



**Focusing on electro permanent magnet
technology development,
Quality first,
continuous innovation.**

Electro permanent lifting magnet



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HVR Magnetics Co., Ltd

Company profile

HVR Magnetics Co.,Ltd,situated in the Liyu Industrial Park,Tianyuan District,Zhuzhou,Hunan, which is a high tech exported oriented company, devoted into research & development and manufacturing of electro permanent lifting magnets, electro permanent magnetic chucks ,magnetic quick die change system ,electro permanent magnetic welding fixtures ,etc.

HVR Magnetics co.,ltd has a experienced group of senior engineers with over 10 years experience on designing and manufacturing electro permanent magnets and related products. We able to offer customers ideal solution for various application . Advanced production and machining equipment and improved quality control system insured the reliability and swiftness of providing high quality product for customers efficiently. Our products have been widely used in metallurgy, machinery, shipbuilding, power supply, automobile manufacturer and rail transport industries and we won customers from Europe, USA, Singapore, Japan, South Korea, Brazil and Russia, etc.

Our product has passed the CE certificate and HVR Magnetics co.,ltd sticked to international requirement. Honest, vigorous and reliable is our principle for production, marketing and trade. Based on win-win foundation, HVR Magnetics co.,ltd seek cooperations with customers from all over the world and build a better future together.



Electro permanent lifting magnet

Energy Saving And Safety



Technical Advantage of HVR Electro Permanent Lifting Magnet



Permanent security

Unique internal structure is adopted to electro permanent magnet design, electric power is only used for activate or deactivate inside structure with less than 3 seconds.

No electric power is required during the working period, avoid the risk of electromagnet system when a sudden power failure or cable broken.

No battery power supply system is needed. Extra sensor also equipped, only allowing do DEMAG operation while load complete on the ground.

Energy saving and user friendly

More than 95% energy could be saving compare traditional lifting electromagnet.
 Only needs electricity with less than 3 seconds, No energy consuming during the handing period.
 Radio control standardization installed, distance control become available.

Practical and efficient

There is no moving parts compare with permanent lifting magnet, reducing the mechanical trouble cause by traditional lifting products.
 Just needs user to press bottoms, the lifting and releasing ferrous load could be realized.
 Magnet field could be adjusted according to the specific circumstance, ensuring only lifting one piece of steel plate in one cycle.

1 For steel plate

Steel plate, especially large one, are particularly difficult load to handle, when attempting to move with traditional method(Hook, chains, cables), plates has a tendency to flex and deform, making the lifting period become dangerous and not stable.

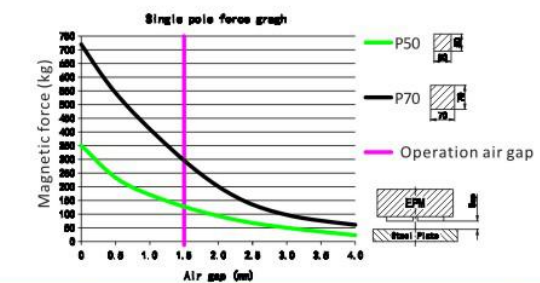
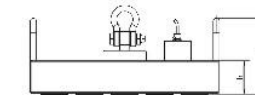
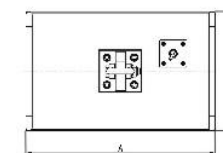
This series of products specifically designed for transporting steel plate thickness starting from 6mm.

Technical feature:

Guarantee only lifting one piece of steel plate in one time.

Steel plate will not become deform or flex when use magnet system handing.

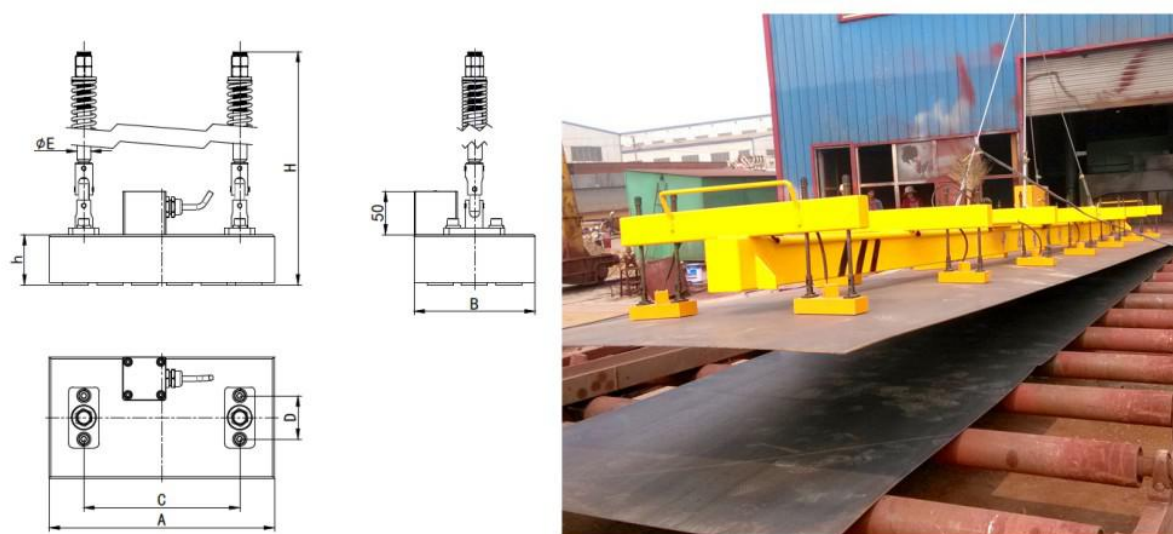
Friendly for various sizes of steel plate.



Model	Data	Rated lifting capacity(kg)	Thickness of steel (mm)	Max. Pull-off force(kg)	Dimension(mm)				Weight (kg)
					A	B	h	H	
HEPMP-500P50		500	≥6	1950	245	175	76	202	26
HEPMP-1000P50A		1000	≥6	3800	455	175	76	202	48
HEPMP-1000P50B	315				245	76	202	45	
HEPMP-1500P50A		1500	≥6	5750	665	175	76	202	65
HEPMP-1500P50B	455				245	76	202	60	
HEPMP-2000P50A		2000	≥6	7650	595	245	76	202	80
HEPMP-2000P50B	455				315	76	202	75	
HEPMP-3000P50A		3000	≥6	11500	665	315	76	202	110
HEPMP-3000P50B	525			385	76	202	105		
HEPMP-1000P70		1000	≥8	5000	395	215	86	202	55
HEPMP-1500P70		1500	≥8	6300	485	215	86	202	65
HEPMP-2000P70		2000	≥8	8800	525	215	86	202	85
HEPMP-2500P70A		2500	≥8	10000	615	215	86	202	95
HEPMP-2500P70B	395				395	86	202	90	
HEPMP-3000P70		3000	≥8	12500	485	395	86	202	110
HEPMP-4000P70		4000	≥8	15700	485	485	86	202	135
HEPMP-5000P70		5000	≥8	20100	755	395	86	202	165

2 For thin steel plate

The series EP magnets are used for lifting single piece of thin steel plate of below 6mm thickness. Our company developed electro permanent lifting magnet for steel sheet. The magnet still can generate enough magnet force when 2mm thickness steel sheet needs to be lifted. Special structure concept can guarantee each process only lifting one piece of steel sheet. And large deflection problem easy overcomes.



Model	Data	Rated lifting capacity(kg)	Thickness of steel(mm)	Max. Pull-off force(kg)	Dimension(mm)						Weight (kg)	
					A	B	C	D	E	h		H
HEPMP-100B		100	1.5 ~ 6	400	140	100	110	60	12	58	425	7
HEPMP-200B		200	2 ~ 10	800	260	100	180	50	16	58	425	12
HEPMP-300B		300	2 ~ 12	900	260	140	180	50	16	58	425	17
HEPMP-400B		400	2 ~ 12	1450	350	140	180	50	16	58	425	23
HEPMP-500B		500	2 ~ 12	1820	350	190	180	50	20	58	425	32
HEPMP-600B		600	2 ~ 12	2050	430	190	180	50	20	58	425	40

3 For steel plate cutting line

This product is particularly suitable for cutting system, can achieve lifting all small work pieces in one time, greatly reducing the labor cost, saving production time, and improve equipment efficiency. These kinds of products can be achieved steel cutting line cutting process automation when automatic actuator is used.

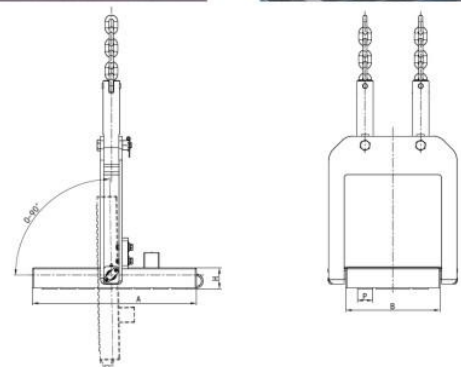


Model	Data	Rated lifting capacity (kg)	Thickness of steel (mm)	Max. Pull-off force (kg)	Dimension(mm)			Weight (kg)
					A	B	H	
HEPMP-4015QG		200	4 ~ 50	2000	400	150	65	30
HEPMP-6015QG		300	4 ~ 50	3000	600	150	65	42
HEPMP-8015QG		400	4 ~ 50	4000	800	150	65	55
HEPMP-10020QG		500	4 ~ 50	5000	1000	200	65	90

4 For vertical lifting

When lifting steel plate or plate work pieces, sometimes need to be lifted or tilted or stacked, and with a certain angle welding, assembly operations and so forth, you can use the side lifting EP magnet. Our company can customer design and manufacture electro permanent magnet to fulfill this special requirement.

The steel plate cans freedom flip 0-90 degrees by using side lifting electro permanent magnet. This product is very suitable limited store spaces which saves storage space, and improve work efficiency.



Model	Data	Rated lifting capacity(kg)	Thickness of steel(mm)	Max. Pull-off force(kg)	Dimension(mm)				Weight (kg)
					A	B	H	P	
HEPMP-1000P50V		1000	≥6mm	14000	650	290	62	50	90
HEPMP-1500P50V		1500	≥6mm	21000	770	350	62	50	125
HEPMP-2000P50V		2000	≥6mm	29400	890	410	62	50	170
HEPMP-3000P50V		3000	≥6mm	42000	950	530	62	50	235
HEPMP-1000P70V		1000	≥12mm	14385	610	290	68	70	100
HEPMP-1500P70V		1500	≥12mm	21920	690	370	68	70	135
HEPMP-2000P70V		2000	≥12mm	27400	850	370	68	70	165
HEPMP-3000P70V		3000	≥12mm	41100	1010	450	68	70	235

Note: The definition of rated lifting capacity for this series EP magnets: Rated lifting capacity=The max. pull-off strength of level lifting at 0.50mm working air gap/7.5;

Telescopic Beam Electro Permanent Lifting Magnet

Unlike normal electro permanent magnet, this product is especially suit for work shop with very limited space.

It is possible to lift loads of various lengths, by simply selecting necessary magnetic modules

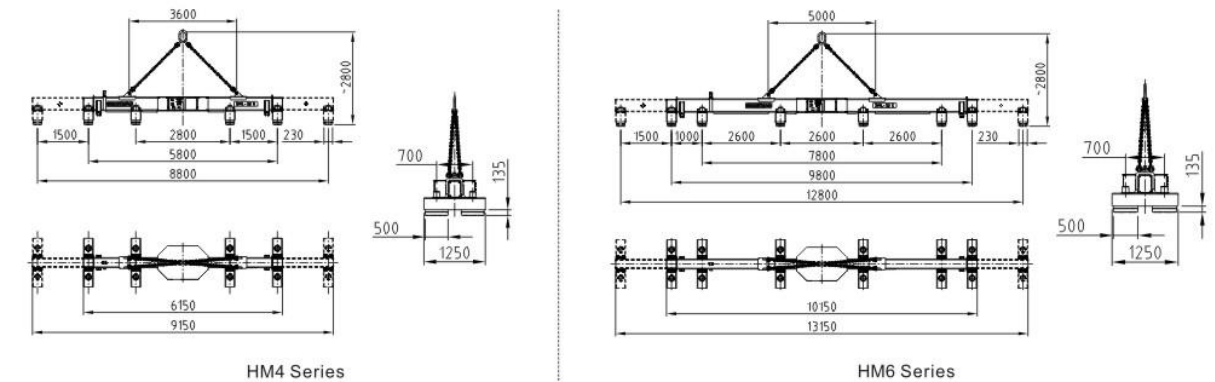
- One set of electro permanent magnet unit placed on the fixed part of the spreader beam and other sets placed on the telescopic part.

- The length of the system can be adjusted depending on the length of the plate being handled.

- Shorter plates: activate only the inner magnets.

- Medium plates: activate all the magnets with the telescopic arm in the closed position.

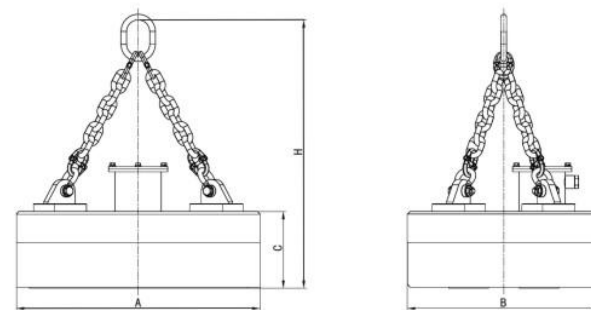
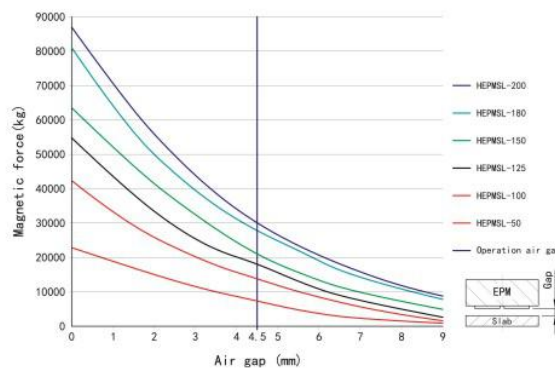
- Long plates: activate all the magnets with the telescopic arm in the expanded position.



Model	Rated lifting capacity(kg)	Beam weight (kg)	Load specification(mm)		
			Length	Width	Thickness
HM4x2-5	5000	2800	3000-12000	500-2500	≥5
HM4x2-7.5	7500	2800	3000-12000	500-2500	≥5
HM4x2-10	10000	2800	3000-12000	500-3500	≥5
HM4x2-12	12000	2800	3000-12000	500-3500	≥8
HM4x2-15	15000	2800	3000-12000	500-3500	≥8
HM6x2-8	8000	4000	3000-16000	500-2500	≥5
HM6x2-10	10000	4000	3000-16000	500-2500	≥5
HM6x2-15	15000	4000	3000-16000	500-3500	≥8
HM6x2-20	20000	4000	3000-16000	500-3500	≥8
HM6x2-25	25000	4000	3000-16000	500-3500	≥8

Electro Permanent Magnet For Lifting Steel Slabs And Heavy Rail (HEPMSL Series)

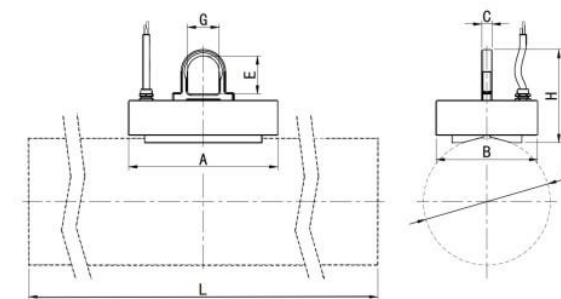
This series of products adopted by unique magnetic poles and working in large air gap, widely used in single or joint lifting steel billet, heavy rail etc. Meanwhile, distance detection, magnetic flux detection, landing detection and other necessary security devices also available.



Model	Rated lifting capacity(KN)	Max. Pull-off force(KN)	Dimension(mm)				Weight (kg)
			A	B	C	H	
HEPMSL-50	50	750	750	215	210	500	880
HEPMSL-100	100	865	865	225	285	500	1180
HEPMSL-125	125	885	885	246	325	600	1400
HEPMSL-150	150	1220	865	225	285	800	1580
HEPMSL-180	180	1350	950	325	325	800	2150
HEPMSL-200	200	1530	1530	290	410	800	3250

Electro Permanent Magnet For Lifting Steel Pipe And Round Bar (HEPMSP Series)

This kind of electro permanent magnet equipment, using a special magnetic structure, apply to lifting a single, or a layer of bar, pipe, and not be lifting surfaces (such as paints, coatings) have any injury.



Model	Data	Rated lifting capacity(kg)	Dimension(mm)							L(as weight of rounded bar)	Weight (kg)
			A	B	C	D	E	G	H		
HEPMSP-100		100	135	160	16	50 ~ 200	60	50	150	0.4m(D=200) ; 4m(D=50)	9.5
HEPMSP-300		300	305	160	16	50 ~ 200	60	50	165	1.2m(D=200) ; 5m(D=50)	23
HEPMSP-600		600	560	190	22	60 ~ 300	70	50	180	1m(D=300) ; 6m(D=60)	48
HEPMSP-1000		1000	680	230	25	100 ~ 500	90	70	206	0.7m(D=500) ; 6m(D=100)	72

Note:

Our factory can customize the electro permanent magnet to lift a row of (single layer) steel pipe or round steel according to customers requirements .



Electro Permanent Lifting Magnet For Steel Coil (HEPMC Series)

Such products suit for lifting steel coil (less than 600 °C), divided into vertical and horizontal lifting type. Electro permanent lifting magnet for steel coil is security, reliable, and will not have any scars steel coil surface compare with traditional methods.



Electro Permanent Magnet for handing beams and profiles

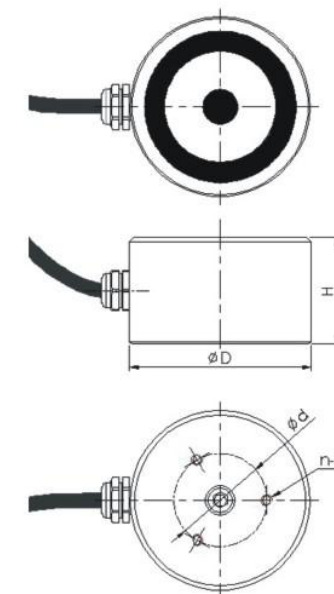
This innovate product combing the benefits of safe lifting, compactness and convenience. Their specific and unique pole design permits transportation beams and profiles.



Round Electro Permanent Magnet (HEPM1 Series)

HEPM1 series EP magnet is a modular system where either one or multiple magnets can be controlled from a single controller.

HEPM1 using ring magnetic structure, once the work piece meets the minimum thickness requirements and completely covers the magnetic work surface, it can produce the greatest gripping force. To meet your lifting, handling, clamping (holding), and other operational needs. We can design and produce special-purpose non-standard products based on user special requirements.



Model	Data	Rated lifting capacity(kg)	Dimension(mm)					Weight (kg)	Thickness of steel workpiece
			D	d	H	M	n		
HEPM1-75		90	78	40	48	6	3	1.5	≥12mm
HEPM1-100		150	100	40	55	6	3	3.5	≥14mm
HEPM1-125		250	125	80	65	8	3	6.0	≥20mm
HEPM1-150		320	158	80	70	10	3	9.5	≥20mm
HEPM1-175-FB		200	175	80	55	8	3	8.6	≥7mm
HEPM1-255-FB		400	255	80	65	10	3	21.5	≥10mm

Electro Permanent Magnet For Automation

For the fast transporting of ferrous load by robot, HVR electro permanent magnet boast the following feature

- Light weight to maximize end of arm capacity
- Special coil configurations for fast transportation with minimum time
- Unique technology providing maintenance free use with safety
- Strong clamping force guarantee the safety



Electro Permanent Lifting Magnet For Special Application (HEPM2 Series)

With the rapid development of manufacturing, the special lifting application always appeared. HVR magnetic can customer design, manufacture, electro permanent magnet system to improve efficiency and ensure safe manufacture



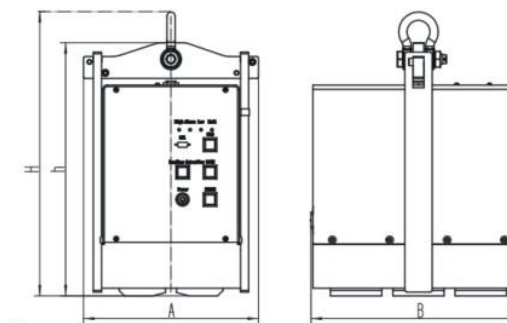
Battery Electro Permanent Magnet Durable and flexible



This product use battery as main power source, no needs cable and AC power, especially suit for lifting ferrous load in outdoor or without power supply area.

Main Features:

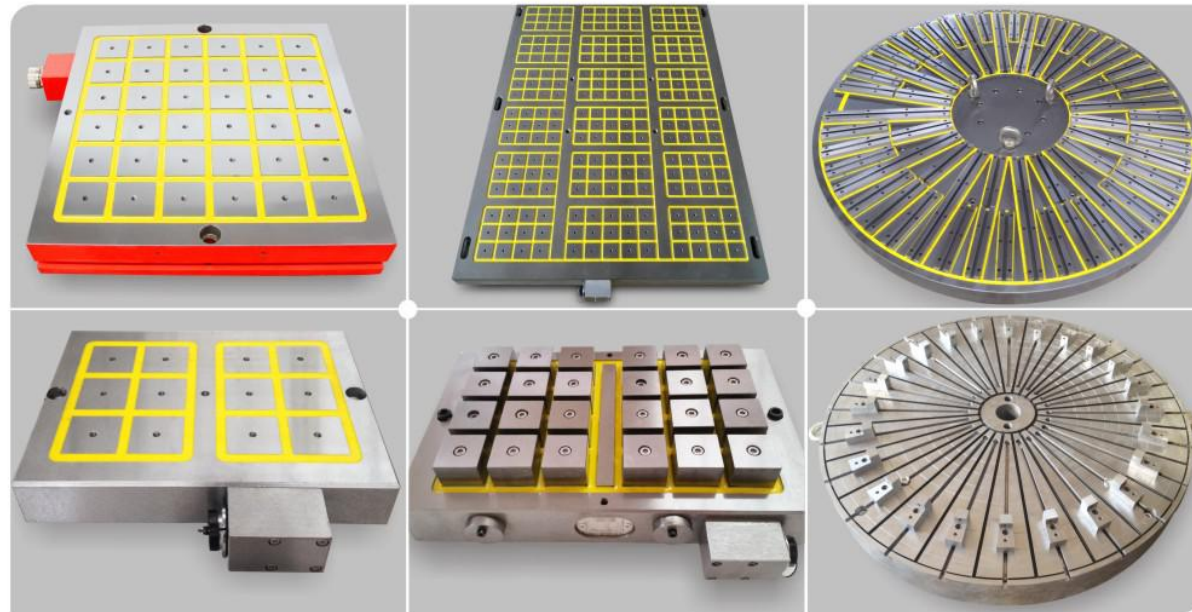
1. Batteries only work in the moment of magnetization and demagnetization. During the lifting and handling, no needs consume battery power.
2. This smart item can be widely used without power or access to power inconvenient forum, toxic, radioactive and other environment ,through remote control.
3. The batteries could be worked for up to 7 to 9 days and their charge state can be real-time monitored.



Model	Data	Rated lifting capacity(kg)	Thickness of steel(mm)	Working voltage(DC:V)	Charging time(H)	Overall dimension(mm)				Self-weight (kg)
						A	B	C	D	
HBEP-500		500	≥6	24	6-8	300	346	431	480	85
HBEP-1000A		1000	≥6	36	7-8	320	386	487	543	108
HBEP-1000B		1000	≥6	48	7-8	290	500	477	522	123
HBEP-1500		1500	≥10	48	7-8	358	500	458	560	150
HBEP-2000		2000	≥12	48	7-8	376	450	509	594	170
HBEP-3000		3000	≥16	72	8-9	460	600	482	610	260

Electro Permanent Magnetic Chuck

- ▶ Magnetic clamping force up to 16kg/cm², No reduction with the time.
- ▶ Uniform magnet clamping over the entire contact area, the thickness of magnet field within 16mm.
- ▶ Electrical energy only consumption within 3 seconds, more than 95% energy could be saved, 5 sides machining in one step could be available..
- ▶ More than 30% working life of cutting tool could be enlarge, no needs repeat clamping work piece, high precision manufacturing can be guarantee.



Electro Permanent Magnet For Smart Phone

- ▶ Magnet system is composed by mounting base, magnet units, former bar, cover plate.
- ▶ Unlike air cylinder, this product has strong clamping force, stable, Uniform, simple operation technical feature.
- ▶ Especially suit for metal frame and Mobile phone glass screen, machining, More than 30% qualified rate compare with air cylinder.
- ▶ Friendly for various kinds of products, long term running cost much lower than traditional method.

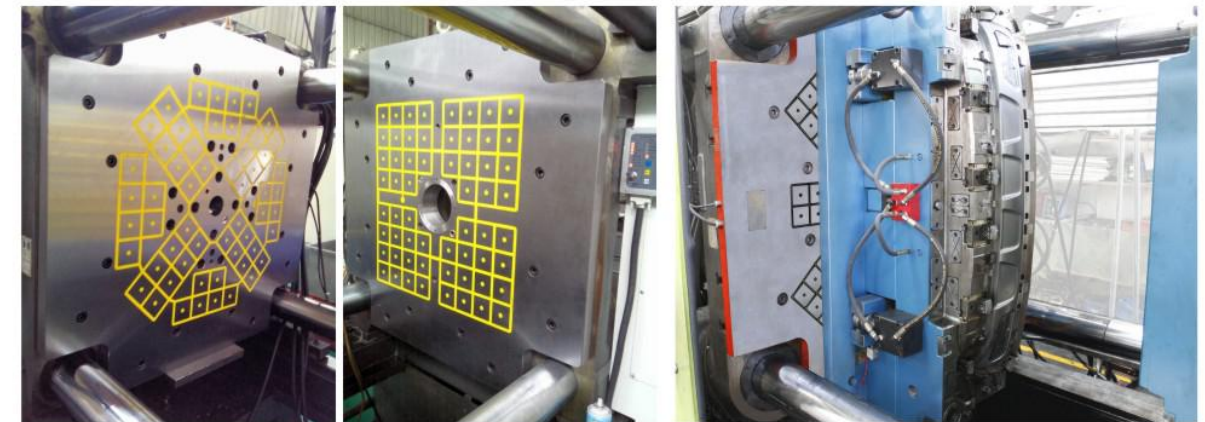


Magnetic Quick Mold Change System

Safety: Unique EPM technique using double magnet system. Magnetic clamping force up to 160N/cm² and keep on even power failure.No need to worry about misoperation.

Energy Saving: Electric power is only used for magnetizing and demagnetizing operation with few seconds. Over 95% power saving.

Quick: A single operator can operate the mold change.No need to loosen and tighten bolts one by one. More than 90% time is saved.



Electro Permanent Magnetic Welding Fixtures

These new innovation products which can be used to optimize welding parts quality, improve assembly precision and efficiency, as well as prevent welding deformation.

- ▶ It can realize distortion-free clamping of thinner materials with in single clamping operation
- ▶ Reduce work piece adjustment time by 30%-50%, and offers clamping and releasing in just 0.3 second
- ▶ Do not add any heat, so it can minimize after service cost

