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Special Purpose Welding Machine

- Grating Welding
- Brake Shoe Welding
- Cap Nuts Welding
- Gas Spring Welding
- Oil Filter & Relieve Valve Welding
- Fuel Tank & Drum Welding
- Motorcycle / Scooter Rim Welding
- Heating Machine / Sintering Machine
- Shock Absorber / Strut
- Compressor Welding

Standard Welding Machines

Seam Welding

- Transversal Type
- Longitudinal Type
- Universal Type
- Special Purpose Machines

Projection Welding

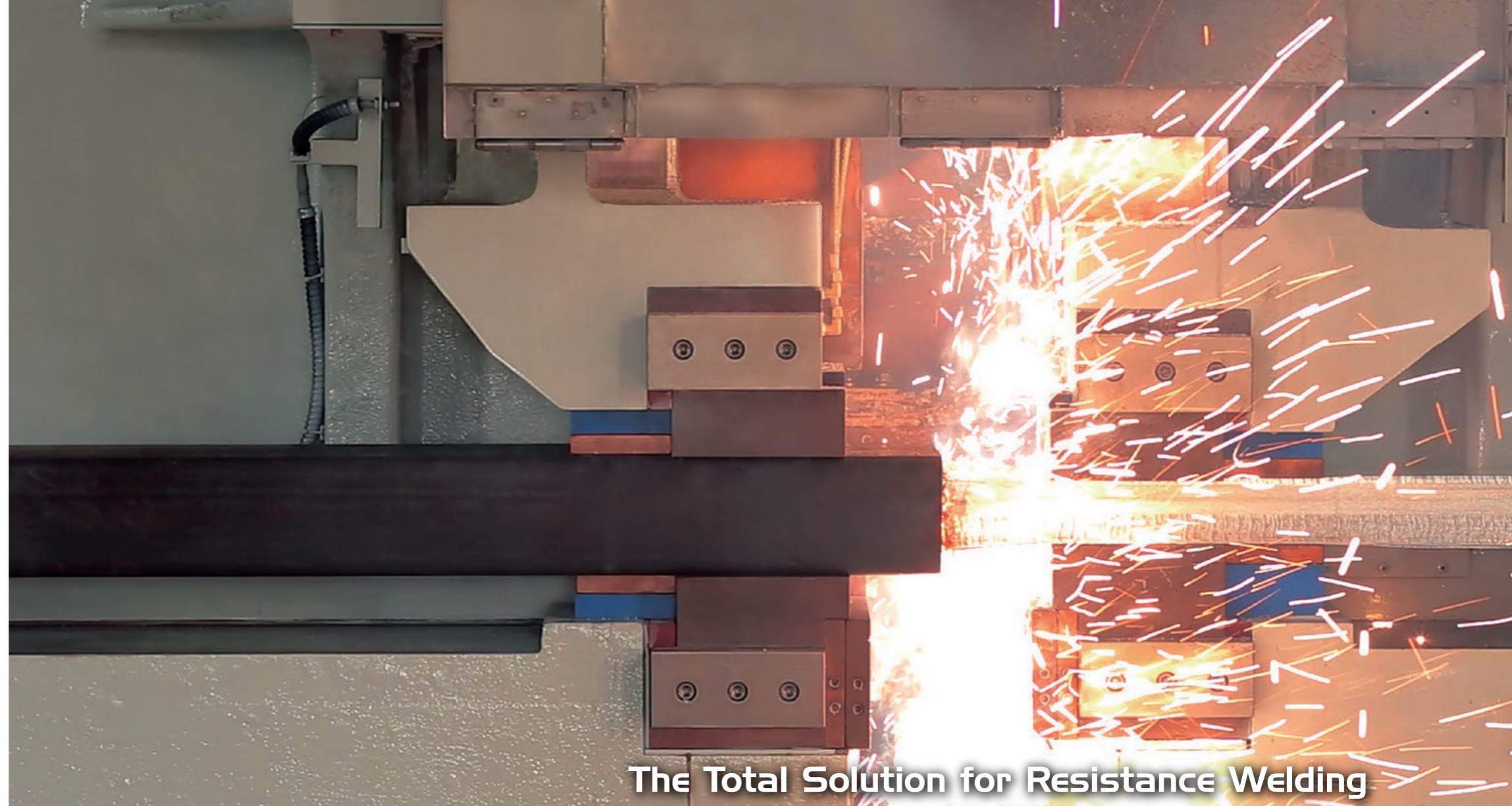
- Fully Automated
- Stationary Type
- Special Purpose Machines

Spot Welding

- Fully Automated
- Multi Spot
- Stationary Type
- Portable Welding Gun

Flash Butt Welding

- Flash Butt Welding
- Butt Welding
- T-Joint Welding



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**Three Phase DC Inverter | Spot | Projection | Seam
Flash Butt | Special Purpose Welding Machine**

RESISTANCE WELDING METHODS & OUTPUT CURRENT SOLUTIONS

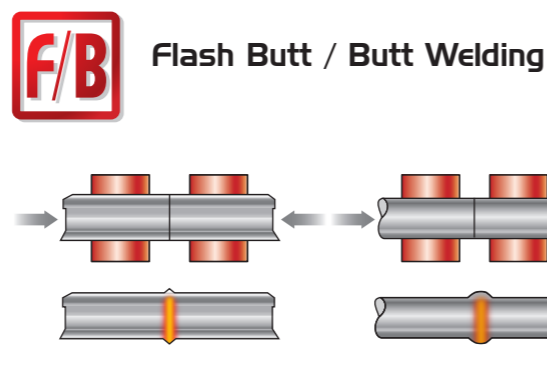
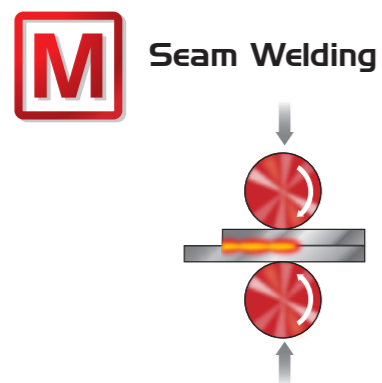
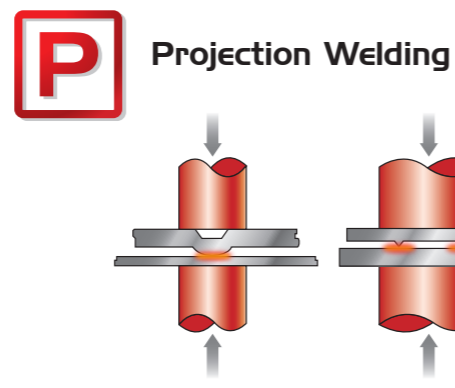
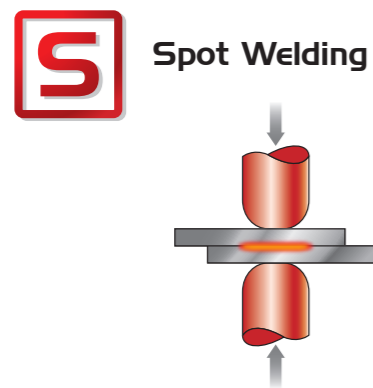
Resistance welding is a fusion process which takes place between two metals under a certain load and heat without need for any additional material. The heat required for the welding is generated by the electrical resistance of the materials to the current versus time.

There are four different methods in resistance welding. Among four types of welding methods only Flash Butt / Butt Welding requires no overlapping of joining metals.

In terms of output current, only Capacitor Discharge DC is not applicable in seam welding and Flash Butt / Butt Welding due to its nature of instantaneous current flow time.

Resistance Welding Machines can be divided into four welding methods and four output currents as electrical solutions.

4 Welding Methods



4 Output Current Solutions

Single Phase AC is the most simple and basic output current. With single phase AC output current, the current returns to zero every half cycle, and the phase control creates a "no current flow" period, hence the heat is intermittent. An AC welding machine with constant current controller has the function of primary voltage compensation and primary and secondary constant current feedback control which automatically adjusts power line fluctuations.



Capacitor Discharge DC

is one of the direct current series which extracts energy from the power line over a period of time and stores it in welding capacitors. The stored energy is then rapidly discharged to the transformer, producing a flow of electrical current for welding. Capacitor Discharged Welding Machines are best for applications with multiple-embossments, hot rolled sheets or thick steel sheets.



Three Phase Rectified DC

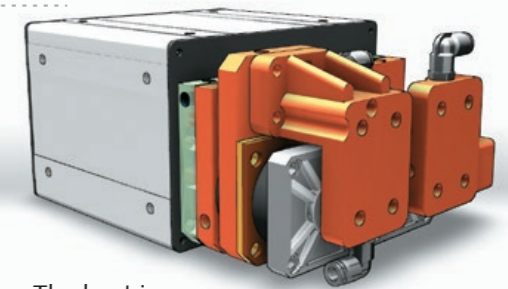
is with three phase balanced input running at 50 or 60Hz. This solution was widely used before the three phase DC Inverter became common. The diodes on the transformers convert AC current into DC output. Compared to single phase AC machines, rectified DC output saves 40% of energy consumption.



Three Phase DC Inverter (MFDC)

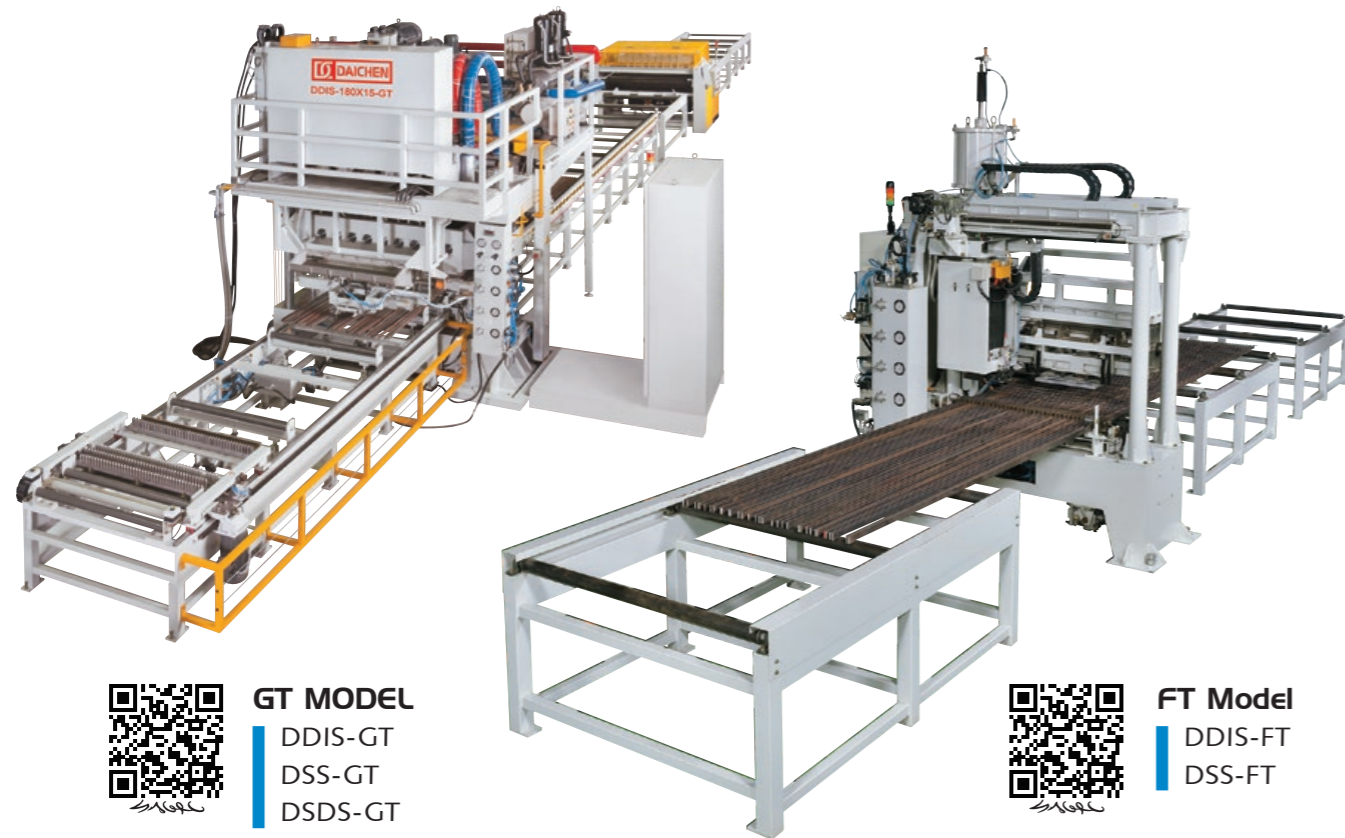
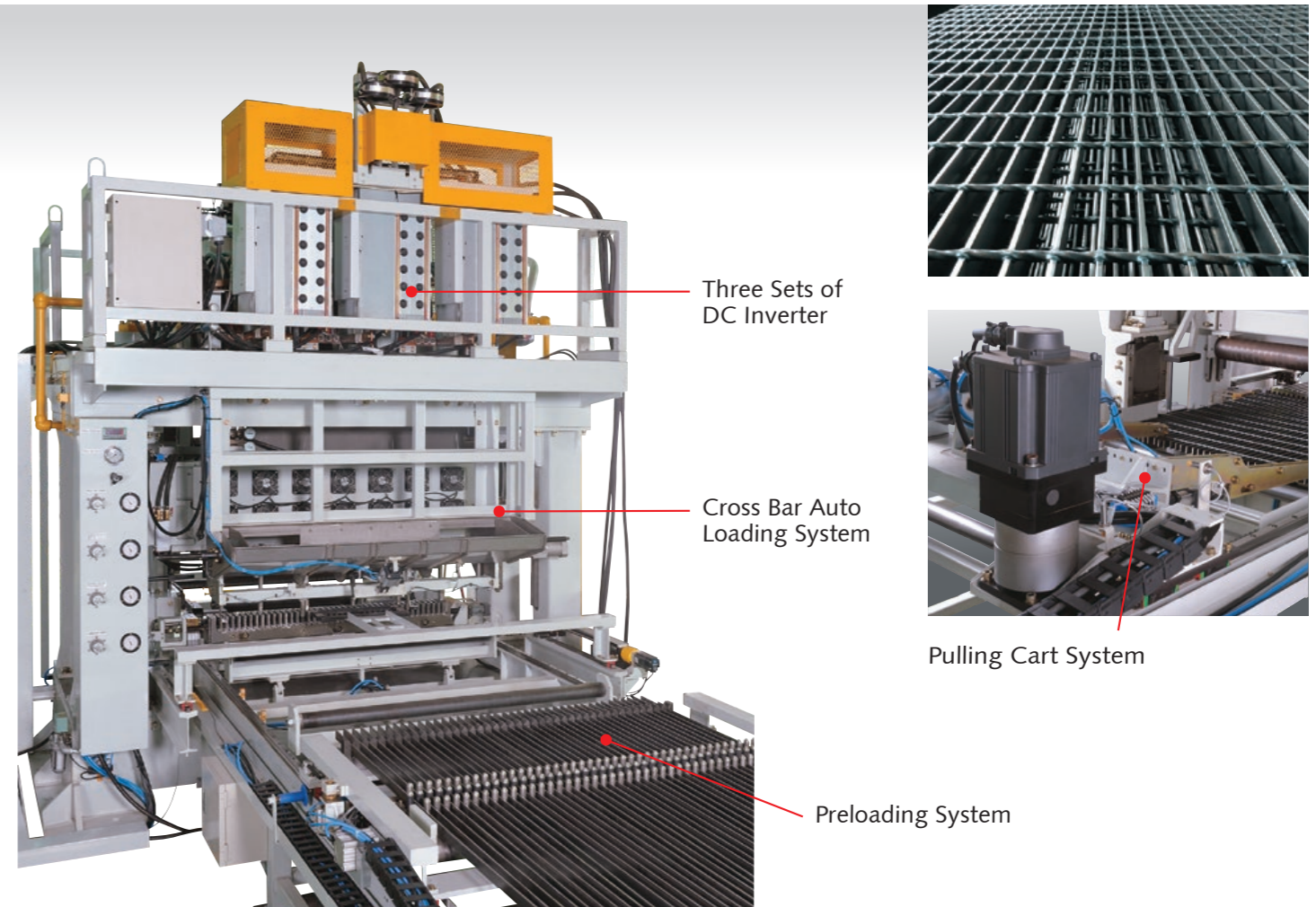
utilizes three phase balanced input. Via full wave rectifier, current is converted to DC and has been switched to 1000Hz, producing AC current to the primary transformer. Then the current is rectified into DC for welding. Three phase DC Inverter welding machine have the following advantages:

- 1) It does not have the blank period in the current wave form. The heat is continuous and efficient. This fast feedback control of 0.1 milliseconds ensures stable welding quality, and welding splash can be easily controlled.
- 2) High frequency means high current density, hence it can generate the required welding heat within a short period of time. This means that welding procedure can be faster, with less power consumption.
- 3) Compared to single phase AC machines, high frequency switching technology consumes only 30 - 40% of power consumption.
- 4) High frequency transformers can achieve wide and large area welding. Whereas, traditional AC transformers tend to have insufficient current disperse, causing poor welding quality.



Schematic Diagram	Spot Welding	Projection Welding	Seam Welding	Flash Butt / Butt Welding
Single Phase AC				
Capacitor Discharge DC			—	—
Three Phase Rectified DC				
Three Phase DC Inverter				

GRATING WELDING MACHINE



Specifications

MODEL	GT Series			FT Series	
	DDIS-180X15-GT	DSS-600X3-GT	DSS-1200X2-GT	DSS-300-FT	DDIS-180X2-FT
Grating Size (W x L)	1000 X 6000 mm	1000 X 6000 mm	1000 X 6000 mm	1000 X 6000 mm	1000 X 6000 mm
Bearing Bar	Thickness 6 mm	Thickness 6 mm	Thickness 8 mm	Thickness 8 mm	Thickness 8 mm
Cross Bar Square Twisted	6 mm	8 mm	8 mm	8 mm	8 mm
Cycle Time	6-8 Min	6-8 Min	6-8 Min	40 Min	40 Min

■ Product dimensions are subject to change without prior notice.

Whole Set Grating Manufacturing Line

From bearing bar serration to cross bar twisting, welding, flattening, cutting and binding, Dahching is able to provide complete solutions to manufacture grating panels.

Variable Cross Bar Pitch*1

Variable cross bar pitch is now available in GT model. Uniform odd number cross bar pitches are no longer necessary.

Any pitch between cross bars, odd or even number pitches, can be set from the touch panel.

Variable cross bar pitch function reduces grating panel waste as well as welding cycle time.

Non-Stop Production Preload System

Operators can load the bearing bars onto the preload system during machine operation. The system enables for automatic feeding into the welding station. This enhances safety and productivity.

Excess Cross Bar Trimming mechanism*1

An in-line trimming mechanism is a useful option to complete grating panel manufacturing without auxiliary machinery for excess cross bar removing.

The 6M2 grating panel helps remove excess bars. This reduces manufacturing cost and increases output.

Energy Efficiency

Compared to standard single phase AC machines, the three phase balanced input with constant DC output saves 70% in energy consumption. Connected load of 900kVA for dual bar welding with primary current is as low as 1400A!

Stability & Excellence

High current density and stable force result in high welding penetration and excellent welding quality. Stable weld force comes from machine rigidity. The machine bed, the mount and the upper frame are made by welding, and are stress relieved and sand blasted afterwards. It prevents the bed, the mount and the upper frame from distortion after years of working.

*1 Optional Function.

BRAKE SHOE



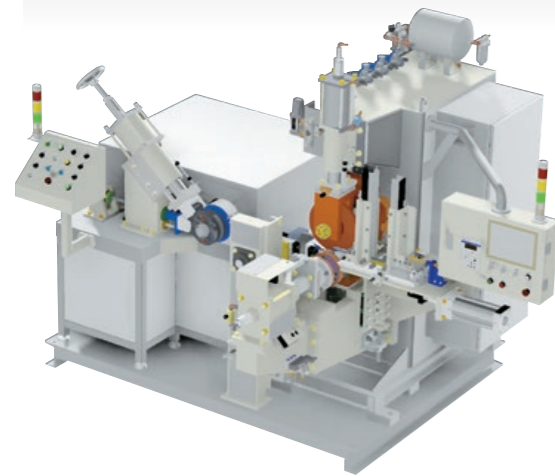
Automatic Brake Shoe Seam Welding

- Fully-automated loading and welding of rims and webs. Automatic discharging after welding.
- Three phase DC inverter model increases current flow and welding angle accuracy.
- Automation reduces manpower reliance.
- Both productivity and accuracy are achieved.



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

Semi Automatic Brake Shoe Seam Welding



Welding and Coining with Auto-Transfer
DDIM-200~300-BRKC



Welding Machine only
DMS-200~300-BRK
DDIMS-200~300-BRK

Manual Brake Shoe Seam Welding



Welding Machine only
DM-100~400-BRK
DDIM-100~400-BRK

CAP NUTS



Automatic Cap Nuts Welding

- Welding cap nuts range from M4 - M22.
- Excellent welded quality. No burrs and no thread damage.
- High productivity (up to 40 pcs/minutes).
- Complete automation from loading, welding, to unloading of caps and nuts.



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



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

GAS SPRING



End Fitting & Tube Welding

- Complete automation for end piece welding of the gas springs with tubes.
- Manual operation available.



DSA-100-SRW

Gas Filling & Welding

- This machine fills nitrogen gas from the bottom of gas springs / shock absorbers, and welds the nail to seal the gas.
- The procedure helps avoid air leakage.

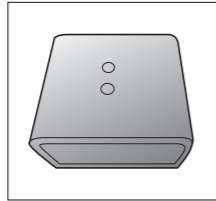


DF-35~70-RL
DF-35~70

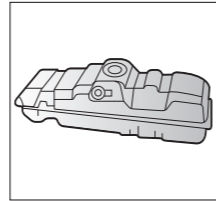
FUEL TANK & DRUM



- Universal seam welding machine with transversal and longitudinal seam welding function.
- Excellent water cooling system prolongs lifetime of seam welding wheels and housing.
- Wheel dressing removes galvanized layer during transversal seam welding.
- Three phase DC inverter option is available for better welding quality.
- Operator-assisted seam welding procedure. Operators do NOT need to hold nor guide fuel tanks during procedure.
- Internally cooled seam welding wheel ensures clean working environment.
- High welding speed, achieved by three phase DC inverter model (DDIMA series).



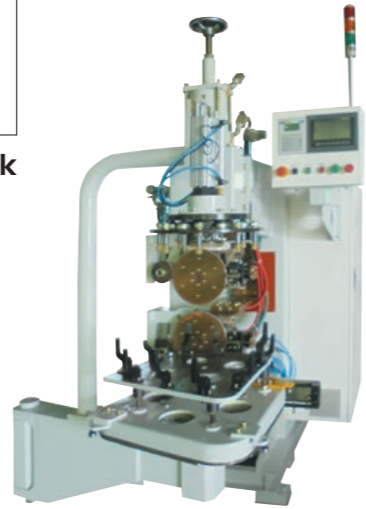
Truck Fuel Tank



Car Fuel Tank



DDIM-210X3-HV

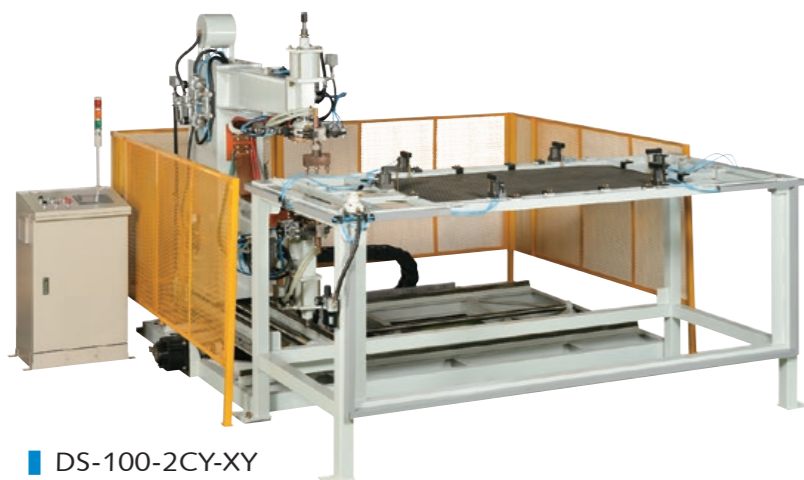
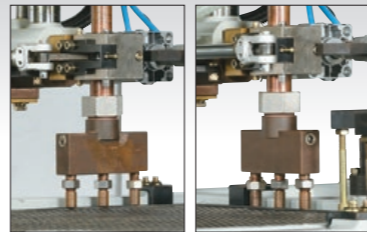


DDIMA-120-HI

NC XY TABLE SPOT / PROJECTION WELDING MACHINE



- User-friendly programming system
- Rectangular table with X axis 2.3M, Y axis 1.2M
- Round table with 1.5M diameter
- Welding width 130mm / 3 spot welding electrode
- Industries: tableware, wire mesh, chassis, electrical appliances, etc
- Material: mild steel, stainless steel, high tensile steel, aluminium, etc.



DS-100-2CY-XY



DS-100-2CY-R

WHEEL RIM MAKING



- Motorcycle and bicycle wheel rims (Metal and aluminum).
- Car wheel rims (Metal only).
- The three phase DC inverter DDIFB model is the best solution to join aluminium rims.



- DDIFB model, the three phase inverter DC model is the best solution for aluminium wheel rim joining.



DM-150~300-x2
DDIM-150x300x2-DH



DDIS-100x3CY-SP



DDIFB-150~300-Z



OIL FILTER & RELIEF VALVE

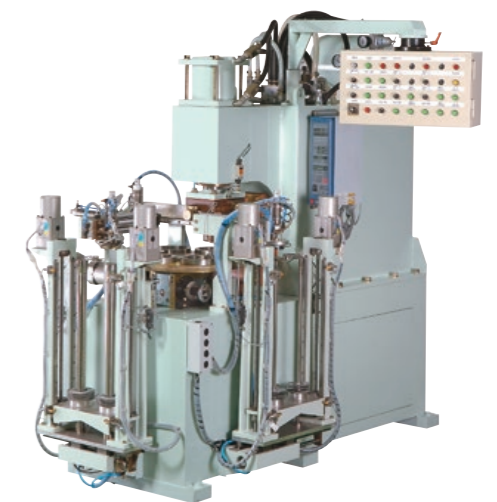


Welding Cycle Table

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



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



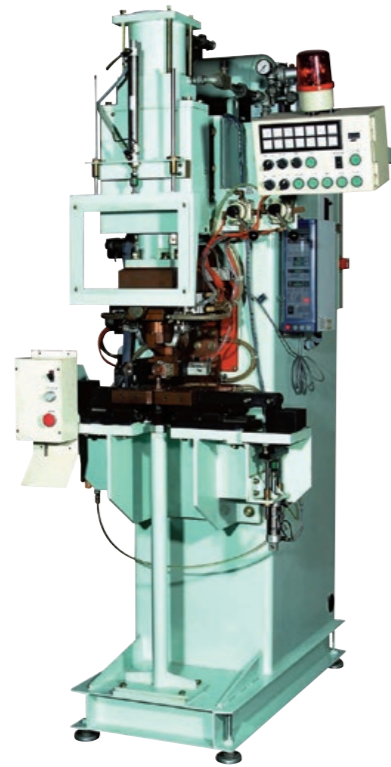
DSA-150~250-PJ-OIL
DDIA-180~360-PJ-OIL
DSCA-15~30-PJ-OIL



SHOCK ABSORBER / STRUT

Bolt & Cap / Ring & Eye Projection Welding

- Deluxe type welding machine with quick die changing system and self-clamping / releasing function.
- Spring cylinder with rigid shaft design for prompt welding pressure.
- Quality and safety protection mechanisms.



DS-150~300-DX
DDI-150~300-DX



DS-150~300-PJ
DDI-150~300-PJ



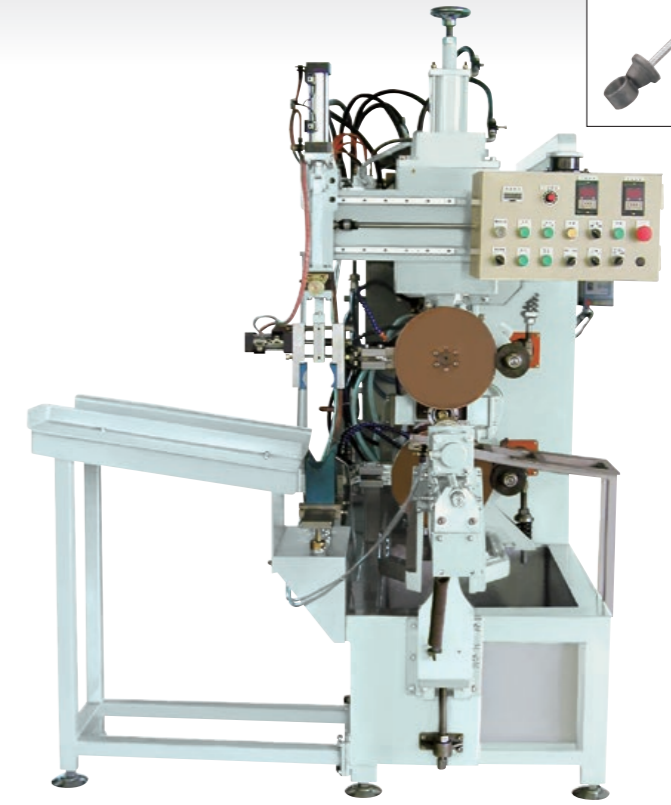
Manual Seam Welding for Base Cup & Final Seam



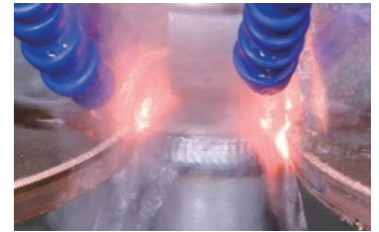
DM-200~300AB-STD
DDIM-200~300AB-STD



Fully-automated / Semi-automated Seam Welding for Base Cup



DMA-200~300AB-H
DDIMA-200~300AB-H
DMS-200~300AB-H
DDIMS-200~300AB-H



Multi Spot Welding for Piston Ring & Stopper

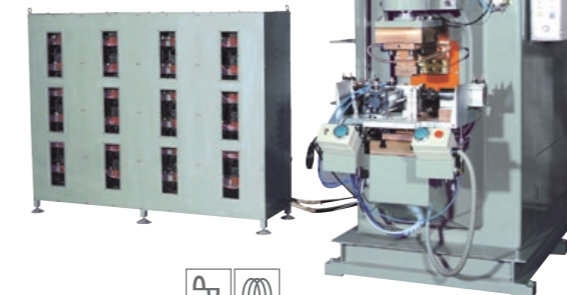
- 4 spot welding gun used
- Welding sequence available: simultaneous and cascade.



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



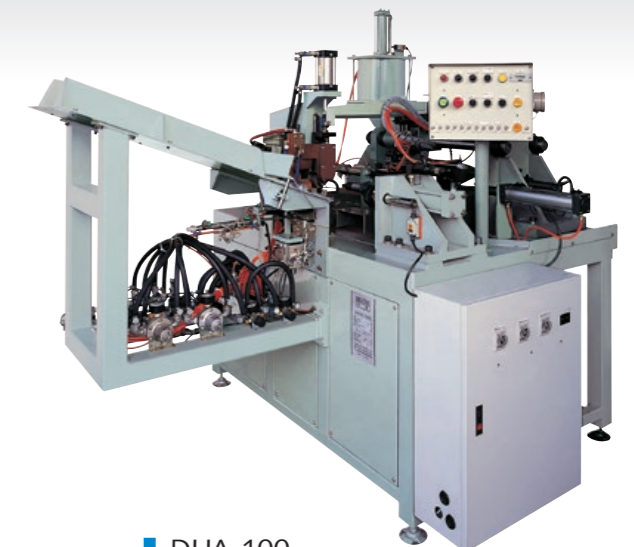
Projection Welding for Knuckle Bracket



DSC-30-PJ
DDI-180x3-PJ



Upsetting



DUA-100
DDIUA-100

COMPRESSORS

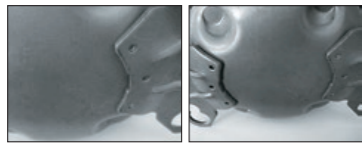


- Complete welding line for reciprocating compressors.
- Customized automatic welding machine. Advanced productivity and accuracy.

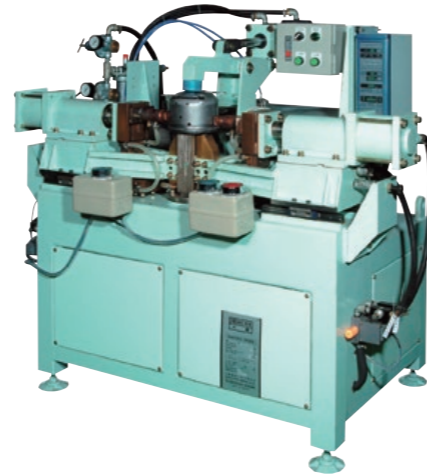
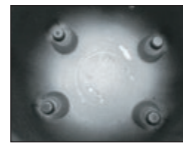
- Three phase DC inverter model are highly recommended to weld components such as leg, mounting and terminal.



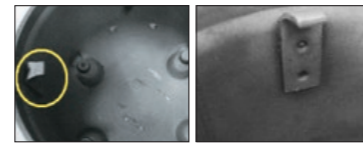
DSD-300x3-PJ



DS-250-PJ



DS-75X2-2CY-TAB



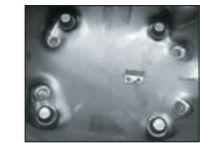
DDIS-450-PJ



DSD-350-PJ-3PH-2CY



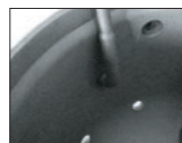
DSA-35-PJ-CPC



DS-200-PJ-2CY



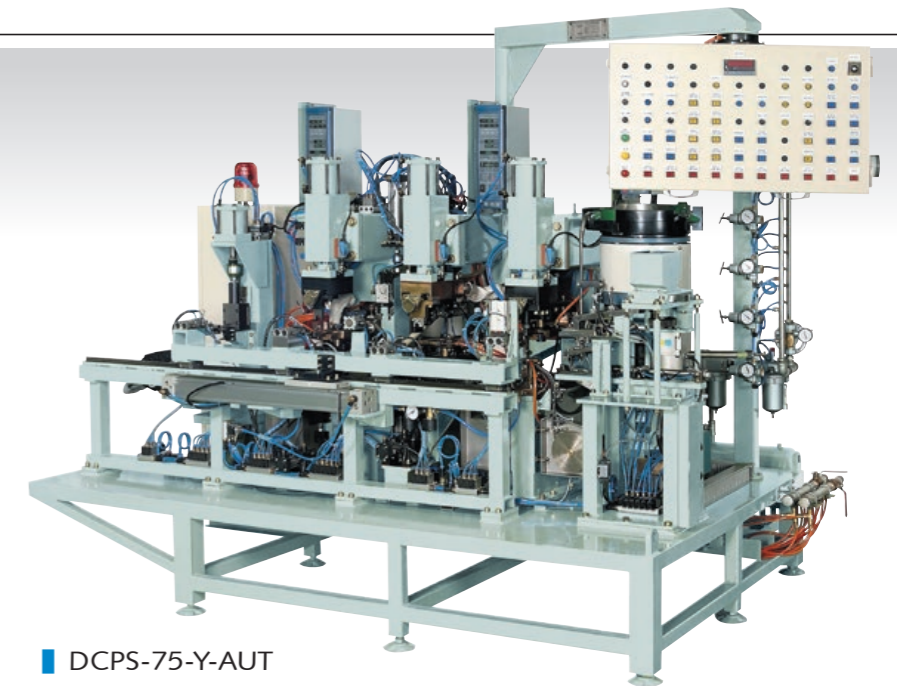
DS-150-PJ-TAB



DMG-500-CPS-TAB



DCPS-100-2H-AUT



DCPS-75-Y-AUT



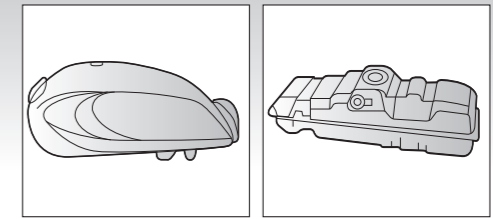


SEAM WELDING



Transversal

- Efficient cooling system inside the seam weld housing reduces wear out rates as well as promotes conductivity.
- Optional accessories are equipped with Japanese constant current welding controller, ensuring welding quality.
- Three phase DC inverter electrical solution available for better welding quality and optimal energy consumption.



DDIM-300-H



DM-200-H-WT



DM-150~300-H
DDIM-150~360-H



DM-150~300-H-2D
DDIM-150~360-H-2D

Longitudinal



DM-150~300-V
DDIM-150~360-V

Universal

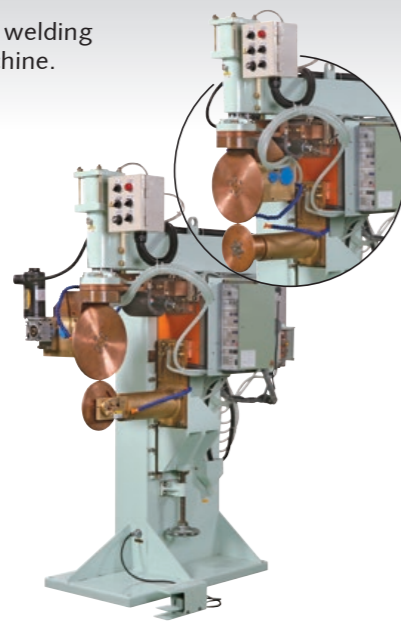
- Transversal and longitudinal welding function combined in 1 machine.

- No adjustment to or from transversal to longitudinal welding. One machine, 2 function sharing 1 welding circuit.



Fixed throat length to perform transversal and longitudinal welding.

DDIM-210X3-HV



HVK model equipped with adjustable throat length from 300mm to 700mm.

DM-100~300-HVK
DDIM-100~300-HVK



DM-150-HV-DH

Special Purpose Machines

- Whole set of welding machines required to weld ammunition box available for your choice.



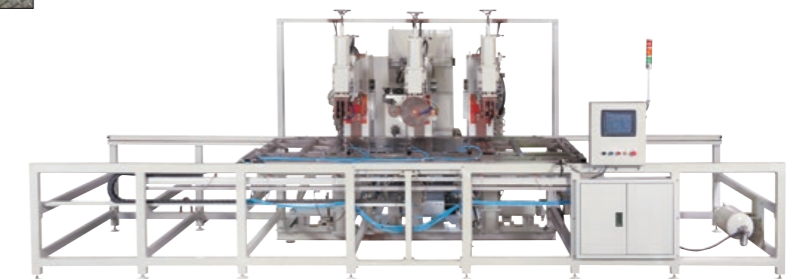
DM-300-2CY-HV
DDIM-300-2CY-HV

- Machine made up of stainless steel frame and table.
- Stainless steel material eliminates the magnetic field and induction created during welding.
- High precision machine to meet flatness tolerance of 0.02mm over 300mm width.

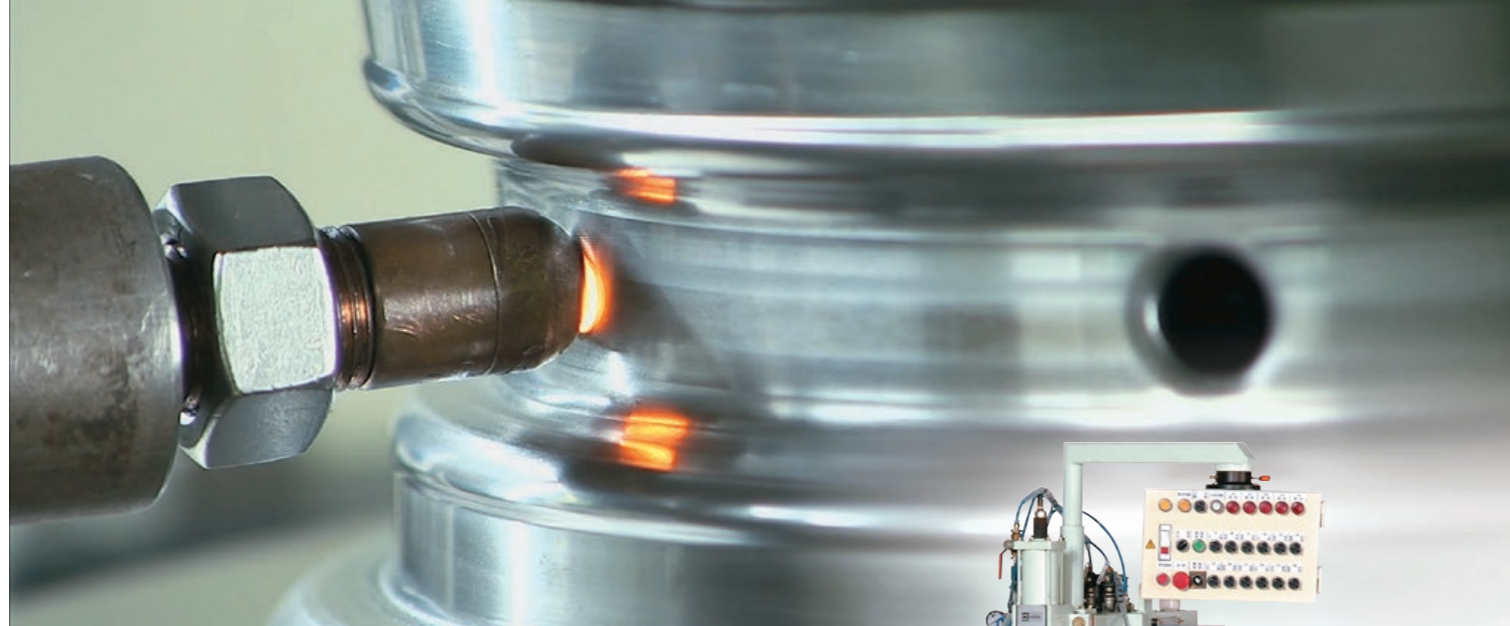


DDIM-50-R

- NC XY axis seam welding with roll spot welding.



DM-150X3-H2V

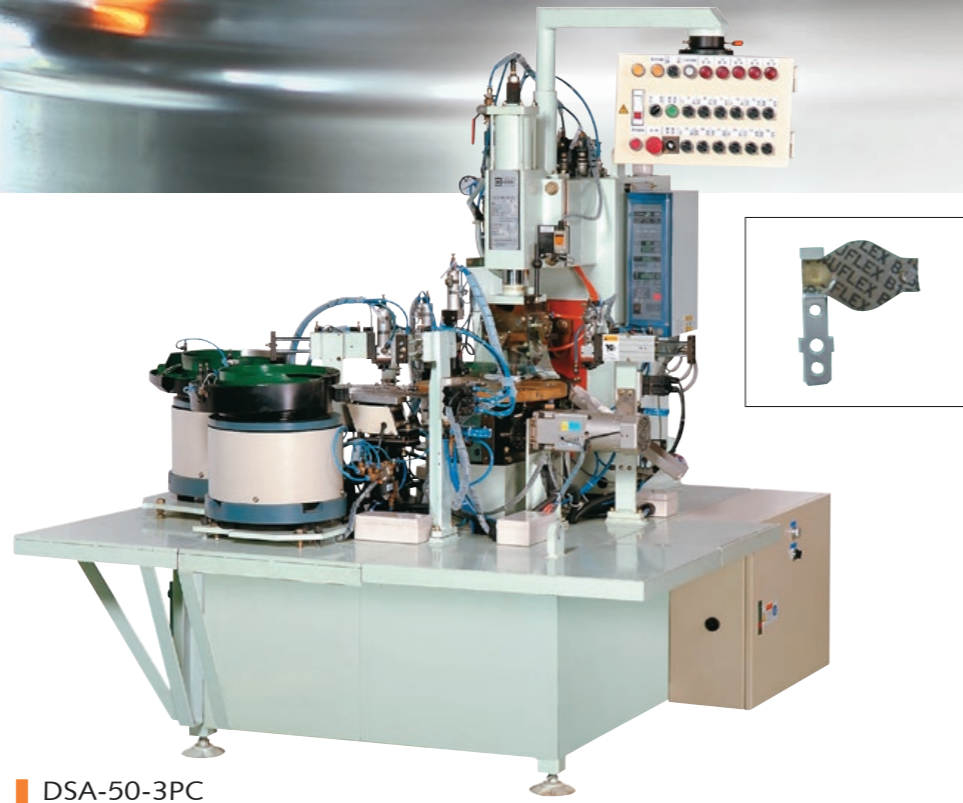


SPOT WELDING



Fully-automated

- Patented in-mold welding.
- Auto loading, unloading, and welding procedures reduces operation hazard.
- Rotary index controlled by electrical brake, ensuring accuracy.
- Three phase DC inverter model enhances welding quality and stability.

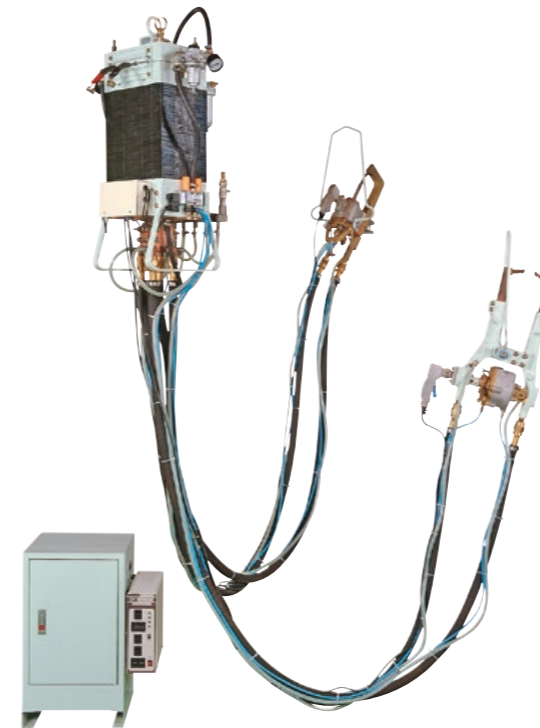


DSA-50-3PC



Portable Welding Gun

- Full range of gun size from hand-hold to robot hold.
- Compact transformer design to reduce weight in hanging type guns



DP-100~200-X/C/XC



DSC-300W-P



DPS-50~200-C



DPS-50~200-X

Multi-spot

- Spots can be welded on one stroke. Productivity & safety advancement.
- Sequential current flow available. Reduces input power requirement.



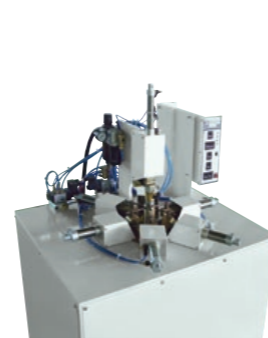
Wire Mesh
DW- 50~100 Series



DSC-2x3-6CY



DDIS-100x3CY-SP



DS-10X3-6CY-SP

Stationary

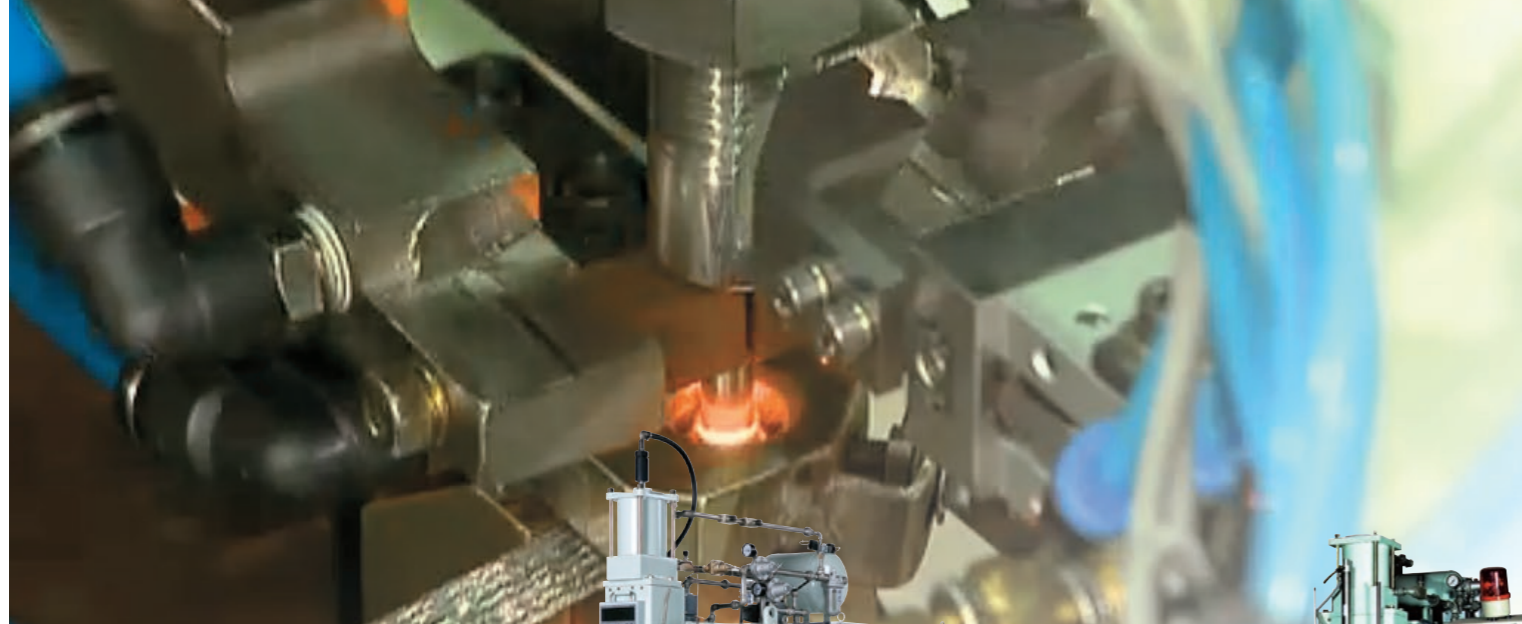
- Easy-to-read LED display.
- 3-step power-on system (upslope and downslope).
- Weld controller with primary voltage scanning and secondary current compensation function ensuring constant weld current.



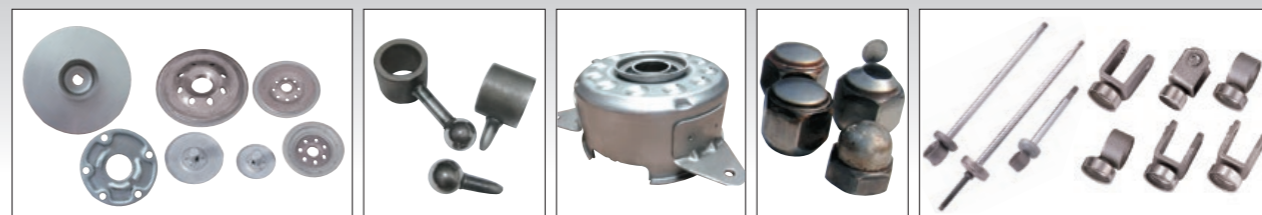
DS-35~150-SP
DS-35~150-SPJ



DDIS-50~180-SP
DDIS-50~180-SPJ



PROJECTION WELDING

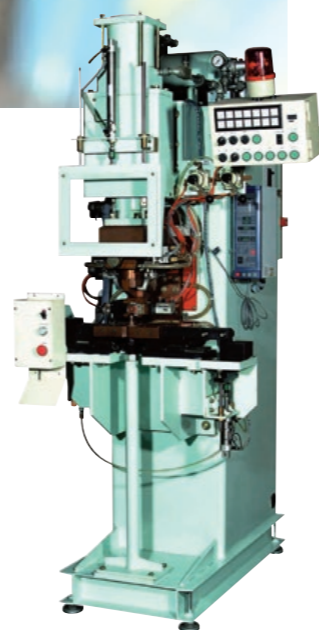


Stationary Type

- Automatic alignment function make sure the welded parts are of high precision.
- Special electrode design reduces material waste.
- Three phase DC inverter reduce energy consumption and reduces required connected load.
- In DS-PJ-DX model (optional), QDCS is available.
- Adjustable knee leaving rooms for larger welding range.



DDIS-150~300-PJ



DS-200-PJ-DX



DS-150~300-PJ



DS-100~200-PJ-WM

Fully Automated

- All parts are fed automatically to the welding station.
- Automated welding machines improve weld quality, increase output while decreasing scrap and variable labour costs.
- Fully automated machines can be designed for different weld components.



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



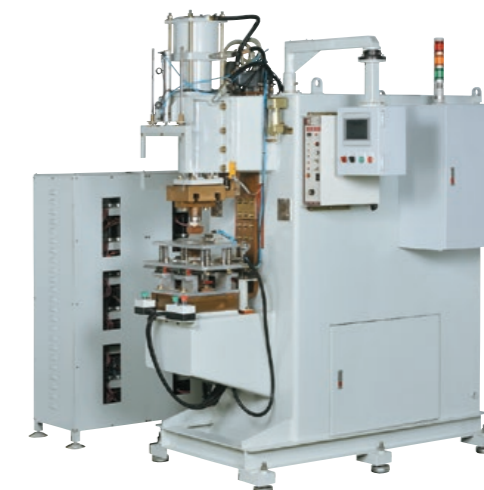
DSS-50X3-PJ-B

Special Purpose Machines

- Integrated projection and flash butt welding functions reduce investment cost.
- Rigid body design endures high welding pressure.
- Two stage welding cylinder ensures better operation and pressure output.
- Adjustable knee leaving rooms for larger welding range.

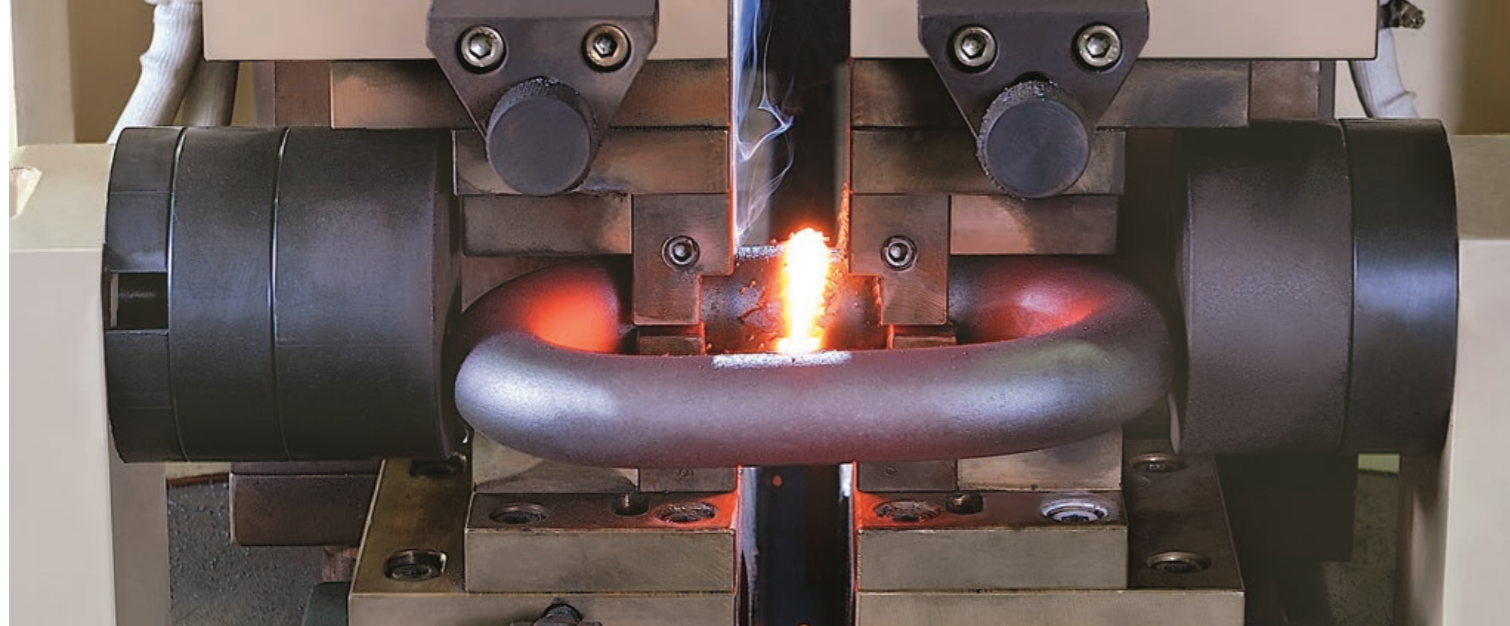


DDIS-180x3-PJ
DDIFB-150 ~ 300-Y



DSC-30-PJ





FLASH BUTT & BUTT WELDING



Flash Butt Welding

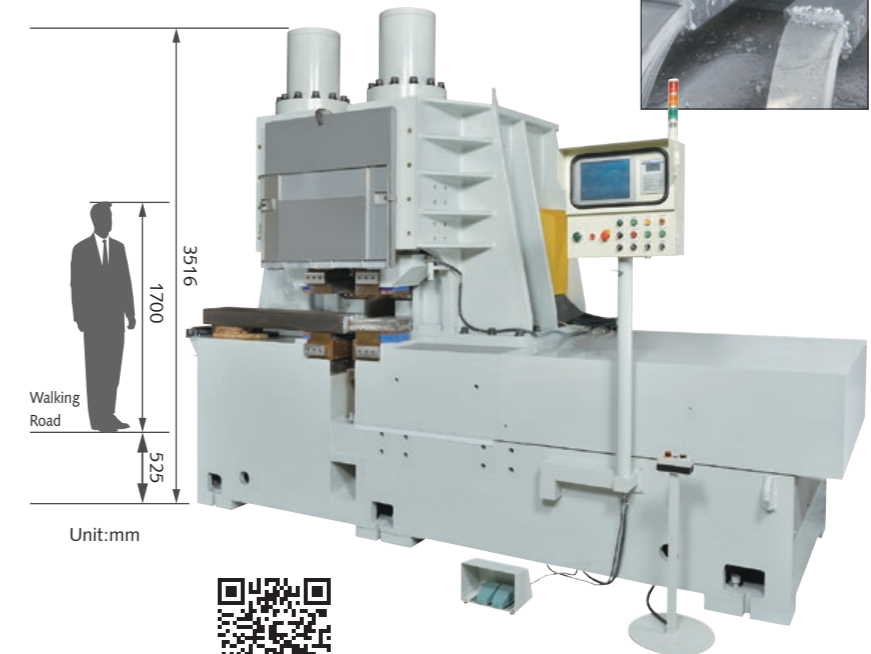
- Flash butt welding are recommended for joinin uneven welding edge, large diameter rods or thick sheets.
- Rigid machine body ensures stable welding quality.
- Easy alignment ensures accuracy of the welded parts.
- Welding burs in flash butt / butt welded joints can be easily grinded as compared to mig welding.
- Three phase DC inverter reduce energy consumption and reduce required connected load.



DDIFB-180x4-Z & DCU-50



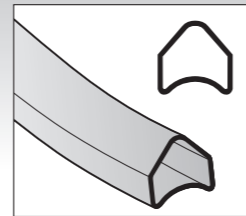
DDIFB-150~300-Y



DFB-300X4-Z

Butt Welding

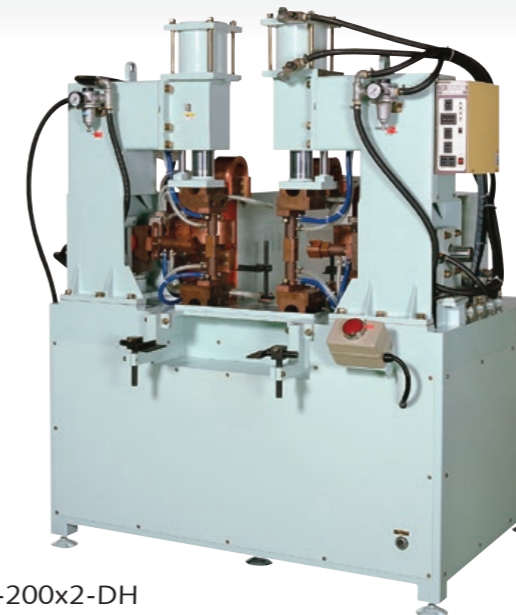
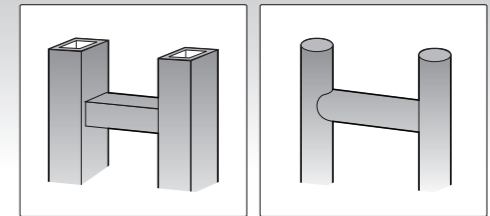
- Butt welding are recommended for joinin tubes, small diameter rods or thin sheets.
- Welding burs are much less and smaller than flash butt welding process.
- Shorter welding process.
- Also available in three phase DC inverter version.
- Option available such as part number marking; Welding data collection and transfer to PC for future reference.



DDIB-150-Z

T-Joint Welding

- Tailored T-Joint tube welding can be applied to furniture industry.



DB-200x2-DH

ABOUT DAHCHING

Established in 1979, Dahching Electric Industrial Co., Ltd. is an experienced Welding Machine manufacturer specializing in the production of Resistance Spot Welders, Seam Welders, Projection Welders, Flash Butt Welders, Three Phase Welders and Capacitor Discharge Welder products. Dahching also designs and produces many tailor welders. Our special Seam Welding Housing has patents and we are proud to inform you that we are the only resistance welding manufacturer who produces high quality transformers for lower power consumption. We have a good reputation in welding quality and after-sales services.

We excel at manufacturing welders for products such as oil filters, shock absorbers, brake shoes, automobile / motorcycle rims & fuel tanks, as well as products for

the auto parts industry and its satellite supply chains, household electrical appliances, refrigerator compressors, stainless steel kitchen wares, screw manufacturers, computer hubs, water tanks, and other industries.

We are also capable of providing full production lines for automobile / motorcycle rim, shock absorber, water tank, and refrigerator compressor factories.

We have accumulated experience in manufacturing resistance welding machines for over three decades. Still, we are innovative as well and are always ready to push the envelop. These deeds help us build machines of the highest quality, which are also easy to operate. We are willing to be your partner supplier and meet your demands.



4th Generation 2003~Today



3rd Generation 2000~2003



2nd Generation 1990~1999



1st Generation 1980~1989



2015 Developed Flash Butt Welding Machine for joining metal block with aluminium sheets.

2014 Obtained CE Certification on Special Purpose Welding Machines for Gas Spring Filling and Welding Machine and Shock Absorber Seam Welding Machine.

2012 Our commitment to the resistance welding industry pushes us to make progress in R&D, quality, and after-sales services.

2011 Construction of the 2nd factory.

2009 Three phase DC inverter transformer was successfully developed and was launched.

Three phase DC inverter welding machine.

2008 Successfully developed the grating welding machine and began marketing operations.

2007 Began R&D on three phase DC inverter transformer.

2004 Developed a complete assembly line for Toshiba rotary compressor manufacturing for outer shell welding. Customized fully-automated machines developed for Toshiba compressor piston rod and silencer welding.

2002 Integrated seam welding with the three phase rectified DC current output solution.

2001 Relocated to the current factory in Tainan.

1997 First product marketed to the Americas.

1995 Successfully developed and launched capacitor discharge DC current output solution (widely applied in the multi-embossment welding process).

1994 Designed and developed three phase rectified DC current output solution

(Our three phase DC inverter developed in 2009 was based on this).

1993 Successfully designed and developed customized welding machines for automobile oil filter (both auto and semi-auto types) with 70 sets sold so far.

1991 Tainan factory refurbished and extended.

1989 Patented special seam welding housing design developed. Complete assembly line for stainless steel water tank.

1987 Attended first international exhibition in Philippines. Established Taipei office.

1986 Became an agent of leading Japanese brand (Miyachi) for resistance welding controllers and checkers.

1984 Attended first exhibition in Taipei.

1983 Established factory in Tainan.

1980 First foreign sales with exports to Thailand. Began marketing into South East Asia.

1979 Founded in Banciao, Taipei with a small office and workshop.

