

# Panasonic

## HI-MAX

**Bangkok** **Welding**  
(Thailand)

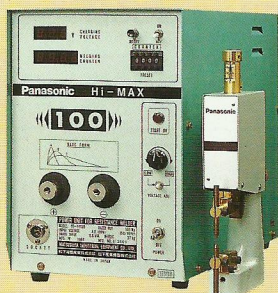
[www.bangkokwelding.com](http://www.bangkokwelding.com)

[info@bangkokwelding.com](mailto:info@bangkokwelding.com)

### CAPACITOR DISCHARGE TYPE RESISTANCE WELDER

## A CLEAN WELD ON THE SPOT WITH A MINIMUM OF POWER CONSUMPTION

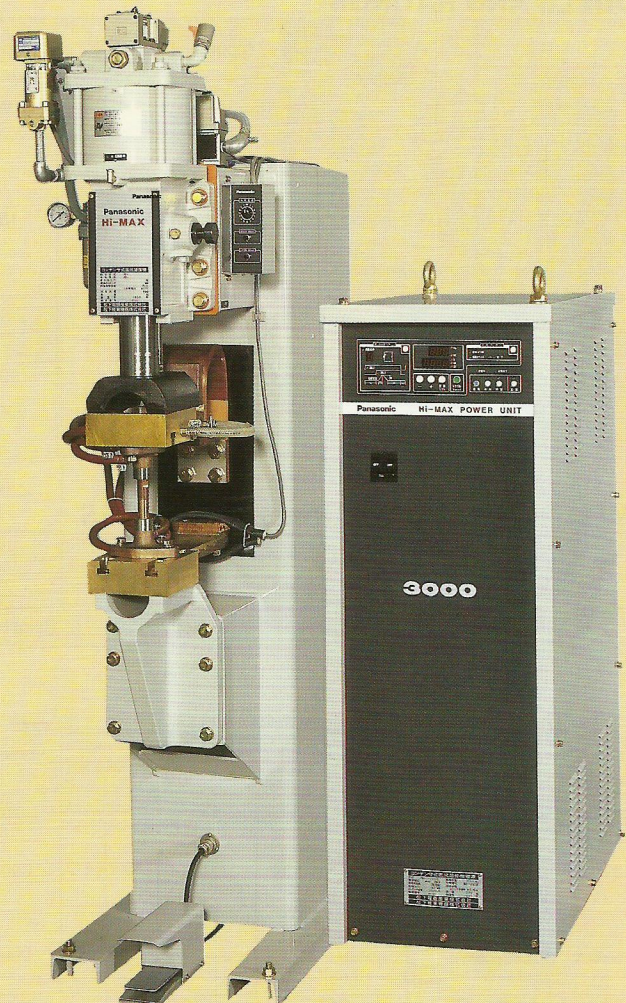
Designed to replace conventional methods of joining metal parts, this is an innovative piece of welding equipment. Panasonic's exclusive electronic control is ingeniously combined with a special electrolytic capacitor and a welding transformer so that the electric energy built up in the capacitor is released in a moment (about 3/1000 second). The resulting heat is utilized to fuse the parts together. The machine is outstanding in performance, cutting labor requirements and cost drastically. It is a versatile tool for any business that aspires to keep growing and remain competitive.



YG-101SPF



YG-508SPF-3



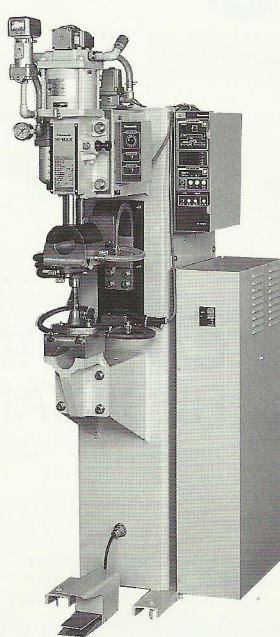
YG-C00EJ1



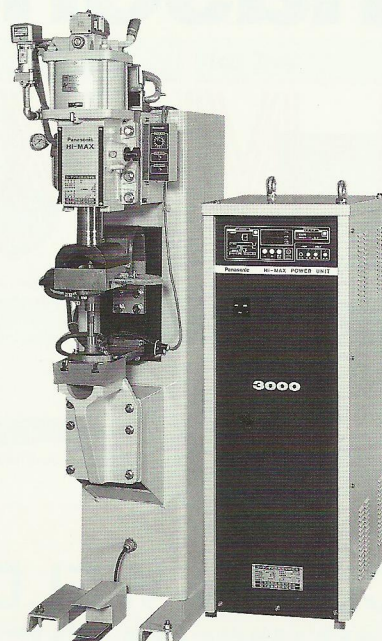
# HIGH SPEED "HI-MAX" WELDER SERIES

## FEATURES

1. Can double the repeat welding speed compared with that of conventional capacitor discharge models.
2. Recently developed welding capacitors have virtually unlimited service life.
3. Designed for repetitive and fast cycling operations
4. Equipped with the ability to adjust and dress electrodes.
5. Digital setting used throughout to simplify operation.
6. Supplied with monitor for charging voltage
7. Compact and integrated configuration.



YG-A50EJ1



YG-C00EJ1

## MODELS AND RATINGS

| Model      | Method              | Input               | Rated Input | Output | Capacity of Capacitor | Electrode Max. Pressure | Stroke | Electrode Size            | Throat Dimensions | Cooling water |
|------------|---------------------|---------------------|-------------|--------|-----------------------|-------------------------|--------|---------------------------|-------------------|---------------|
|            |                     | Phase/Hz            | kVA         | Ws     | $\mu$ F               | kN                      | mm     | Dia. x length mm          | (WxD) mm          | lit/min       |
| YG-A50 EJ1 | ES1 Spot            | 1 $\phi$<br>50/60Hz | 4.5         | 1500   | 13440                 | 4.9                     | 20-60  | $\phi$ 16x50<br>Taper 1/5 | 200x400           | 2 or more     |
|            | Projection          |                     |             |        |                       |                         |        |                           | 175x300           |               |
|            | EC1 Spot/Projection |                     |             |        |                       |                         |        |                           | 175x400           |               |
| YG-C00 EJ1 | ES1 Spot            | 1 $\phi$<br>50/60Hz | 7           | 3000   | 26880                 | 9.8                     | 20-80  | $\phi$ 20x50<br>Taper 1/5 | 200x425           | 3 or more     |
|            | Projection          |                     |             |        |                       |                         |        |                           | 200x300           |               |
|            | EC1 Spot/Projection |                     |             |        |                       |                         |        |                           | 165x425           |               |

## DIMENSIONS AND WELDING CAPACITIES

| Model        | Dimensions (mm) |       |        | Weight (Kg) | Capacity by material (mm x pcs) |       |                               |
|--------------|-----------------|-------|--------|-------------|---------------------------------|-------|-------------------------------|
|              | Width           | Depth | Height |             | Aluminum                        | Brass | Mild Steel<br>Stainless stell |
| YG-A50 EJ1   | 600             | 880   | 1650   | 300         | 1.2x2                           | 1.2x2 | 1.2x2                         |
| EC1          |                 |       |        |             |                                 |       |                               |
| YG-C00 EJ1   | 561             | 1013  | 1780   | 550         | 1.5x2                           | 1.6x2 | 1.6x2                         |
| EC1          |                 |       |        |             |                                 |       |                               |
| main unit    |                 |       |        |             |                                 |       |                               |
| power source | 410             | 682   | 1150   | 230         |                                 |       |                               |

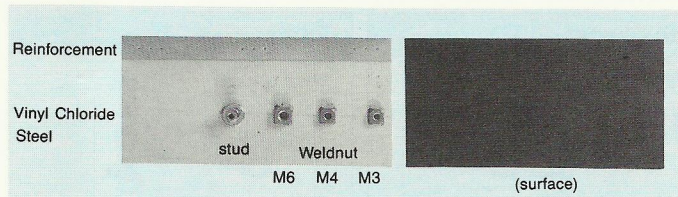


# HIGH SPEED HI-MAX PERFORMANCE IN SERIES WELDING SYSTEM

Today's consumer is placing increasing emphasis on the final surface appearance of finished metal products along with lower costs. Increasingly, pre-coated and/or finished steels are being selected. This places increasing demand on the welding process to assist the manufacturer in delivering a strong but blemish free final product.

Acceptable performance with standard A.C. welders can be difficult, if not possible, in some cases. The high speed HI-MAX series process has been developed to satisfy the needs of resistance welding customers requiring welds that need little or no post processing and at production rates compatible with today's production requirements.

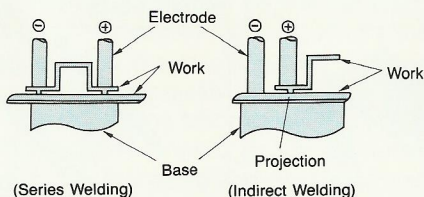
(Example)



## FEATURES

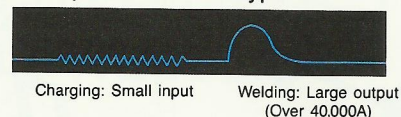
### 1. Single-side insulated material can be welded.

Because of series energization, steel plates insulated on one side such as vinyl chloride steel plate and embossed color steel plate can be directly presented to projection welding without surface treatment and finished beautifully without leaving heat marks. Likewise, stainless steel plate and plated steel can be finished beautifully, without any obvious heat mark, hit mark or distortion, as a result of being welded without passing current to the surface side and the extremely low heat input of the high-speed HI-MAX series process.



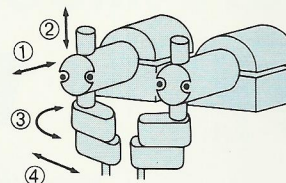
### 2. Small input and large output.

Example of 3000WS type

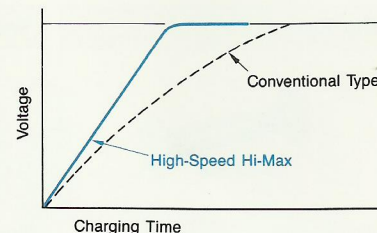


### 3. The electrode can be freely adjusted in position on four axes.

The right and left electrode positions can be quickly changed to front and rear electrodes. With this arrangement, set up time between jobs can be minimized and production output increase.



### 4. Short charging time (1/2 compared with conventional type)



## Models and Ratings

| Model                            | Input         | Rated Input | Output              | Charge Voltage | Electrode Max. Pressure | Stroke | Throat Dimensions | Welding Speed | Cooling water | Air Pressure       |
|----------------------------------|---------------|-------------|---------------------|----------------|-------------------------|--------|-------------------|---------------|---------------|--------------------|
|                                  | Phase/Hz      | kVA         | Ws                  | V              | kN                      | mm     | (WxD) mm          | times/min     | lit/min       | kg/cm <sup>2</sup> |
| YG-1508CPA2T12 (Spot/Projection) | 1φ<br>50/60Hz | 6           | 500<br>1000<br>1500 | 60~485         | 2.0                     | 20/60  | 200x620           | 60            | 2             | 5                  |
| YG-3008CPA2T12 (Spot/Projection) |               | 10          | 500<br>1500<br>3000 | 60~485         | 4.9                     | 20/60  | 200x620           | 45            | 3             | 5                  |

## DIMENSIONS

| Model                      | W   | D    | H    | Weight |
|----------------------------|-----|------|------|--------|
|                            | mm  | mm   | mm   | kg     |
| YG-1508CPA2T12             | 600 | 1210 | 1740 | 350    |
| YG-3008CPA2T12 (main unit) | 560 | 1210 | 1710 | 570    |
| (power source)             | 400 | 580  | 1215 | 230    |

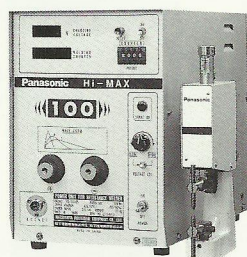
## WELDING CAPACITY (Example)

|                            | Material                                                                          | 1500WS       | 3000WS       |
|----------------------------|-----------------------------------------------------------------------------------|--------------|--------------|
|                            |                                                                                   |              |              |
| Indirect welding           | Vinyl chloride steel plate                                                        | 0.8 ~ 1.6mmt |              |
|                            | Color steel plate                                                                 | 1.2 ~ 1.6 mm |              |
|                            | Plated steel plate                                                                | 0.6 ~ 1.6 mm | 0.6 ~ 2.3 mm |
|                            | Stainless steel                                                                   | 0.8 ~ 1.2 mm | 0.8 ~ 2.0 mm |
| Example of projection size | $D\phi = (A' \times 1.2)$ $H = (A' \times 0.4)$ $B' = A' + (A' \times 1.5)$       |              |              |
|                            | We will recommend 2 or 3 points of projection weldings to increase weld strength. |              |              |

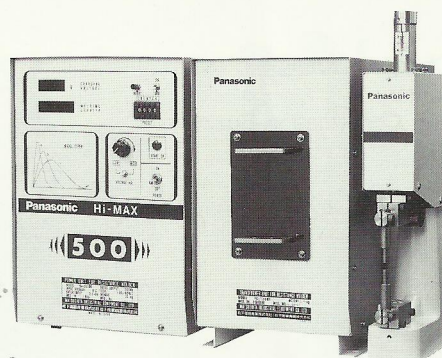
This is only for your reference. Please send us welding sample piece for testing.



# Hi-MAX MICRO SERIES (TABLE TOP TYPE)



□ 100Ws Model YG-101SPF



□ 500Ws Model YG-501SPF

## FEATURES

### 1. High Speed Welding

| Model<br>Rating Range | YG-101SPF     |               | YG-501SPF     |               |
|-----------------------|---------------|---------------|---------------|---------------|
|                       | 100 Ws        | 50 Ws         | 100 Ws        | 50 Ws         |
| Continuous            | 60 times/min  | 120 times/min | 60 times/min  | 120 times/min |
| Short-time            | 150 times/min | 150 times/min | 100 times/min | 120 times/min |

\*Short-time rating means welding 150 times/min for 5 minutes use and rest for 5minutes.

### 2. Six Output Waveform Selection

- Guide-line for selection

|       |                               |
|-------|-------------------------------|
| Tap 1 | Wire Rod / Projection         |
| Tap 2 | Copper Alloy, Aluminum / Spot |
| Tap 3 | Steel, Stainless Steel / Spot |

### 3. Built-in Pre-set Counter and Weld Number Counter

### 4. High-performance Pressurization Head

### 5. Digital Voltage Indication

### 6. Finish Charging Indicator (Lamp)

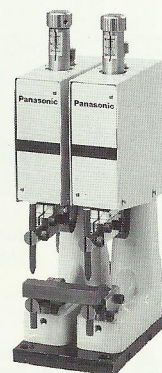
### 7. Start Signal ON Confirmation (Buzzer)

5 axes Adjustable



## OPTION

- Twin Head Type (100Ws only)  
for Series and/or Indirect Welding



- Air Press Type  
YG-101SPA



## MODELS AND RATINGS

| Model            | Input Phase/Hz | Rated Input kVA | Capacity Ws | Charge Voltage V  | Electrode Max. Pressure kN | Stroke mm | Throat dimensions (WxD) mm | Electrode size mm    | Weight kg | Welding capacity* mm x pcs |
|------------------|----------------|-----------------|-------------|-------------------|----------------------------|-----------|----------------------------|----------------------|-----------|----------------------------|
| YG-101SPF/101SPA | 1φ<br>50/60Hz  | 0.6             | 100         | Low<br>(70~270)   | 0.15                       | 13        | 35x105                     | φ6x56                | 41        | 0.3x2                      |
| YG-501SPF/501SPA |                | 3.0             | 500         | High<br>(260~460) | 0.49                       | 20        | 85x120                     | φ8x30L<br>Taper 1/10 | 102       | 0.5x2                      |

\* Welding capacity is for Steel, Stainless Steel, or Brass.

## DIMENSIONS ( ): Air Press Type

| Model           |              | W (mm)    | D (mm) | H (mm)    | Weight     |
|-----------------|--------------|-----------|--------|-----------|------------|
| YG-101SPF (SPA) | Power Source | 222 (372) | 470    | 340       | 37         |
|                 | Welding Head | 40 (51)   | 165    | 281 (350) | 3.8 } 40.8 |
| YG-501SPF (SPA) | Power Source | 272 (422) | 424    | 393       | 40         |
|                 | Transformer  | 223       | 420    | 394       | 50 } 99    |
|                 | Welding Head | 70        | 232    | 455 (523) | 9          |



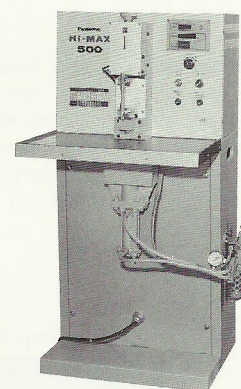
# CONSOLE TYPE Hi-MAX

## FEATURES

- Digital Setting of Charging Voltage
- Built-in Pre-set Counter
- Welding Current Run Confirmation Buzzer



YG-508SPF-3  
Foot Press Type



YG-508SPA-3  
Air Press Type

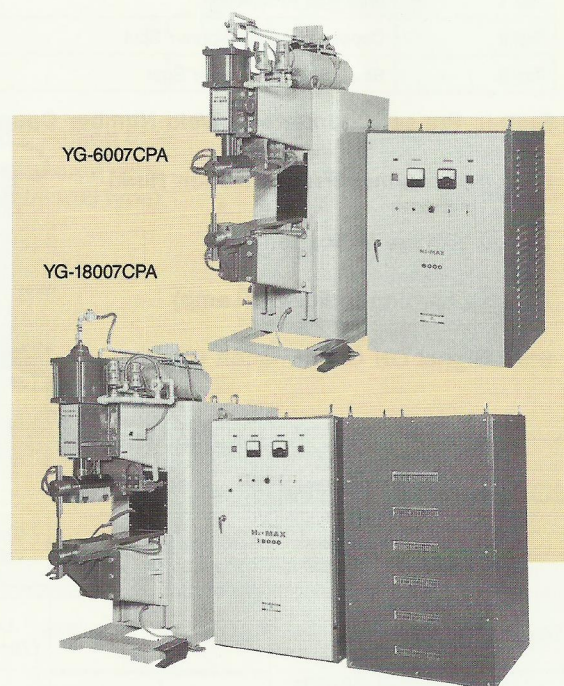
## MODELS AND RATINGS

| Model                            | Input                   | Rated Input | Output | Capacity of Capacitor | Max. Pressure | Stroke | Electrode dia. x length   | Throat Dimensions (WxD) | Welding Capacity Aluminum | WxDxH        | Weight |
|----------------------------------|-------------------------|-------------|--------|-----------------------|---------------|--------|---------------------------|-------------------------|---------------------------|--------------|--------|
|                                  | Phase/Hz                | kVA         | Ws     | $\mu$ F               | kN            | mm     | mm                        | mm                      | mm                        | mm           | kg     |
| YG-508SPF-3<br>(Foot Press Type) | 1 $\phi$<br>50/60<br>Hz | 1           | 500    | 9120                  | 0.44          | 15     | $\phi$ 8x30<br>Taper 1/10 | 80x80                   | Max.<br>0.5               | 550x680x1165 | 135    |
| YG-508SPA-3<br>(Air Press Type)  |                         |             |        |                       |               |        |                           |                         |                           | 700x680x1165 |        |

# LARGE TYPE Hi-MAX

## DIMENSIONS

| Model    |      |              | WxDxH (mm)    | Weight (kg) |
|----------|------|--------------|---------------|-------------|
| YG-4507  | SPA2 | Main body    | 780x1250x1820 | 1000        |
|          | JPA2 | Power Source | 854x800x1252  | 300         |
|          | CPA2 |              |               | 1300        |
| YG-6007  | SPA2 | Main body    | 780x1250x1820 | 1100        |
|          | JPA2 | Power Source | 854x800x1252  | 350         |
|          | CPA2 |              |               | 1450        |
| YG-18007 | JPA2 | Main body    | 800x1570x2090 | 3100        |
|          | CPA2 | Power Source | 950x925x1500  | 500         |
|          | CPA2 | Capacitor    | 950x925x1500  | 450         |
|          |      |              |               | 4050        |



## MODELS AND RATINGS

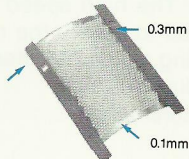
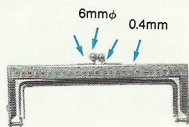
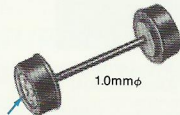
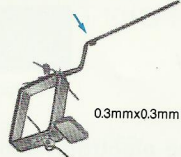
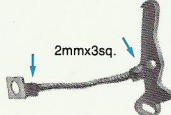
| Model                                                                 | Input                | Rated Input | Output | Capacity of Capacitor | Electrode Max. Pressure | Stroke | Electrode size dia. x length | Throat Dimensions             | Welding Capacity Aluminum |
|-----------------------------------------------------------------------|----------------------|-------------|--------|-----------------------|-------------------------|--------|------------------------------|-------------------------------|---------------------------|
|                                                                       | Phase/Hz             | kVA         | Ws     | $\mu$ F               | kN                      | mm     | mm                           | (WxD) mm                      | mm x pcs                  |
| YG-4507<br>SPA2 (Spot)<br>JPA2 (Projection)<br>CPA2 (Spot/Projection) | 1 $\phi$             | 9           | 4500   | 82080                 | 9.8                     | 20/80  | $\phi$ 20x60<br>Taper 1/5    | 200x700<br>200x300<br>170x410 | 2.0x2                     |
|                                                                       |                      | 12          | 6000   | 109440                |                         |        |                              | 200x700<br>200x300<br>170x410 | 2.3x2                     |
|                                                                       |                      | 30          | 18000  | 328320                |                         |        |                              | 200x700<br>200x300<br>170x430 | 3.2x2                     |
| YG-6007<br>SPA2 (Spot)<br>JPA2 (Projection)<br>CPA2 (Spot/Projection) | 50/60 Hz             | 12          | 6000   | 109440                | 19.6                    | 100    | $\phi$ 25x80<br>Taper 1/5    | 200x700<br>200x300<br>170x410 | 2.3x2                     |
|                                                                       |                      | 12          | 6000   | 109440                |                         |        |                              | 200x700<br>200x300<br>170x410 | 2.3x2                     |
|                                                                       |                      | 30          | 18000  | 328320                |                         |        |                              | 200x700<br>200x300<br>170x430 | 3.2x2                     |
| YG-18007<br>JPA2 (Projection)<br>CPA2 (Spot/Projection)               | 3 $\phi$<br>50/60 Hz | 30          | 18000  | 328320                | 19.6                    | 100    | $\phi$ 25x80<br>Taper 1/5    | 200x700<br>200x300<br>170x430 | 3.2x2                     |
|                                                                       |                      | 30          | 18000  | 328320                |                         |        |                              | 200x700<br>200x300<br>170x430 | 3.2x2                     |
|                                                                       |                      | 30          | 18000  | 328320                |                         |        |                              | 200x700<br>200x300<br>170x430 | 3.2x2                     |

(Note) 8000Ws and 12000Ws Type are also available.

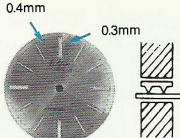
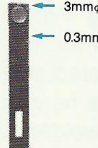
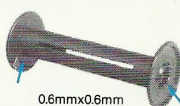
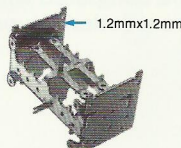
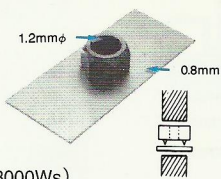
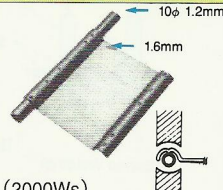


# WIDE APPLICATION OF HI-MAX WELDER

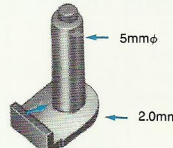
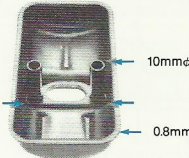
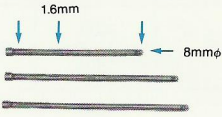
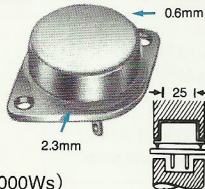
## SPOT WELDING

|                                                                                                                                     |                                                                                                                                         |                                                                                                                             |                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shaver Blade</b><br><br>Stainless Steel (100Ws) | <b>Handbag Clasp</b><br><br>Brass (500Ws)              | <b>Cuff Button</b><br><br>Brass (500Ws)   | <b>Ice Tray</b><br><br>Aluminum (500Ws)                         |
| <b>Toy Parts</b><br><br>Steel (500Ws)              | <b>Instrument Parts</b><br><br>Phosphor Bronze (500Ws) | <b>Nail Clipper</b><br><br>Steel (3000Ws) | <b>Copper Wire</b><br><br>Twisted Copper Wire and Brass (300Ws) |

## PROJECTION WELDING

|                                                                                                                            |                                                                                                                                     |                                                                                                                               |                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Clock Face</b><br><br>Brass (1000Ws)   | <b>Window Lock</b><br><br>Stainless Steel (1500Ws) | <b>Can Handle</b><br><br>Tin Plate (1500Ws) | <b>Contact</b><br><br>Silver Contact and Phosphor Bronze (1500Ws) |
| <b>Film Spool</b><br><br>Steel (3000Ws) | <b>Variable Conductor</b><br><br>Steel (3000Ws)  | <b>Weldnut</b><br><br>Steel (3000Ws)      | <b>Chair Parts</b><br><br>Steel (2000Ws)                        |

## RING PROJECTION WELDING

|                                                                                                                             |                                                                                                                                 |                                                                                                                                      |                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Relay Parts</b><br><br>Steel (1500Ws) | <b>Automobile Parts</b><br><br>Steel (300Ws) | <b>Automobile Push Rod</b><br><br>Steel (3000Ws) | <b>Diode</b><br><br>Steel (8000Ws) |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|

**! Safety precautions** ● Before attempting to use any of welding product. Always read the manual thoroughly to ensure correct use.

**Matsushita Welding System Co., Ltd.**  
**Overseas Department**

1-1, 3-chome, Inazu-cho, Toyonaka Osaka 561-0854 JAPAN  
 TEL : 06(6866)8505 FAX : 06(6866)0709  
 URL : <http://www.mie.panasonic.co.jp/e.index.html>

**Bangkok Welding**  
 (Thailand)

[www.bangkokwelding.com](http://www.bangkokwelding.com)

[info@bangkokwelding.com](mailto:info@bangkokwelding.com)

Tel : (+66)0 2750 9100

**Panasonic** Resistance Welder

Specifications subject to change without notice.

Catalogue No. [RWHMAXAAA]

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