## Model MT-A MAGSUPPORTER*

### Application
Suitable for mating and keeping jointing parts of iron plates or members during welding work.

### Features
- A powerful holding type by use of a high-performance permanent magnet.
  - MT-A-2
    - Both inside and outside welding are possible.
  - MT-A-4
    - Any desired holding angle can be set in a range of 30° and 90° (angle scale provided).
    - ON/OFF function and V-groove provided.

### Holding Power
- MT-A-2: 800N (80kgf) x 2
- MT-A-4: 1500N (150kgf) x 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Holding Power</th>
<th>Holder Dimensions</th>
<th>Holding Angle</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT-A-2</td>
<td>800N (80kgf) x 2</td>
<td>50 (1.96) x 60 (2.36) x 55 (2.16)</td>
<td>45° - 135°</td>
<td>3.9kg/7.71 lb</td>
</tr>
<tr>
<td>MT-A-4</td>
<td>1500N (150kgf) x 2</td>
<td>60 (2.36) x 120 (4.72) x 52 (2.04)</td>
<td>30° - 90°</td>
<td>5 kg/11.0 lb</td>
</tr>
</tbody>
</table>

The holding power is based on a test piece of SS400, 10 mm thick, ground surface.

### Notes
- Inside welding
- Outside welding
- Both welding types possible by using an adequate attractive face.

## Model WK CLAMPER FOR WELDING

### Application
Suitable as a holding tool for welding on such work sites of construction, bridge, ship building and piping.

### Features
- The magnet part has a minimum necessary free rotating angle range for easy mounting on workpieces.
- The exterior of the magnet holder part is made of aluminum to prevent adhesion of iron powder on the top and side faces.
- Model WK-T38 has a construction that is highly resistant to heat.
- These clamps have a large mechanical strength to withstand rough handling.

### Holding Power
- WK-T3B: 1000N

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Temperature</th>
<th>Holding Power</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>WK-3A</td>
<td>80°C</td>
<td>1000N (100kgf) x 2</td>
<td>2.3kg/5.07 lb</td>
</tr>
<tr>
<td>WK-T3B</td>
<td>1000°C</td>
<td>1000N (100kgf) x 2</td>
<td>2.3kg/5.07 lb</td>
</tr>
</tbody>
</table>

The holding power is based on a test piece of SS400, 10 mm thick, ground surface.

### An example of usage

## Model KM-W MAGNETIC HOLDER

### Application
Suitable for temporary holding during drilling and assembly.

### Features
- Two magnets combined for easy angle setting.
- An angle scale provided. (KM-12W)
- The magnetic force can be turned on and off by operating the lever. (KM-12W)
- The V-groove allows the holder to be attached to certain poles and curved surfaces in addition to the flat surface. (KM-12W)

### Holding Power
- KM-06W: 200N (20kgf)
- KM-12W: 1300N (130kgf)

<table>
<thead>
<tr>
<th>Model</th>
<th>Holding Power</th>
<th>Holder Dimensions</th>
<th>Holding Angle</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM-06W</td>
<td>200N (20kgf)</td>
<td>26 (1.02) x 60 (2.36) x 25 (0.98)</td>
<td>129 (5.07) Free</td>
<td>0.7kg/1.54 lb</td>
</tr>
<tr>
<td>KM-12W</td>
<td>1300N (130kgf)</td>
<td>50 (1.96) x 117 (4.60) x 55 (2.16)</td>
<td>273 (10.75) Free</td>
<td>4.5kg/9.92 lb</td>
</tr>
</tbody>
</table>

* The holding power is per holder on one side and based on a test piece of SS400, 10 mm thick, ground surface.

⚠️ Precautions for use
These holders cannot be used for work where heat is applied for long hours. If the magnet is subjected to high temperature, its magnetic force will drop or be lost suddenly, causing the workpiece to come off the attractive face. Exercise caution.
**Model KM-SA**  
**HEXAGONAL MAGNETIC HOLDER**

![Image of KM-SA holder](image1)

**Application**  
These holders provide strong holding power for temporary holding during welding and temporary assembly. These holders can also be used as a block.

**Features**  
- The holding angle can be set to 45°, 90° and 135°.
- The small type is equipped with a pushbutton and the large type with a rotary handle for turning on and off the magnetic force.
- The V-groove provided makes this holder to generate strong holding power on curved surface as well as flat surface of workpieces.

<Min. diameter of workpieces that can be held> KM-SA: φ6 and over, KM-S1A: φ5 and over

<table>
<thead>
<tr>
<th>Model</th>
<th>Holding Power</th>
<th>Dimensions</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM-SA</td>
<td>600-900N/50-90kgf</td>
<td>120-140N/120-14kgf</td>
<td>6.0kg/13.2 lb</td>
</tr>
<tr>
<td>KM-S1A</td>
<td>200-300N/60-90kgf</td>
<td>200-600N/20-60kgf</td>
<td>0.85kg/1.87 lb</td>
</tr>
</tbody>
</table>

*The holding power on steel plate is based on a test piece of SS400, 10 mm thick, ground surface. Note: The holding power in | | is for attraction on one face in the case of double-face attraction.

**Model KM-S**  
**HEXAGONAL MAGNETIC HOLDER**

![Image of KM-S holder](image2)

**Application**  
Usable for temporary holding during welding and temporary assembly. These holders hold workpieces firmly.

**Features**  
- The holding angle can be set to 15°, 45°, 60°, 90°, 105° and 120°.
- The magnetic force can be turned on and off.
- The holding power on steel plates is about the same as when both faces of KM-S9 and S12 are used and at angles other than 105°, the holding power drops little when two faces are used.

<table>
<thead>
<tr>
<th>Model</th>
<th>Holding Power</th>
<th>Dimensions</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM-S10</td>
<td>150-250N/15-25kgf</td>
<td>104.409 x 95.734 x 67.163</td>
<td>0.9kg/2.0 lb</td>
</tr>
<tr>
<td>KM-S13</td>
<td>250-450N/25-45kgf</td>
<td>131.409 x 120.734 x 74.191</td>
<td>1.6kg/3.5 lb</td>
</tr>
</tbody>
</table>

*The holding power on steel plate is based on a test piece of SS400, 10 mm thick, ground surface.

**Precautions for use**  
These holders cannot be used for work where heat is applied for long hours. If the magnet is subjected to high temperature, its magnetic force will drop or be lost suddenly, causing the workpiece to come off the attractive face. Exercise caution.
**Model KM-S**  
**SIMPLE HEXAGONAL HOLDER**

**Application**
These holders are used for tack welding and temporary assembly during welding and assembly work. They can be used in wide applications as they hold round pipes and round steel bars.

**Features**
- The holding angle can be set to 45°, 90° and 135°.
- Compact and handy. Lower cost and simpler than the hexagonal holder KM-S.
- The concave attractive face can hold certain round steel bars.

<table>
<thead>
<tr>
<th>Holding Power</th>
<th>Steel bar</th>
<th>Steel plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM-S9</td>
<td>100-200N</td>
<td>150-500N</td>
</tr>
<tr>
<td>KM-S12</td>
<td>250-400N</td>
<td>250-700N</td>
</tr>
</tbody>
</table>

*The holding power on steel plate is based on a test piece of SS400, 10 mm thick, ground surface.

**Model KM-TH**  
**ANGLE CLAMP**

**Application**
Usable for temporary holding during tack welding and assembly and for holding down gages and rulers.

**Features**
- The all trapezoidal sides provide a strong magnetic force. The angles of 45°, 90° and 135° can be used.

<table>
<thead>
<tr>
<th>Holding Power</th>
<th>KM-TH12A</th>
<th>KM-TH16A</th>
</tr>
</thead>
<tbody>
<tr>
<td>450N (45kgf)</td>
<td>550N (55kgf)</td>
<td></td>
</tr>
</tbody>
</table>

*The holding power is based on a test piece of SS400, 10 mm thick, ground surface.

**Model KM-TA**  
**ANGLE CLAMP**

**Application**
This clamp can be used for temporary holding and temporary assembly during welding. It can hold workpieces firmly.

**Features**
- The V-groove provided on the attractive face enables this clamp to be used for workpieces having curved surfaces such as round steel bars and pipes in addition to flat workpieces.
- ON/OFF function provided.
- Holding angle 90° only.

**Precautions for use**
These holders cannot be used for work where heat is applied for long hours. If the magnet is subjected to high temperature, its magnetic force will drop or be lost suddenly, causing the workpiece to come off the attractive face. Exercise caution.
Model **GS** GUIDE SCALE

[Application]
Special guide tools for moving a torch while maintaining the height of the nozzle during gas welding.

[Features]
- A high-performance permanent magnet holds the scale firmly.
- Model GS-1 allows scale up-down adjustment according to the height of the nozzle.
- Model GS-2 allows its magnetic force to be turned on and off by lever operation for easy mounting and demounting.

<table>
<thead>
<tr>
<th>Model</th>
<th>Holding Power</th>
<th>Scale Length</th>
<th>Magnet Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS-1</td>
<td>200N (20kgf)</td>
<td>500 (19.6)</td>
<td>26 (0.98)</td>
</tr>
<tr>
<td>GS-2</td>
<td>800N (80kgf)</td>
<td>400 (15.7)</td>
<td>50 (1.96)</td>
</tr>
</tbody>
</table>

*The holding power is based on a test piece of SS400, 10 mm thick, ground surface.
*The holding power of GS-1 is the power per magnet holder.
*The material of the scale is SS.

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Model **HL-E** EARTH CLAMP

[Application]
Capable of connecting earth terminals on a wide variety of faces.

[Features]
- A high-performance permanent magnet is used for easy mounting and demounting by simple operation.

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Model **WKS** WELDING JIG FOR TACK WELDING

[Application]
Electromagnetic devices that can easily adjust positioning during tack welding of steel plates.

[Features]
- Can be attracted at the meeting point by a turn of the switch.
- Correcting work can be done easily by driving a wedge.
- WKS-26 and 30 types are equipped with wheels for easy movement.
- WKS-16 type is handy type that is easy to carry or handle on work sites.
- They come with a rectifier.

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**Precautions for use**
These holders cannot be used for work where heat is applied for long hours. If the magnet is subjected to high temperature, its magnetic force will drop or be lost suddenly, causing the workpiece to come off the attractive face. Exercise caution.
**Model EMA** **WELDING JIG FOR ONE FACE WELDING**

![Rectifier required additionally]

*Application*
Jigs developed for automatic welding of steel plates to hold steel plates and backing materials. These jigs can be used to hold cut-out pieces during EPM welding operations, to straighten workpieces and to secure stacked steel plates during fusing of stacked steel plates.

*Features*
- Holding and releasing workpieces can be controlled electrically.
- Workpieces are secured to a welding frame by a strong magnetic force and therefore warping of steel plates due to welding heat can be prevented.
- Drip-proof construction for outdoor operations. Highly resistant to impact and heat.

※The rectifier is of special specifications according to the number of magnets used.

<table>
<thead>
<tr>
<th>Model</th>
<th>Holding Power</th>
<th>Dimensions</th>
<th>Power Source</th>
<th>Working Rate</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMA-25-A</td>
<td>20N (2000kgf)</td>
<td>245 (9.64)</td>
<td>100 (5.39)</td>
<td>150 (5.90)</td>
<td>3−Φ21 (0.82)</td>
</tr>
<tr>
<td>EMA-25-C</td>
<td>21N (2100kgf)</td>
<td>365 (13.60)</td>
<td>120 (6.22)</td>
<td>205 (7.98)</td>
<td>3−Φ16 (0.62)</td>
</tr>
<tr>
<td>EMA-26-A</td>
<td>25N (2500kgf)</td>
<td>50N (16.60)</td>
<td>150 (5.90)</td>
<td>200 (7.87)</td>
<td>4−Φ23 (0.90)</td>
</tr>
</tbody>
</table>

*Applicable rectifiers: RHM102C/M102S/M205S/MA03.

**Model CEM** **ELECTROMAGNET FOR CHAMFERING**

![Rectifier required additionally]

*Application*
Suitable for securing workpieces during light duty work such as chamfering.

*Features*
- The periphery or four faces of workpieces can be worked during chamfering, for example, in one chucking to improve work efficiency.
- Damage to workpieces by mechanical clamping can be prevented.

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Holding Power</th>
<th>Dimensions</th>
<th>Rated Voltage</th>
<th>Rated Current</th>
<th>Working Rate</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEM-16</td>
<td>1000kgf</td>
<td>160 (6.29)</td>
<td>55 (2.17)</td>
<td>50 (1.97)</td>
<td>0.4 A</td>
<td>Approx. 15 kg/33 lb</td>
</tr>
<tr>
<td>CEM-23</td>
<td>2000kgf</td>
<td>230 (9.05)</td>
<td>75 (2.95)</td>
<td>75 (2.95)</td>
<td>0.7 A</td>
<td>Approx. 22 kg/61 lb</td>
</tr>
</tbody>
</table>

*Applicable rectifiers: RHM102C/M102S/M205S/MA03.

**Model CEM-SR** **ELECTROMAGNET WITH RECTIFIER FOR CHAMFERING**

![Rectifier added to electromagnetic CEM for chamfering!]

*Application*
Suitable for securing workpieces during light duty work such as chamfering.

*Features*
- The built-in compact rectifier eliminates a need of a power source board, requiring simple wiring only.
- The magnet specifications are all the same as Model CEM.

**Precautions for use** These holders cannot be used for work where heat is applied for long periods. If the magnet is subjected to high temperatures, its magnetic force will drop or be lost suddenly, causing the workpiece to come off the attractive face. Exercise caution.

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