



CELETTE®



INDUCTION HEATER

ORIGINAL MANUAL

PRODUCT REF NO: CEL.17203-A3-02

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FOREWORD:

IMPORTANT: Before starting the equipment, read the contents of this manual, which must be stored in a place familiar to all users for the entire operative life-span of the machine. This equipment must be used solely for welding operations.

1. SAFETY PRECAUTIONS:

1.1 SYMBOL USAGE:



MEANS WARNING! WATCH OUT! THERE ARE POSSIBLE HAZARDS WITH THIS PROCEDURE! THE POSSIBLE HAZARDS ARE SHOWN IN THE ADJOINING SYMBOLS.

MARKS A SPECIAL SAFETY MESSAGE.

Means “Note” not safety related.



This group of symbols mean **WARNING! WATCH OUT!** Possible **ELECTRIC SHOCK, MOVING PARTS,** and **HOT PARTS** hazard.

Consult symbols and related instructions below for necessary actions to avoid the hazards.

1.2 OPERATION HAZARDS:

- ▶▶ The symbols shown below are used throughout this manual to call attention to and identify possible hazards. When you see the symbol, watch out, and follow the related instructions to avoid the hazard. The safety information to avoid the hazard. The safety information given below is only a summary of the more complete safety information found in the safety standards listed in section below. Read and follow all safety standards.
- ▶▶ Only qualified people should install, operate, maintain, and repair this unit.
- ▶▶ During operation, keep everybody, especially children away.

ELECTRIC SHOCK CAN KILL:

- ▶▶ Touching live electrical parts can cause fatal shocks or severe burns. The electrode and work circuit is electrically live whenever the output is on. The input power circuit and machine internal circuits are also live when power is on. In semiautomatic or automatic wire welding, the wire, wire reel, drive roll housing, and all metal parts touching the welding wire are electrically live. Incorrectly installed or improperly grounded equipment is a hazard.
- ▶▶ Do not touch live electrical parts.
- ▶▶ Wear dry, hole-free insulating gloves and body protection.
- ▶▶ Insulate yourself from work and ground using dry insulating mats or covers big enough to prevent any physical contact with the work or ground.
- ▶▶ Do not use AC output in damp areas, if movement is confined, or if there is a danger of falling.
- ▶▶ Use AC output **ONLY** if required for the welding process.
- ▶▶ If AC output is required, use remote output control if present on unit.
- ▶▶ Disconnect input power or stop engine before installing or servicing this equipment.
- ▶▶ Properly install and ground this equipment according to it's Owner's Manual and national, state, and local codes.
- ▶▶ Always verify the supply ground - check and be sure that input power cord ground wire is properly connected to ground terminal in disconnect box or that cord plug is connected to a properly grounded receptable outlet.



- ▶▶ When making input connections, attach proper grounding conductor first - double-check connections.
- ▶▶ Frequently inspect input power cord for damage or bare wiring - replace cord immediately if damaged - bare wiring can kill.
- ▶▶ Turn off all equipment when not in use.
- ▶▶ Do not use worn, damaged, undersized, or poorly spliced cables.
- ▶▶ Do not drape cables over your body.
- ▶▶ If earth grounding of the workpiece is required, ground it directly with a separate cable.
- ▶▶ Do not touch electrode if you are in contact with the work, ground, or another electrode from a different machine.
- ▶▶ Use only well-maintained equipment. Repair or replace damaged parts at once. Maintain unit according to manual.
- ▶▶ Wear a safety harness if working above floor level.
- ▶▶ Keep all panels and covers securely in place.
- ▶▶ Clamp work cable with good metal-to-metal contact to workpiece or worktable as near the weld as practical.
- ▶▶ Insulate work clamp when not connected to workpiece to prevent contact with any single weld output terminal.
- ▶▶ Do not connect more than one electrode or work cable to any single weld output terminal.

SINGNIFICANT DC VOLTAGE EXISTS AFTER REMOVAL OF INPUT POWER ON INVERTERS:

- ▶▶ Turn OFF inverter, disconnect input power, and discharge input capacitors according to instructions in Maintenance Section before touching any parts.

FUMES AND GASES CAN BE HAZARDOUS:

- ▶▶ Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.
- ▶▶ Keep your head out of the fumes. Do not breathe fumes.
- ▶▶ If inside, ventilate the area and/or use exhaust at the arc to remove welding fumes and gases.
- ▶▶ If ventilation is poor, use an approved air-supplied respirator.
- ▶▶ Read the Material Safety Data Sheets (MSDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.
- ▶▶ Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Always have a trained watch-person nearby. Welding fumes and gases can displace air and lower the oxygen level causing injury or death. Be sure the breathing air is safe.
- ▶▶ Do not weld in locations near degreasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapors to form highly toxic and irritating gases.
- ▶▶ Do not weld on coated metals, such as galvanized, lead, or cadmium plated steel, unless the coating is removed from the weld area, the area is well ventilated, and if necessary, while wearing an air-supplied respirator. The coatings and any metals containing these elements can give off toxic fumes if welded.



HOT PARTS CAN CAUSE SEVERE BURNS:

- ▶▶ Do not touch hot parts bare handed.
- ▶▶ Allow cooling period before working on gun or torch.



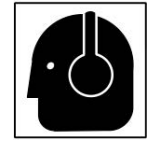
MAGNETIC FIELDS CAN AFFECT PEACEMAKERS:

- ▶▶ Pacemaker wearers keep away.
- ▶▶ Wearers should consult their doctor before going near arc welding, gouging, or spot welding operations.



NOISE CAN DAMAGE HEARING:

- ▶▶ Noise from some processes or equipment can damage hearing.
- ▶▶ Wear approved ear protection if noise level is high.



1.3 ADDITIONAL SYMBOLS FOR INSTALLATION, OPERATION, AND MAINTENANCE:

FIRE OR EXPLOSION HAZARD:

- ▶▶ Do not install or place unit on, over, or near combustible surfaces.
- ▶▶ Do not install unit near flammables.
- ▶▶ Do not overload building wiring - be sure power supply system is properly sized, rated, and protected to handle this unit.



FALLING UNIT CAN CAUSE INJURY:

- ▶▶ Use lifting eye to lift unit only, NOT running gear, gas cylinders, or any other accessories.
- ▶▶ Use equipment of adequate capacity to lift and support unit.
- ▶▶ If using lift forks to move unit, be sure forks are long enough to extend beyond opposite side of unit.



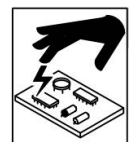
OVERUSE CAN CAUSE OVERHEATING:

- ▶▶ Allow cooling period; follow rated duty cycle.
- ▶▶ Reduce current or reduce duty cycle before starting to weld again.
- ▶▶ Do not block or filter airflow to unit.



STATIC (ESD) CAN DAMAGE PC BOARDS:

- ▶▶ Put on grounded wrist strap BEFORE handling boards or parts.
- ▶▶ Use proper static-proof bags and boxes to store, move, or ship PC boards.



MOVING PARTS CAN CAUSE INJURY:

- ▶▶ Do not press gun trigger until instructed to do so.
- ▶▶ Do not point gun toward any part of the body, other people, or any metal when threading welding wire.



WELDING WIRE CAN CAUSE INJURY:

- ▶▶ Keep away from moving parts.
- ▶▶ Keep away from pinch points such as drive rolls.



MOVING PARTS CAN CAUSE INJURY:

- ▶▶ Keep away from moving parts such as fans.
- ▶▶ Keep all doors, panels, covers, and guards closed and securely in place.



H.F. RADIATION CAN CAUSE INTERFERENCE:

- ▶▶ High-frequency (H.F.) can interfere with radio navigation, safety services, computers, and communications equipment.
- ▶▶ Have only qualified persons familiar with electronic equipment perform this installation.
- ▶▶ The user is responsible for having a qualified electrician promptly correct any interference problem resulting from the installation.
- ▶▶ If notified by the FCC about interference, stop using the equipment at once.
- ▶▶ Have the installation regularly checked and maintained.
- ▶▶ Keep high-frequency source doors and panels tightly shut, keep spark gaps at correct setting, and use grounding and shielding to minimize the possibility of interference.



ARC WELDING CAN CAUSE INTERFERENCE:

- ▶▶ Electromagnetic energy can interfere with sensitive electronic equipment such as computers and computer-driven equipment such as robots.
- ▶▶ Be sure all equipment in the welding area is electromagnetically compatible.
- ▶▶ To reduce possible interference, keep weld cables as short as possible, close together, and down low, such as on the floor.
- ▶▶ Locate welding operation 100 meters from any sensitive electronic equipment.
- ▶▶ Be sure this welding machine is installed and grounded according to this manual.
- ▶▶ If interference still occurs, the user must take extra measures such as moving the welding machine, using shielded cables, using line filters, or shielding the work area.

1.4 EMF INFORMATION:

This machine is manufactured in compliance with the instructions contained in the harmonized standard, **and must be used solely for professional purposes in an industrial environment. There may be potential difficulties in ensuring electromagnetic compatibility in non-industrial environments. IN CASE OF MALFUNCTIONS, REQUEST ASSISTANCE FROM QUALIFIED PERSONNEL.**

2. GENERAL TECHNICAL DESCRIPTIONS:

Model
U1 I1
U2 I2 H2
Duty cycle

MODEL	The model of the machine
U1	International standards
I1	Rated supply voltage
I2	Range of rated ac no-load voltage and number of adjustable steps
U2	Max input welding current
H2	Max output welding current
DUTY CYCLE	The duty-cycle is the number of minutes, expressed as a percentage, the machine can operate (arc on) within a ten minute period without overheating. The duty cycle varies according to the output current.

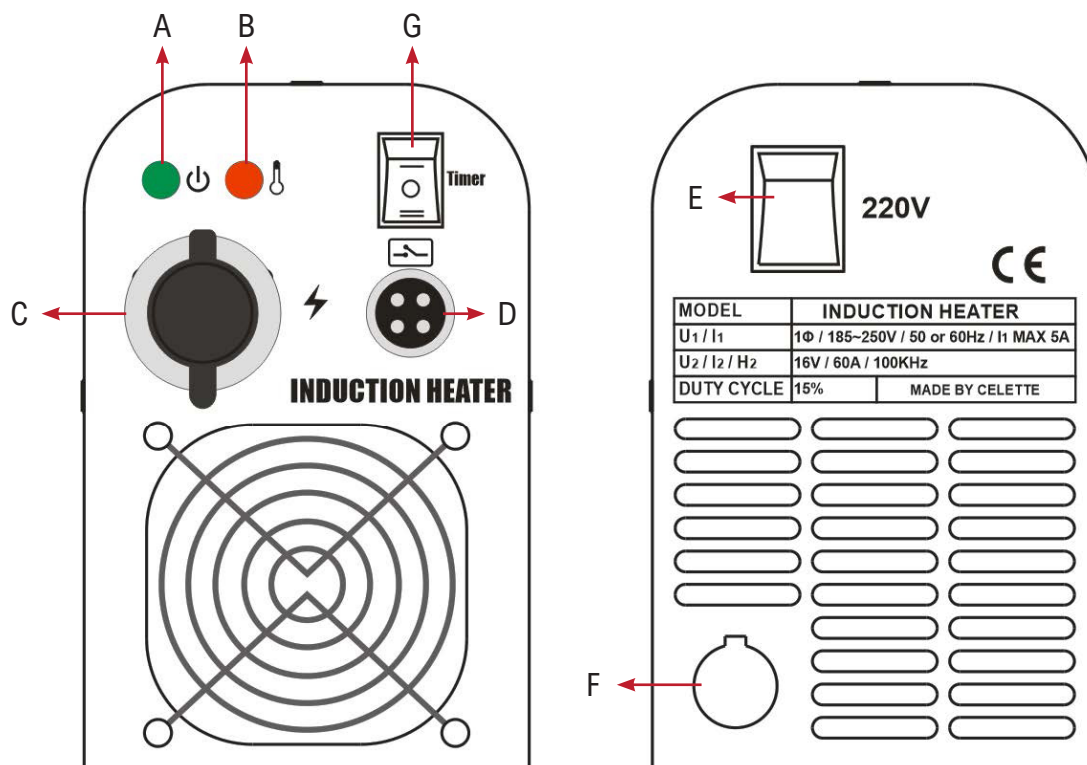
3. DESCRIPTION OF CONTROLS:

- A: Power pilot light (green)
- B: Over heated pilot light (red)
- C: Output connector - for torch power
- D: Output connector - for torch control
- E: Main Switch
- F: Input power cable (Confirm the power voltage before use)
- G: Timer control

Select “-”: Trigger on torch, machine will work 0.5 second, and then stop till to trigger on again.

Select “=”: Trigger on torch, machine will work 1 second, and then stop till to trigger on again.

Select “O”: Trigger on torch, machine will be keeping work.



4. INSTALLATION:

1. Connect the torch to machine.
2. Connect power supply to the machine (Please confirm the power voltage, wrong power voltage will damage the machine).
3. Install torch head to the torch.
4. Turn on the machine, and trigger on the torch. The torch head Start heating.

5. APPLICATION:

1. Output current is isolation to input current. It is more reliable device. No over current problem.
2. Patented PFC power source, wide voltage range:
110V machine V_{in} range: 85~135V.
220V machine V_{in} range: 185~250V.
3. Small body, light weight, good efficiency:
Turn on the machine, and trigger on the torch. The torch head Start heating.
15A breaker available, no need industrial type breaker.
4. Patented heating torch, can be used for glass / stickers / screw / nut / dent repair.
5. Advanced 100kHz induction heating frequency:
According to the skin effect theory, higher induction frequency can reduce the heat affected zone, make the heat more concentrated

PATENTED MULTI-FUNCTION TORCH



For remove screw and nut.

NOTE: After heating, the strength of screw and nut will be reduced. Please don't use the screw and nut again. If any losses caused by improper operation, has nothing to do with the manufacturer.

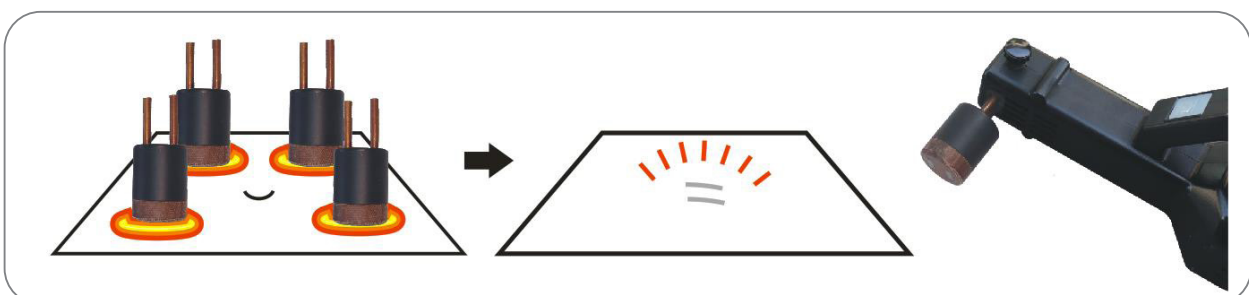


MULTI-FUNCTION TORCH HEAD (USED FOR GLASS / STICKERS)



DENT REPAIR SERVICE (OPTIONAL):

Use special dent repair torch head, induction heating will make the dent expansion. Suggest to use timer control mode, heating time is 1 sec. Please don't heat repeatedly to the same working point. It may damage car body paint cause by over heat





DO NOT USE THE INDUCTION HEATING HEAD OTHER THAN THE STANDARD FOR MACHINE, OTHERWISE IT MAY DAMAGE THE MACHINE.



IF THE INDUCTION HEATING HEAD INNER DIAMETER SIZE IS CLOSE TO THE WORK PIECE, THE HEATING EFFICIENCY WILL BE HIGHER. IF THE SIZE OF WORK PIECE IS MUCH SMALLER THAN THE INDUCTION HEATING HEAD, THE HEATING EFFICIENCY WILL BE REDUCED.



USE THE NON-ROUND HEATING HEAD FOR CONTINUOUS HEATING FOR NO MORE THAN 30 SECONDS.

EXCESSIVE HEATING TIME WILL LEAD TO OVERHEATING OF THE HEATING HEAD OR EVEN DAMAGE TO THE MACHINE.

HEATING RED EACH NUT (WORK PIECE), THE WELDING HEAD (IRON CORE) NEED TO STOP AND COOLING DOWN FOR 20 SECOND.

6. NOTES OR PREVENTIVE MEASURES:

6.1 OPERATION ENVIRONMENT:

1. The machine can perform in environment where conditions are dry with a dampness level of max 90%.
2. Ambient temperature is between -10 to 40 degrees centigrade.
3. Avoid welding in sunshine or drippings.
4. Do not use the machine in environment where condition is polluted with conductive dust on the air or corrosiveness gas on the air.
5. Avoid gas welding in the environment of strong airflow.

6.2 SAFETY NORMS:

1. The working area is adequately ventilated!

The machine is powerful machine, when it is being operated, it generated by high currents, and natural wind will not satisfy machine cool demands. So there is a fan in inter-machine to cool down machine. Make sure the intake is not in block or covered, it is 0.3 meter from welding machine to objects of environment. User should make sure the working area is adequately ventilated. It is important for the performance and the longevity of the machine.

2. Do not over load!

Keep welding current is not exceed max duty cycle current.
Over-load current will damage and burn up machine.

3. No over voltage!

Power voltage can be found in diagram of main technical data. Automatic compensation circuit of voltage will assure that welding current keep in allowable arrangement. If power voltage is exceeding allowance arrangement limited, it is damaged to components of machine. The operator should understand the situation and take preventive measures.

4. If working time is exceeded duty cycle limited, machine will stop working for protection. Because machine is overheated, temperature control switch is on "ON" position and the indicator light is red. In this situation, you don't have to pull the plug, in order to let the fan cool the machine. When the indicator light is off, and the temperature goes down to the standard range, it can weld again.

5. If the user has some metal parts, (such as: ring, necklace, artificial limb, joint prosthesis, artificial organs) please don't let the metal parts close to the induction heater torch or torch head, to avoid damage by induction heating.

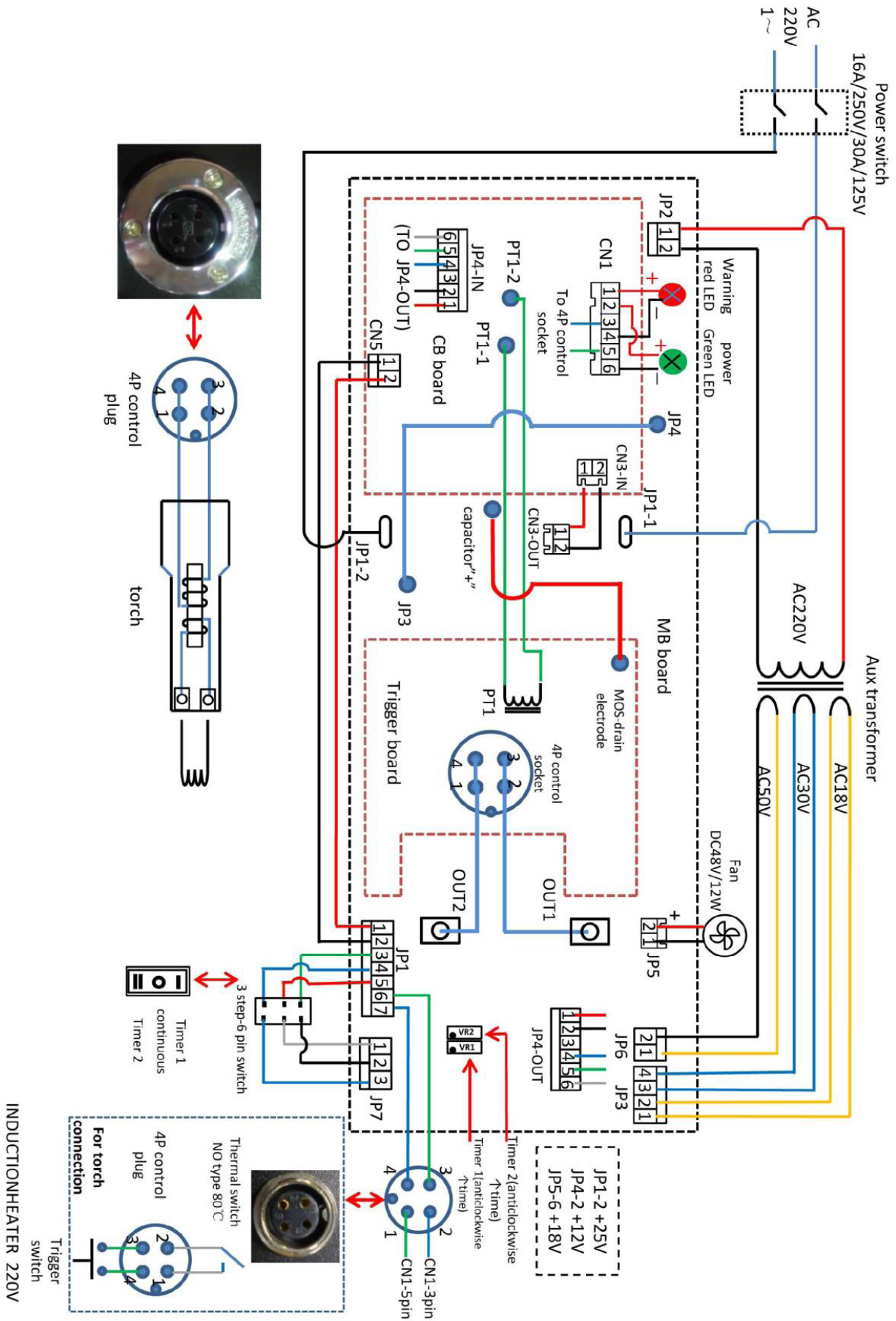
7. MAINTENANCE:

CAUTION: Before maintenance and checking, power must be turned off, and before opening the housing, make sure the power plug is pulled off.

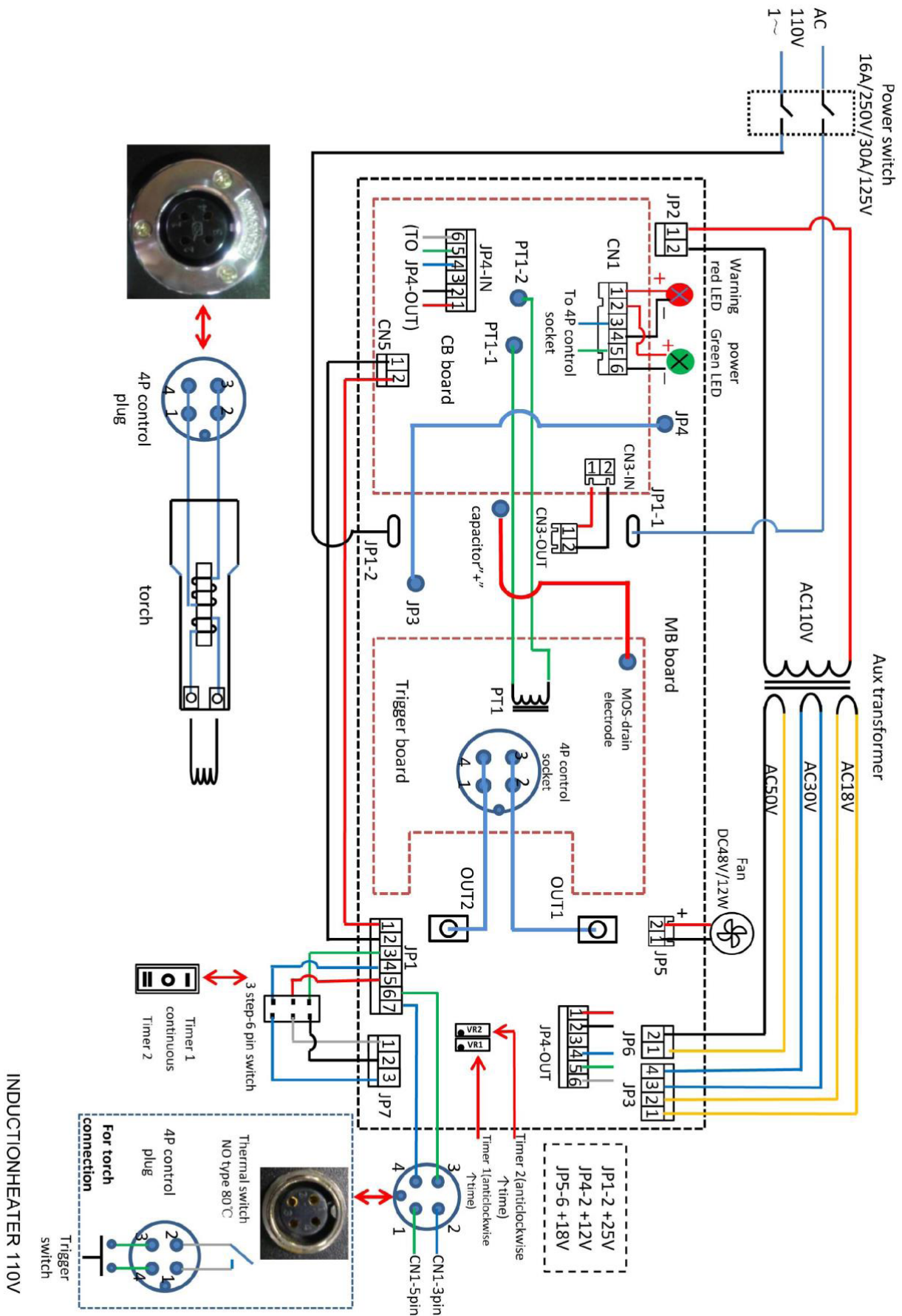
1. Remove dust by dry and clean compressed air regularly, if machine is operating in environment where is polluted with smokes and pollution air, the machine need remove dust everyday.
2. Pressure of compressed air must be inside the reasonable arrangement in order to prevent damaging to small components of inter-machine.
3. Check inter circuit of machine regularly and make sure the cable Circuit is connected correctly and connectors are connected tightly (especially insert connector and components).
4. Avoid water and steam to enter into inside of the machine, if they enter into machine, please dry inter-machine then check insulation of machine.
5. If machine will not be operated long time, it must be put into packing box and stored in dry environment.

8. WIRE DRAWING:

WIRE DRAWING 17203-A3-02 INDUCTION HEATER 1 PH/220V EUROPE/INDIA:



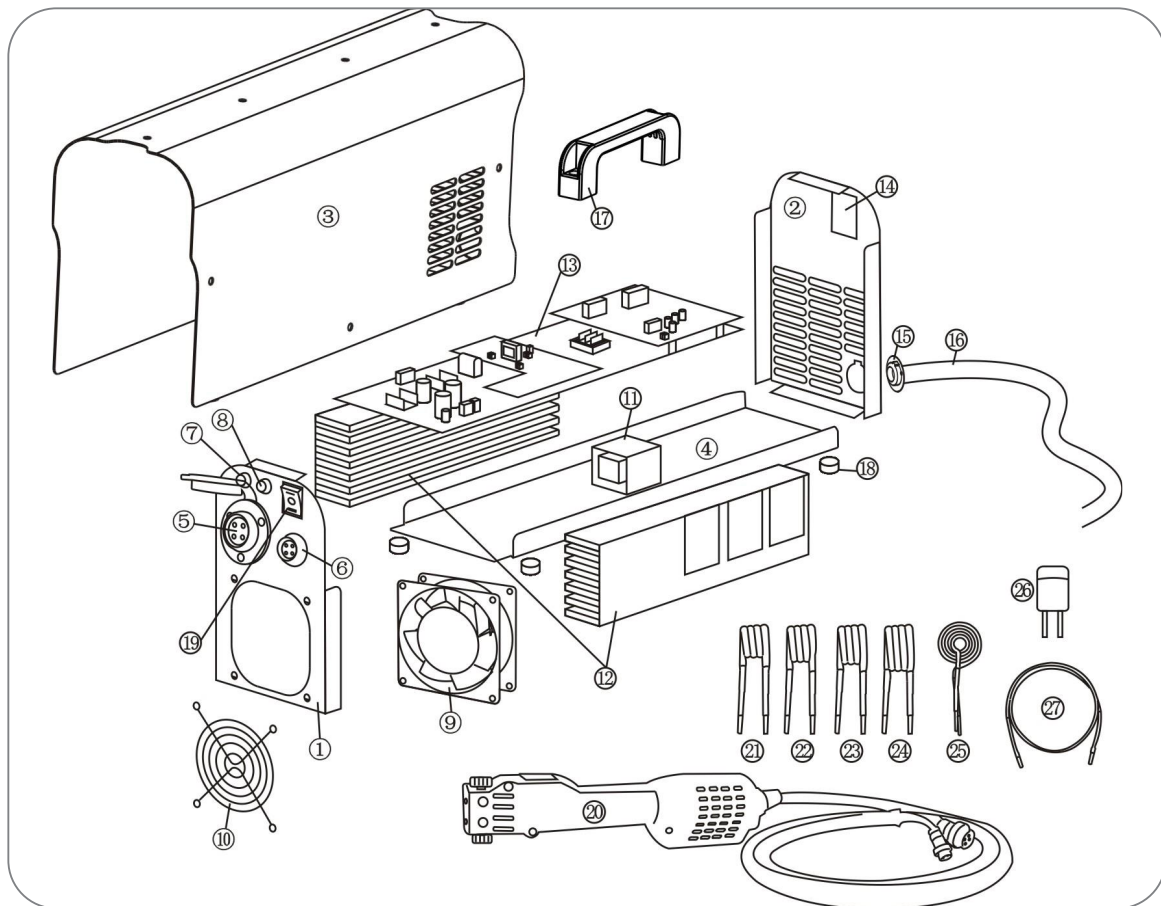
WIRE DRAWING 17203-B3-02 INDUCTION HEATER 1PH/110V USA:



INDUCTIONHEATER 110V

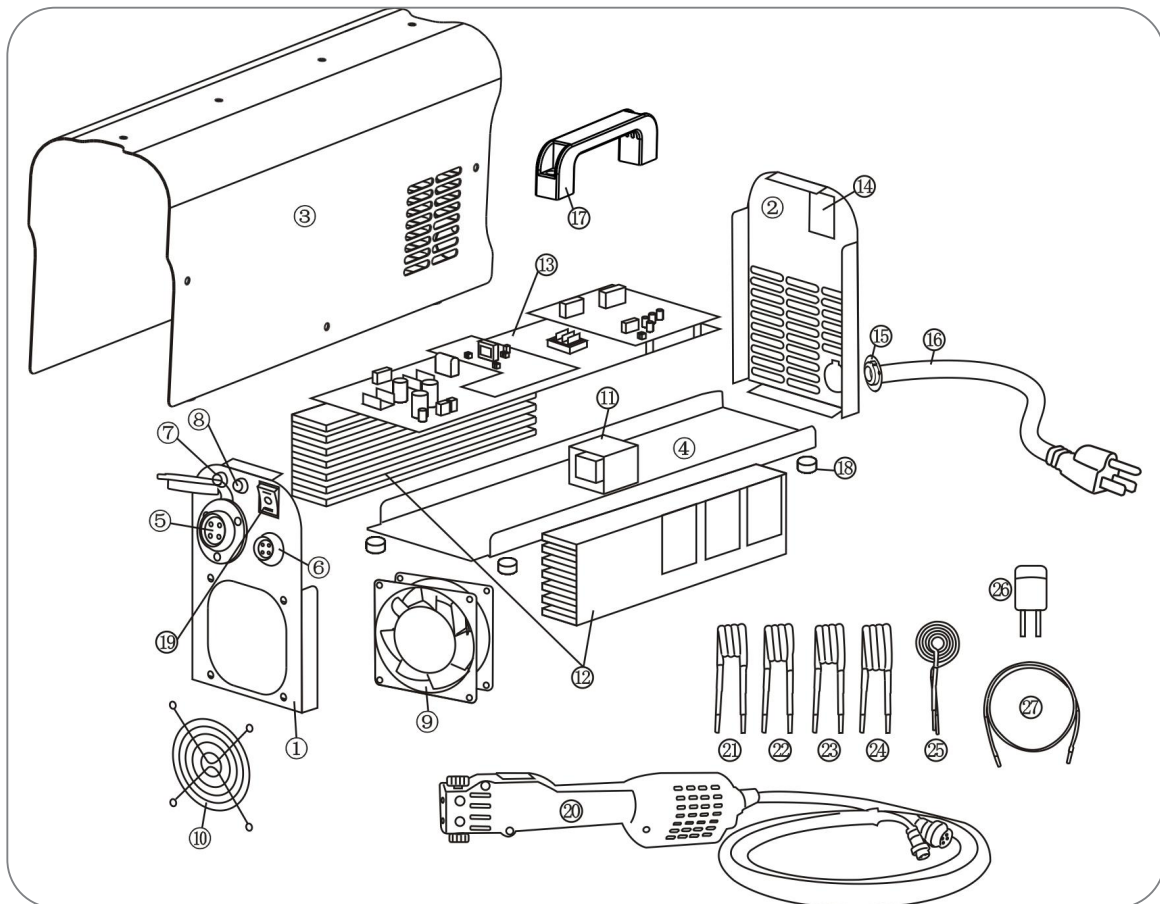
9. INDUCTION HEATER 1PH/220V EUROPE/INDIA:

No.	Code	Description	No.	Code	Description
1	EY17203-B3Q0101B1	Front panel	14	KE055005	Power switch
2	EY17203-B3H0101B1	Back panel	15	SE064000	Cable holder
3	EY17203-B3S0101R16	Top case	16	XE073100	Power cable
4	EY17203-B3X0101B1	Bottom panel	17	SC091120	Handle
5	JG071401	Socket for control	18	SG081100	Plastic foot
6	JG071441	Socket for control	19	KE082010	Selection switch
7	DL092301	LED (green)	20	QT073003	Heating torch
8	DL092300	LED (red)	21	WD093942	Coil
9	MF094300-3	Fan	22	WD094000	Coil
10	MF094310	Fan net	23	WD094022	Coil
11	VT095000-2E	Aux transformer	24	WD094002	Coil
12	ED095010/ ED095020	Radiator	25	WD094040-1	Coil
13	PM092141-E	MB board	26	WD094071	Induction block
	PM092101-E	CB board	27	WD094080-A	Flex coil



10. INDUCTION HEATER 1PH/110V USA:

No.	Code	Description	No.	Code	Description
1	EY17203-B3Q0101B1	Front panel	14	KE055005	Power switch
2	EY17203-B3H0101B1	Back panel	15	SE064000	Cable holder
3	EY17203-B3S0101R16	Top case	16	XJ082050	Power cable UL
4	EY17203-B3X0101B1	Bottom panel	17	SC091120	Handle
5	JG071401	Socket for control	18	SG081100	Plastic foot
6	JG071441	Socket for control	19	KE082010	Selection switch
7	DL092301	LED (green)	20	QT073003	Heating torch
8	DL092300	LED (red)	21	WD093942	Coil
9	MF094300-3	Fan	22	WD094000	Coil
10	MF094310	Fan net	23	WD094022	Coil
11	VT095000-2E	Aux transformer	24	WD094002	Coil
12	ED095010/ ED095020	Radiator	25	WD094040-1	Coil
13	PM092141-E	MB board	26	WD094071	Induction block
	PM092101-E	CB board	27	WD094080-A	Flex coil



THANK YOU!!!
FOR PURCHASING OUR PRODUCT



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