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, 60: 70% reduction)

EP-QN Series

<table>
<thead>
<tr>
<th>Standard Size Model</th>
<th>Work Face</th>
<th>P</th>
<th>Mounting Face</th>
<th>Tapped Hole on Attractive Face</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-QN5</td>
<td>300 (11.8)</td>
<td>18</td>
<td>630 (24.8)</td>
<td>24</td>
</tr>
<tr>
<td>400 (15.7)</td>
<td>372 (14.6)</td>
<td>20</td>
<td>820 (32.2)</td>
<td>40</td>
</tr>
<tr>
<td>500 (19.6)</td>
<td>552 (21.7)</td>
<td>24</td>
<td>980 (38.5)</td>
<td>60</td>
</tr>
<tr>
<td>600 (23.6)</td>
<td>332 (13.0)</td>
<td>72</td>
<td>760 (29.9)</td>
<td>72</td>
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<tr>
<td>EP-QN7</td>
<td>500 (19.6)</td>
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<td>820 (32.2)</td>
<td>40</td>
</tr>
<tr>
<td>600 (23.6)</td>
<td>452 (17.8)</td>
<td>40</td>
<td>1020 (40.1)</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>572 (22.5)</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EP-QS Series

<table>
<thead>
<tr>
<th>Standard Size Model</th>
<th>Work Face</th>
<th>P</th>
<th>Mounting Face</th>
<th>Tapped Hole on Attractive Face</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-QS5</td>
<td>300 (11.8)</td>
<td>18</td>
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</tr>
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<td>552 (21.7)</td>
<td>26</td>
<td>980 (38.5)</td>
<td>32</td>
</tr>
<tr>
<td>600 (23.6)</td>
<td>332 (13.0)</td>
<td>108</td>
<td>760 (29.9)</td>
<td>32</td>
</tr>
<tr>
<td>EP-QS7</td>
<td>500 (19.6)</td>
<td>24</td>
<td>820 (32.2)</td>
<td>32</td>
</tr>
<tr>
<td>600 (23.6)</td>
<td>452 (17.8)</td>
<td>50</td>
<td>1020 (40.1)</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>572 (22.5)</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An example of machining by use of straightening block
**Model designation**

CHUCK : EP-QN5-3060A

- N: Normal (Ribs arranged between poles)
- S: Strong (Poles arranged densely)

Pole size

- 50 (5...50 7...70)

<Ordering information>

- Sizes other than standard sizes are also available.
- Larger sizes are available in the form of linked chucks. 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
- **Planomill, 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

   ![Graph](image)

   Thickness (mm)

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

   ![Graph](image)

   Gap (mm)

**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-P**

- Model: EPS-P2100B
- Dimensions (W×H×D): 190×150×255 (10.0)
- Power source: Single-phase, 200 VAC 50/60 Hz
- Output capacity: 10 VDC - 90 VDC pulse 100 A
- Output switcher: No switcher 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 longer than 3.5 mm² and less than 10 m.

**Options**

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

- KT-Q50M (Movable)
- KT-Q50 (Stationary)

<table>
<thead>
<tr>
<th>Model</th>
<th>EPS-P2100B</th>
<th>EPS-P2100B-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KT-Q50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KT-Q50M</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

KT-Q50 (Stationary)
KT-Q50M (Movable)

The H dimension is the standard height.
PERMANENT ELECTROMAGNETIC CHUCKS

Model **EP-QS3**

**RECTANGULAR PERMANENT ELECTROMAGNETIC CHUCK**

Very small magnetic pole type suitable for small and thin workpieces!

- **Features**
  - Used for securing workpieces during cutting by milling machines, machining centers, etc.
  - Compared with conventional permanent electromagnetic chuck, this type has higher holding power on small and thin workpieces.
  - Compared with conventional chuck, the residual holding power has been reduced to a third maximum.
  - An original construction is employed to keep the height below 50 mm, thus realizing thin and light weight chuck.
  - Electricity is supplied momentarily only when mounting and demounting workpieces, thus minimal heat is generated and highly precise machining can be expected. Also electricity is saved.
  - Can be used in wet operations.
  - The employment of a quick connector facilitates connection/removal of the cable.

![Model EP-QS3](image)

**Holding power-thickness characteristic**

(Test piece: \(50 \times 125, 518\))

![Graph showing holding power vs. thickness](image)

*The chuck controller and clamp parts are not included. ** The KANETEC chucks work best when a KANETEC chuck controller is used. Turning the permanent electromagnetic chucks on and off must be limited to once per several minutes. If on/off operations are repeated frequently, the chuck may be damaged by overheat.

**Model EPZF-WX**

**PERMANENT ELECTROMAGNETIC CHUCK AC SHIM**

- **Features**
  - Most suitable for precise setting of workpieces including mold bases in the milling sector.
  - The sticks on the chuck attractive face hold workpieces in the natural state.
  - The number of sticks can be increased/decreased according to workpieces.
  - Electricity is supplied momentarily only when mounting and demounting workpieces, thus minimal heat is generated and highly precise machining can be expected. Also electricity is saved. In addition, this AC SHIM can be used not only for plate machining, but also for various machining operations that require workpieces to be held for a long time.
  - The elimination of the lid of the stick section facilitates maintenance as there is no need to align the level of the body and the lid when replacing the stick unit.
  - The utilization of T slots enables it to clamp nonferrous or irregular shaped workpieces.
  - The low magnetic force control by the dedicated control unit (EPS-WF275A) offers a low attraction function.
  - Can be used in wet operations.

![Model EPZF-WX](image)

**Chuck controller required additionally**

![Graph showing holding power vs. thickness](image)

*The chuck controller and clamp parts are not included. ** The KANETEC chucks work best when a KANETEC chuck controller is used. Turning the permanent electromagnetic chucks on and off must be limited to once per several minutes. If on/off operations are repeated frequently, the chuck may be damaged by overheat.
Model **EP-QD** DEMAGNETIZING FUNCTION-EQUIPPED PERMANENT ELECTROMAGNETIC CHUCK FOR CUTTING

**Weakness of checker board pattern type permanent electromagnetic chucks overcome!**

![Chuck controller required additionally]

(Mounting size equivalent to 400 × 800)

**[Application]**

- Used for securing workpieces during cutting by milling machines, machining centers, etc.

**[Features]**

- An optimum combination of KANETEC’s original magnetic pole construction and a construction dedicated to demagnetization has reduced residual holding power significantly.
- Hardened steel and special steel workpieces having large residual magnetism can be released easily. (Compared with conventional EP-Q)
- The optional straightening block (KT-707/QT70M) can be used. By mounting various blocks using tapped holes on the attractive face, various securing methods can be utilized according to machining operations.
- Can be used in wet operations.
- Special types having four poles minimum are available.

<table>
<thead>
<tr>
<th>Model</th>
<th>Mounting Size</th>
<th>Work Face</th>
<th>Pole Dimensions</th>
<th>Mounting Face</th>
<th>Height</th>
<th>Mass</th>
<th>Electro Chuck Master</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>W x L x T</td>
<td>W1 x L1</td>
<td>L</td>
<td>No. of Poles</td>
<td>P</td>
<td>N</td>
<td>M</td>
</tr>
<tr>
<td>EP-QD7-2669</td>
<td>300 (11.8) x 800 (31.5)</td>
<td>300 (11.8)</td>
<td>260 (10.2)</td>
<td>730 (28.7)</td>
<td>690 (27.1)</td>
<td>250 (9.8)</td>
<td>680 (26.7)</td>
</tr>
<tr>
<td>EP-QD7-3469</td>
<td>400 (15.7) x 600 (23.6)</td>
<td>380 (14.9)</td>
<td>340 (13.3)</td>
<td>570 (22.4)</td>
<td>530 (20.8)</td>
<td>330 (12.9)</td>
<td>520 (20.4)</td>
</tr>
<tr>
<td>EP-QD7-3453</td>
<td>400 (15.7) x 800 (31.5)</td>
<td>540 (21.2)</td>
<td>500 (19.6)</td>
<td>730 (28.7)</td>
<td>690 (27.1)</td>
<td>490 (19.2)</td>
<td>680 (26.7)</td>
</tr>
<tr>
<td>EP-QD7-2669</td>
<td>550 (21.6) x 800 (31.5)</td>
<td>540 (21.2)</td>
<td>500 (19.6)</td>
<td>730 (28.7)</td>
<td>690 (27.1)</td>
<td>490 (19.2)</td>
<td>680 (26.7)</td>
</tr>
</tbody>
</table>

* The chuck controller and clamp parts are not included.  
* The KANETEC chucks work best when a KANETEC chuck controller is used.  
* 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.

Model **EP-QL** SUPER POWERFUL PERMANENT ELECTROMAGNETIC CHUCK FOR LONG WORKPIECE

A permanent electromagnetic chuck specialized in securing long workpieces! Powerfully holds workpieces without jigs!

![Chuck controller required additionally]

**[Application]**

- Used to secure workpieces quickly and firmly during milling and machining of long workpieces such as railroad rails.

**[Features]**

- The employment of magnetic pole arrangement providing a wide attractive area enables it to attract and hold workpieces on the whole attractive face.
- A magnet for side-face attraction may be mounted to support securing of workpieces from sides.
- In place of a side-face attraction magnet, clamp parts may be used.

<table>
<thead>
<tr>
<th>Model</th>
<th>Work Face</th>
<th>Mounting Face</th>
<th>Height</th>
<th>Mass</th>
<th>Electro Chuck Master</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B1 x B2 x Be</td>
<td>L1 x L2</td>
<td>B</td>
<td>L</td>
<td>[mm/in]</td>
</tr>
<tr>
<td>EP-QL2411A</td>
<td>240 (9.44)</td>
<td>135 (5.31)</td>
<td>85 (3.34)</td>
<td>1115 (43.8)</td>
<td>1074 (42.2)</td>
</tr>
</tbody>
</table>

* The chuck controller and clamp parts are not included.  
* The KANETEC chucks work best when a KANETEC chuck controller is used.  
* 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.
PERMANENT ELECTROMAGNETIC CHUCKS

Model EP-QZ SUPER POWERFUL PERMANENT ELECTROMAGNETIC CHUCK FOR LONG WORKPIECE

Chuck controller required additionally

[Features]
- The gap characteristic is superior to that of the current Model EP-QN/QS. These chucks are suitable for workpieces that have poor flatness and require large holding power.
- These chucks replace conventional hydraulic and mechanical clamping to reduce the setup time and improve productivity.
- The magnetic poles are arranged according to shapes and length of workpieces such as rails. Securing blocks specially designed according to workpiece shapes are also available.
- A type with a separator made of brass is also available.

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Holding Power per Pole</th>
<th>Pole Size</th>
<th>No. of Poles</th>
<th>Features</th>
<th>Electro Chuck Master</th>
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</thead>
<tbody>
<tr>
<td>EP-QZ-15100A</td>
<td>750kg</td>
<td>75(2.95)</td>
<td>5</td>
<td>Single type</td>
<td>EPS-P2108B</td>
</tr>
<tr>
<td>EP-QZW-30100A</td>
<td>300kg</td>
<td>75(2.95)</td>
<td>10(75)+14(50)</td>
<td>Double type</td>
<td>EPS-P2108B-2</td>
</tr>
</tbody>
</table>

An example of special fabrication

Model EP-D DEMAGNETIZING FUNCTION-EQUIPPED PERMANENT ELECTROMAGNETIC CHUCK FOR CUTTING

Chuck controller required additionally

[Application]
Used for securing workpieces during cutting by milling machines, machining centers, etc.

[Features]
- A coil dedicated to demagnetization has significantly improved the workpiece release performance when the chuck is turned off.
- The magnetic pole arrangement to concentrate magnetism on the workpiece provides strong holding power.
- Hardened steel and special steel workpieces having large residual magnetism can be released quicker than the conventional chucks.
- Electricity is used only when mounting and demounting workpieces, thus minimal heat is generated and electricity is saved.
- Can be used in wet operations.

Model EP-D3060

<table>
<thead>
<tr>
<th>Model</th>
<th>Work Face</th>
<th>Dimensions</th>
<th>Mounting Face</th>
<th>Mass</th>
<th>Electro Chuck Master</th>
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</thead>
<tbody>
<tr>
<td>EP-D 3060</td>
<td>304 (11.9)</td>
<td>518 (20.3)</td>
<td>558 (21.9)</td>
<td>638 (25.1)</td>
<td>110kg/242 lb</td>
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<tr>
<td>EP-D 4080</td>
<td>404 (15.9)</td>
<td>518 (20.3)</td>
<td>558 (21.9)</td>
<td>806 (31.7)</td>
<td>185kg/407 lb</td>
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<tr>
<td>EP-D50100</td>
<td>504 (19.6)</td>
<td>1038 (40.8)</td>
<td>978 (38.5)</td>
<td>1058 (41.6)</td>
<td>305kg/672 lb</td>
</tr>
<tr>
<td>EP-D60100</td>
<td>604 (23.7)</td>
<td>1038 (40.8)</td>
<td>978 (38.5)</td>
<td>1058 (41.6)</td>
<td>305kg/672 lb</td>
</tr>
</tbody>
</table>

Comparison of holding power

Comparison of residual holding power

*The chuck controller and clamp parts are not included. *The KANETEC chucks work best when a KANETEC controller is used.

*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.
Model **EP-DV**

**POWERFUL PERMANENT ELECTROMAGNETIC CHUCK WITH VACUUM FUNCTION**

Hybrid chuck to handle diversified materials!

**Chuck controller and vacuum system required additionally**

![EP-DV3060](image)

An example of milling by utilizing the permanent electromagnetic feature

![EP-DV3060](image)

An example of grinding of brass by utilizing the permanent electromagnetic feature

![EP-DV3060](image)

Model **EP-DW**

**POWERFUL PERMANENT ELECTROMAGNETIC CHUCK FOR HEAVY DUTY CUTTING**

Strong magnetic force & good release performance & high water-tightness!

![EP-DWM3060](image)

Model **EPS-D**

**CHUCK MASTER® DEDICATED TO DEMAGNETIZING FUNCTION-EQUIPPED PERMANENT ELECTROMAGNETIC CHUCK**

![EPS-D2100A](image)

**[Application]**

A chuck controller dedicated to permanent electromagnetic chucks equipped with a demagnetizing function.

### Model **EPS-PD**

**[Application]**

Permanent electromagnetic chucks for cutting equipped with a grid-seal type vacuum chuck function added to hold workpieces during cutting and grinding of magnetic and nonmagnetic workpieces.

### Features

- The strong holding power makes these chucks suitable for cutting of magnetic materials.
- Electricity is used only when mounting and demounting workpieces, thus minimal heat is generated and electricity is saved.
- Since these chucks have a construction dedicated to demagnetization, they have good workpiece release performance when they are turned off.
- The vacuum chuck can be set to a desired area by use of seal rubber according to workpieces.
- When machining nonmagnetic workpieces, the permanent electromagnetic feature can be utilized to hold magnetic substances around them to secure them firmly.

### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Size</th>
<th>Work Face</th>
<th>Pole Pitch</th>
<th>Mounting Face</th>
<th>Height</th>
<th>Grid Pitch</th>
<th>Effective Area</th>
<th>Mass</th>
<th>Electro Chuck Master</th>
<th>Applicable Vacuum System</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-DV 3060</td>
<td>300 (11.8) x 600 (23.6)</td>
<td>310 x 122 (12.2)</td>
<td>638 x 25.1</td>
<td>558 x 15.2</td>
<td>256 x 6.0</td>
<td>92 x 3.62</td>
<td>252 (9.9) x 638 (25.1)</td>
<td>170 kg</td>
<td>EP-DV2100A</td>
<td></td>
</tr>
<tr>
<td>EP-DV 4080</td>
<td>404 (15.7) x 800 (31.5)</td>
<td>410 x 161 (16.1)</td>
<td>806 x 31.7</td>
<td>726 x 28.5</td>
<td>35 x 1.37</td>
<td>79 x 3.11</td>
<td>404 (15.9) x 806 (31.7)</td>
<td>125 kg (42.6) x 42 x 1.65</td>
<td>EPS-D2100A</td>
<td></td>
</tr>
<tr>
<td>EP-DV50100</td>
<td>600 (19.6) x 1000 (35.4)</td>
<td>510 x 158 (15.6)</td>
<td>1058 x 35.0</td>
<td>978 x 31.0</td>
<td>87 x 3.40</td>
<td>504 (19.8) x 1058 (35.0)</td>
<td>462 (16.1) x 1058 (35.0)</td>
<td>450 kg</td>
<td>EPS-D2100A-2</td>
<td></td>
</tr>
</tbody>
</table>

- The chuck controller, vacuum system and clamp parts are not included.
- The KANETEC chucks work best when a KANETEC chuck controller is used.
- 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 overheating.

### Model **EPS-D2100A**

- **Dimensions (W×H×D):** 190.7 (7.5) x 165.6 (6.5) x 255.0 (10.0) mm
- **Power Source:** Single-phase, 200 VAC, 50/60 Hz
- **Output capacity:** 10 VDC - 90 VDC, Pulse 100 A
- **Output switcher:** No switcher
- **Magnetizing time (approx.):** 1 sec. / 4 sec.
- **Breaker capacity (ref.):** 30 A
- **Mass:** 7.6 kg (16.6 lb)

- The power cable must be larger than 3.5m and less than 10m.

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**Features**

- Suitable for such precision machining of relatively large load as heavy duty grinding and cutting and for securing workpieces having steps such as linear motion guides.
- Capable of holding relatively small workpieces, workpieces having a small attractive area and concave workpieces.
- The addition of a construction dedicated to demagnetization has improved the workpiece release performance when the chuck is turned off.
- Hardened steel and special steel workpieces having large residual magnetism can be released quickly.
- Electricity is supplied momentarily for mounting and demounting workpieces, thus minimal heat is generated and electricity is saved.
- The chucks can be used in wet operations and have improved water-tightness.
- A resin-bonded structural face plate having little environmental burden is employed.
**Model EPT/EPT-LW**

**PERMANENT ELECTROMAGNETIC CHUCKS**

Chuck controller required additionally

**EPT-3060F**

NOTES: The L dimension has not been machined together with L and therefore, there may be some variation.

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**About EPT-LW**

Model EPT-LW is equipped with a low magnetic force (weak attraction) control function that is difficult with conventional permanent electromagnetic chucks and therefore facilitates strain relieving and work piece positioning at the same level as electromagnetic chucks. (When the low magnetic force control is active, the power is supplied continuously.)

Please note that a dedicated Chuck Master (Model EPH-LW) (see page 39) needs to be used together.

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**Model EPT-H**

**POWERFUL PERMANENT ELECTROMAGNETIC CHUCK**

Chuck controller required additionally

**EPT-H3060F**

(Eample of special fabrication)

---

**Application** Suitable for high precision grinding and slicing.

**Features**

- Compared with the standard type (EPT), these chucks generate a larger magnetic force and therefore are capable of securing work pieces firmly during grinding of large machining load.
- A resin-bonded structural face plate having little environmental burden is employed.

---

*The chuck controller and clamp parts are not included. The KANETEC chucks work best when a KANETEC chuck controller is used.*
*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 overheating.*
Model **EPTW**

**PERMANENT ELECTROMAGNETIC MICROPITCH CHUCK**

*Chuck controller required additionally*

---

**Model EPTW-N**

**PERMANENT ELECTROMAGNETIC MICROPITCH CHUCK**

*Chuck controller required additionally*

---

**Model EPZ-U**

**TILT TYPE PERMANENT ELECTROMAGNETIC CHUCK**

*Chuck controller required additionally*

---

### Table: 

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Size</th>
<th>Work Face</th>
<th>Pole Pitch</th>
<th>Mounting Face</th>
<th>Height (mm)</th>
<th>Voltage (VDC)</th>
<th>Power Cord</th>
<th>Mass (kg)</th>
<th>Chuck Master</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPTW-1530</td>
<td>150 x 300</td>
<td>150 x 300</td>
<td>30 x 11.8</td>
<td>20</td>
<td>125.42</td>
<td>4.82</td>
<td>290/63</td>
<td>2 m</td>
<td>EPS-215B</td>
</tr>
<tr>
<td>EPTW-1545</td>
<td>150 x 450</td>
<td>450 x 17.7</td>
<td>450 x 17.7</td>
<td>17.7</td>
<td>71.3</td>
<td>17.7</td>
<td>13.1</td>
<td>100 VDC</td>
<td>EPS-215B</td>
</tr>
<tr>
<td>EPTW-2040</td>
<td>150 x 500</td>
<td>450 x 17.7</td>
<td>450 x 17.7</td>
<td>17.7</td>
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<td>450 x 17.7</td>
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<td>24.5</td>
<td>100 VDC</td>
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### Table: 

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Size</th>
<th>Work Face</th>
<th>Pole Pitch</th>
<th>Mounting Face</th>
<th>Height (mm)</th>
<th>Voltage (VDC)</th>
<th>Power Cord</th>
<th>Mass (kg)</th>
<th>Chuck Master</th>
</tr>
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<tbody>
<tr>
<td>EPTW-N1530</td>
<td>150 x 300</td>
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<td>30 x 11.8</td>
<td>20</td>
<td>125.42</td>
<td>4.82</td>
<td>290/63</td>
<td>2 m</td>
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<td>EPTW-N1545</td>
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<td>450 x 17.7</td>
<td>450 x 17.7</td>
<td>17.7</td>
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<td>100 VDC</td>
<td>EPS-215B</td>
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<td>450 x 17.7</td>
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<td>450 x 17.7</td>
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<td>71.3</td>
<td>17.7</td>
<td>24.5</td>
<td>100 VDC</td>
<td>EPS-215B</td>
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<tr>
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<td>450 x 17.7</td>
<td>17.7</td>
<td>71.3</td>
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<td>EPS-215B</td>
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<tr>
<td>EPTW-N2550</td>
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<td>450 x 17.7</td>
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<td>71.3</td>
<td>17.7</td>
<td>24.5</td>
<td>100 VDC</td>
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<tr>
<td>EPTW-N3050</td>
<td>150 x 500</td>
<td>450 x 17.7</td>
<td>450 x 17.7</td>
<td>17.7</td>
<td>71.3</td>
<td>17.7</td>
<td>24.5</td>
<td>100 VDC</td>
<td>EPS-215B</td>
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### Table: 

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Size</th>
<th>Work Face</th>
<th>Pole Pitch</th>
<th>Mounting Face</th>
<th>Height (mm)</th>
<th>Voltage (VDC)</th>
<th>Power Cord</th>
<th>Mass (kg)</th>
<th>Chuck Master</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPZ-1025UF</td>
<td>100 x 3.8</td>
<td>250 x 9.84</td>
<td>100 x 3.8</td>
<td>250 x 9.84</td>
<td>211.3</td>
<td>9.84</td>
<td>15.5</td>
<td>100 VDC</td>
<td>EPS-215B</td>
</tr>
<tr>
<td>EPZ-1030UF</td>
<td>100 x 3.8</td>
<td>300 x 11.8</td>
<td>150 x 3.8</td>
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<td>211.3</td>
<td>9.84</td>
<td>15.5</td>
<td>100 VDC</td>
<td>EPS-215B</td>
</tr>
<tr>
<td>EPZ-1230UF</td>
<td>120 x 4.72</td>
<td>300 x 11.8</td>
<td>150 x 3.8</td>
<td>250 x 9.84</td>
<td>211.3</td>
<td>9.84</td>
<td>15.5</td>
<td>100 VDC</td>
<td>EPS-215B</td>
</tr>
<tr>
<td>EPZ-1530UF</td>
<td>150 x 5.9</td>
<td>300 x 11.8</td>
<td>150 x 3.8</td>
<td>250 x 9.84</td>
<td>211.3</td>
<td>9.84</td>
<td>15.5</td>
<td>100 VDC</td>
<td>EPS-215B</td>
</tr>
<tr>
<td>EPZ-1535UF</td>
<td>150 x 5.9</td>
<td>450 x 17.7</td>
<td>150 x 5.9</td>
<td>450 x 17.7</td>
<td>269 x 10.0</td>
<td>17.7</td>
<td>26.7</td>
<td>100 VDC</td>
<td>EPS-215B</td>
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### Table: 

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Size</th>
<th>Work Face</th>
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<td>250 x 9.84</td>
<td>100 x 3.8</td>
<td>250 x 9.84</td>
<td>211.3</td>
<td>9.84</td>
<td>15.5</td>
<td>100 VDC</td>
<td>EPS-215B</td>
</tr>
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<td>EPZ-1030UF</td>
<td>100 x 3.8</td>
<td>300 x 11.8</td>
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<td>211.3</td>
<td>9.84</td>
<td>15.5</td>
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</tr>
<tr>
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<td>450 x 17.7</td>
<td>269 x 10.0</td>
<td>17.7</td>
<td>26.7</td>
<td>100 VDC</td>
<td>EPS-215B</td>
</tr>
</tbody>
</table>

---

### Notes: 

- The chuck controller and clamp parts are not included. 
- The KANETEC chucking work best when a KANETEC chuck controller is used. 
- 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 overheating.
PERMANENT ELECTROMAGNETIC CHUCKS

Model **EPS** EP CHUCK MASTER*

Control unit for permanent electromagnetic chucks

Rectifies an input from an AC power source to DC and momentarily outputs exciting current to permanent electromagnetic chucks. The automatic demagnetization circuit is activated to reduce residual magnetism of permanent electromagnetic chucks.

**Features**
- The EP Chuck Master* is dedicated to permanent electromagnetic chucks and can be used for EPT, EPT-H, EPTW, EPTW-N, EPZ-U and EPC-ARF.
- The microcomputer control ensures very effective automatic demagnetization.
- The holding power is adjustable.
- Model EPS-GW (B) is of external operation type.

**Major features**
- EPS-GW is installed inside the machine panel and EPS-GWB is installed outside the panel and both of them are equipped with a remote operation box.
- Compared with the conventional type, the volume has been reduced to about a third.
- The workability and operability such as wiring, fuse replacement, switchover of voltage between 200 VAC and 220 VAC and output voltage/demagnetizing time adjustment have been improved.

**General type**

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Source</th>
<th>Rated Output</th>
<th>Dimensions</th>
<th>Mounting Dimensions</th>
<th>Mass</th>
<th>Operation box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>Current</td>
<td>Width x Depth</td>
<td>Height</td>
<td>Width x Height</td>
<td>Hole</td>
<td>Width x Depth x Height</td>
</tr>
<tr>
<td>EPS-215B</td>
<td>15A</td>
<td>180 (9.477)</td>
<td>70.111</td>
<td>250 (9.842)</td>
<td>120</td>
<td>75 (3.78)</td>
</tr>
<tr>
<td>EPS-303B</td>
<td>4.0A</td>
<td>190 (9.777)</td>
<td>50 (2.985)</td>
<td>275 (10.822)</td>
<td>4.0</td>
<td>7 (0.276)</td>
</tr>
<tr>
<td>EPS-W215B</td>
<td>2.9A</td>
<td>190 (9.777)</td>
<td>50 (2.985)</td>
<td>275 (10.822)</td>
<td>4.5</td>
<td>7 (0.276)</td>
</tr>
<tr>
<td>EPS-GW230A</td>
<td>3.2A</td>
<td>210 (10.629)</td>
<td>67 (2.640)</td>
<td>284 (11.171)</td>
<td>2.2</td>
<td>7 (0.276)</td>
</tr>
<tr>
<td>EPS-GW230A</td>
<td>5.0A</td>
<td>213 (10.55)</td>
<td>65 (2.560)</td>
<td>284 (11.171)</td>
<td>2.4</td>
<td>7 (0.276)</td>
</tr>
</tbody>
</table>

The applicable models are EPT, EPT-H, EPTW, EPTW-N, EPZ-U and EPC-ARF only. EPS-GW (B) 230A is used as a control unit for the connection of same models or specialty ordered large chucks.

Model **EPH-LW** NON-CONTACT TYPE EP CHUCK MASTER*

Low magnetic force control function

[Application]
The use of the low magnetic force control function enables straightening operations as with electromagnetic chucks. The use of the low magnetic force control function facilitates positioning of workpieces. (The low magnetic force control requires electricity to be supplied continuously. When used with the low magnetic force control function activated for long hours, accuracy change due to heat generated in the permanent electromagnetic chuck itself may slightly affect the machining accuracy.)

[Features]
These Chuck Masters enable it to control the low magnetic force (weak holding power), which is difficult with permanent electromagnetic chucks. When a conventional permanent electromagnetic chuck is used, it is necessary to turn it off once and after lowering the magnetizing voltage, turn it on again in order to set a low magnetic force for straightening/ grinding operations. These Chuck Masters have a control function by which the power can be applied continuously only in the low output region, which makes it possible to finely and continuously adjust the low magnetic force region as with electromagnetic chucks. They offer a possibility of straightening with permanent electromagnetic chucks. Workpieces can also be positioned smoothly with the low magnetic force control.

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Source</th>
<th>Rated Output</th>
<th>Dimensions</th>
<th>Mass</th>
<th>Operation box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>Current</td>
<td>Width x Depth</td>
<td>Height</td>
<td>Depth</td>
<td>Cond</td>
</tr>
<tr>
<td>EPH-LW205B</td>
<td>(50/60Hz) 5.5A</td>
<td>220 (8.661)</td>
<td>50 (2.992)</td>
<td>175 (6.89)</td>
<td>4.7kg (10.4 lb)</td>
</tr>
<tr>
<td>EPH-LW205B</td>
<td>(50/60Hz) 10A</td>
<td>220 (8.661)</td>
<td>50 (2.992)</td>
<td>250 (9.842)</td>
<td>6.6kg (14.5 lb)</td>
</tr>
</tbody>
</table>

Non-contact type Chuck Masters (with low magnetic force control) for permanent electromagnetic chucks (180 VDC version). The low magnetic force control is possible when used in conjunction with the permanent electromagnetic chuck Model EPT-LW. Three types: rated output of 180 VDC-5A, 180 VDC-5A (with operation box) and 180 VDC-10A (with operation box) are available.
**Model EPC-AST** ROUND PERMANENT ELECTROMAGNETIC CHUCK

Revolutionary permanent electromagnetic chuck!
Magnetic force adjustable!

[Application]
Suitable for machining of ring-shaped workpieces such as bearings while rotating them on lathes, turning machines, cylindrical grinders and rotary grinders.

[Features]
- When used in combination with a dedicated controller equipped with a magnetic force adjust function, the magnetic force can be adjusted between strong and weak.
- Since internal heat generation and thermal distortion are minimal, highly precise machining is possible.
- Can be used in wet operations.
- These chucks are provided with T-grooves to make them suitable for various workpieces.

A size φ1200 and larger is also available.

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Size</th>
<th>Work Face</th>
<th>No. of Poles</th>
<th>Mounting Face</th>
<th>Height</th>
<th>Voltage</th>
<th>Current</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC-50AST</td>
<td>500(19.6)</td>
<td>500(19.6)</td>
<td>460(18.1)</td>
<td>100(3.93)</td>
<td>8</td>
<td>200(7.9)</td>
<td>8</td>
<td>300(11.8)</td>
</tr>
<tr>
<td>EPC-70AST</td>
<td>700(27.5)</td>
<td>700(27.5)</td>
<td>566(22.3)</td>
<td>120(4.72)</td>
<td>12</td>
<td>500(19.6)</td>
<td>12</td>
<td>700(27.5)</td>
</tr>
<tr>
<td>EPC-90AST</td>
<td>500(19.6)</td>
<td>450(17.8)</td>
<td>100(3.93)</td>
<td>12</td>
<td>300(11.8)</td>
<td>150(5.90)</td>
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<td></td>
</tr>
<tr>
<td>EPC-120AST</td>
<td>1200(47.2)</td>
<td>1200(47.2)</td>
<td>1350(53.1)</td>
<td>200(7.9)</td>
<td>18</td>
<td>500(19.6)</td>
<td>18</td>
<td>1000(39.4)</td>
</tr>
</tbody>
</table>

The chuck controller is required additionally.

---

**Model EPC-ARF** ROUND PERMANENT ELECTROMAGNETIC CHUCK

Highly precise rotary grinding operations realized!

[Application]
Most suitable for grinding operations by rotary grinders.

[Features]
- Since electricity needs not be supplied continuously (momentarily supplied only when mounting and demounting workpieces), heat generation and thermal deformation are minimal, thus highly precise machining operations are possible. Also, the running cost is very low and electricity can be saved.
- The holding power is maintained by the permanent magnet in the case of such troubles as power failure and cable breakage to enhance safe operations.
- In addition to four standard sizes, sizes of φ600 mm minimum and up to φ1500 mm are available.
- Can be used in wet operations.
- A resin-bonded structural face plate having little environmental burden is employed.

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Source</th>
<th>Output</th>
<th>Dimensions</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC-RW230A</td>
<td>Single-phase 200 VDC (50/60Hz)</td>
<td>30A</td>
<td>180(15.7)</td>
<td>10</td>
</tr>
<tr>
<td>EPC-RW250A</td>
<td>Single-phase 300 VDC (50/60Hz)</td>
<td>50A</td>
<td>250(20.5)</td>
<td>250(9.8)</td>
</tr>
<tr>
<td>EPC-RW275A</td>
<td>Single-phase 400 VDC (50/60Hz)</td>
<td>75A</td>
<td>725(28.5)</td>
<td>250(9.8)</td>
</tr>
</tbody>
</table>

The chuck controller is required additionally.

---

Ring-pole type EPZ-120ARF

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Size</th>
<th>Work Face</th>
<th>Pole Pitch</th>
<th>Mounting Face</th>
<th>Height</th>
<th>Voltage</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC-63ARF</td>
<td>630(24.8)</td>
<td>630(24.8)</td>
<td>580(22.8)</td>
<td>100(3.93)</td>
<td>14(2×12)</td>
<td>0.65</td>
<td>0.07×0.47</td>
</tr>
<tr>
<td>EPC-68ARF</td>
<td>800(31.4)</td>
<td>800(31.4)</td>
<td>740(29.1)</td>
<td>100(3.93)</td>
<td>10(2×10)</td>
<td>0.65</td>
<td>0.07×0.47</td>
</tr>
<tr>
<td>EPC-100ARF</td>
<td>1030(40.6)</td>
<td>1030(40.6)</td>
<td>970(38.0)</td>
<td>100(3.93)</td>
<td>14(2×12)</td>
<td>0.65</td>
<td>0.07×0.47</td>
</tr>
<tr>
<td>EPC-120ARF</td>
<td>1200(47.2)</td>
<td>1200(47.2)</td>
<td>1440(56.5)</td>
<td>200(7.9)</td>
<td>18</td>
<td>500(19.6)</td>
<td>1000(39.3)</td>
</tr>
</tbody>
</table>

The chuck controller is not included.

---

Model | Power Source | Output | Dimensions | Mass |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC-RW230A</td>
<td>Single-phase 200 VDC (50/60Hz)</td>
<td>30A</td>
<td>180(15.7)</td>
<td>10</td>
</tr>
<tr>
<td>EPC-RW250A</td>
<td>Single-phase 300 VDC (50/60Hz)</td>
<td>50A</td>
<td>250(20.5)</td>
<td>250(9.8)</td>
</tr>
<tr>
<td>EPC-RW275A</td>
<td>Single-phase 400 VDC (50/60Hz)</td>
<td>75A</td>
<td>725(28.5)</td>
<td>250(9.8)</td>
</tr>
</tbody>
</table>
PERMANENT ELECTROMAGNETIC CHUCKS

Model EPC-Z

POWERFUL ROUND PERMANENT ELECTROMAGNETIC CHUCK

Construction machinery / Ship building / Nuclear power plant / Wind power generation
Highly precise machining of ring-shaped workpieces such as bearings!

[Application]
Suitable for machining of ring-shaped workpieces such as bearings while rotating them on lathes and cylindrical grinders.

[Features]
• The employment of a magnetic pole construction suitable for cutting has increased the holding power. Suitable for cutting operations where large load is applied.
• The rectangular magnetic poles provide consistent holding power regardless of workpiece sizes.
• By using included blocks with T-grooves and adapter blocks, various workpieces, small and large, can be held.
• By mounting blocks, workpieces can be machined while being lifted. This feature enables it to machine workpieces from any direction. Also removal of chips and maintenance are easy.

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions (min. x max. x height)</th>
<th>No. of Poles</th>
<th>Applicable Workpiece Diameter</th>
<th>Mass</th>
<th>Electro Chuck Master</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC-Z60</td>
<td>ø 640 (25.1) x 90 (3.54)</td>
<td>14</td>
<td>250 (9.84)</td>
<td>160</td>
<td>EPS-PZ2100A-2</td>
</tr>
<tr>
<td>EPC-Z90</td>
<td>ø 950 (37.4) x 90 (3.54)</td>
<td>28</td>
<td>14 (1-14)</td>
<td>280</td>
<td>EPS-PZ2100A-4</td>
</tr>
<tr>
<td>EPC-Z120</td>
<td>ø 1250 (49.2) x 90 (3.54)</td>
<td>28</td>
<td>140 (5-7)</td>
<td>360</td>
<td>EPS-PZ2100A-6</td>
</tr>
<tr>
<td>EPC-Z150</td>
<td>ø 1500 (61.0) x 110 (4.33)</td>
<td>50</td>
<td>222 (8.77)</td>
<td>580</td>
<td>EPS-PZ2100A-8</td>
</tr>
<tr>
<td>EPC-Z180</td>
<td>ø 1850 (72.8) x 110 (4.33)</td>
<td>43</td>
<td>315 (12.4)</td>
<td>700</td>
<td>EPS-PZ2100A-10</td>
</tr>
<tr>
<td>EPC-Z200</td>
<td>ø 2050 (80.7) x 110 (4.33)</td>
<td>50</td>
<td>39.4 (1.55)</td>
<td>800</td>
<td>EPS-PZ2100A-10</td>
</tr>
</tbody>
</table>

*The chuck controller is not included.
*The power is supplied through the metal connector (with cable connection confirmation signal) on the side of the chuck.

[Chuck controller]

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Source</th>
<th>Voltage</th>
<th>Output</th>
<th>Current</th>
<th>Breaker Capacity</th>
<th>Dimensions</th>
<th>Mass (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS-PZ2100A-2</td>
<td>200 VAC</td>
<td>90 VDC</td>
<td>2 times switching</td>
<td>30A</td>
<td>450 (17.7)</td>
<td>200 (7.87)</td>
<td>150 (6.8)</td>
</tr>
<tr>
<td>EPS-PZ2100A-4</td>
<td>200 VAC</td>
<td>90 VDC</td>
<td>4 times switching</td>
<td>60A</td>
<td>750 (29.5)</td>
<td>250 (9.84)</td>
<td>350 (15.9)</td>
</tr>
<tr>
<td>EPS-PZ2100A-6</td>
<td>200 VAC</td>
<td>90 VDC</td>
<td>6 times switching</td>
<td>75A</td>
<td>850 (33.4)</td>
<td>300 (13.6)</td>
<td>500 (22.7)</td>
</tr>
<tr>
<td>EPS-PZ2100A-8</td>
<td>200 VAC</td>
<td>90 VDC</td>
<td>8 times switching</td>
<td>75A</td>
<td>925 (36.4)</td>
<td>300 (13.8)</td>
<td>800 (36.2)</td>
</tr>
<tr>
<td>EPS-PZ2100A-10</td>
<td>200 VAC</td>
<td>90 VDC</td>
<td>10 times switching</td>
<td>75A</td>
<td>1000 (39.4)</td>
<td>800 (36.2)</td>
<td>1000 (45.4)</td>
</tr>
</tbody>
</table>

Examples of magnetic chucks of special specifications

Permanent electromagnetic type

Permanent magnetic type

Electromagnetic + vacuum type

Permanent electromagnetic type

Permanent magnetic type