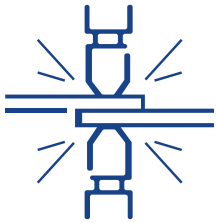


A close-up photograph of a resistance welding machine's electrode tip in contact with a metal workpiece. A bright, intense orange-yellow light is visible at the point of contact, with numerous bright, curved sparks radiating outwards, creating a dynamic and industrial scene.

RESISTANCE WELDING MACHINES





STANDART RESISTANCE WELDING MACHINES

AC, 3Phase-DC, MFDC in the range of 30-600kVA, MFDC, spot, projection, portable transformer, seam and butt welding machines



SPECIAL PURPOSE RESISTANCE WELDING MACHINES AND WELDING LINES

Fully automatic product and special purpose, semi-automatic resistance welding machines and full automatic welding lines



WELDING GUNS

Special arm designed X and C types robotic and manual welding guns



RESISTANCE WELDING TOOLS AND EQUIPMENTS

Process and machine specicated welding fixtures, smart electrodes for nut and bolt control, welding scopes, nut and bolt quality breakout test machines



RESISTANCE WELDING TRAINING AND CONSULTING SERVICES

Resistance welding process design, special fixture and electrode designs, welding trainings and machine retrofits

ABOUT US

mactera is a brand of ACT Group.

ACT Automotive has been serving the automotive industry since 2005 on control fixtures and assembly lines and special machines. Focusing on the field of Joining Technologies with years of experience, he established the group company KUDem Makina Sanayi ve Ticaret A.Ş. in 2012 and started the production of Rivet and Resistance Welding Machines under the brand mactera within the body of KUDem.

mactera, with its experienced and well-equipped Design, Production and Commissioning Team, offers spot, projection, seam, wire mesh, butt welding machines as well as special welding lines and welding cells solutions. By determining the

process improvements and special solutions required to produce defect-free products with high efficiency, it serves its customers not only as a machine manufacturer, but also as an engineering partner.

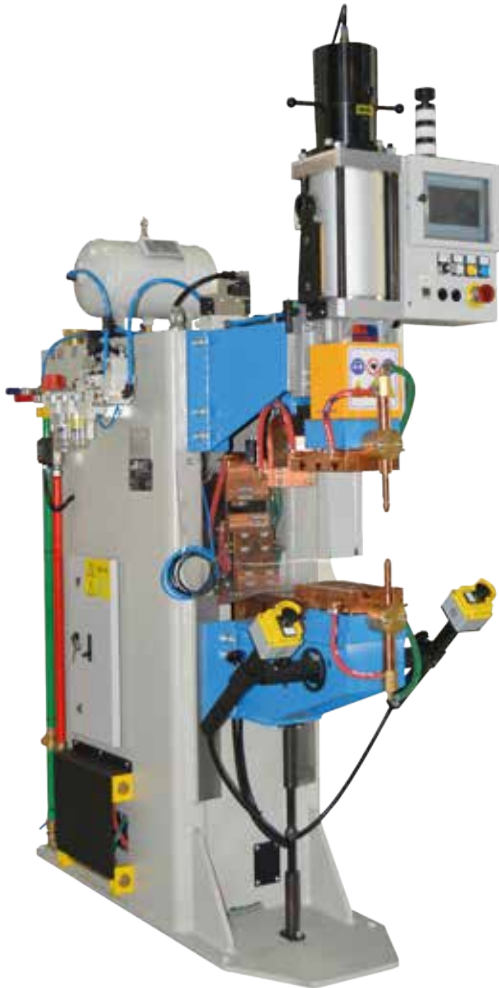
Technological renewal of existing machines in accordance with today's technology, maintenance and service support are also among the services offered by mactera. In addition, he has carried out his R&D studies on Joining Technologies in the R&D Office at Uludağ University Ulutek Technopark since 2012.

is conducting.

ACT Group continues its path with determination by increasing its exports in domestic and foreign markets with its three offices in the USA, Germany and Macedonia with its mactera branded welding machines as well as control fixtures and assembly lines.



SSW WELDING MACHINES



Rated Power at 50% 50-60Hz AC	kVA	120	150	180	210	250	300	350
Secondary Short Circuit Current 50%	kA	38	42	46	48	50	52	55
Rated Power at 50% 1000Hz DC	kVA	100	150	180	180	250	300	300
Secondary Short Circuit Current [20%-15ms]	kA	4 DIODES 35	4 DIODES 35	4 DIODES 50	6 DIODES 75	4 DIODES 50	6 DIODES 75	8 DIODES 95
Projection Arm Length	mm	400/500/600	400/500/600	400/500/600	400/500/600	400/500/600	400/500/600	400/500/600
Spot Arm Length	mm	500/600/700	500/600/700	500/600/700	500/600/700	500/600/700	500/600/700	500/600/700
Distance Between Projection Tables	mm	200-450	200-450	200-450	200-450	200-450	200-450	200-450
Force [6 bar max]	daN	730-1400	730-1400	730-1400	730-1400	1200-2400	1200-2400	1200-2400
Stroke (max) (mm)	mm	100	100	100	100	100	100	100

OPTIONS

1. Spot
2. Projection
3. Spot&Projection
4. PLC-HMI
5. Linear Sensor [upper]
6. Smart Electrode [lower]
7. Stroke Adjustable Cylinder
8. Stroke End Adjustable Cylinder
9. Double Stroke Cylinder
10. Flow&Temperature Sensor
11. Proportional Valve
12. Pressure Sensor
13. Barcode Scanner
14. Stepped Transformer
15. 2nd ,3rd or 4th Welding Cylinder
16. Nut&Bolt Feeder

TIMERS

1. Safco
2. Dengensha
3. Bosch Rexroth

SPW WELDING MACHINES

Rated Power at 50% 50-60Hz AC	kVA	120	150	180	210	250	300	350
Secondary Short Circuit Current 50%	kA	38	42	46	48	50	52	55
Rated Power at 50% 1000Hz DC	kVA	100	150	180	180	250	300	300
Secondary Short Circuit Current [20%-15ms]	kA	4 DIODES 35	4 DIODES 35	4 DIODES 50	6 DIODES 75	4 DIODES 50	6 DIODES 75	8 DIODES 95
Projection Arm Length	mm	300/400	300/400	300/400	300/400	300/400	300/400	300/400
Spot Arm Length	mm	400/500	400/500	400/500	400/500	400/500	400/500	400/500
Distance Between Projection Tables	mm	400-650	400-650	400-650	400-650	400-650	400-650	400-650
Force [6 bar max]	daN	730-1400	730-1400	730-1400	730-1400	1200-2400	1200-2400	1200-2400
Stroke [max] [mm]	mm	100	100	100	100	100	100	100

OPTIONS

- | | |
|-----------------------------------|-----------------------------|
| 1. Spot | 9. Double Stroke Cylinder |
| 2. Projection | 10. Flow&Temperature Sensor |
| 3. Spot&Projection | 11. Proportional Valve |
| 4. PLC-HMI | 12. Pressure Sensor |
| 5. Linear Sensor [upper] | 13. Barcode Scanner |
| 6. Smart electrode [lower] | 14. Stepped Transformer |
| 7. Stroke Adjustable Cylinder | 15. 2nd Welding Cylinder |
| 8. Stroke End Adjustable Cylinder | 16. Nut&Bolt Feeder |

TIMERS

1. Safco
2. Dengsha
3. Bosch Rexroth



MW WELDING MACHINES



Rated Power at 50% 50-60Hz AC	kVA	30	45	60	90
Secondary Short Circuit Current 50%	kA	15	22	25	32
Rated Power at 50% 1000Hz DC	kVA	30	40	60	80
Secondary Short Circuit Current [20%-15ms]	kA	2 DIODES 19	2 DIODES 15	2 DIODES 15	2 DIODES 15
Projection Arm Length	mm	300	300	300	300
Spot Arm Length	mm	400	400	400	400
Distance Between Projection Tables	mm	400	400	400	400
Force (6 bar max)	daN	180-470	180-470	470-730	470-730
Stroke (max) (mm)	mm	100	100	100	100

- | | |
|-----------------------------------|-----------------------------|
| 1. Spot | 9. Double Stroke Cylinder |
| 2. Projection | 10. Flow&Temperature Sensor |
| 3. Spot&Projection | 11. Proportional Valve |
| 4. PLC-HMI | 12. Pressure Sensor |
| 5. Linear Sensor [upper] | 13. Barcode Scanner |
| 6. Smart Electrode [lower] | 14. Stepped Transformer |
| 7. Stroke Adjustable Cylinder | 15. Nut&Bolt Feeder |
| 8. Stroke End Adjustable Cylinder | |

TIMERS

1. Safco
2. Dengensha
3. Bosch Rexroth

SEAM WELDING MACHINES

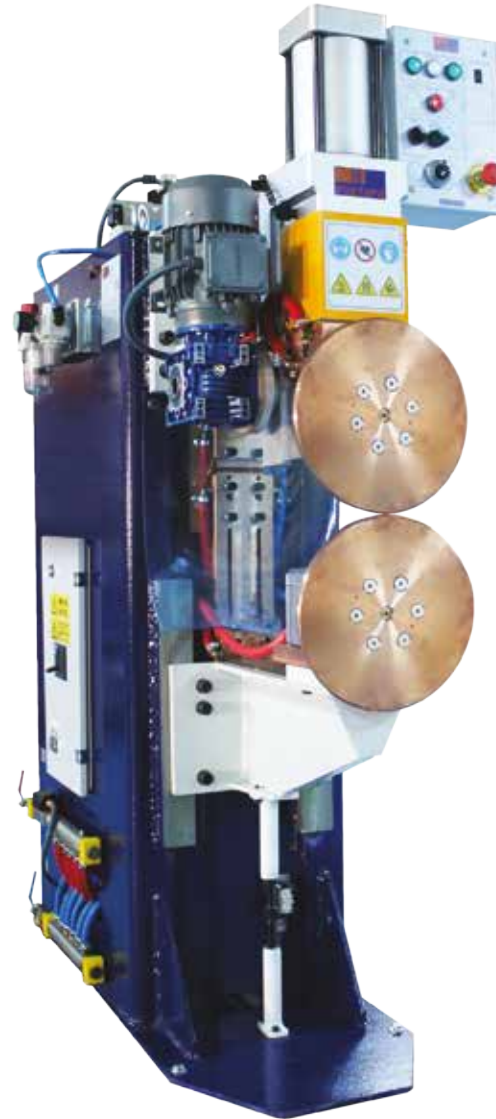
Rated Power at 50% 50-60Hz AC	kVA	120	150
Secondary Short Circuit Current 50%	kA	38	42
Rated Power at 50% 1000Hz DC	kVA	100 4 DIODES	180 4 DIODES
Secondary Short Circuit Current [20%-15ms]	kA	35	50
Transversal Seam Arm Length	mm	400/500/600	400/500/600
Longitudinal Arm Length	mm	400/500/600	400/500/600
Disk Diameter	mm	400	400
Force [6 bar max]	daN	470-730	470-730
Stroke [max] [mm]	mm	100	100

OPTIONS

- | | |
|---|----------------------------|
| 1. Transversal Seam Welder | 8. Double Stroke Cylinder |
| 2. Longitudinal Seam Welder | 9. Flow&Temperature Sensor |
| 3. Transversal&Longitudinal Seam Welder | 10. Propotional Valve |
| 4. PLC-HMI | 11. Pressure Sensor |
| 5. Lineer Sensor [upper] | 12. Barcode Scanner |
| 6. Stroke Adjustable Cylinder | 13. Stepped Transformer |
| 7. Stroke End Adjustable Cylinder | |

TIMERS

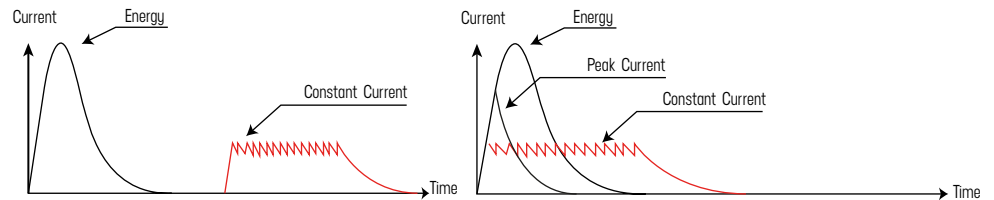
- | | | |
|----------|--------------|------------------|
| 1. Safco | 2. Dengensha | 3. Bosch Rexroth |
|----------|--------------|------------------|



CAPACITOR DISCHARGE WELDING MACHINES

Model	1	2	3	4	5	6	7	8	9
	NDZ	-	-					-	
		CA 0	4	6	B	S	U	Y	D
			7	8		N	C		
			1			L			
			A			R			
						B			
						M			
						T			

Power Supply	200V, 6kA
Maximum Energy	3000 joule
Short Circuit Current	50kA



Series Name	NDZ	NDZ Series
Weld Controls	CA 0	Capacitor Discharge
Throat Depth	4	400 mm
Electrode Force	6	6kN, [Ø60 Mum Tutucu, Ø25 Mum, Ø16 Elektrot]
	7	6kN, [Ø70 Mum Tutucu, Ø32 Mum, Ø20 Elektrot]
	8	6kN, [Ø70 Mum Tutucu, Ø32 Mum, Ø16 Elektrot]
	1	10kN, [Ø70 Mum Tutucu, Ø32 Mum, Ø20 Elektrot]
	A	10kN, [Ø70 Mum Tutucu, Ø32 Mum, Ø16 Elektrot]
Stroke [max]	B	75 mm
	S	Center
	N	Nut Projection
	L	Nut Yes/No and Wrong Nut Control Feature
	R	Automatic Nut Feeding Feature
Application	B	Bolt Projection
	M	Bolt Yes/No and Wrong Nut Control Feature
	T	Automatic Bolt Feeding FeatureUL/CSA
	U	UL/CSA
	C	CE
Power Source	Y	200V±15%50/60Hz
Revision	A,B,C,D...	

TECHNICAL DATA

1. Compact design.
2. High welding current up to 50kA with only a small 6kVA and 200V power supply.
3. Precisely adjustable welding quality with various current control modes
4. Possibility of traceless welding thanks to minimum heat transfer with high current in a very short time.
5. Consistent welding with current feedback mode even under unstable power supply conditions.
6. Nuts etc. on high strength steels. successful projection source of small parts such as

BENCH TYPE WELDING MACHINES

Rated Power at 50% 50-60Hz AC	kVA	30	45	60
Secondary Short Circuit Current 50%	kA	15	22	25
Rated Power at 50% 1000Hz DC	kVA	30 2 DIODES	40 2 DIODES	60 2 DIODES
Secondary Short Circuit Current [20%-15ms]	kA	19	15	15
Projection Arm Length	mm	150	150	150
Spot Arm Length	mm	230	230	230
Distance Between Projection Tables	mm	100/150	100/150	100/150
Force [6 bar max]	daN	75-300	75-300	75-300
Stroke (max) (mm)	mm	50	50	75

OPTIONS

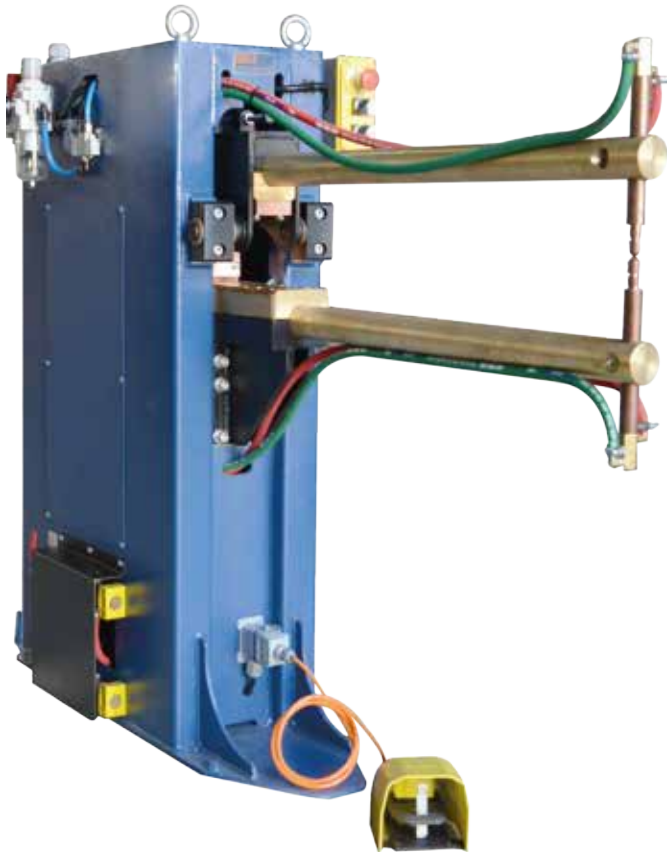
- | | |
|-----------------------------------|----------------------------|
| 1. Spot | 8. Double Stroke Cylinder |
| 2. Projection | 9. Flow&Temperature Sensor |
| 3. Spot&Projection | 10. Proportional Valve |
| 4. PLC-HMI | 11. Pressure Sensor |
| 5. Linear Sensor [upper] | 12. Barcode Scanner |
| 6. Stroke Adjustable Cylinder | 13. Lower Table |
| 7. Stroke End Adjustable Cylinder | 14. Double Hand Button |

TIMERS

- | | | |
|----------|--------------|------------------|
| 1. Safco | 2. Dengensha | 3. Bosch Rexroth |
|----------|--------------|------------------|



ROCKER ARM RESISTANCE WELDING MACHINES



Rated Power at 50% 50-60Hz AC	kVA	30	45	60	90
Secondary Short Circuit Current 50%	kA	15	22	25	32
Rated Power at 50% 1000Hz DC	kVA	30 2 DIODES	40 2 DIODES	60 2 DIODES	80 2 DIODES
Secondary Short Circuit Current [20%-15ms]	kA	19	15	15	15

Spot Arm Length	mm	400/600	400/600	400/600	400/600
Distance Between Projection Tables	mm	200	200	200	200
Force [6 bar max]	daN	180	180	180	180
Stroke [max] (mm)	mm	175	175	175	175

OPTIONS

- | | |
|-----------------------------------|---------------------------|
| 1. Spot | 6. Double Stroke Cylinder |
| 2. Angular Electrode | 7. Proportional Valve |
| 3. PLC-HMI | 8. Pressure Sensor |
| 4. Stroke Adjustable Cylinder | 9. Double Hand Button |
| 5. Stroke End Adjustable Cylinder | |

TIMERS

1. Safco
2. Dengensha
3. Bosch Rexroth

BUTT WELDING MACHINES

Rated Power at 50% 50-60Hz AC	kVA	30	45	60	90
Secondary Short Circuit Current (50%)	kA	15	22	25	32
Arm Length	mm	60	60	60	60
Clamping Force (6 bar max)	mm	200	200	200/600	200/600
Welding Force (6 bar max)	daN	80	80	100/300	100/300
Stroke (max)	mm	25	25	25	25

OPTIONS

1. Manual or Automatic Clamping and Pressure Groups
2. Special Electrodes For The Parts
3. PLC-HMI
4. Propotional Valve
5. Double Hand Button
6. Foot Pedal
7. Lower Table

TIMERS

1. Safco
2. Dengensha

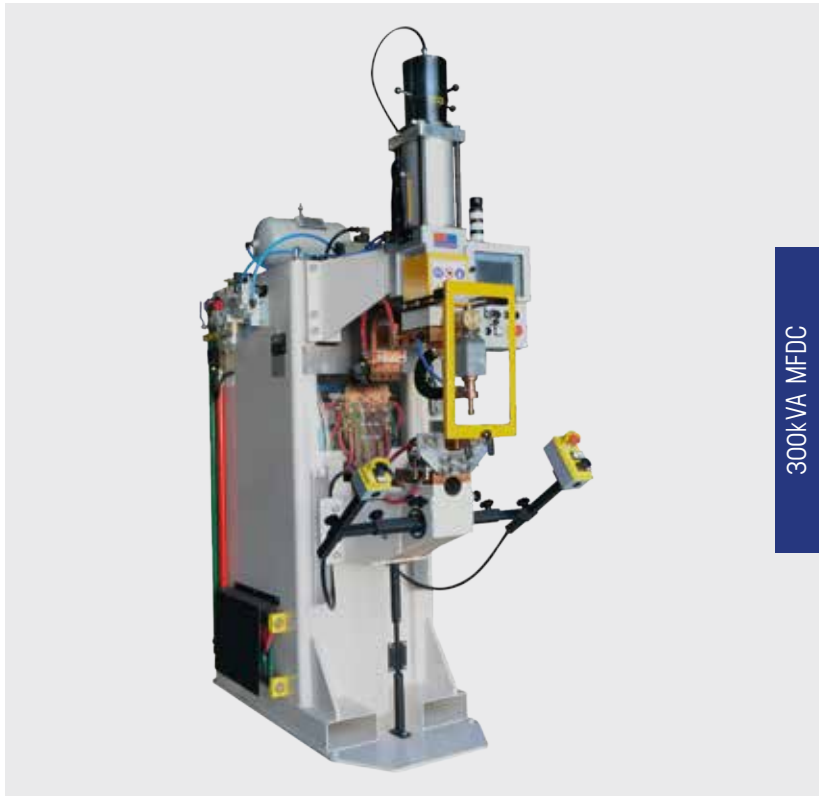


DEDICATED RESISTANCE WELDING MACHINES



600kVA 3 PHASE DC

SHOCK ABSORBER KNUCKLE JOINT BRACKET PROJECTION WELDING MACHINE



300kVA MFDC

ALUMINIUM SPOT WELDING MACHINE

DEDICATED RESISTANCE WELDING MACHINES



SHOCK ABSORBER STOPPER PLATE MULTI-POINT WELDING MACHINE



SHOCK ABSORBER AUTO ROTATE DUST COVER SPOT WELDING MACHINE

DEDICATED RESISTANCE WELDING MACHINES



120kVA AC

X-Y MOVING FIXTURE BOLT PROJECTION WELDING MACHINE



150kVA AC

SUSPENSION STABILIZER BAR LINK (Z ROT) WELDING MACHINE

DEDICATED RESISTANCE WELDING MACHINES



120kVA AC

DISHWASHER BASKET PROJECTION WELDING MACHINE



150kVA AC

SHOCK ABSORBER BOTTOM CUP SEAM WELDING MACHINE

DEDICATED RESISTANCE WELDING MACHINES



180kVA MFDC

SERVO DRIVEN SPOT&PROJECTION WELDING MACHINE



250kVA AC

SHOCK ABSORBER PISTON ROD MOUNTING PART PROJECTION WELDING MACHINE

DEDICATED RESISTANCE WELDING MACHINES



2 x 250kVA AC

DOUBLE HEAD NUT PROJECTION WELDING MACHINE



170kVA MFDC

OVEN SIDE FRAME SPOT WELDING MACHINE

DEDICATED RESISTANCE WELDING MACHINES



300kVA AC

1100 mm THROAT DEPTH CROSS WIRE PROJECTION WELDING MACHINE



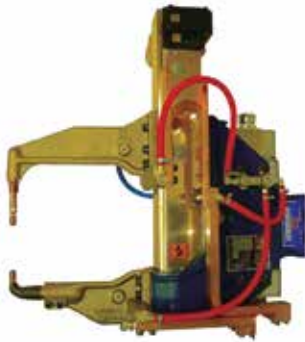
60kVA AC

COPPER WIRE WELDING MACHINE

WELDING GUNS

Lineer Motion Guns

X TYPE GUN



C TYPE GUN



Reduction Gear Guns

X TYPE GUN



MFDC Lightweight Compact Servo Guns

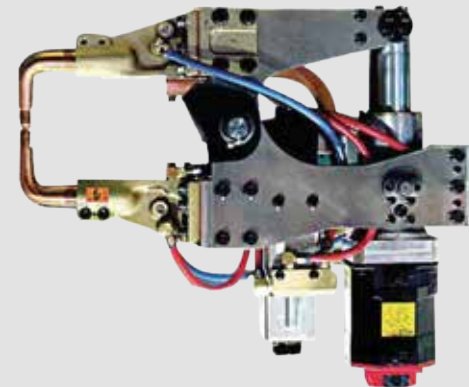
X TYPE GUN

Total Weight:
55-66 kg



C TYPE GUN

Total Weight:
61-69 kg

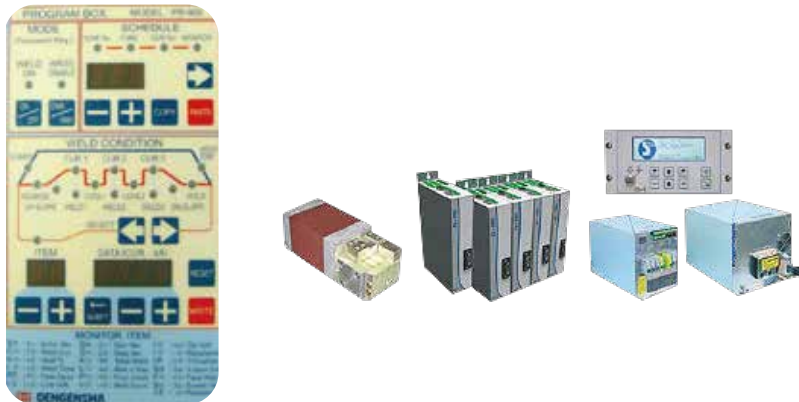


WELDING TOOLS & EQUIPMENTS

Automatic Nut/Bolt Feeders



Welding Timers and Transformers



Weld Scopes

WS - 100



Smart Electrodes for Nut/Bolt Controls





www.mactera.com.tr

OUR PARTNERS

SAFCO



- MFDC Transformers
- MFDC Inverters
- Welding Timers

DG



- Welding Timers
- MFDC Transformers
- Nut&Bolt Automatic Feeders
- Robotic Welding Guns
- Weld Scopes

SMK



- Smart Electrodes For Nut&Bolt Control



UNITROL



- Pinch Point Safety System



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