







PURSUIT OF EXCELLENCE













Since 1991

M.S. Trading Eu Hua Guang Jear Sung Co., Ltd.

Found on 1989, since then we have been a leading-edge trader and manufacturer of state-of-the-art products related mainly in resistance welding industry

to meet customer needs.

• Kickless cables, aka, Low reactance cables

• Secondary cables

• Water-cooled and air-cooled cables

• Flexible shunts

Resistance welding electrodes and accessories
 Resistance welding guns

- Resistance welding machines and systems
- Resistance welding quality monitoring and checking equipment
- Wide varieties of custom engineered resistance welding products

We have been serving automotive industry, computer assembly industry, steel furniture industry, electrical appliance industry and high-tech industry for over two successful decade. We utilize our innovations and expertise to bring our customers products performing quality driven. Our products are tough, dependable and efficient of their cost.

> Our target is to be the best one-stop service point to support all needs and requirements from our customers.



MS KICKLESS CABLE



(Low Reactance Cable)

GUN SIDE

Main Feature :

- Unique "X-shape" separator maintains strand positioning and equally distributed cooling water flow
- State-of-the-art 4-wire design to minimize current loss, reduced CO² emission
- Electrolytic tough pitch annealed, bare copper wire, 28 AWG, herringbone rope construction for greater flexibility and reduced wear point
- High temperature internal restraining collars to minimize stress in the bending area
- Lowest reactance of the class to engage lower primary power demand
- No noticeable pulsation due to low magnetic kicking
- Improved flexibility, smaller bend radii comparing to previous model
- Reduced operator fatigue, higher productivity
- All customized length is available upon request

Main Specification :

				Spe	ecificati	on			
ltem	300 MCM			400 MCM			500 MCM		
	2.0 m	2.4 m	3.0 m	2.0 m	2.4 m	3.0 m	2.0 m	2.4 m	3.0 m
Reactance $(\mu\Omega)^1$	68	81	90	45	57	71	33	44	57
Resistance $(\mu\Omega)^2$	460	550	680	330	400	495	265	320	400
Impedance $(\mu\Omega)^1$	465±10	556±10	686±10	333±15	404±15	500±15	267±20	323±20	404±20
Power Factor					≈0.99				
Breakdown Pressure					8 kg/cm²				
Min. Cooling Water Require Rate	6 Liter/min								
Outer Diameter (mm)		52 mm			56 mm			63 mm	

¹ By calculating under ISO 8205-1:2002 at 50 Hz

 2 By measuring under IIS C9318-1976 at 25°C



WATER-COOLED SECONDARY AND AID CABLE

Feature :

- Available in 185mm², 200mm², and 250mm²
- Special joining method to improve the durability of the cable
- Special twist to balance the stress regardless of the welding direction
- Made-to-order at any length
- Unique 150mm² model comes with full-length special tube to insure free-flow water path, also available





AIR COOLED JUMPER



Standard size

Type No

CA-375

CA-400

CA-Type :

- Cable twisted to from circular cross section
- Economical type for non-directional movement
- Available from 150mm² 750mm²
- Made-to-order at any length
- Non-asbestos protective cover

LAMINATED SHUNT





Cross Section (sq)

375

400



Copper Wire Protective Cover

А

32

18.0

16.0



S TYPE SPOT WELDER and SP TYPE SPOT & PROJECTION WELDER

Non-oil supply guide is adopted considering the environment. And there're 9 types of wide variation available .

Feature for S2 Series :

- 1. Non oil supply inflating guide with high performance adopted (Electrode stroke is of one touch switching)
- 2. A ball valve mounted at feed water inlet
- 3. Transparent hose available for stream confirmation
- 4. Microcomputer timer mounted (welding time interlock equipment)
- 5. Operation available with little cooling water (comparing with our previous type / under 50kVA)

Feature for SP2 Series :

- 1. Spot and projection welding compatible type mounted with frame of high precision
- 2. Non-oil supply inflating guide with high performance adopted (Electrode stroke is of one-touch switching)
- 3. A ball valve mounted at feed-water inlet
- 4. Transparent hole available for stream confirmatio
- 5. Microcomputer timer mounted (welding time interlock equipment)



Main Specifications :

Мо	Model		S2 6 505T	SP2-10)-70T	SP2-10)-110T	
Specifications		32-0-3331	32-0-3031	Platen	Spot	Platen	Spot	
Rated capacity	kVA	35	50	70	70	110	110	
Throat dimensions (opening x depth)	mm	200 x 500	200 x 500	200 x 300	200 x 400	200 x 300	200 x 400	
Max. short circuit secondary current	А	16,500	20,000	35,000	26,000	45,000	35,000	
Rated max. input	kVA	86/104	131/145	277/303	198/226	430/510	335/397	
Duty cycle	%	8.3/5.7	7.3/5.9	3.2/2.7	6.3/4.8	3.3/2.3	5.4/9.8	
Rated frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	
Welder power source	V	380	380	380		3	380	
Control unit power source	V	100	100	100		100		
Max. electrode force	kN	5.9	5.9	9.	8	9	.8	
Electrode stroke	mm	60.20	60.20	60.	20 (max 75)	60	.20 (max 75)	
Electrode tip diameter	mm	Φ 16	φ 16	Φ10	5	Φ 1	6	
Electrode tip taper		1/10	1/10	1/*	10	1/	'10	
Tip holder diameter	mm	φ 25	φ 25	Ф 3	2	Ф Э	32	
Horn diameter	mm	Φ 60	Φ 60	Φ 60		Φε	50	
Cooling water	l/min	4	4	8		8	3	
Weight	kg	245	260	38	35	4	10	
Thyristor size		C	C	C)		E	



INVERTER TYPE DC SPOT WELDER

Offering High Quality Welding and Wide Range for Welding Condition!! Achieve to Improve a Working Environment and Reduce Flash & Spatter!!

Main Specifications :

Specifications	Model	SID2-6-505T
Rated capacity	kVA	50
Throat dimensions (opening x depth)	mm	200x500
Max. short circuit secondary current	А	18,000
Rated max. input	kVA	125
Duty cycle	%	10
Rated frequency	Hz	50/60
Welder power source	V	3\$4380
Max. electrode force	kN	5.9
Electrode stroke	mm	60.20 (max 75)
Electrode tip diameter	mm	Ф 16
Cooling water	l∕min	4
Weight	kg	300



Main Feature :

- 1. Non-oil supply inflating guide with high performance adopted (Electrode stroke is of one-touch switching)
- 2. Output with DC high-frequency current of good heat efficiency
- 3. Input unbalance improved by 3-phase balanced loading
- 4. Short time welding available, electrode abrasion reduced
- 5. Space saving with inverter power built in the frame
- 6. Inflating auto switching with electro-pneumatic proportional valve mounted (optional)

PROJECTION WELDER

High precision projection welder with further improved advanced features inflating precision.



Main Feature :

- 1. Dynamic precision improved with a high efficiency design
- 2. Precision needle bearing adopted at inflating guide
- 3. Stable quality compensated, such as multipoint, ring projection
- 4. Simple setup change of the jig electrode
- 5. Support big work or special shaped work
- 6. Power saving type
- 7. Electric transformer with perfect durability
- 8. Microcomputer timer mounted
- 9. Semi-permanent main circuit switch adopted

Main Specifications :

Specifications N	/lodel	P-15-	150T
Rated capacity	kVA	15	50
Rated ptimary vottage	V	38	30
Max. electrode force	kN	13	5.7
Electrode stroke	mm	0	85
Rated frequency	Hz	50	60
Rated max. input	kVA	438	506
Duty cycle	%	5.9	4.4
Max. short circuit secondary current	А	50,0	000
Throat dimensions (opening x depth) mm	200>	< 300
Lower platen adjustable range	mm	0-1	00
Platen size	mm	ф 23	30
Cooling water	{/min	8	3
Weight	kg	72	20

MS TRADING

SEAM WELDER

Latest technology added to the function pursued by different using condition And newly developed power supply housing adopted!!

Main Feature :

- 1. High performance pressure guide and cylinder
- 2. Uses silver contacts point in conductivity part
- 3. 3-phase induction motor for electrode housing drive
- 4. Free select drive system
- 5. Equipped welding transformer to with stand highly severe work conditions
- 6. Slim and compact type part
- 7. Easy maintenance for electric supplied housing
- 8. State of the art microcomputer

Main Specifications :

Specifications	Model	SC-10-16	50 🗆 G	SC-10-16	50 🗆 K
Rated capacity	kVA	135	160	135	160
Rated frequency	Hz	50	60	50	60
Duty cycle	%		5	0	
Max. short circuit secondary current	А		25,0	000	
Weld speed	m/min	0.9-3.0 10-3.5 0.9-3.0 10-3.5			
Throat dimensions (opening x depth)	mm		90x	200	
Max. electrode force	kN		9.	.8	
Electrode stroke	mm		30:	:95	
Electrode dimentions		Upper 12x Φ250 Lower 12x Φ 200			
Drive system		Gear Knurl			
Cooling water	{/min		4	0	



SPECIAL SPOT WELDER



WELD CONTROL Model : CK4-8-15P/15



Main Feature :

- 1. Additional functions are further substantiated. And also available used as a simple control device by signal assembly.
- 2. 2 current monitor displays. 2-stage power-on monitoring available.
- 3. Direct input method adopted . Preset value can be inputted accurately.
- 4. A maximum of 31 welding conditions can be inputted. (15/31 condition switching type)
- 5 Total tapping dots counter added. Counter function was further substantiated.
- 6. External management of stored input data is available as an option feature.

WELD CONTROL Model : CE2-6-7

High reliability and Easy operation

Main Feature :

- 1. Easy operation
- 2. Wide input voltage 100-220V of power source is available. Squeezing output voltage becomes same as the input voltage.
- 3. Total counter
- 4. 7 channels for welding condition

Main Specifications :

lodel	CE2-6-7		Constant current monitor	±5%
	Channel 7 channels		Full heat	Detection on voltage compensation control
elding ondition	Squeezing channel 2 channels	Monitors	Over temperature	Lack of cooling water, duty cycle is over.
etting	Weld step 2 steps	1 Ioninoita	Weld source	Weld source detection
	Sequence step 6 steps		Thyristor	Short circuit of thyristor detection
	Weld time 0-99 cycle		Count up	Stop restarting during count up
me Control	Other times 0 (2)-99 cycle		Weld interlock output	Non-contact circuit
	Current upslope 0-29 cycle time		Weld input	Non-voltage contact
	Welding current 2.0-49.9kA	External input &	Monitor reset input	Non-voltage contact
	(When WMC-451N is used)	output	Release time output	1a contact
	Current range 5.0-50kA		Monitor error output	1a contact
urrent	(secondary) (When WMC-451N is used)		Squeezing output	Same voltage as input voltage of Timer
ontrol	Constant current 0.5 cycle	Usaae	Ambient temperature	0-45 °C
	response speed	Environment	Humidity	45-85% (No condensation)
	Constant voltage control and voltage	Input	Control input voltage	AC 100-220V, 50/60Hz
	compensation control can be combinated .	Voltage	Welding input voltage	AC200-220V, 380-415V, 50/60Hz
	Welding current WMC-451 N detection coil	Dimension	W90 x H300 x D285mm (Not includ	ing attachment)
ounter	Total counter 0-999	Weight	3.8kg	

Main Specifications :

		Item	Specifications		
Fundamental		Welding set data channel	15 or 31		
		Number of squeezing channel	2		
		Number of pulsation	3		
		Welding process step	4 or 8		
Time control		Heat 1-3 time	0-99 cycles		
		Other time	0(2)-99 cycles		
		Pulsation	2-99 times		
		Current slope	0-98 cycles for up or down		
Current o	control	Welding Current	2.0-50. OKA		
		Voltage compensation control	Constant current compensation		
		Current detector coil	WMC-451N		
	External	Heat-on output	Solid-stant circuit		
	input/	Pulsation-on output	(Alternately switched)		
	output	Wolk input	Equipped		
		Wekling step timing output	One make-contact		
		Outside squeezing mode inpot	Equipped		
		Squeazing pressure control output	0.00-999kN (for 15ch or 31ch) (Option)		
		No work input	Equipped		
Addtional	Counter	Spot counter	0-99 (for 15ch or 31ch)		
funtion		Work counter	0-9999 (for 15ch or 31ch)		
		Total spot counter	o-99999 (for 15ch or 31ch)		
		Sleep-up counter	0-9999 (for 3SVch)		
	Monitors	memory error	SCR short-circulted		
		Up/low. limit current error	Current checker		
		Full heat check	Cotltact ohecker		
		Cooling water error	Wekling power discontinuation		
		Up/low. limit firing angle monitor	Fused electrode detec/No work		
		(Error memory capacity : 10 points)			
Data Sto	bre	Oata backup	with flash memory		
Environm	ental	Operation temperature	o-45 ℃		
condition		Storing temperature	-10 - +60 °⊂		
		Allowable humidity	45 - 85% (without condensation)		
Power su	pply	Control power	100V AC+ 10% / -15%, 50/60Hz,30VA		
		Welding power	220V/440V AC+ 10%-20%, 50/60Hz		
Dimensio	∩s	Vertical type CK4-8-15	W90 X H300 X D325		
		Lateral type CK4-8-15P	W300 X H90 X D325		
Waiaht		Vertical type/Lateral type	540		



MS TRADING

RECTANGULAR WAVE AC INVERTER FOR WELDER

The 21st Century Manufacturing Style! We offer Next Generation Welding Quality!!

Main Feature :

- 1. A wide variation-6 model
- 2. Easy selection for input voltage
- 3. Equipped with power supply : DC24V of electrode force for standard and AC100V or AC110V made on order
- 4. A built-in type weld controller, setting can be operated by program box (Optional)
- 5. Welding conditions : 31 channel settings
- 6. A wide variety of weld conditions with up-slope, down-slope, pulsation and 2 step weld
- 7. Easy remote operation and equipped lead wire : 20m between main unit and program box or monitor box
- 8. The display contents on program box and monitor box can be switched between Japanese and English



Main Specifications :

Model Specifications	WIP2-440AC	WIP2-460AC			
Rated ptimary vottage	380V/400V	/ 440V +-15%			
Rated frequency	50-	60Hz			
Output current	400A	500A			
Output voltage	620V (at440V)				
Max. capacity	248kVA	372kVA			
Rated capacity	110kVA	166kVA			
Duty cycle	1	0%			
Turns ratio	4.0-1	200.0			
Primary current	50A-400A	50A-600A			
Cooling water	5e min or more infet terr	peratture 30'C or below			
Dimension	W320 X H750 X D320	W450 X H750 X D350			

HI-MINI RECTIFIER MB8C SERIES

Major features :

- 1. High reliability
- 2. Plating defective prevention circuit
- 3. A perfect protection circuit
- 4. A wild control functions
- 5. A rich option
- 6. Miniature, light weight, small space
- 7. Quiet operation sound
- 8. Durability and environmental resistance characteristics
- 9. A wild variation
- 10. Usage

~	Χ	Current(A)	100	200	300	500	1000	1500	2000	3000	4000	5000	6000	8000	10000
K/A	Voltage(V)	Model	101	201	301	5.1	102	152	202	302	402	5.2	6.2	802	103
ity (6	060	1.0	1.8	2.8	4.5	8.5	12.5	16.7	25.0	33.6	42.0	52.5	71.0	89.5
Daci	8	080	1.2	2.2	3.4	5.6	10.6	15.7	21.0	31.5	42.0	52.3	62.5	85.0	98.0
cap	10	100	1.4	2.7	1.4	6.6	12.8	19.0	25.5	38.2	50.3	62.8	78.0	105.0	130.0
put	12	120	1.6	3.1	4.7	7.6	15.0	22.4	30.2	45.0	60.2	73.8	92.0	121.0	150.0
<u> </u>	15	150	1.9	3.7	5.6	9.4	18.5	27.5	37.2	55.2	74.2	92.6	112.0	151.0	190.0

Indicates rated Output voltage EX.: 080—8V 120—12V 150—15V





THAILAND



SP-231N SERIES

HYDRAULIC WELD FORCE GAUGE For GeneralResistance Weld Compact, Lightweight, Easy



Outline :

For getting better result of weld, it is necessary to control fully pressure force put in between electrodes which is one of the three important factors for welding conditions. The weld forcegauge of SP-231N series employs closed and sealed hydraulic system offering compactness, light weight and simplicity of handling. Pressure receiving section is fabricated with insulated plate which safeguards against weld current on if applied by any chance. In accordance with the international standard, unit of N (Newton) is adopted and indicated on the meter. High reliability of this gauge supports severe quality control.

Main Features :

- 1. Seven types of variations fitted to the weld forceare available.
- 2. Be indicated with the internatio nal standard, unit of N (Newton).
- 3. losed and sealed hydraulic system offers small size, light weight and easy handlings.
- 4. Insuration type to protect to a certain extent against weld current on when carelessly applied.
- 5. Adoption of parting needle except SP-232N can point at maximun value of pressure force. (Optional f or SP-232N)
- 6. SP-241N has a flexible neck which is bendable from straight to U-form.
- 7. With accessory of a hardcase convenient for keeping and custody.

Main Specification :

MS TRADING

Mo	del	SP-233SN	SP-236N	SP-231N SP-232N		SP-233-3T	SP-233-4T	SP-241N
Range 0.25-3kN		0.3-6kN	0.3-6kN 0.5-10kN		1.5-30kN	2-40kN	0.5-10kN	
Min. Scale 100N (10kg		100N (10kgf)	200N (20kgf)	200N (20kgf)	1kN (100kgf)	1kN (100kgf)	2kN (200kgf)	200N (20kgf)
Асси	iracy				+-3% F.S.	-		
Weight	Unit	400	410	500	660	900	900	580
(g)	case	400						

SP-255 SERIES

HYDRAULIC WELD FORCE GAUGE For General Resistance Weld

Outline :

The model SP-255 is a handy type digital welding force gauge, which can measure weld force applied between electrodes that is one of the three important conditions for the spot welding. The model measures the force applied and displays data on LCD by using high accurate sensor

Main Features :

- 1. Measuring forces are digitally displayed successively.
- 2. To ensure accuracy, averaged value of sampling in 64 times/sec. is employed in display.
- 3. It can hold an optional data measured.
- 4. It can memory and indicate maximum load during measurement.
- 5. It has an auto-zero reset function.
- 6. Convenient in handling by incorporating dry batteries (UM-3x2)
- 7. Auto-power off function for saving power consumption.
- 8. Indication is for requesting replacement of batteries.





Main Specification :

	Item		Contents				
Measurment display		Digital successive (with	Digital successive (with hold function)				
Display		3+1 / 2 digits LCD (Se	3+1 / 2 digits LCD (Segment type)				
Accuracy		+- 1% Full scale (Static	force)				
Limit force		120% of fixed force					
Power source		Dry battery X 2 (UM-3))				
Battery life		8hrs (Alkaline battery c	ontinuous use)				
Temp. operated		0°-+40°C					
Accessory		Case / Manual / Test r	eport				
[Fixed type] The	e fixed neck type is standard type	e in this series which adopt	s hydraulic system.				
Model	Measure range	Minimum force	Dimensions (mm)				
SP-255-10kN	0.5kN~10.00kN	0.01kN (1kgf)	L262 × W68 × T36 /780g				
SP-255-20kN	1.0kN~20.0 kN	0.1 kN (10kgf) L262 × W68 × T36 /780g					
[Flexible type]	Two types are available, the o which is convenient in the mea:	ne is fixed neck type and t surement for the distant plc	he other is flexible neck type, ice.				
SP-255-F 200N	10N ~ 200N	1 N (0.1kgf)	Sensor Ф20×L198 / 60g / Cable 1.0m				
SP-255-F1000N	50N \sim 1000N	1 N (0.1kgf)	Sensor				
SP-255-F10kN	0.50kN ~ 10.00kN	0.01kN (1kgf)	Sensor				
SP-255-F30kN	1.5 kN ~ 30.0 kN	0.1 kN (10kgf)	Sensor				
[Flexible FU type] The n	ew FU type is flexible long neck	and closed hydraulic syste	Body L195×W68×T36/430g m, insulated against weld current.				
SP-255-FU10kN	0.50kN ~ 10.00kN	0.01kN (1kgf)	Sensor 36×36×L470/ 610g / Cable 1.5m				
SP-255-FU20kN	1.0 kN ~ 20.0 kN	0.1 kN (10kgf)	Sensor 36×36×L470/ 610g / Cable 1.5m				

Sensor 36×36×L470/610g / Cable 1.5m Body L195×W68×T36/430g



SP-3288 SERIES

Main Specifications:



WELDING CURRENT METER Lightweight Compact

Outline:

Model SP-3288 is handy type welding meter of secondary current and welding time for all kinds of resistance welding. Sensor is MEKANO patented toroidal coil for precise current detection. Measured data is digitally indicated in the RMS effective value calculated at each half cycle or Peak value of welding current is displayed together with welding time and conduction angle. In case of capacitor discharge type welder, it measures and displays peak value of current and time(mSec) to peak current or time(mSec) to the end of current application.

Index		Description		
Applicable for		Single phase AC, Single phase rectified, 3 phase rectified, Inverter, Capacitor discharge, Intermittent seam weld		
	Ranges	0.50kA - 9.99kA / 5.0kA - 25.0 kA / 10.0kA - 99.9kA		
Welding current	Indication	Average of RMS value or PEAK value		
	Accuracy	±2% of full scale		
Ranges		Cycle: 0.5 - 999.5 cycles, mSec: 0.1 - 2000mSec		
Welding time	Indication	[Cycles] All over weld time [mSec] Time to Peak(Tp) / Time to End(Tz)		
	Accuracy	Cycle: ± 0.5 cycle, mSec: ± 0.1 mSec		
Power source	0)	NiMH battery (1900mAH) AC adaptor (AC100-240V 50/60Hz 2A)		
Operating temperatu	re range	5°C - 40°C		
Dimensions		87(W) x 151(H) x 30(D) mm		
Weight		0.45kg (Main unit) / Approx. 1.8kg (Including Case & Accessories)		
Accessories	5	Toroidal coil PU-15B (16 x 500mm, U-Shape), AC adaptor (AC100-240V) Carrying case, Strap, Instruction manual, Test Certificate		

• Option: Soft case for main unit, Toroidal coil PU-14 [$18\phi \times 800$ mm (260ϕ)]

Main Features :

MS TRADING

- 1. More compact lighter body and touch key is improved for easier operation.
- Measured data of maximum 100counts are stocked in built-in memory. Wide range for measurement (Current: Max. 99.9kA, Time: Max. 999.5CY / 2000ms)
- 3. The unit displays measured data; "Count No.", "Current (kA)", "Welding time (cycle / ms)" and "Conduction angle".
- 4. Additional new functions support measurement of designated time scope for any current type and designated pulse number for multi-pulse current application.

SP-3510 SERIES



WELDING METER USB Access Lightweight, Compact

Outline :

Model SP-3510 is welding current/volt meter for all kinds of resistance welding, such as Single phase AC, Inverter, Condenser type, etc.. Current detection is supported by high performance toroidal coil made by Spotron. The unit has 4 patterns of display for measurement [Standard (per weld)] [Divisional(per cycle)] [Wave form] [Graph data] depending on the purpose. Measured value (Current/Voltage/Weld time) is displayed on touch panel LCD and it is possible to save measured data into SD card. External start signal can be used for the measurement to be linked with timer.

Main Specification :

ltem		Description			
Applicable for		Single phase AC, Three phase Rectified, Inverter, Condenser, etc. (for resistance welding)			
	Ranges	1.00kA-499kA			
Welding	Display	Average of RMS or Peak value (excluding upslope and downslope)			
Conem	Accuracy	+-2% (F.S.)			
	Ranges	0.30-59.9 V			
Voltage	Display	Average of RMS or Peak value (excluding upslope and downslope)			
	Accuracy	+-1% (F.S.)			
Ranges		CYCLE : 0.5 cycle-9999 cycle / mSec : 1-180,000mSec			
Welding Time	Display	All over weld time: cycle / Time to peak:Tp, Time to zero:Tz			
	Accuracy	CYCLE : +-0.5 cycle / mSec : +-1 mSec			
	Standard	Current • Effective heat time • Voltage • Phase control angle			
Display	Division	Standard data + divisional data of designated time/cycle			
Dispidy	Wave form	Standard data + Wave form per one heat(current application)			
	Graph	Standard data + Graphic diaplay of measured data			
F	ower source	Built-in Battery & AC Adapter (AC100-240V 50/60Hz)			
Dimensions		W145 X H183 X D65 (mm)			
Weight		Body: Approx 1.9 kg			
Accessories		Toroidal Coil PU-14 [Current detection] (Ф18×800≒Ф260) Clip cable{Voltage detection] • AC Adapter (AC100-240V) Start signal cable • SD Card • Shoulder belt Instruction manual • Test certificate			

Main Features :

- Displaying Current/Voltage/Weld time/Wave form on LCD (3.5inch, 240x320dots)
- 2. Easy operation and setting by Touch Panel.
- Saving measured data and wave form into SD card and data output by USB connector is possible.
- 4. Covering weld time max.3minutes for the continuous seam weld.
- 5. Wider current range 1.00kA-499kA consists of 3ranges (HIGH/MIDDLE/LOW)



AMS-1070M SERIES SECONDARY CABLE CHECKER (MicroOhm Meter)

Main Specification :

Measuring range	$3\mu\Omega\sim 9.9m\Omega$			
Range select	Auto range			
Display	Index 1-digit LED			
	Resistance	4-digit LED (Effective value)		
Accuracy	Relative accuracy	Less than 3/1,000 F.S.		
	Absolute accuracy	Less than 1/100 F.S.		
Data memory	Index 10 items			
Printing item	Index, Resistance, NG judge ratio			
Power supply	Rechargeable battery (built-in charger)			
Dimensions	150(W) × 60(H) × 200(D)mm Weight 1.6 kg (Approx)			
Accessory	Pen type probe (one couple) ,Shoulder belt			

Main Features :

- 1. Employed 4-terminal system to neglect resistance between terminal and work piece.
- 2. Can measure low resistance in accurate by adoption of such circuits as precision constant-current, microvoltage amplifying and common voltage eliminating.
- 3. Easy to read even in dark place by adoption of digital LED display.
- 4. Data memory function capable of storing 10 kinds of upper limit resistance value. The criterion for judging a Yes or No can be monitored at the time of measurement.
- 5. An pen probe with automatic start for ready measurement on the site.
- 6. A compact and lightweight convenient to use at any places.

Outline :

The model measures an increase in DC resistance due to deterioration of the secondary cables or kickles cable and also detects an abnormality in the secondary circuit caused by insufficient bolting or oxidizing of the contact surface.





NUGGET - VIEWER (SPOT WELD ANALYZER)



What is Nugget Viewer?

- 1. This is newly developed spot weld inspection tool with application of ultrasonic wave phenomenon.
- 2. It simply indicates spot weld nugget on the display in flat image (C-scope image) and determines judgment either of ideal weld nugget has performed or not.
- 3. Automatic measurement on weld nugget diameter and also on space factor ca be made for the evaluation of weld quality.

Standard set :

SCANNER (WITH HAND STRAP)	1 SET
MONITOR (WITH NECK STRAP)	1 SET
AC ADAPTOR	1 SET
CABLE 1.0M (MONITOR-SCANNER)	1 PC
BATTERY SET (BATTERY CHARGER, CASE, CABLE 1.0M)	1 SET
SD MEMORY CARD	1 PC
PC SOFT FOR DATE CHECK	1 PC
MEMBRANE SHEET	20 PCS
TOUCH CATALYST (1509}	1 PC
TEST PIECE	1 PC
MANUAL	1 SET

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Specification :

CHECK TIME	HIGH SPEED MODE 2SEC	
	HIGH SPEED SAVE MODE 4SEC	
	PRECISION MODE 4SEC	
CHECK AREA	igoplus 12mm	
INTERFACE	so caad, usb, ethernet	
UTILITY	AC100VI200V 10% SINGLE P	
	50/80Hz (WITH BATTERY CHARGE)	
ENVIRONMENT	INDOOR 5°C - 40°C	
SIZE	L280 X W80 X H71mm(SCANER)	
	L214 X W287 X H73mm (MONITORTOR)	
WEIGHT	0.8kg (SCANNER)	
	2.5kg (MONITOR)	

OPTION : CARRYING CASE /S PARE BATTERY / HOLDER BELT PARTS : TOUCH CATALYST / MEMBRANE SHEER

Operating windows

- 1. Indication is possible either on the plane (C-scope) and on the cross section (B-scope) of spot welding nugget performance.
- The automatic judgment function has employed so that three level of evaluations (O /△/ X) in nugget long dia., short dia. / in average diameter / in space factor.
- 3. The judgment shall be informed by lamp of the scanner and / or buzzer sound of the monitor.



Indicate Plane (C-scope) / Base (A-scope)

Judgment result example



Spot weld





Judged result

Nugget d'ameter





EK-METALS



MS TRADING

"EK-METALS" are precipitation hardening type special alloys produced through our strictly controlled process of solution as well as precipitation heat treatment subsequent to some plastic deformation processes - extruding, drawing, forging or rolling -of their alloyed ingots cast by quality controlled melting of respective chemical compositions made of copper and other component (Cr, Zr, Ti, Be, Ni) with some special elements as additive.

"EK-METALS" have the outstanding features of high temperature endurance, thermal and electric conductivities in virtue of our selected process control mentioned above.

Alloy		Mecanical properties		Electrical	Temperature			
		Tensi l e strength	Elongation	Hardness	conductivity	limit on heat	Equivalent standard	
		N/m2	%	HRB	L.A.C.S.% at20°C	°C		
	Drown bar	450-550	15-30	78-87	78-88	480-520	JIS Z 3234-2	
EK-2	Forged Products	390-490	15-30	72-82	70-00	400-520	RWMA Class 2	
	Characteristics & Applications	With durability improved by adding special element to copperchromium-zirconium alloy, it excells in electric conductivity and heat resistanze; hence, it is in usemost windely as resistance welding electrode material.						
	Drown bar	510-640	15-30	85-92	50.70	490.530	Dia/MA Class B10	
EK-3	Forged Products	470-590	15-30	82-90	30-70	470-330	RWINA CIdss D10	
	Characteristics & Applications	Having excelelen pressure where ve	t mechanical stren ery high strength a	gth of copper-chro nd durability are re	hromium-titanium alloy, EK-3 issuited to the electrode materials working under raised welding required.			
	Drown bar	490-600	15-25	80-90	70.85	500 550	JIS Z 3234-2	
CZ-5	Forged Products	440-590	15-25	75-88	70-85	500-550	RWMA Class 2	
	Characteristics & Applications	having a high copper-chromium-zirconium content, it's high-temperature strength is best suited for seam welding electorode in particular, the surface treated steel plates resistant welding is being used.						
	Drown bar	730-880	9-25	93-105	45.70	480.50	JIS Z 3234-2	
	Forged Products	690-830	9-25	93-105	43-60	480-52	RWMA Class 3	
END-JU Characteristics & Applications Characteristics Characteristics Applications Characteristics Character					made by adding some sopecial g electorodes or holders of spot			
	Drown bar	1100-1500	2-8	HRC 36-45	00.00	245,250	JIS H 3270	
EKB-25	Forged Products	970 (Min)	2(Min)	HRC 33 (Min)	20-30	315-350	JIS Z 3234-4	
	Characteristics & Applications	EKB-25 metal be the outstanding p	comes to compare properties relating	compare with special steels in high strength by means of the pertinently suitable heat treament and it has, besides, elating to those of specific spring character, electric conductivity resistance and wear resistance.				
	Drown bar	650-850	15-25	90-105	10.50	500 550		
EK-NS50	Forged Products	600-800	15-25	90-105	40-50	500-550		
	Characteristics & App l ications	with it's copper-nic	ckek-silicon-chroniu	um alloy, and eco-	co-friendly (conaini beryllium) attributes, it is best used as electrode material for extreme condition			

ELECTRODE SAMPLES





Brauer Systemtechnik GmbH is a midsize company from the southeast of Germany. Known as an experienced and reliable system supplier in the automotive industry, we care for customers from around the world. Our engineering company offers the best requirements for the development and manufacturing of high-quality product solutions in the area of resistance welding. Customized solutions for welding tools, electrode tip dressing as well as the automation of welding processes belong to our special product portfolio.



Electrode Tip Dresser for Manual Welding Guns BF 2400

pneumatically driven electrode tip dresser



Electrode Tip Dresser for Robot Welding Guns

BFS 3600

electriacally driven single head electrode tip dresser -stationary-



Electrode Tip Changer for Robot Welding Guns

BWS 5700 electrode tip changing

electrode tip changing system with tip cartridge and control sensor (single head)



Electrode Tip Changer for Robot Welding Guns

BWS 5710

electrode tip changing system with tip cartridge and control sensor (double head)



MS TRADING

Combi Units for Robot Welding Guns

BKS 5810

combined electrode tip dressing and tip changing system with tip cartridge and control sensor (double head)



Combi Units for Robot Welding Guns

BKS 5820

combined electrode tip dressing and tip changing system with tip cartridge and control sensor (triple head)



Mobile Systems for Stationary Welding Guns FS 1600

electrically driven swiveling system for electrode tip dresser

TIP DRESSER ETD-18F



Small, light and easy to handle Quick and accurate work Low air consumption Easy to change cutter and cutter case

Tip size: 10-18 mmNo-load RPM: 1,300 r.p.m.Weight: 1.65 kg





Welding Thyristor Water-Cooled Stack Type

THYRISTOR STACKS FOR RESISTANCE WELDING MACHINE



	RMS. Input	RMS. Load Current Continuous (A)	JIS Japanese Industrial Standard		Dimensions (mm.)			
Type No.	Voltage (V)		JIS	Type No.				
			Class	1700110	a	Ъ	с	d
AC05-4S07	400	510	С	WTh-C-400	225	145	235	40
AD09-4S07	400	910	D	WTh-D-400	225	145	250	40
AE11-4S07	400	1,110	E	WTh-E-400	225	155	300	40
AF16-4S07	400	1,600	F	WTh-F-400	225	155	300	35
AG22-4S07	400	2,200	G	WTh-G-400	225	180	370	40
AH30-4S07	400	3 ,000	H	WTh-H-400	225	270	370	40



THALAND Sheaty C Felonier Ganers



NUT FEEDER SERIES :

NF21 (YAJIMA) series which you can combine

NF21 (YAJIMA) is our latest machine. It has high performance with high speed supply ability, eco-friendly and maintenance-free.

- 1. Changing air-cylynder can change supply head stroke.
- 2. High speed supply (1.5 times faster than the previous model)
- 3. Low noise (Less than 80dB for parts feeder configuration)
- 4. Energy-saving (Power consumption was reduced to 1/2 and air-consumption was reduced to 1/6)
- 5. Simple & Compact (It easy to handle or operate and compact-sized)
- 6. You can choose the combination of bowls and hoppers.



260H standard type It has nut selection configuration of \oplus 260 and equipped with 10L hopper. The height from floor to hopper is 1m, which makes it easy for you to re-supply nuts.

STANDARD CONFIGURATION :

MS TRADING



260N standard type

It is a cheaper version of Φ 260 nut selection bowl configuration. You can attach hopper in a later time by sliding counter. You can perform control operation in front of the equipment.





300N standard type It has Φ 300 nut selection bowl and therefore can accommodate nuts twice compared with Φ 260. You can perform control operation in front of the equipment. You can attach hopper in a later time.

Power supply	: AC100V, 50Hz / 60Hz Max 300VA	
Nut shapes which can be used	: Square, round, Hexagon	
Air pressure used	: 0.3 - 0.4MPa	
Sizes	: M5 - M10	
Bowl size	:Ф260mm,Ф300mm	
Hopper capacity	: 10L (Approx. 12,000 pcs for M6 nut)	
Supply capacity	: 60 pcs / minute for single feed M6 square nuts	
Angle	: (Against floor) 0° - 90°	
Equipment weight	: Ф 260Body: 54kgf : Ф 300Body: 57kgf	

*All specifications are subject to change without notice, due to Yajima's policy of continuous improvement.

BOLT FEEDER SERIES : ELECTRODE PUSH TYPE BOLT FEEDER

Standard configyration :

Standard configyration :



Bolts that are chucked will be pushed into work holes directly at the upper electrode of welding machine. It has a simple and secure mechanism, which enables short cycle time.

Power Supply	AC100V, 50Hz / 60Hz 300VA - 500VA
Nut sizes which can be used	M5,6,8,10 MIN. L = 1.2 x Dmm MAX. L = 40mm *Round bolts only
Air pressure used	0.3 - 0.5MPa
Bowl size	Ф260mm, Ф350mm
Supply capacity	Approx. 15 - 20 pcs/minute
Supply chute length	3m
Angle	(Against floor) 40°
Equipment	Type S body: 70kgf Type L body: 90kgf Supply head: 3kgf

VECUUM TYPE BOLT FEEDER



Vacuum type bolt feeder performs the vacuum absorption of bolt heads, therefore it can used with any kind of bolt material. It can also be installed for small space, as its absorbing part is compact. We also has special chute (Hose) for those bolts whose length under head is short. Please feel free to make inquiry.



Body for S type bowl configuration



Body for L type bowl configuration

Power supply	AC100V, 50Hz / 60Hz, Max 300 - 500VA
Nut shapes which can be used	M5,6,8,10 MAX. D ≤ Φ25 MAX. L ≤ 40
Air pressure used	0.35 - 0.4MPa
Supply stroke	200mm, 250mm, 300mm
Bowl size	Ф260mm, Ф350mm
Supply capacity	Approx. 20 pcs/minute
Supply chute length	3m
Angle	(Against floor) 45° *0° is available as an option.
Equipment weight	Type S body : 70kgf Type L Body : 90kgf Supply head : 10kgf







AMADA MIYACHI's TECHNOLOGY

AMADA MIYACHI's technology supports our daily lives & Industry.





- Bus bar welding of electronics control units (ECUs) **PULSETIG Welders**
- Fusing of motor terminals DC Inverter-type Welding Power Supplies
- Fusing for terminal treatment for HV(hybrid) motors.
- Tab Welding of EV (electric vehicle) batteries
- Seal Welding of on-vehicle relay covers
- Fusing of starters and alternators





Smartphone / Electrical Appliance & Component



- Welding of Vibration motor terminals for mobile phones
- Welding of IC lead and sensor component - Joining of LCD panels for car navigation system and flexible flat cable



Photovoltaic Cells

Joining of bus bars and interconnectors Pulsed Heat Controllers

Medical Instrument



- Fusion cutting mesh catheters - Welding of guide wire tips

- Ribbon welding between cells

- Welding of terminals inside junction boxes

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- Joining of interconnectors



Layer joining (inside battery cells) Transistor-type Power Supplies

Others

- Resistance brazing of eyeglass frames
- Welding of fountain pen tips
- Welding of fuel rods

FINE SPOT WELDER

AMADA MIYACHI's Lineup of Fine Spot Welders

Fine Spot Welders

Welding Power Supplies



Weld Checker / Testers

Providers precise closed looped feedback control for any weld profile, and provides the current necessary for resistance welding.

To realize welding quality control, weld checker/testers measure important parameters for resistance welding, specifically current, voltage, welding time, welding force, and displacment.

Welding Power Supplies



Weld Heads



Converts low current output from welding power suppliers to the high current required for resistance welding.

In resistance welding, weld head supply the required force to the parts via welding eletrodes, current is then passed through the electrodes and parts to weld them together.



PULSETIG[®] Welders are DC current TIG welder (Arc welders). These units can be used for TIG welding or precision devices and miniature parts with good weld quality and reduced thermal effects.

Pulsed Heat Controllers



Pulsed heat controller are best suited for solder joining of flexible flat cable (FFC) and substrates as well as thermal caulking of resin. These controllers utilize closed-loop temperature and time control to produce precise and repeatable energy profiles for precision solder joining.







PULSETIG® Welder



ALUMINIUM-BRONZE ALLOY

We have been witnessing a rise in demand for special copper alloys with more demanding requirements. We have to be careful in meeting customers' needs and we must not deviate from their specifications in metallic industry as the present age of new technology progresses. A special aluminum-bronze alloy was developed by our founder, Dr. Shigeru Hagino, when he was with Mitsubishi Steel Mfg. in the 1940s. Many of the alloys developed during that period have made a big impact in the alloy industry in the past 65 years.

HRW-1

We have developed a special aluminum-bronze alloy, HRW-1, the only one of its kind on the market. HRW-1 (Patent NO. 18919342) has over 640MPa in tensile strength, over 15% of elongation and has over HBW180 of hardness. Its characteristics include high mechanical strength and high wear resistance, and it is best suited for small abrasion-movement parts or parts that must withstand heavy load.



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Feature :

- Mechanical properties are good.
- Excellent in wear resistance.
- Excellent in anti-corrosion quality.
- Excellent in fatigue resistance.
- Small specific gravity (specific gravity 7.5-7.6).

Principal applications :

- Non-magnetic bolts
- Non-magnetic engine materials
- Rotor wedgesShafts
- Bolts
- Nuts
- Overhead wiring metal fittings for trains
- Springs
- Connecting rods
- Brackets
- Various gears
- Bearings
- Liners
- Various materials for ships
- Pistons
- Bushes
- Various materials for electric machine parts
- Joints
- Valve cocks
- Valve seats
- Pumps
- Various machines
- Bushings for aircraft



OVERHEAD MATERIALS HANDLING LIGHT CRANE SYSTEMS



Turn-key installation of CEARS Gantry System, IT Guns, Non-IT Guns, Transformers and Controllers

CEARS Gantry System is a proven system and efficient solution for variety of overhead material handling requirement for auto and engineering industry. CEARS Gantry System is used for handling and assembling of heavy material in three dimensional work space. The operator does not feel fatigue in handling heavy material which results in enhancement of production to great extent.

CEARS sections are cold rolled Special Track Sections in steel with a smooth surface finish. The dead weight being very low and with extremely smooth running trolleys the crosstracker allows heavy and odd size goods to be moved quickly and effortlessly. Special guide surfaces and slightly inclined contact surfaces gurantee smooth trolley travel.

All rails are powder coated from inside as well as outside.

Cears rails are available in four different sizes - CGS-1G, CGS-1, CGS-2L and CGS-2.



CEARS Gantry System can be suspended from the building structure or a pillar type structure can be erected from the floor. Technical assistance is provided in designing this structure. We can also assist in providing other details like height of structure, height of gun station, working height of gun etc.

As sections are available in different sizes, wide variety of possible combinations can be adapted and any load handling problem can be solved.

If possible, please send us your shop layout to enable us to offer you right solution for your requirement.

- Suspension Assembly for Suspending Runways : Suspension assemblies are mounted on 1-beams for suspending runways. The 1-beam holder is provided with an adjustment clamp which can fit on all standard 1-beams. The complete assembly consists of ball and socket joint with moulded plastic cups for noiseless operation, absorption of jerks and minimum maintenance. Uniqueness of the assembly allows pendulum movement which prevents bending stresses and minimizes horizontal forces in the CEARS structure. The height of the runway can be easily and accurately adjusted by means of threaded suspension rods.
- Runways : Runways are suspended on 1-beams with the help of suspension assemblies. Runways are available in various lengths. The runway joining set enables the runways to be extended to any required lengths.
- Cross Tracker : The Cross Tracker has a two axis movement. It is suspended on runways with the help of tracker suspension trolley.
- Smooth Running Trolleys : Trolleys are strong, fitted with self lubricating polymer wheels, moulded with double Z bearings for maintenance free and long life operation. Trolley wheels are tapered to match the taper of the track thereby reducing rolling resistance.

Cears rails are available in four different sizes - CGS-1G, CGS-1, CGS-2L and CGS-2.









MS TRADING





BAND-IT[®]

AUTOMOTIVE APPLICATIONS



FUEL FILTER



AIR INTAKES :

• Clamp hoses to tubes to prevent removal without proper tools



SOUND ATTENUATION SHIELD

AIR BAGS :

 Clamp canisters and other components in air bag systems



BRAKE CABLE SUPPORT :

- Coated stainless steel tie secures brake cable to axle
- Unaffected by heat, cold, moisture, UV
- Fasten and unfasten tie without tools



FIRE PROTECTION SLEEVES /

FUEL TANK SHIELD

EXHAUST :

- Clamp heat shields to manifols, exhaust tubing, mufflers, catalytic convertors
- Attach heavy duty exhaust components
 to support structures
- Works well with stamped heat shields or modern composites
- Eliminates squeaks, ratties and warranty problems with broken welds
- Fast, easy, safe, field repairs
- unaffected by temperature differentials
- Complete variety of clamp sizes and types



DRYWE / RECEIVER



CV BOOTS :

• Easy aftermarket repair

• Wide selection of clamps

and application tools

and replacement

COOLING SYSTEMS :

• PERMANENT clamping of heavy duty cooling lines to prevent removal without proper tools









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BAND-IT[®]









