USER'S MANUAL



Please read this manual carefully before installation, use and maintenance



	When the DC inverter welder works with AC welder, please don't let the output cable of two
WARNING	different machine connected together prevented from damage welder
	Once you touch the electric parts will result in electric shock
DANGER	Don't touch the electric parts.
	Make sure the welder connect to earth before using.
	Off power supply while assembly and maintenance.
	• Don't use the welder while opening the case.
•	Please use the good insulating gloves.
	ARC_{v} Spatter and slag may burn eyes and skin, abnormal noise may hurt hearing
	 Please use the welding mask to protect your face and eye
€ ایر م	Please use the welding clothes to protect your body
	Please use hearing protecting tool when it is noising
	Using welder in a narrow place or higher have the potential to cause electric shocks,
DANGER	stinging lead to falls and other accidents.
	Please use the VRD device or build-in VRD welder in the following location
	•2m or higher location with risk of falling, workers who may be exposed to bars and other places
	of grounding electrical conductivity.
=	Please check the VRD device per the safety rule while operating
	The dust, smoke or gas caused by welding are bad for health
	Please use local exhaust ventilation equipment and respiratory protective equipment.
	• When operating in narrow places, please check and accept monitoring of adequate ventilation,
	wearing of respiratory protective equipment
<u> </u>	 Please don't use the welder in the degreasing, cleaning and spraying area
	It may result in fire, blasting or other accident during welding
	Please don't place any Combustible and flammable gases in the welding location.
A Des	Please don't weld any airtight container, like oil tank or tube or others
	Please equip with fire apparatus in welding location.
	Lifting Device:
	The standard package for this welder is carton or wooden box without any connector for
	lifting device, so when the welder arrive, please use the fork lift truck to move the machine
₩ TA	and then open it.
	•When the welder equipped with rings for lifting, you can use the ring to transport the machine,
	but please notice that don't use roller to move the welder since it may damage the welder
	Please make sure all accessories have been removed when lifting
	• When the welder is being lifted, please make sure there is nobody below the welder and there is
47	someone to mention the passengers.
	Please don't use the crane to move the welder quickly.
	Please install the welder in accordance with the assembly direction.
L	

Please make the generator's power is at least 2 times than the welder's rated power when using generators as power supply

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1.MACHINE DESCRIPTION:

1)THIS SERIES OF PRODUCT FEATURES:

The carbon dioxide gas shielded welding machine is my company's R & D design of inverter technology manufacturing inverter welding machine, has the following advantages:

① strong adapt of grid voltage , ± 15% range can be used normally.

2 simple design, beautiful, the atmosphere, small size, light weight, easy to carry.

③ the use of three-protection duct design, comprehensive protection of electronic devices.

(4) This series of gas welding machine using current-mode PWM pulse width adjustment technology, IGBT Inverter technology, high-power fast recovery diode should be With the technology, make sure

the reliability of the product and more stable.

5 with insufficient voltage, over heating, over current, phase-missed protection, to ensure product reliability.

6 output performance is stable, real-time monitoring of the output power of the welding, the effective management of the output current to ensure welding welding reliability.

⑦ has a good dynamic characteristics, easy arc, arc stability, easy to control the pool.

(8) precise preset welding current, the use of more intuitive and convenient for different thickness of the work piece, sheet with a small current, thick plate with a large power Flow, to ensure the quality of welding and energy conservation.

(9) digital key encoder adjustment, the interface is simple, with synergic and a unified, 2T / 4T, check wire and other functions; boot automatically restore the last parameter, Adjust the side. Integrated with 0.6,0.8,1.0 three kinds of wire CO2 gas protection welding synergic and a unified specification, just adjust a parameter can be to normal welding, and with the voltage fine-tuning function.

2) APPLICATION:

It is suitable for the welding of various kinds of metal materials such as carbon steel, alloy steel and nonferrous metals. It is suitable for the manufacture of metal parts, such as boiler pressure fuse manufacturing, industrial power station, aerospace industry, automobile and engineering vehicle manufacturing and construction.

3)MODEL DESCRIPTION:



4)LOGO DESCRIPTION:

	Read all safrty regulations and instructions Disconnet the machine from the mains before instal-lation or adjustment		Earthing loop Attention.Warning of possi-ble user health damage
0	Wear a welding mask	合合	Movement direction
	Wear a dust mask	1	Unlocked
0~0	Rotation direction	1	Locked

 \geq note:Be sure to identify the product model on the nameplate, the same product model may

have different parameters.

2. MECHNICAL PARAMETERS TABLE:

Table 1

Model Parameters	MIG 180 I	MIG 2001	MIG 230CI	MIG 230CI		MIG 270 DY
Power	1 phase	1 phase	1 phase	1 phase	1 phase	3 phase
voltage(V)	AC220V±15%	220V±15%	220V±15%	220V±15%	380V±15%	AC380V±15%
Frequency(Hz)	50/60	50/60	50/60	50/	/60	50/60
Rated input current(A)	33	37	45	45	21	18.2
Output current(A)	30-160	30-200	30-230	30-	230	50-270
Rated output voltage(V)	16.5-25	16.5-26	16.5-26	16.5	5-26	17-35
Duty Cycle(%)	30	30	30	3	0	60
Power factor	≥0.70	0.73	0.73	0.1	73	≥0.90
Efficiency(%)	≥80	≥80	≥80	≥{	30	≥85
Wire feed speed(m / min)	2-13	3-18	3-18	3-18		3-31
Postflow time(S)	1.0±0.5	1.0±0.5	1.0±0.5	1.0±0.5		1.0±0.5
Wire diameter(mm)	0.8/1.0	0.8/1.0	0.8/1.0	0.8/1.0		0.6/0.8/1.0
Insulation grade	F	F	F	F		F
Housing protection grade	IP21S	IP21S	IP21S	IP2	21S	IP21S
Applicable thickness(mm)	Over 0.8	Over 0.8	Over 1.0	Ove	r 1.0	Over 1.0
Output cable(mm²)	Over 12	Over 16	Over 16	Ove	r 16	Over 25
Weight-Main Unit(kg)	5.5	8.8	19	1	9	22.3
Dimension (mm)	344*159*267	425*183*290	546*234*417	546*23	34*417	581*234*470

Table 2

Model Parameters	MIG 270 PY	MIG 270 DF	MIG 350I	MIG 350PG	MIG 500I
Power Voltage(V)	3 phase AC380V±15%	3 phase AC380V±15%	3phase AC380±15%	3phase AC380V±15%	3phase AC380V±15%
Frequency(Hz)	50/60	50/60	50/60	50/60	50/60
Rated input current(A)	18.2	18.2	21.2	21.2	37.5
Output current(A)	50-270	50-270	50-350	50-350	100-500
Rated output voltage(V)	17-35	17-35	17-32	17-32	19-39
Duty Cycle(%)	60	60	60	60	100
Power factor	≥0.90	≥0.90	≥0.90	≥0.90	≥0.93
Efficiency(%)	≥85	≥85	≥85	≥85	≥85
Wire feed speed(m / min)	3-31	3-24	3-24	3-24	3-18
Post flow time(S)	1.0±0.5	1.0±0.5	1.5±0.5	1.5±0.5	1.5±0.5
Wire diameter(mm)	0.6/0.8/1.0	0.6/0.8/1.0	0.8/1.0/1.2	0.8/1.0/1.2/1.6	1.0/1.2/1.6
Insulation grade	F	F	F	F	F
Housing protection grade	IP21S	IP21S	IP21	IP21	IP21
Applicable thickness(mm)	Over 1.0	Over 1.0	Over 1.2	Over 1.2	Over 1.2
Output cable(mm²)	Over 25	Over 25	Over 50	Over 50	Over 50
Weight-Main Unit (kg)	22.3	15.3	19.3	19.3	29.3
Dimension (mm)	581*234*470	433*219*354	545*234*414	545*234*414	670*303*640

3.PANEL FUNCTION INSTRUCTION:







Fur	Function description:		
1	Current adjustment knob		
2	ARC/Solid wire/Flux-core switch button		
3	ARC/Solid wire/Flux-core indicator		
4	Wire checking function button		
5	Wire checking indicator		
6	Ammeter		
7	Gas and electricity integrated socket		
8	Negative output		
9	Positive output		
10	Power switch		
11	Input power line		
12	Grounding bolt		
13	Air intake		
14	AC 36V Gas meter power supply		

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Photo 3-2 MIG 200 I

Function description:		
1	Gas and electricity integrated socket	
2	ARC/MIG/lift TIG function switch button	
3	ARC/MIG/lift TIG indicator	
4	Current indicator	
5	Ammeter	
6	Voltmeter	
7	Voltage indicator	
8	Adjustment potentiometer	
9	Wire checking indicator	
10	Wire checking function button	
11	Solid core 0.8 / flux-core 1.0 indicator	
12	Solid core 0.8 / flux-core 1.0 switch button	
13	Positive output(solid core)	
14	Negative output(flux-core)	
15	Torch connector	
16	Power switch	
17	AC 36V Gas meter power supply	
18	Grounding bolt	
19	Input power line	
20	Air intake	



Fun	Function description:		
1	ARC/MIG/lift TIG function switch button		
2	ARC/MIG/lift TIG indicator		
3	Current indicator		
4	Ammeter		
5	Voltmeter		
6	Voltage indicator		
7	Adjustment potentiometer		
8	Wire checking indicator		
9	Wire checking function button		
10	Solid core 0.8 / flux-core 1.0 switch button		
11	Solid core 0.8 / flux-core 1.0 indicator		
12	Positive output(solid core)		
13	Negative output(flux-core)		
14	Torch connector		
15	Gas and electricity integrated socket		
16	Power switch		
17	Input power line		
18	Air intake		
19	AC 36V Gas meter power supply		
20	Grounding bolt		

Photo 3-3 MIG 230 CI

MIG180I、200I、230CI、270DY、270PY、270DF、350I、350PG、500I MIG-Inverter welding series DC welding machine





Photo 3-4 MIG 270 DY

Fun	action description:		
1	ARC/MIG/TIG function switch button		
2	Synergic unified function button		
3	2T/4T Status switch button		
4	Wire checking function button		
5	Welding current/ARC current/electrode diameter /electrode material selection button		
6	Welding voltage / arc voltage / arc force / back burn time selection button		
7	ARC/MIG/TIG indication		
8	Synergic unified indication		
9	2T/4T indicator		
10	Wire checking indicator		
11	Welding current/ARC current/electrode diameter /electrode material indicator		
12	Welding voltage / arc voltage / arc force / back burn time indicator		
13	Ammeter		
14	Voltmeter		
15	Current adjustment knob		
16	Voltage adjustment knob		
17	Positive output		
18	Positive output		
19	Negative output		
20	Power switch		
21	Input power line		
22	Air intake		
23	Grounding bolt		
24	AC 36V Gas meter power supply		

MIG180I、200I、230I、270DY、270PY、270DF、350I、350PG、500I MIG-Inverter welding series DC welding machine



Fur	ction description:		
1	ARC/MIG/Single pulse / double pulse function switch button		
2	Frequency/amplitude state switch button		
3	Wire checking function button		
4	2T/4T/Special 4T/spot welding function switch button		
5	Aluminum silicon / aluminum magnesium / stainless steel / carbon steel material selection button		
6	ARC/MIG/Single pulse / double pulse indicator		
7	Frequency/amplitude indicator		
8	Wire checking indication		
9	Aluminum silicon/aluminum magnesium/stainless steel/carbon steel material indicator		
10	2T/4T/Special 4T/spot welding function indicator		
11	Voltage adjustment knob		
12	Current adjustment knob		
13	Parameter setting adjustment knob		
14	Voltmeter		
15	Ammeter		
16	Positive output		
17	Positive output		
18	Negative output		
19	Power switch		
20	Input power line		
21	AC 36V Gas meter power supply		
22	Air intake		
23	Grounding bolt		

MIG180I、200I、230I、270DY、270PY、270DF、350I、350PG、500I MIG-Inverter welding series DC welding machine





Function description:		
1	ARC/MIG/TIG function switch button	
2	Synergic unified function button	
3	2T/4T Status switch button	
4	Wire checking function button	
5	Welding current/ARC current/electrode diameter /electrode material selection button	
6	Welding voltage / arc voltage / arc force / back burn time/remote control selection button	
7	ARC/MIG/TIG indicator	
8	Synergic unified indicator	
9	2T/4T indicator	
10	Wire checking indicator	
11	Welding current/ARC current/electrode diameter /electrode material indicator	
12	Welding voltage / arc voltage / arc force / back burn time/remote control indicator	
13	Ammeter	
14	Voltmeter	
15	Current adjustment knob	
16	Voltage adjustment knob	
17	Positive output	
18	Wire feeder control wire six-hole socket	
19	Negative output	
20	Power switch	
21	AC 36V Gas meter power supply	
22	Input power line terminal block	
23	Grounding bolt	

Photo 3-6 MIG 270 DF





Fun	unction description:		
1	ARC/MIG/Synergic unified/pulse function switch button		
2	ARC/MIG/Synergic unified/pulse indicator		
3	0.8/1.0/1.2/1.6 wire diameter switch button		
4	0.8/1.0/1.2/1.6 wire diameter indicator		
5	Voltmeter		
6	Ammeter		
7	2T/4T/Special 4T/spot welding function indicator		
8	2T/4T/Special 4T/spot welding function switch button		
9	Parameter setting adjustment knob		
10	Frequency/amplitude indicator		
11	Frequency/amplitude state switch button		
12	Positive output		
13	Aviation socket (six core)		
14	Negative output		
15	Power switch		
16	AC 36V Gas meter power supply		
17	Input power line terminal block		
18	Grounding bolt		





Photo 3-8 MIG 350 I

MIG1801、2001、230CI、270DY、270PY、270DF、3501、350PG、5001 MIG-Inverter welding series DC welding machine

Function description:								
Fun	nction description:							
1	ARC/MIG/TIG function switch button							
2	ARC/MIG/TIG indicator							
3	Welding current/ARC current/electrode diameter /electrode material selection button							
4	Welding current/ARC current/electrode diameter /electrode material indicator							
5	Ammeter							
6	Current adjustment knob							
7	Voltmeter							
8	Voltage adjustment knob							
9	Welding voltage / arc voltage / arc force / burn time/remote control selection button							
10	Welding voltage / arc voltage / arc force / burn time/remote control indicator							
11	Wire checking function button							
12	Wire checking indicator							
13	2T/4T indicator							
14	2T/4T switch button							
15	Synergic unified function button							
16	Synergic unified indicator							
17	Positive output							
18	Aviation socket (six core)							
19	Negative output							
20	Power switch							
21	AC 36V Gas meter power supply							
22	Input power line terminal block							
23	Grounding bolt							





Photo 3-9 MIG 500 I

MIG1801、2001、230CI、270DY、270PY、270DF、350I、350PG、500I MIG-Inverter welding series DC welding machine

	<u> </u>
Fun	action description:
1	ARC/MIG/TIG function switch button
2	ARC/MIG/TIG indicator
3	Welding current/ARC current/electrode diameter /electrode material selection button
4	Welding current/ARC current/electrode diameter /electrode material indicator
5	Welding voltage/arc voltage /arc force/remote control indicator
6	Welding voltage/arc voltage/arc force/remote control selection button
7	Wire checking function button
8	Wire checking indicator
9	2T/4T switch button
10	2T/4T indicator
11	Synergic unified function button
12	Synergic unified indicator
13	Ammeter
14	Current adjustment knob
15	Voltmeter
16	Voltage adjustment knob
17	Positive output
18	Aviation socket (six core)
19	Negative output
20	Power switch
21	AC 36V Gas meter power supply
22	Grounding bolt
23	Input power line terminal block

1.Function button description:

1)ARC/MIG/TIG mode switch button (button 1)

The working mode of the welder can be switched. When the button is pressed multiple times, the working mode of the welder can be cyclically switched, and the corresponding status indicator can indicate the current working mode of the welder.

2)Synergic unified function button (button 2)

①.In the MIG mode, the welding parameters can be automatically matched. At this time, the welding voltage can be fine-tuned. Press button 6 to restore the default matching value.

2).Press the button again, the Synergic unified status indicator is off. At this time, the welder is in a non-synergic uniform state, and the welding voltage, welding current, arc force and other parameters need to be manually matched.

3)2T/4T switch button(button 3)

①.Press and hold the torch switch welder in the 2T state, and release the torch switch welder to stop working, generally used for short seam welding and spot welding.

⁽²⁾Pressing the torch switch welder in the .4T state, the welding current and welding voltage are not controlled, and the torch switch is released to continue welding. The welding current welding voltage is controlled, and the torch switch welder is pressed again to continue welding. The arc current and the arc voltage are controlled, and the torch switch is released again, and the welding machine stops welding. It is suitable for long-slit long-distance welding, and the corresponding indicator lights when the state is switched.

4)Wire checking function button(button 4)

In the MIG state, when the wire check function button is pressed, the wire feeder is in the state of wire detection, the wire is fed quickly, the corresponding status indicator lights up, and when the button is released, the wire is stopped.

5)Welding current/ARC current/electrode diameter/electrode material selection button(button 5)

Pressing the button multiple times in the non-welding state selects the current adjustable parameter, the corresponding indicator light is on (indicator 11), the current adjustment knob can adjust the parameter value (knob 15), the preset value of the parameter is displayed in the ammeter, and the current meter is displayed in the welding state and the actual output current of the welder.

6) Welding voltage / arc voltage / arc force / back burn time/remote control selection button (button

6)

Press the button several times in the non-welding state to select the current adjustable parameter, and the corresponding indicator is on (indicator 12). Voltage adjustment knob

Adjust the parameter value (knob 16) and the set value of the parameter is displayed in the voltmeter. The voltmeter in the welding state shows the actual output voltage of the welder.

2.Adjustment knob:

1) Current adjustment knob (knob 15): used to adjust welding parameters such as welding current / arc current / wire diameter / wire material selection.

2) Voltage adjustment knob (knob 16) : used to adjust welding parameters such as welding voltage/arcing voltage/arc force/back burn time/remote control selection.

3. Parameter Description:

1)Welding current: the current output when the welder is normally welded.

2)arc current: the welding machine stops the output current before welding and adjusts with the arcing voltage.

3)wire diameter: different wire diameters of 0.6mm, 0.8mm and 1.0mm can be selected.

4) wire material: different materials can be used for welding work.

5)Welding voltage: the output voltage of the welder during normal welding.

6)Arc voltage: the welding machine stops the output voltage before welding and adjusts it together with the arcing current.

7) Arc force: the welding arc characteristics are appropriately adjusted as the welding output current increases, which can reduce the welding spatter.

8)Back burn time: the burn-back time is adjustable from 10-99.9ms.

9) Remote control: he MIG270DF model is turned on by default in the remote control state. If it is in the near control state (the wire feeder adjustment knob is not adjustable), it can be pressed multiple times in the non-uniform state, "welding voltage/arc voltage/arc force/returning/ Remote control" button to the welding voltmeter shows y.on switch to remote control. When the welding voltmeter shows y.off, it switches to the near-control state, and the MIG270DY model does not have this function.

4.Parameter adjustment(MIG270PY/MIG350PG models only):



Parameter Adjustment

Note:

1)The Syn on/off under the parameter button appears in the MIG/MAG state. If it is in the full-function V display (IdI) I display (ALL) state, it cannot be adjusted to the synergic unified Syn on state.

2)Ind indicates the arc characteristic -10-10%, rotate the encoder adjustment without adjusting any button or enter the parameter function button to select the adjustment

3)In addition to the warning light, the digital tube displays Rrr 1

4)Press the torch for more than 5 seconds without load. The machine defaults to use the torch switch to jog the wire function. The digital tube displays INC OFF. At this time, the torch switch signal can be released, and then press the torch switch to enter the jog wire.

5.Parameter preset:

1)ARC/MMA welding mode: The current preset 30-240A range is adjustable in the non-welding state; the voltmeter shows the no-load voltage; the current meter shows the actual output current in the welding state, and the voltmeter shows the output voltage.

2)MIG welding mode: Different wire diameters are selected for different welder parameters. The adjustable parameters are as follows:

3)TIG welding mode: The welding current is adjustable from 5-240A, and the voltmeter shows that the arc-breaking voltage is adjustable from 16-72V.

Display parm	Welding	Welding	Arc current	Arc voltage	Back burn	Arc force
Wire Φ	current	voltage	(, ,)		time	
	(A)	(V)			(ms)	
0.6	30-160	14.0-40.0	30-160	14.0-40.0	10.0-99.9	1-100
0.8	30-250	14.0-40.0	30-250	14.0-40.0	10.0-99.9	1-100
1.0	50-270	14.0-40.0	50-270	14.0-40.0	10.0-99.9	1-100

4.ACCESSORY DRAWING:



Photo 4-1electrode holder with cable



Photo 4-2earth clamp with cable







Photo 4-4 inner hexagon wrench



Photo 4-5 MIG torch

MIG-Inverter welding series DC welding machine

5.WELDING PARAMETERS RECOMMENDED TABLE:

The values listed in the table below are the general specification values under standard conditions.

		Thickn	Diameter	Gap	Current	Voltage	Speed	Genuine	Gas flow
		ess	(mm)	(mm)	(A)	(V)	(cm/min)	length	(L/min)
		(mm)						(mm)	
		0.8	0.8,0.9	0	60~70	16~16.5	50~60	10	10
		1.0	0.8,0.9	0	75~85	17~17.5	50~60	10	10~15
		1.2	0.8,0.9	0	80~90	16~16.5	50~60	10	10~15
	T	1.6	0.8,0.9	0	95~105	17~18	45~50	10	10~15
	peed	2.0	1.0,1.2	0~0.5	110~120	18~19	45~50	10	10~15
	s ɓu	2.3	1.0,1.2	0.5~1.0	120~130	19~19.5	45~50	10	10~15
	veldi	3.2	1.0,1.2	1.0~1.2	140~150	20~21	45~50	10~15	10~15
bu	- wo-	4.5	1.0,1.2	1.0~1.5	160~180	22~23	45~50	15	15
veldi	_	/	1.2	1.2~1.6	220~260	24~26	45~50	15	15~20
outt v		/	1.2	1.2~1.6	220~260	24~26	45~50	15	15~20
be I I		/	1.2	1.2~1.6	300~340	32~34	45~50	15	15~20
T J		/	1.2	1.2~1.6	300~340	32~34	45~50	15	15~20
	h welding speed	0.8	0.8,0.9	0	100	17	130	10	15
		1.0	0.8,0.9	0	110	17.5	130	10	15
		1.2	0.8,0.9	0	120	18.5	130	10	15
		1.6	1.0,1.2	0	180	19.5	130	10	15
		2.0	1.0,1.2	0	200	21	100	15	15
	Hig	2.3	1.0,1.2	0	220	23	120	15	20
		3.2	1.2	0	260	26	120	15	20
		Thickn	Diameter	Current	Voltage	Speed	Genuine	Gas fl	ow(L/min)
		ess	(mm)	(A)	(V)	(cm/min)	length		
		(mm)					(mm)		
t -		1.6	0.8,0.9	60~80	16~17	40~50	10		10
join	ding	2.3	0.8,0.9	80~100	19~20	40~55	10	1	0~15
Angle	weld	3.2	1.0,1.2	120~160	20~22	35~45	10~15	1	0~15
		4.5	1.0,1.2	150~180	21~23	30~40	10~15	2	0~25

MIG1801、2001、2301、270DY、270PY、270DF、3501、350PG、5001

		Thickn	Diameter	Vertical	Current	Voltage	Speed	Genuine	Gas flow
		ess	(mm)	angle of	(A)	(V)	(cm/min)	length	(L/min)
		(mm)	~ /	welding		()		(mm)	()
				torch					
				(degree)					
	g	1.0	0.8,0.9	45 ⁰	70~80	17~18	50~60	10	10~15
	spee	1.2	0.9,1.0	45 ⁰	85~90	18~19	50~60	10	10~15
	ding	1.6	1.0,1.2	45 ⁰	100~110	19~20	50~60	10	10~15
	weld	2	1.0,1.2	45 ⁰	115~125	19~20	50~60	10	10~15
	Low	2.3	1.0,1.2	45 ⁰	130~140	20~21	50~60	10	10~15
		3.2	1.0,1.2	45 ⁰	150~170	21~22	45~50	15	15~20
oint		4.5	1.0,1.2	45 ⁰	140~200	22~24	45~50	15	15~20
utt jo		6	1.2	45 ⁰	230~260	24~27	45~50	20	15~20
e T b		8.9	1.2,1.6	50 ⁰	270~380	29~35	45~50	25	20~25
e type		12	1.2,1.6	50 ⁰	400	32~36	35~40	25	20~25
angle	High welding speed	1.0	0.8,0.9	45 ⁰	140	19~20	160	10	15
Flat		1.2	0.8,0.9	45 ⁰	130~150	19~20	120	10	15
		1.6	1.0,1.2	45 ⁰	180	22~23	120	10	15~20
		2	1.2	45 ⁰	210	24	120	15	20
		2.3	1.2	45 ⁰	230	25	110	20	25
		3.2	1.2	45 ⁰	270	27	110	20	25
		4.5	1.2	50 ⁰	290	30	80	20	25
		6	1.2	50 ⁰	310	33	70	25	25
		0.8	0.8,0.9	10 ⁰	60~70	16~17	40~45	10	10~15
	ed	1.2	0.8,0.9	30 ⁰	80~90	18~19	45~50	10	10~15
	ads I	1.6	0.8,0.9	30 ⁰	90~100	19~20	45~50	10	10~15
joint	Iding	0.0	0.8,0.9	47 ⁰	100~130	20~21	45~50	10	10~15
ding	v we	2.3	1.0,1.2	47 ⁰	120~150	20~21	45~50	10	10~15
wei	Γo	3.2	1.0,1.2	47 ⁰	150~180	20~22	35~45	10~15	20~25
angle		4.5	1. 2	47 ⁰	200~250	24~26	45~50	10~15	20~25
Flat a	ð			47 ⁰	220	24	150	15	15
	High weldin speed	2. 3~3. 2	1.2	47 ⁰	300	26	250	15	15

6.INSTALLTION NOTES:

If the connecting cable is too long, the arcing performance of the welding machine will have a great influence on the stability of the welding performance. Therefore, we recommend that you use the recommended configuration length. To reduce the voltage drop, please use a cable with a larger cross section.

1)Connect the grounding mark grounding screw attached to the rear of the welder to a cable larger than 6mm2 to reliably ground the welder casing.

2)According to the input voltage level of the welding machine, connect the power line to the distribution box of the corresponding voltage level, do not connect the wrong voltage, and ensure that the error of the supply voltage is within the allowable range.

3)Confirm that the input power cable, output welding tongs, and output ground wire are reliably connected. For the output interface, please refer to the connection method below and tighten it clockwise.

4)Pay attention to the polarity of the wiring. Generally, the wiring method of the DC welding machine has two positive connection methods and reverse connection method; (1) positive connection method, the welding clamp is connected to the negative pole, and the workpiece will have arc instability, large splash and sticky strips. In this case, the quick plug can be replaced to change the polarity. When there is an arc instability, large splash and sticking, etc., in this case, the quick plug can be replaced to change the polarity.

INSTALLATION STEPS:

1)The gas cylinder equipped with the carbon dioxide gas pressure reducing flow meter is closely connected with the gas inlet of the carbon dioxide inlet at the back of the machine.

2)Plug the ground wire quick plug into the corresponding quick socket on the front panel.

3)The wire spool equipped with the welding wire is mounted on the frame shaft of the wire feeder, and the hole position of the wire wire plate is aligned with the fixing bolt on the frame shaft.

4)Depending on the diameter of the wire used, choose a different wire feed slot.

- 5)Loosen the nut of the pressure roller, feed the welding wire into the wire feeder groove through the wire guide tube, adjust the pressure wire to press the welding wire to ensure that the welding wire does not slide, but the pressure should not be too large, to prevent the wire from being deformed and affecting the wire feeding.
- 6)The wire spool should be rotated clockwise to release the wire. In order to prevent the wire from loosening, the new wire disk head is often placed in the fixing hole on the side of the wire disk. In order to prevent the bent wire from being stuck during normal use, cut off this part of the wire.
- 7)The torch is inserted into the output socket of the front panel and tightened, and the wire is inserted into the gun body.

THIS STEP MUST BE OPERATED BY AN ELECTRICIAN !

According to the input voltage and current of the welding machine (see technical parameter table), connect the appropriate power supply line to the distribution box of the corresponding capacity. Do not connect the wrong voltage and ensure the error of the supply voltage is within the allowable range.

MACHINE INSTALLATION DIAGRAM:



Earth connecting

Poto 5-1 Installation of Instruction, using MIG270DY as a installing example



Earth connecting

Photo 5-2 Installation of Instruction, using MIG270DF as a installing example

MIG-Inverter welding series DC welding machine

7.PRECAUTIONS AND PREVENTIVE MEASURES:

1.ENVIRONMENT:

1)The welding operation should be carried out in a relatively dry environment, the air humidity should generally not exceed 90%.

2) The ambient temperature should be between -10C and 40C.

3) Avoid welding in the sun or in the rain, do not let water or rain into the welding machine.

4) to avoid welding in the dust or corrosive gas environment.

5) to avoid a strong air flow in the environment for gas protection welding operation.

2.SECURITY POINTS:

Our welding machine has been installed over voltage, over current and overheating protection circuit, when the grid voltage, output current and the machine temperature exceeds the set standard, the welder will automatically stop working; but excessive use (such as voltage over High) will still cause damage to the welder, so you still need to note the following:

TO ENSURE GOOD VENTILATION:

Our welding machine is a small welder, in operation, there is a large working current through, natural ventilation can not meet the requirements of welding machine cooling, so built a fan to effectively cool the welding machine to make it work smoothly. The user should confirm that the ventilation is not covered or blocked, the distance between the welder and the surrounding objects should be not less than 0.3 meters, the user should always pay attention to maintain good ventilation, which for the welding machine work better and ensure a longer life is very important.

1)PROHIBIT OVERLOAD PROHIBIT

The user should remember to observe the maximum allowable load current (relative to the optional

load duration) at any time, keeping the welding current not exceeding the maximum allowable load current. Current overload will significantly shorten the life of the welder, and may even burn the welding machine.

2)PROHIBIT THE VOLTAGE IS TOO HIGH

The supply voltage is listed in the "main performance parameters" table. In general, the voltage

compensation circuit within the welder will ensure that the welding current is kept within the permissible range. If the power supply voltage exceeds the allowable value, it will damage the welder, the user should be fully aware of this situation, and take appropriate precautions.

3)Each welding machine is attached with a grounding screw and marked with a ground mark. Before use, use across-section greater than 6mm2 cable, the welding machine shell can be reliably grounded to release static electricity or to prevent accidents due to leakage may occur.

4) If the welder operates beyond the standard duty cycle, the welder may suddenly enter the protected

state and suspend the work, which means that the welder exceeds the standard load duration, excessive heat triggers the temperature control switch, so that the welder stops working The red indicator light on the front panel lights up. In this case, you do not have to unplug the power plug so that the cooling fan can continue to work for the welding machine to cool. When the red light is off, the temperature drops to the standard range, you can start welding again.

8.WELDING PROBLEMS ENCOUNTERED AND ANALYSIS:

The phenomena listed here may be related to the accessories, welding materials, environmental factors and power supply conditions you are using. Please try to improve the environment and avoid such situations.

A. ARC PROBLEMS.AND EASY TO BREAK ARC

1) Check that the wire clamp is in good contact with the workpiece.

2)Check whether the connection points are bad.

B. THE OUTPUT CURRENT DOES NOT REACH THE RATED VALUE

The supply voltage deviation from the rated value will cause the output current value to differ from the set value. When the supply voltage is below the rated value, the maximum output current of the welder may be lower than the rated value.

C. THE CURRENT CAN NOT BE STABILIZED DURING THE USE OF THE WELDER

This may be related to the following factors:

- 1) grid voltage changes;
- 2) serious interference from the grid or other electrical equipment.

D. Welding seam

1)Check the air supply circuit for leaks.

2)Base metal surface there is no oil, dirt, rust, paint and other impurities.

9.ROUTINE MAINTENANCE:

1) regular dust, with dry and clean compressed air is generally used in smoke and contaminated air

in the welding machine at least once a month to do dust treatment.

- 2) Compressed air to the required pressure, so as not to damage the welding machine components.
- 3) Check the internal electrical connection to confirm the good (especially the connector), strengthen

the loose contact, if there is oxidation of the use of sandpaper to remove the oxide film, re-connected.

4)Avoid water or moisture in the welder, otherwise blow dry in time, measure the insulation with a Megohm meter (including between the connection nodes and between the connection point and the casing). Welding work can only be continued if no abnormalities are confirmed.

5) If the welder is not used for a long time, the welder should be put in the original packaging and stored in a dry environment.

Note: all maintenance, maintenance work must be completely cut off the power situation under the circumstances, please open the chassis before the confirmation has been unplugged Power plug.

MIG-Inverter welding series DC welding machine

10. EARLIER CHECKING FOR THE ABNORMAL:

Don't too early to judge the malfunction of the welding machine even if the abnormal phenomenon, such as cannot welding, arc instability, welding effect is not good.

Welding machine is normal, but often due to some far from the fault reasons, caused the abnormal phenomena.For example, parts loose,switch settings forgotten, and error setting, cable break of, gas hose burst, etc.Therefore, before to make fault judgment fixing, please try to check first, there are quite a part can be solved.

It is in the sense to make early diagnosis of the general welding exception list below. Finding the abnormal phenomenon from the project bar of the top right table. Please respectively according to the corresponding marked "O" in the table below to inspection and maintenance.

Abnormal Items			o gas	Wire	d Arc Nition	stable Arc	rt on ige of Veld eam	Vire ick to arent iterial	Vire ick to ickio	whole
and Maintained			ž	0 Ū LL	Ba	ů,	<u>сп</u> П	PStic Base	> <u>S</u> ON	Ben
Distribution Boxes (Input Protection Devices)	 Turn on power supply or not? Fuse burnt out Connection joint loose 	0	0	0	0	0	0			
Input Cable	 Examine whether the cable is cut off. Connection joint loose Over heat 	0	0	0	0	0	0			
Welding Power Operation	Turn on power supply or not? 2. Phase Lacking	0	0	0	0	0	0	0	0	
Gas Cylinder and Gas Regulator	 1.Turn on gas supply 2. Residual Amount of Gas in the Cylinder 3. Set value for flow 4. Connection joint loose 					0				0
Gas supply hose (the whole line from the high pressure cylinder to the weld gun)	 Connection joint loose Gas hose damaged 									0
Wire feeder	 Wire feeding wheel does not match with the diameter of wire in texturing tube Crackle on wire feeding wheel, groove blocked up or defect Too tight or loose of the handle. Wire powder accumulated on the inlet of SUS pipe 			0	0	0	0		0	

Earlier Checking Diagram For The Abnormal:

Weld torch and cable	Weld torch cable rolled up or over curved Adaptability of conductive tip, wire feeding pipe and cable diameter Worn, blocked up or deformation, etc				0	0	0		0	
Body of weld torch	 Loose connection of conductive tip, nozzle and nozzle contactor Contactor of weld torch body is not plunged in or tightened well 						0			0
Power supply cable of weld torch as well as cable of switch control	 Break off (bending fatigue) Damaged by weight drop 	0	0	0		0		0		
Surface Condition of Parent material and length that wire stretches out	 Oil, dirty, rust and paint residues Too long length of wire stretched out 				0	0	0	0		0
Output Cable	 1.Cross-section of cable that connects to parent material is not enough 2.Loose connection of (+), (-) output cable 3. Bad electric conductivity of parent material 				0	0	0			
Lengthened Cable	1.Cross-section of cable is not enough 2.It is rolled up or folded				0	0	0	0		
Work Condition for Welding	Welding current, voltage, angle of weld torch, welding rate and wire length stretched out should be confirmed once again				0	0	0	0	0	

11.DAILY CHECK:

Wire feeder

Part	Check point	Remarks
Pressing handle	Is the pressing handle adjusted to an appropriate pressure-applied indicator line? (Special attention: it is strictly prohibited to damage the welding wire under Φ1.2mm)	It will cause unstable wire feeding and arc.
	1. Is the cut powder and scrap accumulated in the end of the wire-guide tube and the rim of wire-feeding reel?	Clean the cut powder and scrap. Check the reason and correct the problem thoroughly.
Wire-guide tube	2. Does the diameter of the welding wire match the inner diameter of the wire-guide tube?	The mismatch would cause unstable arc, or the cut powder and scrap.
	3. Check if the end center of the wire-guide tube is aligned with the groove center of the wire-feeding reel (visual inspection).	The misalignment would cause the cut powder and unstable arc.
Wire-feeding wheel	 Does the diameter of the welding wire match the nominal diameter of the wire-feeding reel? Check if the groove of the wire-feeding reel is 	1. It would cause the welding wire to produce the cut powder, the wire-feeding hose to be blocked, and the arc to be unstable.
Pressing wheel	blocked. Check the running stability. Check if the pressure-applied side of the welding wire is worn away and the contact side is narrowed.	 Replace it with a new one if any abnormality occurs. It would cause poor wire feeding and unstable arc.
Part		
Cable of the	1. Is the cable of the welding torch over-bended?	1. It would cause poor wire feeding.
welding torch	2. Is the metal joint of the fast plug loose?	2. The over-bended cable would cause unstable arc.
Output cable	 The cable insulation is worn away and damaged. The cable joint is exposed (the insulation is damaged) and loose. (the welded area of the power terminal, and the joint of the base material and the cable) 	In order to ensure human safety and stable welding, please use appropriate check methods according to
Input cable	 Is the input and output terminal of the input protection device of the switch cabinet securely connected? Is the safety device securely connected? Is the cable in the input terminal of the welding power source securely connected. Is the input cable exposed as its insulation is worn away or damaged during the wiring. 	 Daily check General and simple Regular check Thorough and detailed
Grounding cable	 Is the grounding cable of the welding power source broken? Is it securely connected? Is the grounding cable of the base material broken. Is it securely connected? 	Be sure to make daily check in order to prevent the current leakage and ensure the safety.

12.MALFUNCTION AND TROUBLESHOOTING

MIG180I,200I,230I,270DY,270PY,270DF,350I,350PG,500I malfunction and troubleshooting.

Malfunction	Remedy						
Digital display meter light off	1.Confirm the power switch is closed.						
Ean doesn't run	2. The power supply connect with input cable is electricity						
	3.Whether the three-phase rectifier bridge is damaged						
	4.Parts of the auxiliary power on the control board malfunction(Contact with the dealer)						
Digital display motor light on	1. Check if the various patch cords in the machine are in poor contact.						
Eap rup well	2. There is an open circuit or poor contact at the output connection.						
	3. The control line on the welding torch is broken or the micro switch is damaged.						
But no output	4. The control circuit is damaged. (Contact the dealer)						
	1.may be over current protection. Please turn off the power supply. When the abnormal indicator light is off and						
Digital display meter light on	then restarted, it can be restored.						
Fan run well	2, may be overheat protection, don't need to shut down for 2-3 minutes, the machine can naturally return to normal.						
Digital display abnormal	3.may be the inverter circuit is faulty. (Contact the dealer).						
	4.may be damaged by the secondary rectifier diode (contact the dealer).						
Digital display meter light on	1. Confirm whether the gas meter has gas output						
Fan run well	2. Confirm whether the solenoid valve socket has voltage.						
Have Welding output	3. Check if the solenoid valve is damaged.						
No gas	4. It may be a fault in the wire feeder circuit (contact the dealer).						
Digital display meter light on	1. Check if the fan socket has 24V voltage.						
Fan doesn't run	2. the fan may be damaged, replace the same type of fan						
Fan run well	1. Confirm if the gas meter is damaged.						
Have Welding output	2. Check if the fuse of the gas meter socket is burnt out.						
Gas meter is icy	3, may be high frequency transformer damage (contact dealer)						

If you still can't work normally after the above adjustment and overhaul, please contact your local dealer or our after-sales service department.

Note: The following operations require the operator to have sufficient electrical expertise and comprehensive safety knowledge. Operators should have valid qualifications that demonstrate their competence and knowledge. Before performing maintenance, we recommend that you first and locally The dealer gets in touch and gets approval.

MIG180I、200I、230I、270DY、270PY、270DF、350I、350PG、500I MIG-Inverter welding series DC welding machine

