

Welding Laboratory Configuration

Specifications

Notes: Product pictures are only for reference, CEIEC may update them due to technical reasons.

ITEM:	IGBT INVERTER MIG WELDING MACHINE	
PART NUMBER:	0299300013	
BASIC FUNCTION:		
<p>MIG350 with high-quality performers that can be used for all-purpose, semi-automatic CO₂ gas shield welding with solid or flux-cored wire(Φ1.0-Φ1.6mm)for welding mild steel and low alloy steel work pieces.</p> <ol style="list-style-type: none"> 1) HF inverter, small size, light weight, energy-saving, low expense. 2) Digital display for accurate parameter preset, easy to operate 3) Easy arc starting with slowly wire feeding. 4) Stopping arc procedure has reducing melting ball feature. 5) Low welding distortion, pretty weld formation, high welding deposit rate. 6) Used for solid/flux-cored electrode wire. 7) 2 cycle / 4cycle operating modes provided. 		
SPECIFICATIONS:		
TABLE		
Voltage/ frequency		3-phase 220V±10% /60Hz
Rated input power (KVA)		14
Rated input current(A)		36
Rated output voltage (V)		31.5
Rated duty cycle (%)		60
Rated range of output current (A)		60-350
Rated range of output voltage (V)		15-40
Open circuit voltage (V)		50
Efficiency (%)		≧ 89
Power factor		0.87
Wire diameter (mm)		1.0/1.2/1.6
CO ₂ gas flow rate (L/min)		10-20
Wire feeding type		Wire pushing
Insulation class of main transformer		H
Insulation class of output reactor		B
Weight (Kg)		40
Dimensions L×W×H (mm)		576×297×574
Configuration: (As per one set)		
1) power source		1set
2) Connected primary cable L=3m		1 set
3) Ground cable L=3m with clamp		1 set
4) North Gas-cooled torch L=3m		1 set

5) Wire feeder with Europe type connection	1 set
6) Inner-connection cable L=5m	1 set
7) Fuse 2A (6×30)	2set
8) Allen wrench	1 set
9) wire feeding roller $\Phi 1.0/\Phi 1.2$	1 set
10) wire feeding roller $\Phi 1.2/\Phi 1.6$	1 set
11) Contact tip $\Phi 1.0$	1 set
12) Contact tip $\Phi 1.2$	1 set
13) Contact tip $\Phi 1.6$	1 set
14) Operating manual	1 set

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ITEM:	IGBT INVERTER MIG WELDING MACHINE	
PART NUMBER:	0299300014	
BASIC FUNCTION:		
<p>MIG500 with high-quality performers that can be used for all-purpose, semi-automatic CO₂ gas shield welding with solid or flux-cored wire(Φ1.0-Φ1.6mm)for welding mild steel and low alloy steel work pieces.</p> <ol style="list-style-type: none"> 1) HF IGBT inverter, small size, light weight, energy-saving, low expense. 2) Digital display for accurate parameter preset, easy to operate 3) Easy arc starting with slowly wire feeding. 4) Stopping arc procedure has reducing melting ball feature. 5) Low welding distortion, pretty weld formation, high welding deposit rate. 6) Used for solid/flux-cored electrode wire. 7) 2 cycle / 4cycle operating modes provided. 		
SPECIFICATIONS:		
TABLE		
Voltage/ frequency	3 phase 220V±10% /60Hz	
Rated input power (KVA)	25	
Rated input current(A)	66	
Rated output voltage (V)	39	
Rated duty cycle (%)	60	
Rated range of output current (A)	60-500	
Rated range of output voltage (V)	15-50	
Open circuit voltage (V)	79	
Efficiency (%)	≥ 89	
Power factor	0.87	
Wire diameter(mm)	1.0/1.2/1.6	
CO ₂ gas flow rate	15-20	
Wire feeding type (L/min)	Wire pushing	
Insulation class of main transformer	H	
Insulation class of output reactor	B	
Weight (Kg)	50	
Dimensions L×W×H (mm)	636×322×584	
Configuration: (As per one set)		
1) power source	1set	
2) Connected primary cable L=3m	1 set	
3) Ground cable L=3m	1 set	
4) North Gas-cooled torch L=3m	1 set	



5) Wire feeder with Europe type connection	1 set
6) Inner-connection cable L=5m	1 set
7) Fuse 2A (6×30)	2set
8) Allen wrench	1 set
9) wire feeding roller $\Phi 1.0/\Phi 1.2$	1 set
10) wire feeding roller $\Phi 1.2/\Phi 1.6$	1 set
11) Contact tip $\Phi 1.0$	1 set
12) Contact tip $\Phi 1.2$	1 set
13) Contact tip $\Phi 1.6$	1 set
14) Operating manual	1 set

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ITEM:	DIGITAL IGBT INVERTER PULSE MIG WELDING MACHINE	
PART NUMBER:	0299300015	
BASIC FUNCTION:		
<p>AMIG500PIII Full digital inverter MIG/MAG welders, which has CV and Pulse output characteristics and have been widely applied in welding carbon steel, Al-Mg alloy and stainless steel, copper and so on.</p> <ol style="list-style-type: none"> 1) Completely digitalized control system, to achieve precise control of the welding process, one pulse one drop 2) Friendly operating interface, unified adjustment, and easy to operate; 3) Synergic operation in MIG/MAG and Pulse MIG/MAG welding process; 4) Built-in welding expert database, which provide intelligent welding parameters 5) Capable for storing 100 sets of user-defined parameters 6) Flexible digital communication interfaces, convenient to equipped with automated welding 		
SPECIFICATIONS:		
TABLE		
Voltage/ frequency	3 phase 220V±10% /60Hz	
Rated input power (KVA)	25	
Rated input current(A)	66	
Rated output voltage (V)	39	
Rated duty cycle (%)	60	
Rated range of output current (A)	60-500	
Rated range of output voltage (V)	15-50	
Open circuit voltage (V)	79	
Efficiency (%)	≧ 89	
Power factor	0.87	
Wire diameter(mm)	1.0/1.2/1.6	
CO ₂ gas flow rate (L/min)	15-20	
Wire feeding type	Wire pushing	
Insulation class of main transformer	H	
Insulation class of output reactor	B	
Weight (Kg)	53	
Dimensions L×W×H (mm)	655×340×558	

Water cooling machine:	
Voltage/ frequency	Single phase 220V±10% /60Hz
Rated input current(A)	1
Cooling water capacity (L)	10
Cooling style	Air-blast cooling
Cooling water circulating style	Inner circulating
Circulating water flux (L/min)	3
Circulating water distance (m)	30
Cooling ability (W)	4000
Configuration: (As per one set)	
1) power source	1 set
2) Connected primary cable L=3m	1 set
3) Ground cable L=3m with quick plug	1 set
4) Binzel Water-cooled torch L=3m	1 set
5) Full digital Wire feeder with Europe type connection	1 set
6) Inner-connection cable L=2m	1 set
7) Fuse 2A (5×20)	2set
8) Allen wrench	1 set
9) V type wire feeding roller Φ0.8/Φ1.0	2 set
10) V type wire feeding roller Φ 1.2/Φ 1.6	2 set
11) U type wire feeding roller Φ 0.8/Φ 1.0	4 set
12) U type wire feeding roller Φ 1.2/Φ 1.6	4 set
13) Contact tip Φ0.8	2 set
14) Contact tip Φ 1.0	2 set
15) Contact tip Φ 1.2	2 set
16) Contact tip Φ 1.6	2 set
17) Contact tip Φ 10A	2 set
18) Contact tip Φ 1.2A	2 set
19) Contact tip Φ 1.6A	2 set
20) Teflon line 3.5m	1 set
14) Operating manual	1 set


ITEM:	DIGITAL IGBT INVERTER TIG WELDING MACHINE	
PART NUMBER:	0299300012	
BASIC FUNCTION:		
<p>ATIG400 is novelty high-efficient and energy-saving DC Arc welders, wish has MMA and TIG function, not only are used in carbon steel and low alloy steel welding, but also used in stainless steel, high alloy steel, copper, silver, molybdenum and titanium welding.</p> <ol style="list-style-type: none"> 1) HF IGBT inverter, small size, light weight, energy-saving, low expense. 2) 2 cycle / 4cycle operating modes provided. 3) Digital display for welding current and welding voltage. 4) Knee point voltage is adjustable, suitable for long distance and short distance welding. 5) Adjustable welding parameters of pre-gas flow, arc-start current, up-slope, down-slope, crater fill current and post-gas flow improve the TIG welding performance. 6) Fan-on demand cooling system operates when needed. 7) Wire / Wireless remote control 		
SPECIFICATIONS:		
TABLE		
Primary power voltage/frequency		3-phase 220V±10% /60Hz
Rated input power (KVA)		14.4
Rated input current (A)		48
Rated output voltage (V)		36
Rated duty cycle (%)		60
Range of output current (A)		5-400
MMA arc-force current (A)		1-200
MMA arc-starting current (A)		0-160
MMA knee point voltage (V)		10-30
MMA arc-starting time (S)		0.1-1.5
TIG pre-gas time (S)		0.1-15
TIG arc-starting current (A)		10-160
TIG up-slope time (S)		0.1-10
TIG down-slope time (S)		0.1-15
TIG crater-filling current (A)		5-160
TIG post-gas time(S)		0.1-15
Open circuit voltage (V)		23±3V
Efficiency (%)		≥ 89

Power factor	0.95
Welding electrode diameter (mm)	2-6
Tungsten electrode diameter (mm)	1-6
Max argon flow rate (L/min)	25
Insulation class of main transformer	H
Insulation class of output reactor	B
Weight (Kg)	43
Dimensions L×W×H (mm)	576×297×557
Configuration: (As per one set)	
1) power source	1set
2) Connected primary cable L=3m	1 set
3) Ground cable with clamp and quick plug L=3m	1 set
4) Gas-cooled TIG torch L=5m	1 set
5) Welding cable with electrode holder and quick plug L=3m	1 set
6) Fuse 2A (6×30)	2set
7) Allen wrench	1 set
8) Operating manual	1 set


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ITEM:	DIGITAL IGBT INVERTER AIR PLASMA CUTTER	
PART NUMBER:	0299300011	
BASIC FUNCTION:		
<p>ACUT60 is new-designed for metal processing, apply IGBT as well as PWM (Pulse width Modulation) soft switch technology. This series cutting machines can cut all types of metal materials, especially for high alloy steel</p> <ol style="list-style-type: none"> 1) HF IGBT inverter technology, small size, light weight, energy-saving, low expense 2) HF arc-starting, easy to strike. 3) Outstanding cutting quality with trim and slick edge. 4) 2 cycle / 4cycle operating modes provided. 5) Delayed post-flow can protect plasma torch effectively 		
SPECIFICATIONS:		
TABLE		
Voltage/ frequency	3-phase 220V±10% /60Hz	
Rated input power (KVA)	7.0	
Rated input current(A)	17	
Rated output voltage (V)	104	
Rated range of output current (A)	30-60	
Open circuit voltage (V)	345	
Rated duty cycle (%)	60	
Air pressure for cutting torch (MPa)	0.45	
Gas flow rate (L/min)	250	
Max cutting thickness for carbon steel (mm)	15	
Optimum cutting thickness for carbon steel (mm)	1-10	
Power factor	0.95	
Insulation class of main transformer	H	
Insulation class of output reactor	B	
Weight (Kg)	28.5	
Dimensions L×W×H (mm)	501×232×495	
Configuration: (As per one set)		
1) power source	1set	
2) Connected primary cable L=3m	1 set	
3) Ground cable with clamp and quick plug L=3m	1 set	
4) Air plasma cutter torch L=6m	1 set	
5) Fuse 2A (6×30)	1 set	
6) Air filter	1set	
7) Operating manual	1 set	

ITEM:	WELDING FUME TREATMENT	
PART NUMBER:	0299400022	
BASIC FUNCTION:		
<p>During the welding process, the welding machine will produce a large amount of harmful gases such as CO, CO₂, SO₂, H₂S, lead oxide smoke and dust and so on. Inhalation of the harmful gases in a long time would causes disability and even death. Therefore, welding smoke management has drawn increasing attention.</p> <p>The cartridge is used by the U.S. imported materials with a long life time and it can absorb dust particles 0.3 um, which has a very good filtering effect for the wet and sticky dust.</p> <p>Using the 360°flexible arm, the machine can absorb the smoke from the right place that the gases occur. It greatly increased the dust collection rate to ensure the health of the workers.</p> <p>The inside of the filter used three protective measures aiming at fire danger and large particles of slag, which make the filter longer life and more secure.</p>		
SPECIFICATIONS:		
Air volume		1200m ³ /h
Motor power		0.75kw
Voltage		380V/50HZ
Filtering area		10
Size		580*550*1250 (mm)
Noise		62db

ITEM:	ELECTROD DRYER	
PART NUMBER:	0299400023	
BASIC FUNCTION:		
Portable welding rod dryer for 5kg rod		
SPECIFICATIONS:		
Rod length (mm)		40
Capability (kg)		5
Capacity		180W / 90V
Size(L*W*H)		Φ 180*600H
Weight		4 kg

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ITEM:	ELECTRODE OVEN	
PART NUMBER:	0299400024	
BASIC FUNCTION:		
SPECIFICATIONS:		
Supply voltage	single phase 220V/50hz	
Power	5.2KVA	
Max. temperature	500	
Capability	100kg	
Temperature homogeneity	±5	
Electrode length	450mm	
Size (L*W*H)	630*720*1210	
Weight	160 kg	

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ITEM:	WATER COOLING MACHINE	
PART NUMBER:	0299400027	
BASIC FUNCTION:		
<ul style="list-style-type: none"> ● It can supply stable and ample cooling for water-cooled torch. ● Accurate displays of liquid condition, temperature and pressure. ● Little circulating resistance, good cooling effect. ● Stainless steel liner, durable, airtight. ● Convenient operation, compact configuration, small, easy to carry. <p>Features :</p> <ul style="list-style-type: none"> ● Supply stable and ample cooling for water-cooled torch. ● Accurate displays of liquid condition, temperature and pressure. ● Little circulating resistance, good cooling effect. ● Stainless steel liner, durable, airtight. ● Convenient operation, compact configuration, small size, easy to carry. <p>Applications:</p> <ul style="list-style-type: none"> ● Suitable for water-cooling of all type 		
SPECIFICATIONS:		
Rated input voltage (V)	Single phase 380±10% / 60Hz	
Input current (A)	0.8	
Rated frequency (Hz)	50	
Cooling water capacity (L)	20	
Cooling style	Air-blast cooling	
Cooling water circulating style	Inner circulating	
Circulating water flux (L/min)	3	
Circulating water distance (m)	30	
Cooling ability (W)	4000	
Radiation Area (m ²)	0.6	
Pump power (W)	72	
Weight (kg)	32	
Dimension (mm ³)	690×340×560	

ITEM:	Digital Flaw Detector	
PART NUMBER:	0299400014	
BASIC FUNCTION:		
<p>This is a portable ultrasonic flaw detector that adopts the international advanced IC technique and new-style color TFT LCD display. Its each performance index all arrive or even beyond international excellence.</p> <p>It use the artificial intelligence technology, can test, orient, evaluate and diagnose various flaws such as crack, lard, air hole, welding defects in workpiece's interior swiftly and accurately without any destruction. The flaw detector can not only be used in lab but also can be used on engineering site. Also, it can be widely used for safety checking and life evaluating in fields of aeronautics, rail transportation and boiler pressure vessel.</p> <p>It has mainly advantages such as higher detection sensitivity, short cycle, low cost, convenient that with small size and light weight, can be hold by one hand, high efficiency and harmless to the human body, etc.</p>		
SPECIFICATIONS:(As per one set)		
Range	(0 ~ 9999) mm(at steel velocity); range selectable in fixed steps or continuously variable	
Bandwidth	(0.5 ~ 15) MHz	
Material Velocity	(1000 ~ 9999) m / s	
Dynamic Range	≥ 32dB	
Vertical linear error	≤ 3%	
Horizontal linear error	≤ 0.2%	
Resolution	> 40dB (5P14)	
Sensitivity Leavings	60dB (flat-bottomed deep hole 200mmΦ2)	
Rejection	(0 to 80)% Linear	
Noise level	≤ 10%	
Pulse Repetition Rate	10 to 1000 Hz	
Spike excitation	low, middle and high choices	
Pulse width	(0.1~0.5)μs	
Damping	100Ω, 200Ω, 400Ω	
Probe work mode	Single, angle, dual element and through transmission	
Probe interface	BNC, Lemo, Microdot	
Gate Reading	Single, dual	
warning	Buzzer, LED light	

Real-time sampling	160MHz high speed
Rectification	Positive half wave, negative halfwave, full wave, and RF
Filter band	(0.25~20) MHz,
DB Step	0dB, 0.1 dB, 2dB, 6dB, auto-gain mode
Welding show	ok
Mermory	100 configuration channels
Power supply	DC 9V; lithium batteries
Working time	4-8 hr. or more
Communication	USB2.0
Ambient temperature	(-20 ~ 50) °C
Relative Humidity	(20 ~ 95)% RH
Overall dimensions	263 × 170 × 61 (mm)

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ITEM:	Computer Control Electro-hydraulic Servo Universal Testing Machine	
PART NUMBER:	0206000031	
BASIC FUNCTION:	<p>1. Control card adopts advanced neural adaptive PID control algorithm, and truly realizes three closed-loop digital controls.</p> <p>2. Data acquisition system consists of or channels high precision A/D conversion channel. The maximum resolution of 1/200000. There is no subsection of all process; meanwhile, it can have 4 subsections according to customers' requirement.</p> <p>3. Select BB, AD and Xilinx original brand integrated devices and digital design.</p> <p>4. Built-in large scale CPLD programmable device with high-speed computation capability and real-time processing digital signal.</p> <p>5. Integrated dual roads precision instrument programmable amplifier, digital zero and automatic smooth shifting.</p> <p>6. Select high quality imported servo valve block, all control signals photoelectric isolation, 24V DC and safe and reliable.</p> <p>7. MaxTest software runs on Windows98/2000/XP operating system; equipped with a special Windows system for Test Chinese intelligence package, the testing machine can process test result and then output test report and the characteristic curve design.</p> <p>8. Real-time record and dynamic display test curve.</p> <p>9. Provide programmable automatic testing procedures and users can edit their own test steps according to the requirements of test.</p> <p>10. Adopts human-computer interaction to analyze and count performance indicators of materials. It has both automatic and manual modes.</p> <p>11. Adopts standard database to manage test data and support batch test.</p> <p>12. Customer can add test methods and rules for his needs.</p>	
SPECIFICATIONS:(As per one set)		
Type parameters		1000
Maximum force (kN)		1000



Measuring range of force (kN)		2%~5% F.S, 4subsection1,2,5,10
Accuracy of testing force		±1%
Subsection of force		0.01mm
Accuracy of distortion measurement		±0.5%F.S
Control range of stress speed		1MP/S-60MP/S
Speed adjusting range of testing strain		0.00025/S-200025/S
Clamping thickness of flat specimen (mm)		0-40
Clamping width of flat specimen (mm)		120
Testing space(mm)	Tension	650
	Compression	600
Clamping diameter of round specimen (mm)		φ13-φ60
Plates size(mm)		210×210
Distance of bending by pass roll(mm)		30-800
Piston stroke(mm)		250
Power supply		380V±10%, 50Hz
Working environment		10oC~30oC, relative humidity≤80%
Overall dimension (L×W×H) (mm)	Host machine	1070×850×2530
	HPS	600×600×1165
Weight(kg)		4120

ITEM:	PRESS BRAKE		
PART NUMBER:	0205050506		
BASIC CHARACTERISTIC OF FUNCTION:			
<p>The machine used Omega combination of integrated valve in the machine, compact, less fault, synchronization system uses mechanical synchronization, synchronization better with stand partial load capability; significant number of fine-tuning, digital back gauge; upper die pad type deflection compensation device to resolve the problems brought about by the bending force plate deformation. The whole structure is advanced, superior performance, beautiful appearance.</p>			
SPECIFICATIONS: (As per one set)			
Normal pressure			630KN
.Length of worktable			2500mm
Distance between uprights			2050mm
Throat depth			250mm
.Ram travel			120mm
Max open height between working table surface and ram			300mm
Adjustment to ram trap			80mm
Speed of ram travel	No load	120mm/s	
	Full load	13mm/s	
	return	70mm/s	
Axial plunger pump	type	16MCY-1B	Actual use 22Mpa
	flow	16ml/r	
	pressure	31.5Mpa	
Main motor	type	Y132M2-6/B35	
	power	5.5KW	
	speed	960rpm	
Motor for adjusting ram	type	A02-6324/B14	
	power	120W	
	speed	1440rpm	
Motor for adjusting back	type	YU80M6B	
	Power	0.55KW	
	speed	960rpm	
Overall dimension	Length	2560mm	
	Width	1350mm	

	height	2100mm
Net/gross weight		4.82T

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ITEM:	Shearing machine	
PART NUMBER:	0205050408	
BASIC CHARACTERISTIC OF FUNCTION:		
<p>1, high-quality welding of steel, tilting turret, high strength and good rigidity; 2. After welding to eliminate the internal stress, the body as a whole processing, to ensure the accuracy of processing; 3, step less adjustment of the blade gap, light and fast; 4, high-strength blade to ensure the service life of the blade; 5, with lighting, easy crossed shearing; 6. Customized binder foot, can effectively protect the sheet will not be crushed.</p>		
SPECIFICATIONS: (As per one set)		
Max. shearing thickness	6mm(CS)/3mm(SS)	
Max. shearing width	2500mm	
Cut angle	1.5°	
Tensile strength of plate	450n/mm	
Times of stroke	16times/min.	
Distance between uprights	2730mm	
Length of blade	2600mm	
Height of worktable	680mm	
Main power	7.5KW(Y132M-4)	
Plunger pump	25MCY-1B	
Dimension(LxWxH)	2960x1600x1700mm	
Net/gross weight	5200KG	

ITEM:	Interactive White Board	
PART NUMBER:	0207100000	
BASIC FUNCTION:		
<p>The Interactive White Board is widely used in modern high-level classroom. It has to be used together with the presenter.</p>		
SPECIFICATIONS:(As per one set)		
Technology	Infrared Technology	
Writing Styles	Pen or Finger	
Resolution	4096×4096	
Cursor Speed	120 dots/second	
Consume Current	≤95mA	
Data Port	USB or COM	
Dimension (inch)	80	
Screen Proportion	4:3	
Active Input Area (mm)	1653×1139	
Intelligent Pen Tray	YES	
Working Temperature	-15~50℃	
Working Humidity	20~90%	
Storage Temperature	-40~50℃	
Storage Humidity	10~95%	

ITEM:	Presenter	
PART NUMBER:	0207100201	
BASIC FUNCTION:		
It is used together with the Interactive White Board in this project.		
SPECIFICATIONS:(As per one set)		
Light output:	3000 lumens	
Chip:	0.55DMD×1	
Number of Pixels:	XGA (1024×768)	
Lamp:	230W	
Noise (dB):	34/32 (ECO mode)	
Audio out (W):	8	
Power (W):	295	
Dimensions (mm)	306×99×224	
Terminals:	RGB input:	15-pin mini D-sub×2
	RGB output:	15-pin mini D-sub×2
	Video input:	S-video: Mini Din-4×1; Component video : RCA jack×1
	RS232C :	3-pin D-sub×1
	HDMI Input :	HDMI×1
	Network:	RJ-45×1
	Audio input :	Audio×1
Audio output:	Audio×1	