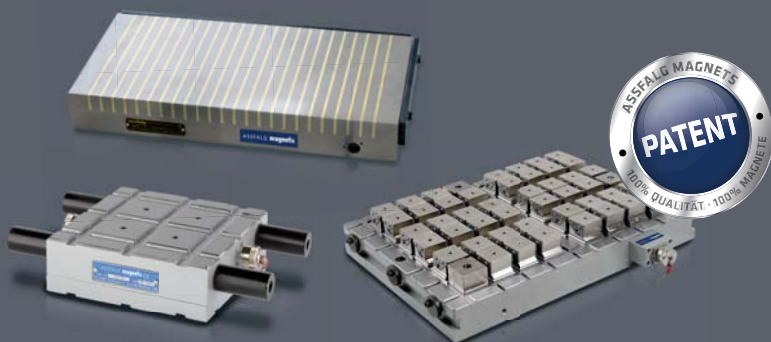


Clamping magnets

Maximum adhesive force for safe processing

with unimagined production reserves

- ⌚ a 5-sided machining in one clamp
- ⌚ minimum set-up times and increase of productivity
- ⌚ increase of tool useful life and process safety



ASSFALG **magnets**

Assfalg GmbH

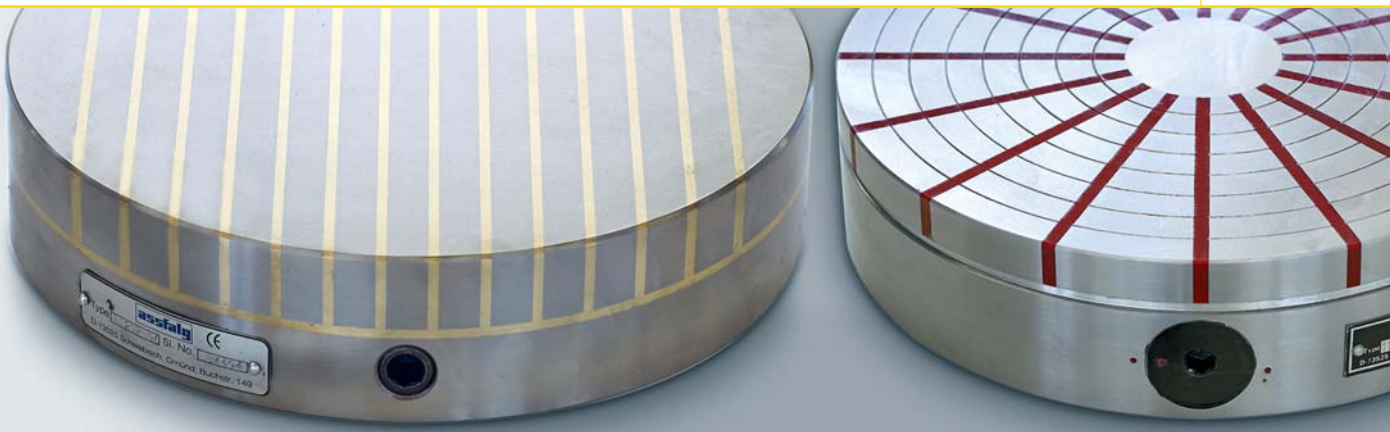
Buchstraße 149
73525 Schwäbisch Gmünd
Germany

Tel +49 (0) 71 71.92 505-0
Fax +49 (0) 71 71.92 505-50

info@assfalg-gmbh.de
www.assfalg-gmbh.de
www.assfalg-magnets.de

The right of changes and deviating pictures is reserved. Liability is excluded.

Design and production:
Hela Werbung GmbH | www.hela.com



Permanent Magnets



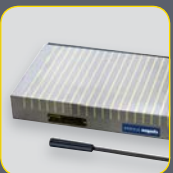
Microfine
Permanent Magnetic Chucks

04



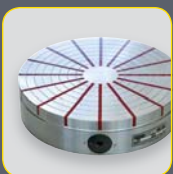
Microsine
Permanent Magnetic Chucks

05



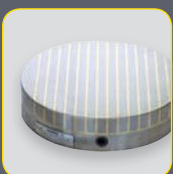
Permamax
Permanent Magnetic Chucks

06



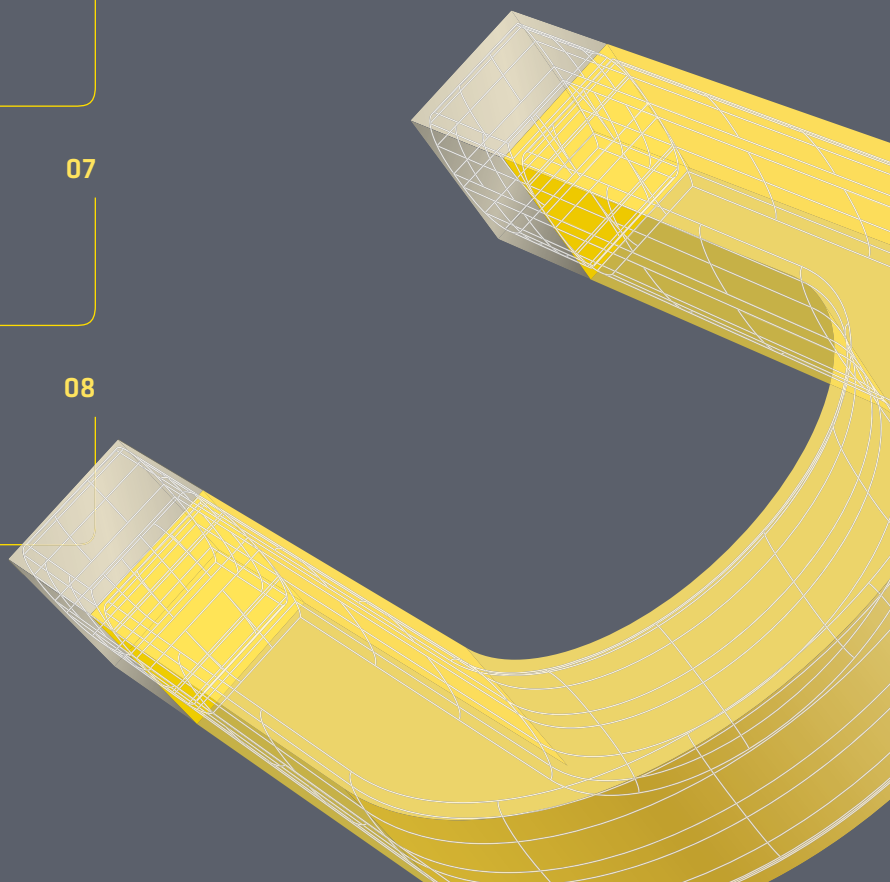
Neostar
Permanent Magnetic Chucks

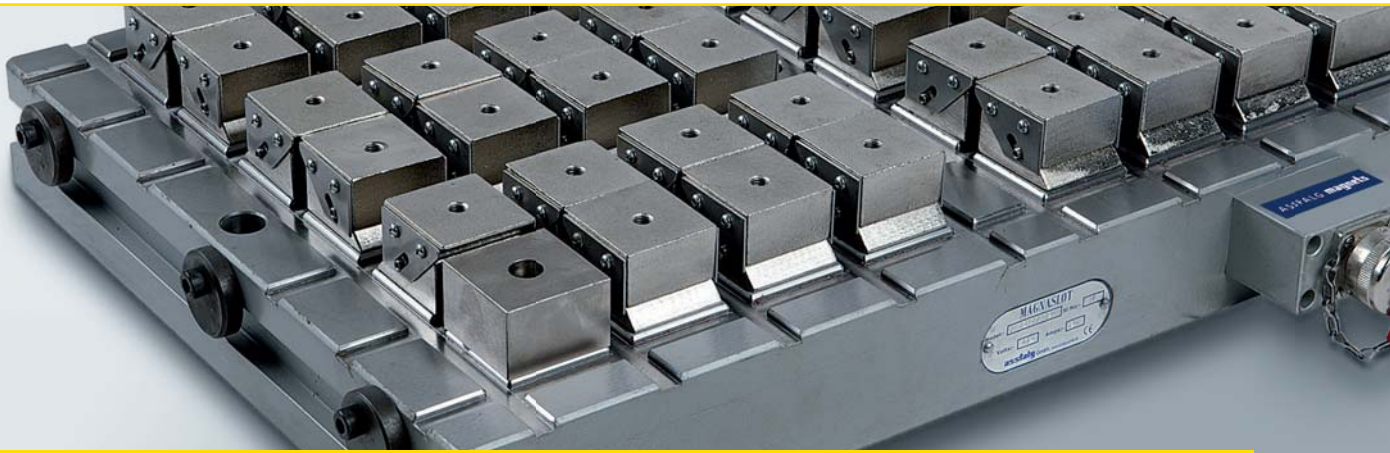
07



Permamax
Permanent Magnetic Chucks

08





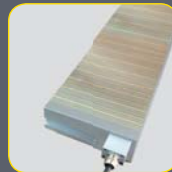
Electropermanent Magnets | Magnet Welding Angles

09



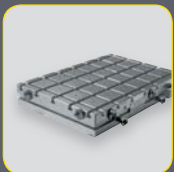
Magnaslot
Electropermanent
Magnetic Chucks

10



EPFlux
Electropermanent
Magnetic Chucks

20



Magnaslot mit T-Slots
Electropermanent
Magnetic Chucks

14



MS | SW | MAV | PA
Magnet Welding Angles

21



Accessories
for Electropermanent Magnetic
Chucks

15



Magsquare
Magnetic module

22



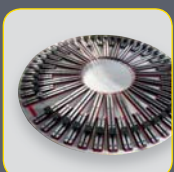
Doublemag | Triplemag
Electropermanent magnetic
clamping elements

16



A 90
Magnet Welding Angles

23



Radialpol
Electropermanent
Magnetic Chucks

18



Boomer
Magnet Welding Angles, flexible

24



Assfalg Clamping Magnets
in use

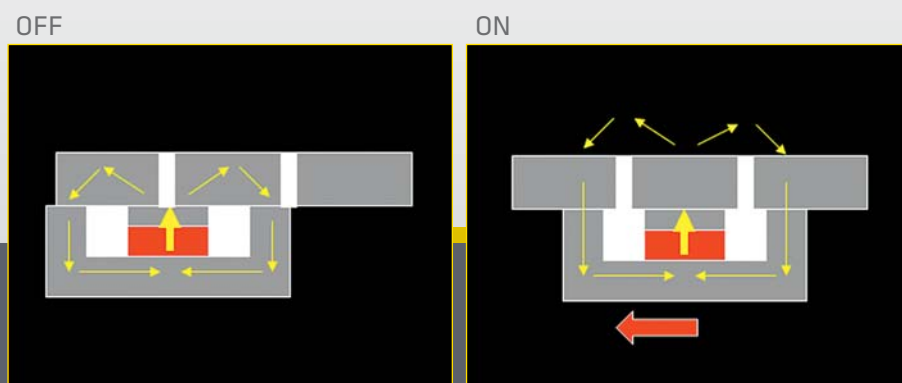
25

Permanent Magnets

How do Permanent Magnets function?

When switching on/off the Permanent Magnet System by operating a lever or similar, it will be spatially shifted in such a way that it will not be aligned under the poles any more. The magnetic flux will thereby be redirected inwards (📌 Graphic 1).

When switching on the system, a group of permanent magnets each will be aligned under the poles (📌 Graphic 2).



📌 Graphic 1

📌 Graphic 2

Features

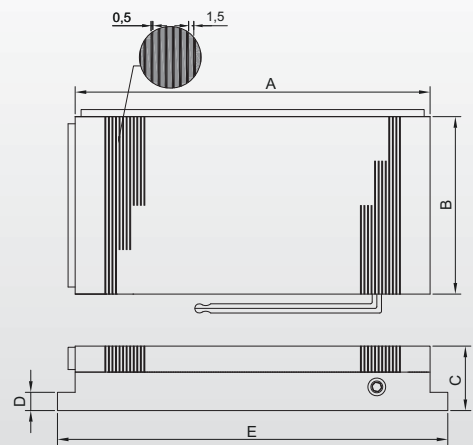
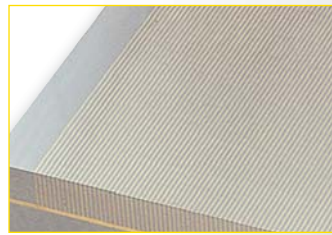
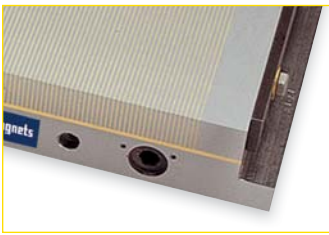
- ▶ Permanent Magnets are independent from any power source, portable and fail-safe
- ▶ The clamping force and size of a magnet system is limited by the internal mechanical friction
- ▶ A Permanent Magnet can be demagnetized by external, very large magnet fields or heat (> 80°C)

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 light and medium processing on machine tools.



Application

- ▶ Universally usable, especially for eroding and grinding works but also for fine milling
- ▶ For small and thin, but also for thick workpieces with a clean, flat surface

Features

- Ⓜ Low design height with high adhesive force
- Ⓜ Processing of adhesive surface 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 penetration depth of the magnetic force because of a flat magnetic field due to fine pole pitch
- Ⓜ 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 |

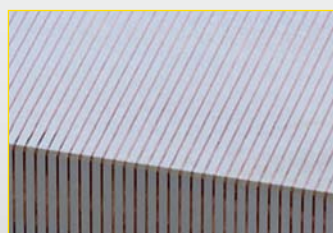
Microsine

Permanent Magnetic Chucks

Magnet Sinetables are very helpful for angle works on milling and grinding machines, particularly in tool making.

They are available in two versions: either single-pivotable via the longitudinal axis or double-pivotable via the longitudinal and transverse axis.

The mechanical Sinetables can be equipped with magnetic chucks as required.



Application

- ▶ Universally usable, particularly for easy and medium milling and grinding works
- ▶ For small and thin, but also for thick workpieces with a clean, flat surface

Features

- ✔ Liquid-tight
- ✔ The Sinetables are equipped with Microfine Magnetic Chucks as standard
- ✔ Low penetration depth of the magnetic force because of a flat magnetic field
- ✔ Processing of adhesive surface up to max. 8 mm depth
- ✔ Workpieces can be clamped in an angle, stress-free and fast
- ✔ Precise adjustment of the tilt angle using the sinus-table by means of gauge blocks
- ✔ All-around processing as only one side is clamped magnetically
- ✔ Adhesive force: 80 N/cm² with pole pitch 1.5 + 0.5 mm
- ✔ Swivel range 0 – 60°
- ✔ Surface hardened

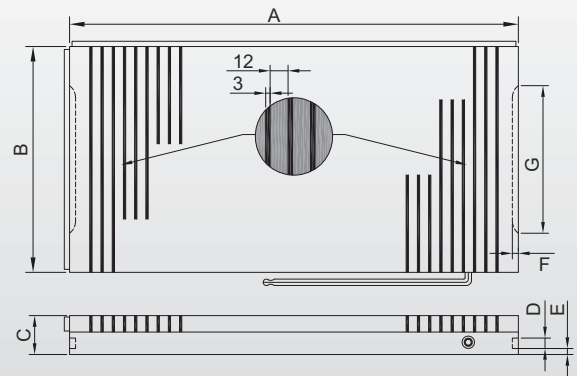
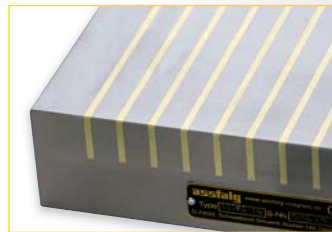
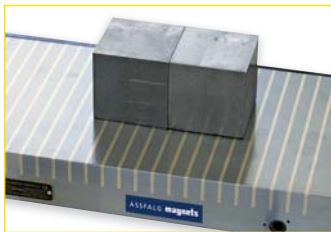
Technical data

| | Dimensions [L×W] | No. | |
|------------|------------------------|--|---|
| | [mm] | [pivotable around the longitudinal axis] | [pivotable around the longitudinal and transverse axis] |
| 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 which is switched manually. It can be used universally on machine tools.



Application

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

Features

- Ⓜ Medium design height with very high adhesive force
- Ⓜ Processing of adhesive surface up to max. 8 mm depth
- Ⓜ 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 penetration depth of the magnetic force (approx. 10 mm) because of the flat magnetic field
- Ⓜ Adhesive force: 140 N/cm² with pole pitch 12 + 3 mm

Technical data

| | Dimensions [mm] | | | | | | | Weight [kg] | No. |
|---------|-----------------|-----|----|----|----|---|-----|-------------|-------|
| | A | B | C | D | E | F | G | | |
| 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 |

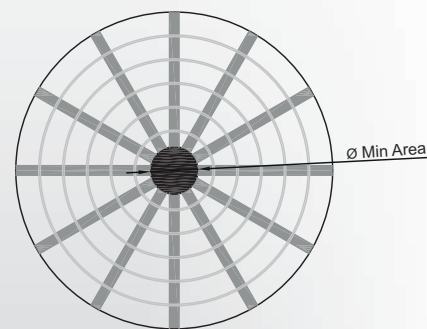
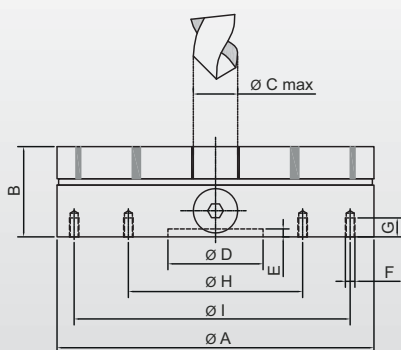
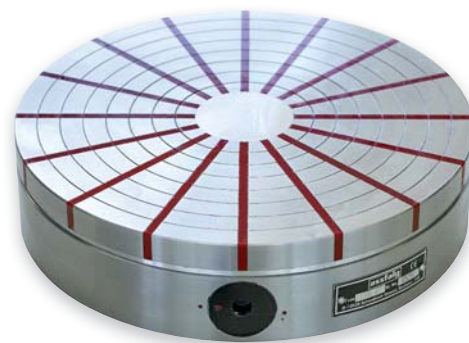
Neostar

Permanent Magnetic Chucks

The Neostar is a very strong Permanent Magnetic Chuck with radial pole pitch. It is manually switched.

It is universally suitable for rotationally-symmetrical, ferromagnetic workpieces, especially for rings and discs from approx. 80 mm diameter.

A drilled hole in the center can be made.



Application

- ▶ Universally usable, particularly for internal cylindrical grinding, turning and hard turning
- ▶ Excellently suitable for clamping rings

Features

- ✔ Medium design height with very high adhesive force
- ✔ Liquid-tight
- ✔ Can be switched ON/OFF mechanically
- ✔ The center is not magnetic and can be drilled up to the max. measure "C"
- ✔ Workpieces can be clamped stress-free and fast
- ✔ All-around processing as only one side is clamped magnetically
- ✔ A centric through-hole can be incorporated
- ✔ Low penetration depth of the magnetic force (approx. 10 mm) because of the flat magnetic field
- ✔ Adhesive force: 140 N/cm²

Technical data

| | Dimensions [mm] | | | | | | | | Boreholes in F [mm] | Pole | Weight [kg] | No. |
|-------|-----------------|----|-----|-----|---|----|-----|-----|------------------------|------|----------------|-------|
| | A | B | C | D | E | G | H | I | | | | |
| 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 x M6 | 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 |

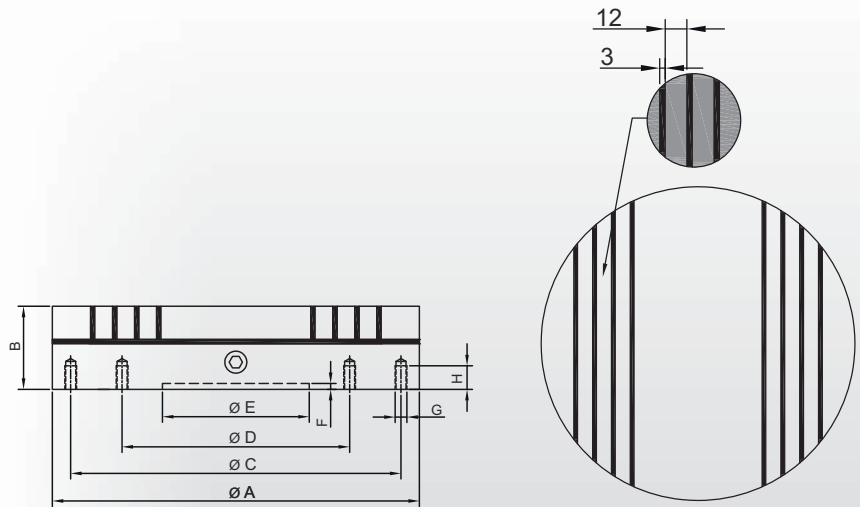
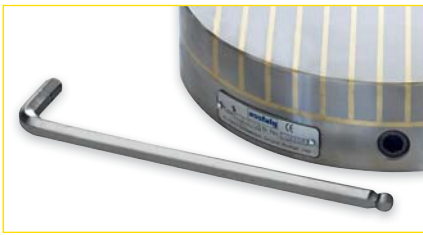
Permamax

Permanent Magnetic Chucks

The Permamax is a very strong Permanent Magnetic Chuck with parallel pole pitch. It is manually switched.

It is universally suitable for ferromagnetic workpieces, particularly for small parts and disks.

Only blind holes can be incorporated



Application

- ▶ Universally usable, particularly for small workpieces
- ▶ Best suitable for flat grinding, internal cylindrical grinding, turning and hard turning

Features

- Ⓜ Medium design height with very high adhesive force
- Ⓜ Processing of adhesive surface up to max. 8 mm depth (5 mm at $D \leq 130$ mm)
- Ⓜ Liquid-tight
- Ⓜ Mechanically switchable
- Ⓜ Workpieces can be clamped stress-free and fast
- Ⓜ All-around processing as only one side is clamped magnetically
- Ⓜ Low penetration depth of the magnetic force (approx. 10 mm) because of the flat magnetic field
- Ⓜ Adhesive force: 140 N/cm² with pole pitch 12 + 3 mm

Technical data

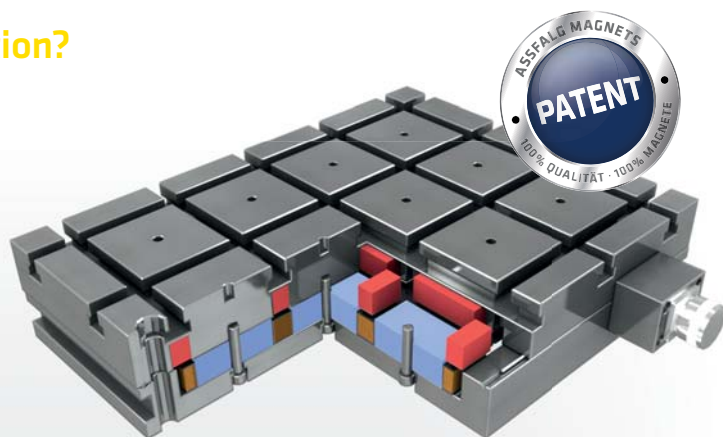
| | Dimensions [mm] | | | | | | | | Weight [kg] | No. |
|--------|-----------------|----|-----|-----|-----|---|----|----|-------------|-------|
| | A | B | C | D | E | F | G | H | | |
| PMR 10 | 100 | 55 | - | 75 | 50 | 5 | M6 | 12 | 3 | 57990 |
| PMR 16 | 160 | 55 | 120 | 80 | 50 | 5 | M6 | 12 | 9 | 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 |

Electropermanent Magnets

How do Electropermanent Magnets function?

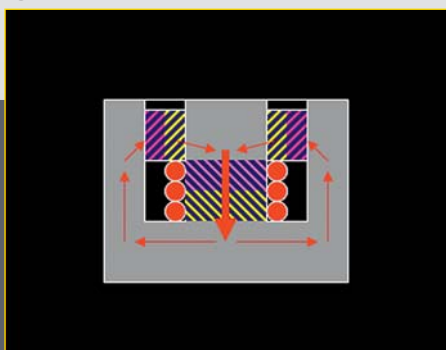
Magnetic components (AlNiCo within the coil) which are controllable by means of current are magnetized using impulse current for a few seconds (👉 Graphic 1 + 2).

The magnetic components are exactly opposed to the polarizations of the Neodym Permanent Magnets, with the magnet being switched off (👉 Graphic 1). The magnetic components are rectified to the polarizations of the Neodym Permanent Magnets, with the magnet being switched on (👉 Graphic 2). **Electropermanent Magnets excel by their strong adhesion strength which they do not even lose in case of a power failure.**



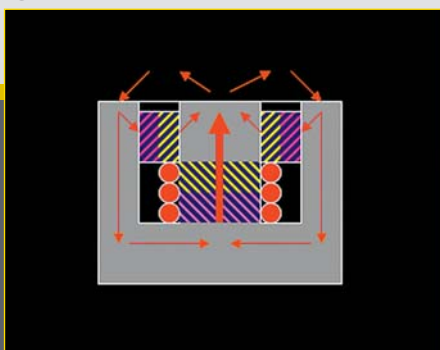
Patent No US 7999645

OFF




👉 Graphic 1

ON



👉 Graphic 2

 North pole
 South pole

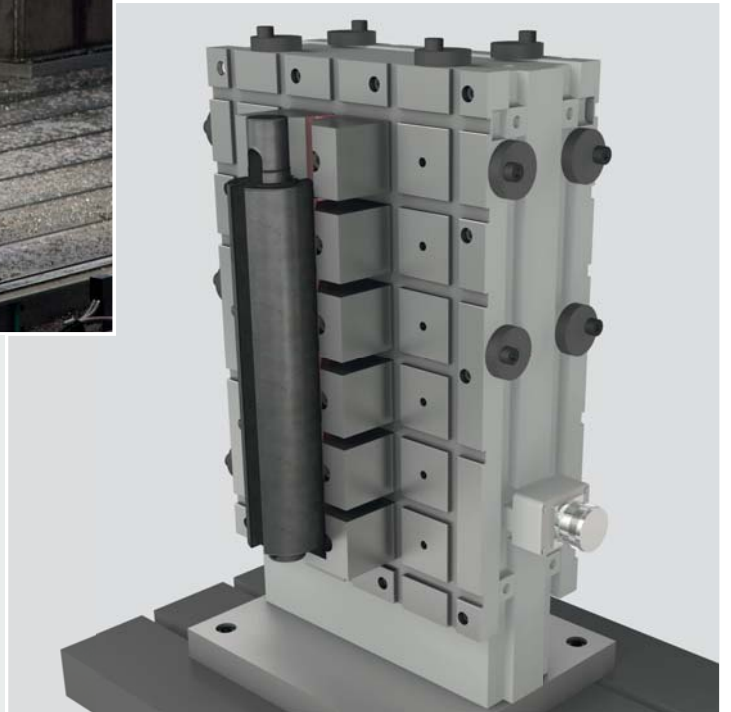
Features

- ▶ Electropermanent Magnets combine both the Electrical and the Permanent Magnet Technology.
- ▶ It is a Permanent Magnet which is switched on and off electrically

Magnaslot

Electropermanent Magnetic Chuck

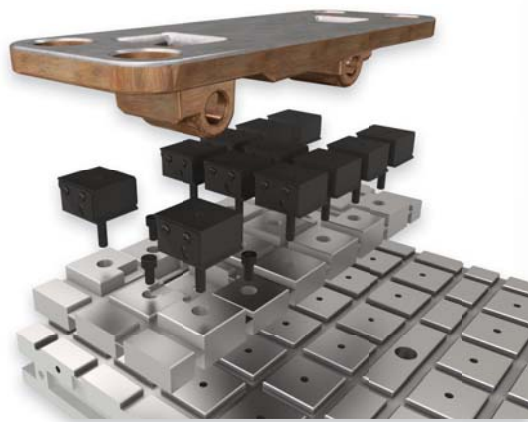




Magnaslot

Electropermanent Magnetic Chuck

The patented (EPM) electropermanent magnetic chuck with squarepole technology with a full steel surface is the perfect solution in clamping ferromagnetic workpieces on machine tools reliably and energy efficient. By using of pole extensions unevenness in the workpiece is being compensated and a distortion of the workpiece will be prevented.



Workpiece clamped on adapter plate mounted with mobile poles to adjust to the uneven surface

Features [HD 50]

- ☑ Pole size 50 x 50 mm
- ☑ Adhesive force ≥ 350 kg per pole
- ☑ Penetration depth of the magnetic field at maximum of adhesive force level up to 12 mm
- ☑ A minimum of 8 poles contact is necessary for optimum clamping



- ☑ Magnaslot 400 x 600 mm: ECO Version, 40 poles in pole sizes 50 mm offers enough adhesive surface for small and medium sized workpieces

Technical data

| | Dimension [LxWxH] | 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 | 56300 |
| 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 |
| 608 ECO 50 | 580 x 790 x 55 | 80 | 170 | 63278 |

* stock standard



- Magnaslot 400 x 600 mm: HD Version, 48 poles in pole sizes 50 mm offers enough adhesion surface for small and medium sized workpieces

- Magnaslot 400 x 800 mm: 32 poles pole size 75 mm



Professional advantages

- ▶ All-around 5-sided machining is possible in one clamp
- ▶ No distortion by a hardly strained clamping of the workpiece
- ▶ Set-up times are reduced to a minimum, hence and increase of productivity
- ▶ Longer tool life and process accuracy
- ▶ Workpieces are clamped in seconds

| Technical data | Dimension [LxWxH] | 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
- Penetration depth of the magnetic field at maximum of adhesive force level up to 24 mm
- A minimum of 4 alternate poles contact is necessary for optimum clamping

Options

- Controllers and pole extensions see accessories on page 15

Application

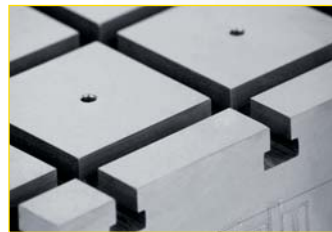
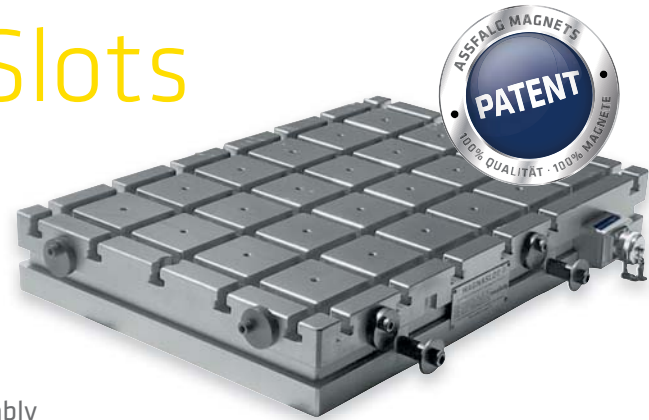
- ▶ For clamping of small and big workpieces by milling processes
- ▶ Clamping without vibration and distortion
- ▶ Manufacturing and process accuracy with plane parallelism of 0.02 mm and more

Magnaslot with T-Slots

Electropermanent Magnetic Chuck

The patented (EPM) electropermanent magnetic chuck with T-Slots with a full steel surface combined the advantages of the magnetic and mechanical clamping in one chuck. It is the perfect solution in clamping ferromagnetic and non ferromagnetic workpieces on machine tools reliably and energy efficient.

By using of pole extensions unevenness in the workpiece is being compensated and a distortion of the workpiece will be prevented.



Application

- ▶ All-around 5-sided machining is possible 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 enable a processing of big workpieces

Features

- ⌚ Pole size 75 x 75 mm
- ⌚ T-slots for the mechanical clamping
- ⌚ Adhesive force ≥ 790 kg per pole
- ⌚ Penetration depth of the magnetic field at maximum of adhesive force level up to 25 mm
- ⌚ Completely from a full steel body, hence the best protection against hot chips and coolant
- ⌚ By using pole extensions also uneven workpieces can be clamped without distortion
- ⌚ Minimization of setup times

Options

- ⌚ Controllers and pole extensions (see accessories on page 15)

| Technical data | Dimension [LxWxH] | 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

The function of the electronic controllers reserving the polarity is to switch on and off the magnetic chuck and for regulating the adhesive force in 8 steps by the corresponding manual control unit. If several or multiple chucks are grouped together a distributor JB is switched between. For a magnetic chuck size of 600 x 600 mm the controller D50 is enough. For bigger sizes the controller D100 is required. Every controller is provided with a 3 m power cable for connection to 400 V and with a 3.5 m power cable with bayonet connection for each channel.



Controller D50



Hand operating unit

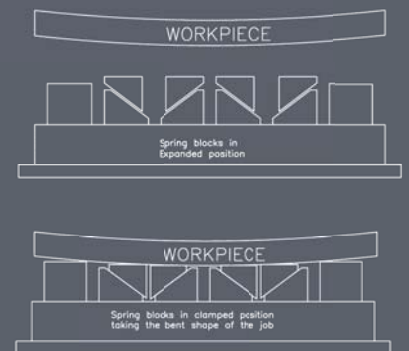


PVF



PVB Pole extension compressed (left) and in a rebounding state (right)

| Technical data | Pole size | Dimensions | Version | No. |
|-----------------------|-----------|--------------|---------|-------|
| Pole extensions [Typ] | [mm] | [mm] | | |
| PVF 50 | 50 | 50 x 50 x 32 | fixed | 61262 |
| PVB 50 | 50 | 50 x 50 x 32 | mobile | 61263 |
| PVF 75 | 75 | 75 x 75 x 48 | fixed | 40127 |
| PVB 75 | 75 | 75 x 75 x 48 | mobile | 40128 |



| Technical data | Channel | No. |
|--|---------|-------|
| Controller [Typ] | | |
| EPM-D50 to 50 A, with remote and adhesive regulation | 1 | 64200 |
| EPM-D100 to 100 A, with remote and adhesive regulation | 1 | 52950 |
| EPM-D100-4 to 100 A, with remote and adhesive regulation | 4 | 58088 |
| EPM-D100-6 to 100 A, with remote and adhesive regulation | 6 | 60875 |



4-channel- operator panel for D100-4



Bayonet connection



Bayonet socket



Bayonet plug

Doublemag | Triplemag

Electropermanent Magnetic Chucks

These magnetic modules are adhesive on both sides and both clamp the work piece and themselves to the machine table. Mechanical clamping or fix clamping is not required.

Several modules combined, are a cost-effective alternative to big magnetic chucks.

The Triplemag series has additional positioning magnets, ensuring a constant position on the machine table and which are separately switched.



DM 502

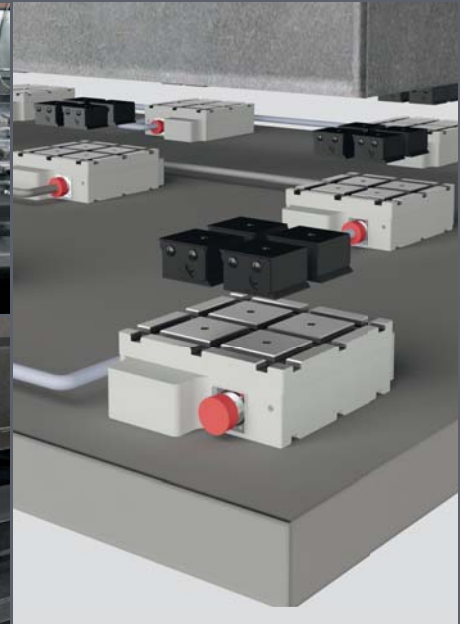


TM 505

Special versions
on request

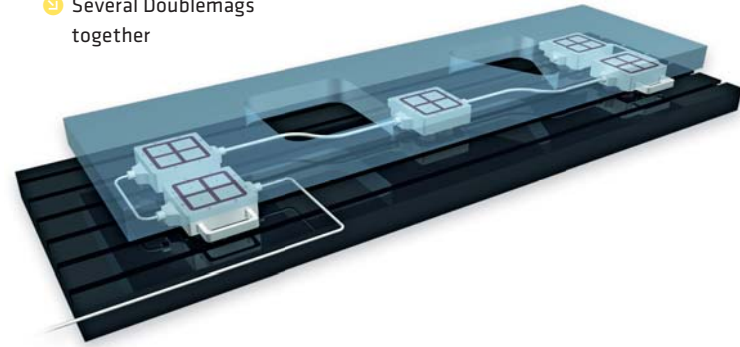
Application

- ▶ For clamping big or bulky workpieces during milling processing, rough or finish machining
- ▶ For clamping during edge cutting or deburring (without mechanical chucks)
- ▶ For simple and fast fixing of workpieces during mounting
- ▶ Also usable with fixed and movable pole extensions for uneven surfaces





- Several Doublemags together



Professional advantages

- ▶ Drastic reduction of set-up times
- ▶ A 5-sided processing at simple and fast positioning of the work piece
- ▶ Low vibration while milling, and even distribution of adhesive force over the entire magnetic clamping surface
- ▶ For processing big parts, several Double/Triplemags can be connected with each other and controlled
- ▶ Using pole extensions, plane-parallelism of up to 0.01 mm is possible on the work piece
- ▶ Also bulky workpieces can be clamped without distortion by using pole extensions
- ▶ Full utilization of the machine, because there are no disturbing edges unlike with mechanical clamping

Features

- ✔ Pole size 50 × 50 mm
- ✔ Adhesive force ≥ 350 kg per pole
- ✔ Penetration depth of the magnetic field at maximum adhesion force up to 12 mm
- ✔ Complete full steel body, so the best protection against hot chips and coolant
- ✔ Full clamping force will only be achieved if the supporting table is ferromagnetic and at least 15 mm thick

Options

- ✔ For pole extensions see Accessories on page 15



Controller D40-S

Technical data

| | Dimensions [L×W×H] [mm] | Number of poles | Voltage [Volt] | Ampere [A] | Weight [kg] | No. |
|--------|----------------------------|-----------------|-------------------|---------------|----------------|-------|
| 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 |

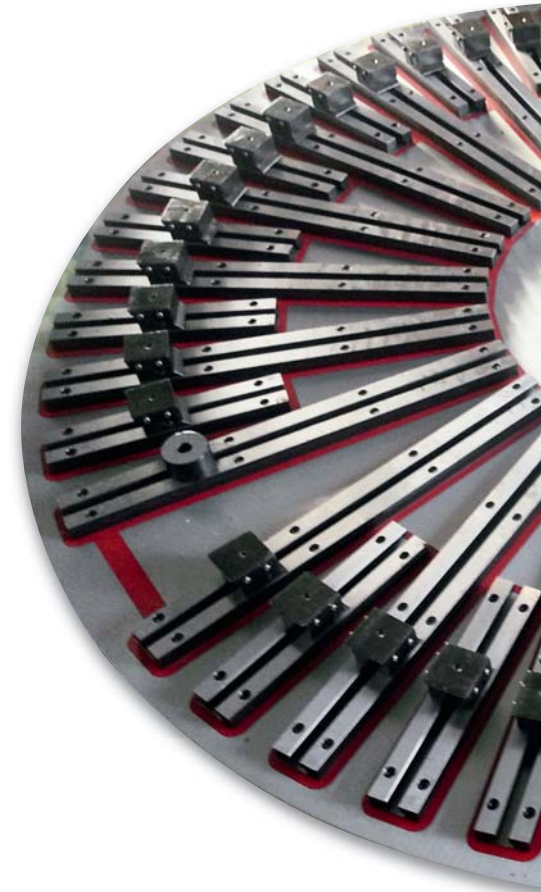
Radialpol

Electropermanent Magnetic Chuck

The Electropermanent Magnet Chuck from Assfalg magnets is ideal for clamping big, rotationally-symmetrical workpieces from 400 mm diameter without distortion.

A drilled hole in the center can be made at any time.

Pole extensions which are attached to the surface of the magnetic chuck make it possible also for uneven workpieces or raw parts to be clamped without distortion.



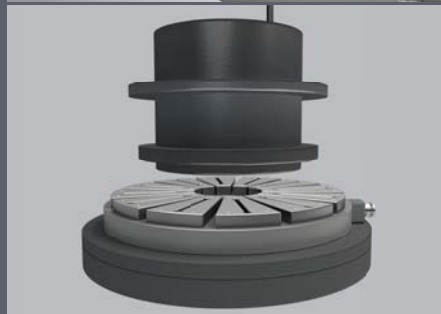
👉 EPRadial from Ø 600 mm



Application

- ▶ Universally suitable for clamping ferromagnetic (ferrous) workpieces, particularly on lathes and disc grinding machines
- ▶ Ideal for bearing ring processing, also for hard processing

👉 EPRadial-P to Ø 600 mm





Professional advantages

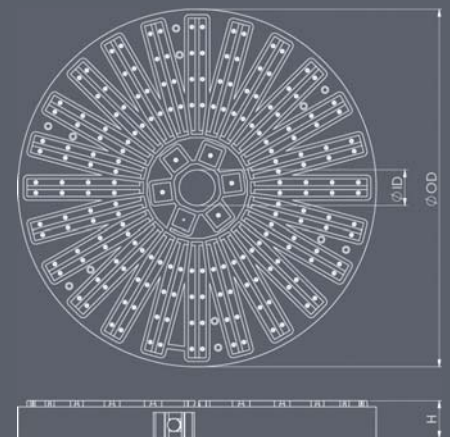
- ▶ Extremely short set-up times due to simple and fast clamping of workpieces
- ▶ 5-side processing, as only one work piece side is required for magnetic clamping
- ▶ Distortion-free holding of raw part or uneven work piece, because positive-locking clamping by means of fixed and mobile pole extension becomes possible (underlining of workpieces is not necessary any more!)
- ▶ No damages to the magnetic chuck in case of breakouts, because the work piece can be clamped raised to pole extensions
- ▶ Slight adjustment of the magnetic adhesion power to thin workpieces or when aligning by means of the adhesion power regulation

Features

- ⌚ Extremely high, permanent, magnetic adhesion power at activation within seconds
- ⌚ Through holes or surrounding clamping slots for fastening on machine table or device
- ⌚ Special cable with bayonet fixing or fixed cable with slip ring carrier enable a connection of magnetic chuck and controller

Options

- ⌚ Optionally, the magnetic chuck can be also delivered with T-slots so that additional stops can be fixed
- ⌚ For controllers and pole extensions see Accessories on page 15



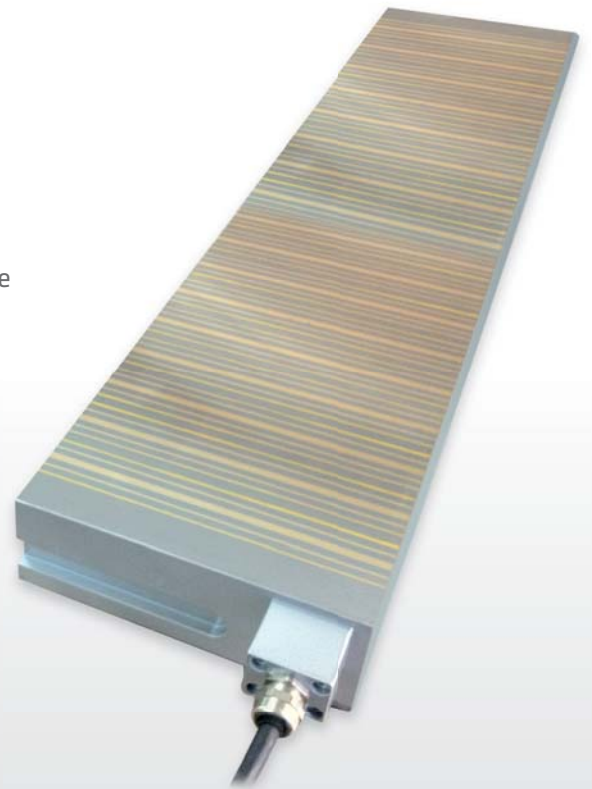
Technical data

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

EPFlux

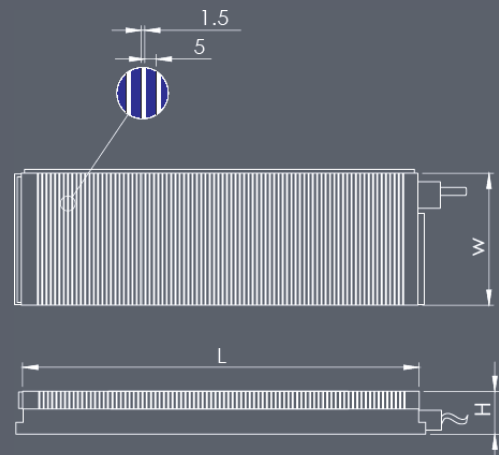
Electropermanent Magnetic Chuck

The EPFlux magnetic chuck is highly suitable for grinding application of all size of jobs – also for hardened and alloyed workpieces, because there is nearly no residual magnetism. By the EPM technology no heat built up. This guarantees a maximum of precision while processing.



Features

- ⌚ Clamping force approx. 100 N/cm²
- ⌚ Pole pitch 5 + 1.5 mm
- ⌚ Incorporating cable outlet
- ⌚ Controlling and switching with the controller D50-F/D100-F 220 V / 400 V depending on the size of the chuck



Technical data

| Technical data | Length | Width | Height | No. |
|----------------|--------|-------|--------|------------|
| | [mm] | [mm] | [mm] | |
| EPFlux 4515 | 450 | 150 | 65 | 64287 |
| EPFlux 5020 | 500 | 200 | 65 | 51002 |
| EPFlux 6030 | 600 | 300 | 65 | 63494 |
| EPFlux 8040 | 800 | 400 | 65 | on request |
| EPFlux 10050 | 1,000 | 500 | 65 | on request |
| EPFlux 15060 | 1,500 | 600 | 65 | on request |

MS | SW | MAV | PA

Magnet Welding Angles

Your universal handyman for small welding and assembly works, for round and flat materials. All magnetic angles are switchable and suitable for flat and round material, except SW.

MAV 120 and PA 200 are stepless angle adjustable.



MS



PA 200



SW



MAV 120



MSA

Features

- ☑ Easy positioning, adjusting and fixing of workpieces
- ☑ No disruption of the arc when welding
- ☑ MS, MAV 120 and PA 200 each thigh is switchable
- ☑ MAV 120 and PA 200 have an easy and exactly angle adjustment by a quick release and scale



| Technical data | Dimensions [LxWxH] [mm] | Angle | Switchable | Use also for Round material | Adhesive force [kg] | Weight [kg] | No. |
|----------------|----------------------------|------------|------------|--------------------------------|------------------------|----------------|-------|
| MSA I | 110 x 95 x 30 | 45°/90° | Yes | Yes | 36 | 0.7 | 45338 |
| MSA II | 150 x 130 x 35 | 45°/90° | Yes | Yes | 60 | 1.4 | 45339 |
| MS 2-80 | 153 x 153 x 38 | 90° | Yes * | Yes | 46 | 1.2 | 48192 |
| MS 2-90 | 195 x 195 x 59 | 90° | Yes * | Yes | 68 | 2.7 | 18736 |
| MAV 120 | 197 x 197 x 50 | 25° - 275° | Yes * | Yes | 41 | 2.4 | 162 |
| PA 200 | 240 x 240 x 41 | 22° - 270° | Yes * | Yes | 90 | 1.6 | 60343 |
| SW 200 | 200 x 200 x 50 | 90° | No | No | 40 | 2.5 | 46504 |
| SW 300 | 300 x 300 x 50 | 90° | No | No | 60 | 4.0 | 46503 |

* Every thigh is separately switchable

Magsquare

Magnetic module

Universal welding and mounting help. The magnetic force acts on 5 sides. It can also be used as an addition to magnetic angle A 90 and Boomer. Several threaded holes already exist as fastening options.



Features

- 🔌 Magnets can be completely switched off by just turning the switch lever by 180°
- 🔌 Usable for round and square workpieces
- 🔌 Retention force acts on all sides
- 🔌 Threaded holes on every side for individual take-up or mounting



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

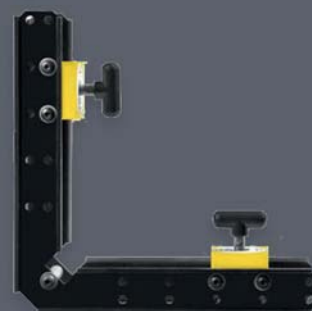
Magnet Welding Angles

Your third indispensable hand for welding or assembly works on flat and round materials at an angle of 90°.



Features

- ☑ Magnets can be completely switched off by just turning the switch lever by 180°
- ☑ Sturdy steel construction of the angle
- ☑ Usable as inside and outside angle
- ☑ Usable for round and square workpieces
- ☑ Retention force acts on all sides
- ☑ Even more magnetic force with optional extensible magnetic modules



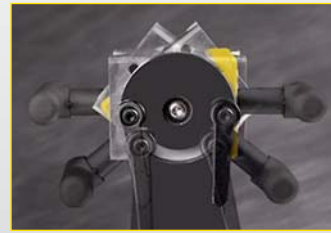
Technical data

| | Dimensions [LxWxH] | Adhesive force | Weight | No. |
|--------|--------------------|----------------|--------|-------|
| | [mm] | [kg] | [kg] | |
| A 165 | 205 x 205 x 77 | 68 | 0.8 | 61945 |
| A 400 | 288 x 288 x 89 | 181 | 2.8 | 60340 |
| A 600 | 288 x 288 x 105 | 272 | 3.7 | 60341 |
| A 1000 | 287 x 474 x 145 | 454 | 4.6 | 60342 |

Boomer

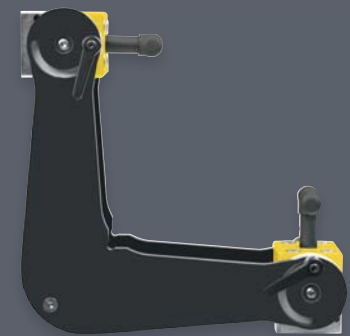
Magnet Welding Angles, flexible

Your compact helper for welding or assembly works, for round and flat materials.



Features

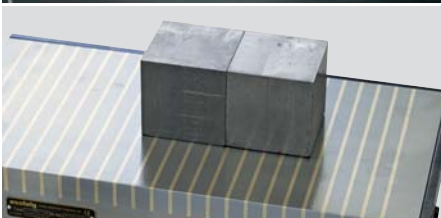
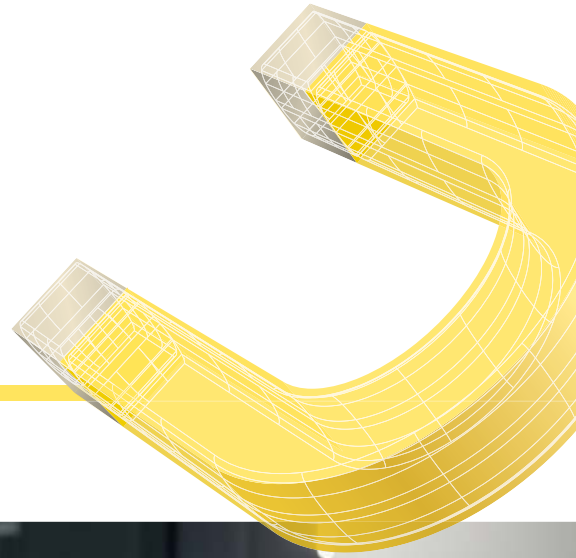
- ⌚ Fast and easy angle adjustment by means of quick release
- ⌚ Engraved scales for exact angle adjustment, 0 - 360°
- ⌚ Magnets can be completely switched off by just turning the switch lever by 180°
- ⌚ Sturdy steel construction of the angle
- ⌚ Usable for round and square workpieces
- ⌚ Retention force acts on all sides



Technical data

| | Dimensions [LxWxH] | Adhesive force | Weight | No. |
|--------|--------------------|----------------|--------|-------|
| | [mm] | [kg] | [kg] | |
| BA 150 | 196 x 196 x 140 | 68 | 1.3 | 60344 |
| BA 400 | 257 x 257 x 132 | 181 | 3.0 | 60345 |
| BA 600 | 257 x 257 x 140 | 272 | 4.4 | 60346 |

Assfalg Clamping Magnets



WANT TO KNOW MORE?

We advise you gladly.

Via telephone or during a personal appointment.

➔ T +49 (0) 71 71.92 505-0

➔ info@assfalg-gmbh.de



www.assfalg-gmbh.de



www.assfalg-magnets.de

Assfalg GmbH

Buchstraße 149
73525 Schwäbisch Gmünd
Germany

Tel +49 (0) 71 71.92 505-0

Fax +49 (0) 71 71.92 505-50

assfalg