8 | 16 | 300 | 400 | 4 x M10 | 24 | 125 | 37494 |
| NS 60 | 600 | 95 | 100 | 250 | 8 | 20 | 350 | 450 | 4 x M12 | 30 | 200 | 57997 |

# ElectroPermanent Magnets

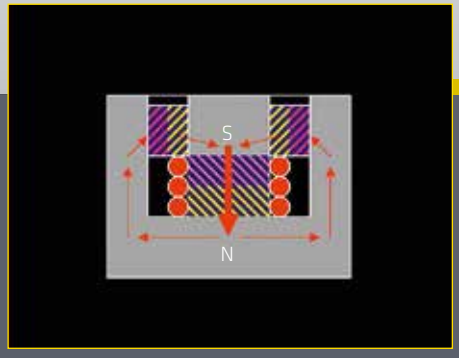
## How do ElectroPermanent Magnets work?

AlNiCo-Magnets (surrounded by coil) can be magnetized as N-pole or S-pole by a current impulse (Graphic 1 + 2).
The AlNiCo-Magnets are exactly opposed to the polarization of the Neodym Permanent Magnets with the magnet being switched OFF (Graphic 1). The AlNiCo-Magnets are rectified to the polarization of the Neodym Permanent Magnets with the magnet being switched ON (Graphic 2).
**Electropermanent Magnets keep their magnetized condition.**



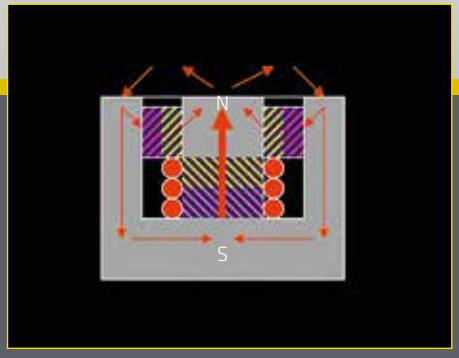

Patent No EP1874504

OFF

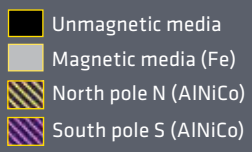



Graphic 1

ON




Graphic 2

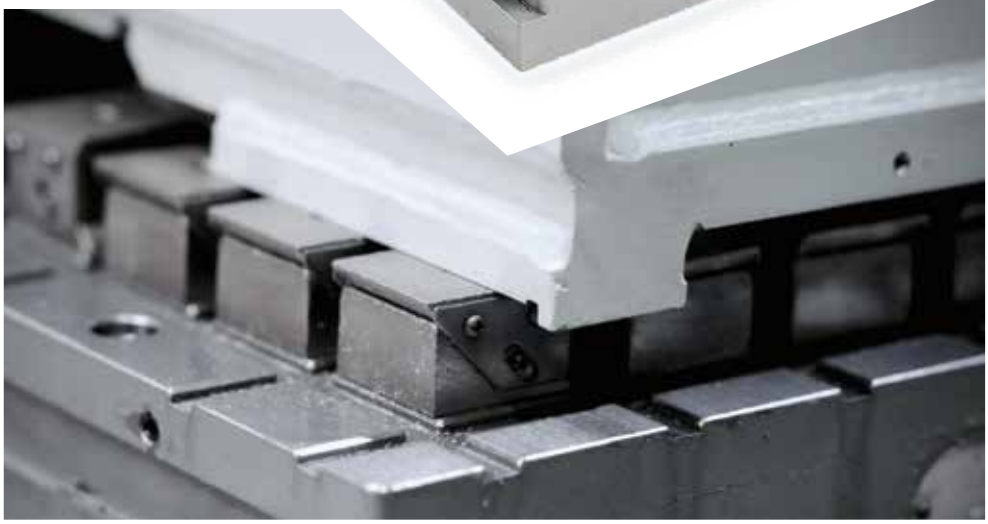


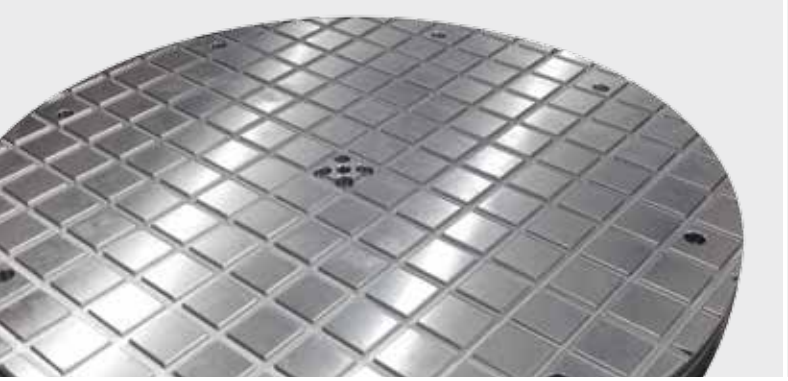

## Features

- **Electropermanent Magnets are Permanentmagnets which are switched electrically. They do not warm up and consume only very little energy (impulse current).**
- **They combine the safety of Permanentmagnets with the convenience of Electromagnets.**

# Magnaslot

## Electropermanent Magnetic Chucks

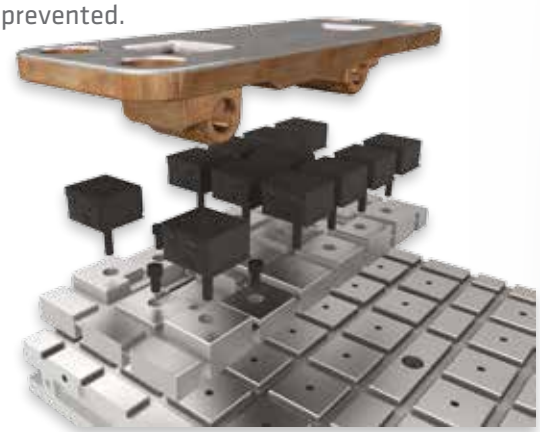





# Magnaslot

## Electropermanent Magnetic Chucks

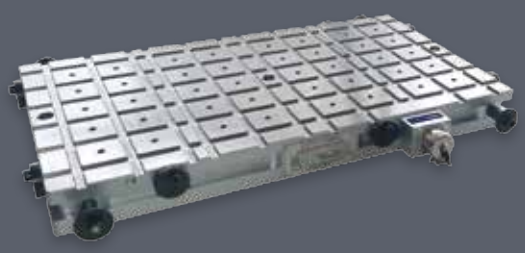
The patented (EPM) ElectroPermanent Magnetic chuck with solid steel top and squarepole technology is the perfect clamping solution for milling.
Each pole is surrounded by opposite poles (chess pattern). Hence magnetic power flows in X- and Y- axis. The current impulse for magnetizing and demagnetizing is very energy efficient. By using fixed and mobile pole extensions the roughness of unmachined or bent workpieces can be compensated. Also a distortion will be prevented.



An adapter plate with mobile poles provides maximum magnetic power for clamping the uneven workpiece

### Features [HD 50]

- Pole size 50 x 50 mm
- Adhesive force ≥ 350 kg per pole
- Magnetic field penetration up to 15mm
- A minimum of 2 alternate poles must be at least partially covered to get any power
- The more poles are covered the higher the magnetic clamping force



- Magnaslot HD or ECO ?
  HD is recommended when workpiece sizes vary a lot from small to big.
  ECO is sufficient when only larger workpieces are clamped.

| Technical data | Dimension [L×W×H] | Number of Poles | Weight | No. |
|---|---|---|---|---|
| **High pole density (HD)** | [mm] | | [kg] | |
| 304 HD 50 | 300 x 430 x 55 * | 24 | 50 | 38335 |
| 306 HD 50 | 300 x 590 x 55 | 32 | 72 | 50613 |
| 308 HD 50 | 300 x 750 x 55 | 40 | 91 | 41485 |
| 404 HD 50 | 420 x 430 x 55 | 36 | 71 | 49812 |
| 406 HD 50 | 420 x 590 x 55 * | 48 | 100 | 56130 |
| 408 HD 50 | 420 x 750 x 55 | 60 | 127 | 48641 |
| 410 HD 50 | 420 x 990 x 55 | 84 | 168 | 49787 |
| 508 HD 50 | 480 x 750 x 55 * | 70 | 145 | 50615 |
| 510 HD 50 | 480 x 990 x 55 | 98 | 192 | 50249 |
| 606 HD 50 | 600 x 590 x 55 | 72 | 143 | 50541 |
| 608 HD 50 | 600 x 750 x 55 | 90 | 181 | 49574 |
| 610 HD 50 | 600 x 990 x 55 * | 126 | 240 | 49319 |
| **Reduced pole density (ECO)** | [mm] | | [kg] | |
| 304 ECO 50 | 325 x 370 x 55 | 20 | 42 | 63276 |
| 406 ECO 50 | 370 x 635 x 55 | 40 | 90 | 63277 |
| 408 ECO 50 | 370 x 790 x 55 | 50 | 120 | 64066 |
| 508 ECO 50 | 445 x 790 x 55 | 60 | 150 | 64072 |
| 608 ECO 50 | 580 x 790 x 55 | 80 | 170 | 63278 |
| 609 ECO 50 | 580 x 940 x 55 | 96 | 200 | 63279 |

* stock standard


Magnaslot HD means: maximum pole number on given chuck size ***Pole number and chuck size define the chuck price***

Magnaslot 400 x 800 mm with 32 x P75

## Professional advantages

- All-around 5-side machining and distortion free clamping is possible in one clamp by means of pole extensions -> With given pole number the chuck can be covered with 3 x fixed and multiple mobile pole extensions for rough machining. If already machined side is clamped, then only fixed pole extensions may be advantageous
- Set-up time is reduced to a minimum, hence an increase of productivity
- Less vibrations for longer tool life and better process accuracy
- Patented solid top resists best to hot chips and coolance and cares also for heat dissipation

| Technical data | Dimension [L×W×H] | Number of Poles | Weight | No. |
|---|---|---|---|---|
| **High pole density (HD)** | [mm] | | [kg] | |
| 304 HD 75 | 327 x 425 x 60 | 12 | 62 | 48900 |
| 306 HD 75 | 327 x 601 x 60 | 18 | 87 | 49835 |
| 308 HD 75 | 327 x 815 x 60 | 24 | 118 | 52548 |
| 404 HD 75 | 415 x 425 x 60 | 16 | 78 | 52546 |
| 406 HD 75 | 415 x 601 x 60 * | 24 | 110 | 49011 |
| 408 HD 75 | 415 x 815 x 60 | 32 | 150 | 49012 |
| 410 HD 75 | 415 x 1,029 x 60 | 40 | 188 | 50235 |
| 508 HD 75 | 503 x 815 x 60 * | 40 | 181 | 52542 |
| 510 HD 75 | 503 x 1,029 x 60 | 50 | 228 | 49833 |
| 606 HD 75 | 591 x 601 x 60 | 36 | 157 | 52543 |
| 608 HD 75 | 591 x 815 x 60 | 48 | 212 | 52544 |
| 610 HD 75 | 591 x 1,029 x 60 * | 60 | 268 | 49985 |

* stock standard

## Features [HD 75]

- Pole size 75 x 75 mm
- Adhesive force ≥ 790 kg per pole
- Magnetic field penetration up to 24 mm
- Less sensitive to air gaps
- A minimum of 2 alternate poles must be at least partially covered to get any power. The more poles are covered, the higher the magnetic clamping force

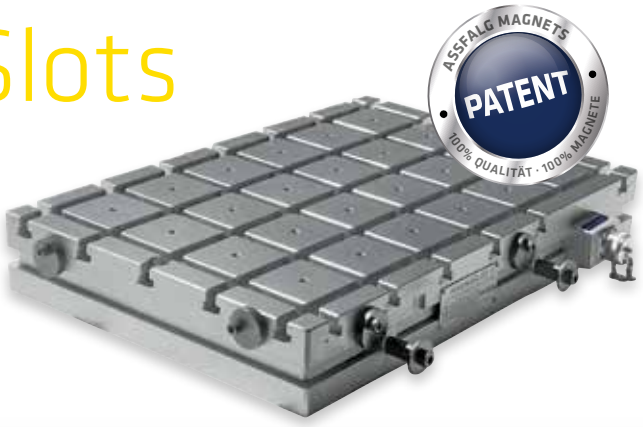
## Options

- Controllers and pole extensions -> see accessories on page 15

## Application

- Clamping of small and big workpieces for milling
- Clamping without vibration and without distortion
- Process accuracy with plane parallelism 0.02/1000 mm and better

# Magnaslot with T-Slots




## Electropermanent Magnetic Chucks

The patented (EPM) ElectroPermanent Magnetic chuck with T-Slots in the solid steel top combine advantages of magnetic and mechanic clamping and positioning for milling.
The additional T-slots need a higher Magnaslot and are manufactured only together with squarepoles 75.

## Application

- All-around 5-side machining in one clamp
- For clamping of small and big workpieces by milling processes and rough and fine precision machining
- Clamping of magnetic and nonmagnetic workpieces
- A combination of multiple EPM chucks enables large workpiece machining

## Features

- Pole size 75 x 75 mm
- T-slots for the mechanical clamping
- Adhesive force ≥ 790 kg per pole
- Magnetic field penetration up to 24mm
- Less sensitive to air gaps
- Distortion and stress free clamping of rough, uneven, and bent workpieces by means of flexible or fixed pole extensions
- Minimization of setup time
- Patented solid top resists best to hot chips and coolance and cares also for heat dissipation

## Options

- Controllers and pole extensions -> see accessories on page 15

| Technical data | Dimension [L×W×H] | Number of Poles | Weight | No. |
|---|---|---|---|---|
| | [mm] | | [kg] | |
| 304 HD 75T | 327 x 425 x 93 | 12 | 90 | 48887 |
| 406 HD 75T | 415 x 601 x 93 | 24 | 160 | 49010 |
| 508 HD 75T | 503 x 815 x 93 | 40 | 250 | 51870 |
| 610 HD 75T | 591 x 1,029 x 93 | 60 | 370 | 49986 |

# Accessories

## For Electropermanent Magnetic Chucks

EPM chucks need a controller for switching ON/OFF. The magnetic power can be controlled in 8 steps.
Multiple chucks can also be switched at a time by a multi channel controller or with additional junction box JB in between chuck and controller. A square pole 50 needs at 400V app. 0,5 A, a pole 75 app. 1A. The controllers are equipped with fixed 3m source cable for Plug 16A/32A. Each channel of the controller is connected with the chuck by a 3.5 m shielded, heat and water resistant cable with bayonet and terminal. For special purposes special connecting cables are available.

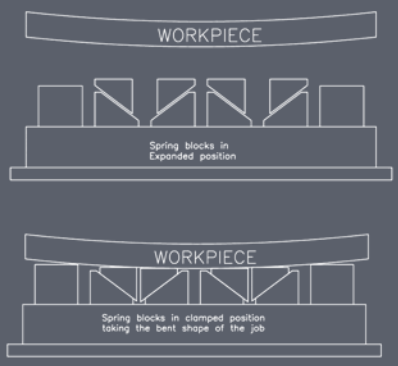
Controller D50/D100


Hand operating unit - pendant with 8 powersteps ( with pin plug for connection with controller)


PVF fixed Pole extension


PVB mobile Pole extension compressed (left) and expanded (right)

| Technical data | Pole size | Dimensions | Version | No. |
|---|---|---|---|---|
| Pole extensions [Typ] | [mm] | [mm] | | |
| PVF 50 | 50 | 50 x 50 x 32 | fixed | 38010 |
| PVB 50 | 50 | 50 x 50 x 32 (+/-3) | mobile | 38011 |
| PVF 70 | 70 | 70 x 70 x 45 | fixed | 40127 |
| PVB 70 | 70 | 70 x 70 x 45 (+/-5) | mobile | 40128 |




| Technical data | Channel | No. |
|---|---|---|
| Controller [Typ] | | |
| EPM-D50 to 50 A, with pendant | 1 | 13070 |
| EPM-D100 to 100 A, with pendant | 1 | 52950 |
| EPM-D100-4 to 100 A, with pendant | 4 | 58088 |
| EPM-D100-6 to 100 A, with pendant | 6 | 60875 |

4-channel- operator panel for D100-4


Bayonet connection


Bayonet socket


Bayonet plug

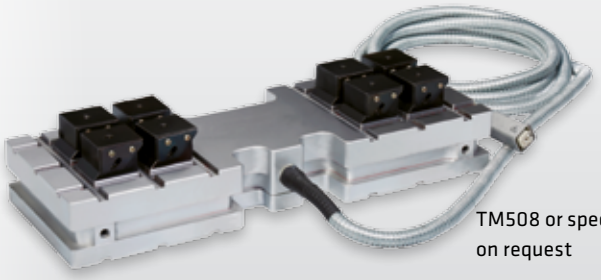
# Doublemag | Triplemag

## Electropermanent Magnetic Chucks

The Doublemag are small Magnaslots, but magnetized on top (to hold the workpiece) and on bottom (to hold itself on the machine table). They are very handisome and flexible in use. They can be combined in multiple number to a large magnetic table to clamp economically large workpieces.
The Triplemag are same as Doublemag, but have additional and separately switched magnets on bottom side, enabling a wanted position on the machine table or the wall before clamping the job.
These magnets are manufactured as double row (DM502 or TM508) or single row (TM505).


DM 502

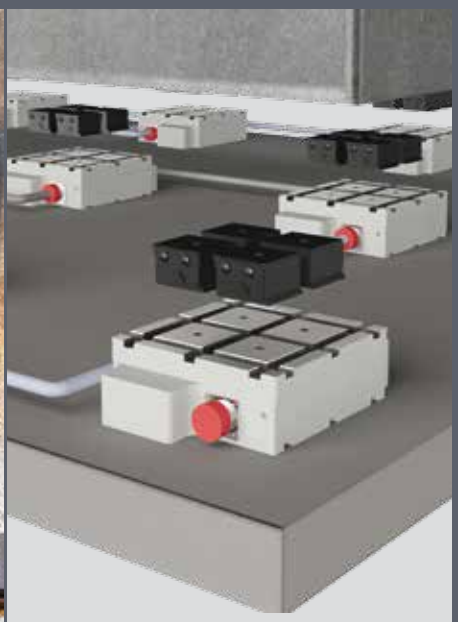
TM 505

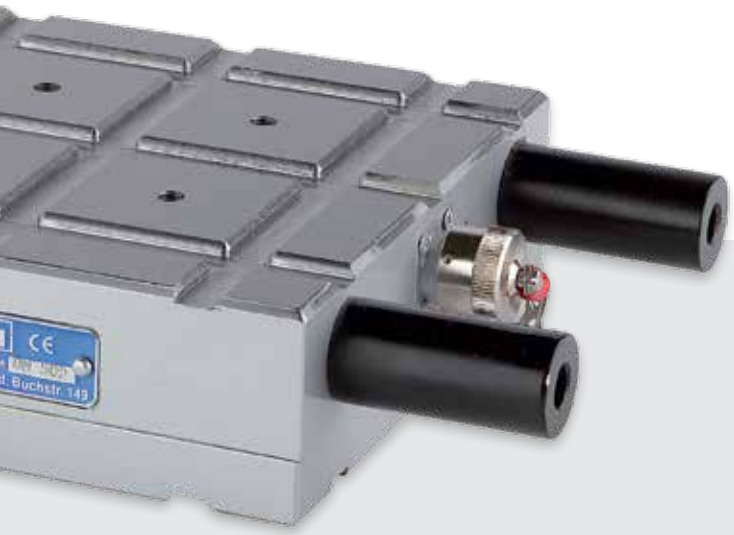


TM508 or special versions on request

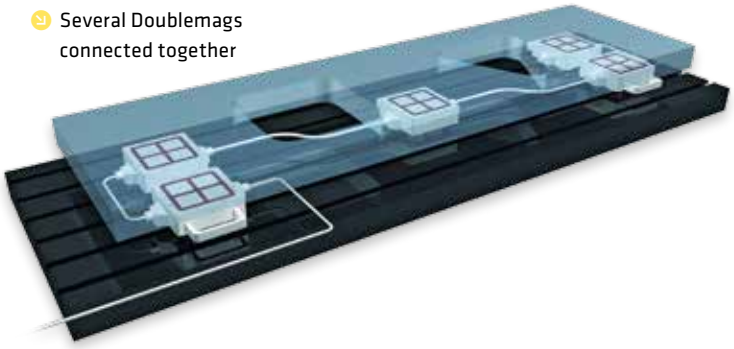
### Application

- Clamping big or bulky workpieces for milling
- Clamping for edge cutting or deburring
- For simple and fast fixing of workpieces
- Also usable with fixed and movable pole extensions for uneven surfaces





Several Doublemags connected together



## Professional advantages

- Drastic reduction of set-up times
- 5-side machining with simple and fast positioning and clamping
- Less stress, less vibrations, less torsions for better machining
- Flexible combination of multiple magnets to machine large or bulky workpieces
- Better accuracy-plane-parallelism 0,01/1000mm is reachable
- The advantage of fixed and mobile pole extensions for balancing uneven, bent, large workpieces

## Features

- Pole size 50 × 50 mm
- Adhesive force ≥ 350 kg per pole
- Full clamping force will only be achieve if the supporting table is ferromagnetic and at least 15 mm thick
- Penetration depth of the magnetic field up to 12 mm
- Patented solid top resists best to hot chips and coolance and cares also for heat dissipation

## Options

- For pole extensions -> see Accessories on page 15


Controller D40-S

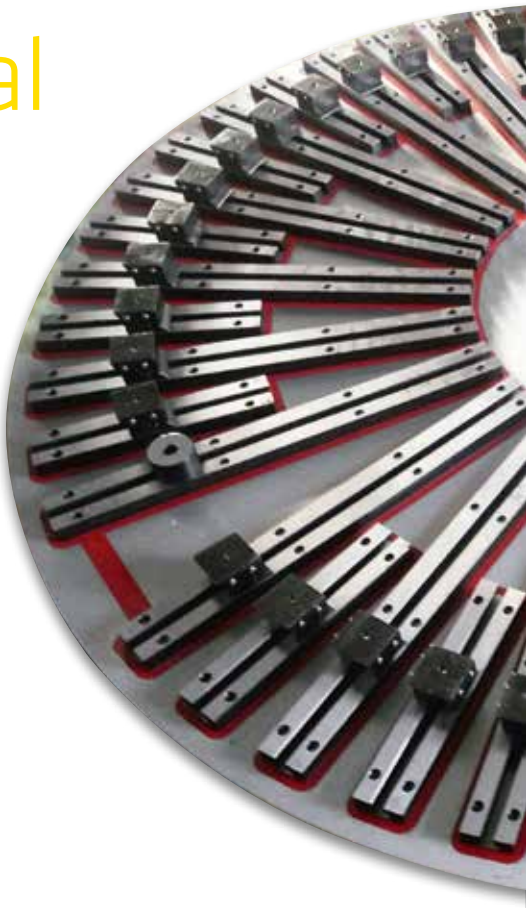
## Technical data

| | Dimensions [L×W×H] | Number of poles | Voltage | Ampere | Weight | No. |
|---|---|---|---|---|---|---|
| | [mm] | | [Volt] | [A] | [kg] | |
| DM 502 | 180 x 180 x 52 | 2 x 4 | 220 | 4 | 12 | 52186 |
| TM 503 | 220 x 180 x 52 | 2 x 4 + 1 x 2 | 220 | 4 | 12 | 51991 |
| TM 505 | 340 x 100 x 52 | 2 x 4 + 1 x 2 | 220 | 4 | 13 | 57086 |

# Round Chuck EPMradial

## Electropermanent Magnetic Chucks

These Electropermanent Magnetic Chucks are ideal for clamping distortionfree big discs, rings or bearings for windmills. Even hardened rings can be finished best. Centric holes or through holes can be drilled.
All the advantages of fixed and mobile pole extensions of Magnaslot can be used, to reach best surface quality.



EPMradial from Ø 600 mm

### Application

- Universal use for clamping ferromagnetic workpieces, particularly on lathes and rotary table grinding machines
- Ideal for bearing ring processing, also for hard processing

EPMradial-P to Ø 600 mm

## Professional advantages

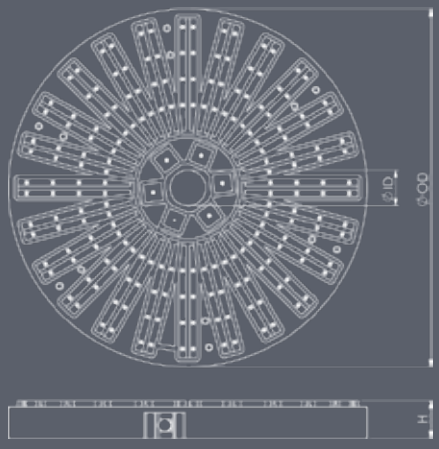
- Extremely short set-up times due to simple and fast clamping of workpieces
- 5-side machining with less stress, less torsions, less vibrations by means of fixed and mobile pole extensions
- No damages to the magnetic chuck by breakouts or through machining, if pole extensions are used
- Sensible magnet power adjustment for thin workpieces or for aligning

## Features

- Extremely high magnetic power with activation within seconds
- Through holes, poleshoes without or with T-slots, fixed and mobile pole extensions for ease of clamping and machining
- The shielded and protected cable from the controller can be connected to the chuck by bayonet or slipring. The chuck controller can be integrated in CNC-machine controller

## Options

- For controllers and pole extensions -> see Accessories on page 15



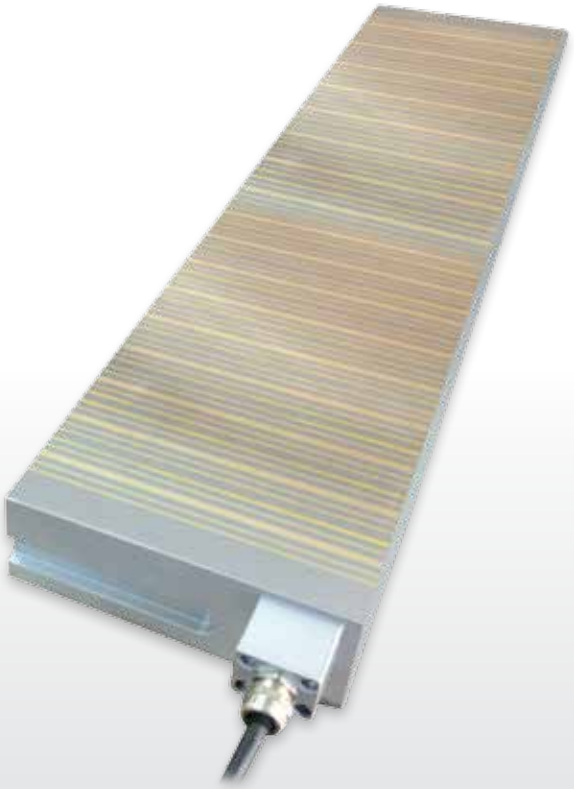

## Technical data

| | External diameter | Internal diameter | Height | No. |
|---|---|---|---|---|
| | [mm] | [mm] | [mm] | |
| EPMradial 600 | 600 | 200 | 90 | 65047 |
| EPMradial 800 | 800 | 250 | 90 | 63541 |
| EPMradial 1000 | 1,000 | 250 | 90 | on request |
| EPMradial 1250 | 1,250 | 500 | 90 | on request |
| ... | other sizes on request | | | |

# EPFlux

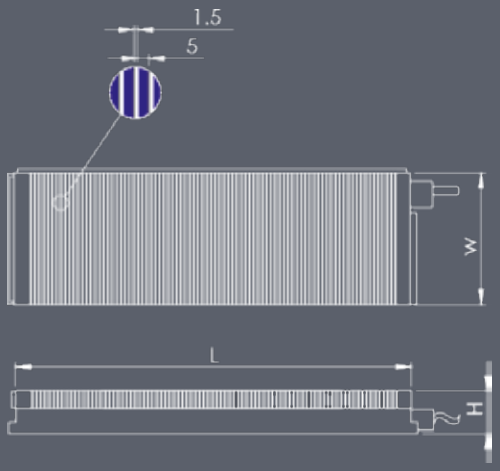
## Electropermanent Magnetic Chucks

The EPFlux magnetic chuck is highly suitable for grinding applications of all size of jobs – also for high alloyed and hardened workpieces.
There will be nearly no residual magnetism. EPM technology guarantees therefore best accuracy. There is no heating up of the job. Energy consumption is very low.



### Features

- Clamping force approx. 100 N/cm²
- Pole pitch 5 + 1.5 mm
- Incorporated cable 3 m
- For Controller EPM D50-100 with additional Flux-IC




| Technical data | Length | Width | Height | No. |
|---|---|---|---|---|
| | [mm] | [mm] | [mm] | |
| EPFlux 4515 | 450 | 150 | 69 | 64287 |
| EPFlux 5020 | 500 | 200 | 69 | 51002 |
| EPFlux 6030 | 600 | 300 | 69 | 63494 |
| EPFlux 8040 | 800 | 400 | 69 | on request |
| EPFlux 10050 | 1,000 | 500 | 69 | on request |
| EPFlux 15060 | 1,500 | 600 | 69 | on request |

# MS | SW | MAV | PA

## Permanent Magnet Welding Angles

Your universal magnet clamp for small welding and assembly works.
All magnetic angles are switchable and suitable for flat and round material, except SW.
MAV 120 and PA 200 are stepless adjustable angles.

MS


PA 200


SW


MAV 120


MSA

### Features

- Easy positioning, adjusting and fixing of workpieces
- No disflection or influence of welding arc
- The contact areas of MS, MAV 120 and PA 200 are separately switchable
- The angle of MAV120 and PA200 is quickly set by scale

| Technical data | Dimensions [L×W×H] | Angle | Switchable | Use also for Round material | Adhesive force | Weight | No. |
|---|---|---|---|---|---|---|---|
| | [mm] | | | | [kg] | [kg] | |
| MSA I | 110 x 30 x 95 | 45°/90° | Yes | Yes | 36 | 0.7 | 45338 |
| MSA II | 150 x 35 x 130 | 45°/90° | Yes | Yes | 60 | 1.4 | 45339 |
| MS 2-80 | 153 x 38 x 153 | 90° | Yes * | Yes | 46 | 1.2 | 48192 |
| MS 2-90 | 195 x 46 x 195 | 90° | Yes * | Yes | 68 | 2.7 | 18736 |
| MAV 120 | 197 x 50 x 197 | 25° – 275° | Yes * | Yes | 41 | 2.4 | 162 |
| PA 200 | 240 x 41 x 240 | 22° – 270° | Yes * | Yes | 90 | 1.6 | 60343 |
| SW 200 | 200 x 50 x 200 | 90° | No | No | 40 | 2.5 | 46504 |
| SW 300 | 300 x 50 x 300 | 90° | No | No | 60 | 4.0 | 46503 |

* Every thigh is separately switchable

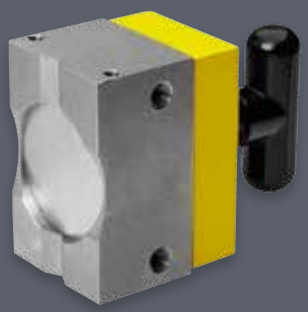
# MSQ Magsquare

## Permanent Magnetic Workholding

Versatile workholding and fixturing magnet. The magnetic grip is powerful on the 3 long sides. A simple 180° turn of the knob to switch ON / OFF. Pretapped holes on 4 sides for mounting. Great for supporting guides and walls. MSQ is assembled in angle A90 and Boomer.

### Features

- Magnets turns completely OFF and stays clean
- Usable for round and square workpieces
- Magnetic power is powerful on 3 sides, but acts on all sides
- Pretapped holes on 4 sides for quick mounting
- Great for making own fixtures



| Technical data | Dimensions [L×W×H] | Adhesive force | Weight | No. |
|---|---|---|---|---|
| | [mm] | [kg] | [kg] | |
| MSQ 165 | 48 x 31 x 65 | 68 | 0.3 | 61939 |
| MSQ 400 | 64 x 42 x 90 | 181 | 0.9 | 60971 |
| MSQ 600 | 75 x 52 x 106 | 272 | 1.4 | 60972 |
| MSQ 1000 | 72 x 108 x 147 | 454 | 3.4 | 60973 |

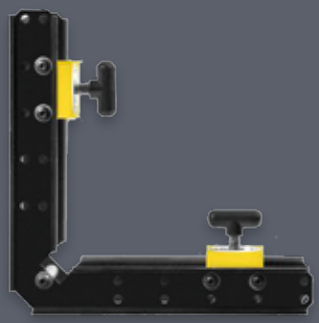
# A 90

## Permanent Magnet Welding Angles

Your third indispensable hand for welding or assembly works on flat and round materials at 90° angle.
Use additional MSQ to increase power. The MSQ can be put reverse for inside angle or slide up and down to adjust.

### Features

- Sturdy steel construction of the angle
- Powerful grip can increased by additional MSQ
- Usable as inside and outside angle
- Usable for round and square workpieces
- Sliding up and down to adjust



| Technical data | Dimensions [L×W×H] | Adhesive force | Weight | No. |
|---|---|---|---|---|
| | [mm] | [kg] | [kg] | |
| A 165 | 205 x 205 x 47 | 68 | 0.8 | 61945 |
| A 400 | 288 x 288 x 104 | 181 | 2.8 | 60340 |
| A 600 | 288 x 288 x 134 | 272 | 3.7 | 60341 |
| A 1000 | 287 x 474 x 145 | 454 | 4.6 | 60342 |

# Boomer

## Permanent Magnet Welding Angles, flexible

Your compact helper for welding or assembly works, for round and flat materials.
The rotating MSQ offers unlimited angles for inside and outside workholding.

### Features

- Fast and easy angle adjustment by means of quick release
- Engraved scales for exact angle adjustment 0 – 360°
- MSQ Magnets can be completely switched off by just turning the switch lever by 180° - stays CLEAN
- Sturdy steel construction of the angle
- Usable for round and square work-pieces
- Magnetic power acts on all sides

| Technical data | Dimensions [L×W×H] | Adhesive force | Weight | No. |
|---|---|---|---|---|
| | [mm] | [kg] | [kg] | |
| BA 150 | 196 x 196 x 80 | 68 | 1.3 | 60344 |
| BA 400 | 257 x 257 x 109 | 181 | 3.0 | 60345 |
| BA 600 | 257 x 257 x 169 | 272 | 4.4 | 60346 |

# Assfalg Magnets in use

# WANT TO KNOW MORE?

**We advise you gladly via telephone or during a personal appointment.**

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