B1-1604

INTIG 401 PULSE
DC Pulse Argon Arc Welding Machine

OPERATOR'S MANUAL

(PLEASE READ CAREFELLY BEFORE OPERATION)

Safety Depends on You

Our arc welding and cutting equipment are designed and built with ample safety consideration. However, proper installing and operating the machine can increase your safety.
DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT CASUALLY WITHOUT READING THIS MANUAL THROUGHOUT.

Special Attention (Very Important):

1. BE SURE TO AVOID THE WELDING MACHINE FALLING DOWN WHEN IT IS PLACED ON THE GRADIENT GROUND.
2. IT'S FORBIDDEN UNFREEZING THE PIPELINE BY THE WELDING MACHINE.
3. THE SHIELD RANK OF THIS SERIAS OF WELDING MACHINES IS IP21S, SO WORKING IN RAIN IS NOT SUTABLE.
4. The rated duty cycle of this welding machine is 35%, there is protection function when the machine is overloading used. When it's protected and no power output, must wait and after the temperature back to normal, then use again.
5. When welding current is lower than 200A, the argon gas flow is 4-8L/min, when welding current is higher than 200A, the argon gas flow is 8-15L/min

Purchase Date : _____
Serial Number : _____
Machine Type : _____
Purchase Place : _____

	Arc and arc rays can hurt.
All performing welding workers ought to have health qualification from the authority organization to prevent you and others from arc radiation and burn, it should be prevented for children to enter into dangerous area as well. Be careful reading the following important items and the welder safety byelaw from the authority organization. Be sure that qualified professionals perform all installation, maintenances and repair procedures.	

1 **Electric shock**: The welding circuits are not insulated when welding. If you touch the two output electrodes of the machine with your bare skin at the same time, it will lead to electric shock, sometimes even fatal dangers. Users need to follow the items below to avoid electric shocks:

- If possible, lay some insulating materials, which are dry and large enough, in your working field. Otherwise, use the automatic or semiautomatic welding machine, DC welding machine as possible as you can.
- Components in the automatic and semiautomatic welding machine such as the welding wire reel, feed wheel, contact tip and welding head are all electriferous.
- Always be sure the machine has been connected perfectly to the work piece with the work cables and should be as close as possible to the working area.
- The work piece should be grounded perfectly.
- Make sure that the insulating material of the electrode holder, the grounding clamp, the welding cable and the welding head are not affected by damp, mildewed or spoilt, and be replaced momentarily.
- Never dip the electrode in water for cooling.
- Never touch electriferous parts of two welding machines at the same time, because this voltage is supposed to be two times of welding voltage while the grounding mode is not clear.
- While working high above the ground or other places having the risk of falling, please be sure to wear safety belt to avoid losing balance caused by electric shock.

2 **Arc**: Use an arc welding mask to protect your eyes and skin from sparks and the rays of the arc, pay special attention to the filter glass, which must be conformable to the national standard.

- Use clothing made from durable flame-resistant material or sailcloth to protect your skin from hurting by the arc rays.
- Remind other nearby personnel before working lest arc rays hurt them by accident.

3 **Fumes and Gases**: Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. While working in limited room, use enough ventilation and/or exhaust to keep fumes and gases away from the breathing zone, or use the respirator. Do not weld at the same time when using of degreasing, cleaning or spraying operations. The heat and rays of the arc can react with these gases to form phosgene, a highly toxic gas,.

- Some protective gases used in welding might displace the oxygen in the air, and can lead to hurt or even death.
- Read and understand the manufacturer’s instructions for this equipment, and validate the health certification of consumptive materials, make sure they are asepsis and innocuity.

4 **Spatter**: Spatter can cause fire or explosion.

- Remove fire hazards from the welding area. Remember that spatter from welding can easily go through small cracks and touch fire hazards. Keep the safety of all kinds of lines going though welding area, including hydraulic lines in the wild.
- Where compressed gases are to be used in the field, special precautions should be used to prevent explosion.
- When not welding, make certain that no electriferous part is touching the work piece or the work stage. Accidental contact can create a fire hazard.
- Do not weld containers or lines, which are not proved to be innocuity.
- It is very dangerous to heat, cut or weld tanks or containers at entry holes. Does not start work until the proper steps have been taken to insure that there are no flammable or toxic gases there.
- Spatter might cause burn. Wear leather gloves, heavy shirt, cuffless trousers, high shoes and a cap over your hair to prevent from burning by spatter. Wear the ear shield when performing sideways or face up welding. Always wear safety glasses with side shields when being in a welding area.
- The welding cables should be as close to the welding area as possible, and the short, the better. Avoid welding cables going through the building framework, lifting chains, AC or DC cables of other welding machines and appliances. The welding current is strong enough to damage them while having short circuit with them.

5 **Cylinder**: Damage of it might cause explosion.

- Make sure that the gas in the storage cylinder is qualified for welding, and the decompression flow-meter, the adapter and the pipe are all in good condition.
- Make sure that the installation of cylinder is by the wall and bundled tightly by a chain.
- Be sure to put the cylinder in the working space with no crash or shake, and far from welding area.
- It is forbidden to touch cylinder with the welding clamp or the work cables.

- Avoid facing the cylinder while installing the decompression flowmeter or the gasometer.
- When not working, please tighten the valve.

6 **Power**: (For electrically powered welding and cutting equipment) Turn off input power before installation, maintenances and repair, so that avoid accident.

- Huanyuan welding equipment is I class safeguard equipment; please install the equipment by manufacture's professional person
- Ground the equipment perfectly in accordance with the manufacturer's recommendations.

7 **Power**:(For engine driven welding and cutting equipment)

- Work in ventilated place or outdoors.

- Do not add fuel near to fire or during engine starting or welding. When not working, add fuel after engine is cooling down; otherwise, the evaporation of hot fuel would result in dangers. Do not splash fuel out of the fuel tank, and do not start the engine until complete evaporation of the outside fuel.

- Make sure that all the safeguard equipments, machine cover and devices are all in a good condition. Be sure that arms, clothes and all the tools do not touch all the moving and rotating components including V belt, gear and fan etc.
- Sometimes having to dismantle some parts of the device during maintenance, but must keep safety awareness strongly every time.
- Do not put your hand close to fans and do not move the brake handle while operating.
- Please remove the connection between the engine and the welding equipment to avoid sudden starting during maintenances.

- When engine is hot, it is forbidden to open the airtight cover of the radiator water tank to avoid hurt by the hot vapor.

8 **Electromagnetic**: Welding current going though any area can generate electromagnetic, as well as the welding equipment itself.

- Electromagnetic would affect cardiac pacemaker, the cardiac pacemaker users should consult one's doctor first.
- The effect of electromagnetic to one's health is not confirmed, so it might have some negative effect to one's health.
- Welders may use following method to reduce the hazardous of electromagnetic:

a. Bundle the cable connected to the work piece and the welding cable together.
b. Do not enwind partially or entirely your body with the cable.
c. Do not place yourself between the welding cable and the ground (work piece) cable, if the welding cable is by your left side, then the ground cable should be by your left side too.
d. The Welding cable and the ground cable are as short as possible.
e. D e. Do not work near to the welding power source.

9 **Lift equipment**: carton or wooden boxes package the welding machines supplied by Our. There is no lifting equipment in its wrapper. Users can move it to the prospective area by a fork-lift truck, then open the box.

- If having rings, the machine can be transited using rings. While Our Welding Machine Manufacture reminds users, there is possible risk to damage the welding machine. It is better to push the welding machine moving in use of its rollers unless special situations.
- Be sure that the appurtenances are all removed off when lifting.
- When lifting, make sure that there is no person below the welding machine, and remind people passing by at any moment.

- Do not move the hoist too fast.

10 **Noise**: Our Welding Machine Manufacture reminds users: Noise beyond the limit (over 80 db) can cause injury to vision, heart and audition depending on oneself. Please consult local medical institution. Use the equipment with doctor's permission would help to keeping healthy.

CONTENT

1 Overview:

INTIG 401 PULSE series TIG welding machine adopts the high power IGBT and FRD as the breaker, the invert frequency reaches 20KHZ. The small mid-frequency transformer replaced the heavy industrial frequency transformer, which with advantages as: high efficiency, low non-load loss, stable current, energy saving, material saving and high reliability etc.

INTIG 401 PULSE series TIG arc welding machine has all functions required by welding technique: high frequency arc striking, gas pre-send (adjustable), initial current (adjustable), current up-slope (adjustable), current down-slope (adjustable), crater current (adjustable), gas post-off etc. Except for DC welding mode, the INTIG 401 PULSE serials has pulsed welding mode, the advantage is: welding current high and low interchange working, so it has better arc and stronger weld seam which is decided by the welding machine parameter.

This series of welding machine can used for almost all metal work pieces except magnesium- aluminum alloy, such as stainless steel, pipeline, boiler, aerospace equipment etc.

2 Working condition & Environment:

2.1 Input Power

2.1.1 The exact input voltage wave shape should be sine wave, the frequency fluctuation should be no more than ±1% of the rated value ;

2.1.2 The fluctuation of input voltage must be within +15% of the rated value;

2.1.3 The unbalance rate of input voltage should be ≦5%.

2.2 Environment

2.2.1 Ambient temperature ranges:Welding temperature range: -10℃~+40℃, Transportation and Storage temperature range: -25℃~+55℃

2.2.2 Relative humidity: ≤50% @ 40℃
≤90%@20℃

2.2.3 The dust, acid, corrosive gas or material around should not exceed the normal content, except the one produced during welding;

2.2.4 Operating altitudes: less than 1000m;

2.2.5 Wind speed should be no more than 1m/s;

2.2.6 Keep the machine inside and dry all the times, do not locate where the machine is exposed to direct sunlight and rain.

3 Specification and parameter

Model / Item		*INTIG 401*	*INTIG 401 PULSE*	*INTIG 501*	*INTIG 501 PULSE*
Input power		*3~ 415V±15% 50/60 Hz*			
Rated Input Capacity (KVA)	*TIG*	*15.1*		*22.4*	
	MMA	*21.1*		*27.8*	
Rated Input Current (A)	*TIG*	*23*		*34*	
	MMA	*32*		*42*	
Rated Output Voltage (V)	*TIG*	*26*		*30*	
	MMA	*36*		*40*	

Rated Open Circuit Voltage (V)	TIG	75		81	
	MMA	75		81	
Power factor	TIG	0.84		0.81	
	MMA	0.82		0.84	
Efficiency (η)	TIG	83.1%		83.9%	
	MMA	85.9%		86.3%	
Rated Duty Cycle (%)		60%			
Hot Start Current Range (A)		0 ~ 120			
Arc Force Current Rage (A)		0 ~ 120			
Gas Pre-flow Time (S)		0 ~ 5			
Arc Striking Current Range (A)		5 ~ 400		5 ~ 500	
Current Up-slope Time (S)		0 ~ 10			
Welding current (A)		5 ~ 400		5 ~ 500	
Pulse Peak Current Range (A)		/	5 ~ 400	/	5 ~ 500
Pulse Background Current Range (A)		/	5 ~ 400	/	5 ~ 500
Pulse Frequency Range (Hz)		/	0.2 ~ 99.9	/	0.2 ~ 99.9
Pulse Duty Ratio Range		/	5% ~ 95%	/	5% ~ 95%
Current Down-slope Time Range (S)		0 ~ 10			
Crater Current Range (A)		5 ~ 400		5 ~ 500	
Gas Post-flow Time (S)		0 ~ 20			
Cooling mode		Air cooling			
Isolation Grade		F			

Ingress Protection	*IP21S*	
*Dimension (L*W*H)*	*570×295×555*	*640×295×555*
Net Weight (KG)	*35*	*41*

4 System description

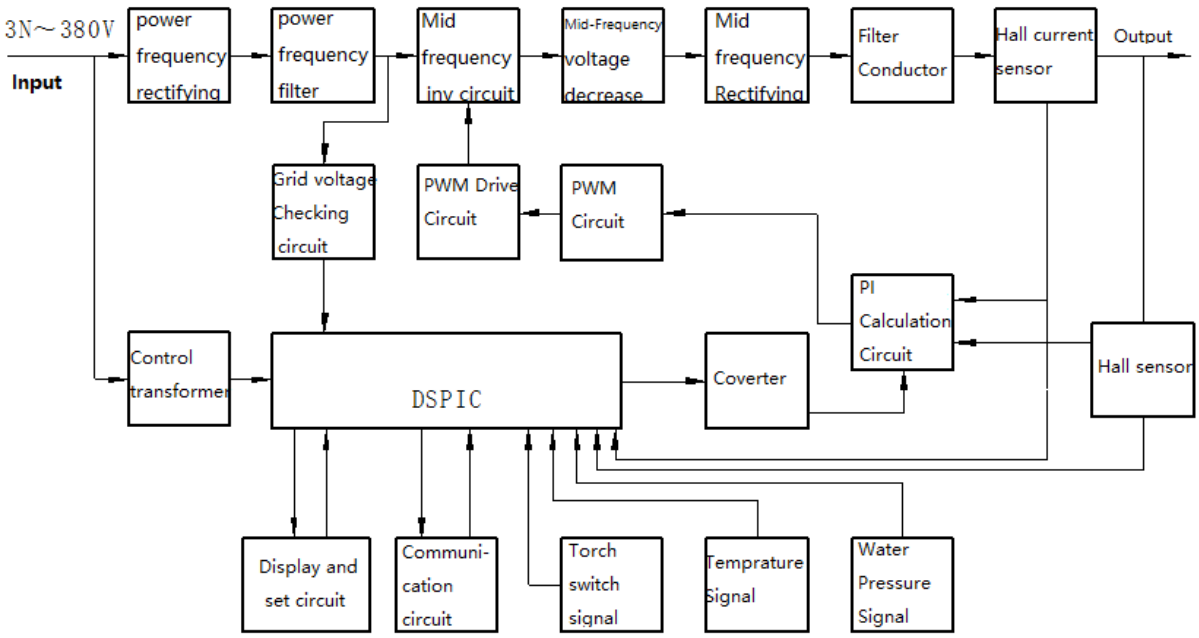
4.1 Working principal

INTIG 401 PULSE series welding machine adopts IGBT as the main circuit switch. The three-phase AC input power inverted to 20KHz mid-frequency current through the rectify of the full bridge. Then through the filter and current negative feedback control to get the constant adjustable welding current.

The control circuit will control the output current through the adjusting of the pulse width. The negative feedback signal, which is the real welding current get from the output current sensor, put into the special PWM circuit after compared with the current adjust signal, then output the driving pulse to control the IGBT, so that the output current will keep stable to get descending external characteristic.

This machine has functions of gas pre send, gas post cut off, HF arc striking, current up-slope, current down-slope. All these functions are controlled by the digital signal controller automatically.

4.2 Working circuit diagram

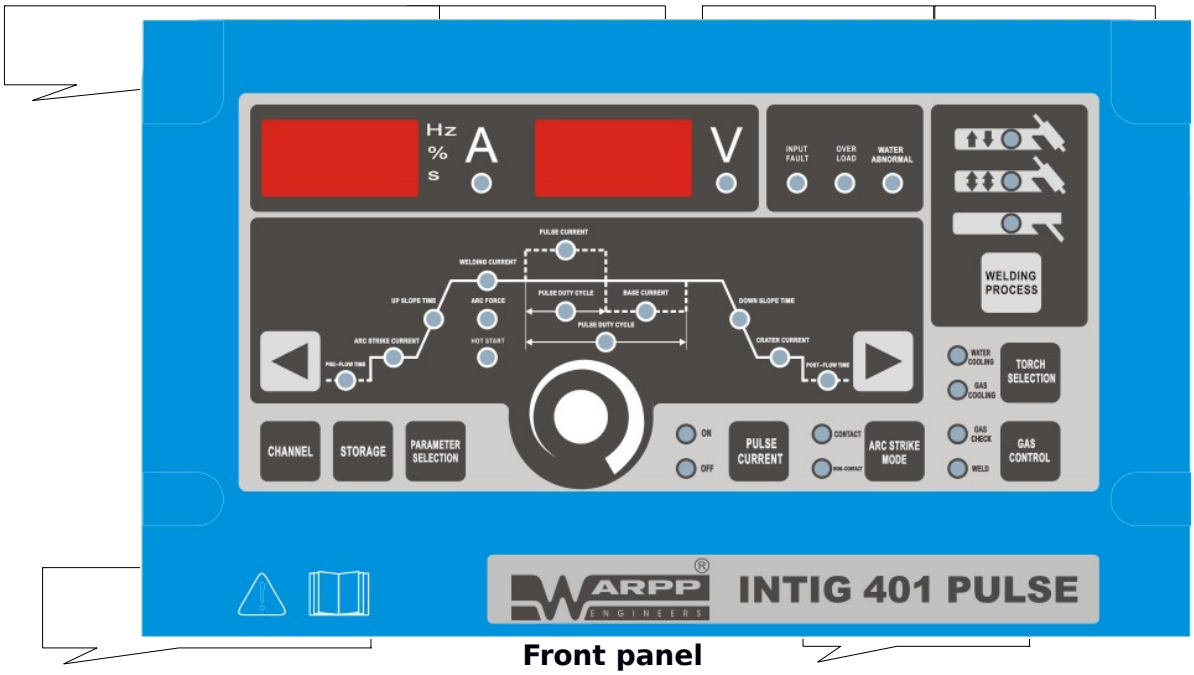


5 Product structure description

5.1 This machine is composed of inner part, cover, handle, supporting base

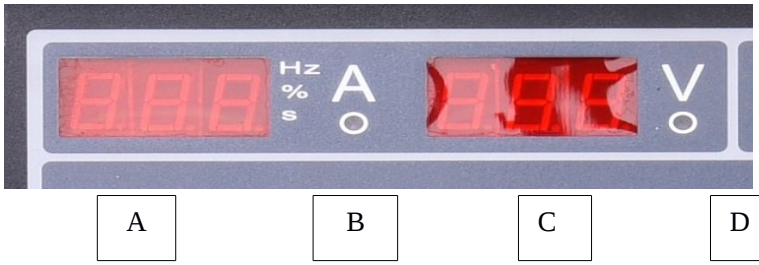
5.2 Front panel description and function:

The front panel is divided into six areas according to the function.



Front panel

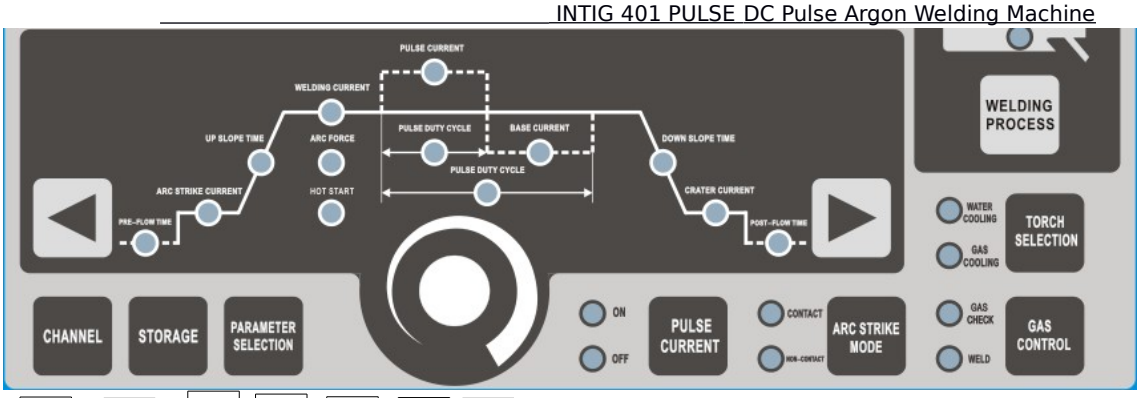
5.1.1 Digital display area:



A B C D

A. A.A.1st digital display meter: it is used to display welding/preset current, pulse/AC frequency, pulse width ratio/clean width, pre-gas time etc.
B. B.B.Display type indicator of 1st digital display meter: when the 1st digital display meter is displaying welding current, this indicator is on.
C. C.C.2nd digital display meter: it is used to display welding voltage, pass no. etc.
D. D.Display type indicator of 2nd digital display meter: when the 2nd digital display meter is displaying voltage, this indicator is on

5.1.2 Selection and adjusting area of parameters:



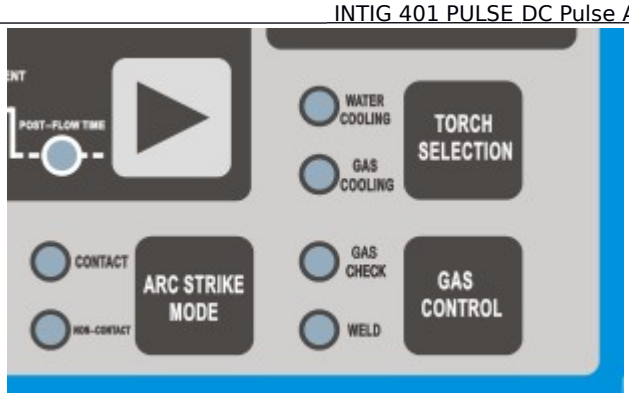
A B C D E F G H I J K L M N O P

At one time, there is only one indicator light on in this area, which indicates current displayed & adjusted parameter, and the parameter value is displayed on 1st digital display meter, adjusted by encoder. WS-IGBT(Pro) display the welding current in default; When WSM-IGBT(Pro) work as MMA or TIG without pulse, it displays the welding current, when work with pulse, it displays the peak current in default.

The current displayed or adjusted parameter can be selected through pressing the left or right selection key.

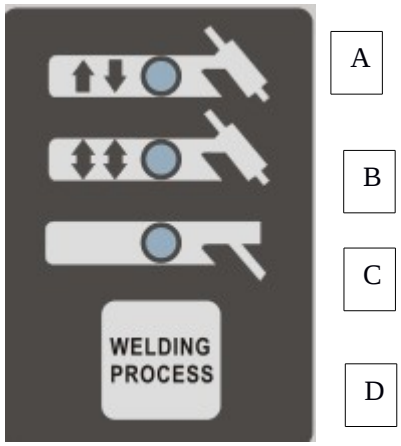
A. Left selection key: press the key, the lighted parameter indicator will move to left, it moves one after press key one time;
B. Gas pre-flow time: adjusting the gas pre-flow time;
C. Arc striking current: it is the current when the arc is started;
D. Up-slope time: current is transited from arc striking current to welding current(when there is no pulse)/peak current and base current (when there is pulse)time;
E. Welding current: it is the current when there is no pulse working;
F. Arc force current: the arc force current of MMA;
G. Hot start current: the hot start current of MMA;
H. Rotary encoder: it is used to adjust current displayed parameter ;
I. PWM ratio: when there is pulse working, the ratio between peak current time and pulse cycle; only INTIG 401 PULSE has this function;
J. Pulse frequency: when there is pulse working, it is pulsed working frequency (the inverse of pulse cycle), only INTIG 401 PULSE has this function;
K. Peak current: it is pulsed peak current when there is pulse working; only INTIG 401 PULSE has this function;
L. Base current: when there is pulse working, it is the base current of pulse, only INTIG 401 PULSE has this function;
M. Down-slope time: the time of current transited from welding current(pulse on)/peak current and base current(pulse off) to crater arc current;
N. Crater arc current: the current during the arc ending;
O. Gas post-flow time: it is gas post-flow time;
P. Right selection key: press the key, the lighted parameter indicator will move to right, it moves one after press key one time.

5.1.3 Function selection area:



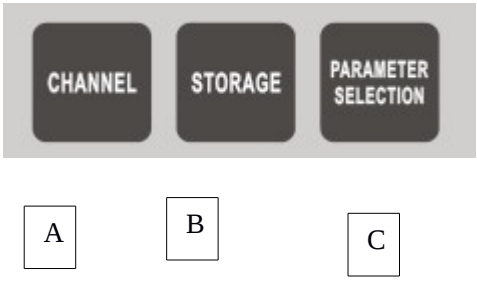
A. Arc striking mode indicator: to indicate the arc striking mode: high frequency arc striking or lifting arc striking;
B. Gas control and indicator: shift on the position of gas checking, to adjusting the argon flow, after adjusting, shift to automatic position, then the welding machine feed gas and cut off gas automatically;
C. Torch selection key and indicator: when use air cooling welding torch, it should be “air cooling “ position, when use water cooling welding torch, it should be “water cooling” position, and start the water pressure checking function.

5.1.4 Operation mode area:



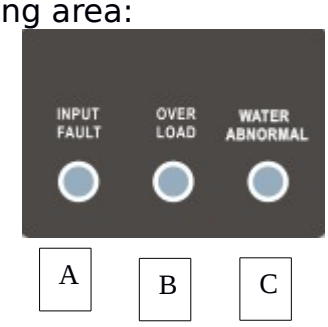
A. Two steps: when this indicator is on, the welding machine is the non self-lock status of TIG welding;
B. Four steps: when this indicator is on, the welding machine is the self-lock status of TIG welding;
C. MMA: when this indicator is on, the welding machine is working as MMA;
D. Operation mode selection key: this key is used to shift the operation modes of welding machine.

5.1.5 Storage and parameter selection area:



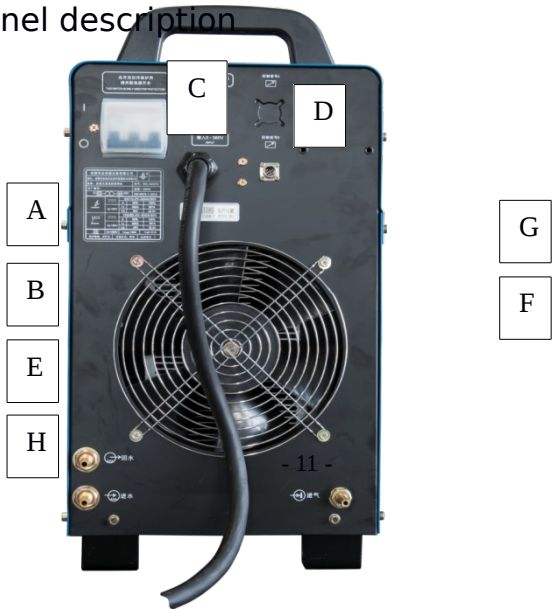
A. Channel key: first time press the :channel key", the voltage meter displays the present channel number, the current meter displays the present present stored welding parameter; Press the right/left selection key to display other stored parameters; Press the "storage" key to store the present welding parameter to the channel; Press "parameter selection" key to select a stored parameter to use; Press "Channel" key to turn to next channel; It quits the channel if there is no action within 5 seconds.
B. "Storage" key: to store the present welding parameter to the present channel;
C. "Parameter selection" key : to select a stored parameter to use;

5.1.6 Protecting indicating area:



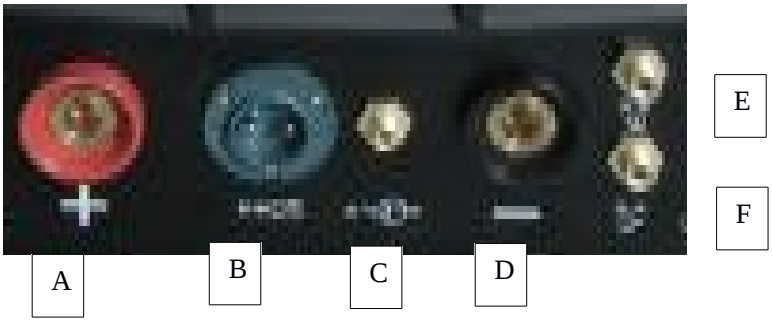
A. Input abnormal indicator: this indicator lights on when input voltage higher than 380±15% range or lack phase;
B. Over-heating indicator: when the temperature inside the machine is too high, this indicator lights on;
C. Water cooling abnormal indicator: when use water cooling welding torch, it shows the water pressure status; when the water pressure is low, this indicator lights on.

5.2 The rear panel description



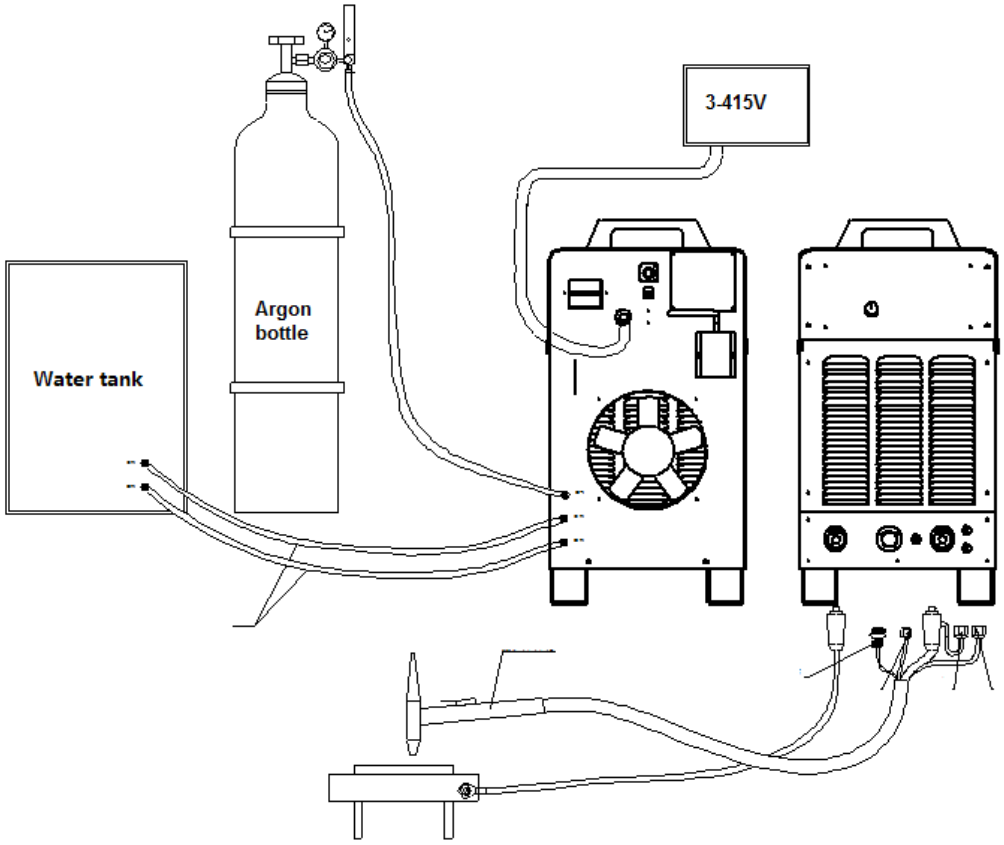
A. Power protection switch: this switch is only for overcurrent protection, please make another power switch separately;
B. Power lead: the three phase power cable is fixed on the machine by screwed union;
C. Communication interface A: to connect the wired remote control potentiometer and arc striking successful-signal connector;
D. Communication interface B: to connect the remote controller;
E. Name plate position;
F. Serial number position;
G. Remote controller installation position;
H. Air cooling fan;
I. Air inlet: to connect with the Argon gas reducing valve;
J. Water inlet;
K. Water outlet;

5.3 Front lower panel description



A. Connect the work-piece;
B. To connect the welding torch switch connector;
C. Argon gas outlet;
D. To connect the welding torch;
E. To connect the water cooling torch water inlet;
F. To connect the water cooling torch water outlet.

6 Installation



6.1 The power supply of this machine is 3~380V 50/60HZ, user should prepare the switchboard and install the air switch (breaker) and ground cable. Connect the green-yellow wire of the three-phase input cable to the grounding wire on the switchboard reliably according to the below table:

Item Model	Sectional area of power cable (mm2)	Air switch (A)	Sectional area of ground cable (mm2)
INTIG 401 PULSE	≥4	40	≥50
INTIG 501 PULSE	≥6	60	≥50

6.2 Connect the argon gas to the air inlet through reducing valve (Use Φ8 air hose);

6.3 Connect the cooling water to the water inlet on the rear of the machine. !!! Note: The machine inside does not need the cooling water but the water cooling welding torch, so only when use water cooling welding torch, the water can be connected in;

6.4 When work as Tig, connect “+” terminal to work-piece firmly; when work as MMA, connect the “+” terminal according to different electrode;

6.5 Welding torch connection: Air cooling torch: connect the torch air hose with the “air outlet “on the welding machine, connect the torch control plug with the “control“on the welding machine, connect the main cable with “-” terminal on the welding machine; water cooling torch: it’s all the same as the air cooling torch, but the water cooling hose is connected outside of the welding machine.

7 Operation

7.1 Turn on the power switch, the welding machine start to check by itself, the digital meters and indicators on panel lights on together for 1.5 seconds and lights off 0.5 seconds, then display normally;

7.2 Press the “Gas control” key, the “check gas” indicator lights on, adjust the argon gas flow according to different welding technology, then press “gas control” key again and the “automatic” indicator lights on;

7.3 Set the “pulse on/off” according to different welding technology, press the “Pulse current” key to do that. If choose “pulse off”, set the welding current by adjusting the encoder; if choose “pulse on”, set the “peak current”, “PWM ratio”, “Pulse frequency” and “base current”, press left/right selection key to choose the parameters need to be set;

7.4 Set the “gas pre-flow time”, “arc starting current”, “Up-slope time”, “down-slope time”,”crater current” and “gas post-flow time” according to different welding technology;

7.5 Welding operation:

7.5.1 Two steps: take the tungsten electrode close to the work-piece about 1~3mm, press the welding torch switch without loosen, it starts weld normally after current up-slope, when finish welding, loosen the welding torch switch, the current down-slope to crater current. After welding, please don’t take away the welding torch at once, should wait the gas post-flow time finish, to protect the weld crater and tungsten electrode;

7.5.2 Four steps: take the tungsten electrode close to the work-piece about 1~3mm, press the welding torch switch without loosen, after arc striking, find the welding position, then loosen the welding torch switch, the welding current will increase to the set current, it starts weld normally , when finish welding, press the welding torch switch again, the current down-slope to crater current, loosen the torch switch, arc stop and the welding finish. After welding, please don’t take away the welding torch at once, should wait the gas post-flow time finish, to protect the weld crater and tungsten electrode

7.6 MMA: connect the work-piece too “+’”-” according to different welding technology; after connecting the ground cable and electrode holder, set the welding current/arc force current/hot starting current according to electrode diameter; before welding, the welding machine output 20V ~ 28V DC voltage, when the instant moment that electrode touch the work-piece, the welding machine output welding current and start the normal welding, after arc stop, the open circuit voltage will remain 1 second.

8 Maintenance

For safety, the welding machine should be maintained and checked regularly, when check the inner or outside connecting terminals, do cut off the power distribution box(or the breaker).

1.1 Daily notes:

1.1.1 Check if there is any abnormal voice, vibration or smell;

1.1.2 Check if there is abnormal heating on the joint of cables;

1.1.3 Check if the cooling fan working well;

1.2 Checking items in 3~6 months period:

1.2.1 The electrical connection: check the fastening screws on cables, to find if there is any loosen, rust or poor connecting and so on;

1.2.2 Grounding cable: check if the welding machine is grounded well

1.3 Clean the dust inside the machine: this work should be done every half a year, with dry compressed air.

Adjust the high frequency: never touch the spark electrodes (the distance of the spark electrodes should be 1mm), when the electrode surface is rough or polluted, polish it. Before touching the electrodes, please discharge them, and then adjust the distance to 1mm.

9 Trouble shooting:

Problem	Possible reasons	Trouble shooting
1. When machine energized, the circuit breaker trip	Three phase bridge rectifier was may damage	Replace the rectifier ;
	IGBT damage	Replace IGBT

2. No output current	The control fuse on the back may broken	Replace fuse 1.5A
	Cooling fan not work, or overload cause overheat, then temperature relay protect	Repair the cooling fan and do not overload
	Temperature relay may damage	Replace the temperature relay
3. No Arc striking	Machine output terminal not connect reliably with the work piece	Reliably connect the work piece and output terminal
	Torch trigger or plug wire may damage	Replace the torch trigger and well connect the plug
4. There is no output voltage, but noise from the machine	FRD may damage	Replace the FRD
5. Difficult to strike arc	Workpiece too dirty	Clean the workpiece
	Tungsten quality not good	Replace good tungsten
6. Cannot turn off the argon gas.	PW03 damage ;	Replace PW03 ;
	There are substance in gas valve ;	Clean the air valve
	Check gas/auto selection switch does not set to auto position ;	Put the switch to auto position ;
	The spring in the air valve may have elastic shortage	open the air valve and extend the spring
7. No argon	The voltage of the air valve coil is insufficient or the coil was burnt	Check the coil voltage (~36V) or replace the air valve
	PW03 damage ;	Replace PW03 ;
8. There is burnt smell from the machine	Some components was burnet or there are wires short circuit.	Replace the damaged components or deal with the short circuit parts ;
9. Machine not work, but the overload indicator on	Machine overload	Stop welding, let the machine rest for 10min without load
	Cooling fan damage	Replace cooling fan
10. Arc break during welding or the machine not work, but the lack voltage indicator on	Water pressure too low or no water let in	Connect water
	The water checking switch damage	Replace the water checking switch
11. When use water cooling torch, machine not work, but the cooling water indicator on	The input lack-phase or lack voltage	Check three phase input

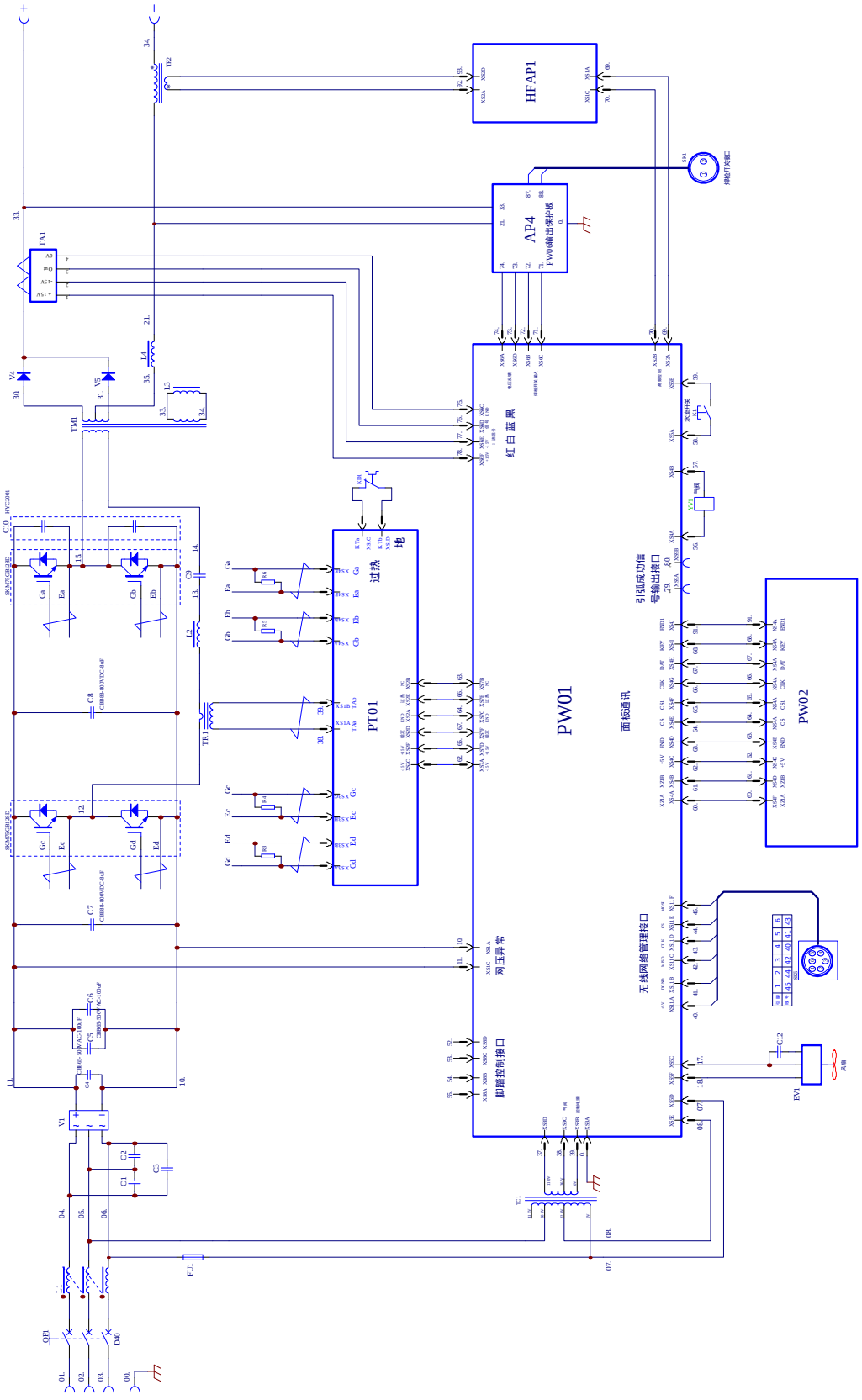
★ ★Note: if meet some problem can’t solve, please turn off the machine immediately, only the professional worker can repair the machine.

10 Packing list

No.	Name		Qty	Unit
1	Welding power source		1	Set
2	Air cooling torch	INTIG 401	1	Piece
		INTIG 401 PULSE		
3	Water cooling torch	INTIG 401 PULSE	1	Piece
		INTIG 501 PULSE		
		INTIG 501		
4	Tungsten electrode		1	Piece
5	Fast connector		1	Piece
6	Lock catch		6	Piece
7	Ground cable		1	Piece
8	Fuse		2	Piece
9	Operation manual , Qualified certificate, Guarantee card		1	Piece

11 Key components list:

No	Name	Model		Specification
1	Air switch	INTIG 401 PULSE	DZ47D-3P/40A	40A
		INTIG 501 PULSE	DZ47D-3P/63A	63A
2	Rectifier bridge	INTIG 401 PULSE	MDS75-12	75A/1200V
		WS(M)-500HD	MDS100-12	100A/1200V
3	IGBT	INTIG 401 PULSE	FF75R12RT4	75A/1200V
		INTIG 501 PULSE	FF100R12RT4	100A/1200V
4	Filter capacitor	INTIG 401 PULSE	1000μF-400V/85	/
		INTIG 501 PULSE	1000μF-400V/85	/
5	Cooling fan	INTIG 401 PULSE	150FZY2-D	/
		INTIG 501 PULSE	200FZY2-D	/


HFAP1
AP4
PW01
PW02
PT01
面板通讯
红 白 蓝 黑
过热
地
网压异常
脚踏控制接口
无线网络管理接口
引弧成功信号输出接口
水压开关
焊枪开关接口
PW01曲出保护板

The final explanation rights reserved to our Company!
If there is any changes in the user's manual, forgive not to inform separately!