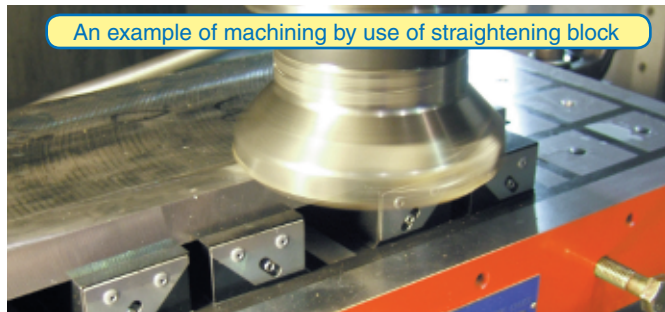


# PERMANENT ELECTROMAGNETIC CHUCKS

## Model EP-Q PERMANENT ELECTROMAGNETIC CHUCK FOR CUTTING

A Line-up of products selectable according to machining methods and workpieces.

- Considerable power saving and reduction in size of the Chuck Master by the renewed design.
- The detachable connector type is employed to respond to pallet changing.
- Electricity is used only when mounting and demounting workpieces. Workpieces can be held firmly in the event of power failure.
- Usable in wet machining operations.



### [Application]

Suitable for securing workpieces during cutting on milling machines and machining centers.

### [Features]

- The power cord is of detachable connector type for easy use. The connector cap is of waterproof type.
- Can be used in wet machining operations.
- The chuck is very thin, 70 mm in height, and light weight.
- Less accuracy change and highly rigid construction.
- Considerable power saving compared with conventional products. (□70: 50% reduction, □50: 70% reduction)

- Magnetization and demagnetization in a very short time.
- Tapped holes on the attractive face can be used to install various blocks to hold workpieces by various methods according to machining operations.
- Straightening blocks are also available that are mounted on the chuck work face to hold workpieces by an induction field. These optional products are very useful for workpieces having irregular attractive faces that for example have steps and distortion and for machining the bottom and side faces of workpieces. (See ■ Options on page 32.)

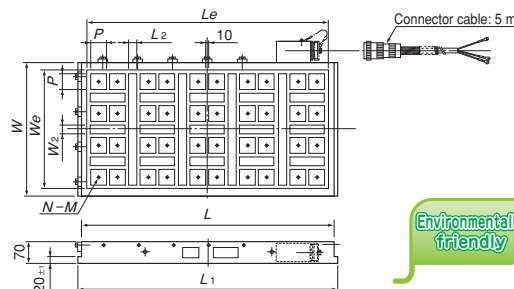
## EP-QN Series



EP-QN7-50100A



Chuck controller required additionally



Environmentally friendly

[mm (in.)]

Standard Size Model	Work Face		Pole Dimensions				Mounting Face		Tapped Hole on Attractive Face		Mass	Applicable Chuck Master			
	W	L	We	Le	No. of poles	P	W <sub>c</sub>	L <sub>2</sub>	L <sub>1</sub>	N			M		
EP-QN5	3060A	300 (11.8)	610 (24.0)	252 (9.92)	570 (22.4)	24	50 (1.96)	18 (0.70)	16 (0.63)	630 (24.8)	24 (0.94)	8 (0.31)	90kg/198 lb	EPS-P2100B	
	4080A	420 (16.5)	800 (31.5)	372 (14.6)	760 (29.9)	40		28 (1.10)	25 (0.98)	820 (32.2)	40 (1.57)		160kg/352 lb		
	50100A	500 (19.6)	960 (37.8)	432 (17.0)	917 (36.1)	60		18 (0.70)	26 (1.02)	980 (38.5)	60 (2.36)		230kg/507 lb		
	60100A	600 (23.6)		552 (21.7)		72		24 (0.94)			72 (2.83)		280kg/617 lb		
EP-QN7	4080A	390 (15.3)	800 (31.5)	332 (13.0)	760 (29.9)	24	70 (2.75)	28 (1.10)	24 (0.94)	820 (32.2)	24 (0.94)	10 (0.39)	150kg/330 lb	EPS-P2100B	
	50100A	500 (19.6)	1000 (39.4)	452 (17.8)	960 (37.8)	40				25 (0.98)	1020 (40.1)		40 (1.57)	240kg/529 lb	EPS-P2100B-2
	60100A	620 (24.4)	572 (22.5)	50	50 (2.36)	300kg/661 lb									

\*Turning the permanent electromagnetic chucks on and off must be limited to once per several minutes. If on/off operations are repeated frequently, the chucks may be damaged by overheat.

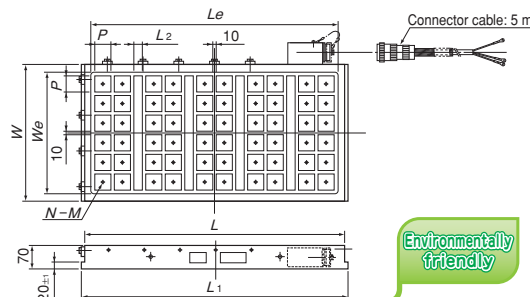
## EP-QS Series



EP-QS5-3060A



Chuck controller required additionally



Environmentally friendly

[mm (in.)]

Standard Size Model	Work Face		Pole Dimensions				Mounting Face		Tapped Hole on Attractive Face		Mass	Applicable Chuck Master	
	W	L	We	Le	No. of poles	P	L <sub>2</sub>	L <sub>1</sub>	N	M			
EP-QS5	3060A	300 (11.8)	610 (24.0)	252 (9.92)	570 (22.4)	32	50 (1.96)	16 (0.55)	630 (24.8)	32 (1.26)	8 (0.31)	90kg/198 lb	EPS-P2100B
	4080A	420 (16.5)	800 (31.5)	372 (14.6)	760 (29.9)	60		25 (0.98)	820 (32.2)	60 (2.36)		160kg/352 lb	
	50100A	500 (19.6)	960 (37.8)	432 (17.0)	917 (36.1)	84		26 (1.02)	980 (38.5)	84 (3.31)		230kg/507 lb	
	60100A	600 (23.6)		552 (21.7)		108				108 (4.25)		280kg/617 lb	
EP-QS7	3060A	300 (11.8)	600 (23.6)	252 (9.92)	562 (22.1)	18	70 (2.75)	25 (0.98)	620 (24.4)	18 (0.70)	10 (0.39)	86kg/189 lb	EPS-P2100B
	4080A	390 (15.3)	800 (31.5)	332 (13.0)	760 (29.9)	32		24 (0.94)	820 (32.2)	32 (1.26)		150kg/330 lb	
	50100A	470 (18.5)	1000 (39.4)	412 (16.2)	960 (37.8)	50		25 (0.98)	1020 (40.1)	50 (1.96)		220kg/485 lb	
	60100A	620 (24.4)	572 (22.5)	70	70 (2.75)	300kg/661 lb							

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ELECTROMAGNETIC CHUCK CONTROLLERS: MAGNETIC CHUCKS EQUIVALENT ELECTROMAGNETIC CHUCKS  
BLOCKS FOR MC  
VACUUM CHUCKS  
PROMETA\*  
SINE BAR CHUCKS  
BLOCKS HOLDERS  
HOLDING TOOLS  
MEASURING TOOL HOLDERS  
MAGNETIC HOLDERS  
MAGNETIC TOOLS

Model designation

**CHUCK : EP-QN5-3060A**

Chuck size: 5, 30, 60, A

Normal (N) / Strong (S) / Pole size (5, 7, 10, 15, 20, 30, 40, 50, 70)

<Ordering information>

- Sizes other than the standard sizes listed on page 31 are also available.
- The recommended maximum one-piece size is W1200 x L1500 mm. For other larger sizes, please contact us.
- Round chucks are also available.

When workpieces are hardened steel or special steel, they may be difficult to demount due to strong residual magnetism. In these cases, Model EP-D (P. 34) is recommended.

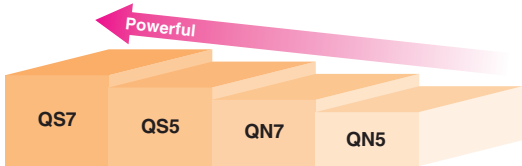
A guide for selection

General milling	Good holding conditions such as plate machining.	QN
Planomiller, horizontal M/C, use of straightening blocks, etc.	Poor holding conditions such as heavy duty cutting	QS

Selection of pole size □50 or □70

- The □70 size is superior in the absolute holding power and gap characteristic.
- The □50 size is recommended for relatively small and thin workpieces. (The plate thickness of magnetic saturation is 20 to 25 mm for □50 and 30 to 35 mm for □70.)

Relation between chuck models and holding power  
Comparison of holding power of chucks of same size



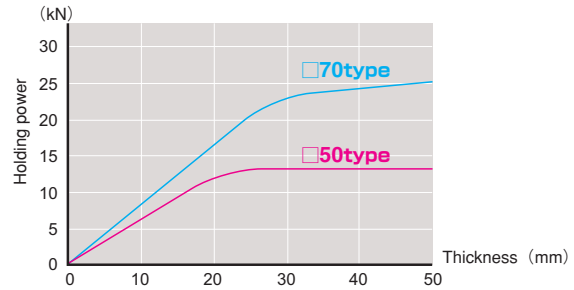
Holding power

□50 generates the max. holding power of 2.94 kN (300 kgf) or over per pole and □70 generates 5.88 kN (600 kgf) or over per pole.

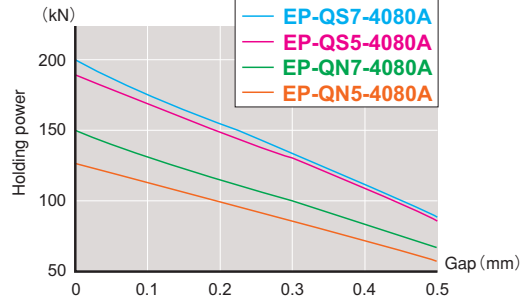
(An example of calculation)  
Max. holding power on whole attractive face of EP-QS5-4080A  
2.94kN×60 (number of poles)=176.4kN {18000kgf}

EP-Q type holding power characteristic

1. Relation between workpiece thickness and holding power  
Test piece held by 4 poles



2. Relation between gap and holding power  
Holding on whole face.



Model of special specification

Model with T-slots available

EP-QX50-S

For more information, please contact us.

EPS-P EP Chuck Master\* Compact design for limited installation space.

EPS-P2100B-2

Model	EPS-P2100B	EPS-P2100B-2
Dimensions (W×H×D)	190 (7.48) × 165 (6.5) × 255 (10.0)	
Power source	Single-phase, 200 VAC 50/60 Hz	
Output capacity	10 VDC - 90 VDC pulse 100 A	
Output switchover	No switchover	2
Magnetizing time (approx.) · demagnetizing time (approx.)	1 sec.	3 sec.
Breaker capacity (ref.)	30A	
Mass	7.5kg (16.5)	7.6kg (16.7)

The power cable must be larger than 3.5 mm<sup>2</sup> and less than 10 mm.

Options

- ① Straightening block; for □50 and □70 (KT-Q)



Model	Type
□50 (1.96) × H28 (1.10)	Stationary
□70 (2.75) × H37 (1.45)	Movable

The H dimension is the standard height.

- ② Separately installed feeder box  
Recommended for applications that require frequent connector connection/disconnection.



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