EARTH-CHAIN
Power that works.

CNC
MACHINERY SALES AUSTRALIA

Mag Vise Magnetic Workholding

EEPM

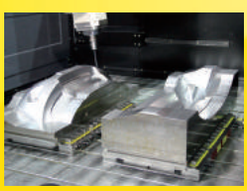
Electro-Permanent Magnetic Chuck

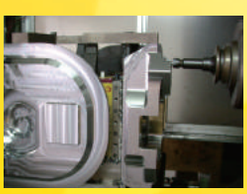
ECB

Permanent Magnetic Clamping Block

www.earth-chain.com.tw

EARTH-CHAIN





EARTH-CHAIN ENTERPRISE CO., LTD.

Professional Manufacturer of Magnetic Tools

Earth-Chain Enterprise was established in 1988, specializing in manufacturing magnetic tools for industrial applications, which are marketed around the world under ECE brand. Owns various patented technologies and products under continuous developments for innovations and improvements as well as with over 40 patents. At present, the customized products have reached more than 50%, providing customers with the most complete product application technology.

Develop MagVise magnetic workholding system is suitable for CNC vertical and horizontal Machining Center, Double Column machining center, vertical and horizontal Lathe and Quick Mold change system for plastic injection machine to improve productive efficiency for customers.

In response to the needs of the CNC automation market, Earth-Chain develops the human-machine interface touch screen built-in intelligent IC signal feedback device, the programmable driven machine tool integrates the magnetic clamping system and links with the robot arm device to reduce the labor time and operation complexity required for future industrial applications.

Prospecting toward the future, Earth-Chain introduces Industry 4.0 to actively invest the market in the supply chain and continuously provide excellent products and services for industrial users, who will advance with us to promote businesses and social improvements for sustainable developments.

Mag Vise

Magnetic Workholding

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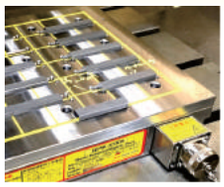
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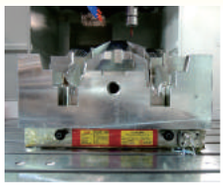
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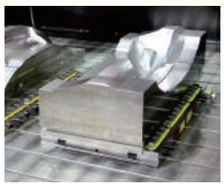
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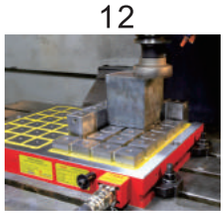

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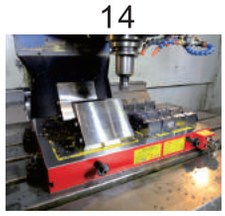

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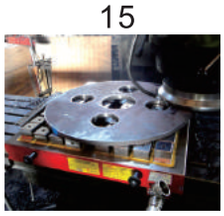

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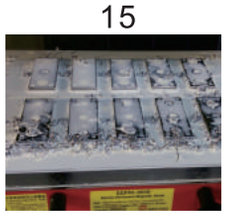

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EARTH-CHAIN
Power that works.

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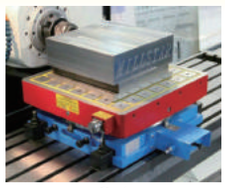
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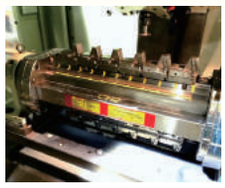
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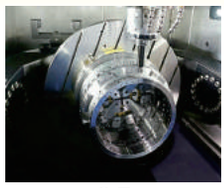
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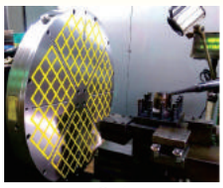
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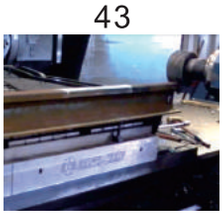

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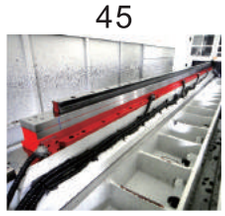

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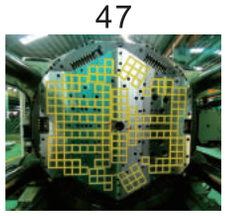

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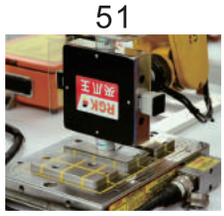

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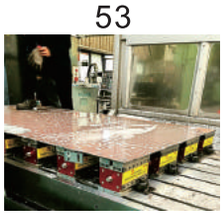

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Electro-Permanent Magnetic Chuck

EEPM-A、EEPM-B、EEPM-D、EEPM-E Series

Suitable for CNC Vertical machining center (Can do 5 sides machining)

Magnetic force of EEPM Chucks

The Magnetic forces will changes depending on the thickness, attractive face roughness and quality of material and clearance between the workpiecec with EEPM Chucks.
(See as the graphs as below)

Chart of difference in Magnetic force by thickness

	Thickness		Percentage of Magnetic force			
	mm	inch	EEPM-A	EEPM-B	EEPM-D	EEPM-E
T1	up 50	up1.97"	100%	100%	100%	100%
T2	45	1.77"				90%
T3	40	1.57"				80%
T4	35	1.38"			90%	70%
T5	30	1.18"			80%	55%
T6	25	0.98"			65%	—
T7	20	0.79"		90%	45%	
T8	15	0.59"		70%	—	
T9	10	0.39"	85%	40%		
T10	5	0.20"	35%	—		

Chart of difference in Magnetic force by attractive face roughness.
For all EEPM Series

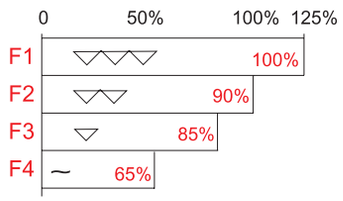
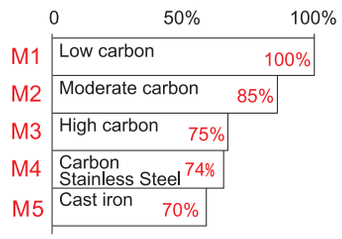


Chart of difference in Magnetic force by material quality.
For all EEPM Series



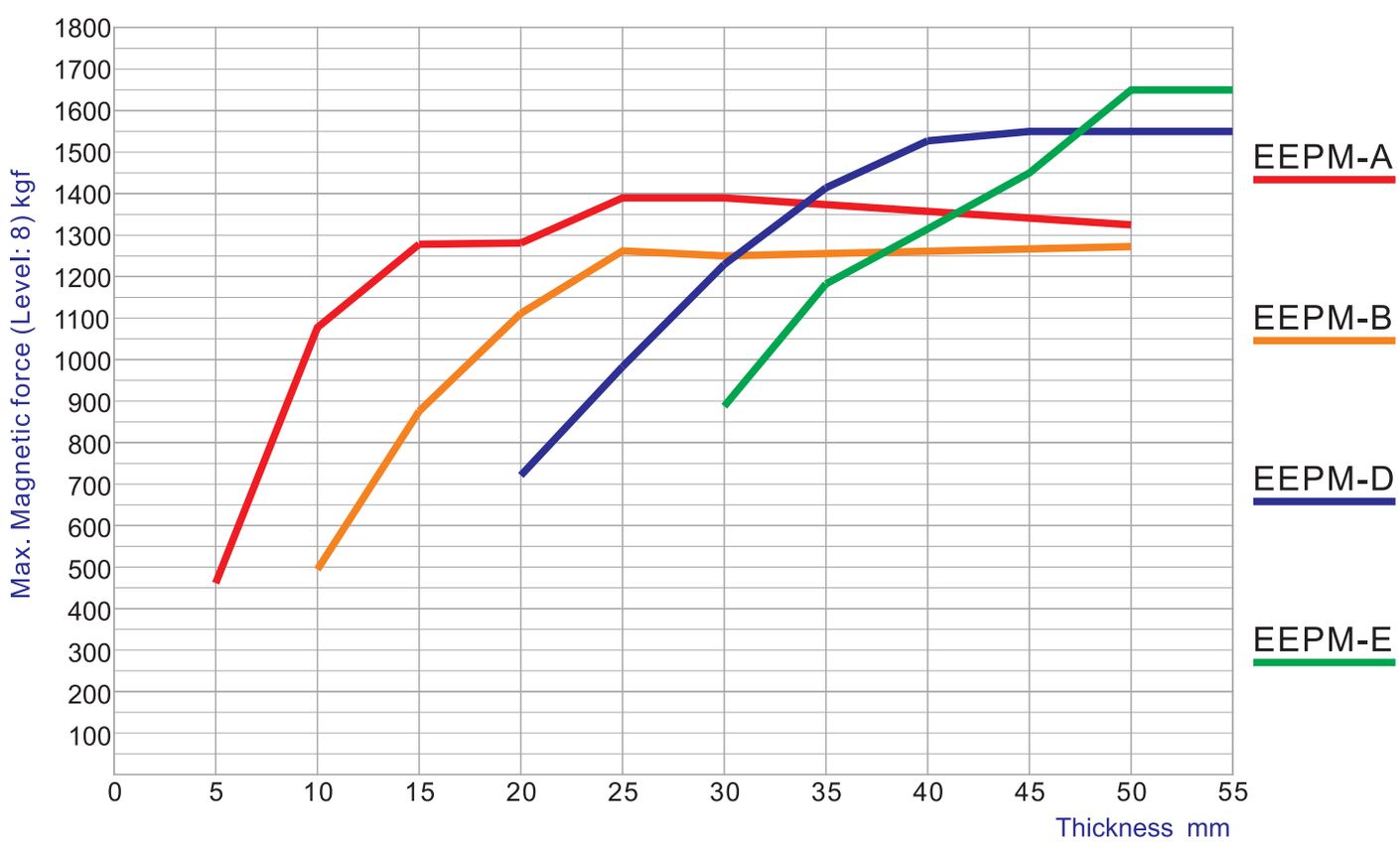
Calculating Formula for "Magnetic force" → (TxFxMxCapacity of Magnetic force)

Example of EEPM-D Series:

Terms of workpiece: T4, F2 and M2

90% x 90% x 85% x 2800±5% kgf/4 Poles =1928±5% Kgf/4 Poles

Comparison chart of Maximum magnetic forces and workpiece thickness



1. Test workpiece: Maximum magnetic force of workpiece of 120X120 mm^2 area
2. EEPM-A Series: Flux line: 15mm, Workpiece thickness suggestion: 25mm ↓
   EEPM-B Series: Flux line: 25mm, Workpiece thickness suggestion: 15~50mm
   EEPM-D Series: Flux line: 40mm, Workpiece thickness suggestion: 30mm ↑
   EEPM-E Series: Flux line: 50mm, Workpiece thickness suggestion: 40mm ↑

Electro-Permanent Magnetic Chuck
EEPM-A、EEPM-B、EEPM-D、EEPM-E Series

Suitable for CNC Vertical machining center (Can do 5 sides machining)

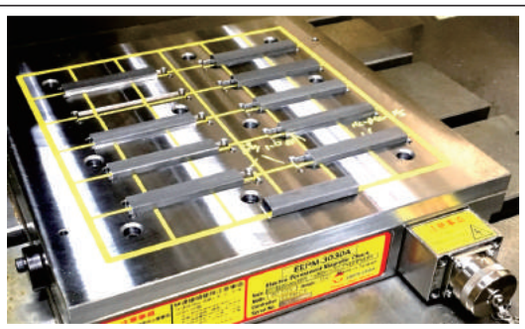
Features:

1. 1-2 seconds control for power ON & OFF. No electric power supply required to keep magnetic chuck ON and provides maximized safety in case of power failure. Never get temperatures to affect the accuracy of workpieces.
2. With 8 Magnetic levels for different workpiece size and application to avoid sticking the iron chip.
3. Capable for 5 sides machining and un-obstructed cutter movement during machining. Allow workpiece machining finished in one cycle, while still achieving best machining accuracy and highly increased working efficiency.
4. Easy and convenient to clamp a workpiece, shortens clamping time.
5. Minimum size of workpiece required as 4 alternate magnetic square poles and above contacts is necessary for optimum clamping.
6. More functions for cooperate with Induction Block and Spring Block. (See the detail of Option Accessories)

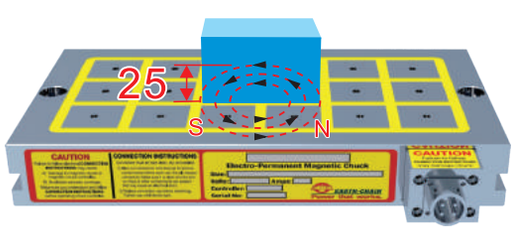
Specification of poles size & Height of magnetic field (Flux Line):

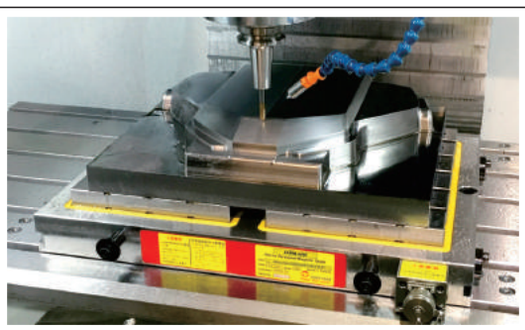
EEPM Chucks are designed for different mold thickness. Specify the mold to be Large, Medium and Small sizes make 4 poles sizes, bigger pole size with higher flux line. Different pole sizes have different magnetic field height (flux line) to ensure mold clamping safety.

EEPM-A Series Flux Line 15 mm, Pole Size 35x35 mm
Magnetic force: 580 ±5% Kgf/4 poles

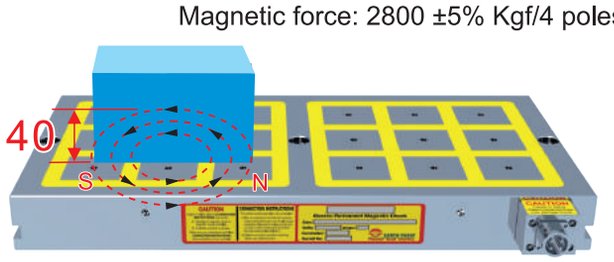


EEPM-B Series Flux Line 25 mm, Pole Size 50x50 mm
Magnetic force: 1250 ±5% Kgf/4 poles

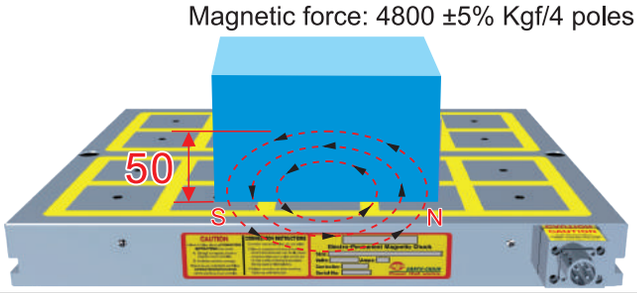


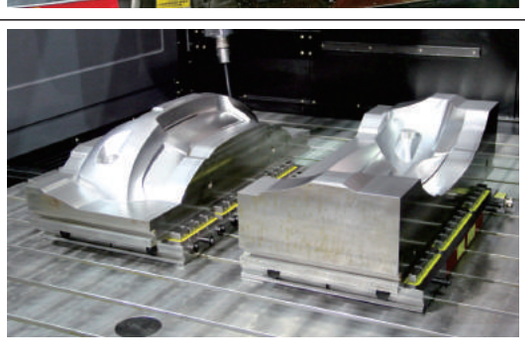


EEPM-D Series Flux Line 40 mm, Pole Size 70x70 mm
Magnetic force: 2800 ±5% Kgf/4 poles



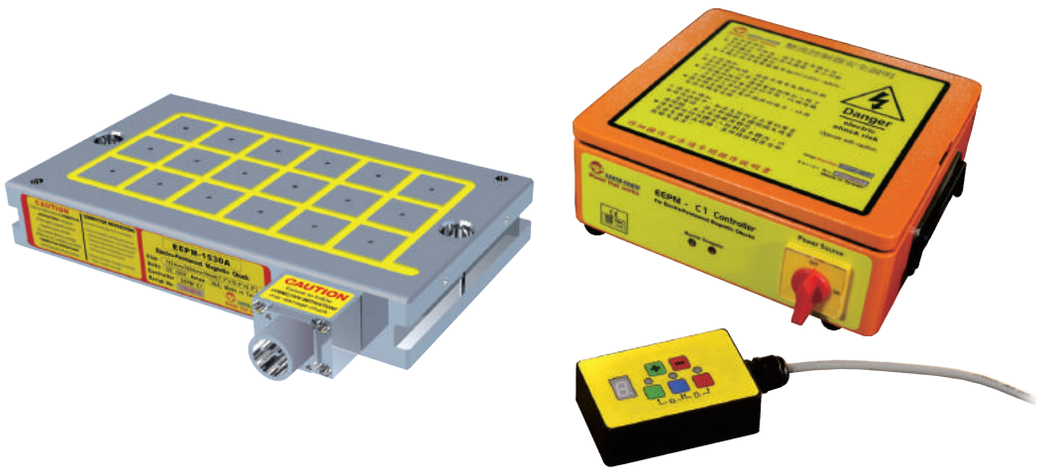
EEPM-E Series Flux Line 50 mm, Pole Size 92x92 mm
Magnetic force: 4800 ±5% Kgf/4 poles





Electro-Permanent Magnetic Chuck EEPM-A Series

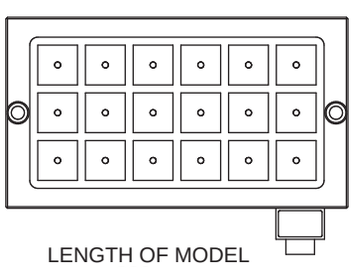
Suitable for CNC Vertical machining center (Can do 5 sides machining)



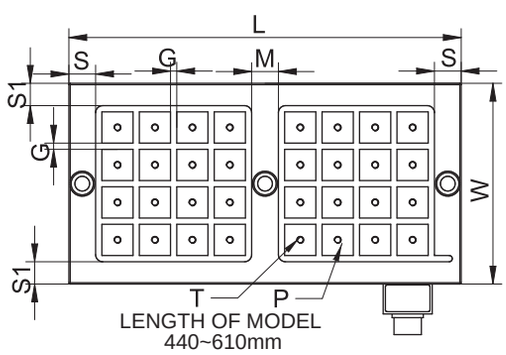
Pole 35X35 mm, Flux Line 15 mm, Magnetic Force 580±5% kgf/4 Poles

Applications:

1. Suitable for thin, small and medium workpiece on light duty machining.
2. Suitable for thin, small and medium workpiece of the drilling and finishing machining.
3. Minimum size of workpiece required as 4 alternate magnetic square poles and above contacts is necessary for optimum clamping.
4. More functions for cooperate with Induction Block and Spring Block. (See the detail of Option Accessories)



LENGTH OF MODEL
320mm



LENGTH OF MODEL
440~610mm

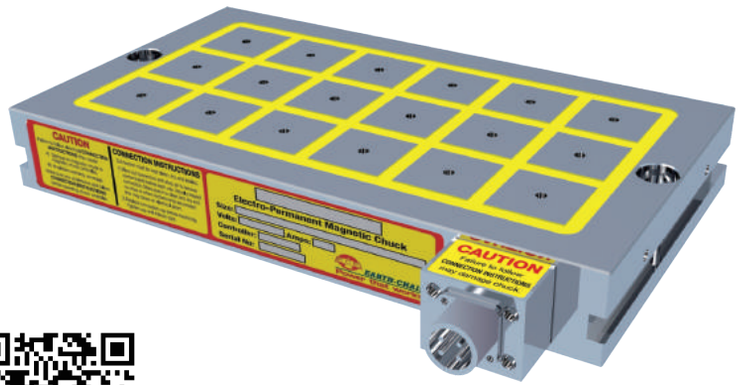
Unit:mm

MODEL NO.	DIMENSION							PITCH G	POLE P	NO. OF POLE	Unipolar suction kgf ±5%	TOTAL HOLDING POWER kgf ±5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
	W	L	S	S1	M	T	H									
EEPM-1530A	185	320	30.5	26	-	M6	50	7	35×35	18	145	2610	23kg	AC 220V ≀ 480V	18A	C1
EEPM-2540A	225	440	30	25	30					32		4640	39kg		30A	C1
EEPM-2560A	225	610	31	25	30					48		6960	54kg		26A	C2
EEPM-3030A	310	320	30.5	25.5	-					36		5220	39kg		26A	C1
EEPM-3040A	310	440	30	25.5	30					48		6960	53kg		25A	C2
EEPM-3060A	310	610	31	25.5	30					72		10440	74kg		31A	C2
EEPM-4040A	435	440	30	25	30					72		10440	75kg		31A	C2
EEPM-4050A	435	525	30.5	25	30					90		13050	90kg		24A	C4
EEPM-4060A	435	610	31	25	30					108		15660	104kg		26A	C4

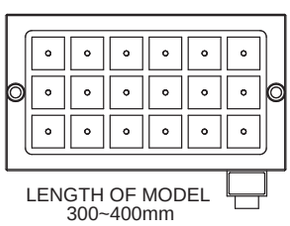
Custom-made is available.

Electro-Permanent Magnetic Chuck EEPM-B Series

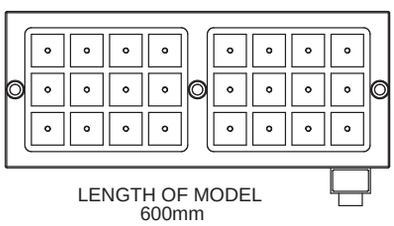
Suitable for CNC Vertical machining center (Can do 5 sides machining)



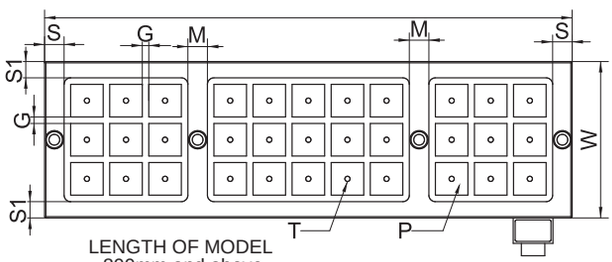
Pole 50X50 mm, Flux Line 25 mm, Magnetic Force 1250±5% kgf/4 Poles



LENGTH OF MODEL
300~400mm



LENGTH OF MODEL
600mm



LENGTH OF MODEL
800mm and above

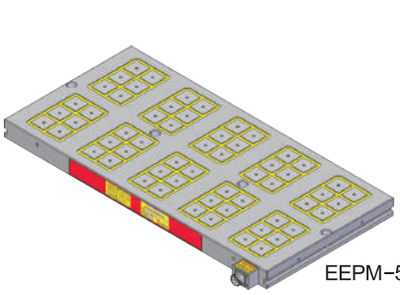
Unit:mm

MODEL NO.	DIMENSION							PITCH G	POLE P	NO. OF POLE	TOTAL HOLDING POWER kgf ±5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
	W	L	S	S1	M	T	H											
EEPM-2540B	240	430	30	25	--	M8	60	10	50×50	18	5600	50kg	AC 220V	18A	C1	AC 380V ~ 440V	16A	C1
EEPM-2560B	240	590	30	25	30					24	7500	69kg		30A	C1		12A	C1
EEPM-2580B	240	810	30	25	30					33	10300	92kg		30A	C1		19A	C1
EEPM-2590B	240	870	30	25	30					36	11200	98kg		18A	C2		18A	C1
EEPM-25100B	240	990	30	25	30					42	13100	111kg		26A	C2		14A	C2
EEPM-3030B	300	310	30	25	--					16	5000	44kg		20A	C1		8A	C1
EEPM-3040B	300	430	30	25	--					24	7500	61kg		30A	C1		12A	C1
EEPM-3060B	300	590	30	25	30					32	10000	82kg		30A	C1		20A	C1
EEPM-3080B	300	810	30	25	30					44	13700	116kg		25A	C2		13A	C2
EEPM-3090B	300	870	30	25	30					48	15000	123kg		30A	C2		12A	C2
EEPM-30100B	300	990	30	25	30					56	17500	138kg		35A	C2		19A	C2
EEPM-4040B	420	430	30	25	--					36	11200	84kg		18A	C2		18A	C1
EEPM-4050B	420	490	30	25	--					42	13100	95kg		26A	C2		14A	C2
EEPM-4060B	420	590	30	25	30					48	15000	100kg		30A	C2		12A	C2
EEPM-4080B	420	810	30	25	30					66	20600	159kg		30A	C2		19A	C2
EEPM-4090B	420	870	30	25	30					72	22500	169kg		18A	C4		18A	C2
EEPM-40100B	420	990	30	25	30					84	26200	193kg		26A	C4		12A	C4
EEPM-5060B	480	590	30	25	30					56	17500	129kg		35A	C2		19A	C2
EEPM-5080B	480	810	30	25	30					77	24000	185kg		30A	C4		13A	C4
EEPM-5090B	480	870	30	25	30					84	26200	196kg		26A	C4		14A	C4
EEPM-50100B	480	990	30	25	30					98	30600	219kg		30A	C4		12A	C4
EEPM-6060B	600	590	30	25	30					72	22500	165kg		18A	C4		18A	C2
EEPM-6080B	600	810	30	25	30					99	30900	215kg		30A	C4		19A	C4
EEPM-6090B	600	870	30	25	30					108	33700	240kg		27A	C4		20A	C4
EEPM-60100B	600	990	30	25	30					126	39300	274kg		32A	C4		21A	C4
EEPM-8080B	755	810	30	25	30					121	37800	271kg		33A	C4		18A	C4

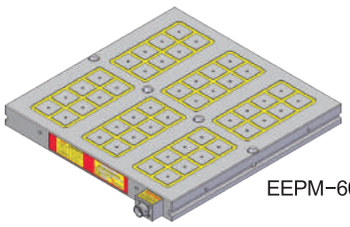
Custom-made is available.

Electro-Permanent Magnetic Chuck EEPM-BF Series

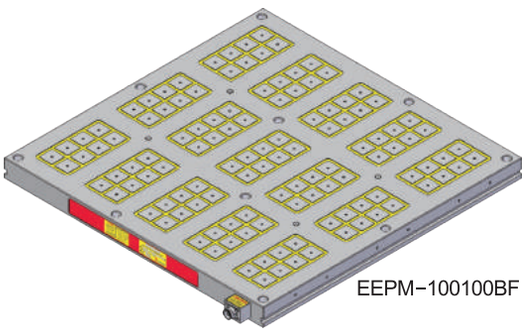
Suitable for CNC Vertical machining center (Can do 5 sides machining)



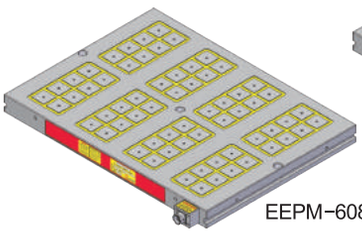
EEPM-50100BF



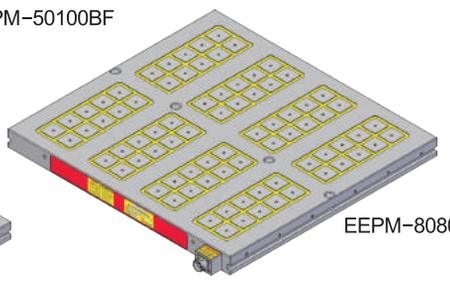
EEPM-6060BF



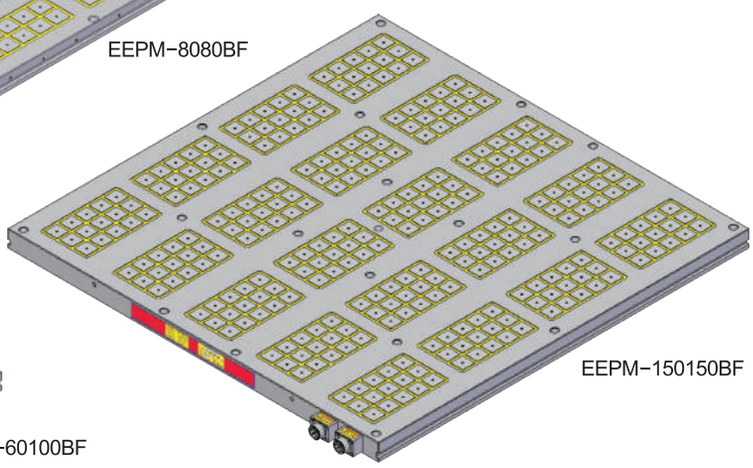
EEPM-100100BF



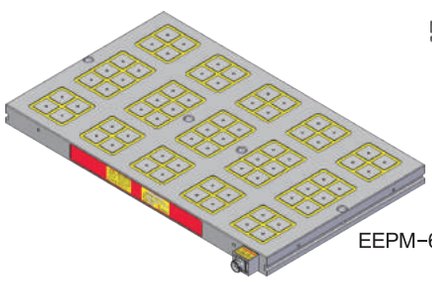
EEPM-6080BF



EEPM-8080BF

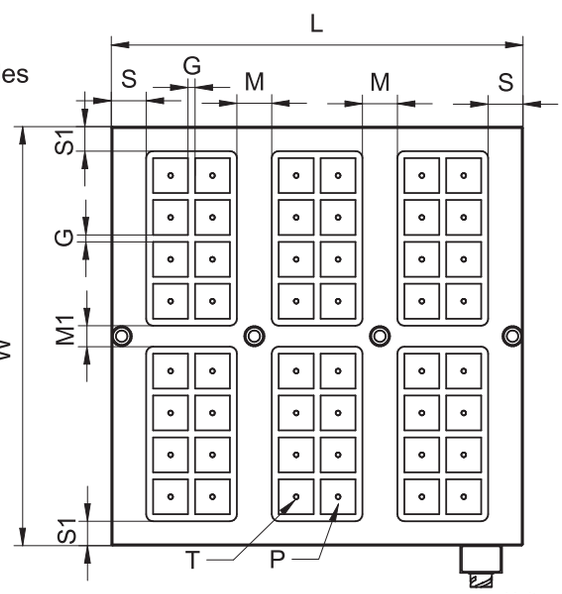


EEPM-150150BF



EEPM-60100BF

Pole 50X50 mm, Flux Line 25 mm, Magnetic Force 1250±5% kgf/4 Poles



Applications:

1. Suitable for medium and large workpiece machining.
2. Suitable for medium and large double column machining center.
3. Make sure the machining quality and security the workpiece dimension of length, width minimum covering required covering 20 poles and thickness must be at least 40mm.
4. More functions for cooperate with induction block and spring block. (See the detail of Option Accessories)

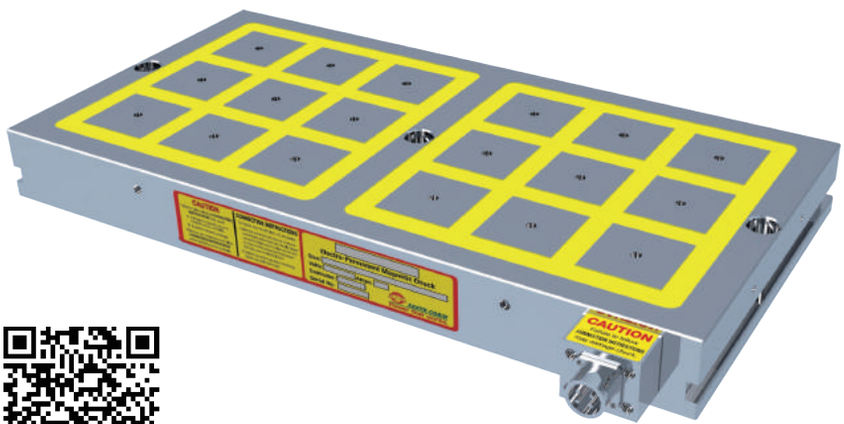
Unit:mm

MODEL NO.	DIMENSION								PITCH G	POLE P	NO. OF POLE	TOTAL HOLDING POWER kgf ±5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
	W	L	S	S1	M	M1	T	H											
EEPM-50100BF	480	990	50	30	60	40	M8	60	10	50x50	60	18750	143kg	AC 220V	31A	C2	AC 380V ~ 440V	18A	C2
EEPM-6060BF	600	590	50	35	50	30					48	15000	196kg		30A	C2		12A	C2
EEPM-6080BF	600	810	55	35	60	30					64	20000	246kg		33A	C2		18A	C2
EEPM-60100BF	600	990	50	35	60	40					70	21850	191kg		25A	C4		14A	C2
EEPM-8080BF	755	810	55	42.5	60	50					80	25000	239kg		23A	C4		14A	C4
EEPM-100100BF	1000	1000	55	60	60	65		70			120	37500	469kg		33A	C4		21A	C4
EEPM-150150BF	1500	1500	75	55	100	50					300	93750	1054kg		29A	C12		15A	C12

Custom-made is available.

Electro-Permanent Magnetic Chuck EEPM-D Series

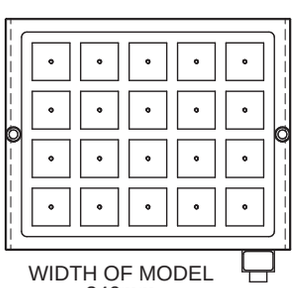
Suitable for CNC Vertical machining center (Can do 5 sides machining)



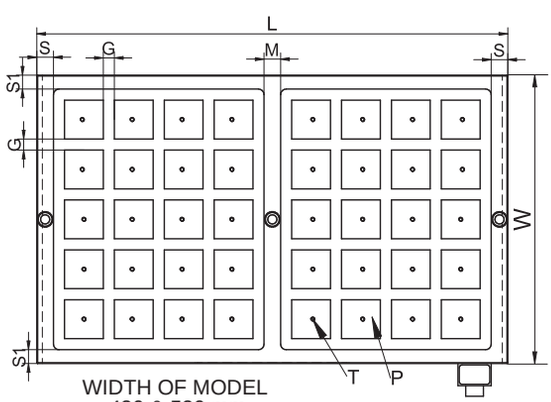
Pole 70X70 mm, Flux Line 40 mm, Magnetic Force 2800±5% kgf/4 Poles

Applications:

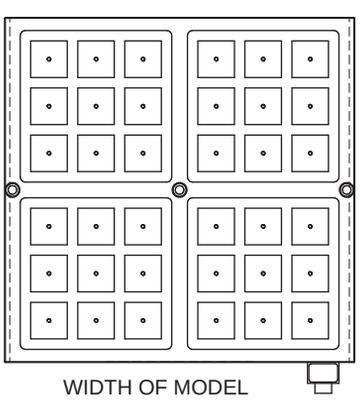
1. Suitable for medium and large workpiece on heavy duty machining.
2. Suitable for medium and double column machining center.
3. Minimum size of workpiece required as 4 alternate magnetic square poles and above contacts is necessary for optimum clamping.
4. More functions for cooperate with Induction Block and Spring Block. (See the detail of Option Accessories)



WIDTH OF MODEL
340mm



WIDTH OF MODEL
430 & 520 mm



WIDTH OF MODEL
660 & 840 mm

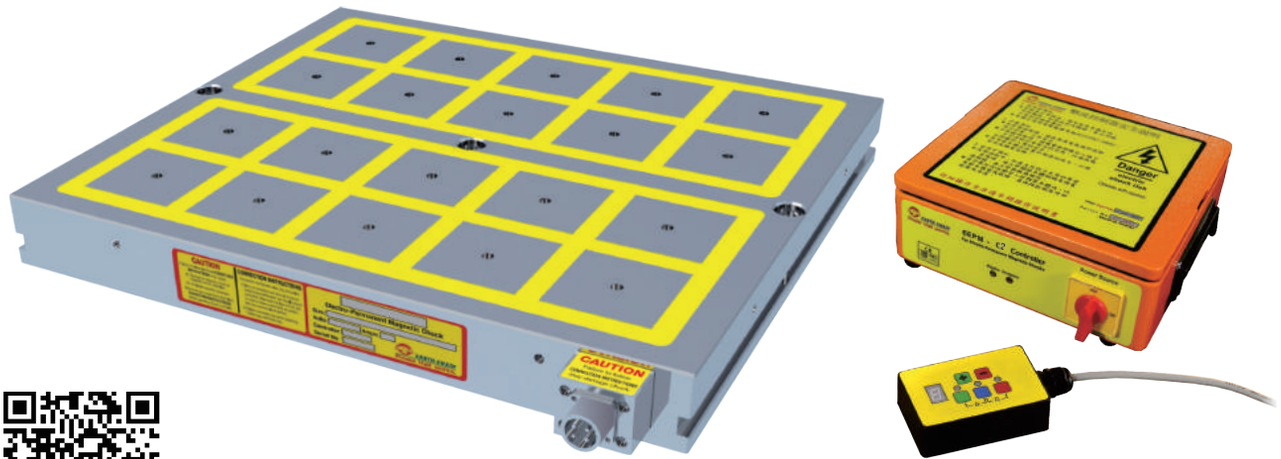
Unit:mm

MODEL NO.	DIMENSION							PITCH G	POLE P	NO. OF POLE	Unipolar suction kgf ±5%	TOTAL HOLDING POWER kgf ±5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
	W	L	S	S1	M	T	H												
EEPM-3060D	340	670	30	25	30	M10	70	20	70×70	18	700	12600	126kg	AC 220V	24A	C2	AC 380V ≀ 440V	25A	C1
EEPM-4050D	430	530	30	25	--					20		14000	126kg		13A	C2		22A	C1
EEPM-4060D	430	670	30	25	30					24		16800	159kg		24A	C2		29A	C1
EEPM-4080D	430	850	30	25	30					32		22400	202kg		16A	C4		27A	C2
EEPM-5060D	520	670	30	25	30					30		21000	193kg		19A	C2		17A	C2
EEPM-5080D	520	850	30	25	30					40		28000	244kg		13A	C4		22A	C2
EEPM-6060D	660	670	30	25	30					36		25200	245kg		15A	C4		25A	C2
EEPM-6080D	660	850	30	25	30					48		33600	310kg		24A	C4		29A	C2
EEPM-8080D	840	850	30	25	30					64		44800	395kg		32A	C8		27A	C4

Custom-made is available.

Electro-Permanent Magnetic Chuck EEPM-E Series

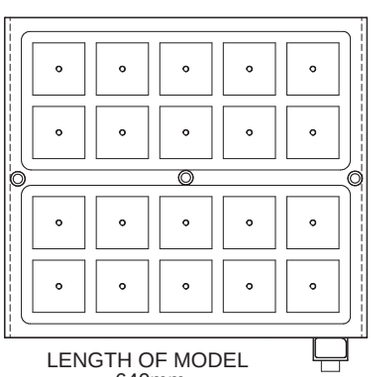
Suitable for CNC Vertical machining center (Can do 5 sides machining)



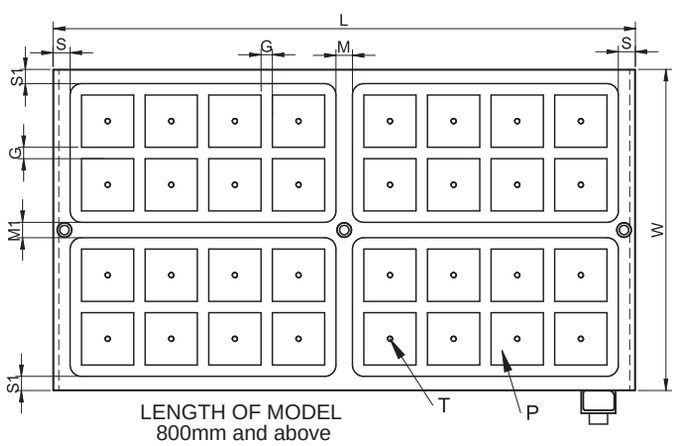
Pole 92X92 mm, Flux Line 50 mm, Magnetic Force 4800±5% kgf/4 Poles

Applications:

1. Suitable for large and high-thickness workpiece
2. Minimum size of workpiece required as 4 alternate magnetic square poles and above contacts is necessary for optimum clamping.
3. More functions for cooperate with Induction Block and Spring Block. (See the detail of Option Accessories)



LENGTH OF MODEL
640mm



LENGTH OF MODEL
800mm and above

Unit:mm

MODEL NO.	DIMENSION								PITCH G	POLE P	NO. OF POLE	Unipolar suction kgf ±5%	TOTAL HOLDING POWER kgf ±5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
	W	L	S	S1	M	M1	T	H									
EEPM-6060E	565	640	30	25	--	27	M10	70	20	92×92	20	1200	24000	214kg	AC 380V ≀ 440V	24A	C2
EEPM-60100E	565	1025	30	25	29	27					32		38400	343kg		13A	C4
EEPM-60120E	565	1250	30	25	30	27					40		48000	418kg		24A	C4
EEPM-8080E	790	800	30	25	28	28					36		43200	374kg		26A	C4
EEPM-80100E	790	1025	30	25	29	28					48		57600	480kg		19A	C4
EEPM-80120E	790	1250	30	25	30	28					60		72000	585kg		15A	C8

Custom-made is available.

Option Controller EEPM-C Serise

Option controller available for control multi-EEPM chuck

Controller

Features:

1. SCR1600 volts/ 70 amps more safety and durability.
2. Built-in transformer 220V~480V full voltage is applicable.
3. Intelligent Precision IC Chip Modification Program.
4. Communication Modbus connection function, can be automated with CNC machine and robot arm.
5. Clock rate up to 20Mhz (generally 8 Mhz), sensitive and increased operation reliability.

Magnetism level:

The magnetism is designed with an adjustable function and divided into 8 levels to meet with the client requirements in sizes and applications.

Relative magnetic force strength percentage table

Magnetism level	1	2	3	4	5	6	7	8
%	16	28	40	52	64	76	88	100

a. The maximum magnetic force of cubic pole 50mm square can reach up to 1,250 ±5% kgf/100cm^2 (4 poles).

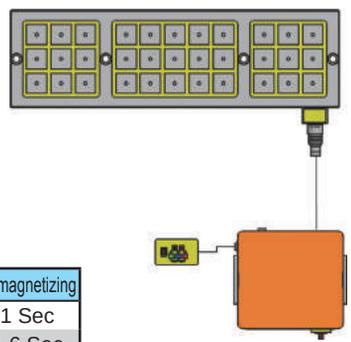
b. Level 8 represents maximum magnetic force.

Signal line can be connected with the machine and the robot arm

Option Controller EEPM-C Serise

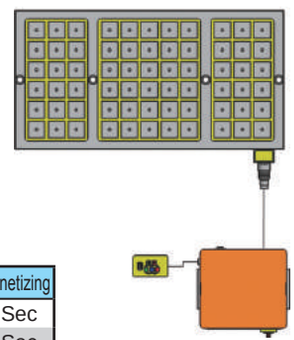
Option controller available for control multi-EEPM chuck.

Please advice the voltage of EEPM chucks are AC220V or AC380V~AC440V when purchased. (Depending on the controller specification the junction box is option product.)



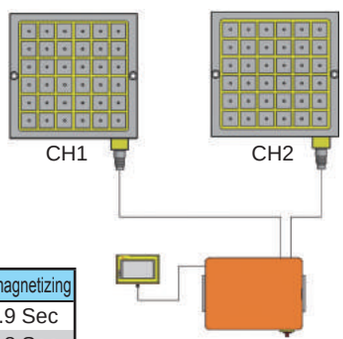
Voltage	Magnetizing	Demagnetizing
220V	1 Sec	1 Sec
380V~440V	1.5 Sec	1.6 Sec

Control for 1 to 1 pieces of C1 EEPM chucks



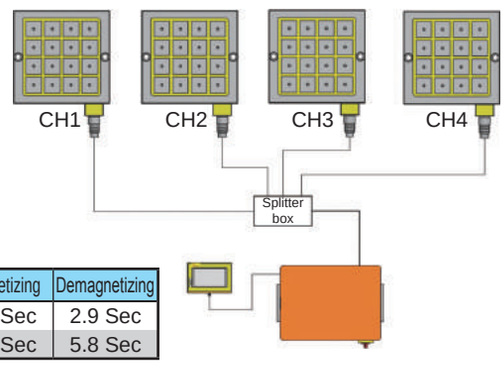
Voltage	Magnetizing	Demagnetizing
220V	1.4 Sec	1.5 Sec
380V~440V	2.9 Sec	3.0 Sec

Control for 1 to 1 pieces of C2 EEPM chucks



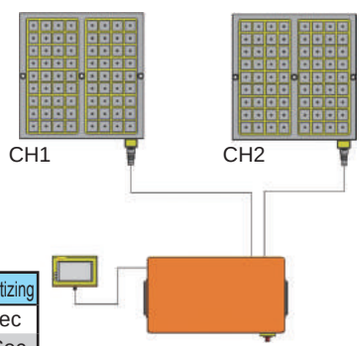
Voltage	Magnetizing	Demagnetizing
220V	2.8 Sec	2.9 Sec
380V~440V	5.5 Sec	5.8 Sec

Control for 1 to 2 pieces of C2 EEPM chucks



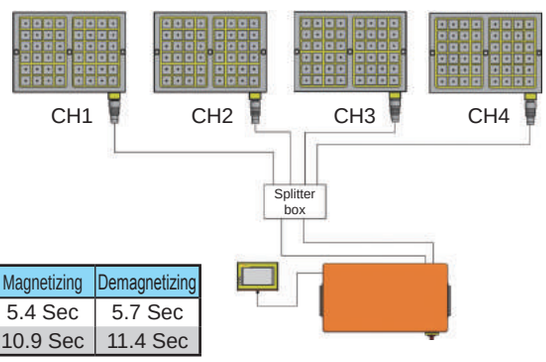
Voltage	Magnetizing	Demagnetizing
220V	2.8 Sec	2.9 Sec
380V~440V	5.5 Sec	5.8 Sec

Control for 1 to 4 pieces of C1 EEPM chucks



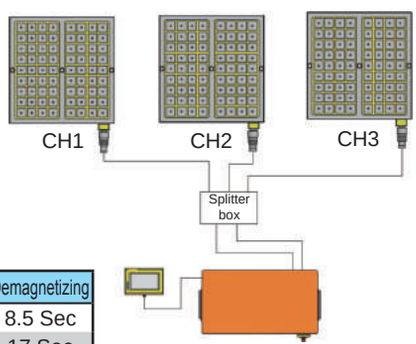
Voltage	Magnetizing	Demagnetizing
220V	5.4 Sec	5.7 Sec
380V~440V	10.9 Sec	11.4 Sec

Control for 1 to 2 pieces of C4 EEPM chucks



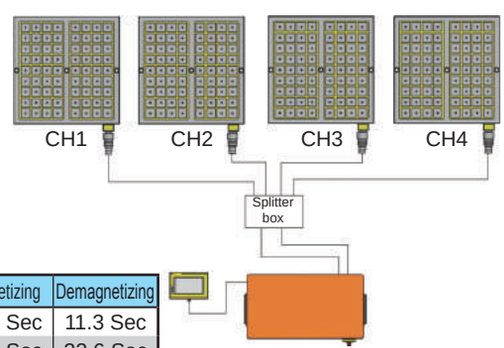
Voltage	Magnetizing	Demagnetizing
220V	5.4 Sec	5.7 Sec
380V~440V	10.9 Sec	11.4 Sec

Control for 1 to 4 pieces of C2 EEPM chucks



Voltage	Magnetizing	Demagnetizing
220V	8.1 Sec	8.5 Sec
380V~440V	16.2 Sec	17 Sec

Control for 1 to 3 pieces of C4 EEPM chucks



Voltage	Magnetizing	Demagnetizing
220V	10.8 Sec	11.3 Sec
380V~440V	21.5 Sec	22.6 Sec

Control for 1 to 4 pieces of C4 EEPM chucks

Human Machine Interface controller EEPM-HMI Series

Suitable for use on EEPM Series of Electro-Permanent Magnetic Chuck.

Controller

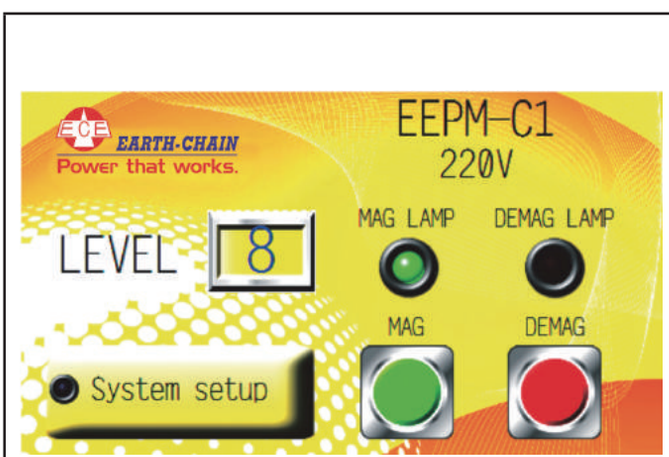
EEPM-HMI

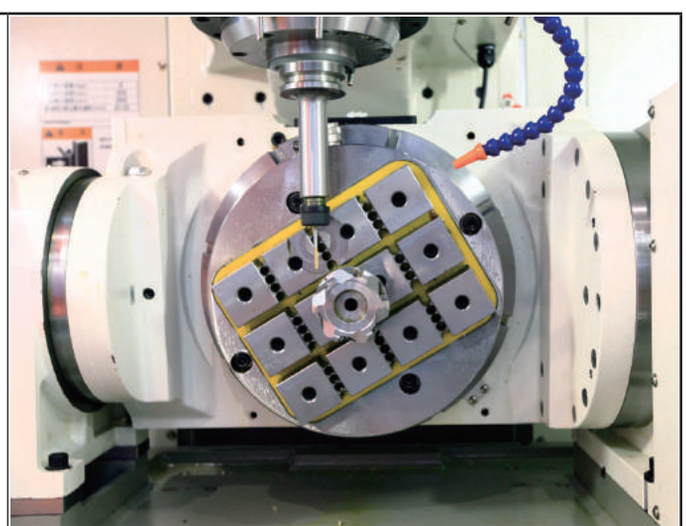
Features:

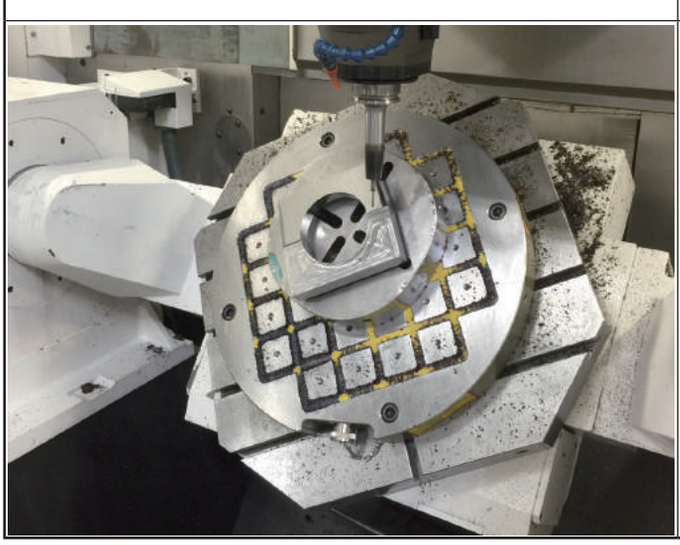
1.HMI touch screen - can be set the screen brightness, key sound, language…etc.
2.Display the abnormal status, such as the chuck cable unconnected, and instruction the troubleshooting.
3. Can detect low voltage abnormal situation, to avoid the insufficient magnetic force situation.

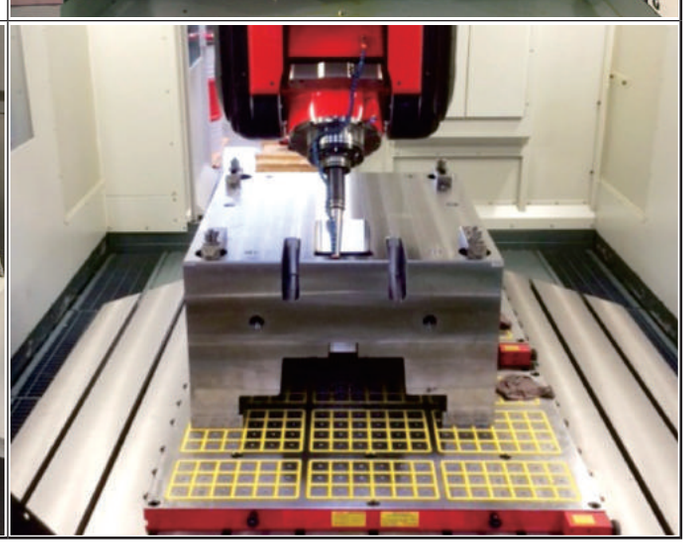
Example description:

Develop Human Machine Interface touch screen system, feedback operation status from screen page, and the devices could be drive by pre-set program and parameter.



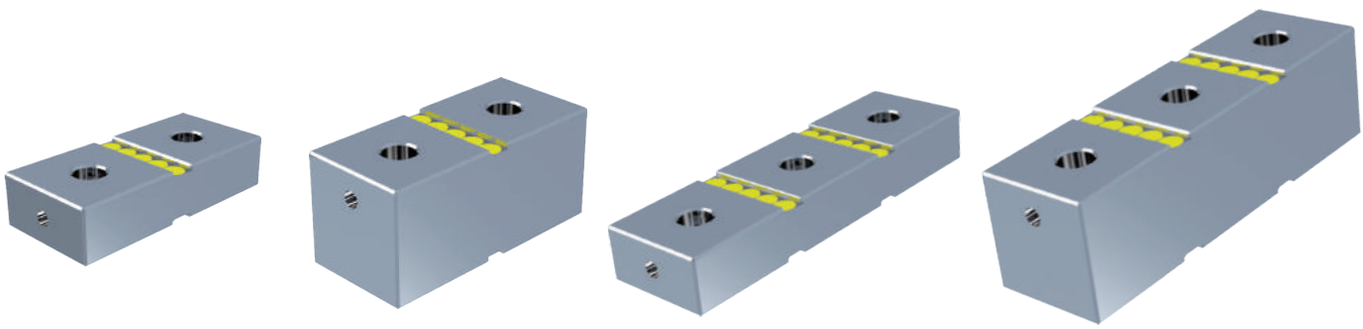






Option Accessories-Induction Block EEPM-IB Series

Suitable for use on EEPM Series of Electro-Permanent Magnetic Chuck.



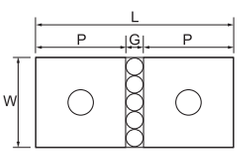
Features:

1. Induction Block EEPM-IB series are use with EEPM chucks, can be increased to more functions on workholding.
2. Increased using life of magnetic chuck: We suggest always use induction block to clamp workpieces, due to workpiece will not touch to the surface of chucks it can be keep chucks always be new.
3. Convenience and Accuracy: Induction Block are interchanging & consuming accessories, you can machining surface or forming induction blocks for the workpiece required by the machine directly, so the parallelism of induction block will always 100% match to the machine.

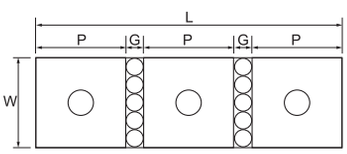
EEPM-IBA Suitable for use on EEPM-A Series Chucks.

Unit:mm

MODEL NO.	NO. OF POLE	W	L	HEIGHT	P	G
EEPM-IB215A	2	35	77	15	35	7
EEPM-IB315A	3	35	119	15	35	7



NO. OF POLE : 2



NO. OF POLE : 3

EEPM-IBB Suitable for use on EEPM-B Series Chucks.

Unit:mm

MODEL NO.	NO. OF POLE	W	L	HEIGHT	P	G
EEPM-IB225B	2	50	110	25	50	10
EEPM-IB325B	3	50	170	25	50	10

MODEL NO.	NO. OF POLE	W	L	HEIGHT	P	G
EEPM-IB250B	2	50	110	50	50	10
EEPM-IB350B	3	50	170	50	50	10

EEPM-IBD Suitable for use on EEPM-D Series Chucks.

Unit:mm

MODEL NO.	NO. OF POLE	W	L	HEIGHT	P	G
EEPM-IB225D	2	70	160	25	70	20
EEPM-IB325D	3	70	250	25	70	20

EEPM-IBE Suitable for use on EEPM-E Series Chucks.

Unit:mm

MODEL NO.	NO. OF POLE	W	L	HEIGHT	P	G
EEPM-IB225E	2	92	204	25	92	20
EEPM-IB325E	3	92	316	25	92	20

Relative magnetic force to height of EEPM-IB：

MODEL NO.	Height	Holding Power (Kgf)
EEPM-IB215A	15 mm	80 %
EEPM-IB315A	15 mm	64 %

MODEL NO.	Height	Holding Power (Kgf)
EEPM-IB225B	25 mm	82 %
EEPM-IB325B	25 mm	68 %

MODEL NO.	Height	Holding Power (Kgf)
EEPM-IB250B	50 mm	72 %
EEPM-IB350B	50 mm	58 %

*50mm height induction block with lower holding power that suitable for stopping block only.

MODEL NO.	Height	Holding Power (Kgf)
EEPM-IB225D	25 mm	86 %
EEPM-IB325D	25 mm	70 %

MODEL NO.	Height	Holding Power (Kgf)
EEPM-IB225E	25 mm	86 %
EEPM-IB325E	25 mm	70 %

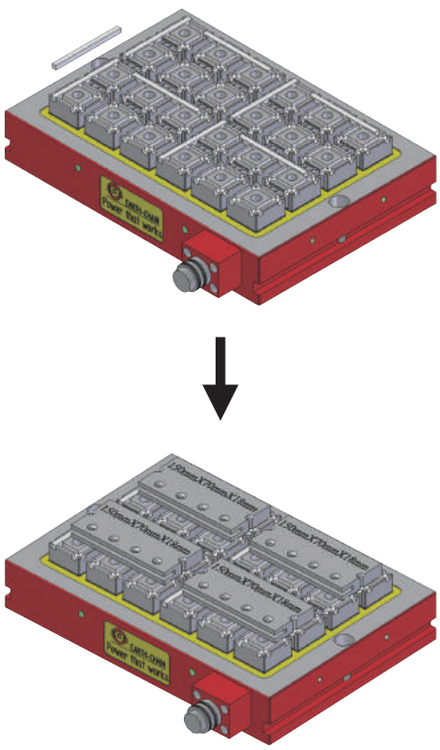
Example:

EEPM chuck	Induction Block	Total Holding Power
EEPM-2560B	None	7,500±5% kgf
EEPM-2560B	IB225B x 24pcs	6,150±5% kgf (7,500x82%)

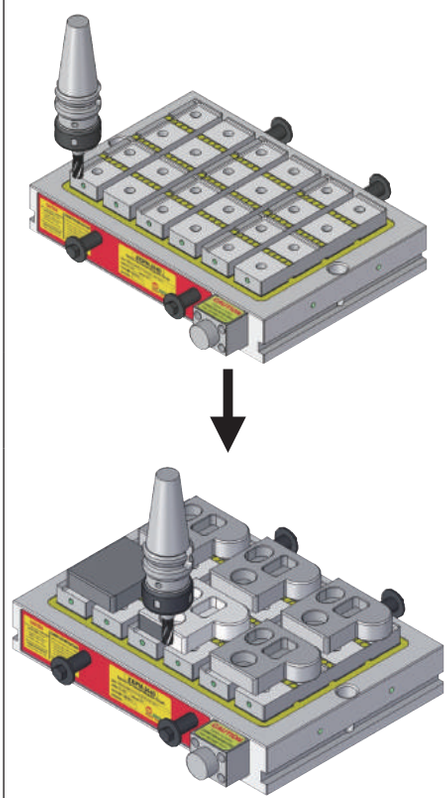
Option Accessories-Induction Block EEPM-IB Series

Suitable for use on EEPM Series of Electro-Permanent Magnetic Chuck.

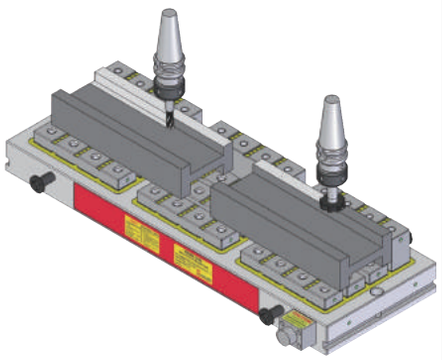
Working Example



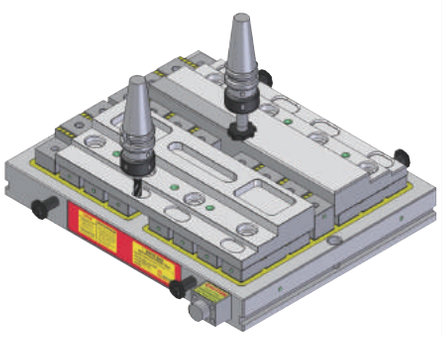
Directly processing the grooves on induction block and placing the bars in demand for multi-workpiece on 5 sides machining.



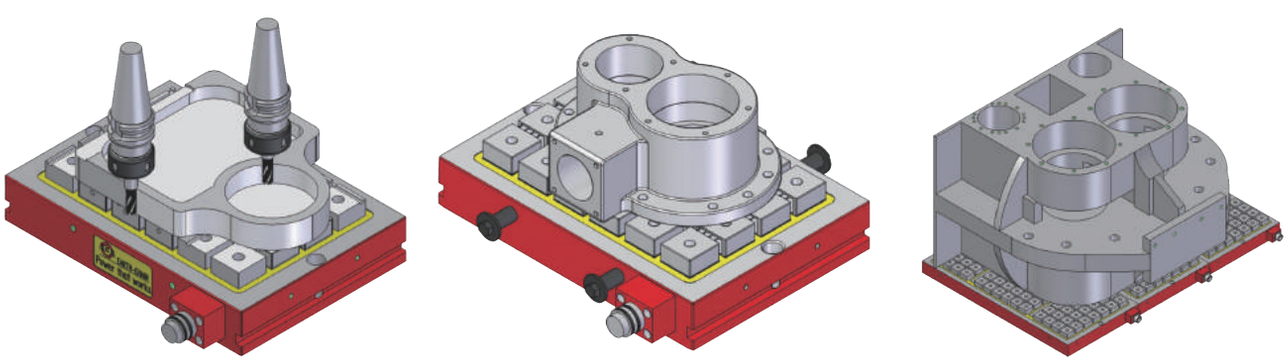
Machining slots and steps on IB for positioning multi- workpiece on 5 sides machining.



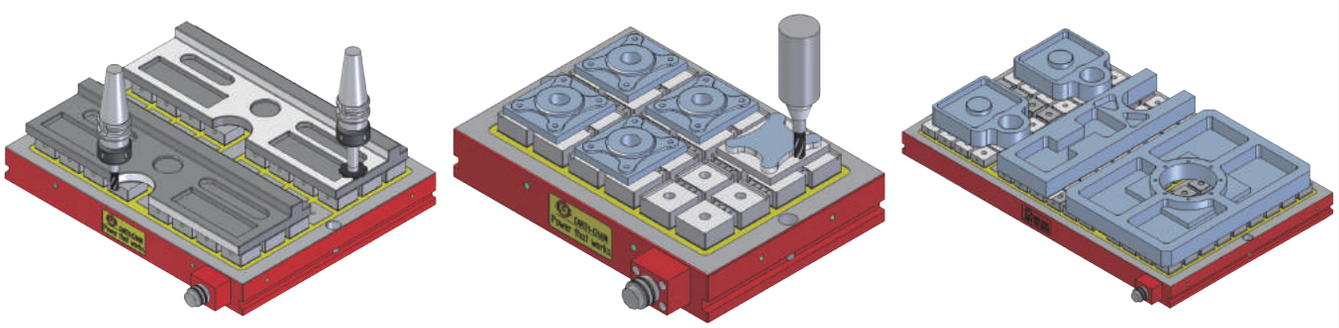
Used 25mm & 50mm height of IB for positioning multi-workpiece on surface machining.



Used 25mm & 50mm height of IB for positioning multi-workpiece on surface machining.



Using height 25mm induction block for irregular workpiece on 5 sides machining.

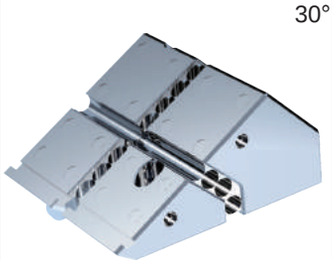
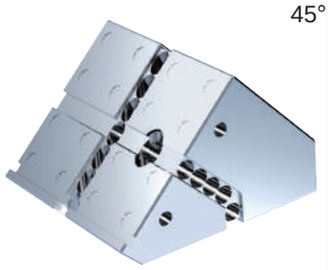
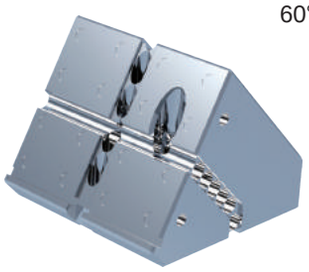
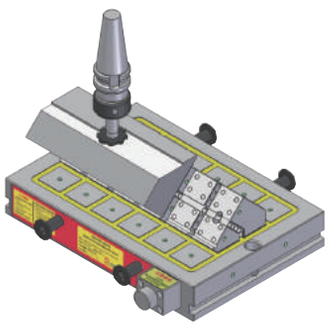
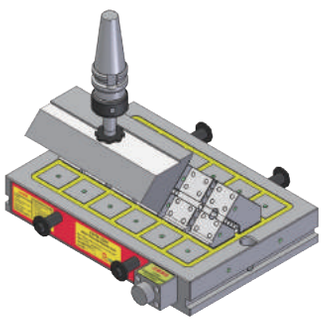
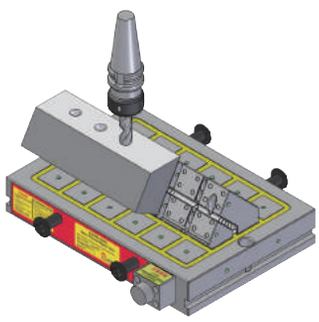
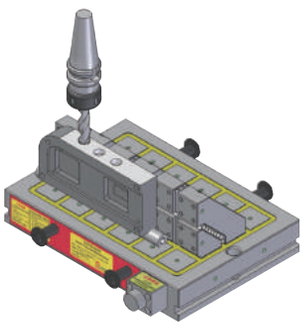


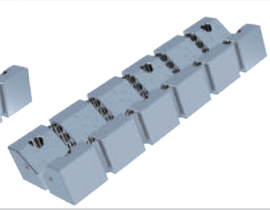
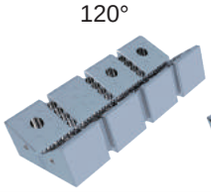
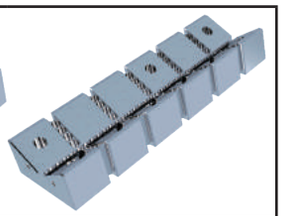
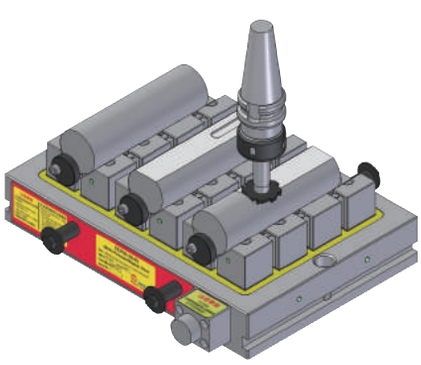
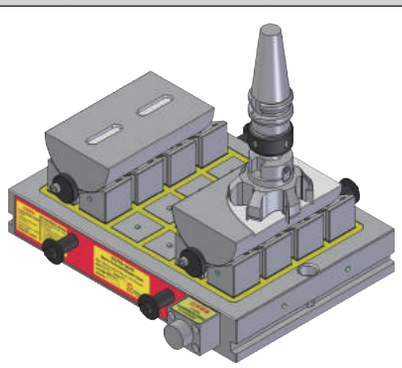
Using height 25mm Induction block for multi-workpiece on 5 sides machining.

Option Accessories

Suitable for use on EEPM Series of Electro-Permanent Magnetic Chuck.

Induction Block EEPM-IBT Series

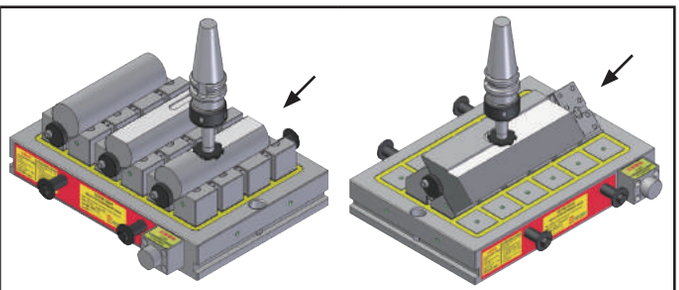
30°	45°	60°	90°
			
EEPM-IBT30	EEPM-IBT45	EEPM-IBT60	EEPM-IBT90
			
Working Example			

90°			120°		
					
EEPM-IB90V3	EEPM-IB90V4	EEPM-IB90V6	EEPM-IB120V3	EEPM-IB120V4	EEPM-IB120V6
					
Working Example					

Stopping Plate EEPM-PS40

EEPM-PS40

Due to the holding surface of small workpiece is not big enough, so please always use the Stopping Plate EEPM-PS40 for avoid the workpiece moving when machining.



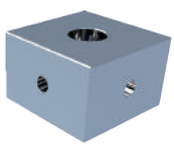
machining way

Magnetic Workholding

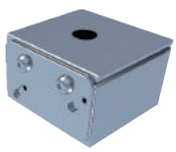
Suitable for use on EEPM Series of Electro-Permanent Magnetic Chuck.

Spring Block EEPM-SP Series

Suitable for clamping on iron cast, irregular form and flexuous workpieces, it will not be out of shape the workpiece after machining.



Fixed Block
EEPM-SPF Series



Spring Block
EEPM-SP Series

Features:

1. Suitable for clamping on iron cast, irregular form and flexuous workpieces, it will not be out of shape of the workpiece after machining.
2. 3 Fixed Blocks is necessary for each workpiece clamping, it could be makes a basic surface for the workpiece touch to the Spring Blocks.
3. Elasticity of EEPM-SP35:
   Each 2.0 mm for up and down.
4. Elasticity of EEPM-SP & EEPM-SP70:
   Each 2.5 mm for up and down.

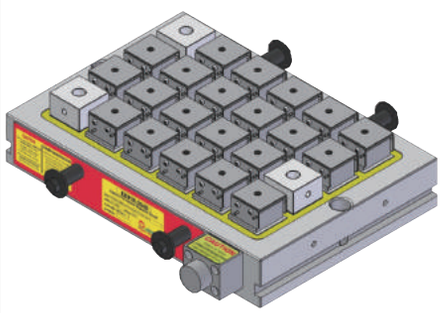
Relative magnetic force to
Fixed block and Spring block:

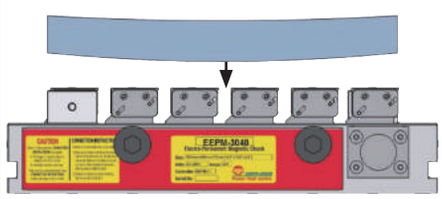
MODEL NO.	Holding Power (Kgf)
Fixed Block	85 %
Spring Block	40 %

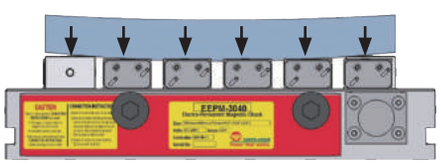
MODEL NO.	L	W	H	SUITABLE
EEPM-SP35	35	33.6	21	EEPM-A Series
EEPM-SPF35	35	35	23	

MODEL NO.	L	W	H	SUITABLE
EEPM-SP	48	48	30	EEPM-B Series
EEPM-SPF	50	50	32.5	

MODEL NO.	L	W	H	SUITABLE
EEPM-SP70	68	68	30	EEPM-D Series
EEPM-SPF70	70	70	32.5	

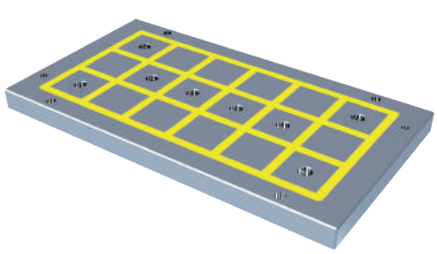






Induction Sub Plate EEPM-ISP Series

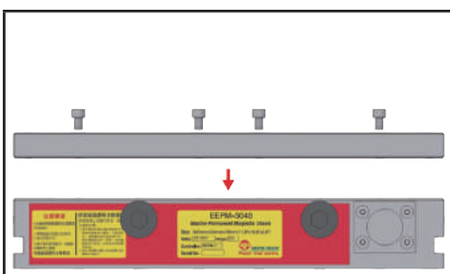
Suitable for quantity of irregular and smaller workpiece. It can be machining multi-workpiece at same time easily.

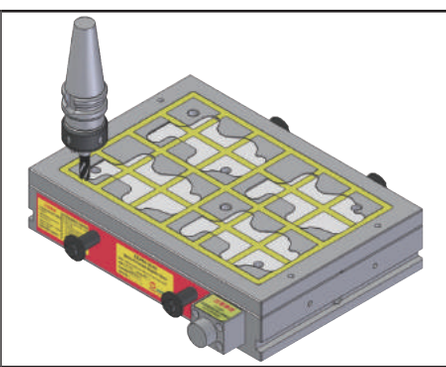


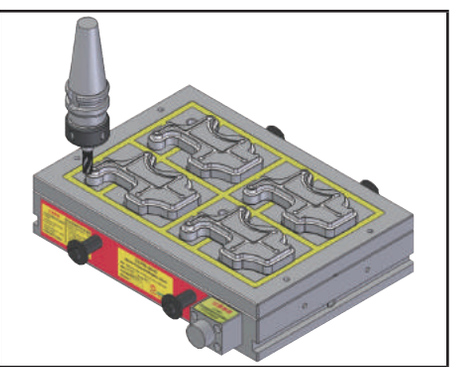
EEPM-ISP

Features:

1. Suitable for quantity of irregular and smaller workpiece. It can be machining multi-workpiece at same time easily.
2. One EEPM chuck can be use several Induction Sub Plate exchangeability for machining different kind of workpiece.
3. Operation:Set up the Induction Sub Plates to the EEPM chucks first, then machining forms (Around 1-2mm depth) on ISP to match the workpiece by the machine directly. Start to clamp workpieces for machining.
4. Please advise the model No. of EEPM chuck which you want to combine for, when purchased.





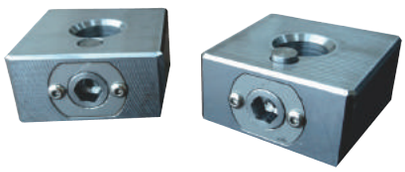


Option Accessories

Suitable for use on EEPM Series of Electro-Permanent Magnetic Chuck.

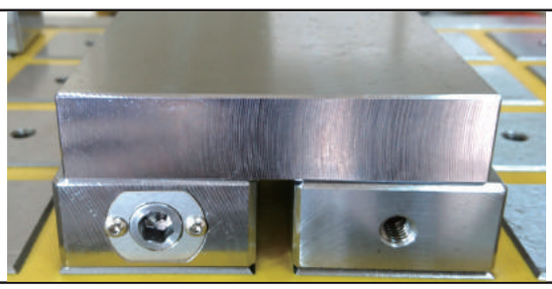
Induction block with raise pin structure EEPM-S50T

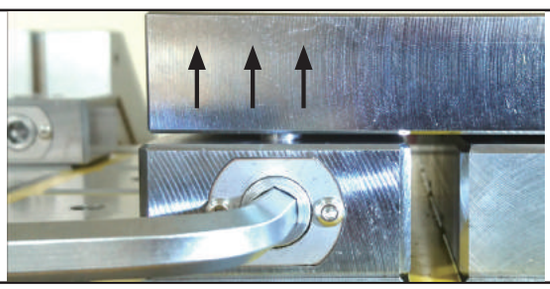
Suitable for high-carbon steel workpiece



Features:

1. Since the high-carbon materials, the workpiece might be unable to be instantly released after machining cycle is completed due to residual magnetism.
2. The high-carbon steel parts are difficult to remove after the magnetization using induction block with raise pin structure can easily remove the workpiece.

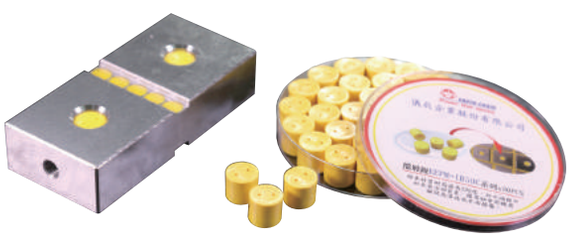




Tap of Induction block screw hole EEPM-IBC50

Features:

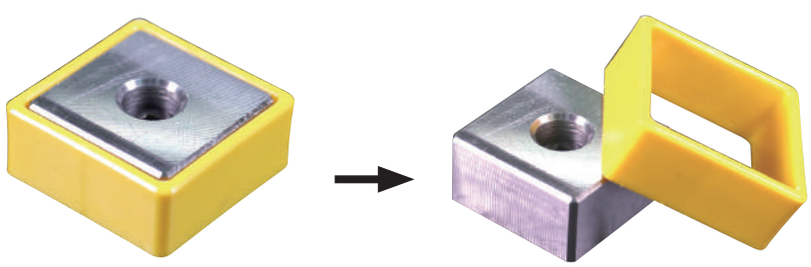
1. 1.Put the EEPM-IBC50 into Induction block screw hole, to avoid the iron chip fall in the induction block screw holes when machining, can be save the time for chips clear.
2. Maximum temperature is 200 degrees, if without cooling device the surface of EEPM-IBC50 will be damage by high temperature of iron chips.



Induction block guards: EEPM-IBS50

Features:

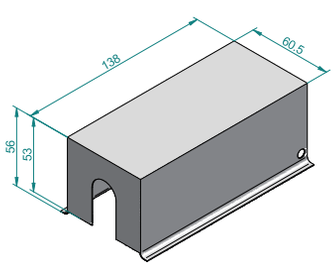
1. Put the EEPM-IBS50 into Induction block gap, to avoid the iron chip fall in the induction block gaps when machining, can be save the time for clear.
2. Maximum temperature is 200 degrees, if without cooling device the surface of EEPM-IBS50 will be damage by high temperature of iron chips.



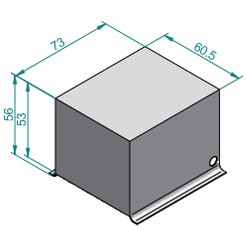
Cover of Connector Base EEPM-CMS & EEPM-CMS1

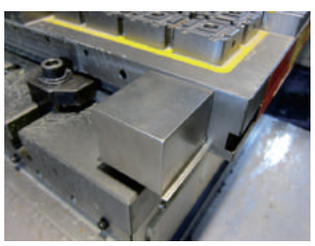
Effectively avoid short circuit cause by liquid or objects enter into the wires.

EEPM-CMS



EEPM-CMS1

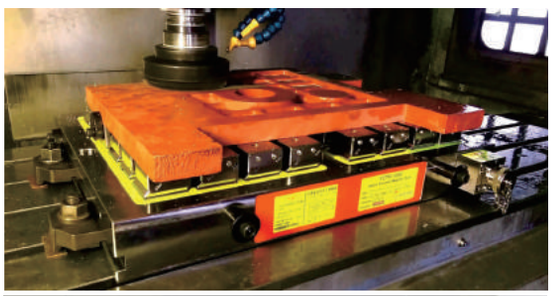
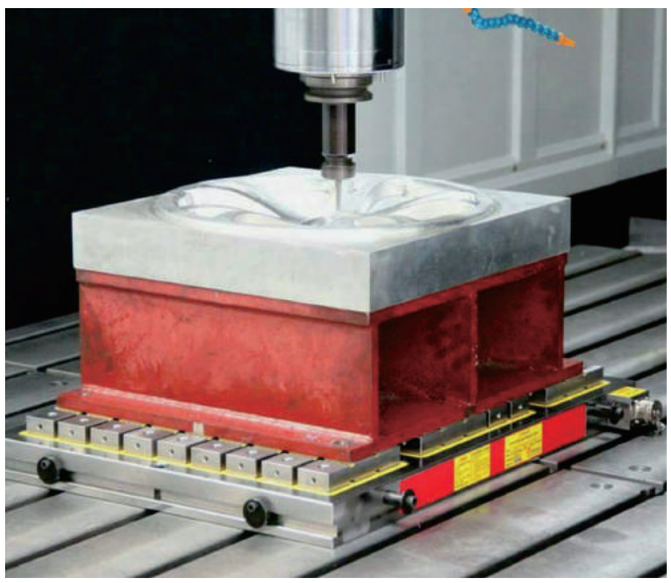


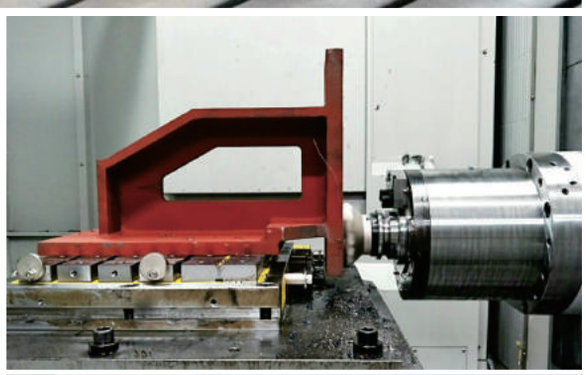
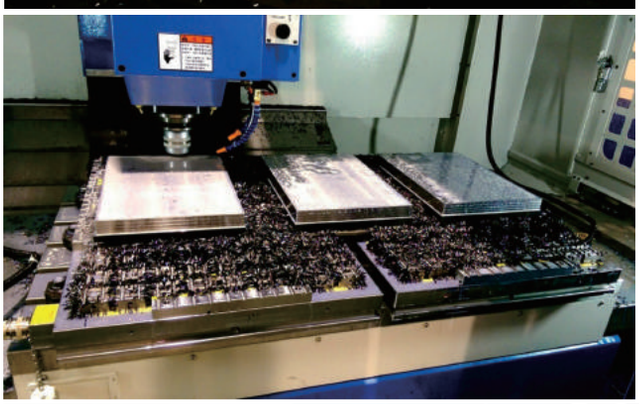


Electro-Permanent Magnetic Chuck EEPM Series

Suitable for CNC Vertical machining center (Can do 5 sides machining)

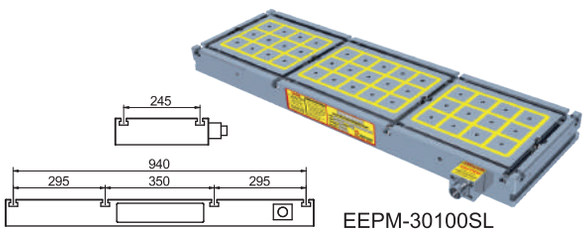
Working Example

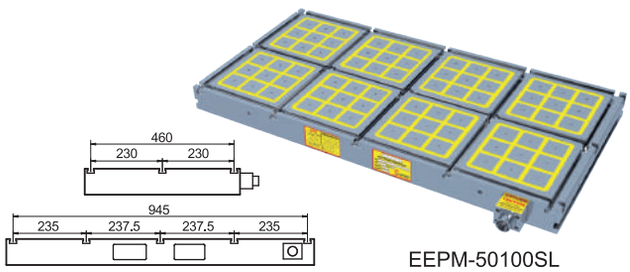




Electro-Permanent Magnetic Chuck EEPM-SL / TA Series

Suitable for all size of workpiece, can be use together with mechanical clamping tools.

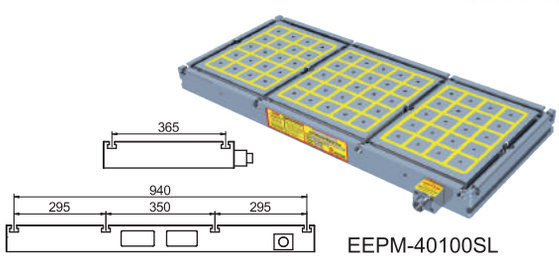


EEPM-30100SL

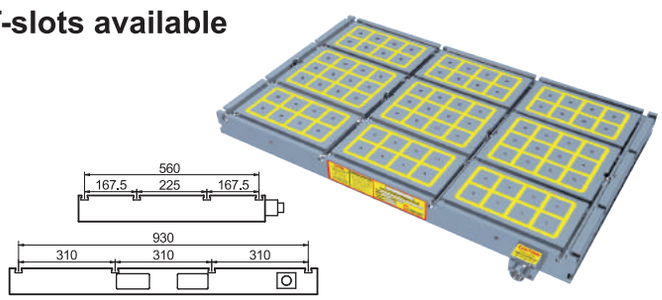


EEPM-50100SL

Made with T-slots available



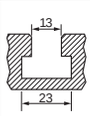
EEPM-40100SL



EEPM-60100SL

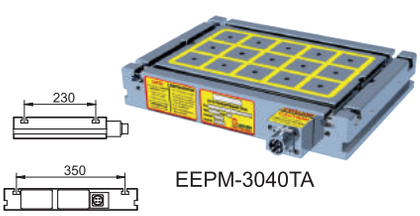
With multi-functions of machine table, clamping plate and magnetic chuck

Unit:mm

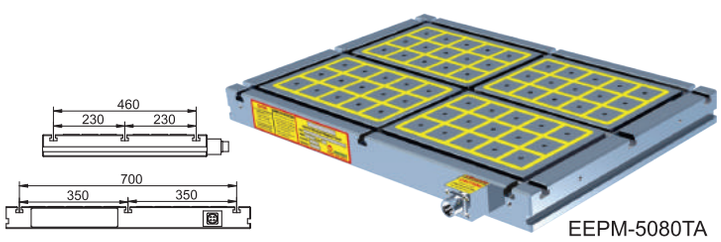
MODEL NO.	DIMENSION L×W×H	PITCH	POLE	NO. OF POLE	T-SLOT	TOTAL HOLDING POWER kgf ±5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
EEPM-30100SL	990×300×70	10	50×50	39		12100	160kg	AC 220V	24A	C2	AC 380V ≀ 440V	16A	C2
EEPM-40100SL	990×420×70	10	50×50	65		20300	225kg		30A	C2		13A	C2
EEPM-50100SL	990×500×70	10	50×50	72		22500	260kg		14A	C4		14A	C2
EEPM-60100SL	990×600×70	10	50×50	84		26200	320kg		22A	C4		9A	C4

Custom-made is available.

Suitable for big size of workpiece only, use together with mechanical clamping tool for heavy duty machining.

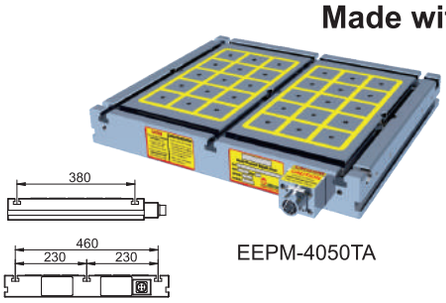


EEPM-3040TA

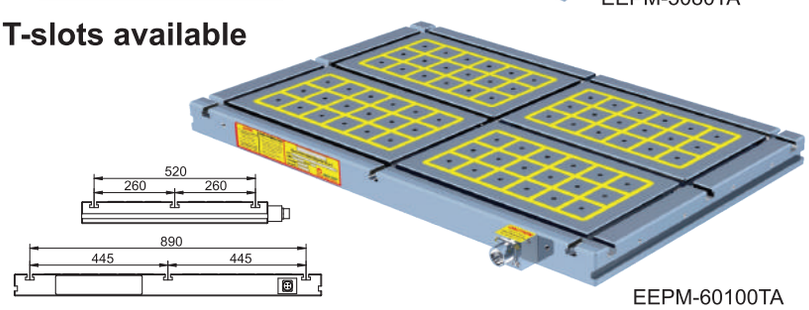


EEPM-5080TA

Made with T-slots available



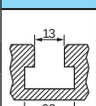
EEPM-4050TA



EEPM-60100TA

Lower price for big size of workpiece only.

Unit:mm

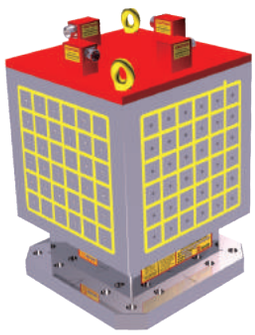
MODEL NO.	DIMENSION L×W×H	PITCH	POLE	NO. OF POLE	T-SLOT	TOTAL HOLDING POWER kgf ±5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
EEPM-3040TA	420×300×70	10	50×50	15		4600	50kg	AC 220V	17A	C1	AC 380V ≀ 440V	14A	C1
EEPM-4050TA	530×440×70	10	50×50	30		9300	80kg		33A	C1		16A	C1
EEPM-5080TA	790×530×70	10	50×50	60		18700	180kg		32A	C2		14A	C2
EEPM-60100TA	990×600×70	10	50×50	72		22500	240kg		23A	C4		13A	C2

Custom-made is available.

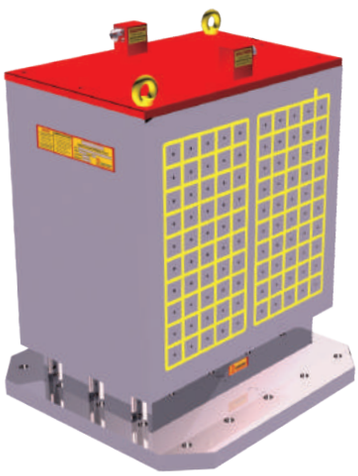
Electro-Permanent Magnetic Chuck EEPM-V Series

Suitable for CNC horizontal machining center

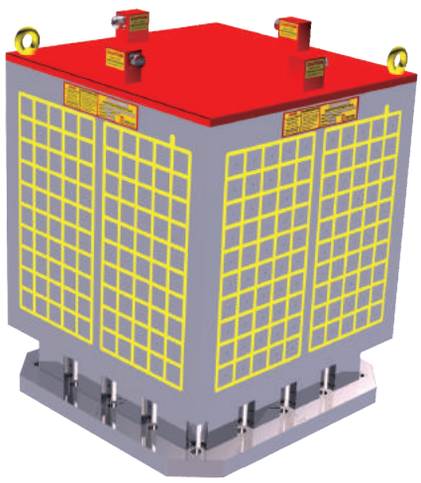
EEPM-500V2



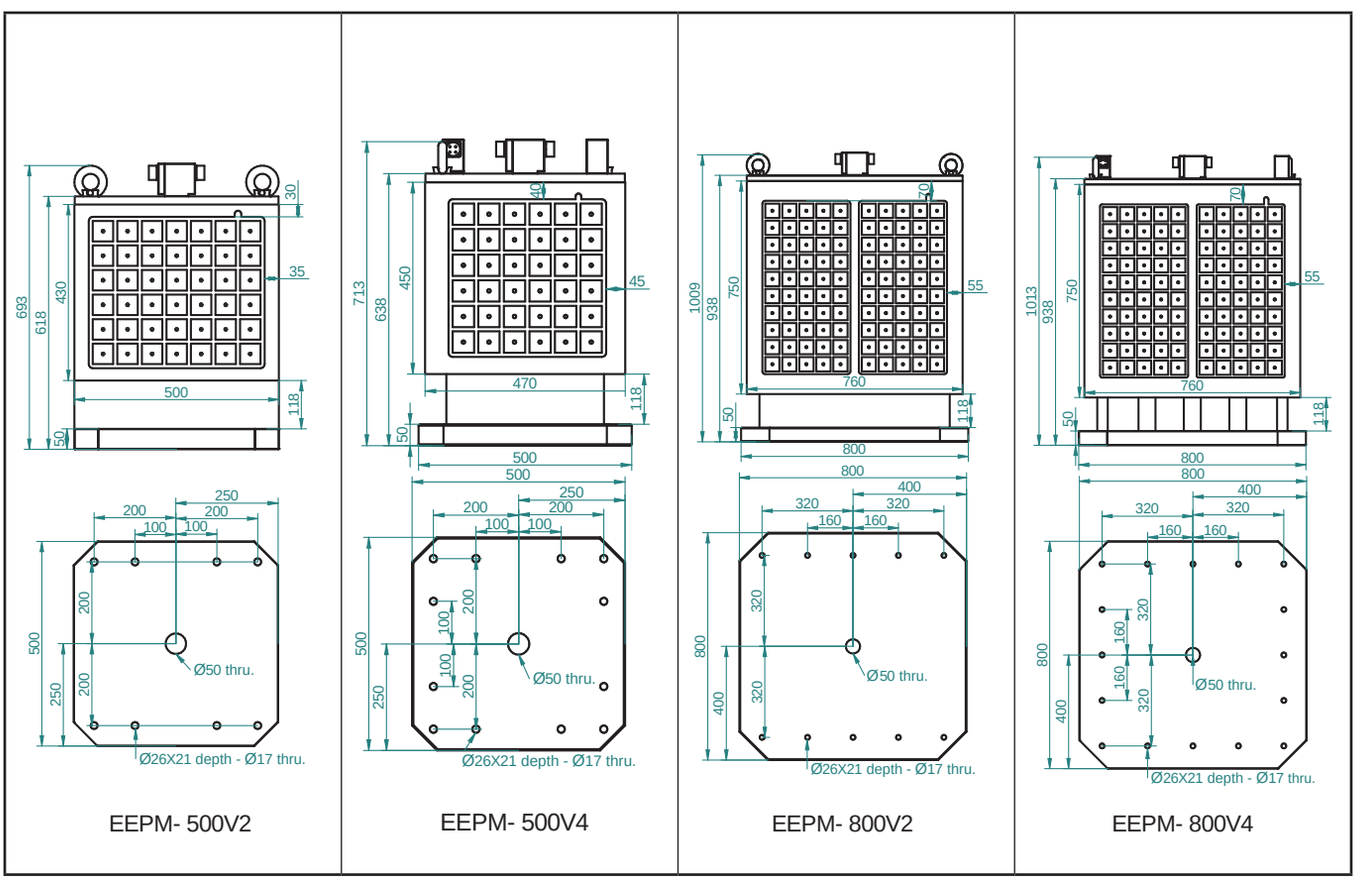
EEPM-500V4



EEPM-800V2



EEPM-800V4



EEPM- 500V2 | EEPM- 500V4 | EEPM- 800V2 | EEPM- 800V4

Unit:mm

MODEL NO.	DIMENSION	PITCH	POLE	NO. OF POLE	TOTAL HOLDING POWER kgf ±5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
EEPM-500V2	430×500	10	50×50	42×2	13100	480kg	AC 220V	30A	C2	AC 380V ≀ 440V	14A	C2
EEPM-500V4	450×470	10	50×50	36×4	11200	510kg		20A	C2		13A	C1
EEPM-800V2	750×760	10	50×50	100×2	31200	760kg		22A	C4		10A	C4
EEPM-800V4	750×760	10	50×50	100×4	31200	810kg		22A	C4		10A	C4

Custom-made is available.

Electro-Permanent Magnetic Chuck EEPM-V Series

Suitable for CNC horizontal machining center

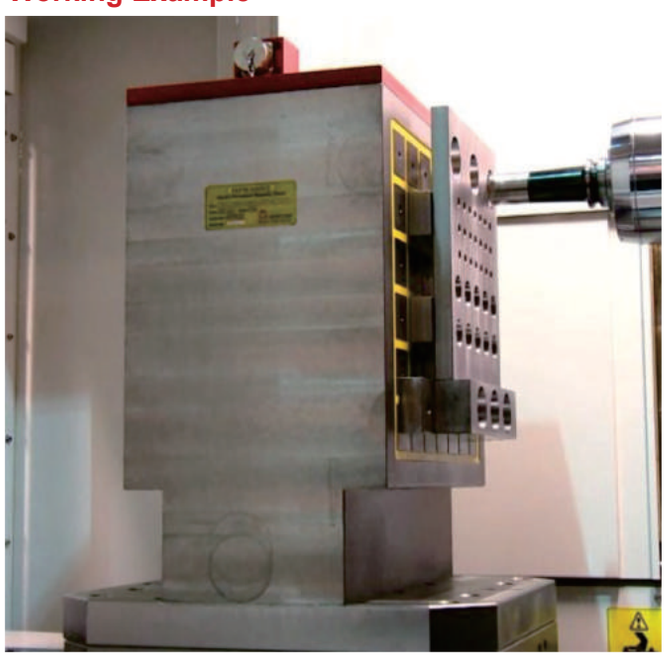
Features:

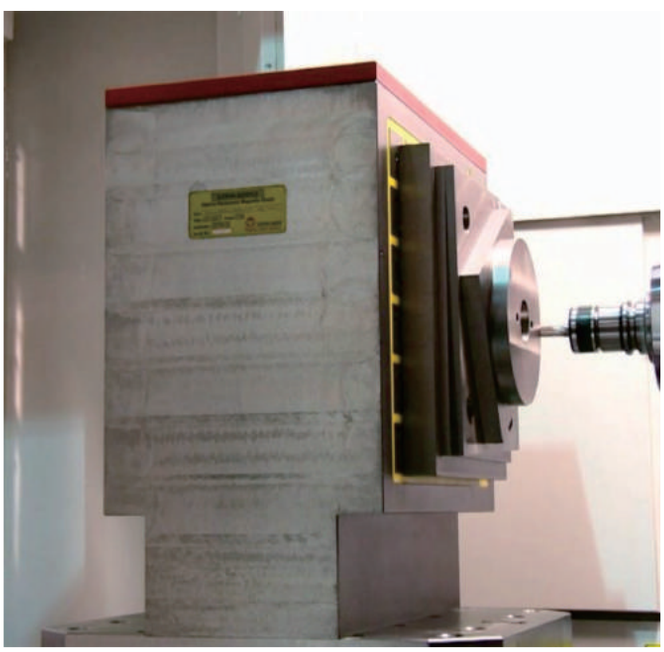
1. Super power magnetic force 1250kgf/100cm2 ±5%. (4 Poles)
2. Control each working face for ON and OFF, so it can be load and unload the workpiece on each working face.
   3~10 seconds control for power ON and OFF.
3. Each EEPM-V type can be clamp multi-workpiece machining, instead of multi-pallet exchange.
4. Can do 5 sides machining, un-obstructed movement of cutters during machining.
   One cycle to finish a workpiece, helps in achieving best machining accuracy and increases efficiency a lot.

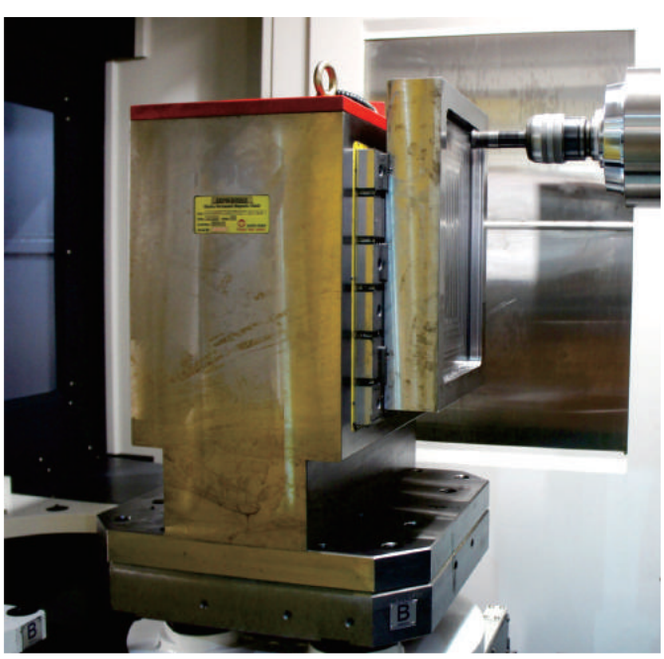
Applications:

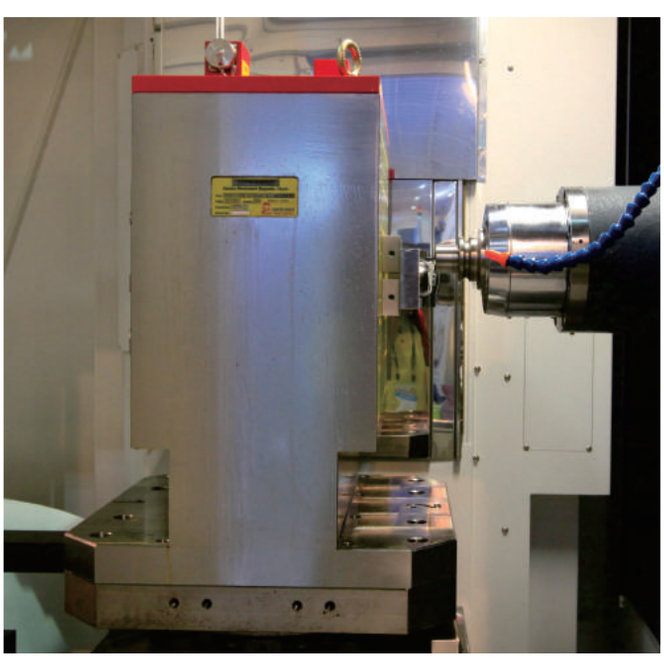
1. Suitable for CNC horizontal machining center.
2. EEPM-V2 with 2 working faces suitable for bigger workpiece.
   EEPM-V4 with 4 working faces suitable for medium workpiece.
3. More functions for cooperate with Induction Block and Spring Block. (See the detail of Option Accessories)

Working Example









Electro-Permanent Magnetic Index Table EEPM-IT Series

Suitable for horizontal milling & boring machine on precision machining of divison.

Traditional Milling Machine can do 5 sides machining too.
PATENT NO.350429

Features:

1. We changed traditional clamping way of Index Table. Made with Electro-Permanent Magnetic Chuck, can do 5 side machining, without any obstructed movement of cutters during machining.
2. Super magnetic force 1250kgf/100cm^2±5%.
3. Structure of Electro-Permanent Magnetic Chuck, 3~10 seconds control for power ON & OFF.
   No electric power supply required to keep the chuck ON. So no electric cable disturbed, can be turning freely.
4. Magnetic power adjustable.
5. Pneumatic system to rotate and fix the table, Easy and convenient to operate.
6. Heavy Duty construction, built of FC35 cast iron. Suitable for heavy duty machining.

Applications:

1. Suitable for horizontal milling, boring machine on precision machining of division.
2. More functions for cooperate with Induction Block and Spring Block. (See the detail of Option Accessories)

Unit:mm

MODEL NO.		EEPM-300IT	EEPM-470IT	EEPM-600IT	EEPM-800IT
L X W		300x300	470x470	600x600	800x800
HEIGHT		193	187	226	302
DRIVING	FLOATATION	Air Pressure 5~8 kg/cm^2			
	REVOLVING	Manual			
MAX. LOAD WEIGHT VERTICAL IN THEOR		1200kg	2400kg	3400kg	4500kg
ALLOWABLE LOAD WEIGHT		500kg	1000kg	2000kg	3000kg
TABLE ROTATION		Clockwise & anticlockwise			
DIVISION		Standard 24T~15° Option 72T~5°	Standard 72T~5° / Option 360T~1°		
NET WEIGHT		104kg	223kg	453kg	983kg
DIMENTION OF POLE		50x50			
NO. OF POLE		16	48	72	144
TOTAL HOLDING POWER kgf ±5%		5000	15000	22500	45000
VOLTAGE (Single Phase)		AC 220V			
CURRENT (AMP)		15A	23A	23A	18A
CONTROLLER (included)		C1	C2	C4	C8
VOLTAGE (Single Phase)		AC 380V~440V			
CURRENT (AMP)		13A	10A	18A	18A
CONTROLLER (included)		C1	C2	C2	C4

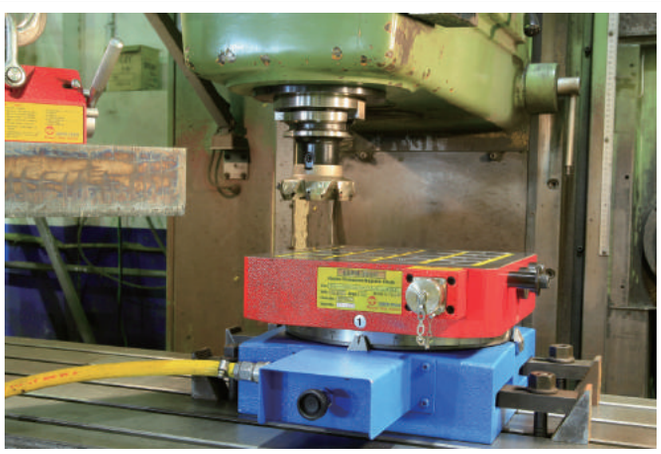
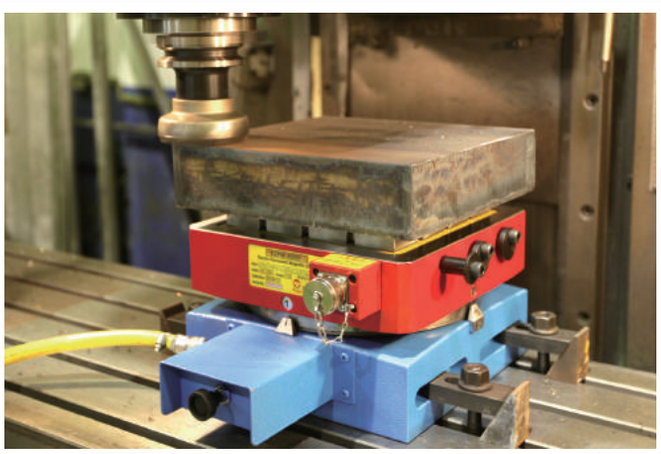
Electro-Permanent Magnetic Index Table EEPM-IT Series

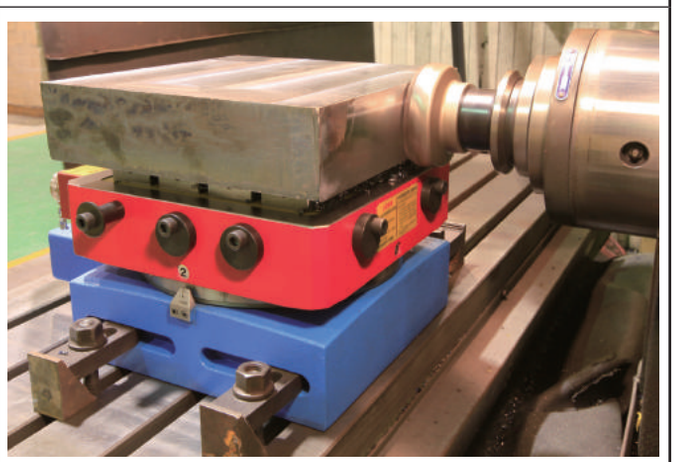
Suitable for horizontal milling & boring machine on precision machining of divison.

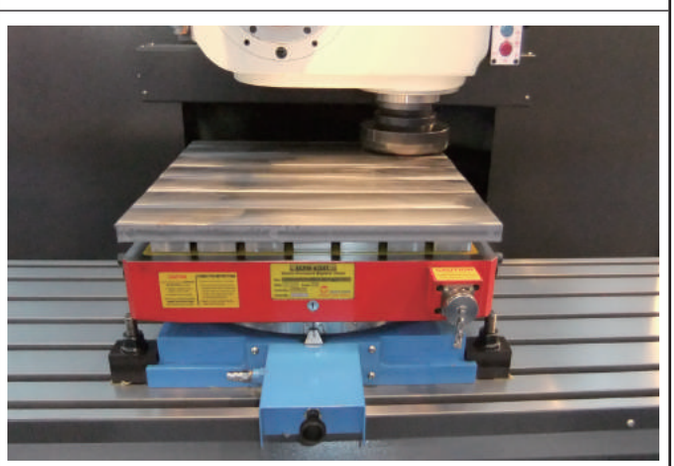
單位：mm

MODEL NO.		EEPM-300IT	EEPM-470IT	EEPM-600IT	EEPM-800IT
SQUARENESS OF TABLE		0.01	0.015	0.02	0.02
REPEAT ROTATION		0.01	0.01	0.015	0.015
PARALLELISM OF TABLE		0.01	0.015	0.02	0.02
BASIC SIDE SQUARENESS		0.015	0.015	0.02	0.02
DIVISION (SECOND)	DIVIDING 4	±2"			
	DIVIDING 72	±3"			

Working Example

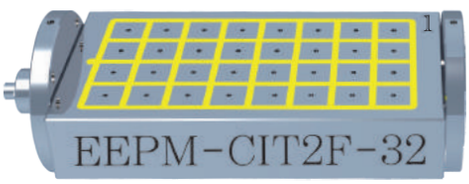



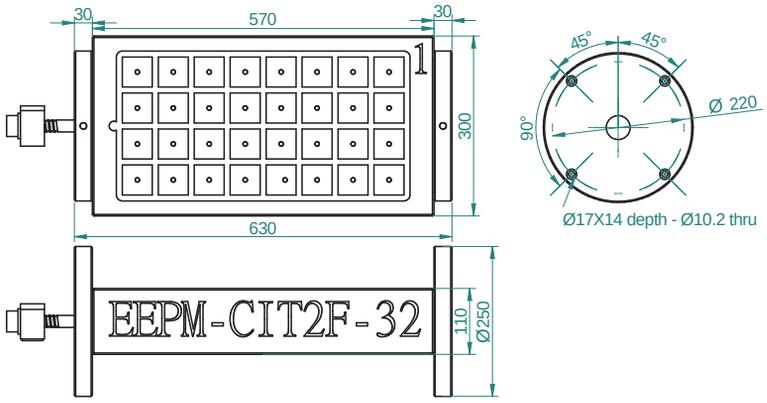


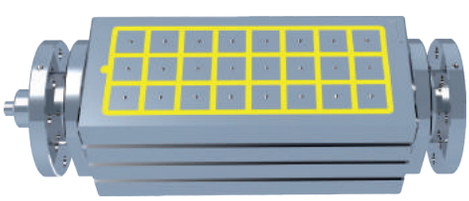
Electro-Permanent Magnetic Chuck EEPM-CIT Series

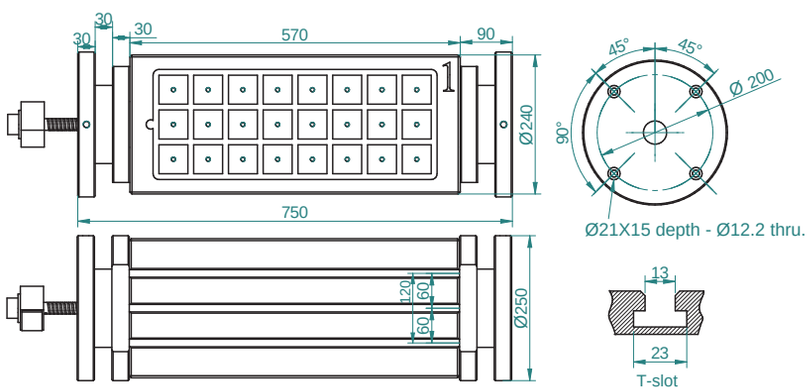
Suitable in use for combine with CNC 4 Axis Index Device



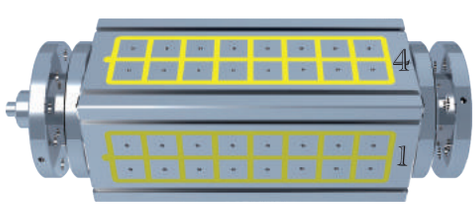


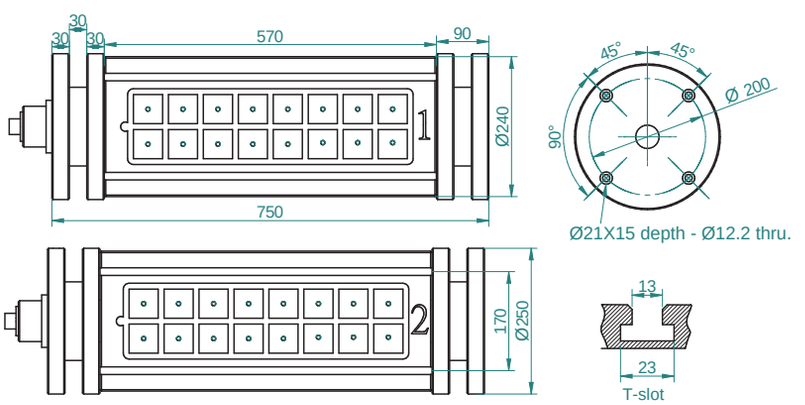
EEPM-CIT2F





EEPM-CIT2F2T





EEPM-CIT4FT

Unit:mm

MODEL NO.	DIMENSION	PITCH	POLE	NO. OF POLE	TOTAL HOLDING POWER kgf ±5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
EEPM-CIT2F	300×570	10	50×50	32×2	10000	141kg	AC 220V	30A	C2-2C1	AC 380V ~ 440V	C2-2C1	C2
EEPM-CIT2F2T	240×570	10	50×50	24×2	7500	228kg		23A	C2-2C1		C2-2C1	C2
EEPM-CIT4FT	240×570	10	50×50	16×4	5000	219kg		20A	C4-4C1		C4-4C1	C4

Custom-made is available.

Electro-Permanent Magnetic Chuck EEPM-CIT Series

Suitable in use for combine with CNC 4 Axis Index Device

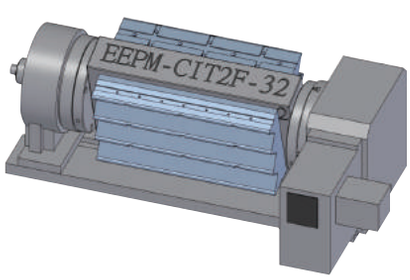
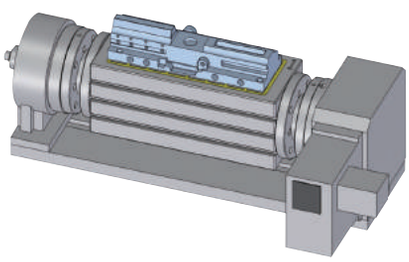
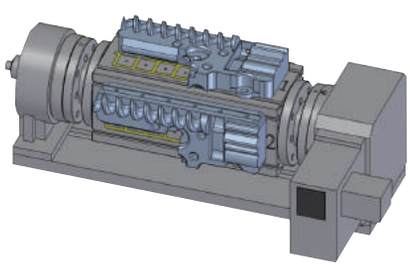
Features:

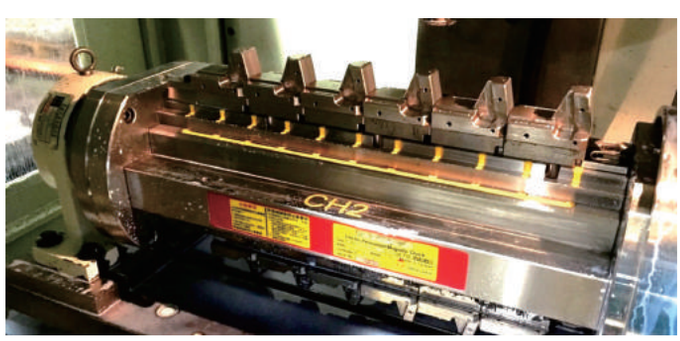
1. Super power magnetic force 1250kgf/100cm2 ±5%. (4 Poles)
2. Control each working face for ON and OFF, so it can be load and unload the workpiece on each working face. 3 seconds control for power ON and OFF.
3. EEPM-CIT2F with 2 magnetic working face, can be clamp 2 workpiece for machining.
   Suitable for bigger workpiece machining.
4. EEPM-CIT2F2T with 2 magnetic working face and 2 T-slot working face, can be clamp both of magnetic and non-magnetic material of workpiece machining. Suitable for smaller workpiece machining.
5. EEPM-CIT4FT with 4 magnetic working face and T-slots available. Suitable for smaller workpiece machining.
6. Without any obstructed movement of cutters during machining. Can be use all the functions of CNC 4 Axis Index Device completely.

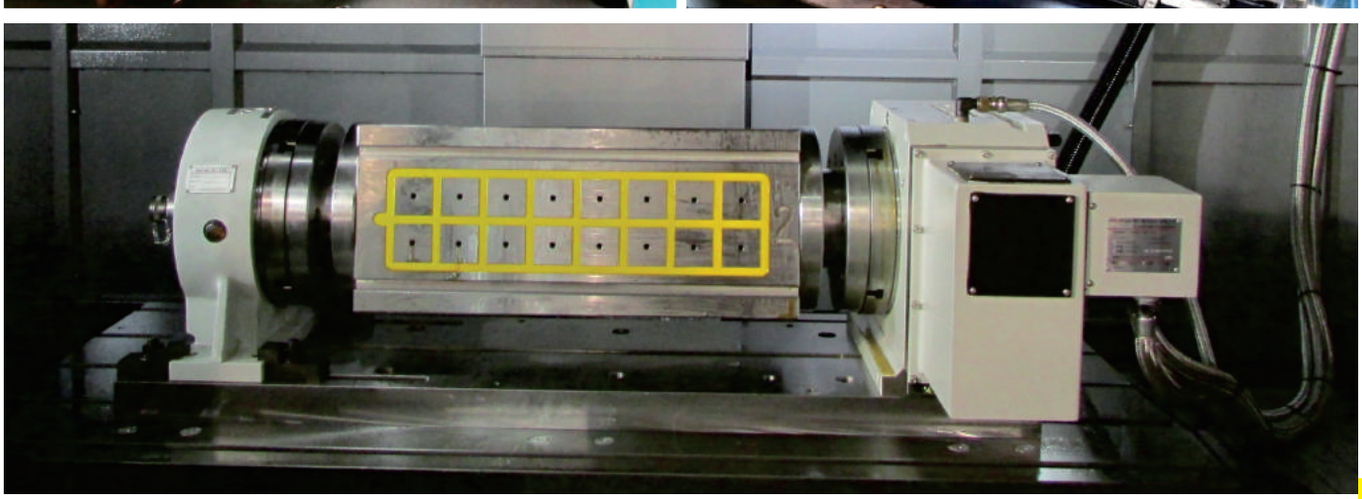
Applications:

1. Suitable in use for combine with CNC 4 Axis Index Device.
2. Minimum size of workpiece required as 4 alternate magnetic square poles and above is necessary for optimum clamping.

Working Example

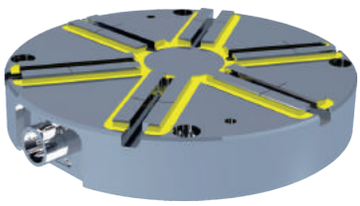
		
EEPM-CIT2F	EEPM-CIT2F2T	EEPM-CIT4FT



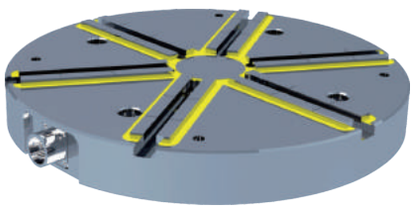


Electro-Permanent Magnetic Chuck EEPM-CIR Series

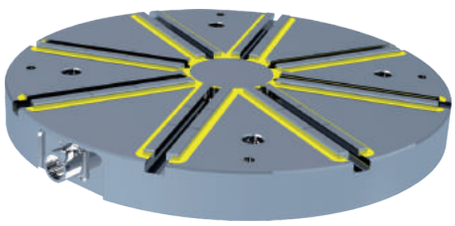
Suitable for use on Vertical Lathe, CNC 5 Axis Machining Center ...etc.



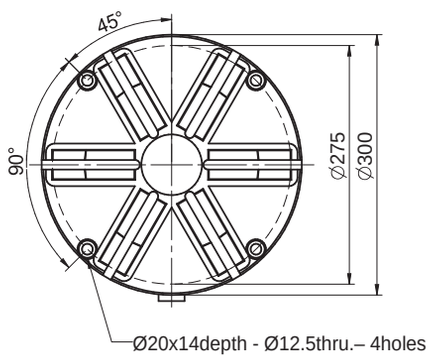
EEPM-CIR300A



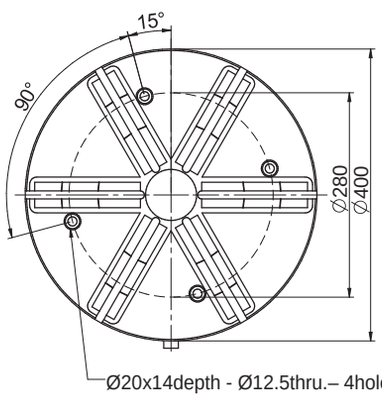
EEPM-CIR400A



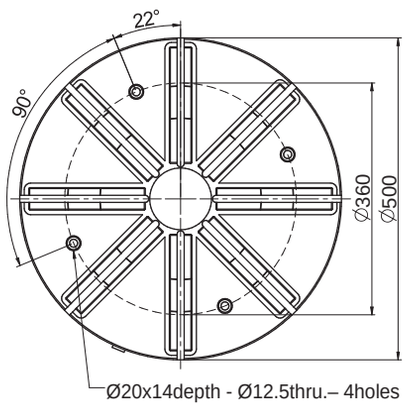
EEPM-CIR500A



EEPM-CIR300A



EEPM-CIR400A



EEPM-CIR500A

Features:

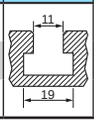
1. Round type and radiate magnetic poles, suitable for clamping round type and any form of workpiece machining.
2. Workpieces can be touch to all poles of Magnetic Chuck, super power magnetic force as minimum of 300Kgf (0.30tons) ±5% and maximum of 2375Kgf (2.38 tons)±5%, it depends on size of workpiece and magnetic chuck. (Please refer to the spec. list)
3. 1 ~ 10 seconds control for power ON & OFF. No electric power supply required to keep the magnetic chuck ON, cable can be taken off for turning chuck freely while machining.
4. Un-obstructed movement of cutters during machining, the really functions of 5 side machining on workholding.
5. Design of Electric-Permanent, never gets temperature to effect the accuracy of workpieces.

Applications:

1. Suitable in use for combine with Vertical Lathe, CNC 5 Axis Index Device, CNC 5 Axis Machining Center ...etc.
2. Minimum dimension of workpiece required as:
   EEPM-CIR300-ϕ300mm; EEPM-CIR400-ϕ360mm; EEPM-CIR 500-ϕ500mm
   or same dimensions of any other forms of workpiece.
3. More functions for cooperate with induction plate, can do positioning on workholding.

Panted Patent No:M358689

Unit:mm

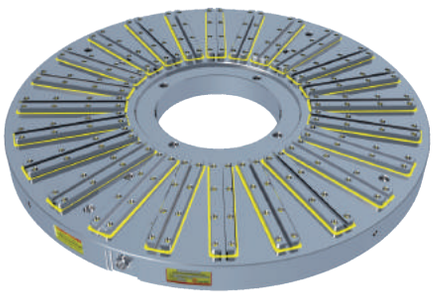
MODEL NO.	DIMENSION			NO. OF POLE	T-slot	MAGNETIC FORCE	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
	OD	ID	HEIGHT							
EEPM-CIR300A	ϕ300	0	55	6		1600kgf±5%	30kg	AC 220V ~ 440V	7A	C1
EEPM-CIR400A	ϕ400	0	55	6		2480kgf±5%	55kg		18A	C1
EEPM-CIR500A	ϕ500	0	55	8		4400kgf±5%	85kg		22A	C1

Custom-made is available.

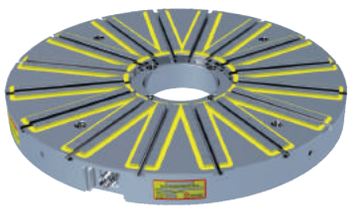
Electro-Permanent Magnetic Chuck EEPM-CIR Series

Suitable for use on Vertical Lathe, CNC 5 Axis Machining Center ...etc.

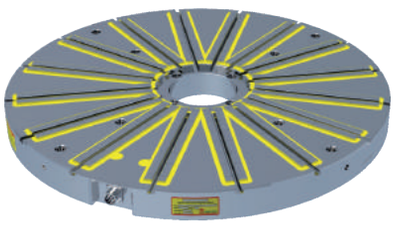
Patent Protected violators will be prosecuted: Patented Taiwan M358689



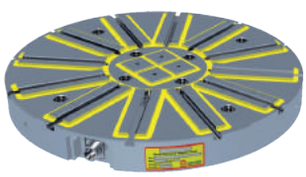
EEPM-CIR1250



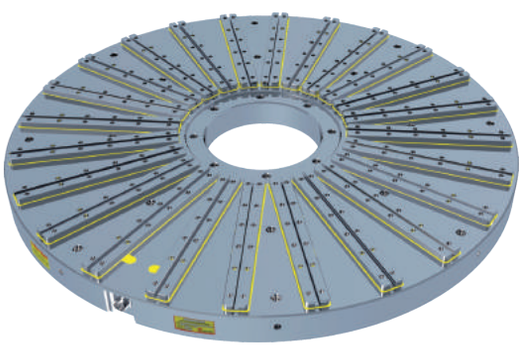
EEPM-CIR800



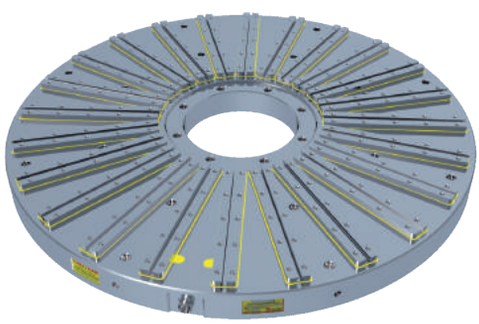
EEPM-CIR1000



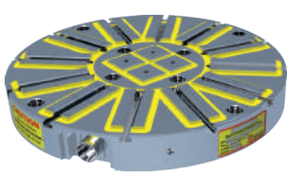
EEPM-CIR600



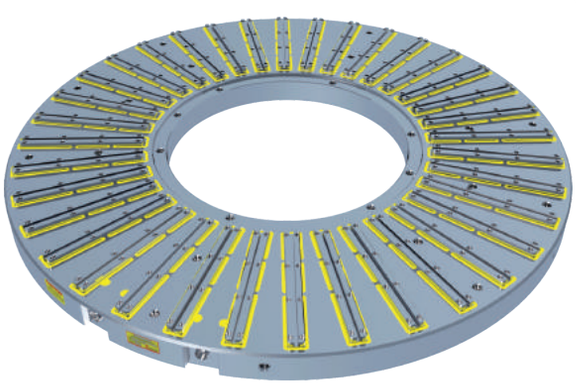
EEPM-CIR1600



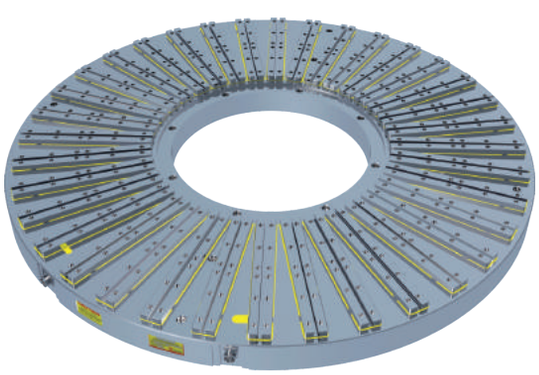
EEPM-CIR1500



EEPM-CIR500



EEPM-CIR2000



EEPM-CIR1800

Panted Patent No:M358689

Unit:mm

MODEL NO.	DIMENSION			NO. OF POLE	T-slot	MAGNETIC FORCE	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
	OD	ID	HEIGHT										
EEPM-CIR500	ϕ500	0	70	12/4		6650kgf±5%	104kg		35A	C1		15A	C1
EEPM-CIR600	ϕ600	0	70	12/4		9500kgf±5%	148kg		23A	C2		15A	C2
EEPM-CIR800	ϕ800	ϕ250	85	16		15200kgf±5%	302kg		30A	C2		28A	C2
EEPM-CIR1000	ϕ1000	ϕ250	85	16		19000kgf±5%	471kg		24A	C4		20A	C4
EEPM-CIR1250	ϕ1260	ϕ500	110	24	11	28500kgf±5%	828kg		33A	C4	AC 380V ~ 440V	18A	C4
EEPM-CIR1500	ϕ1520	ϕ500	120	24		39900kgf±5%	1325kg	AC 220V	24A	C8		25A	C8
EEPM-CIR1600	ϕ1630	ϕ500	120	24	19	45600kgf±5%	1507kg		24A	C8		20A	C8
EEPM-CIR1800	ϕ1820	ϕ800	120	36		59850kgf±5%	2290kg		33A	C8		28A	C8
EEPM-CIR2000	ϕ2050	ϕ1000	130	36		59850kgf±5%	2490kg		33A	C8		28A	C8
EEPM-CIR2600													
EEPM-CIR3000													

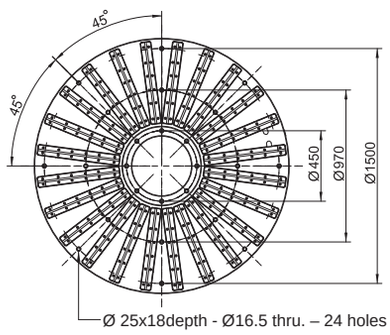
Custom-made is available.

Electro-Permanent Magnetic Chuck EEPM-CIR Series

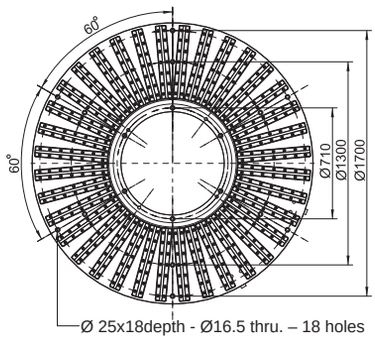
Suitable for use on Vertical Lathe, CNC 5 Axis Machining Center ...etc.

Dimension of screw holes for setting up

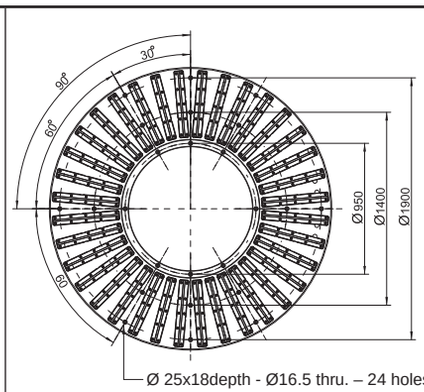
Panted Patent No:M358689



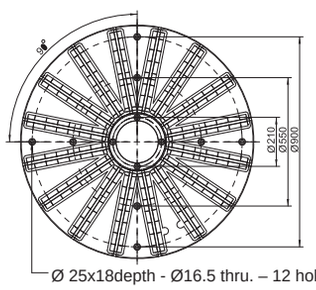
EEPM-CIR1600



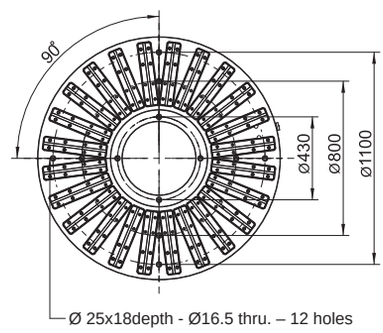
EEPM-CIR1800



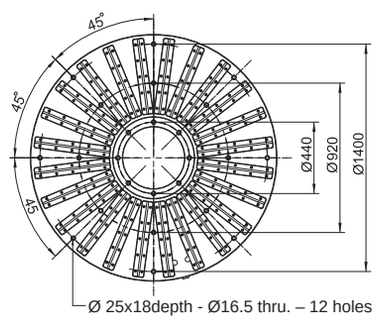
EEPM-CIR2000



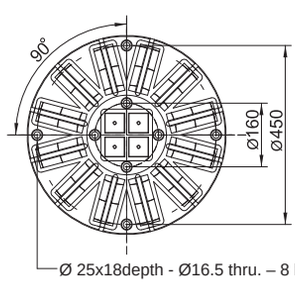
EEPM-CIR1000



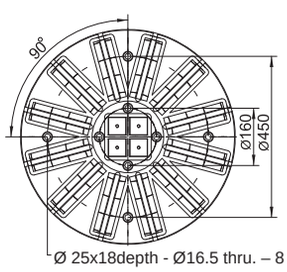
EEPM-CIR1250



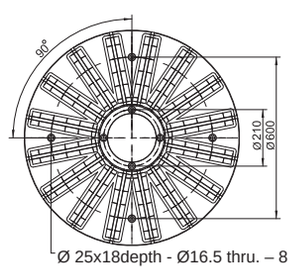
EEPM-CIR1500



EEPM-CIR500



EEPM-CIR600



EEPM-CIR800

Features:

1. Round type and radiate magnetic poles, suitable for clamping round type and any form of workpiece machining.
2. Workpieces can be touch to all poles of Magnetic Chuck, super power magnetic force as minimum of 1340Kgf (I.34tons) ±5% and maximum of 60,400Kgf (60 tons)±5%, it depends on size of workpiece and magnetic chuck. (Please refer to the spec. list)
3. 1~10 seconds control for power ON & OFF. No electric power supply required to keep the magnetic chuck ON, cable can be taken off for turning chuck freely while machining.
4. Un-obstructed movement of cutters during machining, the really functions of 5 side machining on workholding.
5. Design of Electric-Permanent, never gets temperature to effect the accuracy of workpieces.

Electro-Permanent Magnetic Chuck EEPM-CIR Series

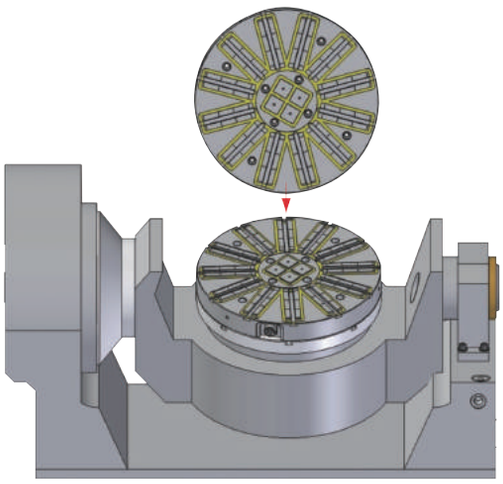
Suitable for use on Vertical Lathe, CNC 5 Axis Machining Center ...etc.

Applications:

1 .Suitable in use for combine with Vertical Lathe, CNC 5 Axis Index Device, CNC 5 Axis Machining Center ...etc.

2. Minimum dimension of workpiece required as:
   EEPM-CIR500-ϕ300mm ; EEPM-CIR600-ϕ360mm
   EEPM-CIR800-ϕ500mm ; EEPM-CIR1000-ϕ500mm
   EEPM-CIR1250-ϕ850mm ; EEPM-CIR1500-ϕ850mm
   EEPM-CIR1600-ϕ1200mm ; EEPM-CIR1800-ϕ1200mm
   or same dimensions of any other forms of workpiece.

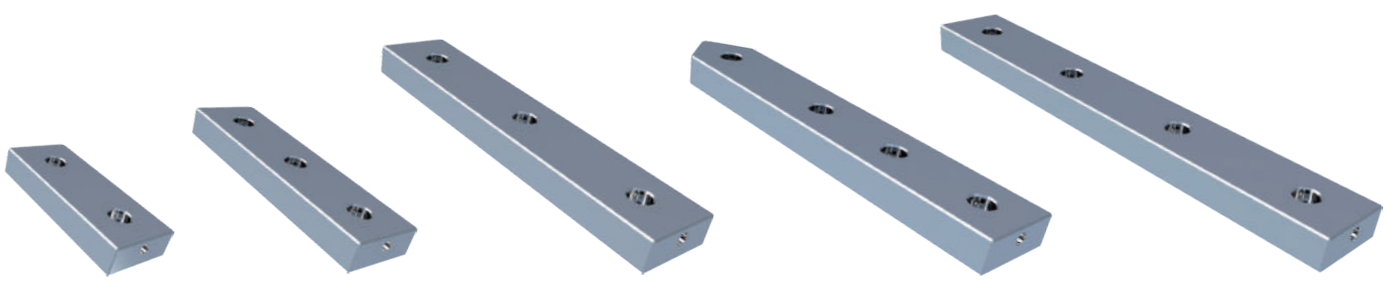
3. More functions for cooperate with induction plate, can do positioning on workholding.



Option Accessories-Induction Block

Features:

1. Induction Block EEPM-CIRIB series are use for EEPM-CIR chucks, can do many more functions on workholding.
2. Convenience and Accuracy: Induction Block are interchanging & consuming accessories, you can machining surface or forming induction blocks for the workpiece required by the machine directly, so the parallelism of induction block will always 100% match to the machine.



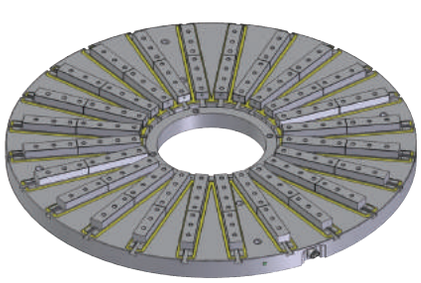
Unit:mm

INDUCTION BLOCK	L	W	H	SUITABLE
EEPM-CIRIB96A	96	35	15	EEPM-CIR300A
EEPM-CIRIB145A	145	35	15	EEPM-CIR400A
EEPM-CIRIB181A	181	35	15	EEPM-CIR500A

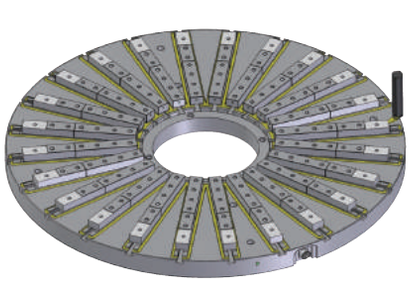
Unit:mm

INDUCTION BLOCK	L	W	H	SUITABLE
EEPM-CIRIB120	120	50	20	EEPM-CIR500
EEPM-CIRIB170	170	50	20	EEPM-CIR600
EEPM-CIRIB245	245	50	20	EEPM-CIR800
EEPM-CIRIB335	335	50	20	EEPM-CIR1000
EEPM-CIRIB220	220	50	20	EEPM-CIR500
EEPM-CIRIB270	270	50	20	EEPM-CIR600

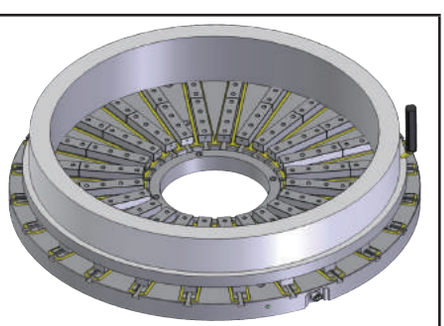
Working Example: ID positioning and OD machining by Induction Block.



Set up Induction Block

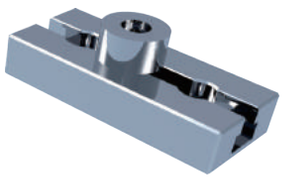


Precise machining on induction Block for ID positioning.



OD machining

T Fixed Slide Block



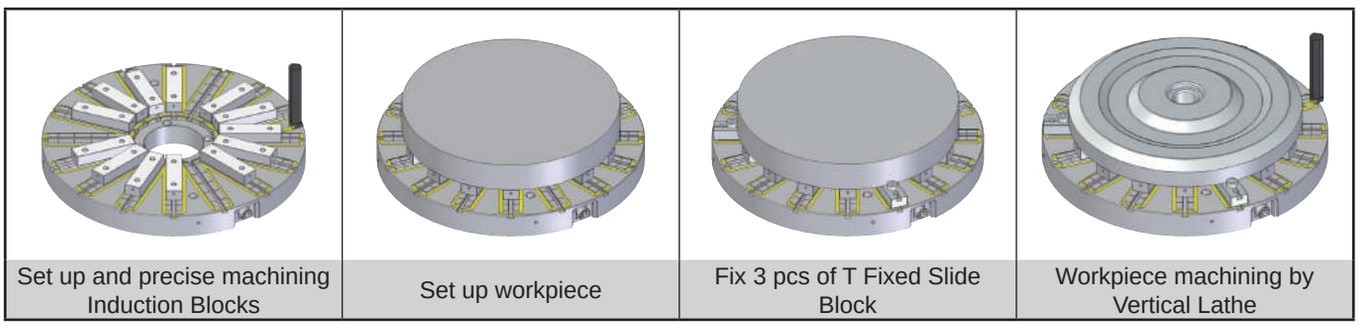
EEPM-T Series

Features:

1. T-fixed slide block can do base points for workpiece positioning.
2. Due to the holding surface of small workpiece is not big enough, so please always use the T fixed slide Block to avoid the workpiece moving when machining.

MODEL NO	L	W	H	SUITABLE
EEPM-15T	77	35	15	EEPM-CIRA Series
EEPM-20T	120	50	20	EEPM-CIR Series

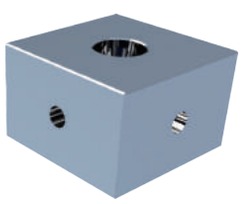
Working Example: Vertical Lathe machining by Induction Block with T Fixed slide Block



Set up and precise machining Induction Blocks	Set up workpiece	Fix 3 pcs of T Fixed Slide Block	Workpiece machining by Vertical Lathe

Spring Block、Fixed Block

Spring Block
EEPM-SP Series



Fixed Block
EEPM-SPF Series

Features:

1. Suitable for clamping on iron cast and flexuous workpieces, it will not be out of shape of the workpiece after machining.
2. 3 Fixed Blocks is necessary for each workpiece clamping, it could be makes a basic surface for the workpiece touch to the Spring Blocks.
3. Elasticity of EEPM-SP35:Each 2.0 mm for up and down.
4. Elasticity of EEPM-SP:Each 2.5 mm for up and down.

Unit:mm

MODEL NO	L	W	H	SUITABLE
EEPM-SP35	35	33.6	21	EEPM-CIRA Series
EEPM-SPF35	35	35	23	

Unit:mm

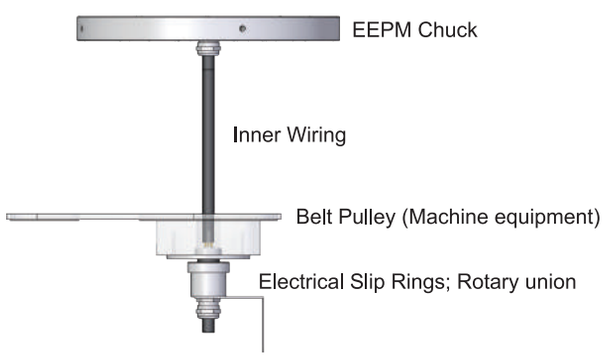
MODEL NO	L	W	H	SUITABLE
EEPM-SP	48	48	30	EEPM-CIR Series
EEPM-SPF	50	50	32.5	

Electrical Slip Rings; Rotary union

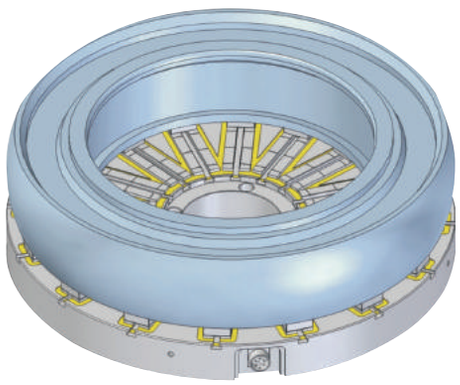
Features:

For Magnetization/Demagnetization connection, installed in the center of the rear of the EEPM Chuck can be turning freely while machining.

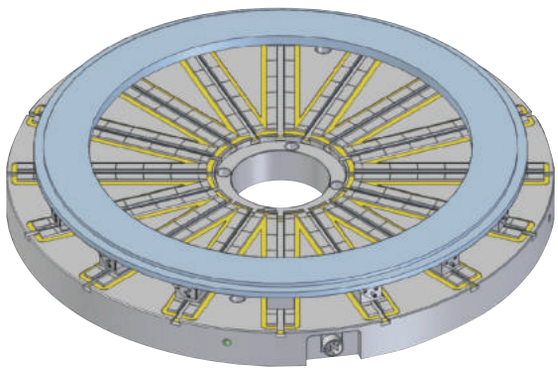
Model No.	Conduction	RPM
EEPM-RUC	Precious metal	0 ~ 3000 RPM
EEPM-V5F	Mercury	0 ~ 1200 RPM



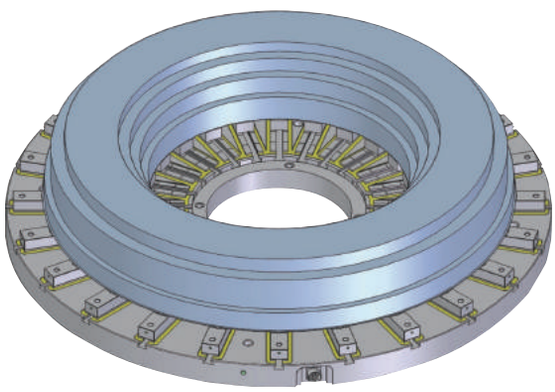
Working Example



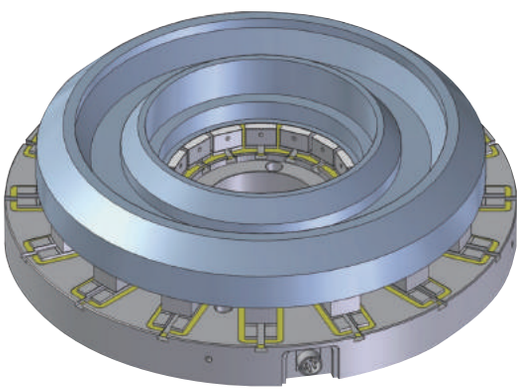
Round type workpiece for surface, ID and OD machining by Induction Block.



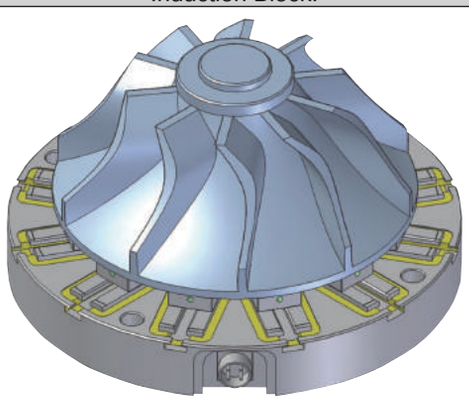
Irregular and thin workpiece for ID and OD machining by Spring Block.



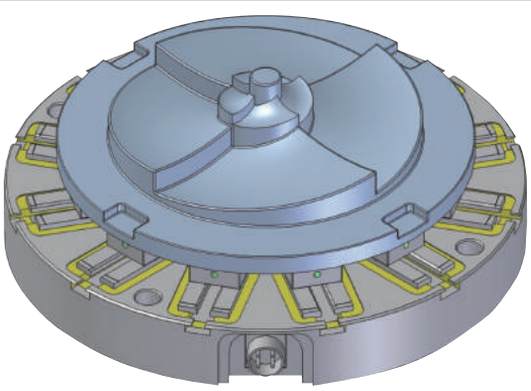
Round type workpiece positioning by OD for ID machining by Induction Block.



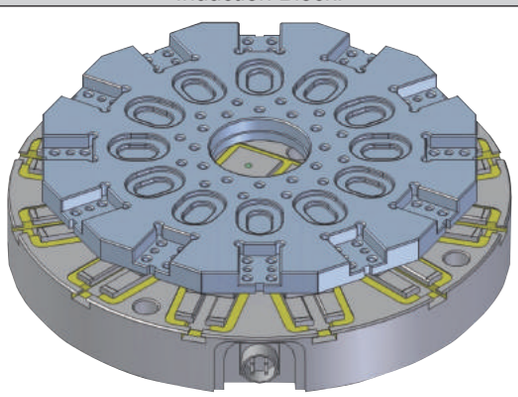
Round type workpiece positioning by ID for OD machining by Induction Block.



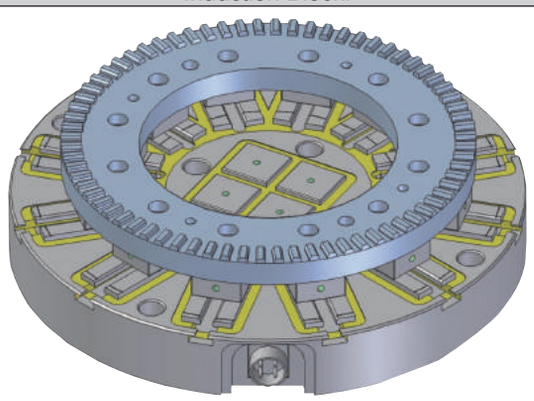
Round type spiral workpiece for complex machining by Induction Block.



Round type spiral workpiece for complex machining by Induction Block.



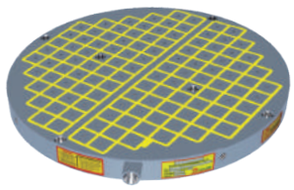
Multi-angle workpiece for 5 sides complex machining by Induction Block.

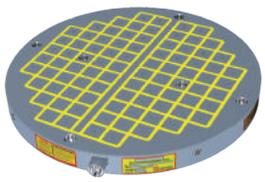


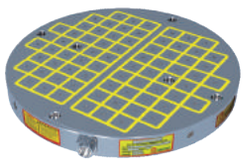
Round type gear workpiece for 5 sides complex machining by Induction Block.

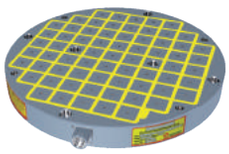
Electro-Permanent Magnetic Chuck EEPM-CIRS Series

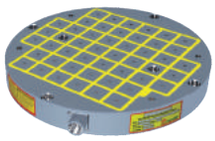
Suitable in use for combine with Rotary type Surface Grinding Machine, CNC 5 Axis Machining Center ... etc.


EEPM-CIRS600A

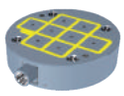

EEPM-CIRS550A

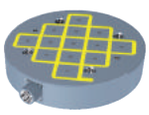

EEPM-CIRS500A

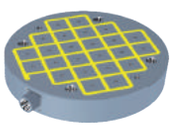

EEPM-CIRS450A

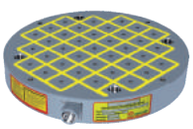

EEPM-CIRS400A


EEPM-CIRS150A


EEPM-CIRS200A

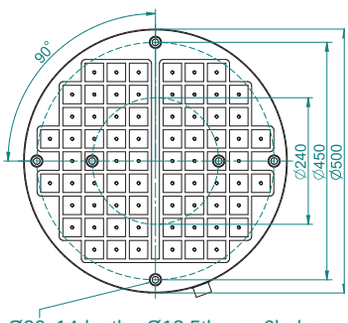

EEPM-CIRS250A


EEPM-CIRS300A


EEPM-CIRS350A

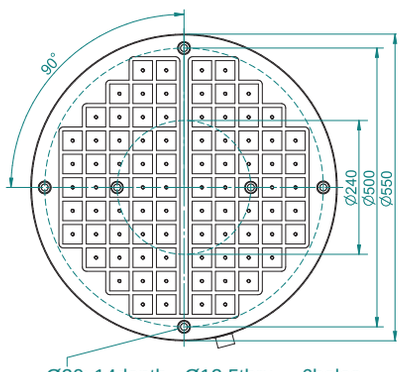
Dimension of screw holes for setting up

EEPM-CIRS500A



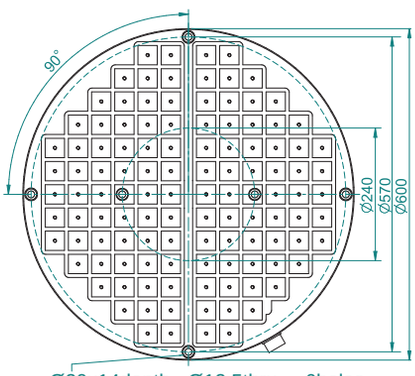
Ø20x14depth - Ø12.5thru. – 6holes

EEPM-CIRS550A



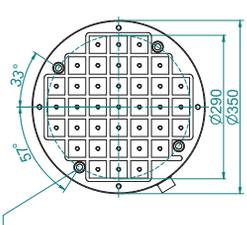
Ø20x14depth - Ø12.5thru. – 6holes

EEPM-CIRS600A



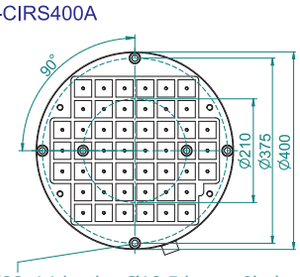
Ø20x14depth - Ø12.5thru. – 6holes

EEPM-CIRS350A



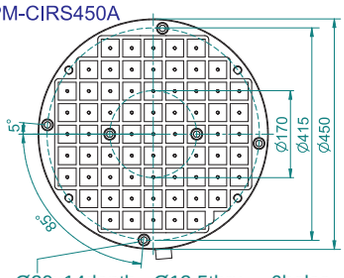
Ø20x14depth - Ø12.5thru. – 4holes

EEPM-CIRS400A



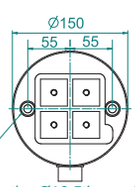
Ø20x14depth - Ø12.5thru. – 6holes

EEPM-CIRS450A



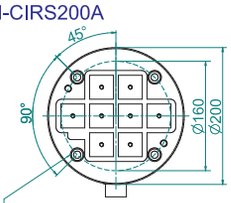
Ø20x14depth - Ø12.5thru. – 6holes

EEPM-CIRS150A



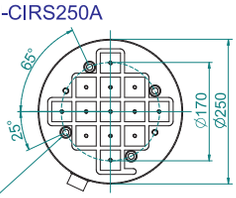
Ø17x12depth - Ø10.5thru. – 2holes

EEPM-CIRS200A



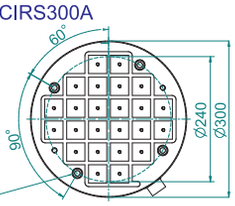
Ø17x12depth - Ø10.5thru. – 4holes

EEPM-CIRS250A



Ø17x12depth - Ø10.5thru. – 4hole

EEPM-CIRS300A



Ø20x14depth - Ø12.5thru. – 4hole

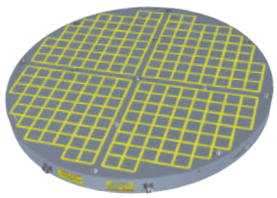
Unit:mm

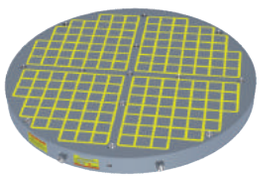
MODEL NO	DIMENSION		PITCH	POLE	NO. OF POLE	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
	D	HEIGHT							
EEPM-CIRS150A	ϕ150	50	7	35×35	4	6kg	AC 220V ~ 480V	20A	C1
EEPM-CIRS200A	ϕ200	50	7		8	11kg		10A	C1
EEPM-CIRS250A	ϕ250	50	7		13	17kg		25A	C1
EEPM-CIRS300A	ϕ300	50	7		24	25kg		10A	C1
EEPM-CIRS350A	ϕ350	50	7		37	34kg		26A	C1
EEPM-CIRS400A	ϕ400	50	7		46	44kg		14A	C2
EEPM-CIRS450A	ϕ450	50	7		67	55kg		21A	C2
EEPM-CIRS500A	ϕ500	50	7		70	69kg		26A	C2
EEPM-CIRS550A	ϕ550	50	7		84	83kg		15A	C4
EEPM-CIRS600A	ϕ600	50	7		114	99kg	--	23A	C4

EARTH-CHAIN
Power that works.

Electro-Permanent Magnetic Chuck EEPM-CIRS Series

Suitable in use for combine with Rotary type Surface Grinding Machine, CNC 5 Axis Machining Center ... etc.


EEPM-CIRS1100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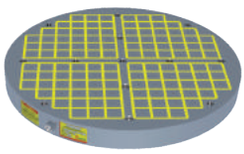
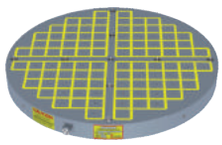
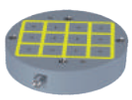
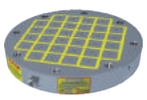
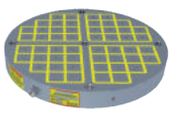

EEPM-CIRS900

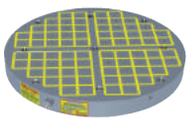

EEPM-CIRS800


EEPM-CIRS200


EEPM-CIRS300

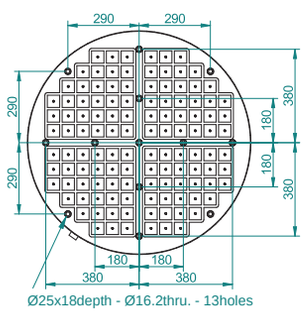

EEPM-CIRS500


EEPM-CIRS600

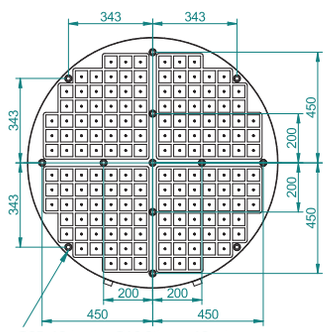

EEPM-CIRS700

Dimension of screw holes for setting up

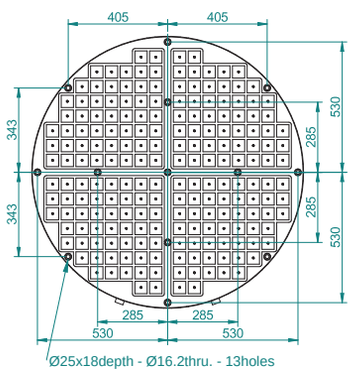
EEPM-CIRS900



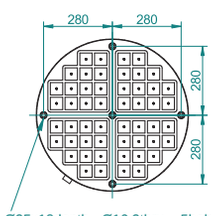
EEPM-CIRS1000



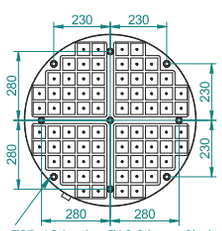
EEPM-CIRS1100



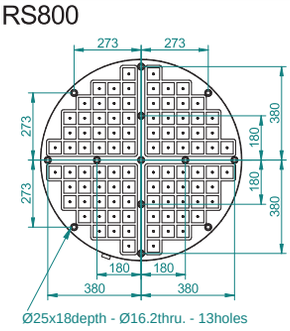
EEPM-CIRS600



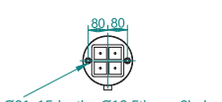
EEPM-CIRS700



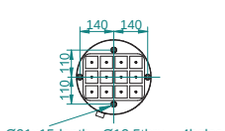
EEPM-CIRS800



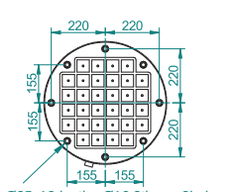
EEPM-CIRS200



EEPM-CIRS300



EEPM-CIRS500



Unit:mm

MODEL NO	DIMENSION		PITCH	POLE	NO. OF POLE	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
	D	HEIGHT										
EEPM-CIRS200	ϕ203	70	10	50×50	4	16kg	AC 220V	15A	C1	AC 380V ~ 440V	--	--
EEPM-CIRS300	ϕ320	70	10		12	35kg		20A	C1		5A	C1
EEPM-CIRS500	ϕ500	70	10		32	97kg		30A	C1		15A	C1
EEPM-CIRS600	ϕ620	70	10		52	150kg		21A	C2		22A	C2
EEPM-CIRS700	ϕ720	70	10		76	191kg		21A	C4		10A	C4
EEPM-CIRS800	ϕ820	70	10		96	262kg		23A	C4		9A	C4
EEPM-CIRS900	ϕ900	80	10		120	362kg		33A	C4		18A	C4
EEPM-CIRS1000	ϕ1020	80	10		164	464kg		29A	C8		27A	C8
EEPM-CIRS1100	ϕ1106	80	10		204	546kg		28A	C8		11A	C8

Electro-Permanent Magnetic Chuck EEPM-CIRS Series

Suitable in use for combine with Rotary type Surface Grinding Machine, CNC 5 Axis Machining Center ... etc.

Features:

1. 1~10 seconds control for power ON & OFF. No electric power supply required to keep the magnetic chuck ON, cable can be taken off for turning chuck freely while machining.
2. Un-obstructed movement of cutters during machining, the really functions of 5 side machining on workholding.

Applications:

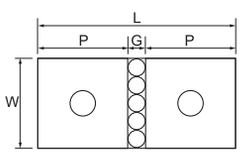
1. EEPM-CIRSA: Suitable for thin & small workpiece.(Pole Size 35X35 mm, Magnetic Force 580 kgf/4 Poles).
2. EEPM-CIRS: Suitable for thin & medium workpiece.(Pole Size 50X50 mm, Magnetic Force 1250 kgf/4 Poles).
3. Minimum size of workpiece required as 4 alternate magnetic square poles and above contacts is necessary for optimum clamping.
4. More functions for cooperate with Induction Block and Spring Block. (See the detail of Option Accessories)

Option Accessories-Induction Block EEPM-IB Series

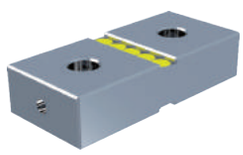
EEPM-IBA Suitable for use on EEPM-CIRSA Series Chucks.

Unit:mm

MODEL NO.	NO. OF POLE	W	L	HEIGHT	P	G
EEPM-IB215A	2	35	77	15	35	7
EEPM-IB315A	3	35	119	15	35	7



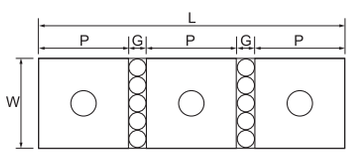
NO. OF POLE : 2



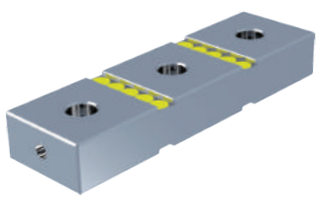
EEPM-IBB Suitable for use on EEPM-CIRS Series Chucks.

Unit:mm

MODEL NO.	NO. OF POLE	W	L	HEIGHT	P	G
EEPM-IB225B	2	50	110	25	50	10
EEPM-IB325B	3	50	170	25	50	10



NO. OF POLE : 3



Relative magnetic force and EEPM-IB percentage table

MODEL NO.	Holding Power (Kgf)
EEPM-IB215A	80 %
EEPM-IB315A	64 %

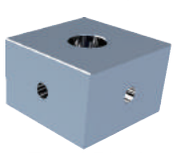
MODEL NO.	Holding Power (Kgf)
EEPM-IB225B	82 %
EEPM-IB325B	68 %

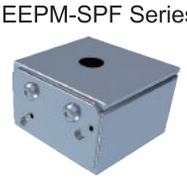
Example:

EEPM chuck	Induction Block	Total Holding Power
EEPM-CIRS500	None	10,000±5% kgf
EEPM-CIRS500	IB225B x 32pcs	8200±5% kgf (10,000x82%)

Option Accessories-Sping Block EEPM-SP Series

Suitable for clamping on iron cast, irregular form and flexuous workpieces, it will not be out of shape the workpiece after machining.


Fixed Block
EEPM-SPF Series


Spring Block
EEPM-SP Series

Features:

1. Suitable for clamping on iron cast, irregular form and flexuous workpieces, it will not be out of shape of the workpiece after machining.
2. 3 Fixed Blocks is necessary for each workpiece clamping, it could be makes a basic surface for the workpiece touch to the Spring Blocks.
3. Elasticity of EEPM-SP35:Each 2.0 mm for up and down.
4. Elasticity of EEPM-SP :Each 2.5 mm for up and down.

Unit:mm

MODEL NO.	L	W	H	SUITABLE
EEPM-SP35	35	33.6	21	EEPM-CIRSA Series
EEPM-SPF35	35	35	23	

Unit:mm

MODEL NO.	L	W	H	SUITABLE
EEPM-SP	48	48	30	EEPM-CIRS Series
EEPM-SPF	50	50	32.5	

Relative magnetic force to Fixed block and Spring block:

MODEL NO.	Holding Power (Kgf)
Fixed Block	85 %
Spring Block	40 %

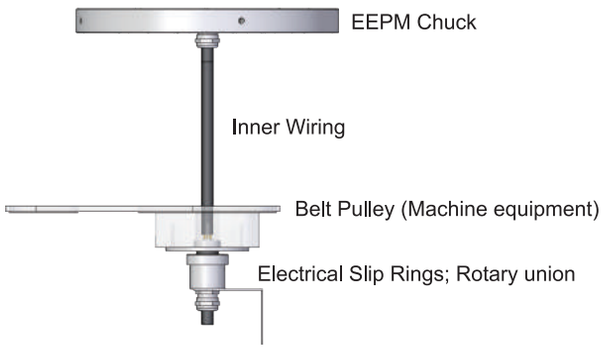
Electro-Permanent Magnetic Chuck EEPM-CIRS Series

Suitable in use for combine with Rotary type Surface Grinding Machine, CNC 5 Axis Machining Center ... etc.

Electrical Slip Rings; Rotary union

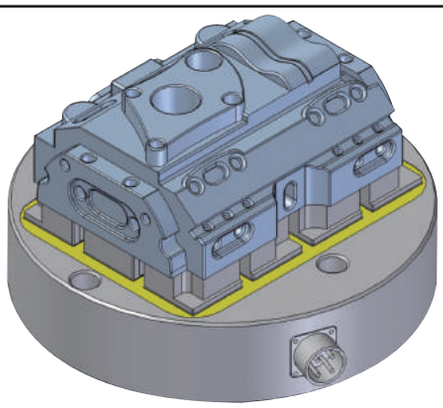
Features:

For Magnetization/Demagnetization connection, installed in the center of the rear of the EEPM Chuck can be turning freely while machining.

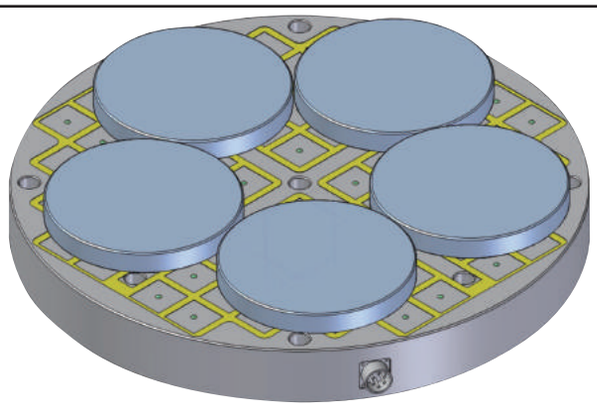


Model No.	Conduction	RPM
EEPM-RUC	Precious metal	0 ~ 3000 RPM
EEPM-V5F	Mercury	0 ~ 1200 RPM

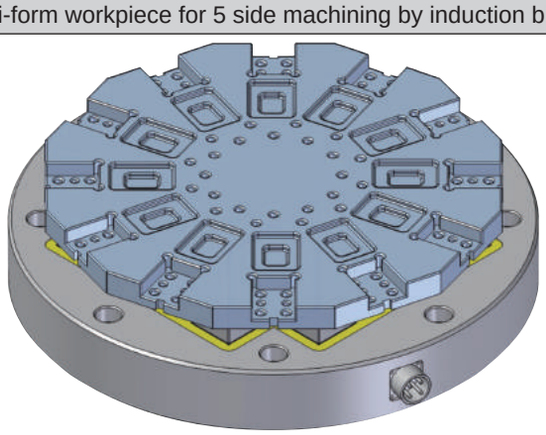
Working Example



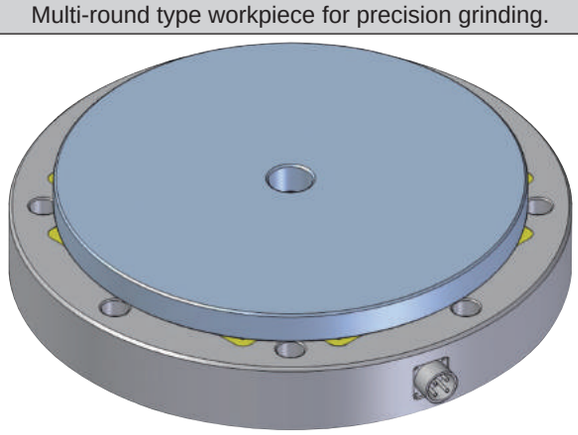
Multi-form workpiece for 5 side machining by induction block.



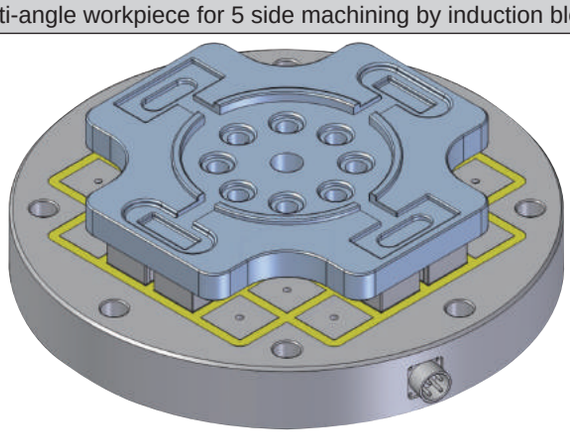
Multi-round type workpiece for precision grinding.



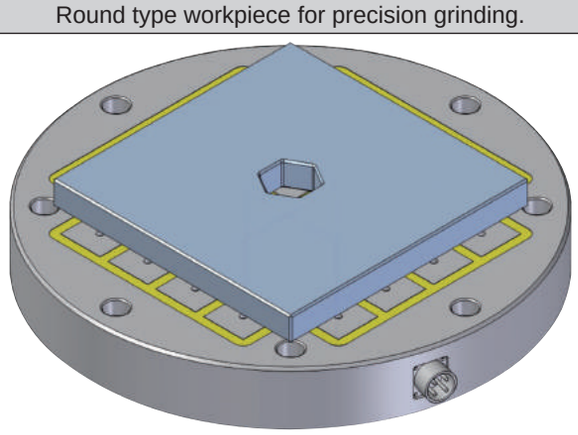
Multi-angle workpiece for 5 side machining by induction block.



Round type workpiece for precision grinding.



Round type workpiece for precision grinding.

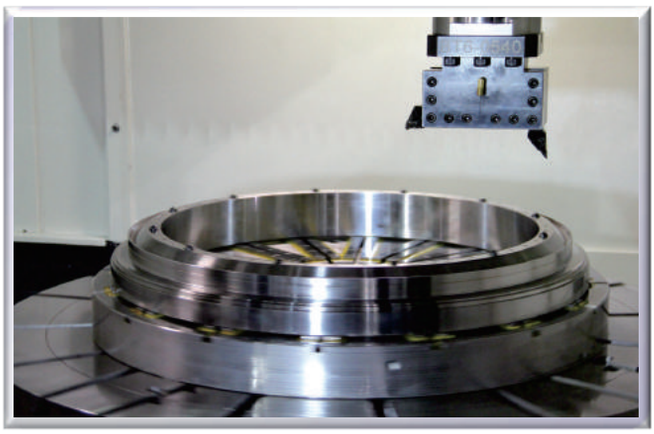
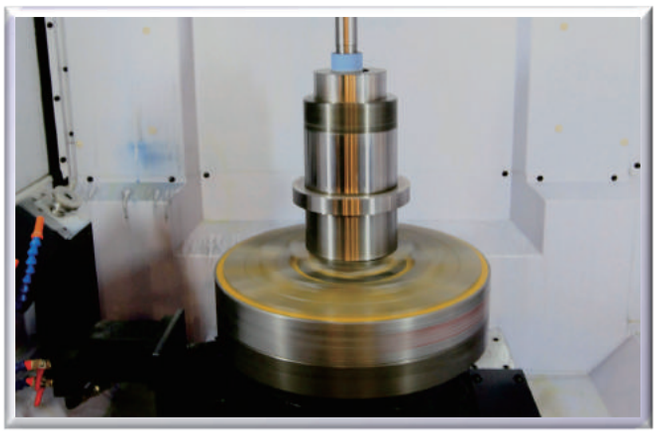
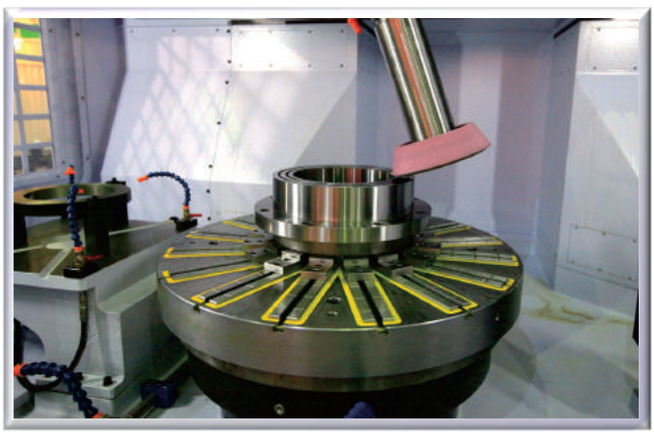
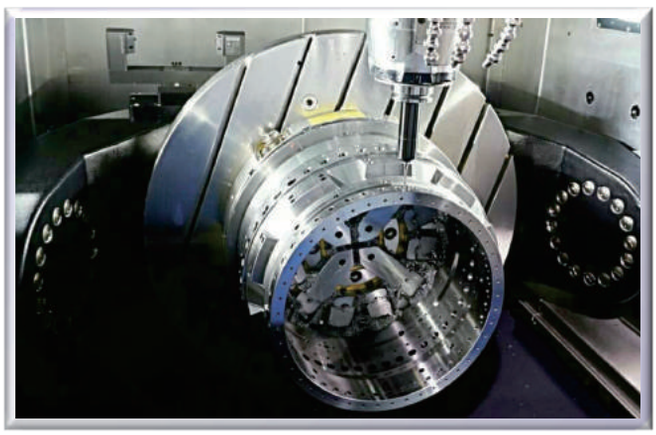
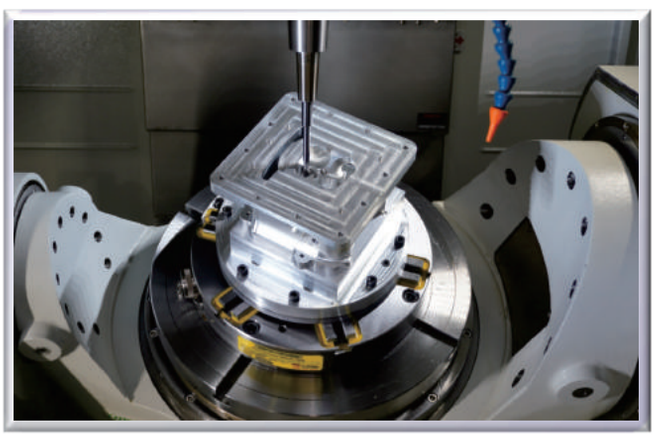
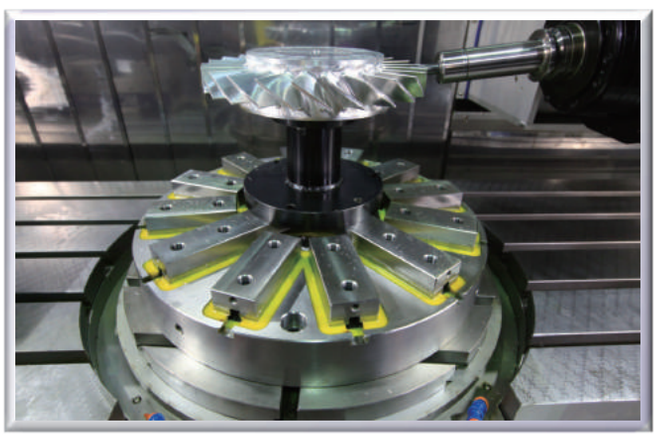
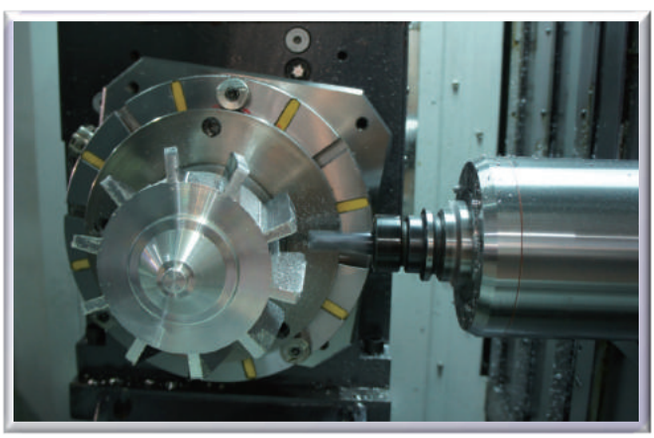
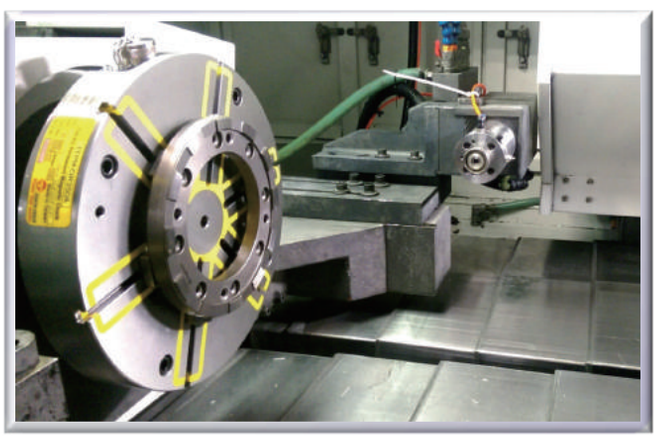


Square workpiece for precision grinding.

Electro-Permanent Magnetic Chuck EEPM-CIR & EEPM-CIRS Series

Suitable for use on Vertical Lathe, CNC 5 Axis Machining Center ...etc.

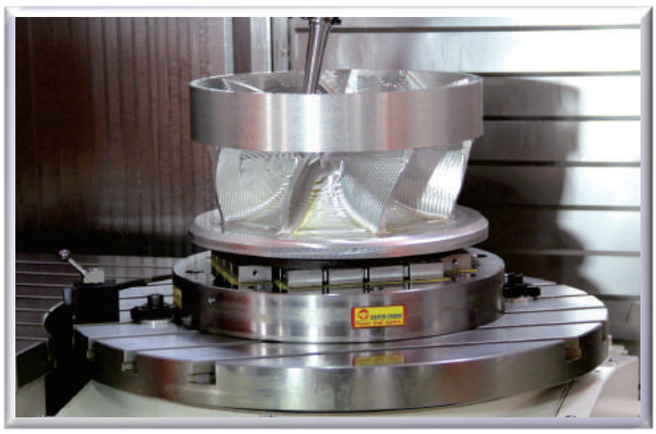
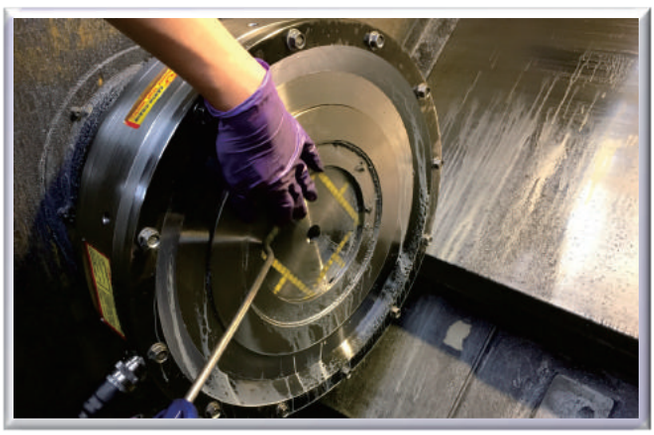
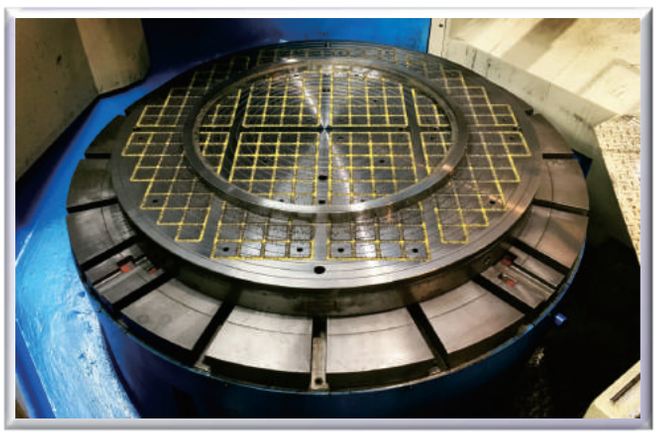
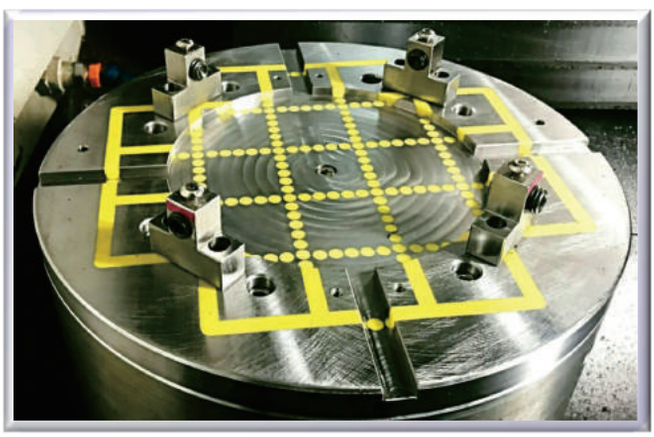
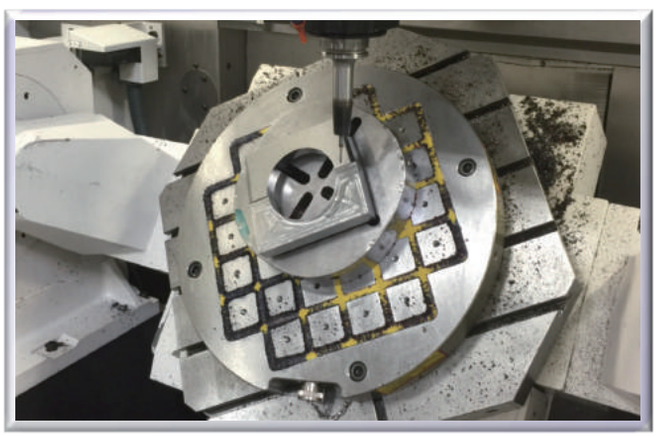
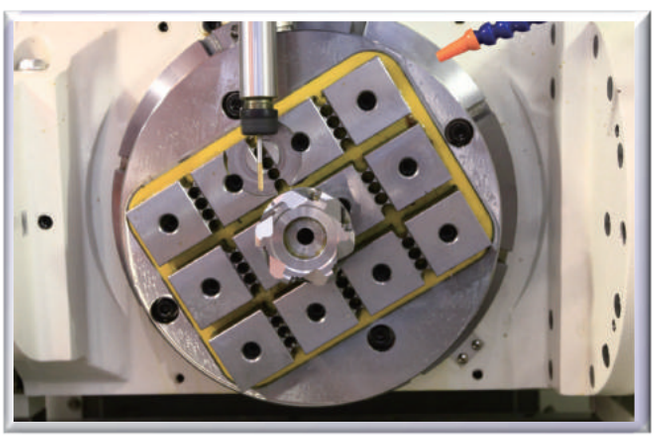
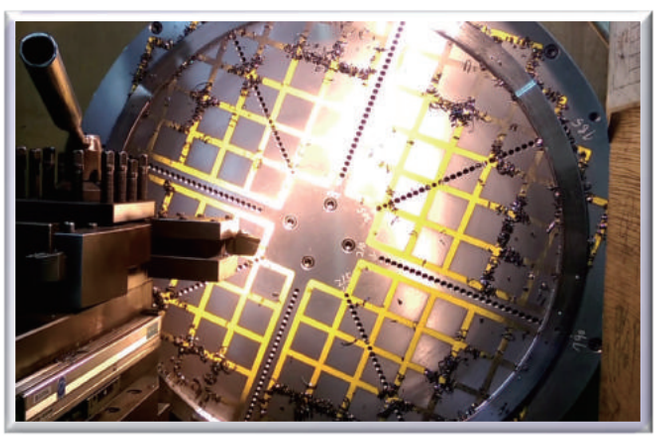
Working Example

Electro-Permanent Magnetic Chuck EEPM-CIR & EEPM-CIRS Series

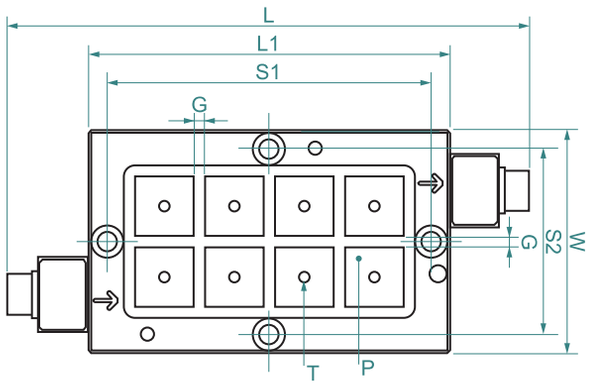
Suitable for use on Vertical Lathe, CNC 5 Axis Machining Center ...etc.

Working Example

Electro-Permanent Magnetic Chuck-Connection Type
EEPM-C Series

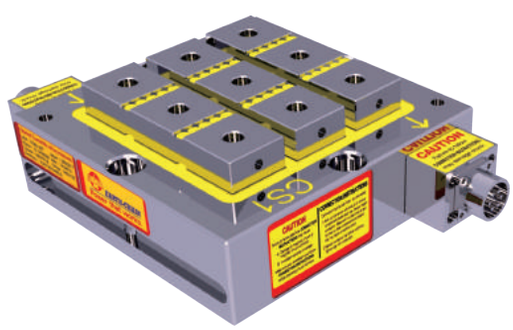
Suitable for use on large Vertical Lathe, Double Column Machining Center and CNC Machining Center …etc.

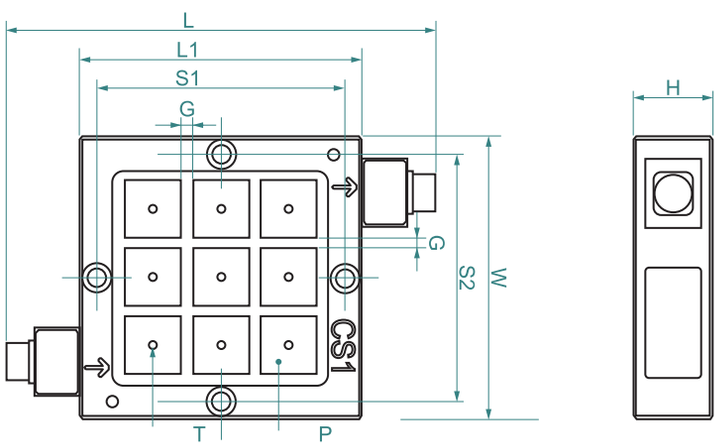


EEPM-2030C-220V

Unit: mm

MODEL NO	VOLTAGE (Single Phase)	DIMENSION							PITCH G	POLE P	NO. OF POLE	HOLDING POWER	CHUCK N.W.
		W	L	L1	S1	S2	H	T					
EEPM-2030C	DC 220V	190	440	310	280	160	70	M8	10	50x50	8	2500±5% kgf	33.5kg

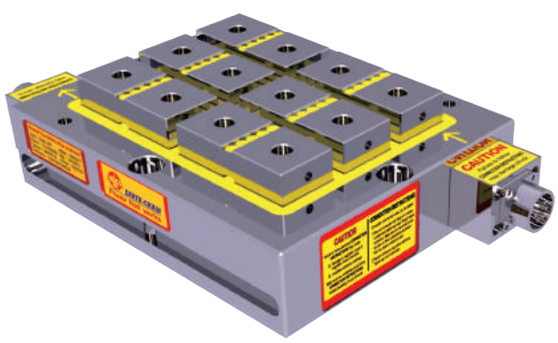


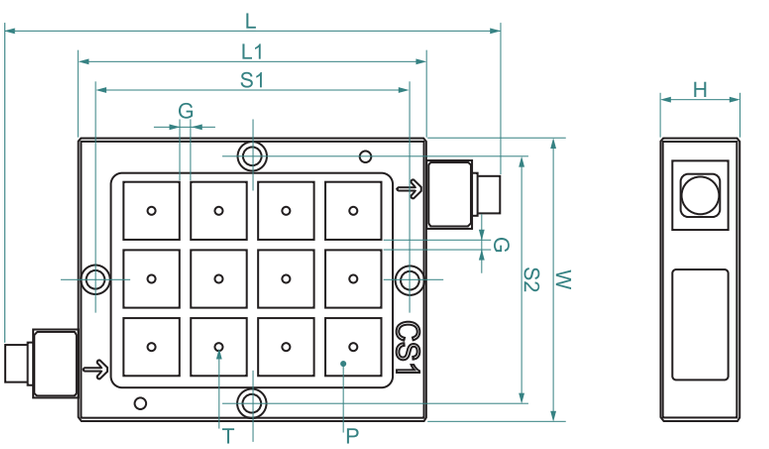


EEPM-2525C-220V

Unit: mm

MODEL NO	VOLTAGE (Single Phase)	DIMENSION							PITCH G	POLE P	NO. OF POLE	HOLDING POWER	CHUCK N.W.
		W	L	L1	S1	S2	H	T					
EEPM-2525C	DC 220V	250	380	250	220	220	70	M8	10	50x50	9	2800±5% kgf	35.0kg





EEPM-2530C-380V~440V

Unit: mm

MODEL NO	VOLTAGE (Single Phase)	DIMENSION							PITCH G	POLE P	NO. OF POLE	HOLDING POWER	CHUCK N.W.
		W	L	L1	S1	S2	H	T					
EEPM-2530C	DC 380V~DC 440V	250	440	310	280	220	70	M8	10	50x50	12	3750±5%	44.0kg

Electro-Permanent Magnetic Chuck-Connection Type
EEPM-C Series

Suitable for use on large Vertical Lathe, Double Column Machining Center and CNC Machining Center …etc.

Features:

1. Super power magnetic force 1250 kgf/100 cm (4 poles), can meet various machining process.
2. Structure of Electro-Permanent Magnetic Chuck, no electric power supply required to keep the chuck On, it could be used for long time and never get temperatures to affect the accuracy of workpiece.
3. Using innovation series and parallel connection modular system, EEPM-C provides a more economic solution to hold various size workpiece. Flexible units could be deployed with various quantities, locations, and distance to each other depending on customers' various workpiece shapes. Save time and cost during machining and increase the accuracy that makes the goods have higher quality and value.
4. According to the size of the workpiece point hold the workpiece, changing the magnetic fixture surface clamp the workpiece, 100% use of the chuck in an all-round way. Can reduce equipment costs and increase more profits.
5. Without any obstructed movement of cutters during machining. Can do 5-sides machining, drilling, tapping, grooving and forming can be done all in one cycle. This greatly enhances work efficiency, and reduces repeated positioning tolerances to achieve best machining accuracy.

How to choose:

According application requirement can choose EEPM-C Series as following steps:

1. Choose number of chucks according to Voltage and workpiece required.
2. Choose Chuck Controller.
3. Choose the Screw Size.
4. Choose the length of Chuck Connection Cables.
5. Choose the length of Power Cord.

Note: A maximum of 16 chucks can be connected to one controller. If the workpiece dimension requests more than 16 chucks please use two groups of chucks unit.

Chuck Controller EEPM-C4C

The controller EEPM-C4C can be control 1-16 chucks at the same time, and has the automatic detection whether the chuck cable is connection completed.

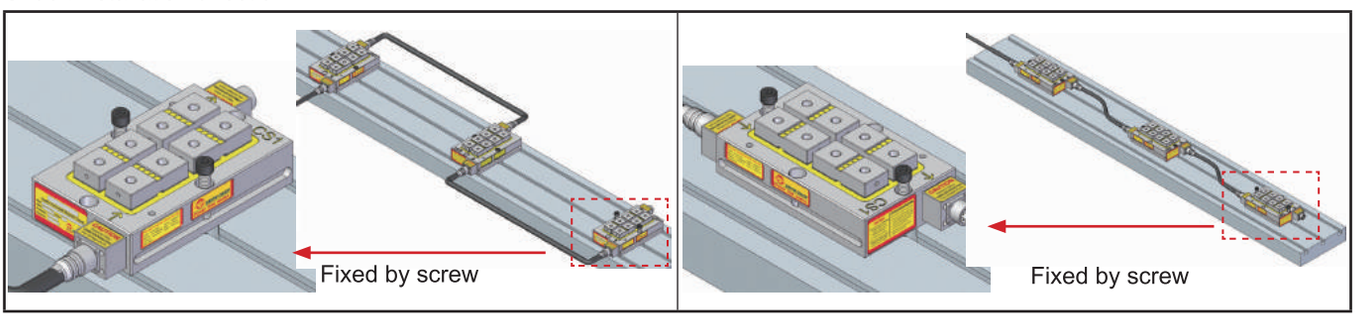
Unit: mm

MODEL NO	VOLTAGE (Single Phase)	DIMENSION		
		L	W	H
EEPM-C4C	AC 220V / AC 380V~440V	370	220	125

Standard accessories Screw Size

T-Slot	A	B	C	D	F	Thread
18	$18^{+0}_{-0.3}$	20	11	28	32	5/8"-11
22	$20^{+0}_{-0.3}$	26	14	32	38	5/8"-11
28	$26^{+0}_{-0.3}$	26	16	41	40	5/8"-11

Chuck installation direction:



Electro-Permanent Magnetic Chuck-Connection Type
EEPM-C Series

Suitable for use on large Vertical Lathe, Double Column Machining Center and CNC Machining Center …etc.

Chuck Connection Cable

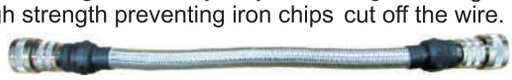
Standard Accessories - (Iron Fle ible Conduit)

Suitable for general machining.

MODEL NO	LENGTH
EEPM-CC05	500mm
EEPM-CC10	1000mm
EEPM-CC15	1500mm

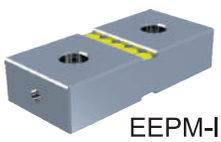
Optional Accessories - (Stainless Steel Fle ible Conduit)

Suitable for long time heavy duty machining. With high toughness and high strength preventing iron chips cut off the wire.

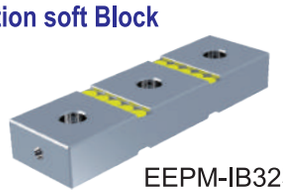


MODEL NO	LENGTH
EEPM-CC05B	500mm
EEPM-CC10B	1000mm
EEPM-CC15B	1500mm

Standard Accessories-Induction soft Block



EEPM-IB225

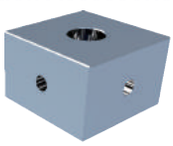


EEPM-IB325

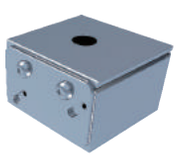
Relative magnetic force and EEPM-IB percentage table

MODEL NO.	Holding Power (Kgf)
EEPM-IB225B	82 %
EEPM-IB325B	68 %

Option Accessories-Sping Block EEPM-SP Series



Fixed Block EEPM-SPF



Spring Block EEPM-SP

Features:

1. Suitable for clamping on iron cast, irregular form and flexuous workpieces, it will not be out of shape of the workpiece after machining.
2. 3 Fixed Blocks is necessary for each workpiece clamping, it could be makes a basic surface for the workpiece touch to the Spring Blocks.
3. Elasticity: Each 2.5 mm for up and down.

Unit:mm

MODEL NO.	L	W	H
EEPM-SP	48	48	30
EEPM-SPF	50	50	32.5

Relative magnetic force to Fixed block and Spring block:

MODEL NO.	Holding Power (Kgf)
Fixed Block	85 %
Spring Block	40 %

CONNECTION TABLE

MODEL NO	EEPM-2030C 220V			EEPM-2525C 220V			EEPM-2530C 380V~440V		
CHUCK NOS.	HOLDING POWER OF EACH CHUCK	TOTAL HOLDING POWER kgf ±5%	CURRENT A MP	HOLDING POWER OF EACH CHUCK	TOTAL HOLDING POWER kgf ±5%	CURRENT A MP	HOLDING POWER OF EACH CHUCK	TOTAL HOLDING POWER kgf ±5%	CURRENT A MP
3	2500±5%	7500	7A	2800±5%	8400	7A	3750±5%	11250	8A
4		10000	9A		11200	9A		15000	10A
5		12500	11A		14000	10A		18750	12A
6		15000	12A		16800	11A		22500	13A
7		17500	14A		19600	12A		26250	16A
8		20000	16A		22400	14A		30000	18A
9		22500	17A		25200	15A		33750	19A
10		25000	19A		28000	17A		37500	21A
11		27500	20A		30800	19A		41250	23A
12		30000	22A		33600	20A		45000	25A
13		32500	24A		36400	22A		48750	27A
14		35000	26A		39200	23A		52500	29A
15		37500	27A		42000	24A		56250	30A
16		40000	29A		44800	26A		60000	33A

If the workpiece dimension requests more than 16 chucks, please use two groups of chuck unit.

Notice:

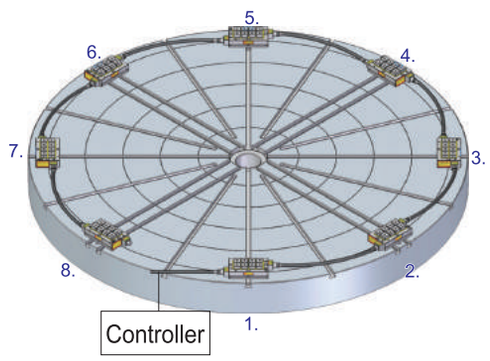
1. EEPM-C Series each voltage has two specifications can be choose.
2. Maximum distance required:

No. of EEPM-CS	3-4 Chucks	5-10 Chucks	11-16 Chucks
Max. Distance Between Chucks	800 mm	1000 mm	1500 mm

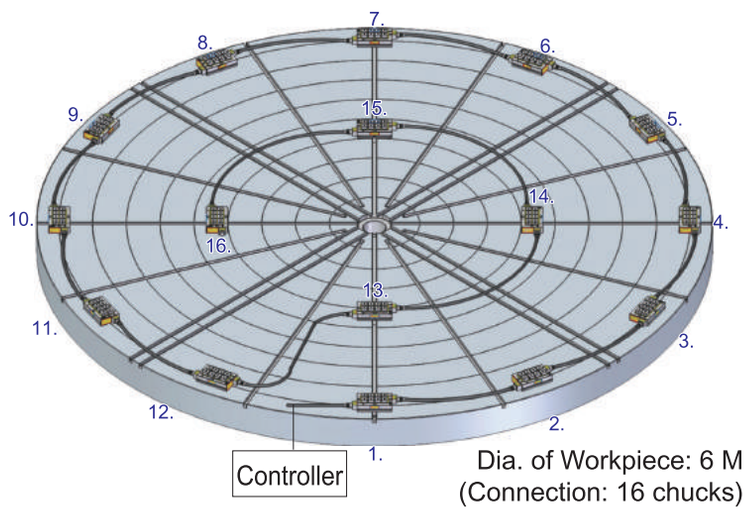
Electro-Permanent Magnetic Chuck-Connection Type
EEPM-C Series

Suitable for use on large Vertical Lathe, Double Column Machining Center and CNC Machining Center …etc.

Example of Vertical Lathe on Setting:

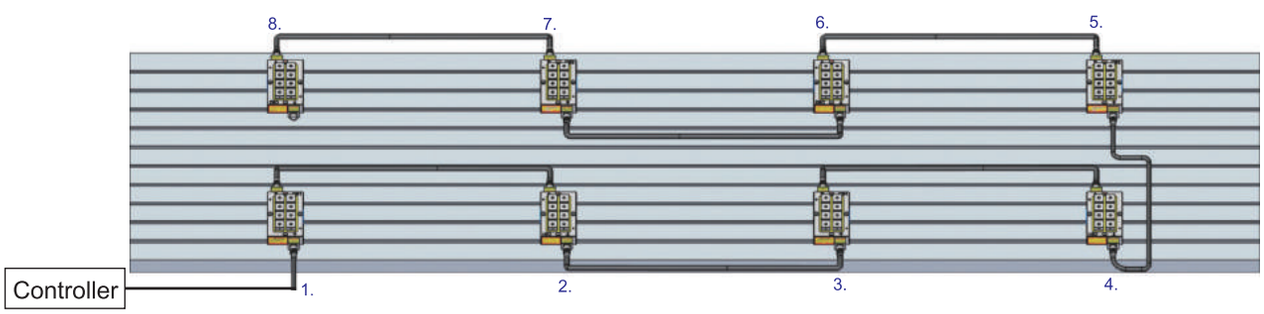


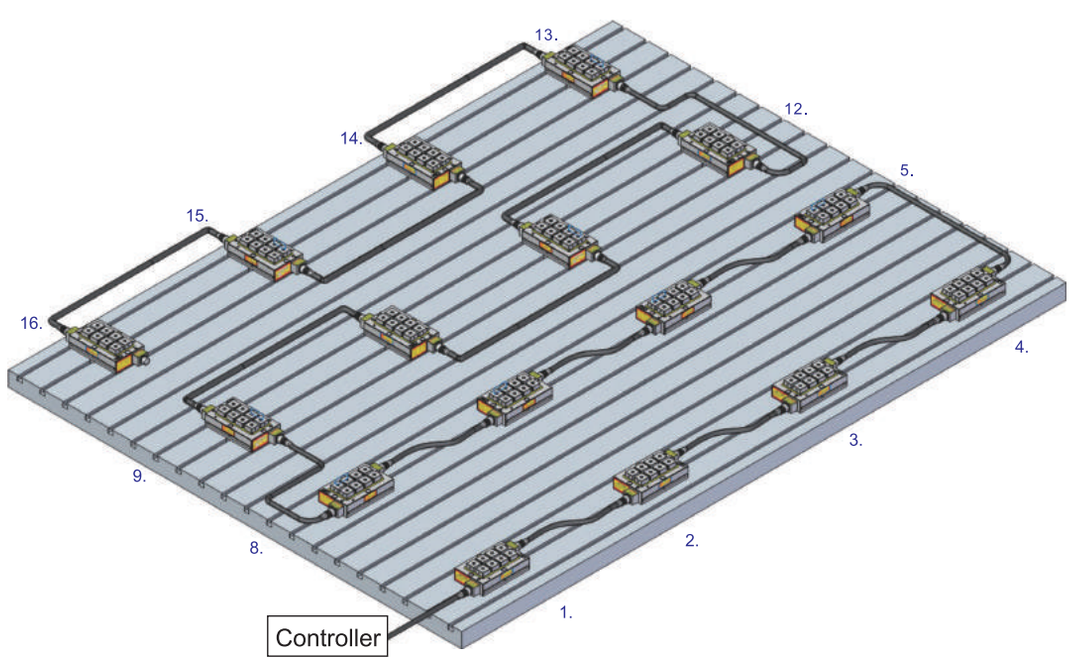
Dia. of Workpiece: 3.5 M
(Connection: 8 chucks)



Dia. of Workpiece: 6 M
(Connection: 16 chucks)

Example of Double Column Machining Center and CNC Machining Center on Setting

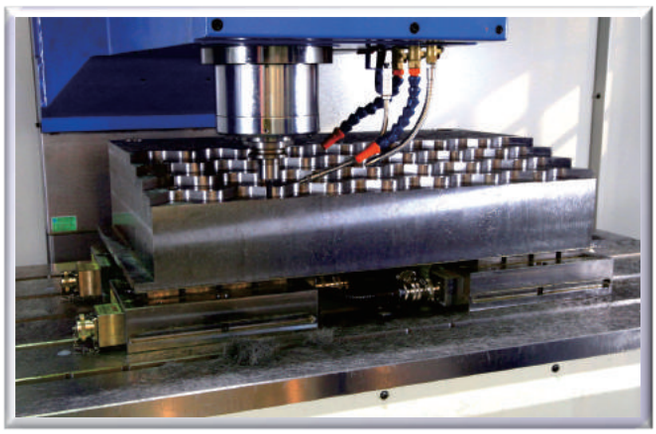
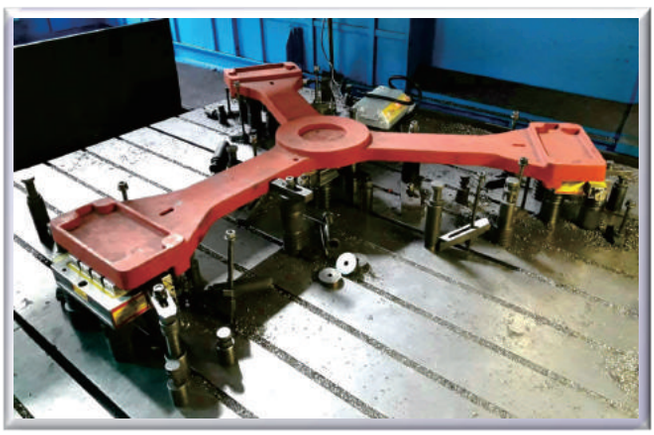
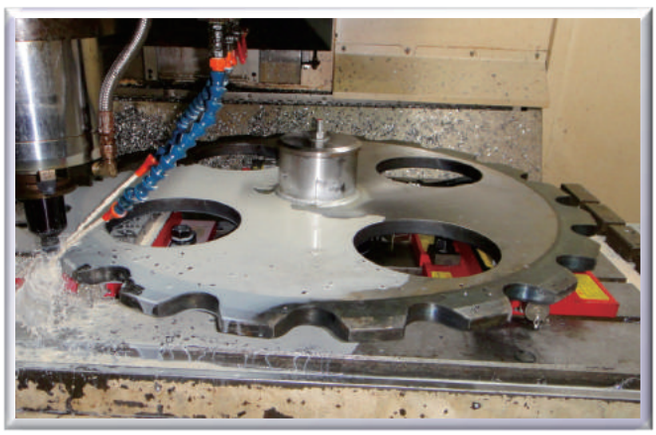
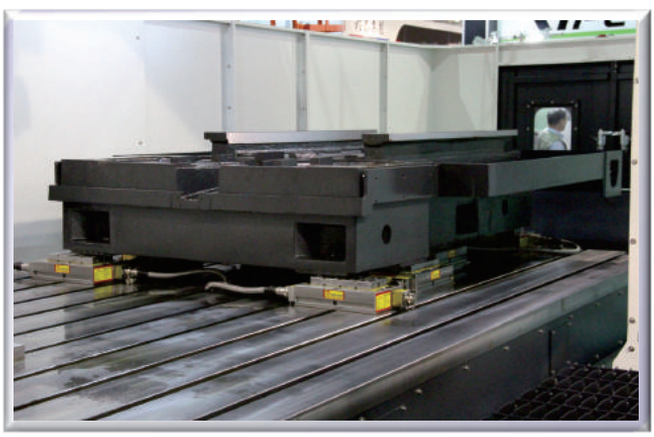
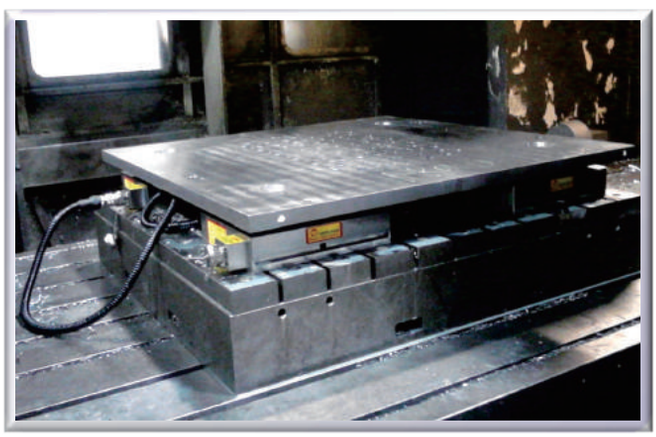
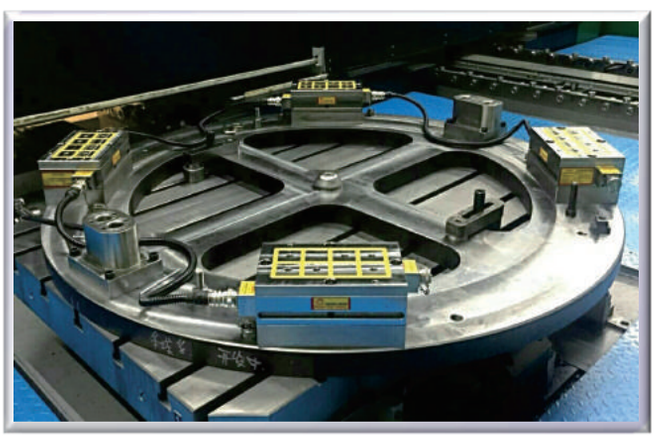
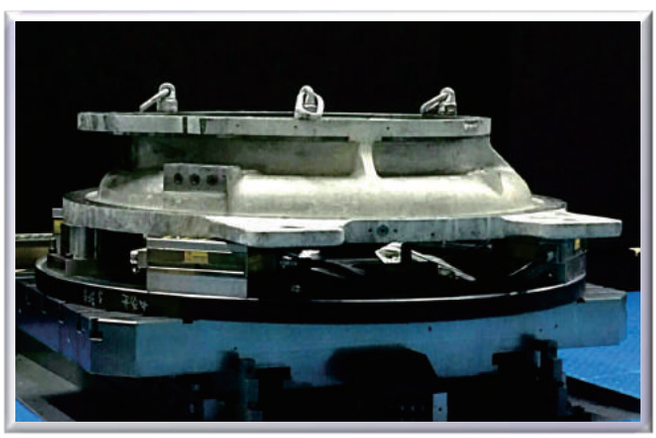




Electro-Permanent Magnetic Chuck-Connection Type
EEPM-C Series

Suitable for use on large Vertical Lathe, Double Column Machining Center and CNC Machining Center …etc.

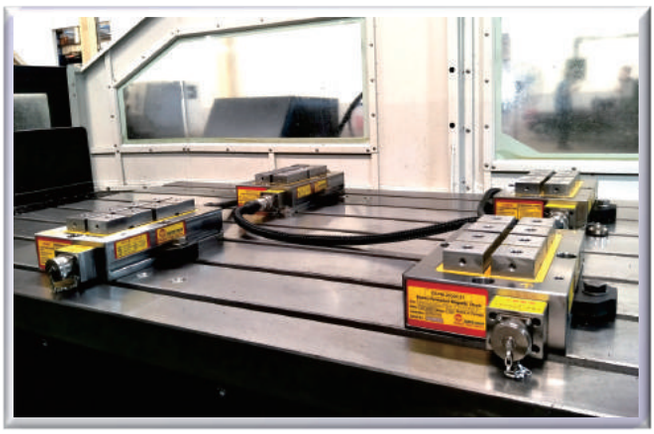
Working Example

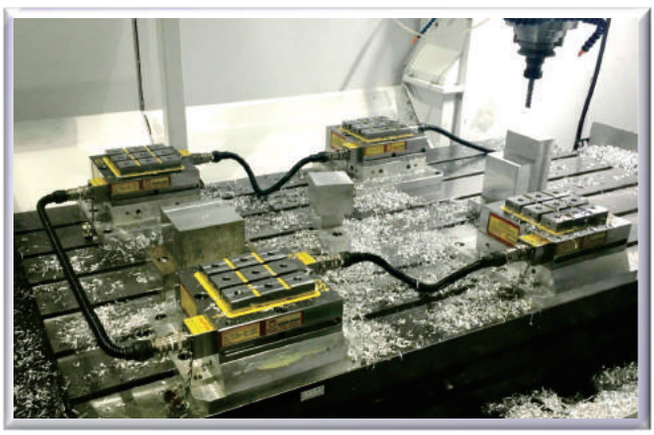
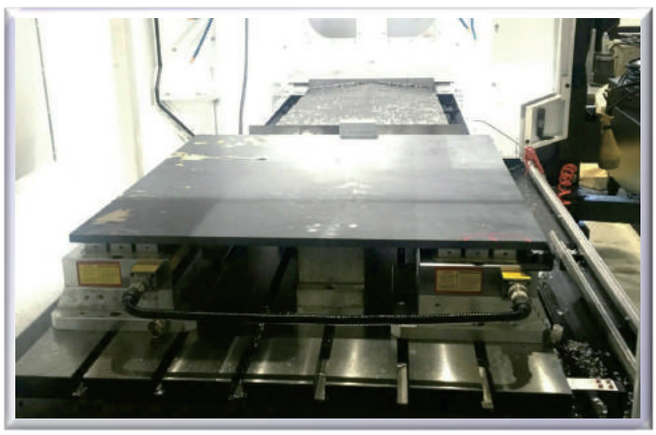









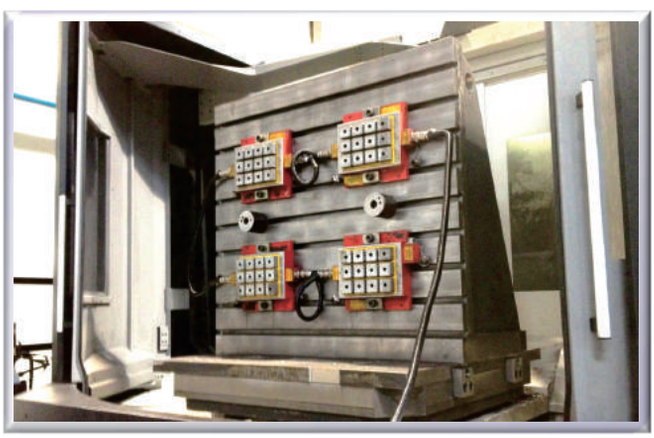
Electro-Permanent Magnetic Chuck-Connection Type
EEPM-C Series

Suitable for use on large Vertical Lathe, Double Column Machining Center and CNC Machining Center …etc.

Working Example




Professional R & D team-Custom-Made is available

At present, the customized products have reached more than 50%. Earth-Chain pays attentions to the services to every customer, listening to customers and tailoring the requirements for customers.

R & D

Customer Service

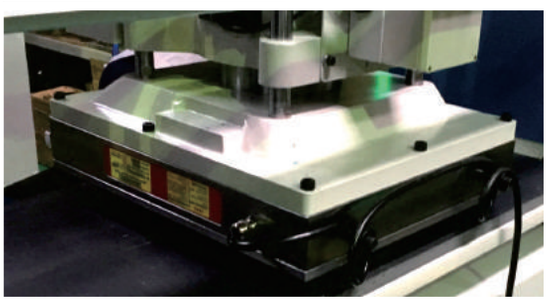
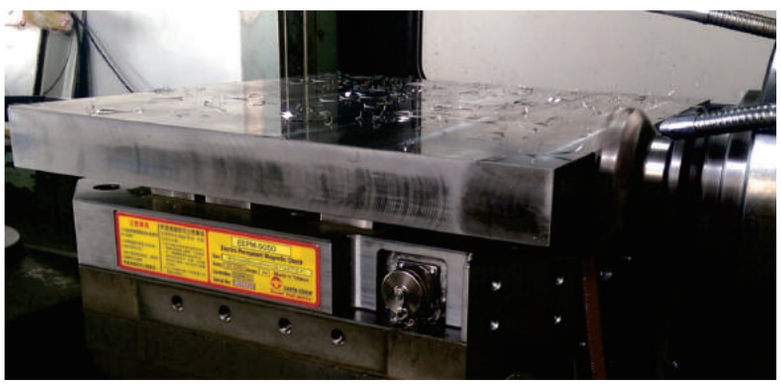
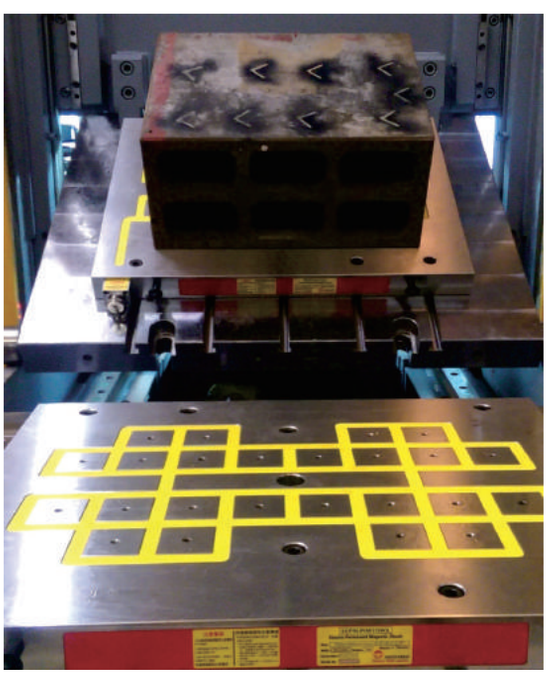
Quality Inspection

Precision Testing

Custom-Made EEPM Chucks

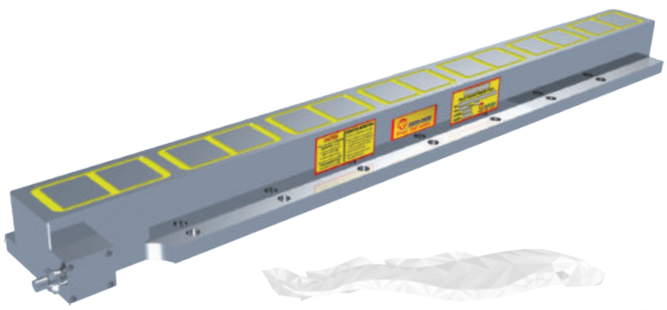
Custom-chucks built to your specification.

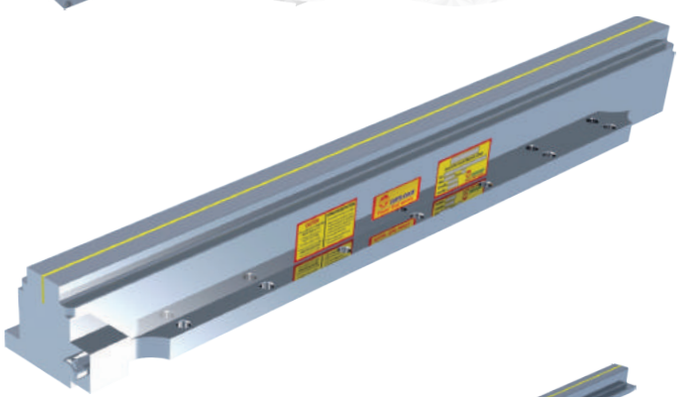


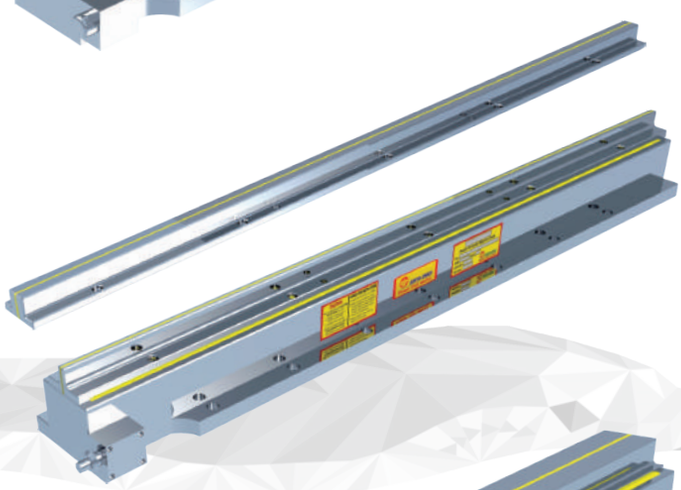




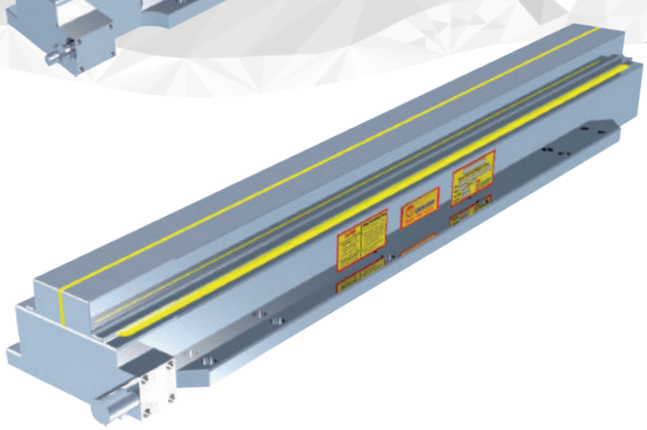
Electro-Permanent Magnetic Chuck EEPML Series

Used on Linear Guideway high precision or high accuracy long strip workpiece drilling, grinding machining...etc. (Custom-made)









Applications:

EEPM-08102WS Series

With Lower price suitable for large sizes of precision linear guideway or long strip workpiece.

EEPML-11-08102 Series

1. Suitable for small, medium and large of linear guideway high precision or long strip workpieces.
2. Using Induction block can be increased the precision of linear guideway grinding.

EEPML-11-08102-1 Series

1. Induction block is changeable, can be using for small, medium and large of linear guideway high precision or long strip workpieces.
2. Custom-made of induction block is available.

EEPML-15-15102 Series

1. Suitable for small, medium and large of linear guideway high precision or long strip workpieces.
2. Using Induction block can be increased the precision of linear guideway grinding.

Unit:mm

MODEL NO.	DIMENSION L X W X H	NO. OF POLE	TOTAL HOLDING POWER kgf ± 5%	CHUCK N.W.	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)	VOLTAGE (Single Phase)	CURRENT AMP	CONTROLLER (included)
EEPM-08102WS	1020X130X80	14	3150	60kg	AC 220V	20A	C1	AC 380V ≀ 440V	10A	C1
EEPML-11-08102	1020X130X88	14	2275	65kg		20A	C1		10A	C1
EEPML-11-08102-1	1020X130X88	14	2275	63kg		20A	C1		10A	C1
EEPML-15-15102	1020X200X88	28	4550	101kg		33A	C1		15A	C1

Custom-Made products (above specification are for reference only)

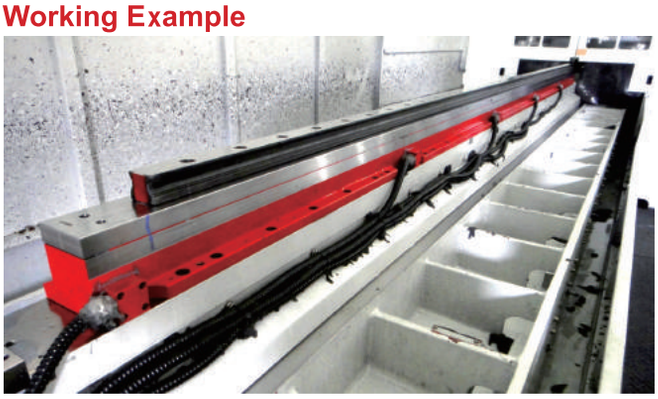
Electro-Permanent Magnetic Chuck EEPML Series

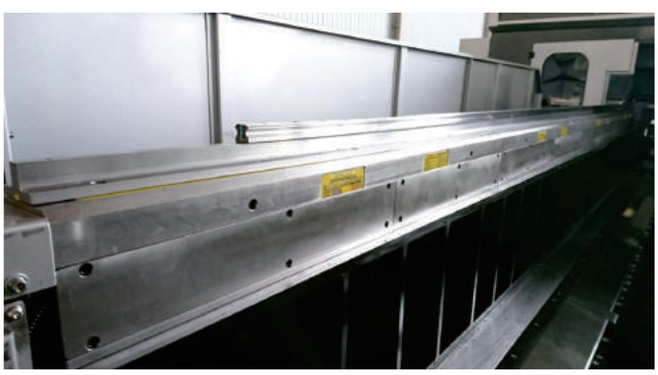
Used on Linear Guideway high precision or high accuracy long strip workpiece drilling, grinding machining...etc. (Custom-made)

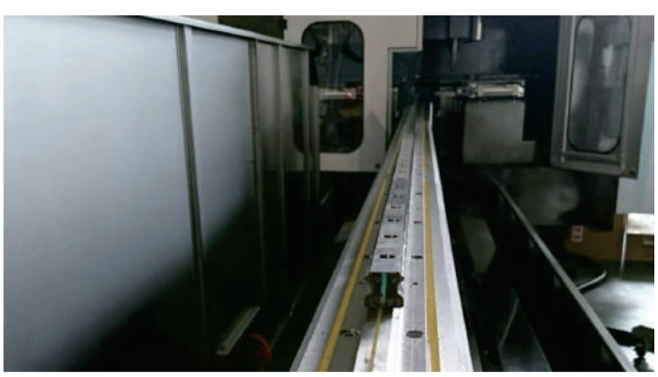
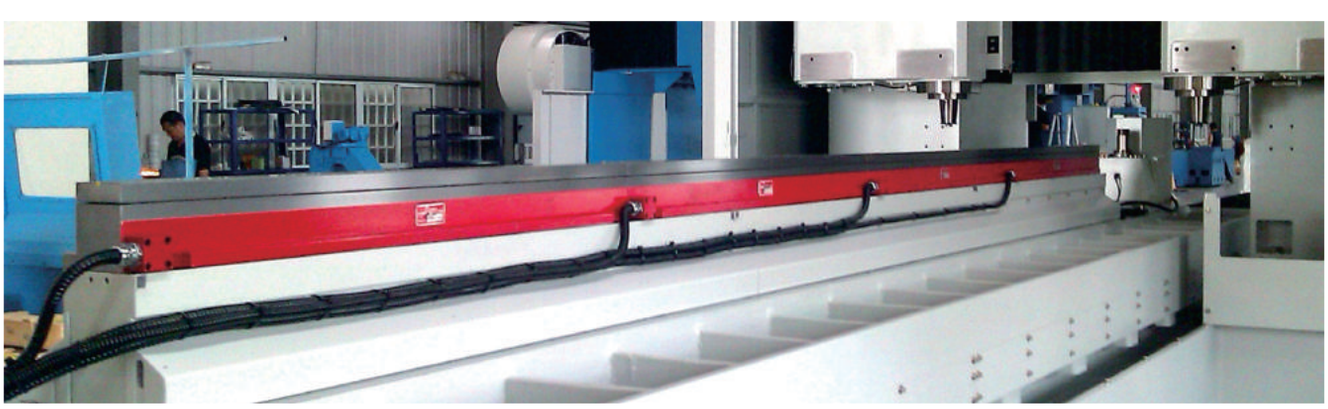
Features:

1. Structure of Electro-Permanent Magnetic Chuck, 1-3 seconds control for power ON & OFF.
   No electric power supply required to keep the chuck ON.
2. EEPM Chucks can be connected and one controller can be control muti-EEPM Chucks.
3. Linear guideway/ Long strip workpieces:
   Can be fully clamped by magnetic chuck and increased grinding accuracy.
4. It could be used for long time and never get temperatures to affect the accuracy of workpieces.

Working Example

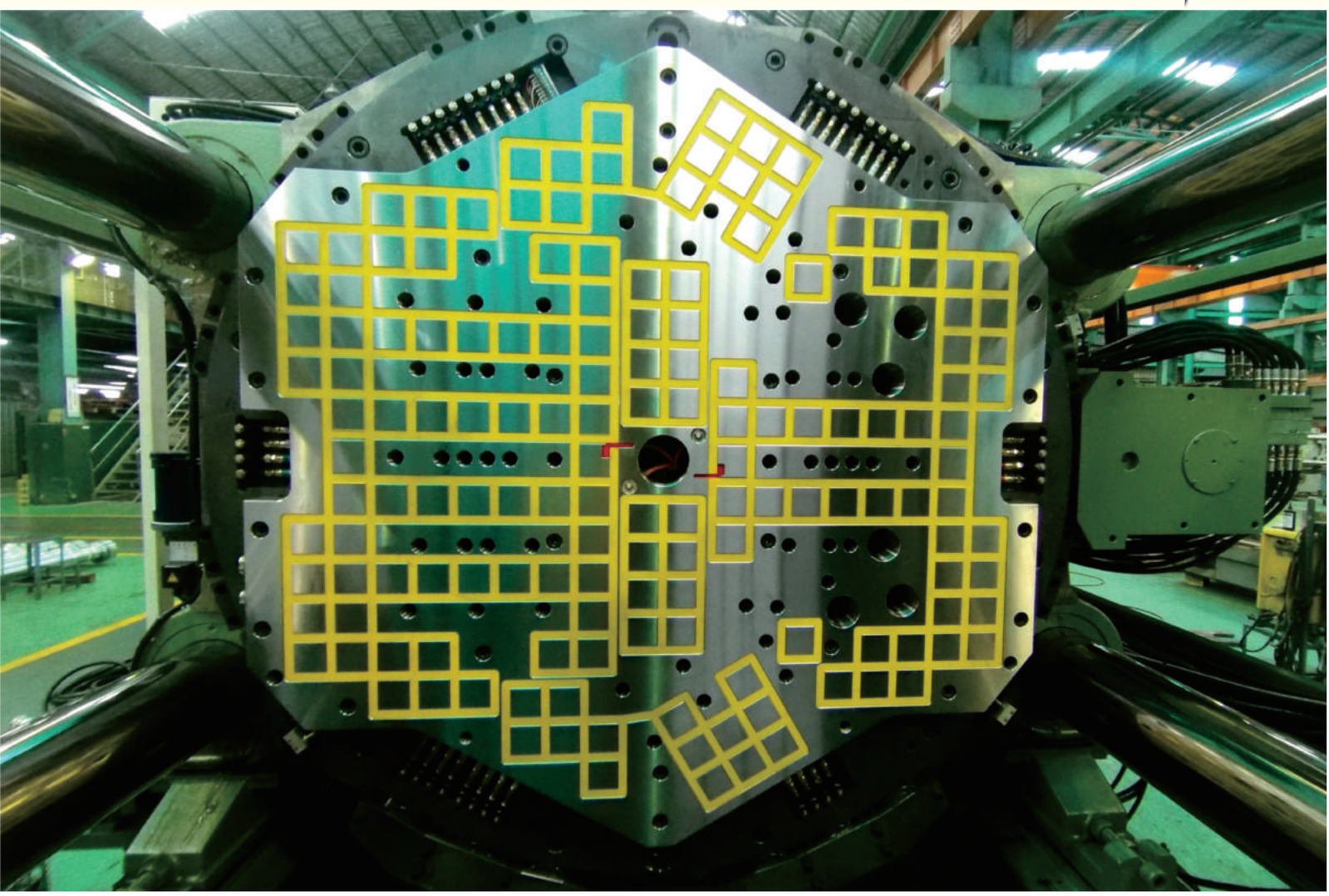




Electro-Permanent Magnetic Chuck EEPM-PIM Series

Quick Mold Change Systems for Plastic Injection Machine



1. Safety
- Electro-Permanent Magnetic design, no power supply to keep the magnetic chuck ON.
- Safety in case of power failure. Magnetic power 4~5 times safety factor.
- Rare-earth material bear up to max. 120℃.

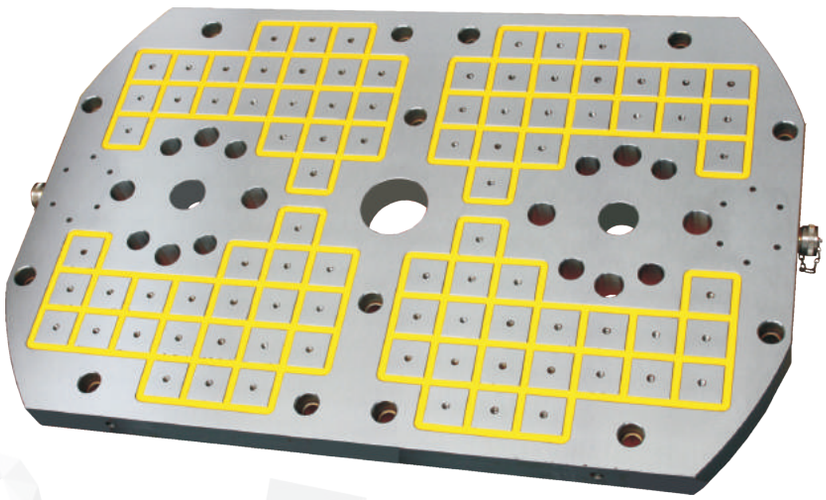
2. Humanity
- Proximity.
- IC safety device.

3. Quickly
- Reduce 70% mold setting time significantly.
- Shorten delivery time.

4. Flexibility
- Low cost and high quality.
- Apply to any kinds of shapes mold.

5. Economic
- Low labor cost.
- Low mold repair cost.
- Less than 1 KW power consuming.
- Low maintenance cost.

6. Improved
- Improve machine mold size capacity.
- Improve machine shifts rotate.
- Improve quick production demand.
- Improve production quality
- Improve strength and parallelism of machine movable/stationary plates and frame.



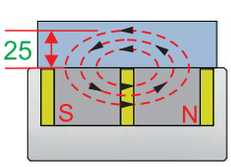
Features:

1. Electro-Permanent Magnetic system: 2~10 seconds control for power ON & OFF. No power supply required to keep the magnetic chuck on, Safety in case of power failure. Never get temperatures and deformation mold.
2. Magnetic force depends on the mold needs, with 3 sizes pole can choose.
3. Magnetic chuck is dual poles (N/S poles), no magnetize machine frame and equipment relative parts.
4. The clamping force is distributed consistently along the whole mold surface reduce product burs and increase mold duration.
5. Reduce 70% mold setting time significantly, increase machine shifts, shorten lead times and increase production capacity.
6. Improve the strength and parallelism of machine movable/ stationary plate and machine frame.
7. Increase 20% clamping area, without fixture plate enhancing the performance of the mold.
8. Can be used with a working temperature up to 120℃, higher product safety.
9. No oil working environment, stable quality, applying for high working specification of germfree/dustfree.

Pole Specification (Height of magnetic field)

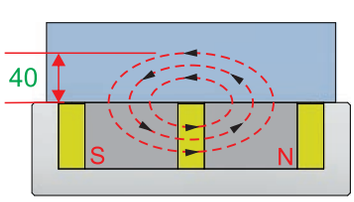
EEPM-PIM designed for different mold thickness. Specify the mold to be Large, Medium and Small sizes, make 3 poles size. Different pole sizes have different magnetic field height to ensure mold clamping safety.

For Small mold



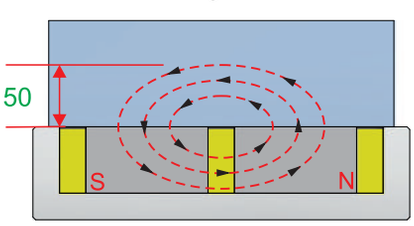
EEPM-PIM Series

For Medium mold



EEPM-PIM-D Series

For Large mold



EEPM-PIM-E Series

Unit: mm

Model No.	Pole Size	Chuck height	Magnetic field height	Magnetic Force (kgf/ 4 poles)
EEPM-PIM Series	50x50	60	25	1200 ±5%
EEPM-PIM-D Series	70x70	70	40	2800 ±5%
EEPM-PIM-E Series	92x92	80	50	4800 ±5%

** The thickness of EEPM-PIM is available from 35~60 mm, magnetic force is 1100 kgf / 4 poles)

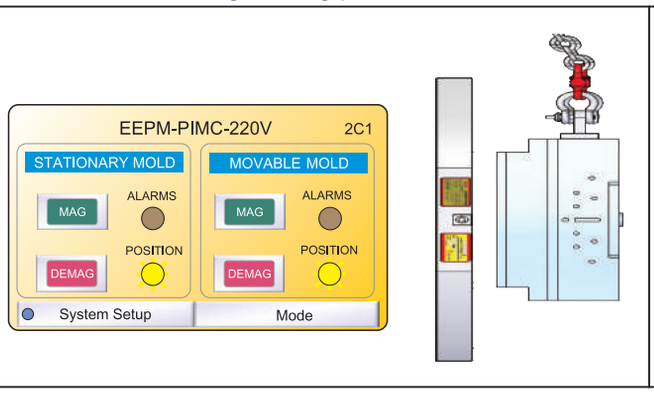
Human Machine Interface controller upcoming

Human Machine Interface touch screen system, feedback operation status from screen page, and the devices could be drived by pre-set program and parameter. Create new policy of 【MagVise Magnetic Clamping System】.

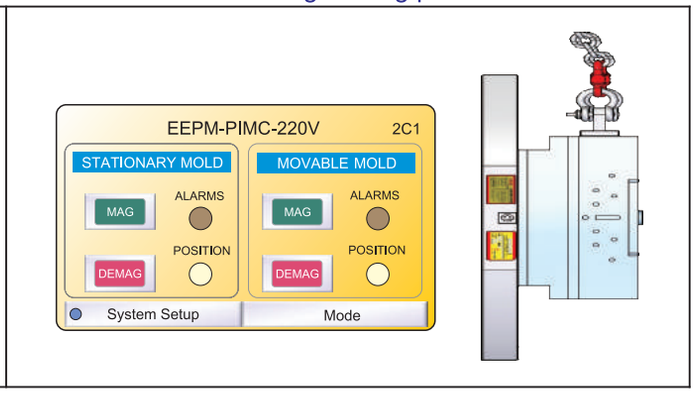
Proximity Sensor Device (Mold clamping detective system)

EEPM-PIM control system built-in IC security detection devices to ensure 100% magnetization when Magnetic Lamp lights on. Install Proximity sensor on the chuck, by detecting lamp shows up the clamping status of the mold, to warn the operator if the mold is completely attached, to avoid holding false happens.

When proximity sensor lamp ON, unable magnetizing process.



When proximity sensor lamp OFF, conduct magnetizing process.



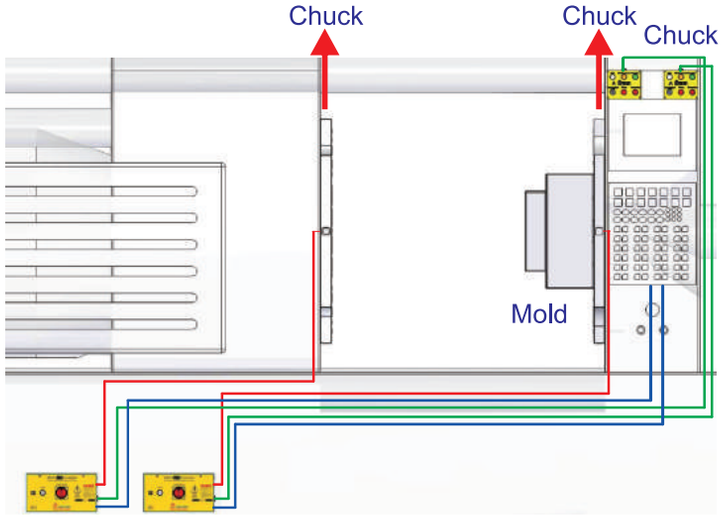
IC Controller (Safety device)

To ensure operator's safety, EEPM-PIM adds safety device to ensure all set-up process then injection machine starts to production process. Set-up process includes complete mold clamping, complete magnetization, plug chuck cable onto safety device … etc.

Chuck and controller

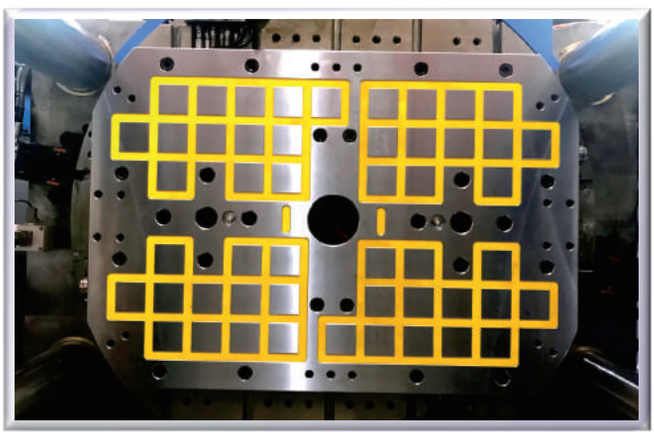
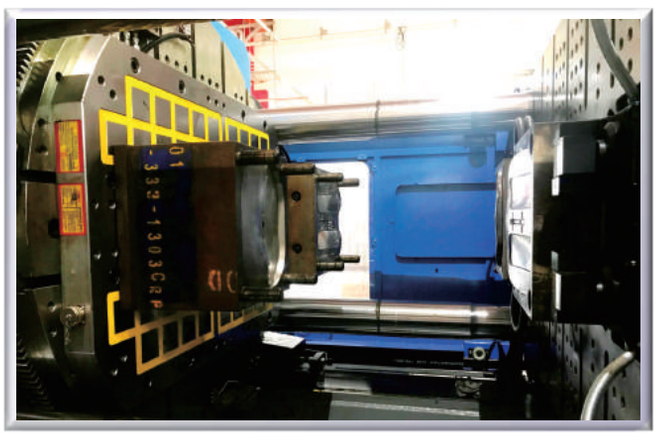
Chuck controller and power switch

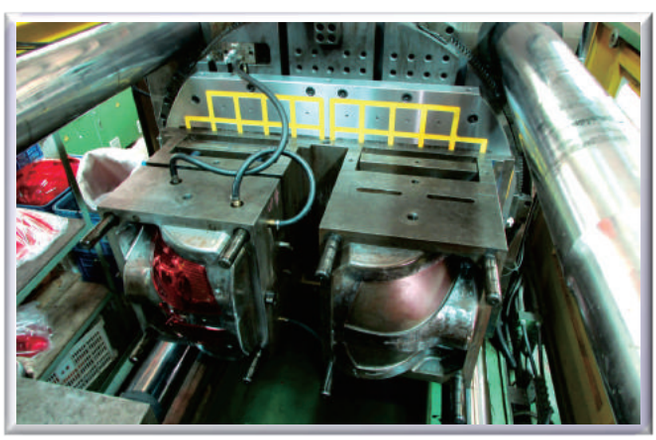
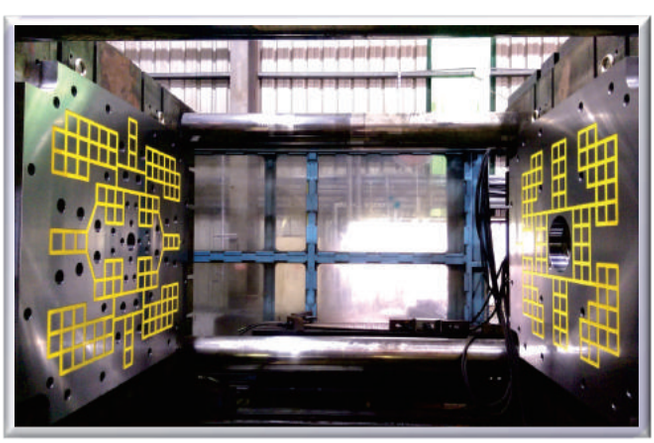
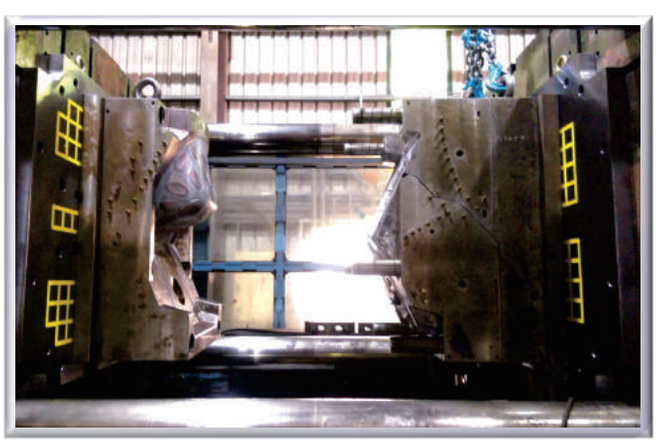
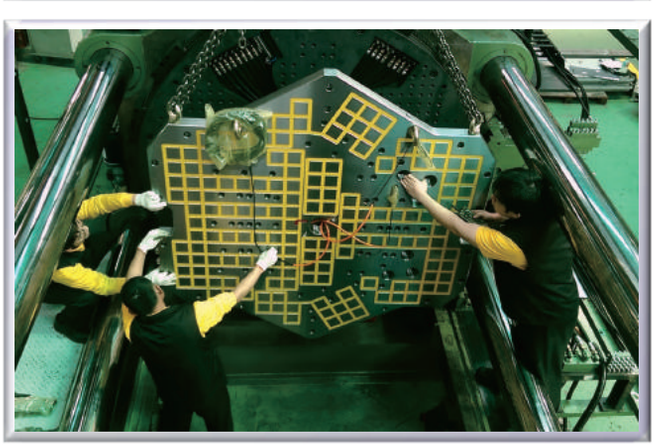
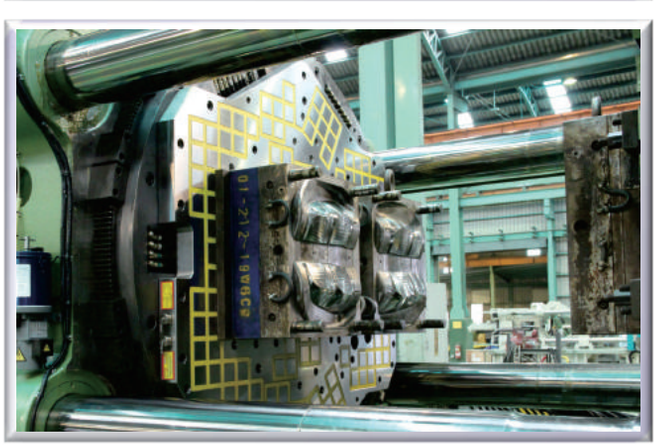
Chuck controller and CNC signal



Chuck controller power switch

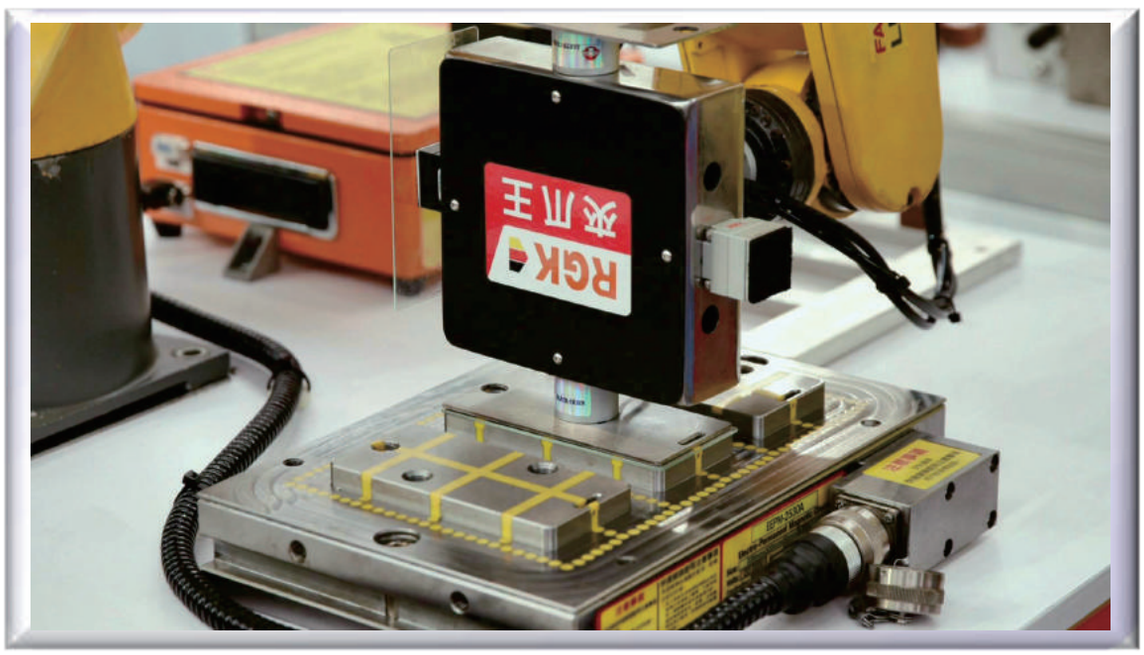
Working Example

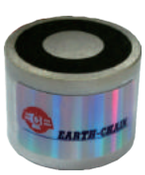



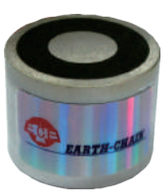






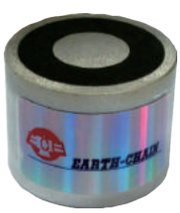
Electro-Magnet ECM Series

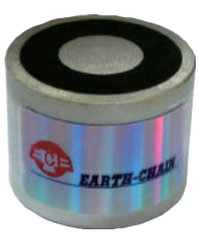
Suitable for Automatic Robotic Arm clamping

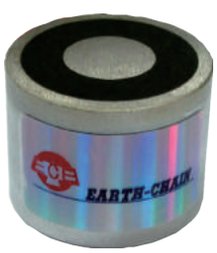



ECM-25


ECM-30


ECM-40


ECM-50

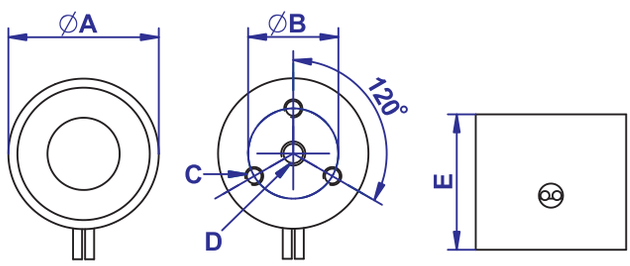

ECM-60

Light weight Powerful High Safety Low Price Easy assembly

Suitable for automated production line including robotic arm, medical, machine, laboratory equipment and other automatic processing production line materials or product transport applications.

Unit : mm

MODEL NO.	A	B	C	D	E	MAGNETIC FORCE
ECM-25	32	15	M3	M4	22.5	15 kgf±5%
ECM-30	32	18	M3	M5	24.5	25 kgf±5%
ECM-40	42	26	M4	M5	30.5	60 kgf±5%
ECM-50	52	34	M4	M5	34.5	90 kgf±5%
ECM-60	65	40	M5	M8	38.5	160 kgf±5%



Electro-Permanent Magnetic Chuck for Automatic Robotic Arm EPSM Series

Suitable for Automatic Robotic Arm clamping

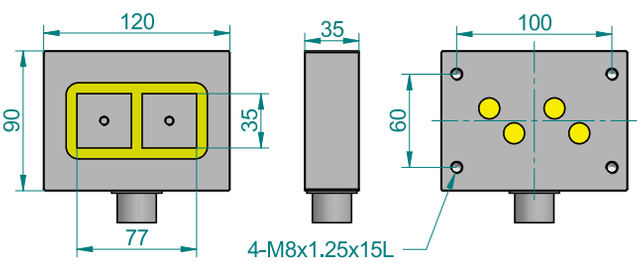
Light weight Powerful High Safety Low Price Easy assembly

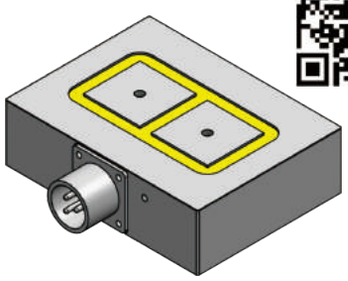
Suitable for automated production line including robotic arm, medical, machine, laboratory equipment and other automatic processing production line materials or product transport applications.

Features:

1. Electro-Permanent Magnetic Chuck made by “Neodymium” magnet. One second control for power ON & OFF. No electric power supply required to keep magnetic chuck ON.
2. The workpiece will not fall due to power failure or abnormal status during the automatic transportation.
3. Built-in intelligent IC signal feedback device can be pre-edited program drive integration of other connected device to reduce the manpower time and operational complexity for future industrial applications.
4. Can be used various types of induction block for different workpieces Transportation.

Unit:mm

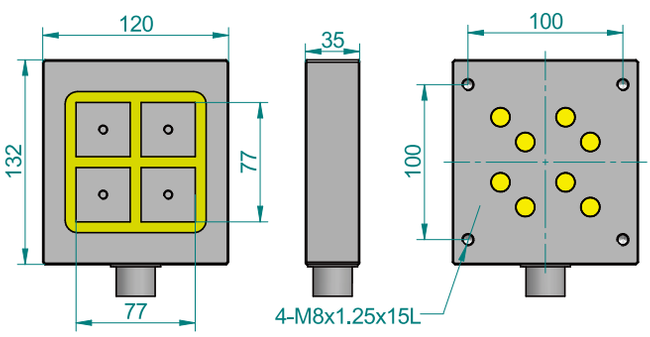


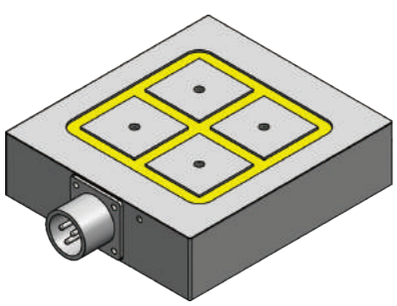


NO. OF POLE:2 TOTAL HOLDING POWER: 290±5% kgf

EPSM-0912A-220V

Unit:mm

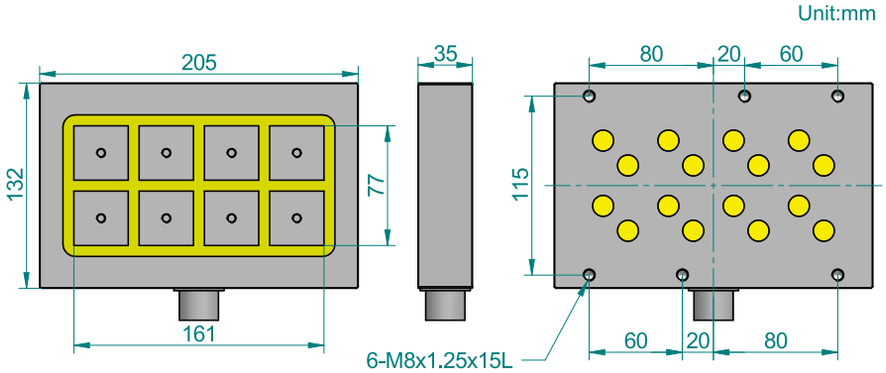


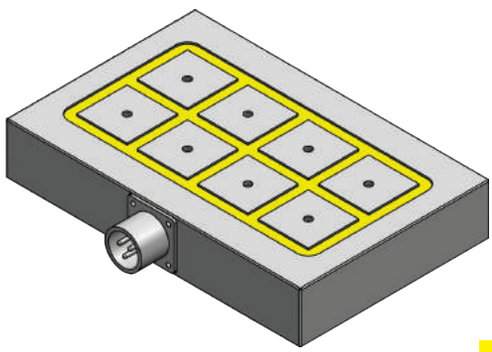


NO. OF POLE:4 TOTAL HOLDING POWER: 580±5% kgf

EPSM-1312A-220V

Unit:mm





NO. OF POLE:8 TOTAL HOLDING POWER: 1160±5% kgf

EPSM-1320A-220V

Mag Vise

Magnetic Workholding

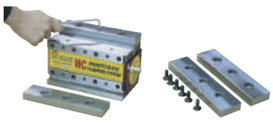
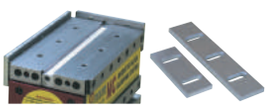
Permanent Magnetic Clamping Block ECB Series

Suitable for medium & large workpiece. (Can do 5 sides machining).

Patented

Taiwan M258824, Italy / USA us7, 224, 251, B2 / apan 3106264, / Korea 0366170, / Germany 20 2004 009 776.1 / China L2004 2 0067865.1

Standard Accessories

 Induction soft block 1 set	 ECB-050, ECB-075: 4 pcs ECB-120, ECB-210: 2 pcs Clamping Jaw
 Handle 1 set	 Guide key 2 pcs
 Stopping plate 1 set	 Switch connector 1 set

Features:

1. The all new model Magnetic Clamping Block ECB Series are a new sense of clamping way for metal working on CNC Machining Center and Milling Machine in quick clamp workpieces.
2. Free to set up position, numbers and distance of Magnetic Clamping Block according to the size of workpiece.
3. The ECB Series including changeable Induction Soft Block. It can be revised the surface to be 100% accuracy on the machine for clamp workpieces. Can be also cutting, drilling, tapping and slotting directly to the Induction Soft Block during machining workpiece. Multi-function of Induction Soft Block, the user can make it by themselves according to workpiece required.
4. Two machining circle for finish workpiece machining, increase a lot of machining efficiency and achieve accuracy required.

Applications:

1. Most suitable for medium and large size of workpiece machining on milling machine and CNC machining center.
2. Minimum size of workpiece required as bigger than an area of two Magnetic Clamping Blocks.
3. The Magnetic Clamping Blocks are not suitable for small workpiece clamping.

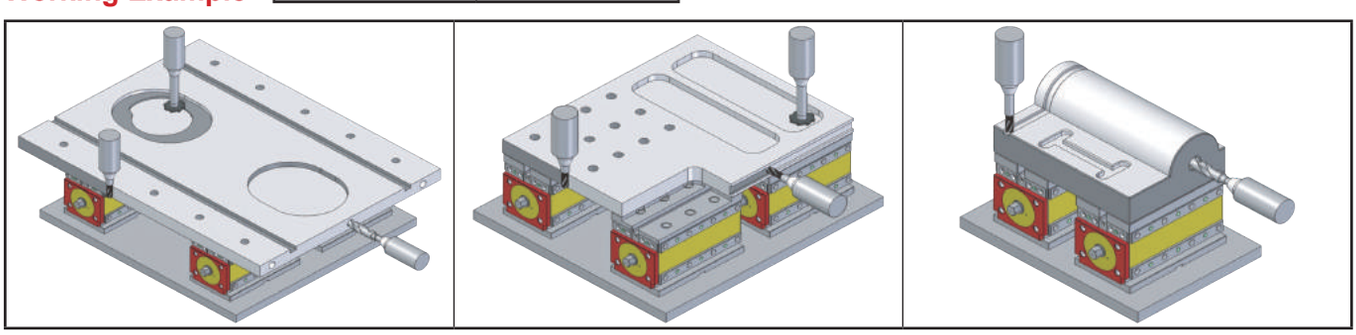
"ON"

"OFF"

Note:

1. Please always make sure the Switch was in ON position before machining.
2. The Magnetic Clamping Blocks are not suitable for non-magnetic material, such as brass, copper, aluminum and stainless steel, etc.
3. The principle of Magnetic Clamping Blocks is magnetism of N. S. poles, so please always put the workpiece between N. S. poles.
   (The middle of top clamping range)

Working Example



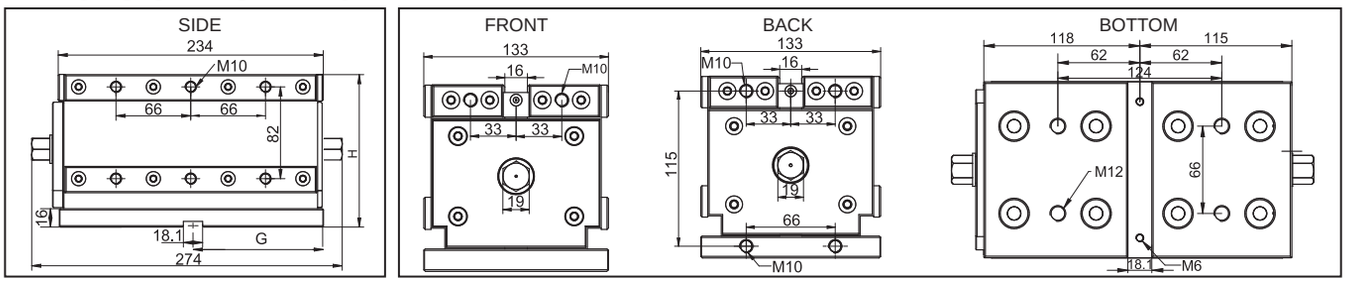
MODEL NO	HOLDING POWER	MINIMUM THICKNESS OF WORKPIECE REQUIRED	G	G= +0 - 0.03	H	H= +0 - 0.03	N.W.
ECB-210	2100kgf±5%	30	115	Accuracy control required	134	Accuracy control required	36kg
ECB-120	1200kgf±5%	20	92.5		108		18kg
ECB-075	750kgf±5%	15	85		78		9.5kg
ECB-050	500kgf±5%	15	61		78		7kg

Continual to next page.

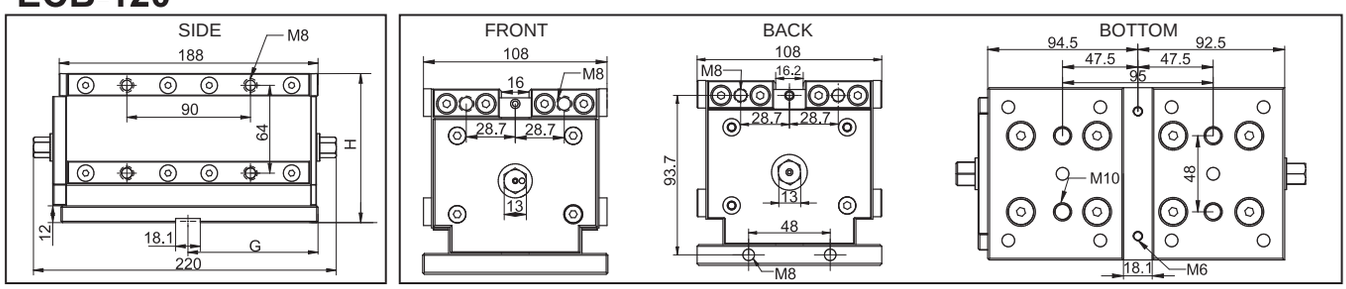
Permanent Magnetic Clamping Block ECB Series

Suitable for medium & large workpiece. (Can do 5 sides machining).

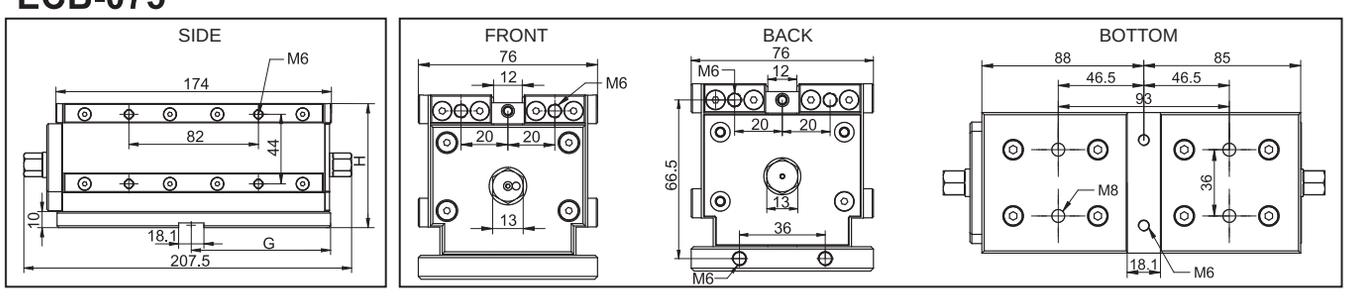
Dimension ECB-210



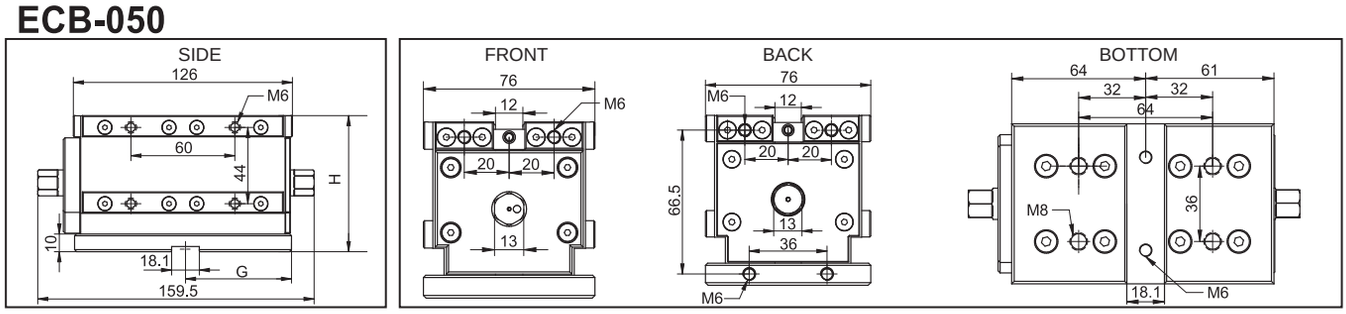
ECB-120



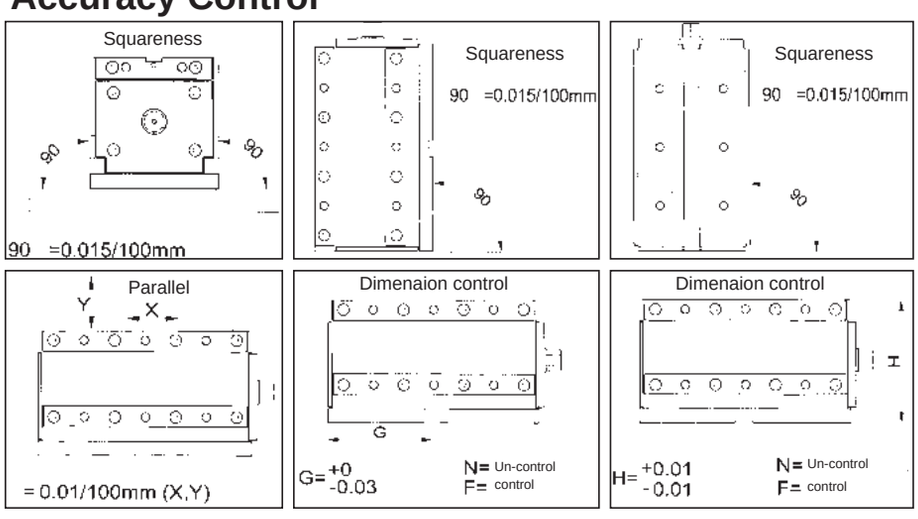
ECB-075



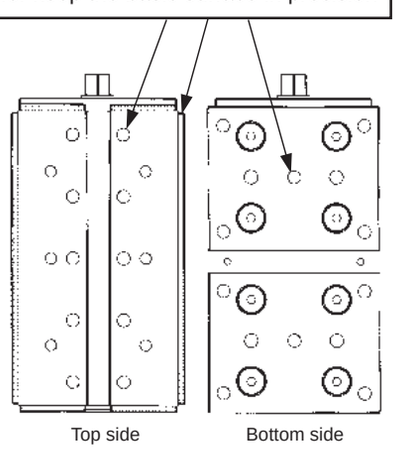
ECB-050



Accuracy Control



The points are hardened up to HRC55 for keep the basic surface in precision



Top side Bottom side

Mag Vise

Magnetic Workholding

Permanent Magnetic Clamping Block ECB Series

Suitable for medium & large workpiece. (Can do 5 sides machining).

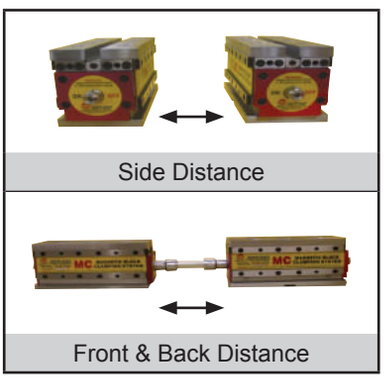
Customer can be makes switch connector by standard hexagon steel bar themselves for depends on length required. The dimension of hexagon bar required as ECB-210 --- 19mm,

ECB-120, 075, 050 --- 13mm.

Maximum & Minimum distance required

Unit:mm

MODEL NO		ECB-210	ECB-120	ECB-075	ECB-050
SIDE DISTANCE	Min.	100	60	25	25
	Max.	1000	600	400	400
FRONT & BACK DISTANCE	Min.	70	40	40	40
	Max.	500	300	200	200



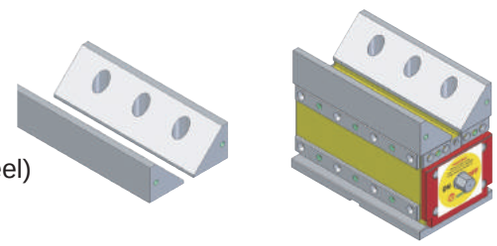
Side Distance

Front & Back Distance

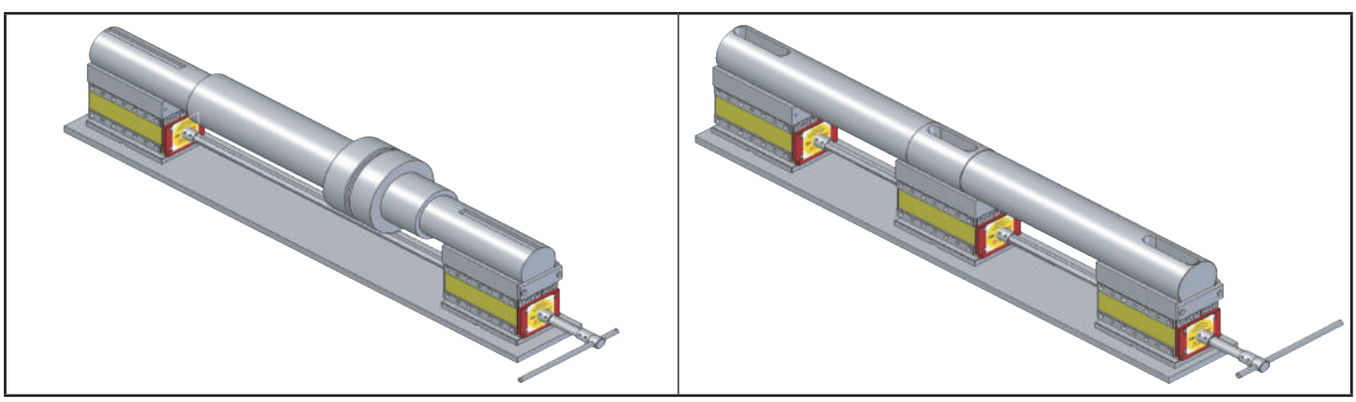
Special made Induction Block:

Customer can makes special induction block themselves for depends on the workpiece and application required.

(The material of induction block required as general and low carbon steel)



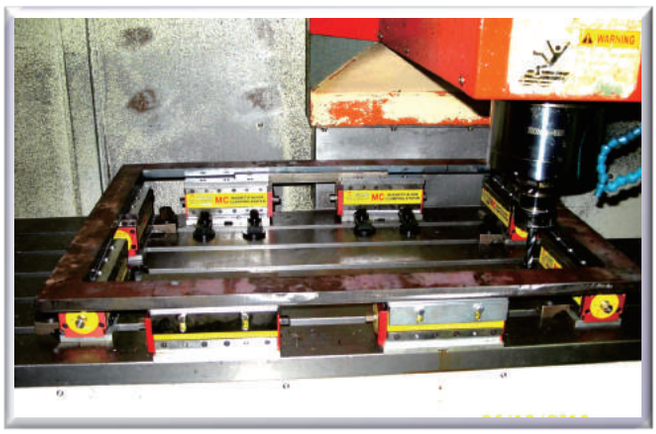
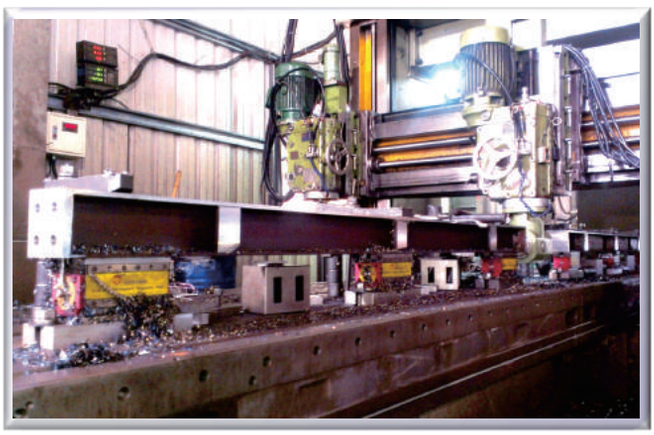
Example

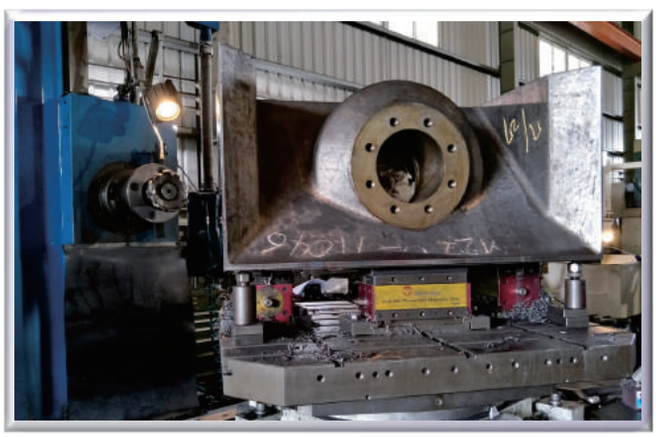


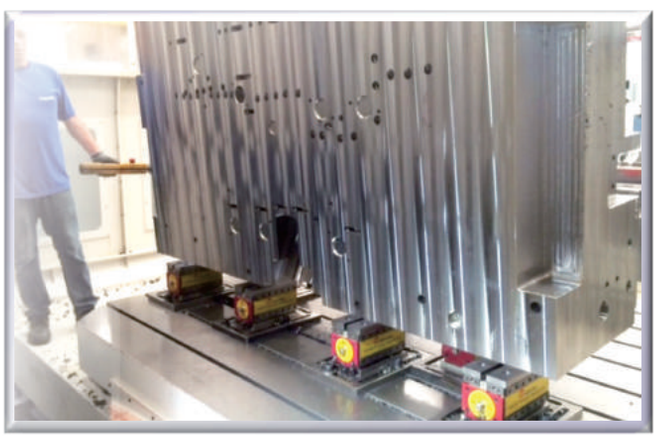
Working Example

Permanent Magnetic Clamping Block ECB Series

Suitable for medium & large workpiece. (Can do 5 sides machining).

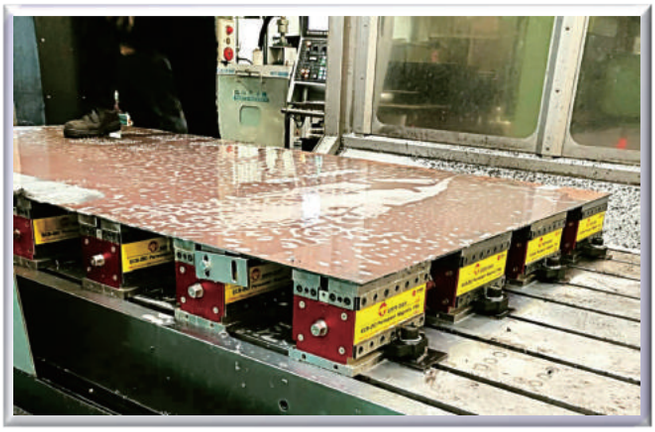




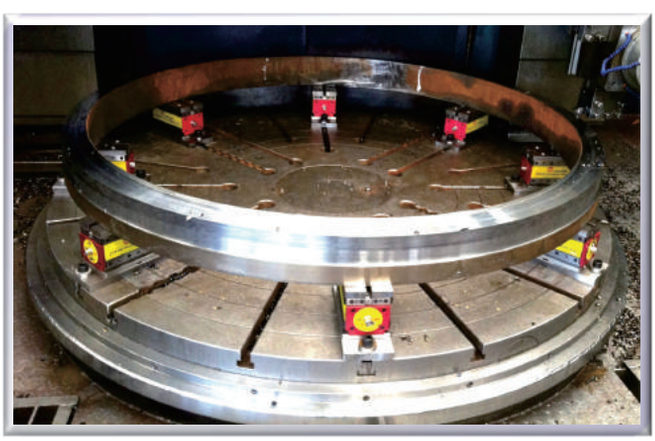





Permanent Magnetic Clamping Block ECB Series

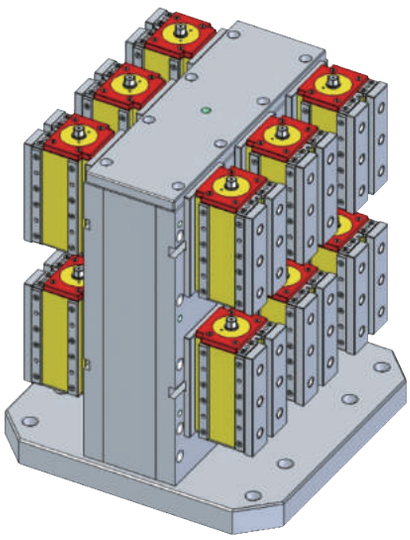
Suitable for medium & large workpiece. (Can do 5 sides machining).

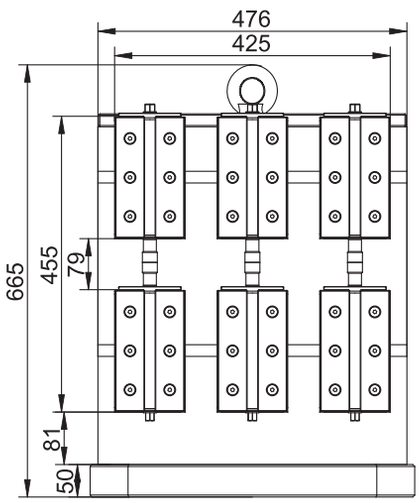


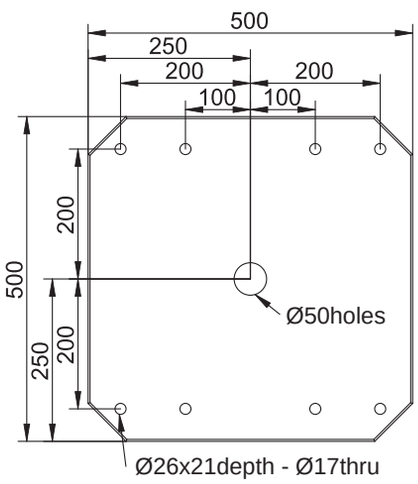


Permanent Magnetic Clamping Block ECB-120V12 Series

Suitable for use on CNC Horizontal Machining Center.







Features & Applications:

1. Each 6pcs of ECB-120 magnetic clamping block on 2 working face, each of 7200 kgf ±5% (1200kgfx6) holding power, can be clamping 2 big workpieces for machining at same time.
2. Customer can makes and assemble any type of clamping device themselves by ECB series for depends on workpieces required.
3. Suitable for use on CNC Horizontal Machining Center. (can do 5 sides machining.)

Working Example

EARTH-CHAIN

Power that works.

ANTARCTIC ARCTIC ZERO

Mag Vise **Magnetic Workholding**

CNC Vertical/ Horizontal Machining Center

CNC Vertical/Horizontal Turning Lathes

Double Column Vertical Machining Center

CNC 4/5 Axis Machining Center

Quick Mold Change Systems for
Plastic Injection Machine

Lifting Magnet Series

Universal Arm Magnetic Stand

CNC MACHINERY SALES AUSTRALIA

ISO 9001

GOOD DESIGN PRODUCT

Taiwan SMEs Innovation

TAIWAN EXCELLENCE