

# Resistance Welding Machine

# TSM





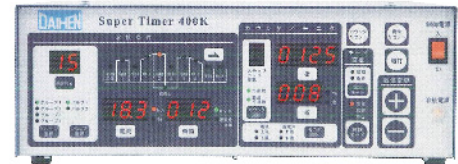
our product

# Microcomputer Timer



Made in Japan

**New innovation  
that VX series realizes!  
Leave it to the  
microcomputer  
for reliable welding  
result/quality control!**



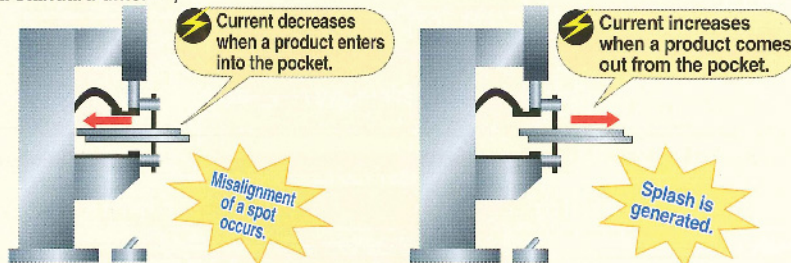
## VX-300K VX-400K

Just replacing a standard volume timer with the microcomputer timer ...

**Such a change into high quality production!  
Yield rate is improved!!**

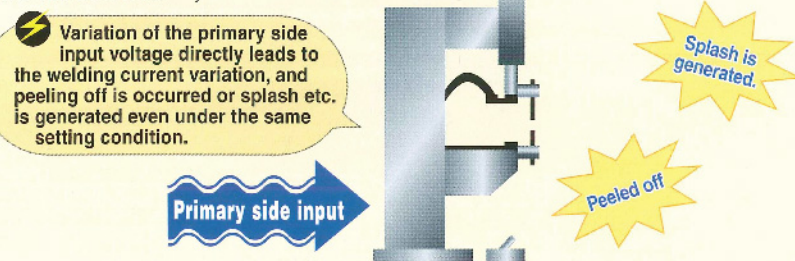
**Point 1** Regarding a current change by inserting a product in a direction to the pocket ...: Microcomputer timer ensures the Stability and Reliability!

With a standard timer ...;



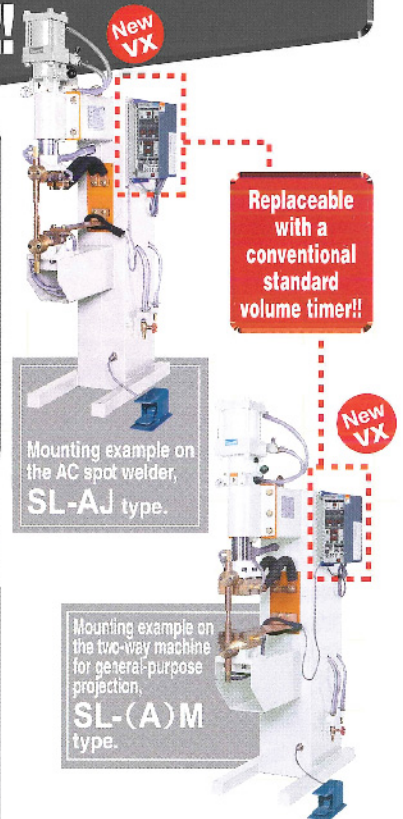
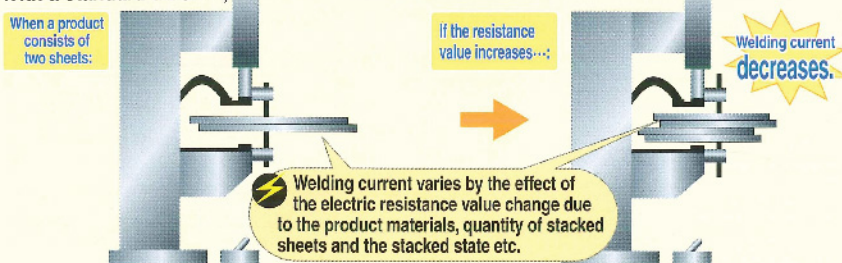
**Point 2** Regarding a change of current due to variation of the primary side input ...: Microcomputer timer ensures the Stability and Reliability!

With a standard timer ...;



**Point 3** Regarding a current change by the resistance value of an electrode's tip ...: Microcomputer timer ensures the Stability and Reliability!

With a standard timer ...;



**Option VX-400K can be connected to your PC!**



With PC connectivity, data such as welding parameters can be recorded to facilitate manufacturing control.

\* Contact our Sales Department for details.

our product

# Air Compressing AC Spot Welder

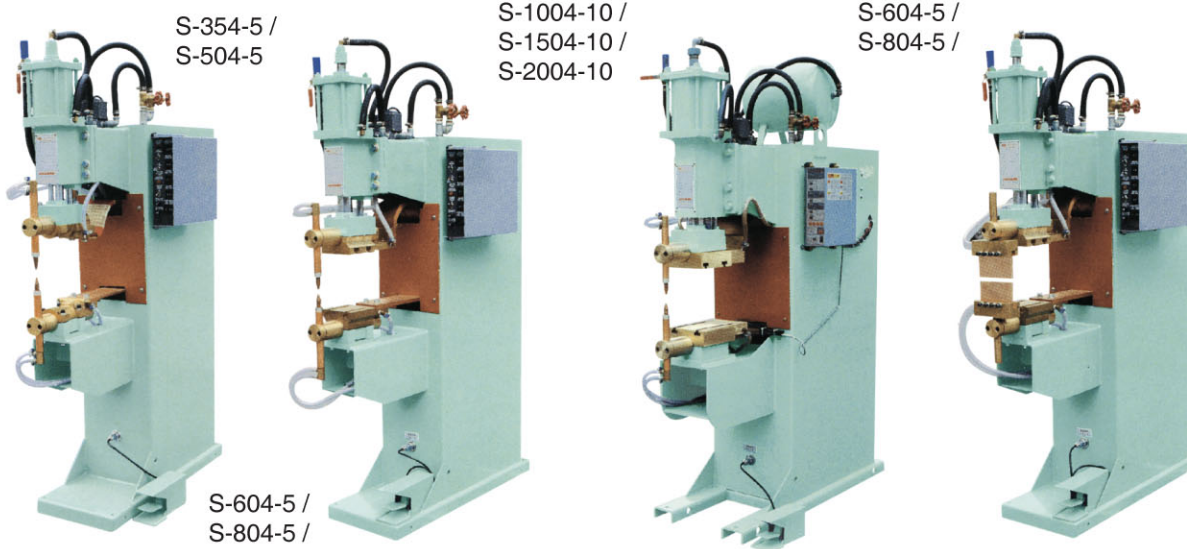
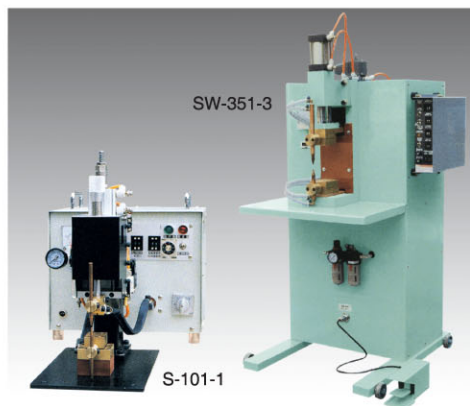
Light and handy desktop type, unique pressurizing mechanism, accurate adjustment of pressure speed. Welds are not liable to deforming under high pressure.

Control with computer IC circuit supported by power voltage fluctuant compensating circuit. Adoption of high-power import SCR contactless switch for the primary circuit, long using life of thyristor with stable output power.

## Apply to

Suitable for the welding of hardware parts, copper wire, electrical switch, panel and fine line.

Welding of wire mesh product, computer casing, automotive parts, office furniture, kitchen utensil, switchbox, stainless steel pan, vent pipe and housing of electric appliances.



Model	Rated Capacity KVA	Power voltage V	Rated Frequency HZ	Rated input KVA	Short Circuit A	Electrode Force Kg	Duty Cycle %	Throat mensions		Cooling Water Flow l/min	Machine Weigh kg	Machine dimension L x W x H mm x mm x mm	Welding Capability Low carbon steel mm+mm
								Opening mm	Depth mm				
S-354-5	35	200 400	50/60	85	16000	500	10	170	250	6	308	1000 x 500 x 1660	2.5+2.5
S-504-5	50	200 400	50/60	129	20000	500	10	170	250	6	320	1000 x 500 x 1660	2.8+2.8
S-604-5	60	200 400	50/60	145	22000	500	9.0	270	500	6	335	1000 x 500 x 1660	3.0+3.0
S-804-5	80	200 400	50/60	161	25000	500	8.2	270	500	6	385	1000 x 500 x 1660	4.0+4.0
S-1004-10	100	200 400	50/60	324	35000	1000	6.5	300	500	10	630	1150 x 570 x 1860	4.5+4.5
S-1504-10	150	200 400	50/60	445	42000	1000	5.5	300	500	10	700	1250 x 670 x 1860	5.0+5.0
S-2004-10	200	200 400	50/60	620	50000	1000	5.0	300	500	10	800	1250 x 700 x 1860	6.0+6.0
S-101-1	10	220	50/60	20	3500	100	10	50	170		42	600 x 350 x 430	0.6+0.6
SW-351-3	35	200 400	50/60	70	12000	300	10	180	170	6	200	800 x 600 x 1420	2.0+2.0

our product

# Air Compressing DC Spot Welder

## Features

- Capacitance Energy Storage Spot Welder, charge & discharge welding, the energy stored in the capacitor releases on the welding transformer instantly to produce high current. Saving electricity, small required power capacity, reducing cost, unaffected by power voltage drop, suitable for the welding of low-impedance materials such as aluminum, brass, nickel alloy, copper wire, silver tipped contact and capacitor.
- A short full discharge time of 0.003 second with a small consumption of electrode and a stable welding quality.



KEL-5K~10K

KEL-12K~20K

Model	Rated Capacity KVA	Power Voltage V	Rated Frequency HZ	Max. Output W.S	Circuit Voltage UF	Max. Pressure Kg	Charge Voltage DC-V	Throat Mensions		Welding Thickness mm+mm	Machine Dimension L x W x H mm
								Opening mm	Depth mm		
KEL-500	1	200 400	50/60	500	5400	120	10-450	195	170	0.6+0.6	800 x 600 x 1450
KEL-1000	2	200 400	50/60	1000	10800	120	10-450	195	170	1.0+1.0	800 x 600 x 1450
KEL-1500	3	200 400	50/60	1500	20250	200	10-450	195	170	1.2+1.2	950 x 600 x 1450
KEL-2500	5	200 400	50/60	2500	33750	500	10-450	230	500	1.5+1.5	1000 x 800 x 1700
KEL-4000	8	200 400	50/60	4000	54000	800	10-450	230	500	2.0+2.0	1000 x 800 x 1700
KEL-5000	10	200 400	50/60	5000	67500	1000	10-450	300	500	2.5+2.5	1000 x 800 x 1700
KEL-6000	12	200 400	50/60	6000	81000	1000	10-450	300	500	3.0+3.0	1250 x 1000 x 1860
KEL-8000	16	200 400	50/60	8000	108000	2000	10-450	300	500	4.5+4.5	1250 x 1000 x 1860

## Inverter controlled D.C Spot Welder / Projection Welder

### New Inverter DIT series

#### Features

- Suitable for welding galvanized steel sheets and aluminium alloys sheets.
- Realized high quality welding of high reliability by wide welding current.
- Make the most of restrain scar burn and strain by pulseless welding current.
- Dissolve the power supply unrest by three-phase low input balanced load.



SLI-50B4

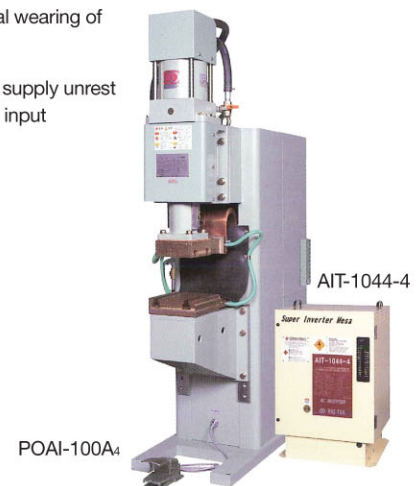
DIT-543-4

## Inverter controlled A.C Spot Welder / Projection Welder

### Super Inverter Mesa AIT series

#### Features

- The scattering scorch decreases sharply.
- Effecting reduce the voltage fluctuation and decreasing of electrode dressing.
- Dissolve the partial wearing of electrode dressing.
- Dissolve the power supply unrest by three-phase low input balanced load.



POAI-100A4

AIT-1044-4

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# Controller

- Simple Operation
- Single & Dual Gun Operation
- Multiple Heats & Pulsation
- Built On Spot & Job Counter

## Features

### Monitoring

With the help of Large Display panel **Set Parameters and Monitored Data** can be continuously viewed which helps operator manage the welding process.

### Error Display

Error number will be displayed on the Display panel along with error alarm. Description of the error is mentioned on the face plate which helps operator resolve the problem instantly.

### Combination of constant current and voltage compensation.

To achieve high quality weld in Zinc coated sheets. Combination of constant current and voltage compensation is available. Multiple heats and pulsation are also available.

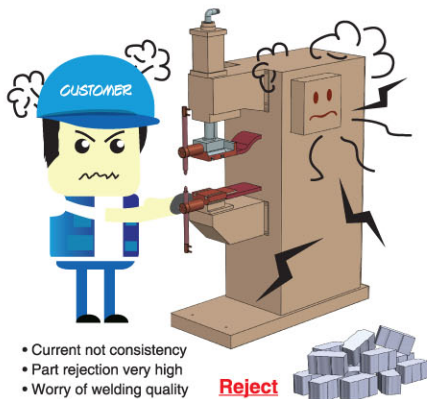
### Suitable for spot & Projection Built-in Spot & Job counter

2 separate Displays for Spot & Job count, this helps to monitor production quantity at any given time.



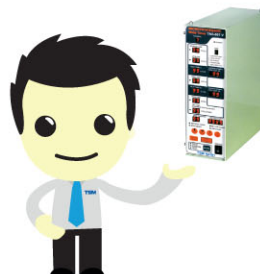
## Table for standard Controller

Features	Parameters	Specifications
Basic Frame	Channel	15 Channel
	Squeezing System	2 Systems
	Heating Step	2 Steps
	Sequence Step	6 Steps
Time Set	Heating Time -1 / -2	0-99 Cycles
	Other Step Time Set	0-99 Cycles
	Pulsation Control	0-99 Times
	Current Up-Slope	0-29 Cycles
	Current Down-Slope	0-29 Cycles
	Welding Current (Secondary)	2.0-49.9kA
	Current Range (Secondary)	Max.5.0 - 49.9kA
Current Controls	Constant Current Response Time	0.5 cycles
	Constant Current Response Speed	0.5 cycles
	Constant Current / Voltage Compensation Control	Equipped
	Current Detector Coil	WDC 550
	Constant Current Monitor	± 5%
Monitoring Function	Full-Heat Check	Under Voltage Compensation
	Coolant Check	Thyristor Coolant Level
	Welding Power Check	Monitoring Welding Power
	Thyristor Short-Circuit Detection	Welding Power Check
Counter	Spot Counter	0 ~ 99 Units
	Job Counter	0 ~ 9999 Units
External Input / Output	Heating Interlock Output	Solid-State Circuit
	Off time Output	One Make-Contact
	Alarm Output	One Make-Contact

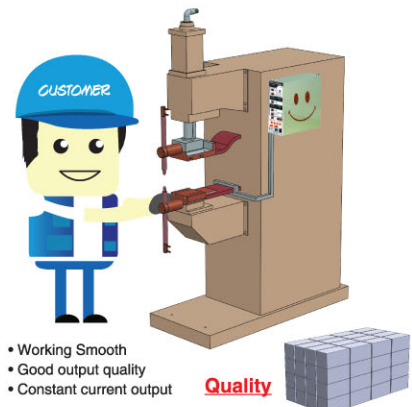


- Current not consistency
- Part rejection very high
- Worry of welding quality

**Reject**



- Change new controller
- With secondary detector coil
- Old machine parts service



- Working Smooth
- Good output quality
- Constant current output

**Quality**

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# Super Inverter Mesa AIT Series

AC Inverter Control Device



TRANSFORM SINGLE PHASE A.C.  
WELDER INTO INVERTER CONTROLLED  
SPOT WELDER

## Do you have these troubles?

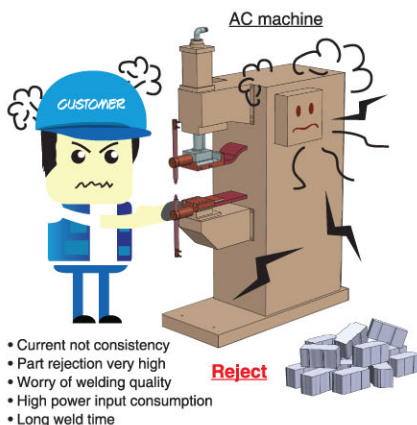
- Galvanized steel sheets
- Electrode grinding
- Restraint the splash
- Burn and strain
- Welding quality.
- Effecting reduce the voltage fluctuation.

## Solve the problems

- Secondary constant current control
- The single phase A.C. Welder machine is transformed
- The Welding condition can be transmitted to the program box with the memory.
- The seam weld can be speed up.

## Specification

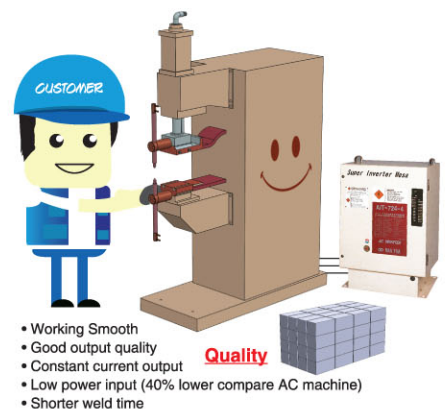
Type	For Spot and Projection welding machine							For Seam welding machine	
	AIT-724-4	AIT-1124-4	AIT-1624-4	AIT-544-4	AIT-844-4	AIT-1044-4	AIT-1644-4	AIT-826-4	AIT-846-4
Power supply	Three phase A.C.200V/220V±10% <b>A</b>			Three phase A.C.400V/440V±10% <b>B</b>				<b>A</b>	<b>B</b>
Frequency	50/60Hz								
Output voltage	Single phase 300V (Peak value A.C.220V) <b>C</b>			Single phase 600V (Peak value A.C.440V) <b>D</b>				<b>C</b>	<b>D</b>
Output frequency	Standard settings 50 or 60Hz synchronous to frequency of power supply. Also frequency can be set from 20 to 180Hz by each 1Hz								
Output current	700	1100	1600	500	800	1000	1600	800	800
Reted capacity	75	118	173	108	173	216	346	214	429
Maximum capacity	210	330	480	300	480	600	960	240	480
Reted duty cycle	6.5							40	
Control method	Primary or secondary constant current control by PWM control								
Repeated output current accuracy	Repeated accuracy is within ± 3% of scale by primary control Repeated accuracy is within ± 3% of scale by secondary control								
Straight line accuracy	Straight line accuracy is within ± 5% of full scale								
Setting of welding current	By program box or analog input								
Setting of welding condition	7/15/31/63/127 Conditions								
Control unit	Time unit: 1 cycle (1msec unit can be set without heat time) Welding current unit: 100A or 1A								
Maximum welding condition	127 welding conditions, 7 transformers and 2 solenoid valves								
Output squeeze solenoid valve	Each circuits of A.C.100V and D.C.24V can be selected								
Function of EP solenoid valve	Three pressure can be set by two electric and pneumatic proportional solenoid valve circuits (option)								
Mass	29	40	86	29	40	42	86	63	
Leak breaker capacity	150A	225A	350A	100A	175A	200A	350A	400A	400A
Input cable	22sq M8	38sq M8	150sq M12	14sq M8	38sq M8	38sq M8	150sq M12	100sq M12	100sq M12
Output cable	60sq M8	100sq M10	200sq M12	38sq M8	60sq M10	80sq M10	200sq M12	150sq M12	150sq M12
Amount of cooling water	3L/min, AIT-825-4 & AIT-846-4 is 5L/min								
Temperature of cooling water	30°C or less								



- Current not consistency
- Part rejection very high
- Worry of welding quality
- High power input consumption
- Long weld time



- Change new super inverter mesa AIT Series
- No need controller
- No need thyristor
- Old machine parts service

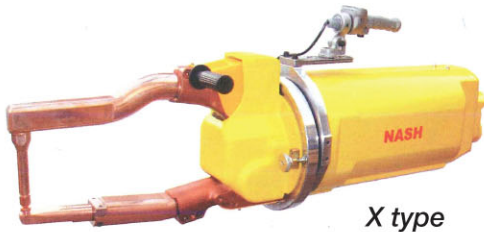


- Working Smooth
- Good output quality
- Constant current output
- Low power input (40% lower compare AC machine)
- Shorter weld time

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# Integral Transformer Guns Slimline Series A/C / MFDC / SERVO

- Compact Design
- High Conductivity Copper Alloy Brackets for Higher Electrode Force
- Modular Multistage Cylinder



X type



C type

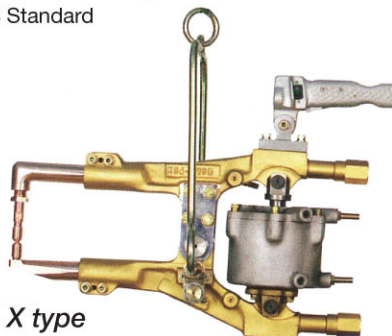
- ISO Transformers 23 KVA - 103 KVA.
- Medium Frequency transformers 56 KVA - 600KVA.
- *Medium Frequency guns 56 KVA - 250KVA.*
- Weld force up to 850 kgs.
- Hi-Lift facility on all guns.
- Gun locking facility in rotary and vertical plane.
- Easy maintenance as all guns are of modular construction.

- Constant current through primary and secondary.
- Thermostats on primary and secondary for total thermal protection.
- Emergency switch provided on gun (Optional).
- Selection switches on handle - 2 weld programs, weld on/off, Hi-lift and initiation.
- Special automotive standard safety to give 30ms/30mA tripping.

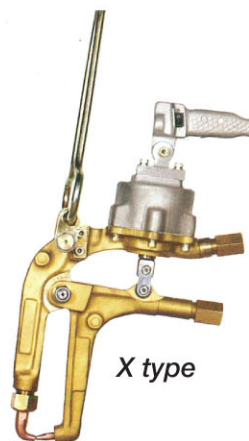
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# Cable Guns

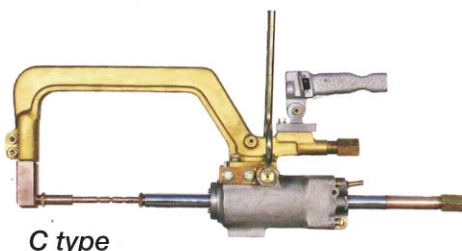
- BSBM Japan Design
- JIS Standard



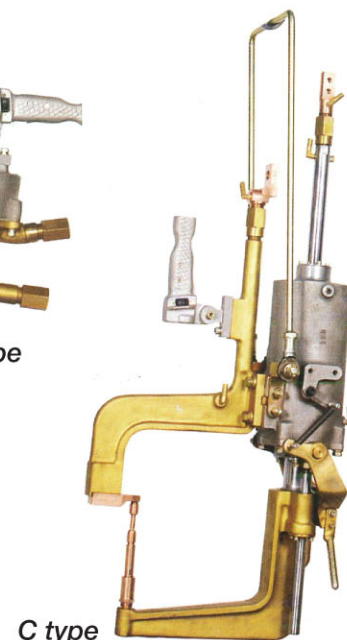
X type



X type



C type



C type

## Specifications for IT Guns - 50Hz / 60Hz AC

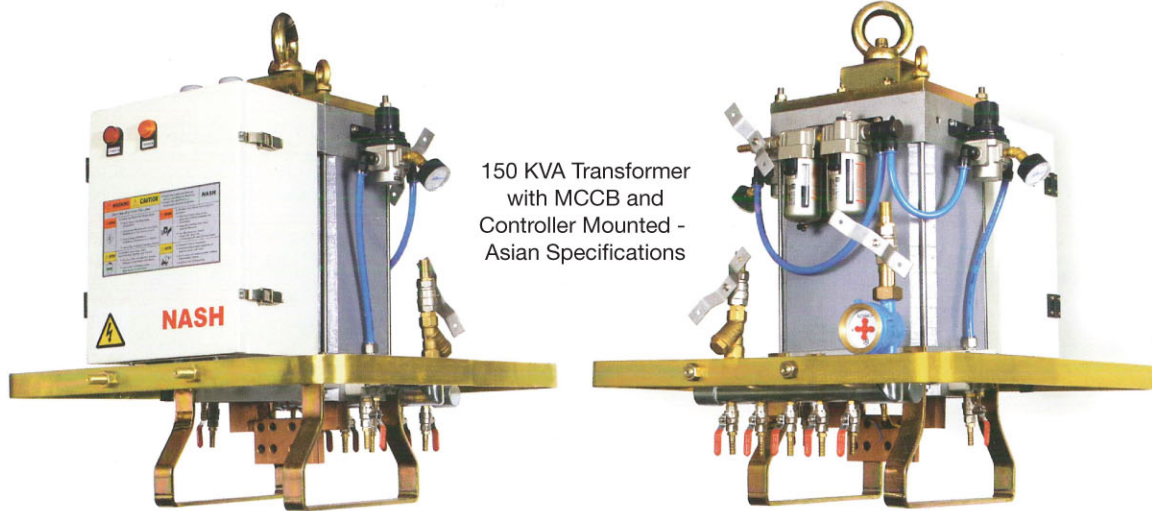
"X" TYPE	X - 23	X - 32	X - 36	X - 48	X - 54	X - 61	X - 75	X - 103
"C" TYPE	C - 23	C - 32	C - 36	C - 48	C - 54	C - 61	C - 75	C - 103
Power at 50% DC KVA	23	32	36	48	54	61	75	103
Power at 100% DC KVA	16	23	26	34	38	43	54	73
Secondary Volts V	4.5	5.6	6.3	6.3	7.1	8	10	13.5
Short Circuit Current (MIN.TD.) KA	14	16	18	18	20	24	26	30
Primary cable cross section mm <sup>2</sup>	10	10	10	10	10	16	25	35
Max Welding Capacity MS Sheet mm	1.5 + 1.5	2 + 2	2.5 + 2.5	2.5 + 2.5	3 + 3	4 + 4	4 + 4	5 + 5
Capacity Round mm	8 + 8	10 + 10	12 + 12	12 + 12	14 + 14	16 + 16	16 + 16	20 + 20
Throat Gap "X" type i mm	100	100	100	150	150	150	150	150
ii mm	150	150	150	200	250	250	250	250
iii mm	200	200	200	250	300	300	300	300
Throat Gap "C" type i mm	110	110	110	110	110	110	-	-
ii mm	200	200	200	200	200	200	-	-
iii mm	300	300	300	300	300	300	-	-
Throat Depth "X" type min mm	190	190	190	255	255	255	255	255
max mm	800	800	1030	1030	1030	1030	1030	1030
Weld Force (6 bar) "X" mm	350	350	350	500	680	680	850	850
Max on 250 mm Arms "C" mm	450	450	450	450	450	450	450	450
Water Flow @ 2 bar lpm	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12
Weight without arms kgs	50	53	55	75	78	82	90	102

## Specifications for IT Guns - MFDC 1000Hz (Inverter)

X Type	X - 56	X - 75	X - 100		
C Type	C - 56	C - 75	C - 100		
Power at 50%	KVA	56	75	100	
Secondary Volts	V	6.3	8	9.0-10.0	
Short Circuit Current (Min. TD)	KA	18	25	30	
Max. Welding Current	KA	14.4	20	24	
Supply Power	KVA	68	120	162	
Max. Welding Capacity (MS Sheets)	mm	2.5 + 2.5	3.0 + 3.0	4.0 + 4.0	
Distance Between Arms	I	100	150	150	
X' Type	II	mm	150	200	200
	III	200	250	300	
Distance Between Arms	I	100	100	100	
C' Type	II	mm	200	200	200
	III	300	300	300	
Throat Depth	min	mm	190	190	250
	max	mm	500	800	1200
Weld Force at 6 bar	X-Gun	Kgf	350	500	850
Max. on 250mm Arms	C-Gun	Kgf	450	450	450
Weight without Electrode Arms			50	59	90

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# Portable Spot Welding Transformer



150 KVA Transformer  
with MCCB and  
Controller Mounted -  
Asian Specifications

## Accessories



- Water Flow meter
- Weld on-off switch
- Gun handle

### • Fully Epoxy Moulded Welding Transformer

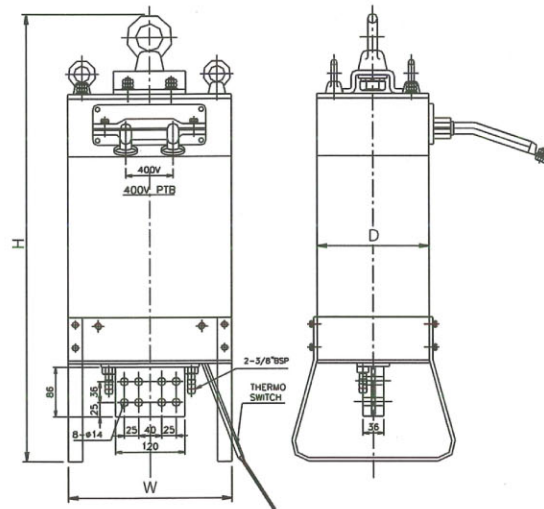
Primary and secondary coils are moulded into single body with Epoxy Resin for compact construction. This construction provides excellent resistance to humidity, dust and vibrations.

### • Safety Measures

Abnormal temperature rise of primary coil due to exceeding the duty cycle limits and that of secondary coils due to water failure / shortage are detected by their respective thermostats, thereby ensuring full protection to transformer.

### • Standard Accessories

Water manifolds, Water Flow Indicator, Relay terminal box. Every inlet has a lever type on-off valve.



## Technical Specifications JIS Standard

Model	Rated Capacity at 50% DC KVA	Max Secondary Voltage V	Water Flow L/min	Approx. Weight Kgs	Dimensions W x D x H	Max Welding Current A	Max Input KVA	Duty Cycle %
PGS-A-75	75	16	8-10	100	300 x 210 x 725	11000	175	9
PGS-A-100	100	18	10-12	115	300 x 210 x 775	14500	265	7
PGS-A-150	150	21	10-12	140	300 x 210 x 725	16000	335	10
PGS-A-200	200	25	10-12	160	300 x 210 x 834	18000	445	10

our product

# Advanced Microprocessor Weld Controller - Nash 960

- 64 Programs
- Password Setting
- Triple Heat Sequence
- Slopes
- Constant Current primary/secondary
- Seam Welding Mode
- Proportional Valve output
- Steppers
- Inputs for Automation Purpose and Robotic Welding
- Chain Sequencing
- Networking - Ethernet/Profibus Connectivity
- Option of Single/Dual/Triple Gun Operation



**Built-in Programming Module**



**Remote Programming**



**Capsule Model**  
Vertical and Horizontal

## Key Features

- Easy to use
- Conduction Angle / Constant current for excellent Quality of weld.
- Inbuilt Programmer or Detachable Programmer
- 50/ 60 Hz operation Auto Detection
- 64 programs for store settings for different materials and thicknesses
- Hilift / Retract facility suitable for all types of gun operation Standard / Hilift + / Hilift -
- Counter functions (spot count , Job count, Tip Dress count, Tip Change Count, Total Weld Counts)
- Weld current monitoring Display
- Proportionate Valve output to control welding force. Pressure monitoring Display
- Sequence - Spot , Roll spot , seam

## Optional

- MCCB ELR (Earth Leakage Relay)
- Reset Box

## Specifications 960

### Constant Current Primary or Secondary Feedback

Power: 415V AC + 10% - 15% 50 Hz AC

**Data Storage: FRAM memory, 45 years of Data Retention Control Range**

Firing angle 30 ~ 150      Primary Current 50 ~ 1500A  
Secondary Current 2 ~ 60 kA      Turns Ratio 1.0 ~ 200.0



### Reset Box with LCD display & without LCD display

Reset Box is provided with every controller to reset the errors and to monitor the data. It is available in two type Electronic reset box & Mechanical reset box

### Features: Electronic Reset Box

- 2 line 16 character Blue display
- 5 keys, Mode key : change weld / no weld and force test mode with LED indication, separate key for stepper reset
- INC / DEC Key : For 64 program selection
- Reset key : Reset the error and change the main screen
- Toggle s/w for coated and non coated program Selection
- Control ON / OFF Switch for control power On / Off

### Fault detection function (All errors are displayed in description form)

\* No Air, No Water \* No current. \* Job count reached. \* Spot count reached. \* SCR Short. \* SCR overheat. \* Solenoid cable short detection \* Weld transformer overheat. \* Extremely low current \* Low current limit. \* High current limit. \* Communication fault. \* Tip Dress, Tip Change \* Air Pressure Limits \* SEAM Drive Error \* Low / High Conduction Angle \* No ZCD \* Initiation Switch Short

## Operation

### 64 Programs weld parameters

Presqueeze	0-250 cycles
Squeeze	1-250 cycles
Upslope	0-30 cycles
Weld 1	0-99 cycles
Cool 1	0-99 cycles
Weld 2	0-99 cycles
Cool 2	0-99 cycles
Weld 3	0-99 cycles
Cool3	0-99 cycles
Down slope	0-30 cycles
Pulses	1-9
Hold	0-250 Cycles
Off	1-250 cycles
Pressure	0-9 Bar
Heat 1	0-99%
Heat 2	0-99%
Heat 3	0-99%
Current 1	2-60 kA
Current 2	2-60 kA
Current 3	2-60 kA

## Monitoring Parameter

Current monitor	ON/OFF
Weld 1, Weld 2, Weld 3 High limit	0-50%
Weld 1 Weld 2, Weld 3 Low limit	0-50%
Pressure/ Force Monitor	ON/OFF
Pressure / Force - High/Low limit	± 50%
Conduction Angle Monitor	ON/OFF
Conduction High/Low limit	0-180 Deg.

## Input Signal Specification

Program selection	6 Numbers
Fault Reset	1 Number
Stepper reset	1 Number
Thermostat	1 Number
Weld / No Weld	1 Number
Foot Switch	1 Number
Retract Switch	1 Number
Air Switch	1 Number
Water	1 Number
Initiation 2	1 Number
Tip Dress/Tip change Reset	1 Number
Spot/Job count Reset	1 Number
Open Circuit Voltage	24V DC
Short Circuit current	10mAmp

## Output Signal Specification

Transistorized output 24 VDC (Total output current should not exceed 500mA)  
Initiation Solenoid, Retract Solenoid, Weld complete, Fault, Stepper Complete, Ready, Tip Dress/Tip change, Spot/Job Count complete for Seam mode drive run output

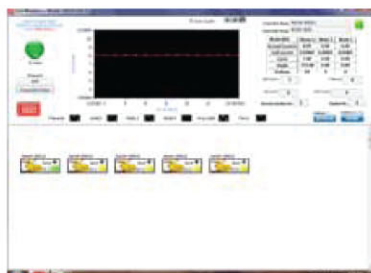
## Configuration Common Parameter

Torrid selection – Primary or Secondary  
Current setting Range – 2 KA to 60KA

## Calibration Parameter

Torrid sensitivity	100..2000 mV/kA
CT Secondary Ratio	1.0
CT Primary Ratio	1.1 - 200
Pressure / Force	Bar / Kg

## Lab view based NASH make PC software for Programming and monitoring.



our product

# Robot Gun SRA166/210-01A



Made in Japan

## Features

### World Class Speed Robot

- Robot motion makes minimum cycle times unbeatable. Light weight and highly rigid design results in high acceleration and minimum vibration. Maximum speed on all axes reduces move time. All this provides dramatically improved productivity.

### Superior Spot Welding Capability

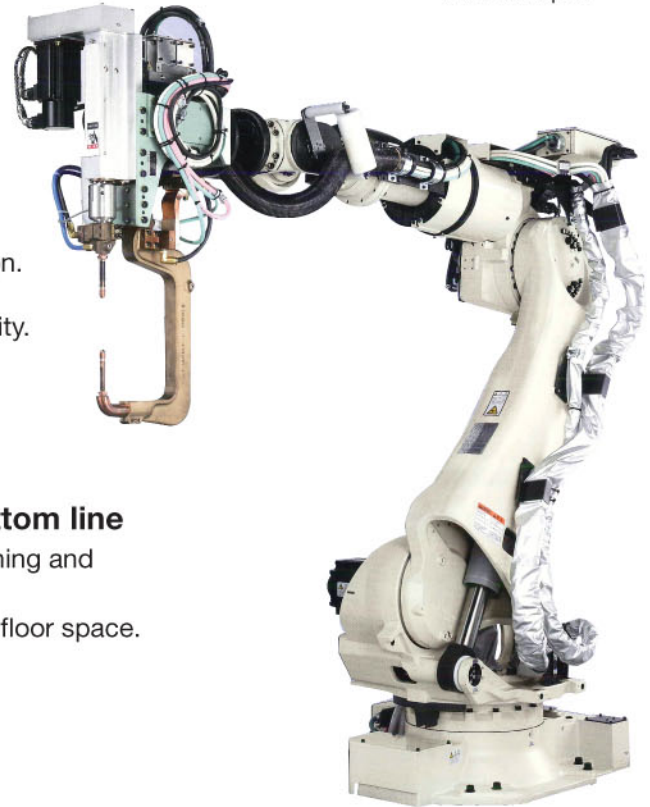
- Industry leading advanced servo gun software feature and technologies.

### SRA robot ease of use improves the bottom line

- Improved drives and motors for accurate positioning and better repeatability.
- Compact design allows closer installation in less floor space.

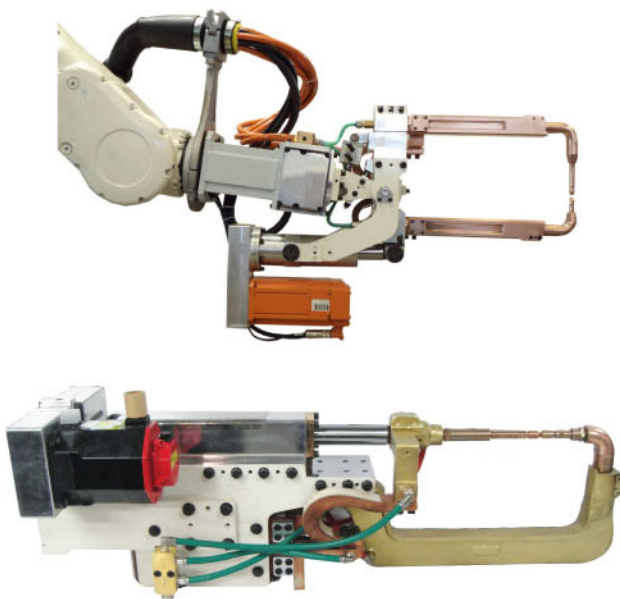
### Improved energy efficiency

- Power consumption reduced 15% from existing models by reducing the robot's weight by 20% and using cutting edge motor drive controls.



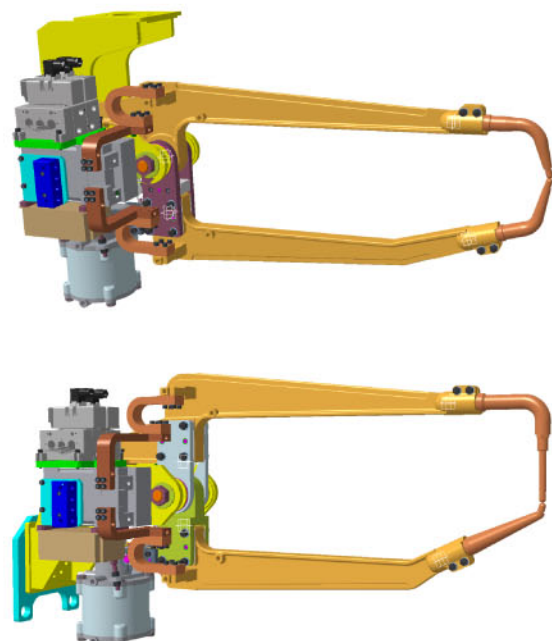
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# Robot Servo Gun



our product

# Pneumatic Gun



**Robot Specifications**

Item		Specifications	
Robot Model		SRA166-01A	SRA210-01A
Structure		Articulated Construction	
Number of axes		6	
Drive System		AC servo system	
Max.operating area	Arm	J1 Swivel	±3.14 rad (±180°)
		J2 Forward/backward	+1.05~-1.40 rad (+60°~-80°)
		J3 Upward/downward	+2.62~-2.56 rad (+150°~-146.5°)
	Wrist	J4 Rotation 2	±3.67 rad (±210°)
		J5 Bending	±2.09 rad (±120°)
		J6 Rotation 1	±3.58 rad (±205°)
Max.velocity	Arm	J1 Swivel	2.18 rad/s (125°/s)    2.01 rad/s (115°/s)
		J2 Forward/backward	2.01 rad/s (115°/s)    1.83 rad/s (105°/s)
		J3 Upward/downward	2.11 rad/s (121°/s)    1.97 rad/s (113°/s)
	Wrist	J4 Rotation 2	3.14 rad/s (180°/s)    2.44 rad/s (140°/s)
		J5 Bending	3.02 rad/s (173°/s)    2.32 rad/s (133°/s)
		J6 Rotation 1	4.54 rad/s (260°/s)    3.49 rad/s (200°/s)
Payload		Wrist	166kg    210kg
Allowable static load torque		J4 Rotation 2	951 N·m    1,337 N·m
		J5 Bending	951 N·m    1,337 N·m
		J6 Rotation 1	490 N·m    720 N·m
Max. allowable moment of inertia <sup>2</sup>		J4 Rotation 2	88.9 kg·m <sup>2</sup> 141.1 kg·m <sup>2</sup>
		J5 Bending	88.9 kg·m <sup>2</sup> 141.1 kg·m <sup>2</sup>
		J6 Rotation 1	45.0 kg·m <sup>2</sup> 79.0 kg·m <sup>2</sup>
Position repeatability <sup>3</sup>			±0.1 mm    ±0.15 mm
Ambient temperature		0 ~45°C	
Installation		Floor Mounted	
Robot mass		1,060 kg	1,090 kg

1[rad] = 180/π[°], 1[N·m] = 1/9.8[kgf·m]

\*1 : Load specification of number 1 arm varies according to wrist load conditions and installation position.

\*2 : Note that the allowable moment of inertia of wrist varies with the wrist load conditions.

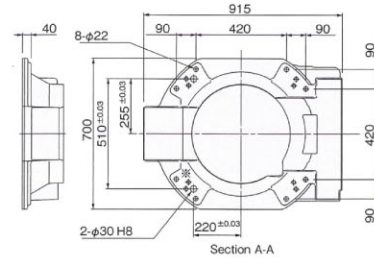
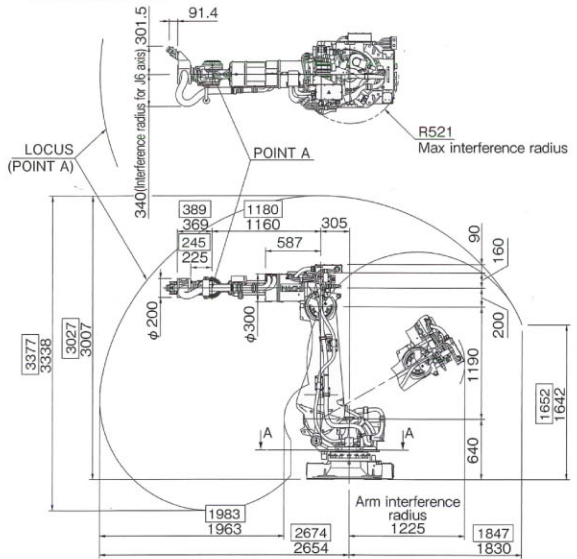
\*3 : JIS B 8432 compliant.

**Exterior Dimensions and Operating Envelope**

SRA166/210-01A

\* Data shown in □ for SRA210-01A.

\* The diagram below shows specifications for cable support (A-Trac4) installed on the arm of a spot welding robot.

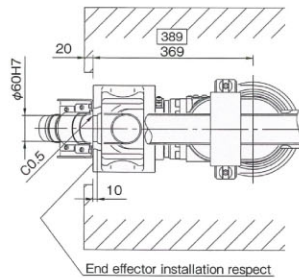
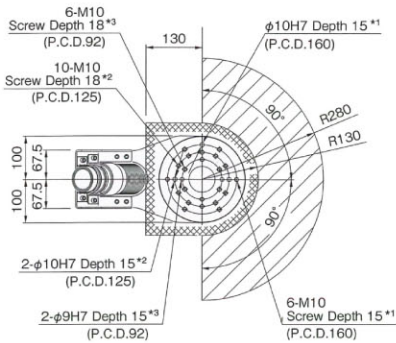


SRA166/210-01A

\*1 : This screw can be used for 210kg or less. (P.C.D.160)

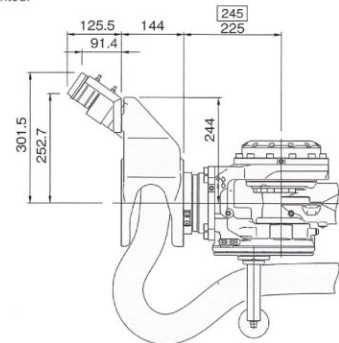
\*2 : This screw can be used for 166kg or less. (P.C.D.125)

\*3 : This screw can be used for 100kg or less. (P.C.D.92)



/// Indicates the operating area of the A-Trac4 spring. Prevent intrusion of end effector into this area. Interference of the A-Trac4 spring may damage the end effector. Also note that the cable inside the A-Trac4 spring may be damaged if something catches on or interferes with the A-Trac4 spring.

■ Indicates area where tools can be mounted.



● The specifications are subject to changes without notice.

● In case that an end user uses this product for military purpose or production of weapon, this product may be liable for the subject of export restriction stipulated in the Foreign Exchange and Foreign Trade Control Law. Please go through careful investigation and necessary formalities for export.

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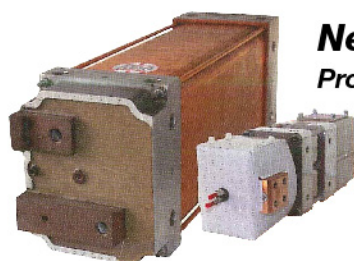
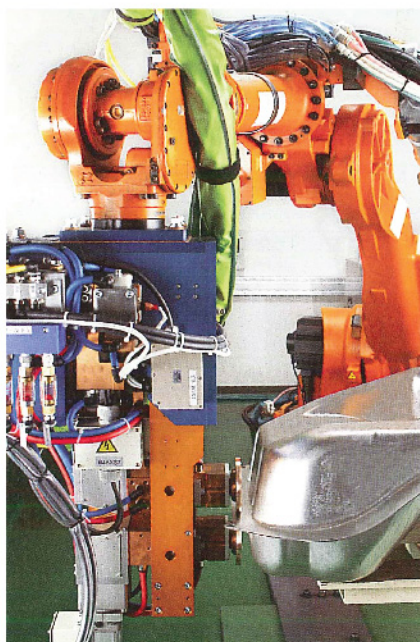
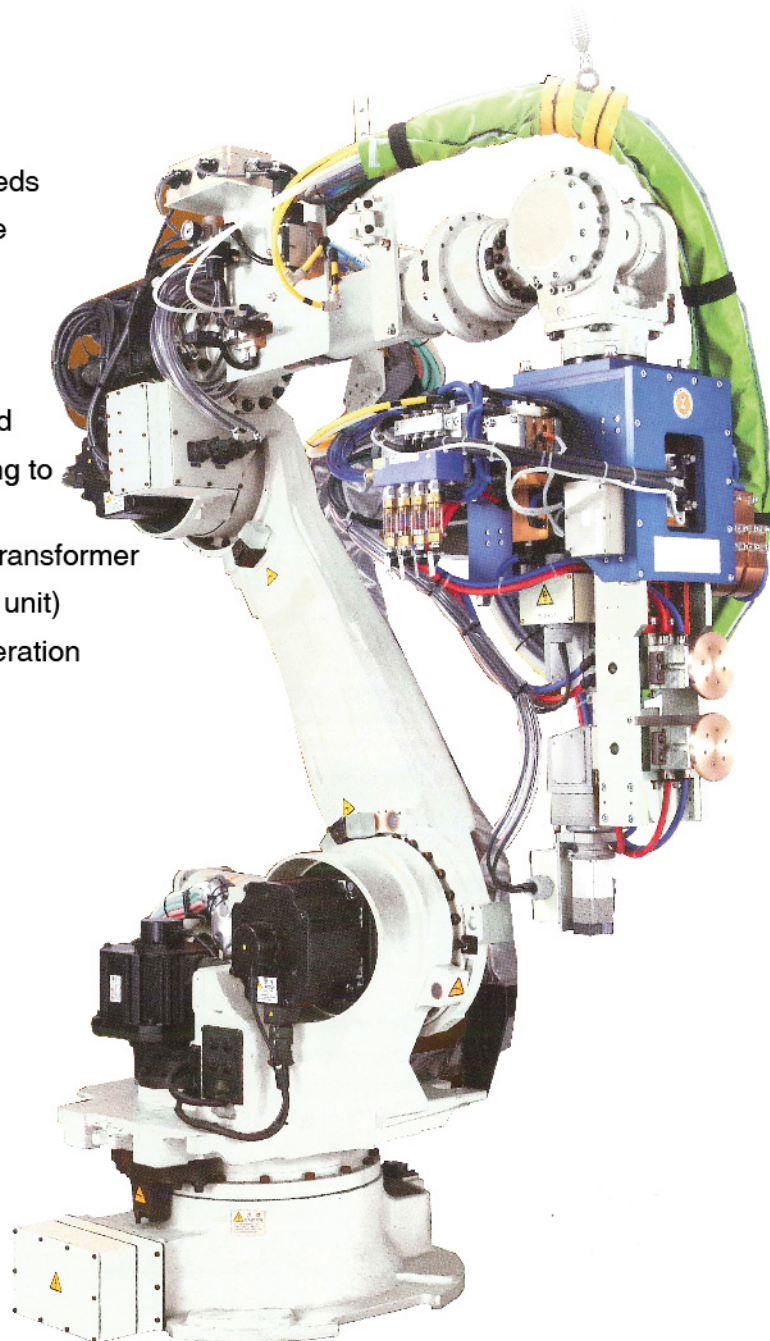
# High-speed Seam Welding Robot



Made in Japan

## Features

- Handles 3D shapes
- Super fast welding surpasses laser speeds
- Consistent welding even at low pressure
- High efficiency for energy savings
- Synchronized rotation of electrodes
- Electrode wear compensation function
- Welding parameter coordinated to speed
- Electrode speed compensation according to thickness of steel sheet
- Super compact and highly efficient MF transformer
- Long-life special housing (power supply unit)
- Non-slip welding with dual electrode operation



### **Newly Developed MF Transformer**

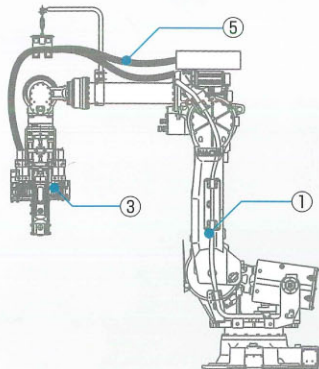
*Proprietary transformer for controlling current for welding*

### **Capacitance : 70 kVA**

- Transformers available from 70 kVA to 220 kVA
- Conventional model 40kg
- Developed Product 9kg

## Standard System Configuration

### • Standard Products



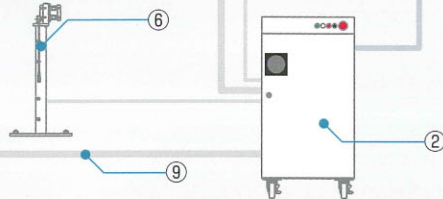
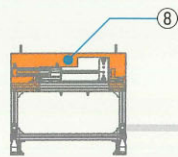
### • Items provided by customer

Air:  
External diameter Ø 12x1  
Water Supply hose:  
Internal diameter Ø 19x2  
Water exhaust hose:  
Internal diameter Ø 19x2

3 phase  
200 VAC

3 phase  
400 VAC

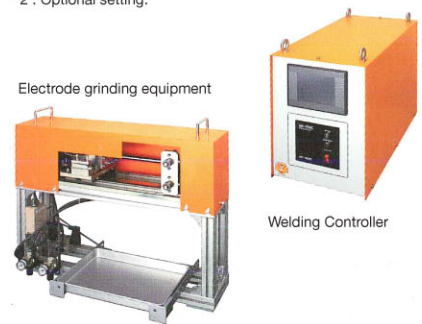
### • Options



No.	Name of Product	Model
1.	Robot*1	ST210F-01
2.	Robot Controller	AX20-0000
3.	Seam Welder	RS-0910510
4.	Welding Controller	AH-FFHC-640
5.	Included Equipment (air and cooling water equipment)	-
6.	Electrode Wear Detection LS	E0516298D2
7.	Cable (robot/welder)	-
8.	Electrode grinder*2	090990
9.	Electrode grinder cable*2	-
10.	Items provided by customer	-

\*1 : Robot models may change due to specifications of welder, layout, and other considerations.

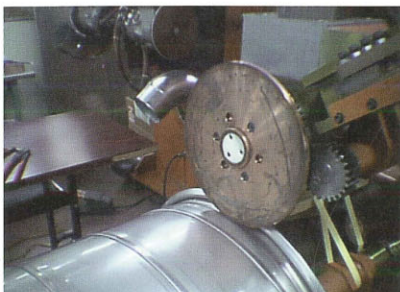
\*2 : Optional setting.



Electrode grinding equipment

Welding Controller

## Example of seam welding applications



Spiral pipe and flange



Auto body



Portable gas tank

our product

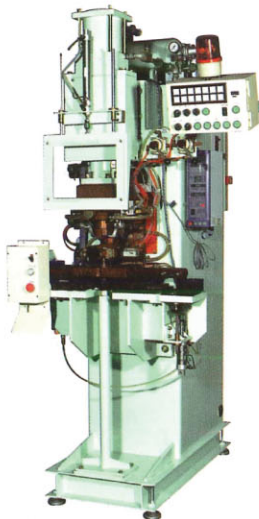
# Projection Welding Machine

## Stationary Type

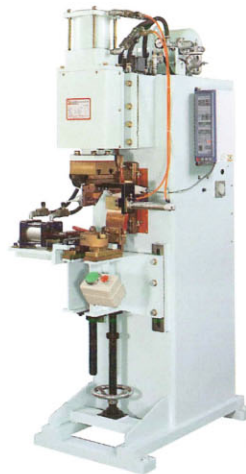
- Rigid machine body ensure stable welding quality.
- Automatic alignment function make sure the welded parts are of high precision.
- Special tooling design to reduce waste of used copper rolling.
- Light and easy for small applications.
- Easy to grind after welding, minor burr.
- Three phase inverter DC welding solution for energy saver's selection.
- Quick die changing system is available as an option in DS-PJ-DX model.



DDIS-150-300-PJ



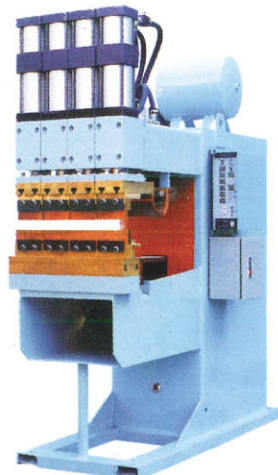
DS-200-PJ-DX



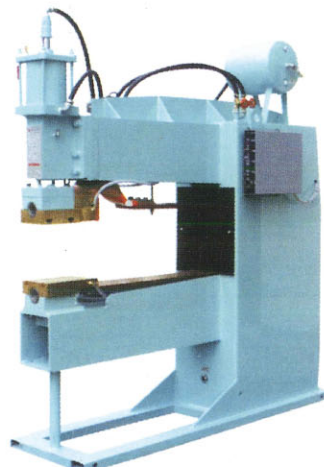
DS-150~300-PJ



DS-100~200-PJ-WM



Projection Welding  
TE-150-4



Long Horn Welding  
TE-150

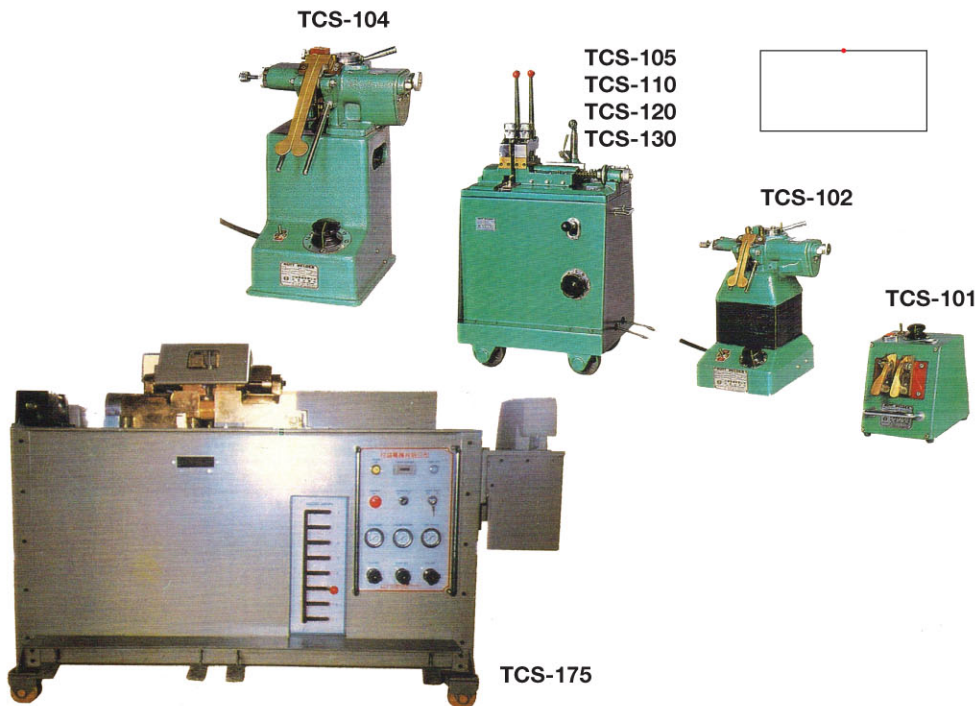
our product

# Butt Joint Welder

## Features

- Copper / Aluminium / Stainless Steel / Iron / Steel.....Wire Welder
- Copper / Aluminium Straded Wire Welder
- Copper Wire Alloy Welder
- Circular DISC Style Wire Welder
- Agent of Cold Pressure BUTT Welder (made in japan)

Model	Capacity	Welding Wire Size
TCS-102	2 KVA	0.5~2.6
TCS-104	4 KVA	0.8~4
TCS-105	5 KVA	1.6~6
TCS-110	10 KVA	3~13
TCS-120	20 KVA	8~15
TCS-130	30 KVA	6~20

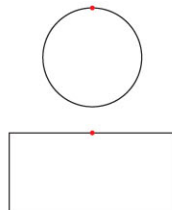


our product

# Pneumatic AC Butt Welding Machine

## Apply to

- Fast and simple welding of iron line pipes in various forms
- AC Power supply for economic usage



Model	Capacity	Voltage	Welding Machine	Machine dimension L x W x H	Weight
TSA-35	35KVA	200V 400V	Φ 5	550 x 700 x 1100	218kg
TSH-50	50KVA	200V 400V	Φ 8	700 x 850 x 1000	216kg

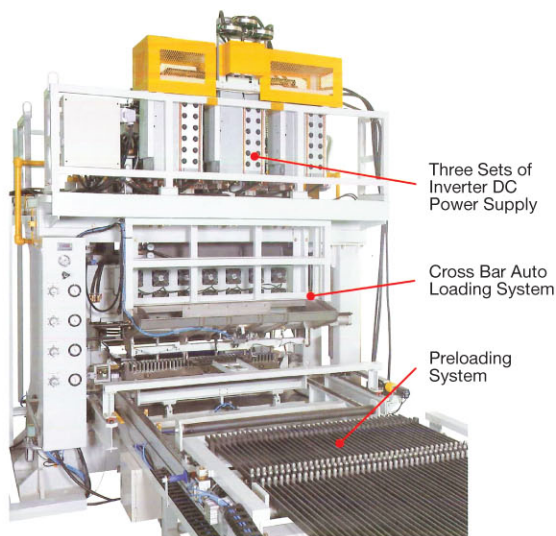


our product

# Special Purpose Machine- Single Dual Cross Bar Welding



DDIS-GT  
DSDS-GT



Three Sets of  
Inverter DC  
Power Supply

Cross Bar Auto  
Loading System

Preloading  
System

Pulling Cart System



Energy Efficient  
Saves **70%**

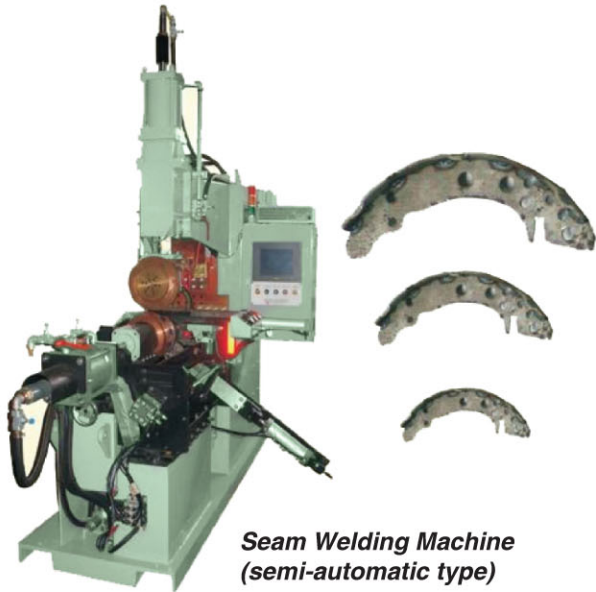
## Specifications

MODEL	DDIS-150X10-GT	DDIS-150X12-GT	DDIS-180X12-GT	DDIS-180X16-GT
Description	150KVAX10	150KVAX12	180KVAX12	180KVAX16
<b>GRATING SPECIFICATION</b>				
Grating Size (W x L)	1000mm x 6000mm			1250mm x 6000mm
Bearing Bar	Thickness 6mm	Thickness 8mm		Thickness 6mm
No. of Bearing Bars	30 pieces	30 pieces	42 pieces	42 pieces
Cross Bar Bar Square Twisted	6 x 6 mm		8 x 8 mm	
Cycle Time	9~10min / Grating			
<b>ELECTRICAL SUPPLY</b>				
Transformer Capacity (Per Set*)	150kVA	150kVA	180kVA	180kVA
No. of Transformers	10 sets	12 sets	12 sets	16 sets
Input Voltage; Frequency	400V/200V (50Hz/60Hz)			
Control Frequency	1000 Hz			
Max Short Circuit Current	200,000 A	240,000 A	300,000 A	400,000 A
Connected Load	500 KVA	750 KVA	1,000 KVA	1,750 KVA
Primary Power Connection Cable	200mm <sup>2</sup> per phase	300mm <sup>2</sup> per phase	400mm <sup>2</sup> per phase	600mm <sup>2</sup> per phase
Programmable Control & Interface	Japanese Mitsubishi PLC Controller with Japanese Proface 10" Human Interface System			
Servo Motor	Mitsubishi 7.0kW and 400W servo motor			
<b>COOLING WATER AND PRESSURE SUPPLY</b>				
Cooling Water Supply	150 L/Min		200 L/Min	280 L/Min
Chiller Capacity (Option)	45 HP			
Welding Pressure	70 Ton			
Hydraulic Pump	210 KG			

• To allow for continuing innovation, product dimensions are subject to change without prior notice.

our product

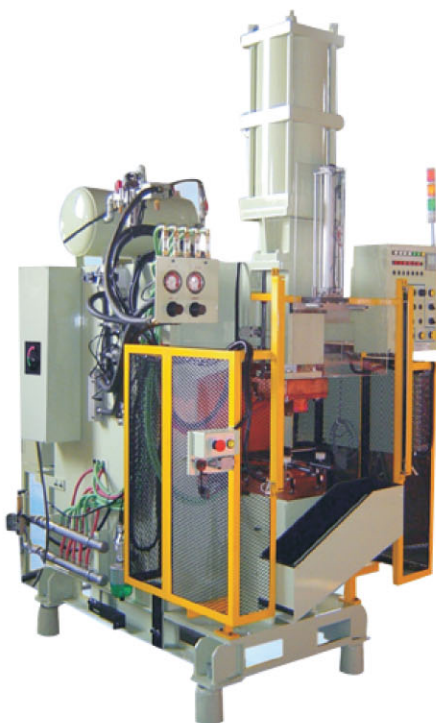
# Special Purpose Machine - Machinery for Brake Shoe



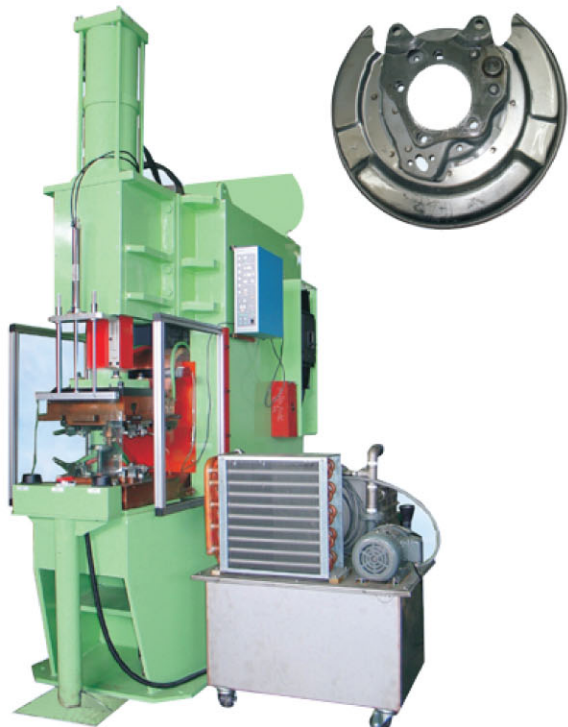
**Seam Welding Machine**  
(semi-automatic type)



**Brake Shoe**  
**Trimming Machine**



**Brake Shoe & Accessory**  
**Projection Welding Machine**



**Brake Shoe & Accessory**  
**Projection Welding Machine**

our product

# Special Purpose Machine - Machinery for Brake Shoe

## Features

### Fully Automatic Brake Shoe Seam Welding

- Fully automatic loading and welding of the rim and web, auto discharging after welding.
- Three Phase Inverter DC model further increase accurate current flow and welding angle.
- Automated operation to reduce labour requirement.
- Highest efficiency and accuracy achieved.



▶  
DMA-200~300-BRK  
DDIMA-200~300-BRK



◀  
Semi Automatic  
Brake Shoe Welding  
DMS-200~300-BRK  
DDIMS-200~300-BRK



◀  
Manual Brake  
Shoe Seam Welding  
DM-100~400-BRK  
DDIM-100~400-BRK

our product

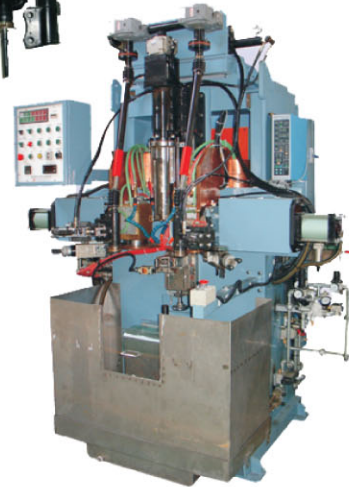
# Machinery For Shock Absorber



**Projection Welding Machine**



**Robotic Co2 Welding Machine**



**Vertical Seam Welding Machine**



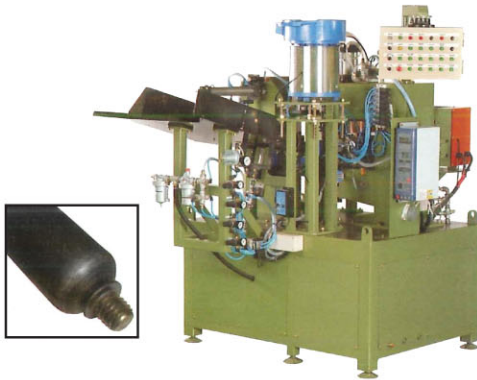
**Full Automatic H.F. NC  
Shaft Hardening M/C**

our product

# Machinery For Shock Absorber

## Gas Spring

- Filling nitrogen gas from the bottom of the gas spring and the shock absorber then weld the nail to seal the gas.
- Hydraulic filled in shock absorber then filling the nitrogen before welding.
- Single process to fill the gas then welding to seal the filling hole.
- Using Japanese digital control for easy and accurate calculation of pressure filled.
- Single fill, linear movement fill and double fill function available according to different production requirement.



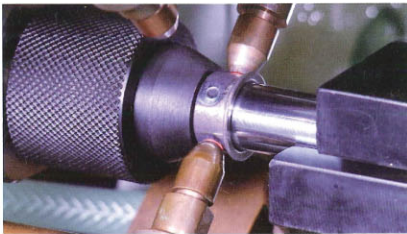
DSA-100-SRW



DF-35-70-RL  
DF-35-70

## Multi Spot Welding for Piston Ring and Stopper

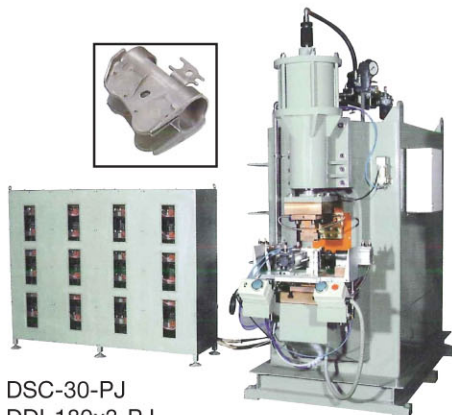
- High current density, excellent thermal efficiency
- Three phase input, three times of power factor as AC machines
- Energy Saving, saves up to 50-70% energy as AC machines



DS-75x2-4CY-SP  
DDI-75x2-4CY-SP

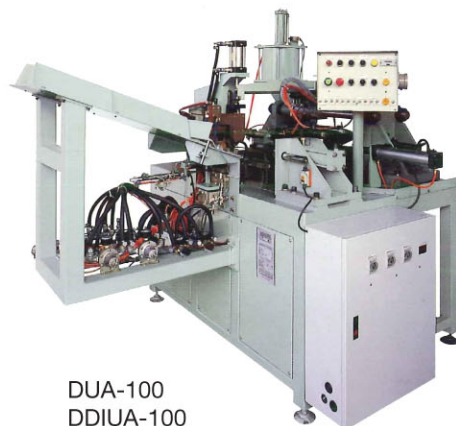


## Projection Welding for Knuckle Bracket



DSC-30-PJ  
DDI-180x3-PJ

## Upsetting



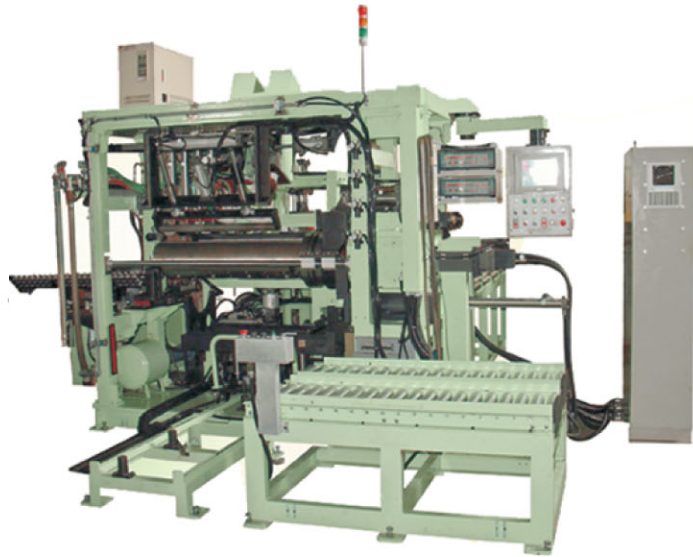
DUA-100  
DDUA-100

our product

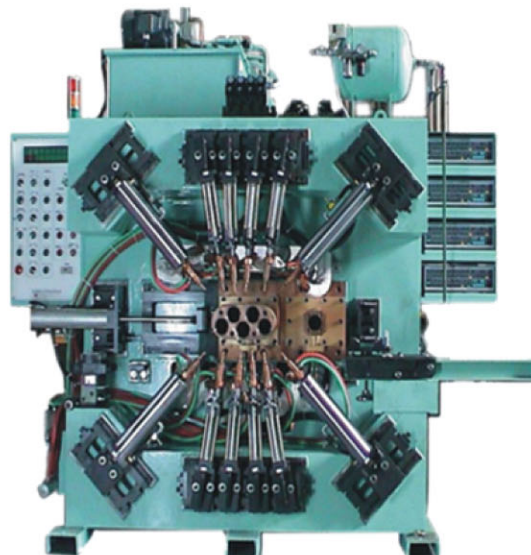
# Muffer Making Machine



**Body Lock Seaming Machine**



**Twin-Level Roll Welding Forming Machine**



**Multi Welding Machine**

our product

# Spot Welding

## Full Automatic

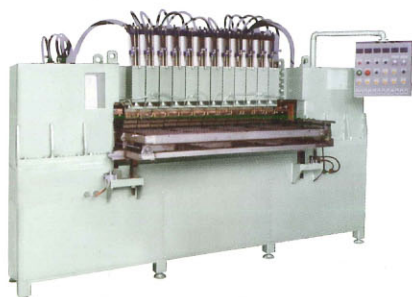
- Specially designed in-mould welding, acquired patent in Taiwan
- Automation in loading, unloading and welding reduce operation danger
- Index with electrical brake accurately controls the movement angle
- Three Phase Inverter DC model further enhance the welding quality and stability



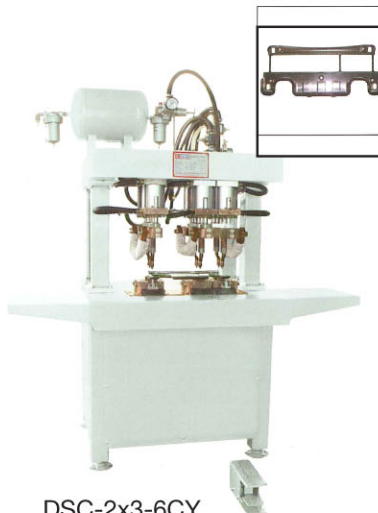
DSA-50-3PC

## Multi-spot

- Multiple spots to be welded in one stroke to increase production efficiency
- Sequential current flow is also available to reduce input power supply requirement
- Multiple spot welds in one stroke for better operation safety
- May equip with Miyachi constant current welding controller which ensures stable and constant secondary current output regardless of input voltage variation



Wire Mesh  
DW-50~100 Series



DSC-2x3-6CY



DDIC-100x3CY-SP

our product

# Cap Nuts

## Fully Automatic Cap Nuts Welding

- Welding Cap Nuts from M4~M20 nuts
- Automated loading of the nuts and cap to the special welding tooling
- Automated welding and discharging
- Productivity of up to 40 pcs per minute



DSA-200-PJ-NUT-8  
DDIA-200-PJ-NUT-8



DSA-50~100-PJ-8  
DDIA-50~100-PJ-8

our product

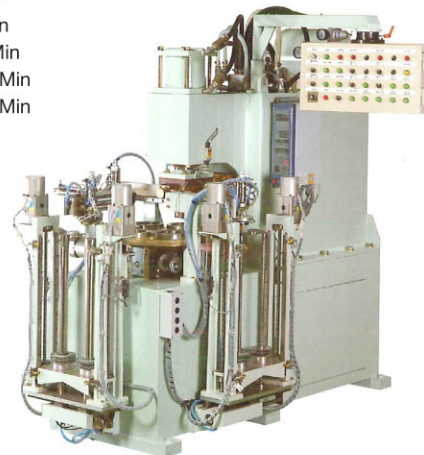
# Oil Filter & Relief Valve

## Welding Cycle Table

	100% Energy	Utilising 2/3 of Energy	Utilising 1/3 of Energy
	AC	Capacitor Discharge DC	Three Phase Inverter DC
Manual	8~10 Pcs/Min	8~10 Pcs/Min	6~8 Pcs/Min
Linear Movement	8~10 Pcs/Min	8~12 Pcs/Min	8~12 Pcs/Min
Semi Automatic	12~18 Pcs/Min	12~16 Pcs/Min	12~18 Pcs/Min
Fully Automatic	16~20 Pcs/Min	16~18 Pcs/Min	16~24 Pcs/Min



DDIS-180x2-PJ-OIL  
DDCS-5~10-PJ-OIL



DSA-150~250-PJ-OIL  
DDIA-180~360-PJ-OIL  
DSCA-15~30-PJ-OIL

our product

# Reciprocating Compressors

## Features

- A complete welding line for reciprocating compressors
- Customised fully automatic welding machine design for efficient production and reduce defects
- Three Phase Inverter DC electrical solution is also available for better welding quality and ENERGY SAVING!



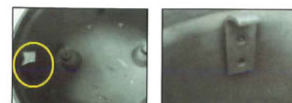
DSD-300x3-PJ



DS-250-PJ



DS-75x2-2CY-TAB



DS-150-PJ-TAB



DMG-500-CPS-TAB



DCPS-100-2H-AUT

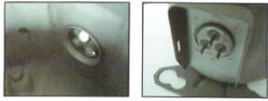


our product

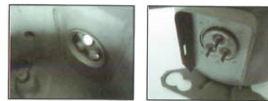
# Reciprocating Compressors



DSD-350-PJ-3PH-2CY



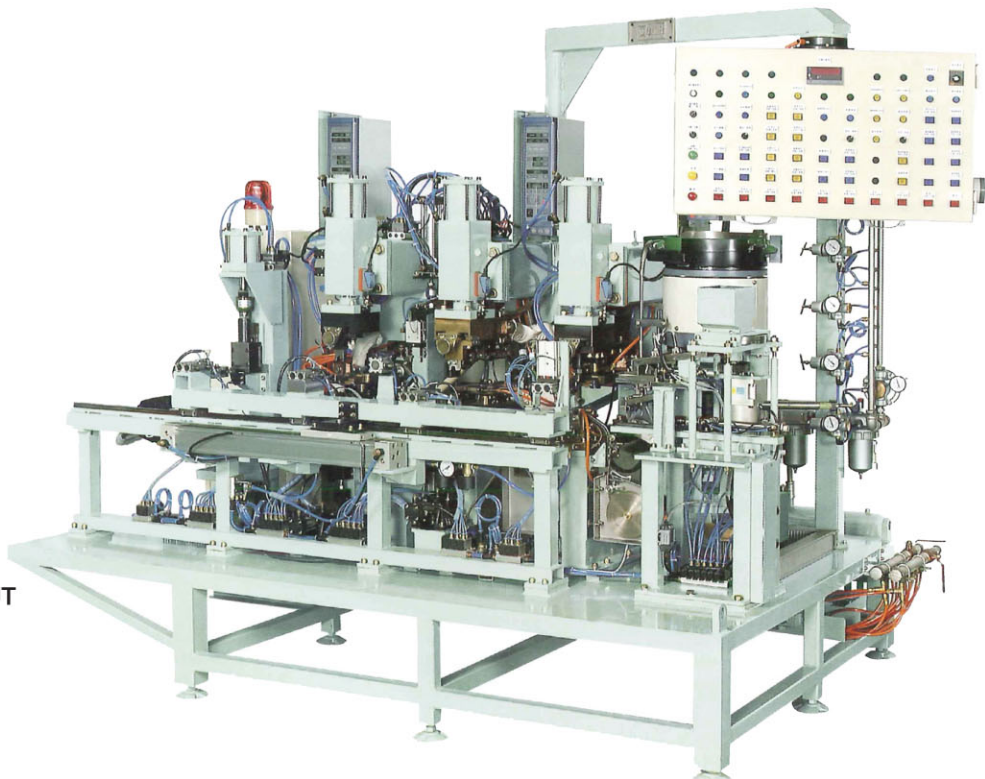
DDIS-450-PJ



DS-200-PJ-2CY



DCPS-75-Y AUT



our product

## Projection Flash Butt Welding

- Joined projection and flash butt welding into one machine for coat saving!
- Three Phase Inverter DC aiming at ENERGY SAVING !
- Special designed machine for secondary short circuit current of 70,000A
- Rigid machine body for high welding pressure applicaton
- 2 Stage welding cylinder for more efficient operation and pressure output
- Adjustable knee leaving room for large range of welding application

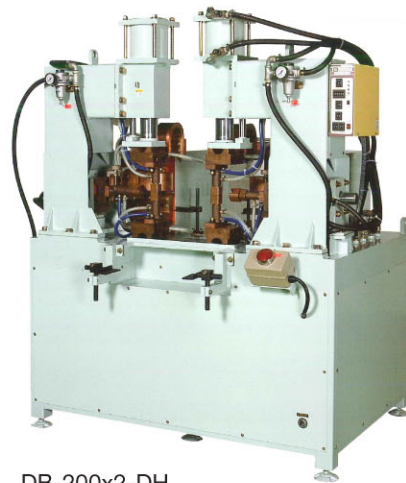
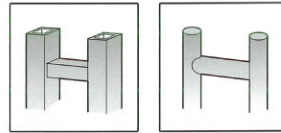


DDIS-180x3-PJ  
DDIFB150~300-Y

our product

## T Joint Welding

- Tailor designed T Joint tube Welding can be easily applied in furniture industry

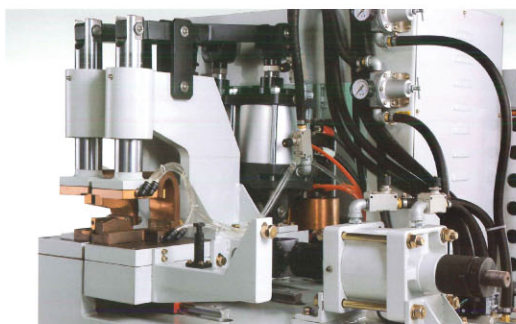


DB-200x2-DH

our product

## Flash Butt & Butt Welding

- Rigid machine body ensure stable welding quality
- Automatic alignment function make sure the welded parts are of high precision
- Special tooling design to reduce waste of used copper cooling
- Light and easy for small applications
- Easy to grind after welding, minor burr
- Three Phase Inverter DC welding solution for energy saver's selection



DDIFB-150~300-Y



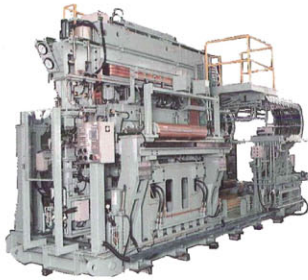
DDIFB-150~300-Z



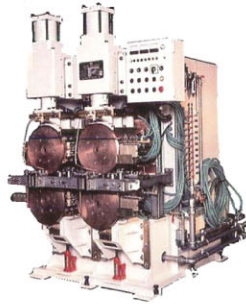
DDIB-100~150-X

our product

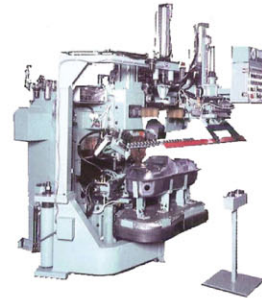
# Special Purpose Machine



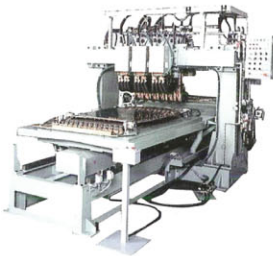
**Narrow-lap seam welder for  
Steel Production lines**



**Double head seam welder  
for motorcycle**



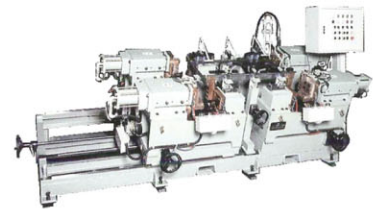
**Iron-man seam welder  
for fuel tank**



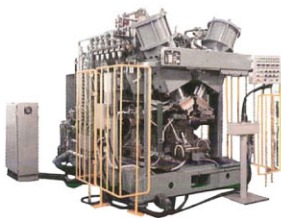
**NC seam welder for  
solar thermal collector**



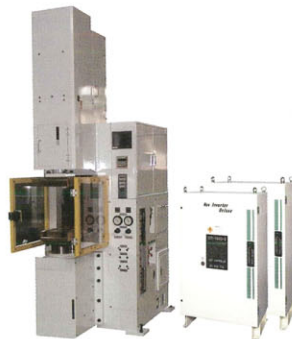
**Motorcycle tank  
seam welder**



**Projection welder for  
stainless sink**



**Projection welder  
for motor case & foot**



**Special specification D.C. Inverter  
Projection welding machine**



**Special specification D.C. Inverter  
spot welding machine**



**Capacitor-type Inverter Welder**

our product

# Accessories & Welding Transformer

## Sky Feeder

**Nihon Inter Thyristor**



made in Japan

## Nut Feeder

**Seki Kogyo, Yajima**

- Nut Feeder meets the reliability and performance needs of customers and employs an electromagnetics absorption supply system so that the supply angle doesn't matter for auto-supply nut stabilization.



made in Japan

## Weld Checker

**Miyachi**

- To check the output current of resistance welder



made in Japan

## Force Gauge

**Spotron**

- To check the electrode force of resistance welder

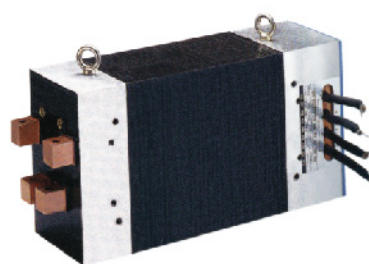


## Epoxy Type Welding Transformer

- Model : DWL 2  
200KVA ~ 300KVA



- Model : DWB 2  
100KVA ~ 150KVA

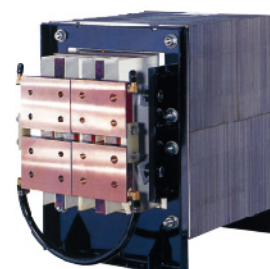


## AC Welding Transformer

- Model : DWL -11-750  
75KVA ~ 100KVA



- Model : DWL -11-750  
75KVA ~ 100KVA



# TSM

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