



HERON

**DIGITAL RESISTANCE
WELDING**

**ADVANCED WELDING EQUIPMENT AND PROCESSES
FOR THE LOW-VOLTAGE ELECTRICAL INDUSTRY**

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HERON

Expert In Resistance
Welding · Clinch



■ PART 1

Application In Refrigerator Compressor



■ PART 1

Frame Series



➤ Standard Equipment ➤ Special Equipment ➤ Special Automated Production Line

Frame Series · Standard Equipments

Welder For Conductive Busbars

- Complete the welding of conductive busbars and soft connections;
- All grooves on the busbar and the braided wire are welded and solidified at the same time;
- The heating is balanced, the filler overflow in the welding area is uniform, and there is no oxidation and discoloration of the braided wire outside the welding area.

Model	DB-2500-20001
Power Supply	2500KVA
Max. Primary Current	1000A
Max. Short-circuit Current	158KA
Max. Pressurization	47KN
Beats	70S/PCS



Frame Series · Standard Equipments

Welder For Conductive Busbars

- Complete the welding of conductive busbars and soft connections;
- All grooves on the busbar and the braided wire are welded and solidified at the same time;
- The heating is balanced, the filler overflow in the welding area is uniform, and there is no oxidation and discoloration of the braided wire outside the welding area.

Model	DB-1500-20001
Power Supply	1500KVA
Max. Primary Current	820A
Max. Short-circuit Current	120KA
Max. Pressurization	43KN
Beats	60~90S/PCS



Frame Series · Standard Equipments

High Frequency Inductive Welder For Silver Points On The Static Bus

- Suitable for busbar and large-size silver spot welding;
- It can ensure the effective connection of the welding surface;
- The load capacity of the product after welding is stable;
- Less load requirements on the grid.

Model	ZA0-F19019
Power Supply	160KW
Max. Primary Current	240A
The Range Of Current	40~160A
Rated Electrode Pressure	0.245KN
Beats	55S/PCS



Frame Series · Special Equipments

Moving Contact/silver Point/soft Connection Welding And Silver Point Spill Milling

- The first machine completes three processing processes: contact sheet silver point welding, contact piece soft connection welding, and silver point spillage milling;
- Turntable structure, in addition to manual soft connection, other processes including upper contact piece, silver point, welding and other processes are automatically completed continuously;
- After welding, the moving contact is automatically placed on the milling turntable to mill the burrs caused by the spillage after silver point welding.

Model	DB-770-20001
Power Supply	440KVA+330KVA
Max. Primary Current	350A (440KVA)
	240A (330KVA)
Max. Short-circuit Current	59.9KA (440KVA)
	45KA(330KVA)
Beats	13S/PCS



Frame Series · Special Equipments

Moving Contact/silver Point(2 Points)/soft Connection Welding And Silver Point Spill Milling

- The first machine completes three processing processes: contact sheet silver point welding, contact piece soft connection welding, and silver point spillage milling;
- Turntable structure, in addition to manual soft connection, other processes including upper contact piece, silver point, welding and other processes are automatically completed continuously;
- After welding, the moving contact is automatically placed on the milling turntable to mill the burrs caused by the spillage after silver point welding.
- The vision system detects the form and position tolerances of the welded product

Model	DB-880-20009
Power Supply	2x440KVA
Max. Primary Current	350A
Max. Short-circuit Current	59.9KA
Max. Pressurization	6.1KN
Beats	16S/PCS



Frame Series · Special Equipments

Welder For Double Silver Points Of The Contacts

- Turntable structure, two sets of tooling at each station correspond to the main silver point and arc silver point of the contact piece;
- Automatic feeding, the upper welding head can be servo-moved, and two silver points are welded twice.

Model	DB-440-20049
Power Supply	440KVA
Max. Primary Current	350A
Max. Short-circuit Current	59.9KA
Max. Pressurization	6.1KN
Beats	15S/PCS



Frame Series · Special Equipments

Welder For Soft Connection Wire

- Fully automatic equipment, with material shortage alarm function;
- The soft connection is reel type feeding, and it is automatically straightened, welded and cured, and cut at fixed length after automatic unwinding;
- It can take into account multiple groups of soft connections and parallel welding;
- The upper electrode assembly has two upper electrode heads, which can automatically switch soft connections corresponding to different curing sizes;
- Integrated equipment for welding and shearing, the error of cutting length is <1%;
- Large welding currents can be output, compatible with soft connection curing welding with cross-sectional areas up to 70mm²;

Model	DB-880-21002
Power Supply	880KVA
Max. Primary Current	700A
Max. Short-circuit Current	110KA
Max. Pressurization	2.51KN
Beats	8S/PCS



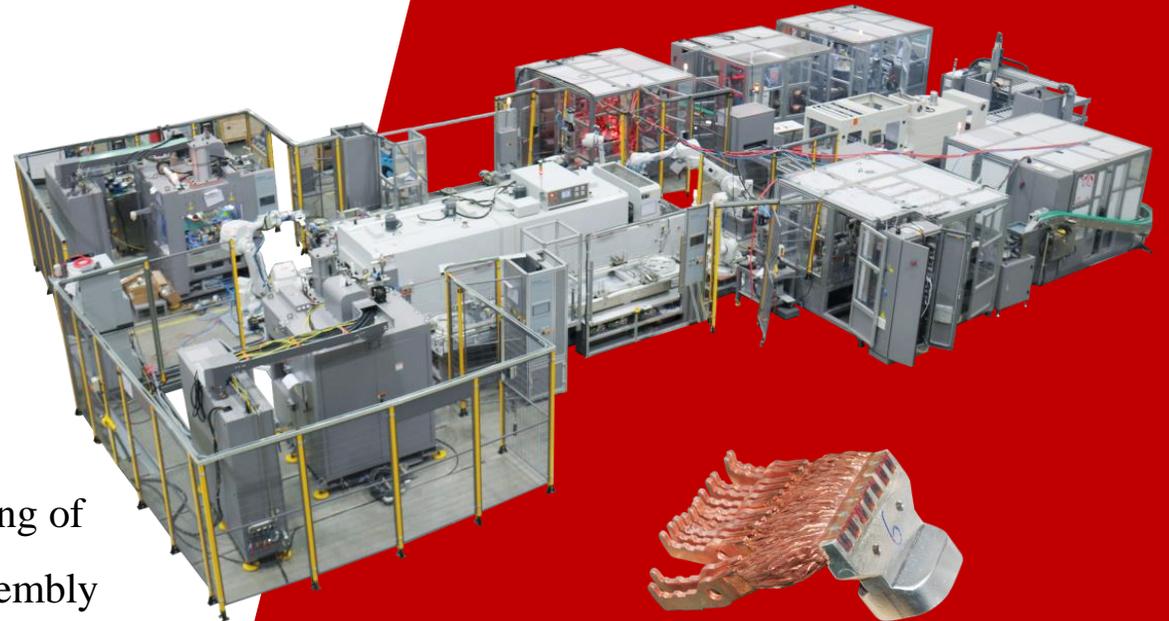
Frame Series · Special Automated Production Line

Automatic Welding Workstation With Multiple Processes In Busbars

Intelligent production line, except for the busbar installation process, other processes are completed by automatic devices and robots, and the integrated production line of product welding, drying, testing, packaging, and production data MES communication is realized.

Processes:

Welding of the silver point of the contact piece - curing welding of soft connection - welding of soft connection and contact - assembly of busbar - welding of busbar and soft connection - drying of busbar - packing of finished product - laminated packaging of the box body - full box output of finished product



The workstation is divided into two parts, mainly corresponding to the 2000 series/4000 series two specifications of busbar products.

■ PART 2

Plastic Shell Series



➤ Standard Equipment ➤ Special Equipment ➤ Special Automated Production Line

Plastic Shell Series · Standard Equipment

Bench Spot Welder

- A kind of tabletop high-precision spot welding equipment;
- Rocker arm panel operation box, easy to observe and set parameters from multiple angles;
- All welding parameters and action settings are set on the man-machine interface;
- Suitable for welding of a variety of molded shell product parts;
- Versatility and cost-effectiveness, short lead times.

Model	DB-165-20025
Power Supply	165KVA
Max. Primary Current	120A
Max. Short-circuit Current	30KA
Max. Pressurization	3900N
Beats	DB-165-20025



Plastic Shell Series · Standard Equipment

Welder For Silver Points Of Static Contact Sheets

- for the welding of silver points of the contact sheet;
- Stand-alone manual equipment, manual loading and unloading;
- The current is only heated indirectly through the contact piece, not through the silver point, which has less effect on the silver point character.

Model	DB-440-21010
Power Supply	440KVA
Max. Primary Current	350A
Max. Short-circuit Current	59.9KA
Max. Pressurization	980N
Beats	≤4S/PCS



Plastic Shell Series · Special Equipment

Welder For Silver Points Of Static Contact Sheets

- Simultaneous realization of long and short contact pieces and silver spot welding;
- The current is only heated indirectly through the contact piece, not through the silver point;
- Turntable structure, semi-automatic equipment for manual placing of contact plates, automatic placement of silver points, automatic welding and automatic unloading;
- Two sets of welding fixtures per station, corresponding to two kinds of contact pieces, long and short, can be loaded and produced at the same time.

Model	DB-440-17014
Power Supply	220KVA
Max. Primary Current	150A
Max. Short-circuit Current	40KA
Max. Pressurization	7.85KN
Beats	7S/PCS



Plastic Shell Series · Special Equipment

Welder For Silver Points Of Static Contact Sheets

- Simultaneous realization of long and short contact pieces and silver spot welding;
- The current is only heated indirectly through the contact piece, not through the silver point, which has less effect on the silver point character.
- Eight-station turntable structure, contact sheet feeding, silver point feeding, welding, finished product unloading are automatically completed, and the 3D vision system detects the shape and position tolerance of the finished product after welding;
- Good and defective products are automatically output by the conveyor line after separating and packing them;
- Two sets of welding fixtures per station, corresponding to long and short contact pieces, can be loaded and produced at the same time.

Model	DB-440-21051
Power Supply	220+220KVA
Max. Primary Current	150A
Max. Short-circuit Current	40KA
Max. Pressurization	628N
Beats	8S/PCS



Plastic Shell Series · Special Equipment

Welder For Silver Points Of Static Contact Sheets

- Turntable structure, each station has two sets of tooling corresponding to long contact and short contact, two sets of tooling feeding at the same time but welding at different stations;
- Each rotation of the indexing disc can produce 1 piece of long and short contact piece.
- The contact plate is electrically conductively heated, and the current does not pass directly through the silver point;

Model	DB-440-15018
Power Supply	220KVA+220KVA
Max. Primary Current	150A
Max. Short-circuit Current	40KA
Max. Pressurization	7.85KN



Plastic Shell Series · Special Equipment

Welder For Silver Points Of Static Contact Sheets

- Realize the automatic welding of static contact sheet and silver point;
- Turntable structure, which can realize the full automation of automatic upper contact piece, silver point, welding and discharge;
- The current is only heated indirectly through the contact piece, not through the silver point, which has less effect on the silver point character.

Model	DB-220-21025
Power Supply	220KVA
Max. Primary Current	150A
Max. Short-circuit Current	40KA
Max. Pressurization	7.85KN
Beats	6S/PCS



Plastic Shell Series · Special Equipment

Welder Of The Double Silver Points Of The Moving Contact Piece

- Fully automatic to realize the welding and detection of the two ends of the contact piece and the silver point;
- Turntable structure, the contact piece is fed by the robot, the silver point is fed by the multi-axis automatic mechanism, the robot automatically rotates the contact piece, and the contact piece is welded at both ends successively;
- The equipment has automatic visual inspection of post-weld dimensions, automatic laser marking, automatic packing and other functions.

Model	DB-440-21033
Power Supply	440KVA
Max. Primary Current	350A
Max. Short-circuit Current	59.9KA
Max. Pressurization	3.9KN
Beats	11S/PCS



Plastic Shell Series · Special Equipment

Welder Of The Double Silver Points Of The Moving Contact Piece

- Fully automatic to realize the welding and detection of the two ends of the contact piece and the silver point;
- Turntable structure, the contact piece is fed by the robot, the silver point is fed by the multi-axis automatic mechanism, the robot automatically rotates the contact piece, and the contact piece is welded at both ends successively;
- The equipment has automatic visual inspection of post-weld dimensions, automatic laser marking, automatic packing and other functions.

Model	DB-500-21004
Power Supply	250KVA+250KVA
Max. Primary Current	150A (每套电源)
Max. Short-circuit Current	45KA (每套电源)
Max. Pressurization	7.85KN (每个工位)
Beats	9.5S/PCS



Plastic Shell Series · Special Equipment

Welder For Copper Wire Of The Circuit Breaker

- Manually put the molded case circuit breaker, servo moves the workpiece to align the position of the welding point with the welding guns;
- Automatic filler with welded component detection;
- Transparent plexiglass cover for easy equipment maintenance and visual management.

Model	DB-55-Q15002
Power Supply	55KVA
Max. Primary Current	63A
Max. Short-circuit Current	18KA
Max. Pressurization	628
Beats	40S/PCS



Plastic Shell Series · Special Automated Production Line

Welding System For Type 125C Moving Contacts

- Intelligent production line, all feeding and welding processes are automatically completed in the integrated equipment;
- With welding, testing, heat treatment, packing, production data MES communication and other automatic functions;
- Linear design, strong observability.

Process:

Welding of the silver point of the contact piece - Pressure pin of the contact piece - Welding of the double gold of the support - Sleeve of soft connection - Welding of the double gold of the soft connection - Welding of the soft connection plate - Welding of the double gold of the soft connection - Welding of the contact piece of the soft connection - Heat treatment - Packing of the finished product.



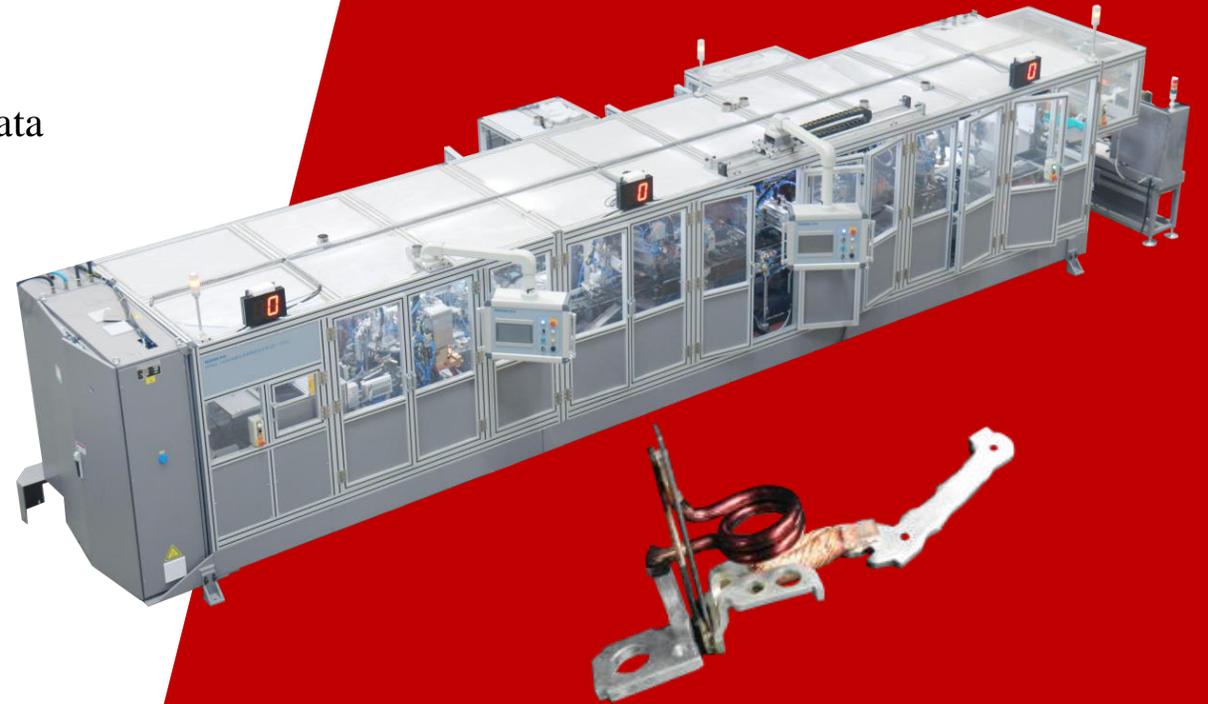
Plastic Shell Series · Special Automated Production Line

Welding System For Type 100M Moving Contacts

- Intelligent production line, all feeding and welding processes are automatically completed in the integrated equipment;
- With welding, testing, heat treatment, packing, production data MES communication and other automatic functions;
- Linear design, strong observability.

Process:

Welding of double gold of support parts - welding of hot elements of double gold - welding of coils of coupling plates - welding of soft connections of components of moving contacts - welding of hot elements of coils - welding of support parts of soft connections - heat treatment - packing of finished products.



Plastic Shell Series · Special Automated Production Line

Welding System For Type 100M Static Contacts

- Multi-process connection;
- With production data MES communication function;
- Standardization of equipment dimensions;
- The overall appearance is visual and observable.

Process:

Welding of silver points of contacts (independent equipment)
- Curing and shearing of soft joints - Welding of soft connections of static contacts - Welding of soft joints (multi-process wiring equipment)



■ PART 3

Micro-break Series



➤ Standard Equipment ➤ Special Equipment ➤ Special Automated Production Line

Micro-break Series · Standard Equipment

Countertop Precision Spot Welding Equipment

- The equipment structure is simple, the operation is simple, and the storage area of the material box with the table configuration is convenient for the temporary storage of workpieces;
- Small appearance, beautiful appearance, suitable for welding all kinds of micro-broken product parts.
- Versatility and cost-effectiveness, short lead times.

Model	DB-55-14105
Power Supply	55KVA
Max. Primary Current	63A
Max. Short-circuit Current	18KA
Max. Pressurization	400N



Micro-break Series · Standard Equipment

Countertop Precision Spot Welding Equipment

- It adopts embedded operation panel and function buttons to form an integrated style with the fuselage;
- The fuselage is lightweight and equipped with moving wheels at the bottom;
- Millisecond-level time response accuracy, 10-ampere-level current resolution, suitable for welding of various micro-broken product parts, both versatility and economy, short supply cycle.

Model	DB-55-15106
Power Supply	55KVA
Max. Primary Current	63A
Max. Short-circuit Current	18KA
Max. Pressurization	400N



Micro-break Series · Special Equipment

Welder For Magnetic Components

- Multi-station automatic welding equipment;
- Turntable structure, the coil frame, coil, terminal board are automatically loaded and assembled and welded in two places;
- The main machine structure of the equipment is integrated, and the parts feeding vibration plate is installed independently, which does not affect the stability of the working platform.

Model	DB-110-14009
Power Supply	55KVA+55KVA
Max. Primary Current	65A
Max. Short-circuit Current	18KA
Max. Pressurization	400N
Beats	4.8S/PCS



Micro-break Series · Special Equipment

Welder For Silver Point Of The Magnetic Frame

- It can realize flexible feeding and welding of magnetic frame silver spot welding;
- The silver point is automatically punched and fed by the disc-shaped strip, and the frame is fed by the vibrating plate & robot, and welded with a medium frequency DC welding machine at the welding station;
- The welding current output is stable and the teach-in operation is simple.

Model	DB-55-21006
Power Supply	55KVA
Max. Primary Current	63A
Max. Short-circuit Current	18KA
Max. Pressurization	980N
Beats	8S/PCS



Micro-break Series · Special Equipment

Curing And Shearing Of Soft Joints

- Wire reel feeding, straightening after automatic unwinding, welding curing, fixed length cutting;
- Fully automatic equipment, with material shortage alarm function;
- It can take into account multiple groups of soft connections and parallel welding;
- The upper electrode assembly has two upper electrode heads, which can automatically switch soft connections corresponding to different curing sizes;
- Soft connection welding and shearing integrated equipment, cutting length error <1%;
- Suitable for soft connections up to 2mm ?

Model	DB-110-19003
Power Supply	110KVA
Max. Primary Current	100A
Max. Short-circuit Current	24KA
Max. Pressurization	2.51KN
Beats	2.5S/PCS

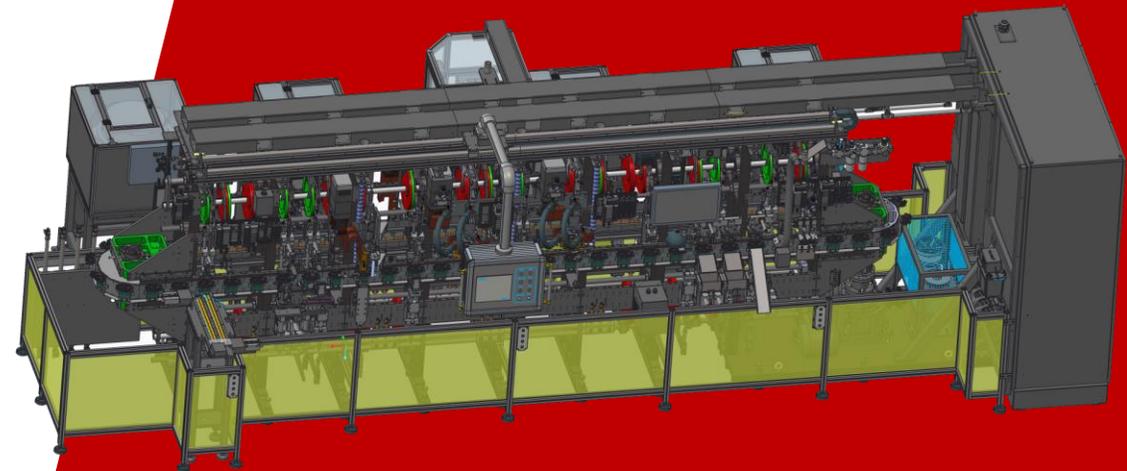


Micro-break Series · Special Automated Production Line

Welder For Thermal Components

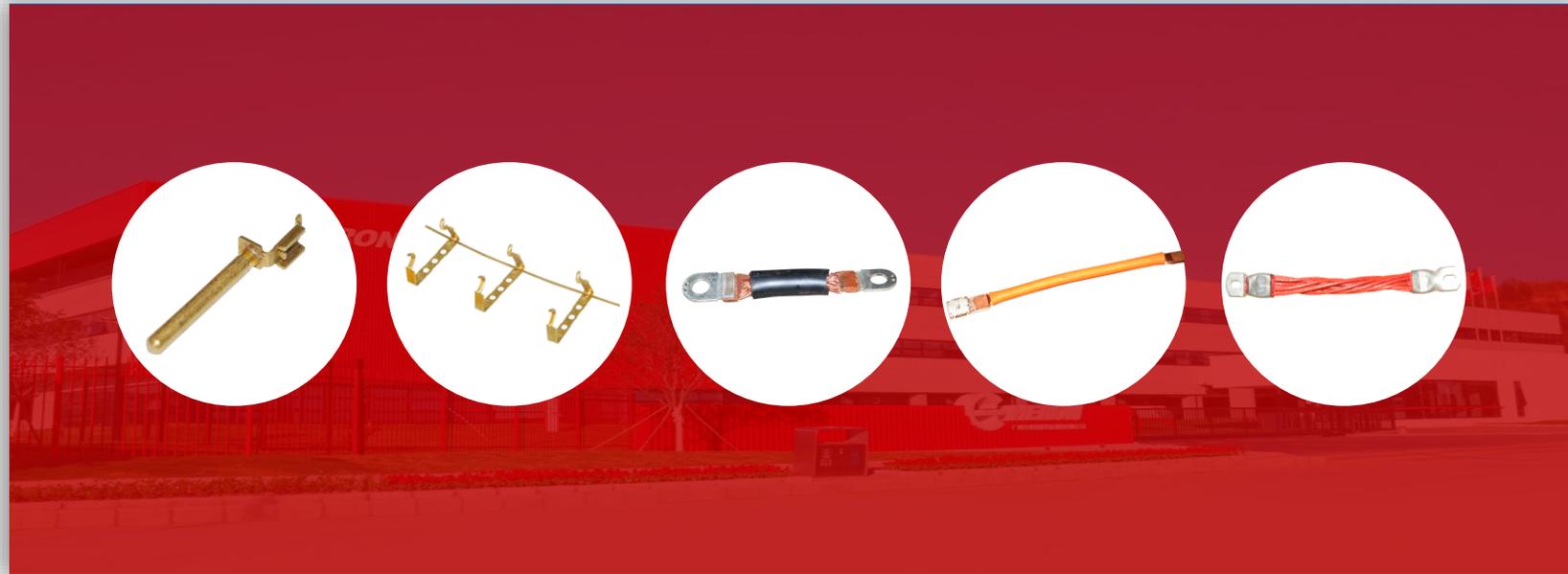
- 64-station ring line automatic production line;
- The production line is highly integrated, the length and width of the main body is only 8 meters x 2 meters, and it realizes the automatic feeding of 6 kinds of metal components and seat components, 7 welding processes and multiple automatic inspection stations;
- The platform adopts steel belt drive, which has the characteristics of wear resistance, fatigue resistance, low ductility and high transmission accuracy;
- High production efficiency, production cycle up to 1.2~2s/piece after the production climbing period.

Model	ZA0-F21048
Power Supply	7*110KVA
Max. Primary Current	100A(每套电源)
Max. Short-circuit Current	18KA (每套电源)
Beats	1.2~2S/PCS



■ PART 4

Plug-in Connector Series



Connector Series

Welder For Socket Bracket

- Fully automated welding equipment;
- The copper wire adopts disc-shaped coil, which is automatically unloaded and automatically cut off after welding, which greatly improves the effective utilization rate of copper wire;
- The copper sheet adopts vibrating plate + mechanical gripper to automatically feed;
- Integrated equipment, observability and maintenance convenience, high accuracy of copper wire length and copper sheet welding position.

Model	DB-55-21005
Power Supply	55KVA
Max. Primary Current	63A
Max. Short-circuit Current	18KA
Max. Pressurization	980N
Beats	17S/PCS



Connector Series

Welder For Components Of The Plug

- Fully automated welding equipment;
- The column shank and insert are automatically loaded with vibrating plate + manipulator, and the integrated clamp tooling is adopted, which is helpful for high-precision positioning of the workpiece;
- The overall shape is relatively square, the layout is reasonable, and the top of the table is a transparent plexiglass cover, which is convenient for equipment maintenance and visual management.

Model	DB-55-15013
Power Supply	55KVA
Max. Primary Current	63A
Max. Short-circuit Current	18KA
Max. Pressurization	620N
Beats	6.5S/PCS



Connector Series

Welder For The Copper Nose Of The Connecting Wire

- Eight-station turntable welding machine;
- Manually put on the connecting wire and copper nose, automatic welding, automatic unloading of finished products;
- The welding machine takes into account the size range of the copper wire from 25 square ~ 90 square meters, and the welding heat of the large square connection line is large, so the welding area is cooled by direct watering to ensure stable welding quality, firm welding joints,

Model	DB-880-19004
Power Supply	880KVA
Max. Primary Current	700A
Max. Short-circuit Current	110KA
Max. Pressurization	25KN
Beats	6S/PCS



■ PART 4

Busway Series



Busway Series

Automatic Riveting Of Busbars

It is an automatic production line that realizes multi-point riveting of busbar shell and sealing plate.

BTM riveting technology is used to rivete and package the busbar shell (there are conductive copper bars and ground wires in the shell), and the riveting object is 1.5mm+1mm color coated plate;

The control system controls the multi-axis servo motor system, which can meet the riveting of different types of product packages (reflected in the change of bus length, width and height parameters);

One-key switching through HMI during changeover reduces manual intervention, avoids human operation errors and improves production efficiency.

Model	ZMY-015-001-14001
Riveting Force (Single Riveting Unit Max)	47KN
Total Riveting Stroke	35mm
Riveting Increasing Force Stroke	10mm
Boost Ratio	56:1
Beats	5min/PCS



Busway Series

- It is a special spot welding equipment for welding busbar trunking aluminum bar.
- Using medium frequency DC welding power supply, the transformer can output large current to meet the fastness requirements of spot welding of aluminum plate and bimetal sheet with a thickness of up to 5mm;
- The equipment is equipped with one welding machine head on the left and right, which can spot weld and connect the two ends of the aluminum bar at the same time;
- Both welding heads can be X/Y/Z three-axis servo moving, and the X-axis can move up to 2300mm, which meets the requirements of aluminum bars of different lengths and widths and different solder joint positions.
- The equipment is very suitable for spot welding of workpieces with large length and weight, which greatly reduces the labor intensity of manual operation and improves production efficiency.

Model	DB-880-18005
Power Supply	440KVA+440KVA
Max. Primary Current	350A
Max. Short-circuit Current	59.9KA
Max. Pressurization	6.1KN
Beats	5S/2 Point



Busway Series

- It is a special spot welding equipment for welding busbar trunking aluminum bar.
- Using medium frequency DC welding power supply, the transformer can output large current to meet the fastness requirements of spot welding of aluminum plate and bimetal sheet with a thickness of up to 5mm;
- The equipment is equipped with one welding machine head on the left and right, which can spot weld and connect the two ends of the aluminum bar at the same time;
- Both welding heads can be X/Y/Z three-axis servo moving, and the X-axis can move up to 2300mm, which meets the requirements of aluminum bars of different lengths and widths and different solder joint positions.
- The equipment is very suitable for spot welding of workpieces with large length and weight, which greatly reduces the labor intensity of manual operation and improves production efficiency.



Model	DB-440-20021
Power Supply	440KVA
Max. Primary Current	350A
Max. Short-circuit Current	59.9KA
Max. Pressurization	6.1KN
Beats	5S/ Point

Busway Series

It is a suspended hand-rivet pliers for aluminum bar's rivetless riveting.

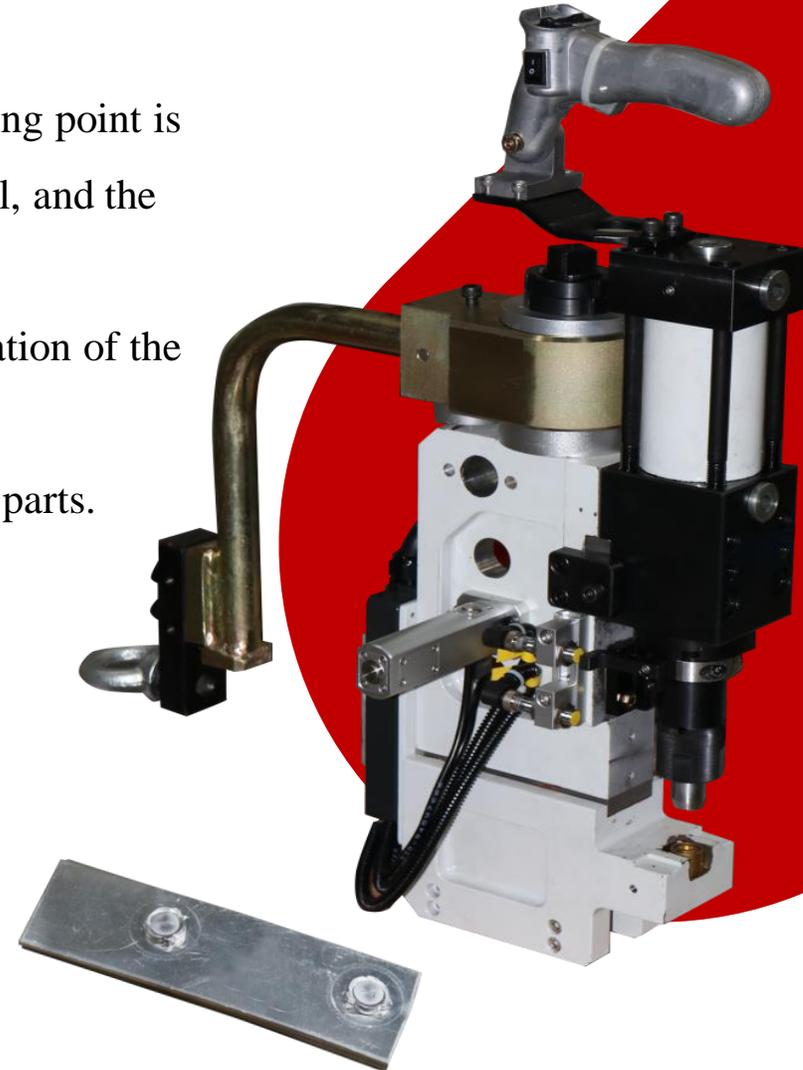
The riveting pliers body is small in size and flexible in operation;

Using the American BTM patented riveting mold, the aluminum riveting point is formed without sticking to the concave mold, the release force is small, and the surface of the riveting point is not strained;

The riveting point connection strength is high and the direct determination of the riveting point qualification index is easy to measure;

Modular mold parts for easy replacement and cost savings of wearing parts.

Model	ZMY-005-007-20003
Max Riveting Force	65KN
Total Riveting Stroke	35mm
Riveting Increasing Force Stroke	10mm
Boost Ratio	52:1
Beats	3~4S/Point



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**EXPERT IN
RESISTANCE WELDING · CLINCH**



Address

NO.63 Xin Yi Road, Taiping Town, Conghua District, Guangzhou, China



Phone

86-020-87815075



E-mail

Shelly@heronwelder.com



Website

www.heron-welder.com