

assfalg  
TOOLS

● LIFTING MAGNETS

● MAGNASLOT

● MAGNETIC TOOLS

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MAGNETS

assfalg  
MACHINES

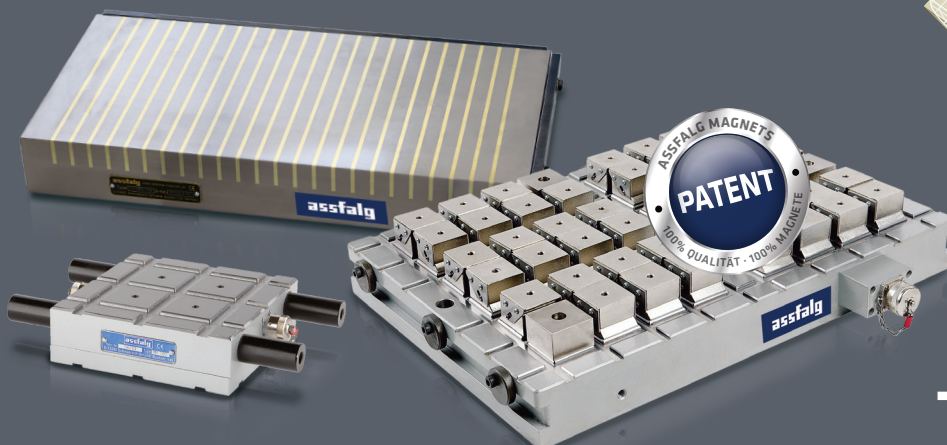
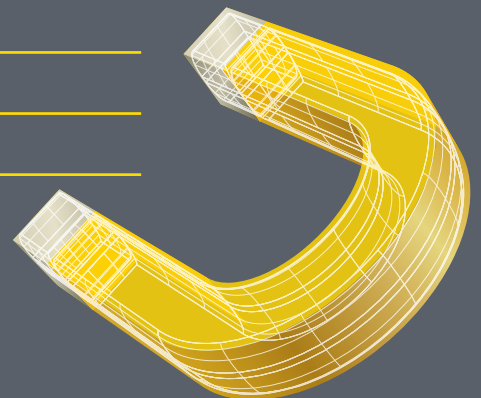
● CLAMPING MAGNETS

# 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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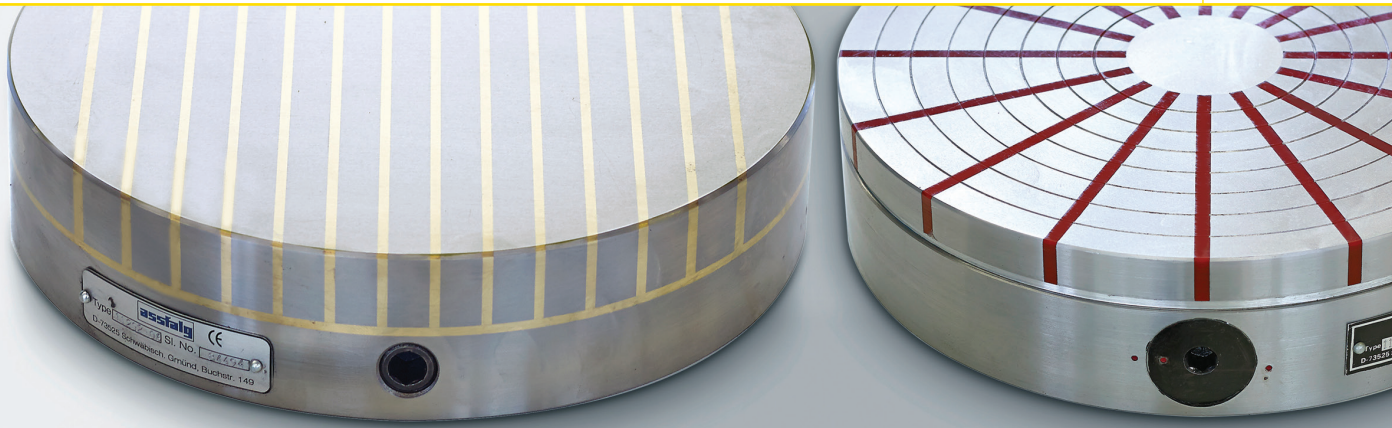
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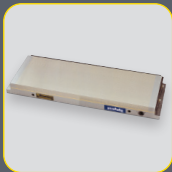
Edition 03.2022

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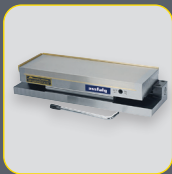


## Permanent Magnets



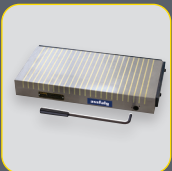
**Microfine**  
Permanent Magnetic Chucks  
for grinding - EDM

04



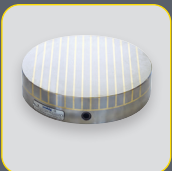
**Microsine**  
Sinetable with Permanent  
Magnetic Chucks

05



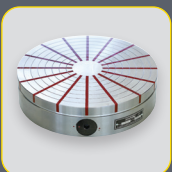
**Permamax**  
Permanent Magnetic Chucks  
for milling

06



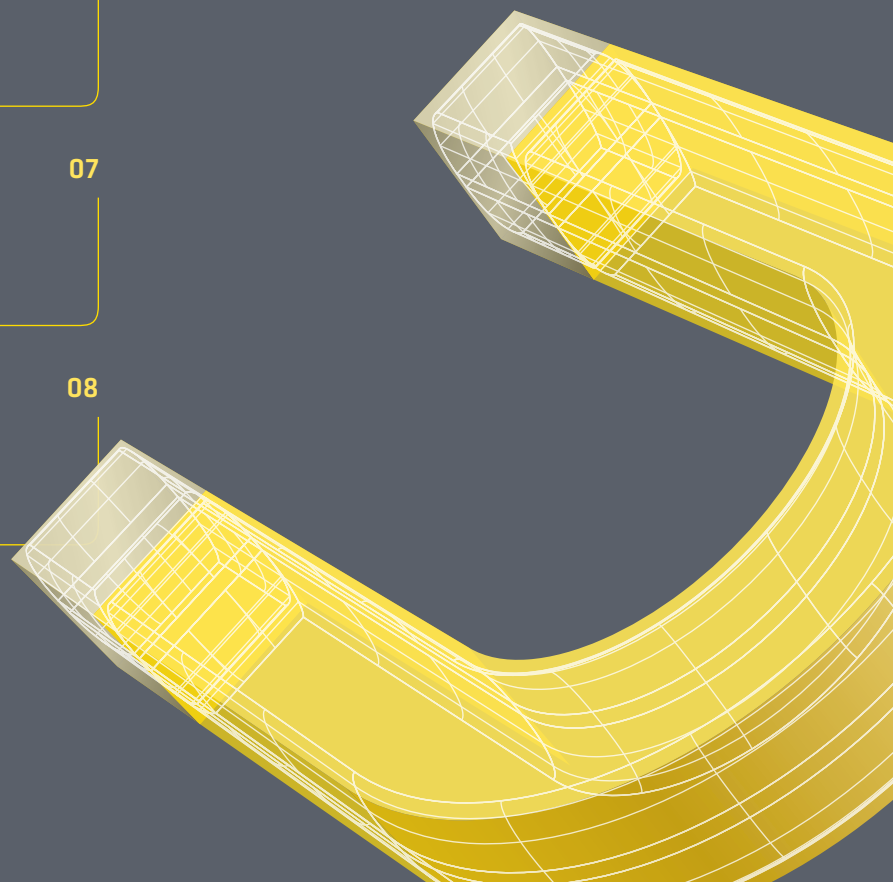
**Permamax**  
Permanent Magnetic Chucks  
for milling, grinding, lathing

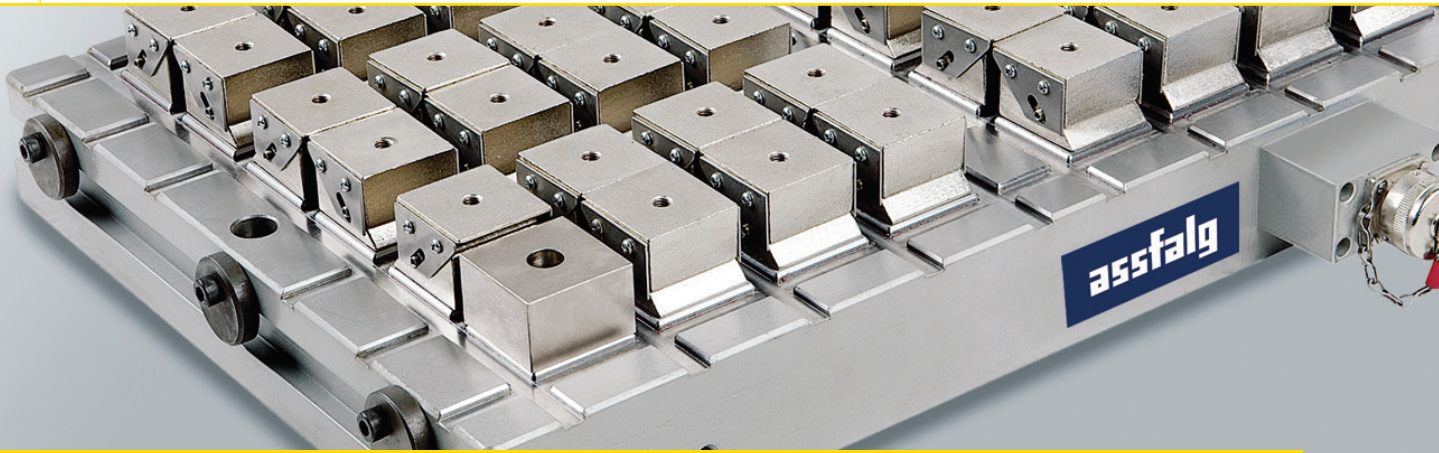
07



**Neostar**  
Permanent Magnetic Chucks  
for lathing, grinding

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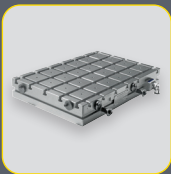
## Electropermanent Magnets 09 | Permanent Magnets 21



### Magnaslot

Electropermanent Magnetic Chucks for milling

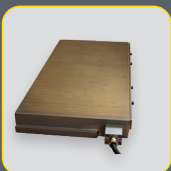
10



### Magnaslot with T-Slots

Electropermanent Magnetic Chucks for milling

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### EPFlux

Electropermanent Magnetic Chucks for grinding

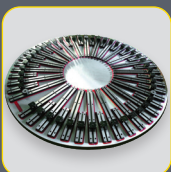
15



### Doublemag | Triplemag

small electropermanent magnetic clamping plates

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### EPRadial

Electropermanent Magnetic Chucks for lathing

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### Control units

for Electropermanent Magnetic Chucks

20



### Accessories

for Electropermanent Magnetic Chucks

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### MSQ MagSquare | MagWheel | MagMount

Magnet - Clamping aid, switchable

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### Magnet Welding Angles A 90 | BA

Switchable permanent magnets

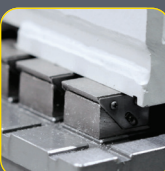
23



### Magnet Welding Angles MSA | MS2 | MAV | PA

Switchable permanent magnets

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### Assfalg Magnets in use

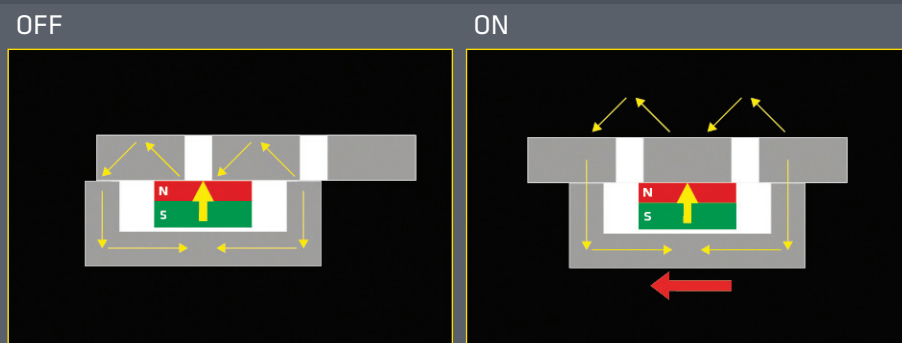
25

# 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

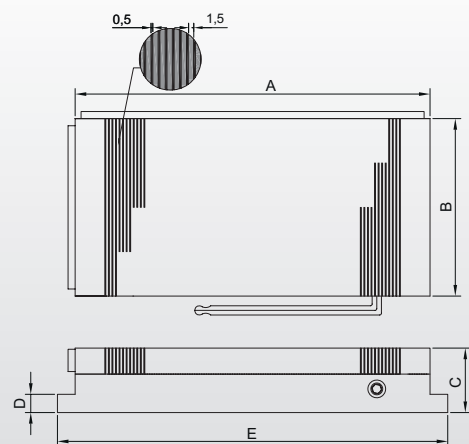
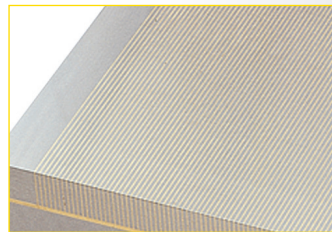
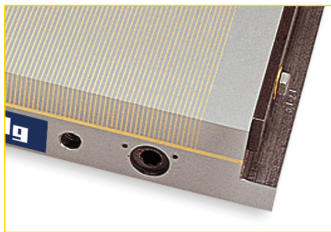
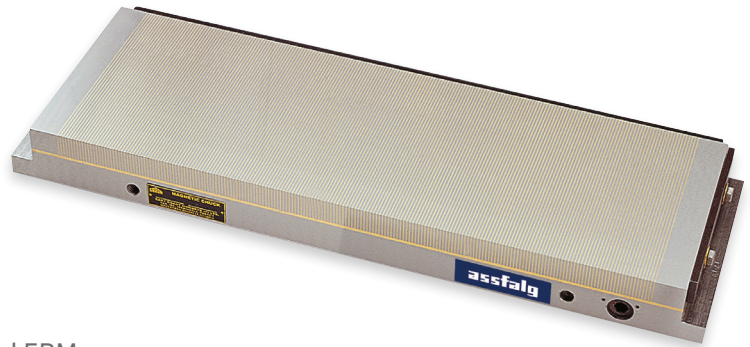
# Microfine

## 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/cm<sup>2</sup> 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

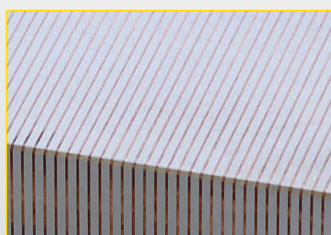
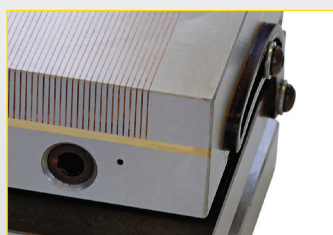
# Microsine

## 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/cm<sup>2</sup> with pole pitch 1.5 + 0.5 mm
- ✔ Swivel range 0 – 45°
- ✔ Surface hardened

### Technical data

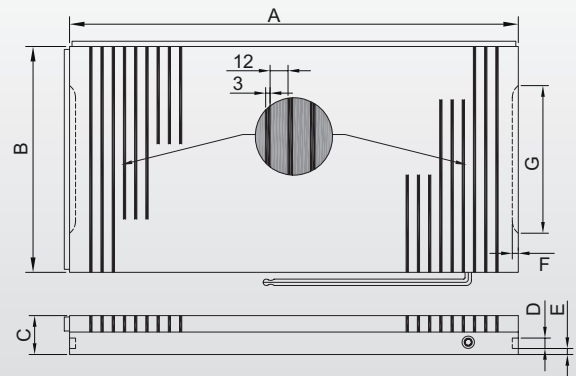
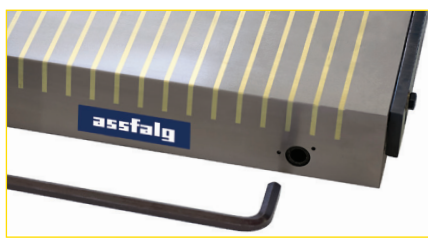
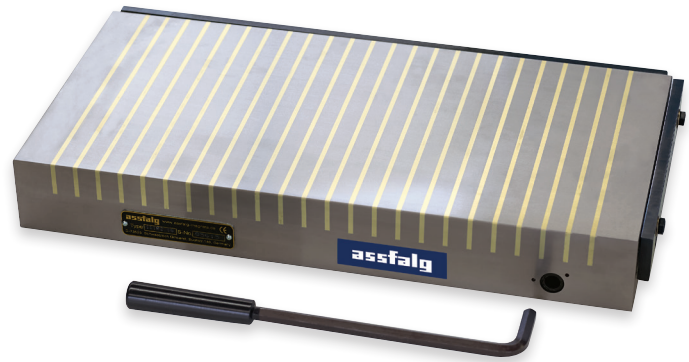
	Dimensions [L×W]		No.	
	[mm]	[swivel axis = length]		[swivel axis = length + width]
MF SI 1710	175 x 100		42461	42468
MF SI 3015	300 x 150		11045	27748
MF SI 4515	450 x 150		63101	on request
MS SI 6030	600 x 300		41795	on request
...	other sizes on request			

# 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/cm<sup>2</sup> with pole pitch 12 + 3 mm (highest power is concentrated within 20 mm from edges)

### Technical data

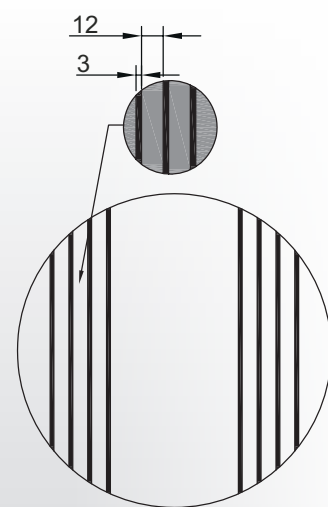
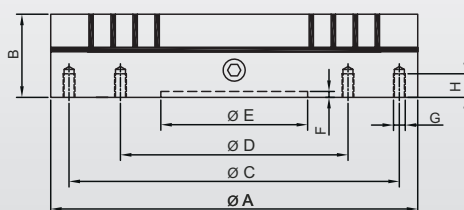
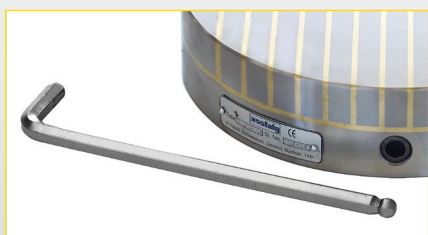
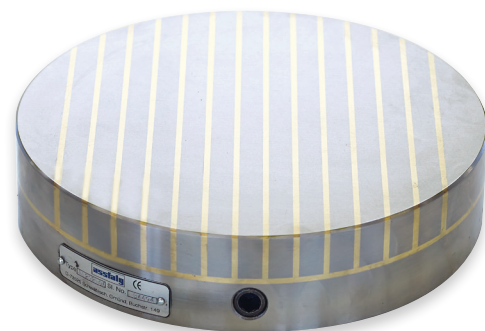
	Dimensions [mm]							Weight [kg]	No.
	A	B	C	D	E	F	G		
PM 1610	160	100	52	14	12	8	60	6	57998
PM 2515	250	150	52	14	12	8	90	15	57999
PM 3015	300	150	52	14	12	8	90	18	5088
PM 3020	300	200	52	14	12	8	120	24	58000
PM 4020	400	200	52	14	12	8	120	32	58001
PM 6020	600	200	52	14	12	8	120	49	58002
PM 5030	500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



# 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  $D \leq 130$  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/cm<sup>2</sup> with pole pitch 12 + 3 mm

### Technical data

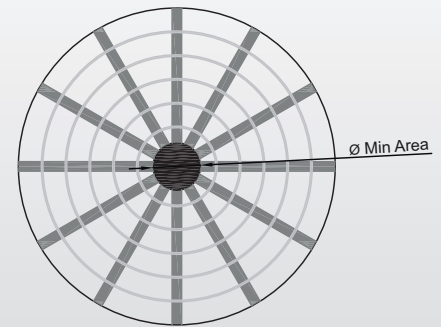
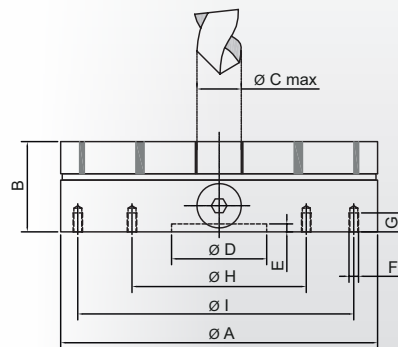
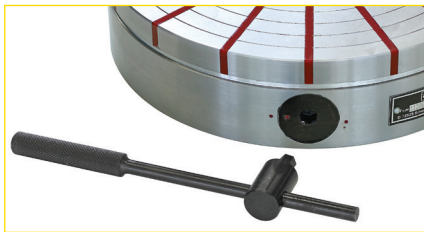
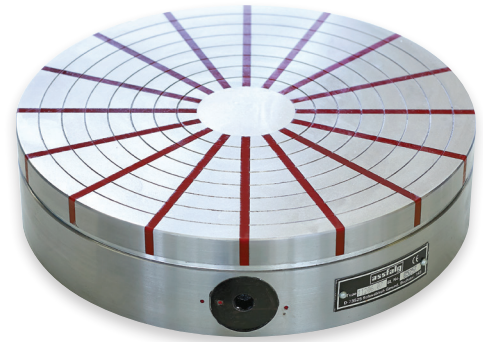
	Dimensions [mm]								Weight [kg]	No.
	A	B	C	D	E	F	G	H		
PMR 10	100	55	-	75	50	5	M6	12	3	57990
PMR 16	160	55	120	80	50	5	M6	12	9	57991
PMR 20	200	55	180	110	60	5	M6	12	13	57992
PMR 25	250	55	220	140	80	5	M6	12	21	57993
PMR 30	300	55	260	180	150	6	M6	16	30	57994
PMR 35	350	55	300	220	170	6	M8	16	41	57995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

# 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/cm<sup>2</sup>

### Technical data

	Dimensions [mm]								Boreholes in F	Pole	Weight	No.
	A	B	C	D	E	G	H	I	[mm]	[kg]		
NS 10	100	55	12	50	2	12	-	75	4 x M6	10	3	2814
NS 13	130	57	15	50	5	12	-	100	4 x M6	10	6	4275
NS 16	160	57	19	50	5	12	80	120	4 x M6	10	9	5007
NS 20	200	57	25	60	5	12	110	180	4 x M6	12	14	16350
NS 25	250	70	36	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	54	170	6	16	220	300	4 x M8	20	55	37502
NS 40	400	75	66	200	8	16	260	340	4 x M8	20	75	37169
NS 50	500	81	84	200	8	16	300	400	4 x M10	24	125	37494
NS 60	600	95	84	250	8	20	350	450	4 x M12	30	200	57997

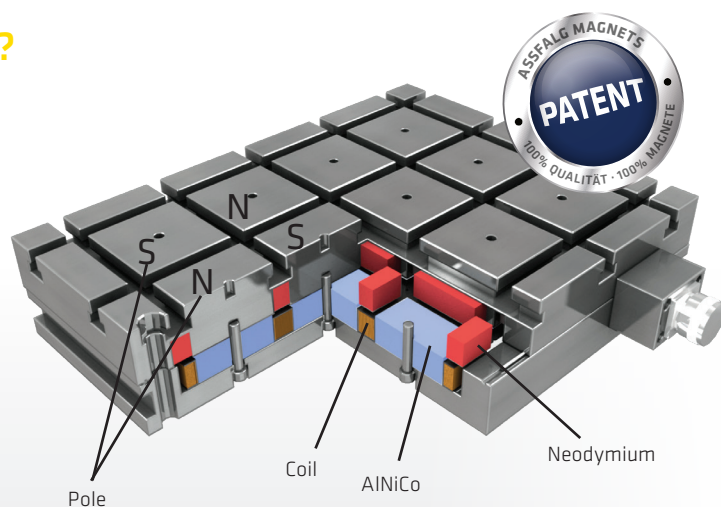
# Electropermanent Magnets

## How do Electropermanent Magnets work?

The magnetic field is created and removed via current-controllable magnets (here: AlNiCo-blue). For this, only one power pulse is needed. Depending on the respective processing case, the magnetic field can be reinforced by additional permanent magnets (here: neodymium red).

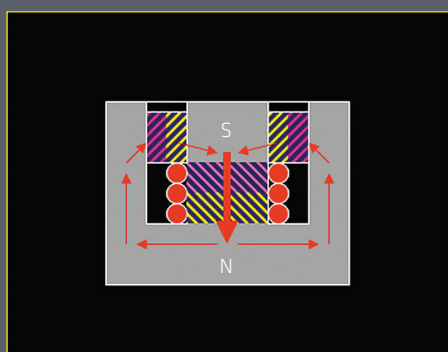
The magnetic poles can be arranged in parallel, star-shaped (radial) or square form.

Graphics 1 and 2 show a sectional image of the electro permanent magnetic clamping plate with square pole to illustrate the magnetic circuit and the switching circuit. When OFF, the AlNiCo magnets compensate for the neodymium magnets. When ON, they reinforce them.



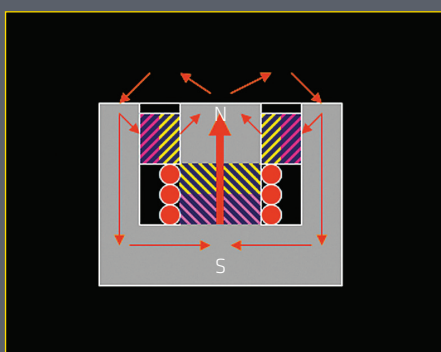
Patent No EP1874504

OFF

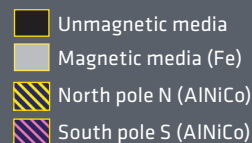


Graphic 1

ON



Graphic 2



### Features

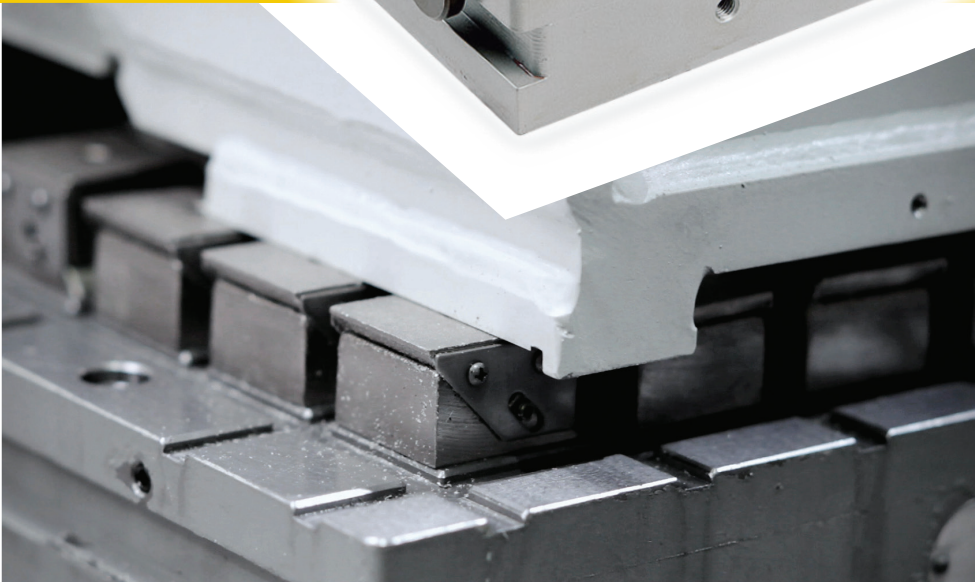
- ▶ Electropermanent Magnets combine the safety of permanent magnets with the operating comfort of electromagnets.
- ▶ The Electropermanent Magnet is switched only by a short but strong power pulse. When switched ON, it consumes no energy!

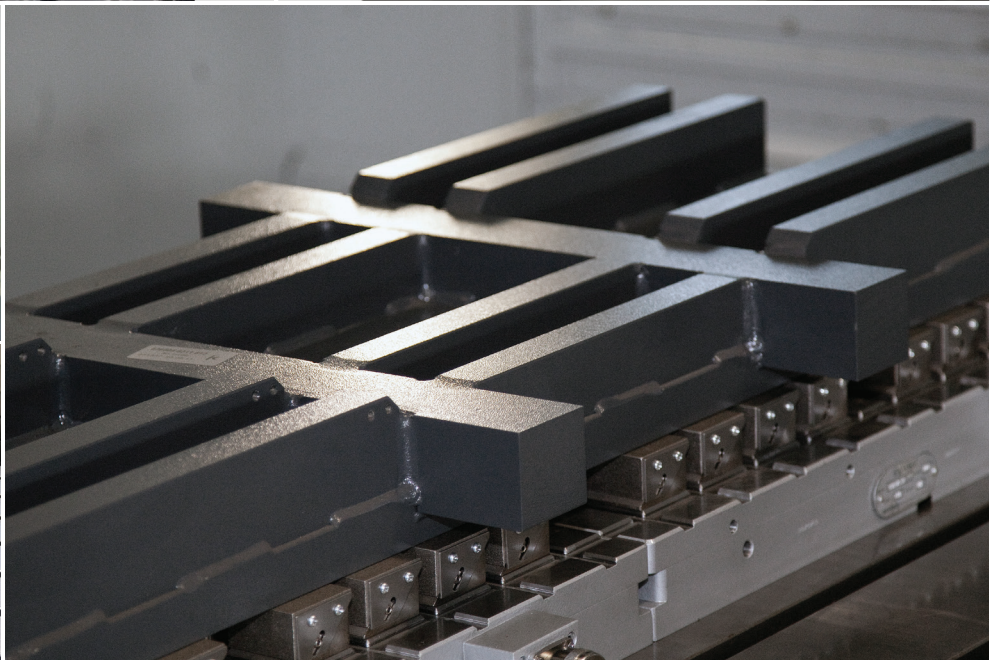
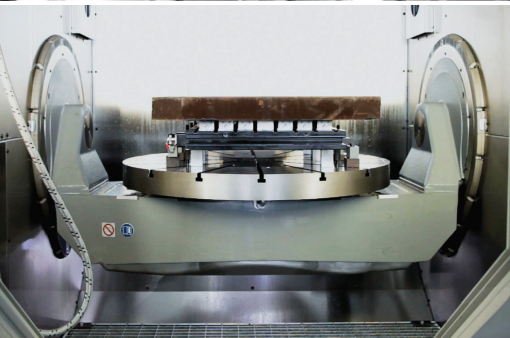
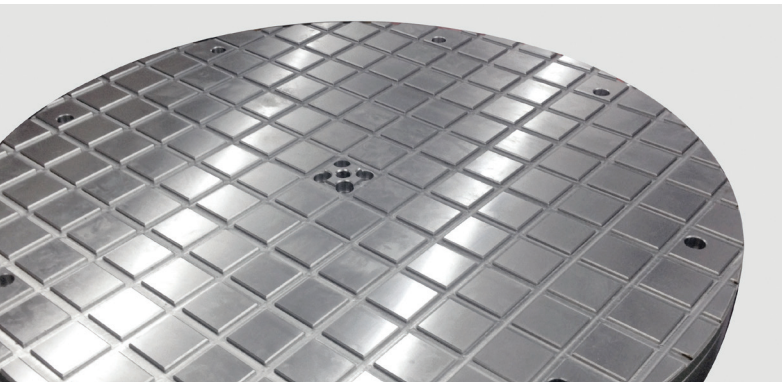
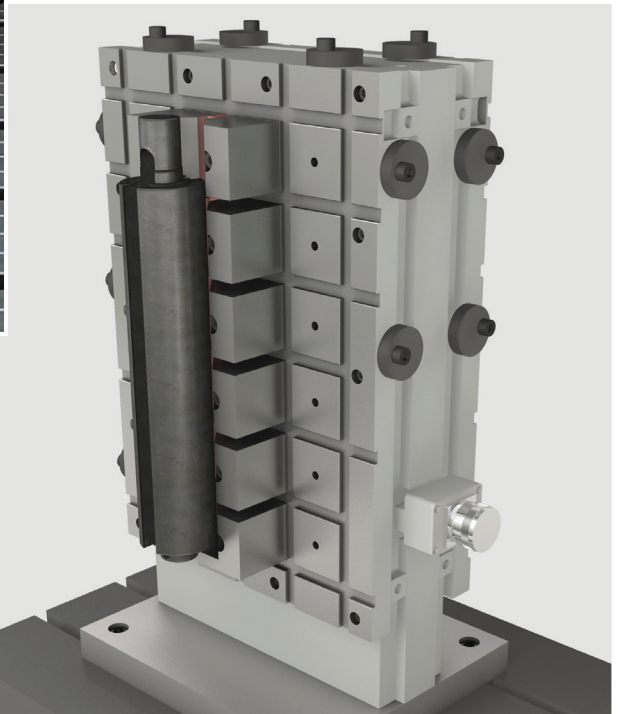
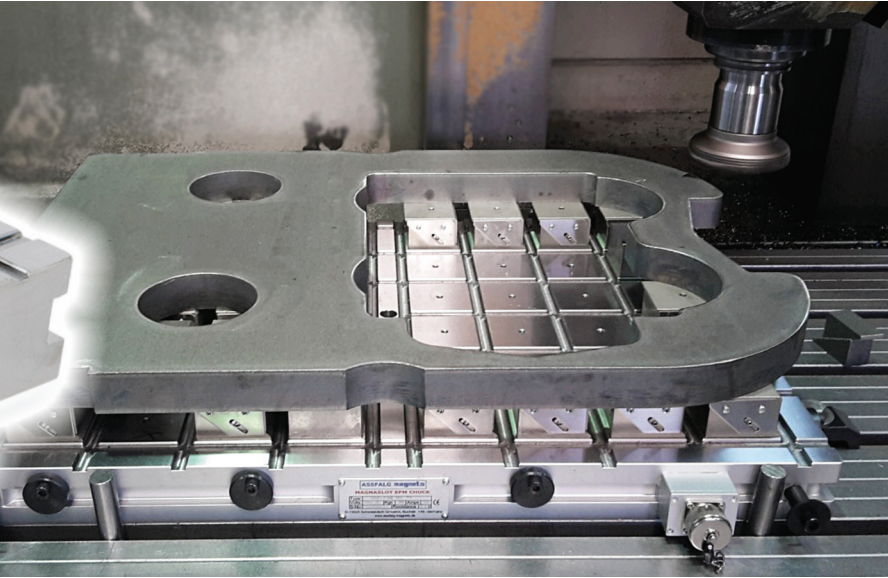
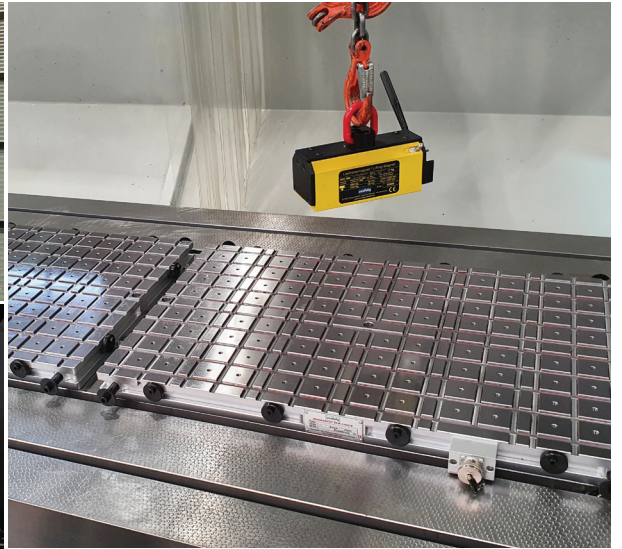
# Magnaslot

Electropermanent Magnetic Chucks



Patent No. EP1874504  
solid steel surface





# Magnaslot

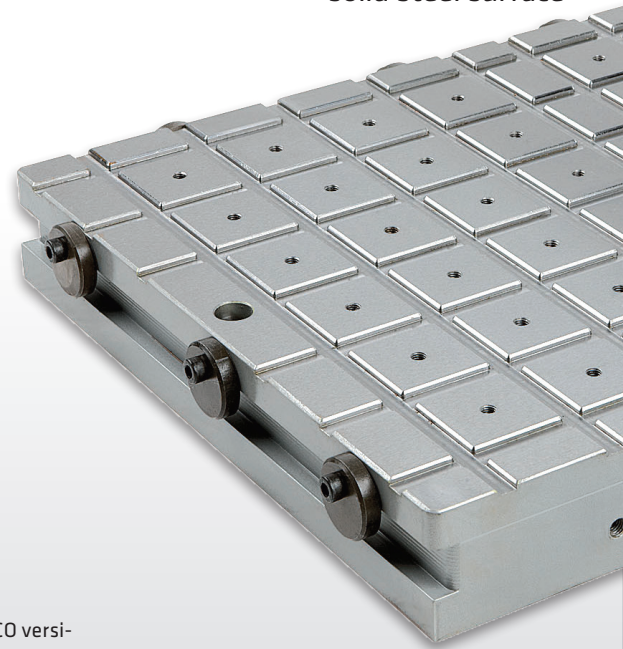
## Electropermanent Magnetic Chucks

The patented (EPM) electropermanent square pole plate Magnaslot has a solid steel surface. It is the perfect solution in order to clamp ferromagnetic materials on machine tools in a process-safe and energy-efficient way. Furthermore, it also protects against wear and tear, preventing heat pockets. The workpiece can be clamped raised by using pole extensions. Unevenness can be levelled, deformations prevented and tensions significantly reduced. The Magnaslot is available with square pole P50 and P75.

Patent No. EP1874504  
solid steel surface



☺ Magnaslot 400 × 600 mm: ECO version, reduced number of poles on the clamping surface - here 40 x P50.



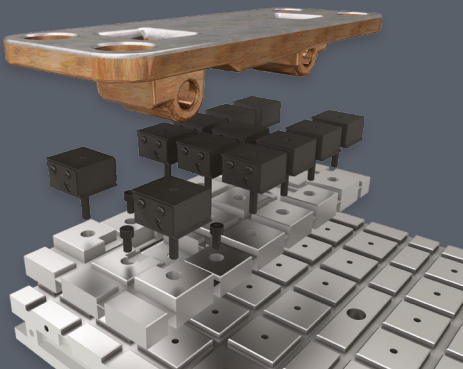
### Features [HD 50]

- ☑ Pole size 50 x 50 mm
- ☑ Adhesive force ≥ 400 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

### Technical data

	Dimension [L×W×H]	Number of Poles	Weight	No.
<b>MAGNASLOT (HD)</b>	[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
	[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



- ☑ Workpiece with adapter plate or fixed and mobile pole extensions.



🔗 Magnaslot 400 x 600 mm: HD-Version  
max. pole number on the clamping  
surface - here 48 x P50



🔗 Magnaslot 400 x 800 HD-Version,  
hier 32 x P75

### Professional advantages

- ▶ Drastic setup time minimization
- ▶ All-around 5-side machining with easy and fast positioning of the workpiece
- ▶ 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
- ▶ Ideal for milling, because its magnetic field acts in the X- and Y- axis.

### Technical data

	Dimension [L×W×H]	Number of Poles	Weight	No.
<b>High pole density (HD)</b>	[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  $\geq 900$  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 accessories -> see on page 20-21



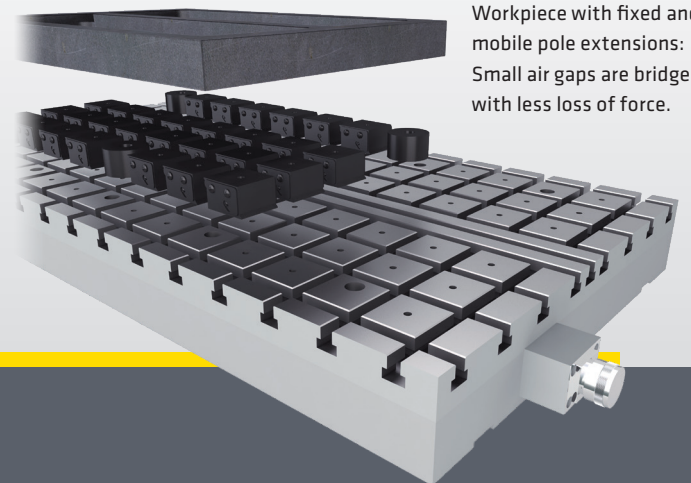
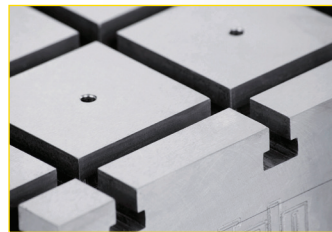
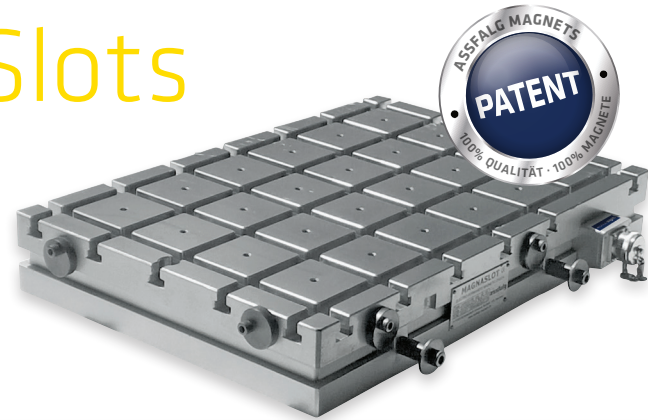
- 🔗 Several magnetic clamping plates can be combined to a large magnetic clamping table.

# 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.

It is the perfect solution in order to clamp magnetic and non-magnetic materials on machine tools in a process-safe and energy-efficient way. This plate is available only with square pole P75T.



Workpiece with fixed and mobile pole extensions: Small air gaps are bridged with less loss of force.

### 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  $\geq 900$  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 accessories -> see on page 20-21

### Technical data

	Dimension [LxWxH]	Number of Poles	Weight	No.
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

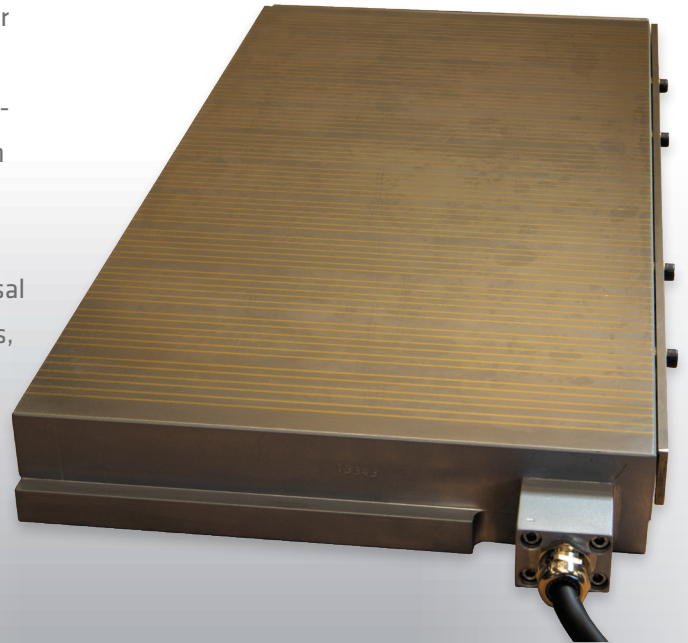


# EPFlux

## Electropermanent Magnetic Chucks

The EPFlux magnetic clamping plate is perfectly suitable for grinding and electric discharge jobs – also of hardened and high-alloy workpieces – because practically no residual magnetism and no electrical heat occurs. This guarantees a high degree of precision when machining.

Normally, these magnetic clamping plates are supplied as EPFlux-F with a fine transverse pole distribution for universal use. If with large-surface workpieces a high adhesion occurs, a special plate with compressed air holes can be offered.



### Features

- ⌚ Clamping force approx. 100 N/cm<sup>2</sup>
- ⌚ Pole pitch
- ⌚ Incorporated cable
- ⌚ Very good demagnetisation characteristics
- ⌚ Low construction height with very high holding force

### Options

- ⌚ Controllers -> see on page 20-21



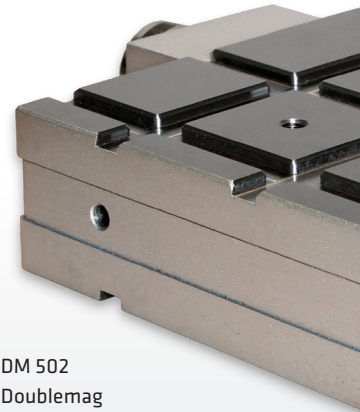
### Technical data

	Length	Width	Height	No.
	[mm]	[mm]	[mm]	
<b>EPFLUX-F</b>				
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

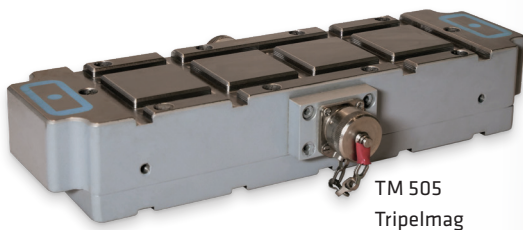
# Doublemag | Triplemag

## small Electropermanent Magnetic Chucks

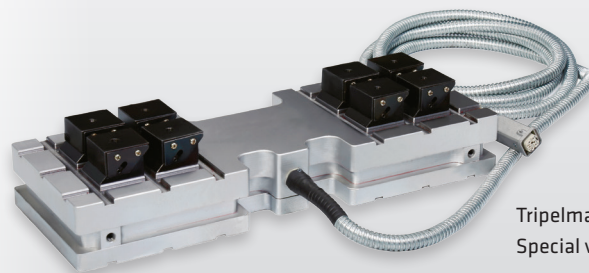
These small electropermanent magnetic clamping plates (Mini Magnaslots) both clamp the workpiece and themselves to the machine table. Mechanical clamping or fix clamping is not required. Several Mini Magnaslots combined with each other are a favourable alternative to large magnetic clamping plates or even magnetic clamping tables. The Triplemags have additional positioning magnets which can be clamped at the desired position on the machine table without the workpiece having to be clamped. As a rule, the small magnetic clamping plates are provided with 2 connection sockets. The magnetic table then comprises the Mini Magnaslots, connecting cables, connection cables and controller.



DM 502  
Doublemag



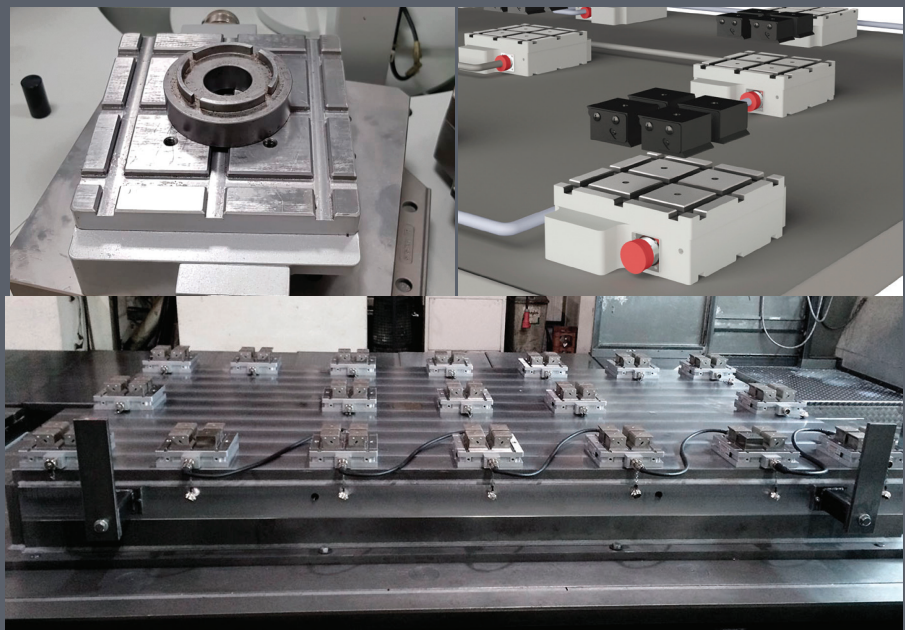
TM 505  
Tripelmag

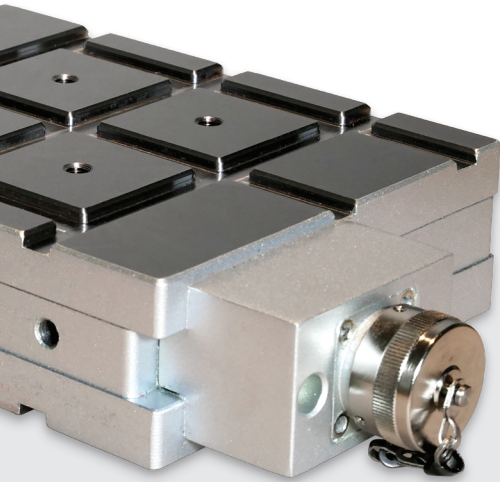


Tripelmag  
Special versions on request

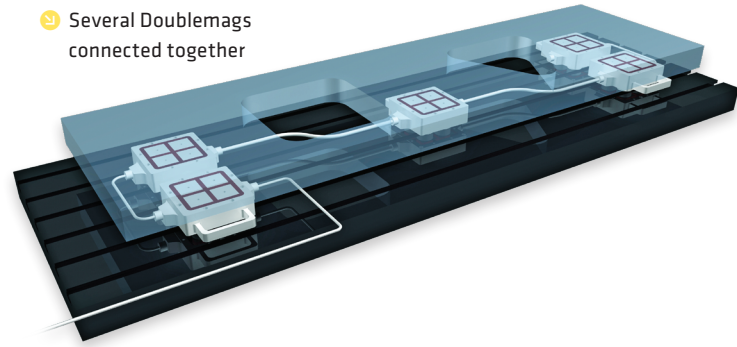
### Application

- ▶ 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 ≥ 400 kg per pole
- ⌚ Full clamping force will only be achieved 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 coolants and cares also for heat dissipation

### Options

- ⌚ Controllers and accessories -> see on page 20-21

### Technical data

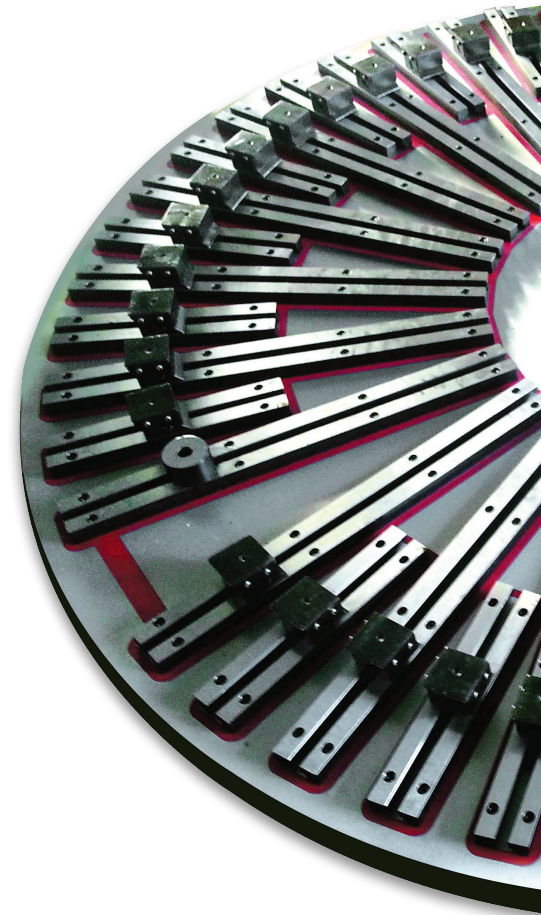
	Dimensions [L×W×H] [mm]	Number of poles	Voltage [Volt]	Ampere [A]	Weight [kg]	No.
DM 502	180 x 180 x 55	2 x 4	400	2	12	52186
TM 503	220 x 180 x 55	2 x 4 + 1 x 2	400	2	12	70604
TM 505	340 x 100 x 55	2 x 4 + 1 x 2	400	2	13	70796

# EPRadial

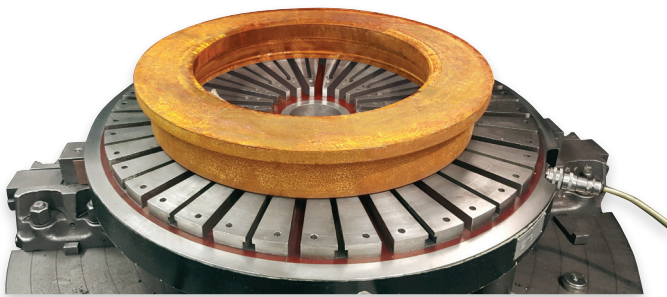
## Electropermanent Magnetic Chucks

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.

Pole extensions can be clamped in the pole shoes with T-slots at any time. Thus, as with the Magnaslot, clamping without distortion is made possible also for uneven workpieces or raw parts.



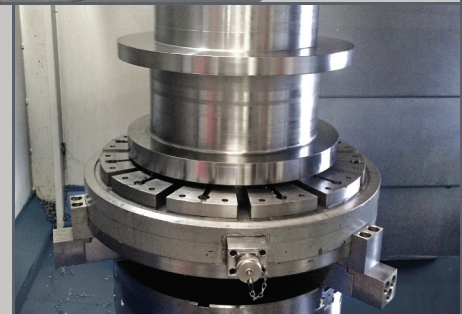
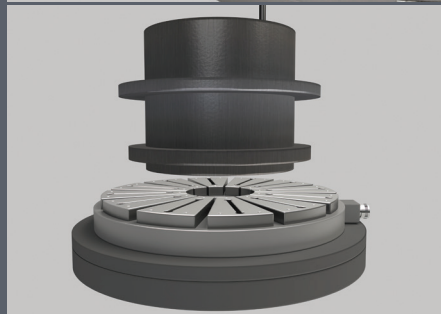
👉 EPRadial from Ø 600 mm

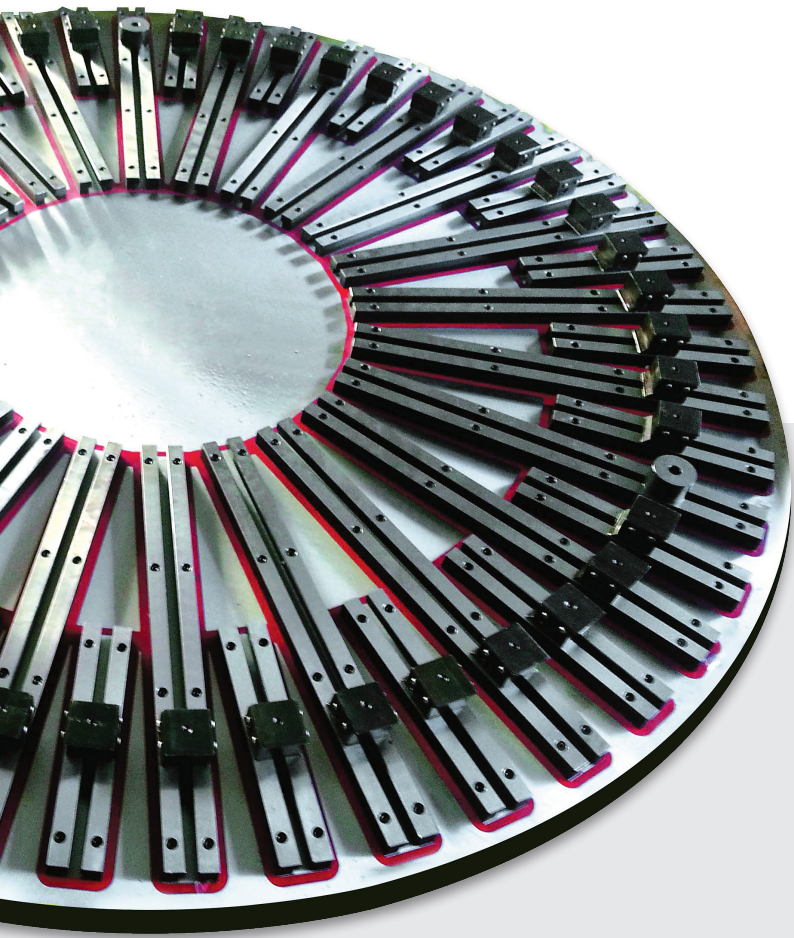


### Application

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

👉 EPRadial to Ø 600 mm





### Professional advantages

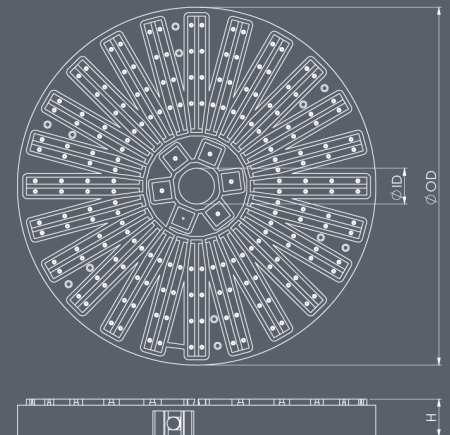
- ▶ Extremely short set-up times due to simple and fast clamping of workpieces
- ▶ 5-side machining with less stress, less torsions, less vibrations by means of fixed and mobile pole extensions
- ▶ No damages to the magnetic chuck by breakouts or through machining, if pole extensions are used
- ▶ Sensible 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 slipping. The chuck controller can be integrated in CNC-machine controller

### Options

- ⌚ Controllers and accessories -> see on page 20-21



### 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			

# Controllers

## For Electropermanent Magnetic Chucks

The electronic reverse polarity controllers are used to turn the magnetic clamping plates on and off and to regulate the holding force in several stages through the affiliated manual operating device.

With the D50 controllers can be switched up to 99 poles with the pole size P50 (or 48 poles with the pole size P75). Furthermore, the D100 controller is needed.

The single-channel devices D50 and D100 are used to control Magnaslot and Doublemag. The D50-2 controller is needed to operate the Triplemag magnet modules.

If multiple magnetic clamping plates shall be controlled individually, the D100-4 controller can be used. Up to 4 clamping plates can be switched separately here. But a distributor can also be interposed. As a rule, each controller is provided with 3-m clamped mains cable and a 3-m clamped bayonet connection cable (5-pin, large, w).



Controller EPM D50



Controller EPM D100



Controller EPM D100-4

### Technical Data

	Channel	No.
Controller with 3-m mains and one connection cable		
EPM D50 to 50 A, for Magnaslot and Doublemag, with remote control and holding force regulation	1	64200
EPM D50 Flux to 50 A, for EPFlux, with remote control and holding force regulation	1	66847
EPM D50-2 to 50A, for Triplemag, with remote control and holding force regulation	2	63863
EPM D100 to 100 A, for Magnaslot and EPRadial, with remote control and holding force regulation	1	52950
EPM D100-4 to 100A, for Magnaslot, with remote control and holding force regulation	4	58088
Foot switch to control unit		53832
Special devices and distributors on request		



Bayonet plug



Remote control



Foot switch



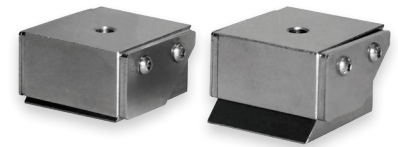
Distributor

# Accessories

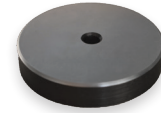
## For Electropermanent Magnetic Chucks

Pole extensions are the ideal complement to the square and radial pole magnetic chucks. Workpieces of any structure can be clamped perfectly with Assfalg pole extensions. The mobile pole extensions adapt optimally to the workpiece contour. The workpiece is shimmed and lies stably on the extensions, for five-sided vibration- and distortion-free all-round machining. In addition, the surface of the magnetic clamping plate is protected against accidental damage caused, for example, by too deep milling and drilling. Another possible application is the use as a stop for e.g. 3D molds, round material and smaller workpieces.

The connection cables are available in different lengths. They connect the magnets to each other in series or several individual magnets to a distributor. The cables are protected against hot chips and cooling water. In case of non-encapsulated machine tools, additional cable protection is nevertheless recommended for wet processing.



P50M or P75M on extension compressed (left) and expanded (right)



P50FR or P75R



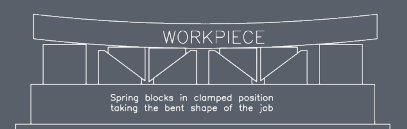
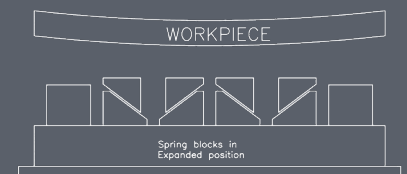
P50FR or P75R



Connecting cable

Technical Data	Pole size	Dimensions	Version	No.
Pole extensions [Typ]	[mm]	[mm]		
P50FR-15	50	Ø50 x 15	fest	74419
P50FR	50	Ø50 x 32	fest	61262
P50M	50	50 x 50 x 32	beweglich	68980
P75FR-15	75	Ø75 x 15	fest	67590
P75FR	75	Ø75 x 45	fest	61264
P75M	75	75 x 75 x 48	beweglich	69098

Technical Data	Length	No.
Connecting cable 5-PIN, large, M + F	[mm]	
	500	67083
	1000	68992
	1500	70665
	2000	62542
	3000	68374
Power cable 5-Pin, large, F	[mm]	
	3000	52802



# MSQ Magsquare | MagWheel | MagMount

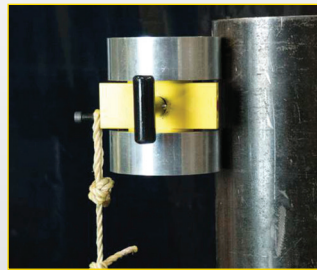
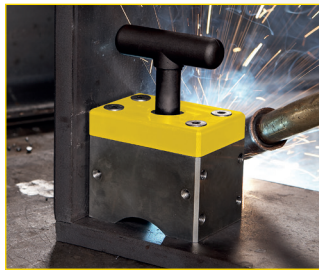
## Magnet - Clamping aids, switchable

MSQ Magsquare is a universal welding and assembly aid. The magnetic force is particularly strong on the 3 long sides. Several threaded holes are available for fastening pole extensions or attaching to devices.

The Magwheel is a switchable magnetic wheel being a further development of the Magsquare. It can be rolled even while it is sticking. The Magmount can serve as a magnetic holder, e.g. for tripods or devices.

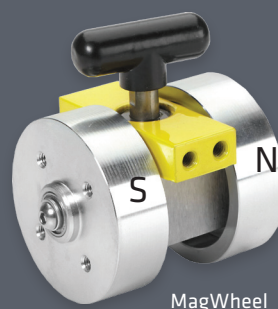


MSQ

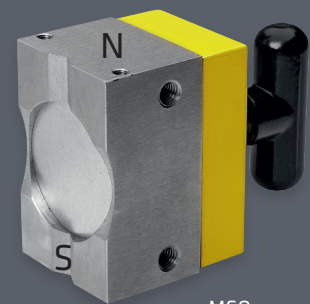


## Features

- ☑ Magnets turns completely OFF and stays clean
- ☑ Usable for round and square workpieces
- ☑ Magnetic force is strong on the 3 long sides, weak on the 2 short sides (MSQ Magsquare)
- ☑ Fastening thread as assembly aid
- ☑ MagWheel - applications: Positioning and guiding, feeding of sheet metals, pipe handling, assembly and manufacturing.



MagWheel



MSQ

## Technical data

	Dimensions [LxWxH]	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
MagWheel 150	68 x 52 x 72	29	1,0	64398
MagWheel 600	101 x 92 x 122	132	3,0	64399
MagMount 235	98 x 68 x 45	106	0,5	64649



# Magnet Welding Angles A 90 | BA

## Switchable permanent magnets

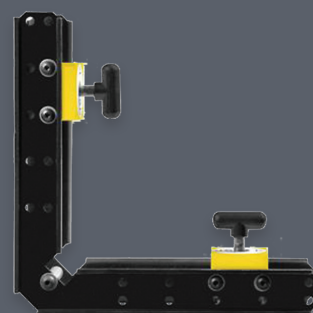
Your third indispensable hand for welding or assembly works on flat and round materials at 90° (A90) angle or with individual angle adjustment 0°-360° (BA).

MSQs are assembled in stable aluminium profiles to form magnetic angles.



## Features

- ⌚ Magnets can be completely switched off by simple 180° rotation of the control lever
- ⌚ Sturdy steel construction of the angle
- ⌚ Usable as inside and outside angle
- ⌚ Usable for round and square workpieces
- ⌚ Powerful grip can be increased by additional Magnetquader (A90)
- ⌚ Fast and easy angle adjustment by means of quick release (BA)
- ⌚ Engraved scales for exact angle adjustment, 0 - 360° (BA)



A 90

## Technical data

	Dimensions [LxWxH]	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
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	4.0	60346

# Magnet Welding Angles MSA | MS2 | MAV | PA

## Switchable permanent magnets

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.



MS2



MSA



MS2



MAV 120



PA 200

## Features

- Easy positioning, adjusting and fixing of workpieces
- No deflection 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

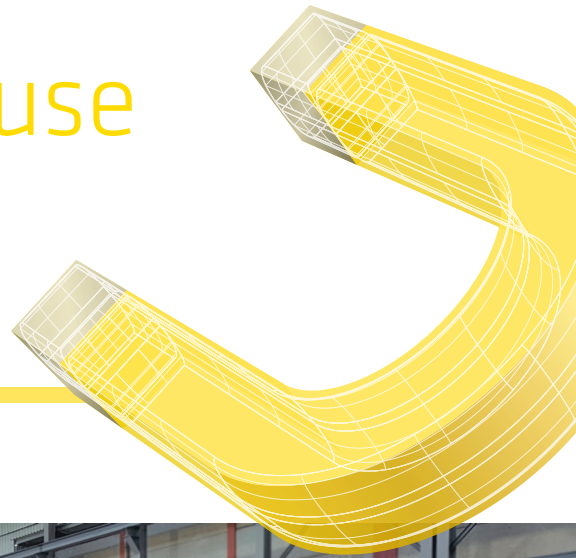


## Technical data

	Dimensions [LxWxH]	Angle	Switchable	Use also for Round material	Adhesive force	Weight	No.
	[mm]				[kg]	[kg]	
MSA I	110 x 30 x 95	45°/90°	Ja	Ja	36	0,7	45338
MSA II	150 x 35 x 130	45°/90°	Ja	Ja	60	1,4	45339
PA 200	240 x 41 x 240	22° - 270°	Ja *	Ja	90	1,6	60343
MS2-80	153 x 38 x 153	90°	Ja *	Ja	46	1,2	48192
MS2-90	195 x 46 x 195	90°	Ja *	Ja	68	2,7	18736
MS2-300	330 x 330 x 32	90°	Ja	Ja	3 x 120	4,0	70505
MS2-450	550 x 550 x 45	90°	Ja	Ja	3 x 300	4,0	70507
MAV 120	197 x 50 x 197	30° - 275°	Ja *	Ja	41	2,4	162

\* Every thigh is separately switchable

# Assfalg Magnets in use



WANT TO KNOW MORE?

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

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