



Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local amenity tip and place into the appropriate recycling bin.



Never dispose of electrical equipment or batteries in with your domestic waste. If your supplier offers a disposal facility please use it or alternatively use a recognised re-cycling agent. This will allow the recycling of raw materials and help protect the environment.

Sip
SIP INDUSTRIAL

machinery specialists since 1968

Weldmate Arc Welder T141P - T251P



05721, 05725, 05741 & 05761

**FOR HELP OR ADVISE ON THIS PRODUCT PLEASE CONTACT YOUR DISTRIBUTOR, OR
SIP DIRECTLY ON:
TEL: 01509500400
EMAIL: sales@sip-group.com or technical@sip-group.com
www.sip-group.com**

**Please read and fully understand the instructions in this manual
before operation. Keep this manual safe for future reference.**

Declaration of Conformity

We

SIP (Industrial Products) Ltd
Gelders Hall Road
Shepshed
Loughborough
Leicestershire
LE12 9NH
England

As the manufacturer's authorised representative within the EC
declare that the


Weldmate T211P Arc - SIP Part. No. 05721
Weldmate T251P Arc - SIP Part. No. 05725
Weldmate T141P Arc - SIP Part. No. 05741
Weldmate T161P Arc - SIP Part. No. 05761

Conforms to the requirements of the following directive(s), as indicated.

2006/95/EC	Low Voltage Directive
2004/108/EC	EMC Directive
89/686/EEC	Personal Protective Equipment Directive
2008/35/EC	RoHS Directive

And the relevant harmonised standard(s), including

EN 60794-1:2012
EN 60794-6:2011
EN 60794-10
EN 379:2003
EN 169:2002
EN 175: 1997

Signed: 

Mr P. Ippaso - Managing Director - SIP (Industrial Products) Ltd
Date: 02/06/2014.



PARTS LIST WELDMATE T251P (05725)

Ref. No.	Description	Sip Part No.
1.	Handle	WE01-00057
2.	Cover	WE01-00069
3.	Mains lead	WE01-00059
4.	Cable clamp	WE01-00033
5.	Rear panel	WE01-00034
6.	Fan motor	WE01-00035
7.	Axle	WE01-00060
8.	Wheel c/w cap	WE01-00061
9.	Insulation strip	WE01-00036
10.	Thermostat (transformer)	WE01-00037
11.	Shunt spindle fork	WE01-00038
12.	Clip	WE01-00039
13.	Transformer	WE01-00070
14.	Shunt	WE01-00081
15.	Indicator	WE01-00042
16.	Shunt bracket	WE01-00043
17.	Hand wheel c/w shaft	WE01-00044
18.	Chassis	WE01-00071
19.	Front foot	WE01-00064
20.	Earth return lead c/w earth clamp	WE01-00072
21.	Electrode holder lead c/w electrode holder	WE01-00073
22.	Rotary switch	WE01-00067
23.	Power indicator	WE01-00075
24.	Thermal overload indicator	WE01-00077
25.	Fault indicator	WE01-00078
26.	Plastic frame	WE01-00051
27.	Clear window	WE01-00052
28.	Handle cap	WE01-00068
29.	Thermostat (fault indicator)	WE01-00076
30.	Axle clip	WE01-00074
N/A.	Electrode	02715
N/A.	Earth clamp	02735

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SAFETY SYMBOLS USED THROUGHOUT THIS MANUAL



Danger / Caution: Indicates risk of personal injury and/or the possibility of damage.



Warning: Risk of electrical injury or damage!



Note: Supplementary information.

SAFETY INSTRUCTIONS



IMPORTANT: Please read the following instructions carefully, **failure to do so could lead to serious personal injury and / or damage to the arc welder.**

When using your arc welder, basic safety precautions should always be followed to reduce the risk of personal injury and / or damage to the arc welder. Read all of these instructions before operating the arc welder and save this user manual for future reference.

The arc welder should **not** be modified or used for any application other than that for which it was designed.

This arc welder was designed to supply electric current for ARC welding.

If you are unsure of its relative applications do not hesitate to contact us and we will be more than happy to advise you.

Before each use of the arc welder always check no parts are broken and that no parts are missing.

Always operate the arc welder safely and correctly.

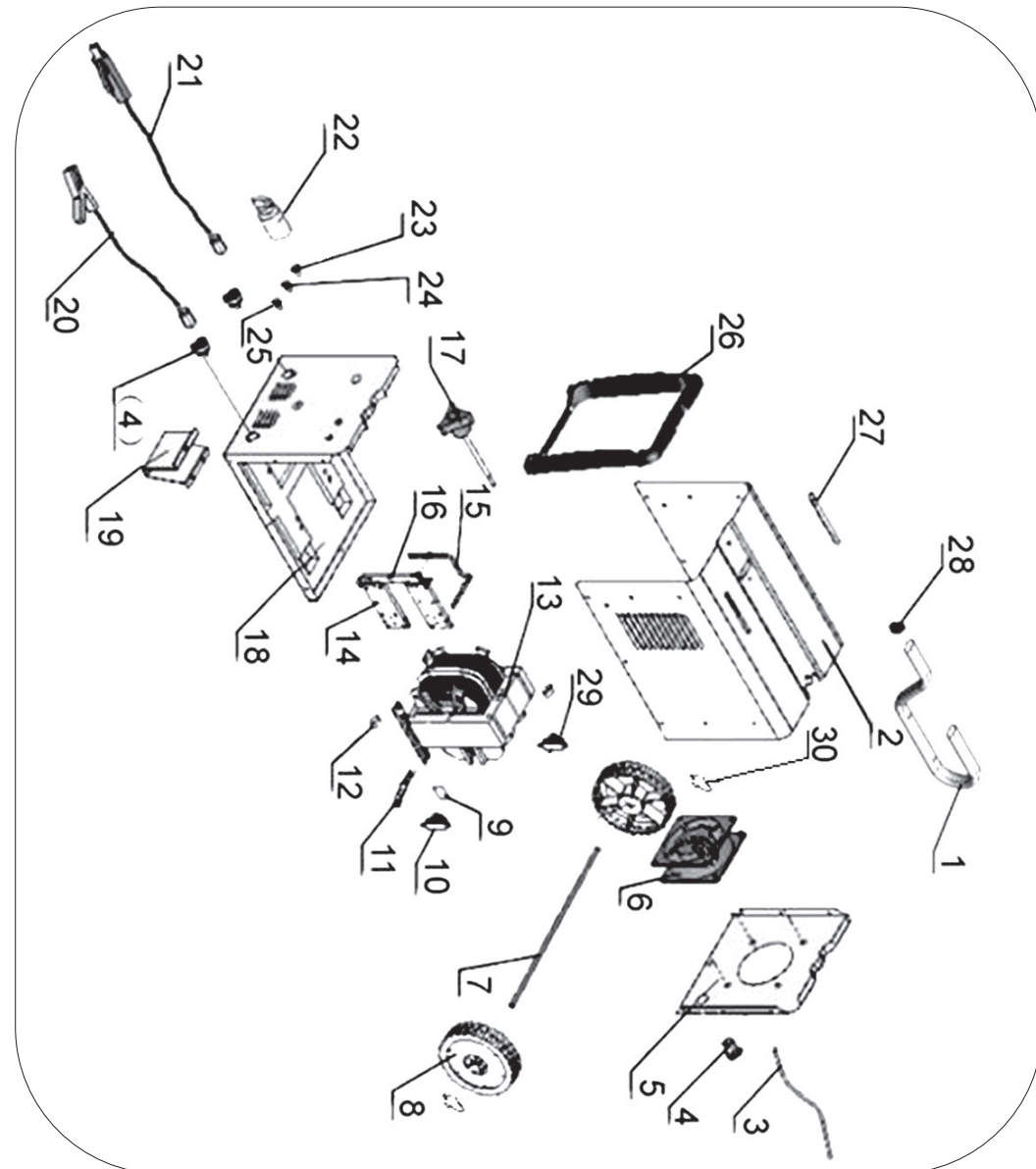
KNOW YOUR ARC WELDER: Read and understand the owner's manual and labels affixed to the arc welder. Learn its applications and limitations, as well as the potential hazards specific to it.

KEEP WORK AREA CLEAN AND WELL LIT: Cluttered work benches and dark areas invite accidents. Floors must not be slippery due to oil, water or sawdust etc.

DO NOT USE THE ARC WELDER IN DANGEROUS ENVIRONMENTS: Do not use the arc welder in damp or wet locations, or expose it to rain. Provide adequate space surrounding the work area. Do not use in environments with a potentially explosive atmosphere.

KEEP CHILDREN AND UNTRAINED PERSONNEL AWAY FROM THE WORK AREA: All visitors

EXPLODED DRAWING WELDMATE T251P (05725)



PARTS LIST WELDMATE T211P (05721)

Ref. No.	Description	Slip Part No.
1.	Handle	WE01-00057
2.	Cover	WE01-00058
3.	Mains lead	WE01-00059
4.	Cable clamp	WE01-00033
5.	Rear panel	WE01-00034
6.	Fan motor	WE01-00035
7.	Axle	WE01-00060
8.	Wheel c/w cap	WE01-00061
9.	Insulation strip	WE01-00036
10.	Thermostat (transformer)	WE01-00037
11.	Shunt spindle fork	WE01-00038
12.	Clip	WE01-00039
13.	Transformer	WE01-00062
14.	Shunt	WE01-00081
15.	Indicator	WE01-00042
16.	Shunt bracket	WE01-00043
17.	Hand wheel c/w shaft	WE01-00044
18.	Chassis	WE01-00063
19.	Front foot	WE01-00064
20.	Earth return lead c/w earth clamp	WE01-00065
21.	Electrode holder lead c/w electrode holder	WE01-00066
22.	Rotary switch	WE01-00067
23.	Power indicator	WE01-00075
24.	Thermal overload indicator	WE01-00077
25.	Fault indicator	WE01-00078
26.	Plastic frame	WE01-00051
27.	Clear window	WE01-00052
28.	Handle cap	WE01-00068
29.	Thermostat (fault indicator)	WE01-00076
30.	Axle clip	WE01-00074
N/A.	Electrode	02715
N/A.	Earth clamp	02735

SAFETY INSTRUCTIONS...cont

should be kept at a safe distance from the work area.

STORE THE ARC WELDER SAFELY WHEN NOT IN USE: The arc welder should be stored in a dry location and disconnected from the mains supply, and out of the reach of children.

USE SAFETY CLOTHING / EQUIPMENT: Use a CE approved welding mask at all times with the correct shade of filter lens. A fume extractor should be used particularly where there is little or no ventilation.

PROTECT YOURSELF FROM ELECTRIC SHOCK: When working with the arc welder, avoid contact with any earthed items (e.g. pipes, radiators, hobs and refrigerators, etc.). It is advisable wherever possible to use an RCD (residual current device) at the mains socket.

STAY ALERT: Always watch what you are doing and use common sense. Do not operate the arc welder when you are tired or under the influence of alcohol or drugs.

DISCONNECT THE ARC WELDER FROM THE MAINS SUPPLY: When not in use and before servicing.

AVOID UNINTENTIONAL STRIKING: Make sure the switch is in the **OFF** position before connecting the arc welder to the mains supply.

NEVER LEAVE THE ARC WELDER CONNECTED WHILST UNATTENDED: Turn the arc welder off and disconnect it from the mains supply between jobs. Do not leave the arc welder connected to the mains supply if no more welding is to be done.

DO NOT ABUSE THE MAINS LEAD: Never attempt to move the arc welder by the mains lead or pull it to remove the plug from the mains socket. Keep the mains lead away from heat, oil and sharp edges. If the mains lead is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid unwanted hazards. *All* extension cables must be checked at regular intervals and replaced if damaged.

CHECK FOR DAMAGED PARTS: Before every use of the arc welder, any damage found should be carefully checked to determine that it will operate correctly, safely and perform its intended function. Any damaged, split or missing parts that may affect its operation should be correctly repaired or replaced by an authorised service centre unless otherwise indicated in this instruction manual.

KEEP ALL PANELS IN PLACE: Never operate the arc welder with any panels removed, this is extremely dangerous.

MAINTAIN THE ARC WELDER WITH CARE: Keep the earth clamp and electrode holder clean for the best and safest performance.

USE ONLY RECOMMENDED ACCESSORIES: Consult this user manual, your distributor or SIP directly for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards and will invalidate any warranty you may have.

SECURE THE WORK-PIECE: Always use welding clamps to secure the work piece. This frees up both hands to operate the arc welder correctly.

DO NOT OVERREACH: Keep proper footing and balance at all times.

USE THE RIGHT TOOL: Do not use the arc welder to do a job for which it was not de-

SAFETY INSTRUCTIONS....cont

signed.

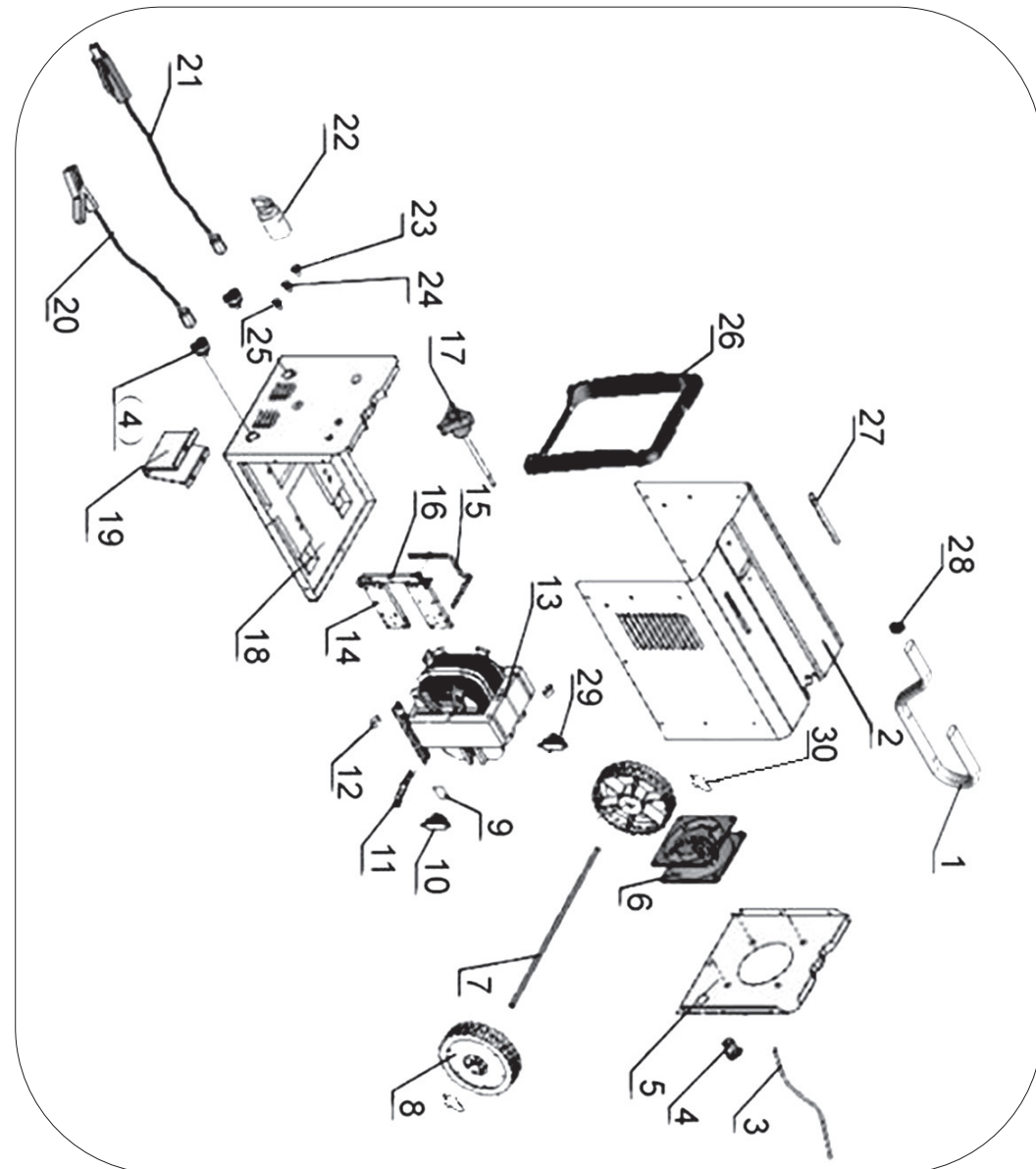
DO NOT OPERATE THE ARC WELDER IN EXPLOSIVE ATMOSPHERES: Do not use the arc welder in the presence of flammable liquids, gases, dust or other combustible sources. Arc welding will create sparks which can ignite the dust or fumes.

DO NOT EXPOSE THE ARC WELDER TO RAIN OR USE IT IN WET CONDITIONS: Water entering the arc welder will greatly increase the risk of electric shock.

HAVE YOUR ARC WELDER REPAIRED BY A QUALIFIED PERSON: The arc welder is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

- Stop operation immediately if you notice anything abnormal.
- Always disconnect the plug from the mains supply before cleaning or servicing etc.
- Be alert at all times, especially during repetitive, monotonous operations; Don't be lulled into a false sense of security.
- Use of improper accessories may cause damage to the arc welder and surrounding area as well as increasing the risk of injury.
- Do not modify the arc welder to do tasks other than those intended.
- To avoid injury, the work-piece should never be held with the bare hands; The work-piece will become hot during normal welding operations, and stay hot for a period after the weld is complete.
- Appropriate personal protective equipment **MUST** be worn and **MUST** be designed to protect against all hazards created. Severe permanent injury can result from using inappropriate or insufficient protective equipment - Eyes in particular are at risk.
- The work should be clamped firmly whilst welding, If its loose it could result in personal injury or damage to the machine or item that is being welded.
- **DO NOT** attempt any repairs unless you are a competent electrician or engineer.
- Ensure that the machine is connected to the correct supply voltage and protected by a fuse or circuit breaker of the recommend rating.
- Never allow the earth clamp and electrode holder to come into contact with each other.

EXPLODED DRAWING WELDMATE T211P (05721)



PARTS LIST WELDMATE T161P (05761)

Ref. No.	Description	Sip Part No.
1.	Handle	WE01-00030
2.	Cover	WE01-00053
3.	Mains lead	WE01-00054
4.	Cable clamp	WE01-00033
5.	Rear panel	WE01-00034
6.	Fan motor	WE01-00035
7.	Insulation strip	WE01-00036
8.	Thermostat (transformer)	WE01-00037
9.	Shunt spindle fork	WE01-00038
10.	Clip	WE01-00039
11.	Transformer	WE01-00055
12.	Shunt	WE01-00041
13.	Indicator	WE01-00042
14.	Shunt bracket	WE01-00043
15.	Hand wheel c/w shaft	WE01-00044
16.	Chassis	WE01-00056
17.	Earth return lead c/w earth clamp	WE01-00046
18.	Electrode holder lead c/w electrode holder	WE01-00047
19.	On/Off switch	WE01-00048
20.	Thermal overload indicator	WE01-00079
21.	Fault indicator	WE01-00080
22.	Plastic frame	WE01-00051
23.	Clear window	WE01-00052
24.	Thermostat (fault indicator)	WE01-00076
N/A.	Electrode holder	02700
N/A.	Earth clamp	02735

SAFETY INSTRUCTIONS....cont

ELECTRIC SHOCK

- Keep your body and clothing dry. Never work in a damp area without adequate insulation against electrical shock, stay on a dry duck board, or rubber mat when dampness or sweat can not be avoided. Sweat, sea water or moisture between the body and an electrically 'hot' part or grounded metal reduces the body surface electrical resistance enabling dangerous and possibly lethal currents to flow through the body.
- **NEVER** allow live metal parts to touch bare skin or any wet clothing, be sure welding gloves are dry.
- Before welding, check for continuity; Be sure the earth clamp is connected to the work piece as close to the welding areas as possible. Grounds connected to building frame work or other remote locations from the welding area reduce efficiency and increase the potential electric shock hazard. Avoid the possibility of the welding current passing through lifting chains, crane cables or various electric paths.
- Frequently inspect leads for wear, splits, cracks and any other damage. **IMMEDIATELY** replace those with worn or damaged insulation to avoid a possibly lethal shock from bare leads.

FIRE

- All inflammable materials must be removed from the area.
- Have a suitable fire extinguisher available close by.
- Causes of fire and explosion are; combustibles reached by the arc, flame, flying sparks, hot slag or heated material, misuse of compressed gases and cylinders and short circuits.
- Flying sparks or falling slag can pass through cracks along pipes, through windows or doors and through walls or floor openings and out of sight of the operator. Sparks and slag can fly up-to 10 metres.
- Keep equipment clean and operable; Free of oil, grease and of metallic particles (in electrical parts) that can cause short circuits.
- If combustibles are in the area. **DO NOT** weld, move the work if practical to an area free of combustibles, avoid paint spray rooms, dip tanks, storage areas and ventilators. If the work can not be moved, then move the combustibles at least 10 metres away and out of the reach of sparks and heat or protect against ignition with suitable and snug fitting, fire resistant covers or shields.
- Walls touching combustibles on opposite sides should not be welded on, walls, ceilings and the floor near the work area should be protected by heat resistant covers or shields.
- Openings (concealed or visible) in floors or walls within 10 metres may expose combustibles to sparks.
- Combustibles adjacent to walls, ceilings, roofs or metal partitions can be ignited.

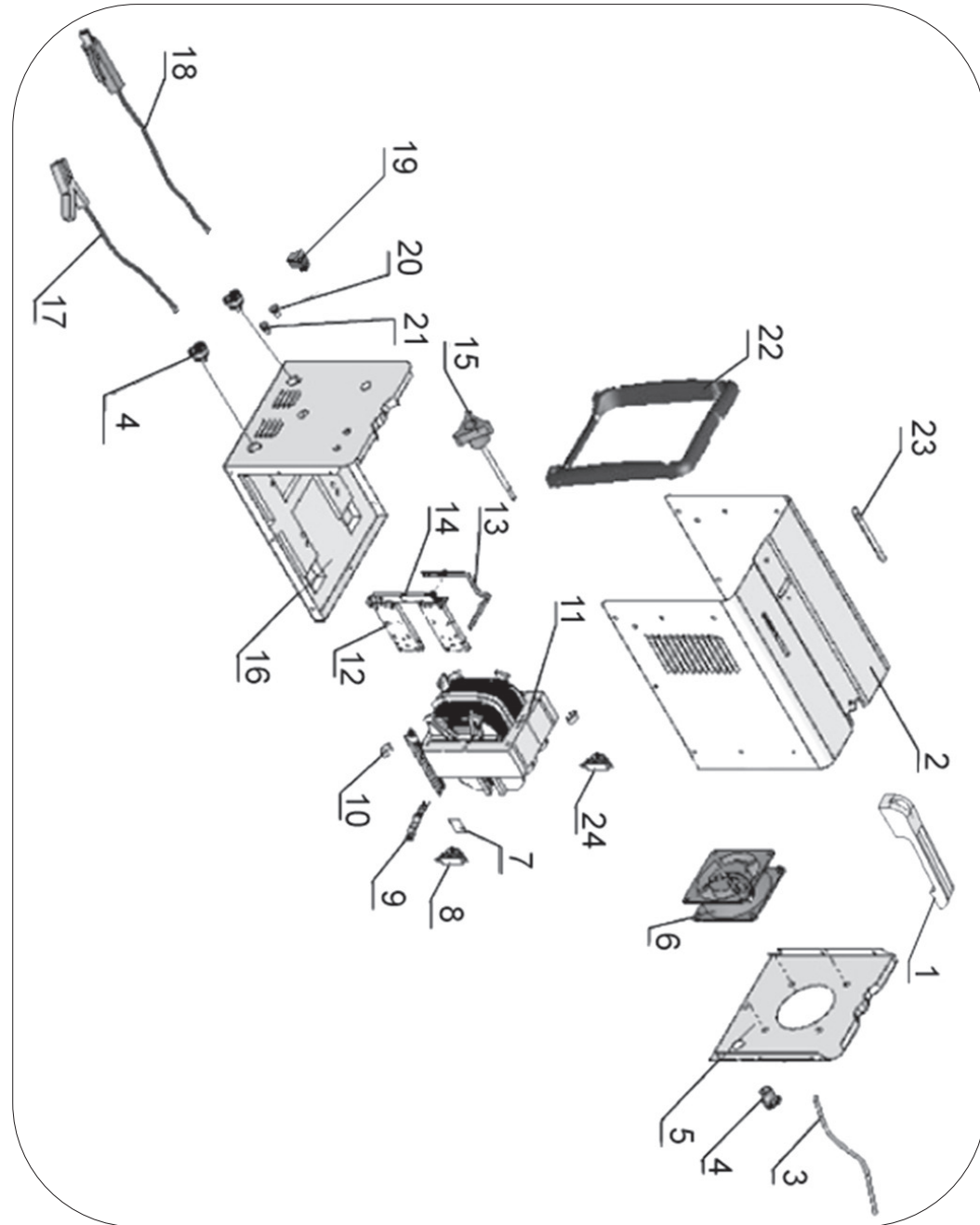
SAFETY INSTRUCTIONS....cont

- ed by radiant or conducted heat.
- After the work is done, check that the area is free of sparks, glowing embers and flames.
- An empty container that has held combustibles, or that can produce flammable or toxic vapours when heated, must never be welded, unless the container has first been cleaned. Consult HSE INDG214, HSG250 and CS15. HSE document CS15 includes information on cleaning by thorough steam or solvent/caustic cleaning followed by purging and inserting with nitrogen, carbon dioxide or water filling just below working level.
- A container with unknown contents should be treated as if it contained combustibles (see previous paragraph), **DO NOT** depend on sense of smell or sight to determine if it is safe to weld.
- Hollow items must be vented before welding as they can explode.
- Explosive atmosphere; Never weld when the air may contain flammable dust, gas or liquid vapours (such as petrol).

GLARE AND BURNS

- The electric welding arc must not be observed with the naked eye. Always use a welding mask; Ensure the welding mask is fitted with the correct shade of filter lens for the welding current level.
- Welding gauntlet gloves should be worn to protect the hands from burns, non-synthetic overalls with buttons at the neck and wrist, or similar clothing should be worn. Greasy overalls should not be worn. Wear suitable protective footwear.
- Always wear correctly rated protective clothing.
- Avoid oily or greasy clothing, a spark may ignite them.
- Hot metal such as electrode stubs and work pieces should never be handled without gloves.
- First aid facilities and a qualified first aid person should be available for each shift unless medical facilities are close by for immediate treatment of flash burns to the eyes and skin.
- Flammable hair products should not be used by persons intending to weld.
- Warn bystanders not to watch the arc and not to expose themselves to the welding-arc rays or to hot metal.
- Keep children away whilst welding, they may not be aware that looking at an arc can cause serious eye damage.
- Protect other nearby personnel from arc rays and hot sparks with a suitable non-flammable partition.

EXPLODED DRAWING WELDMATE T161P (05761)



PARTS LIST WELDMATE T141P (05741)

Ref. No.	Description	Slp Part No.
1.	Handle	WE01-00030
2.	Cover	WE01-00031
3.	Mains lead	WE01-00032
4.	Cable clamp	WE01-00033
5.	Rear panel	WE01-00034
6.	Fan motor	WE01-00035
7.	Insulation strip	WE01-00036
8.	Thermostat (transformer)	WE01-00037
9.	Shunt spindle fork	WE01-00038
10.	Clip	WE01-00039
11.	Transformer	WE01-00040
12.	Shunt	WE01-00041
13.	Indicator	WE01-00042
14.	Shunt bracket	WE01-00043
15.	Hand wheel c/w shaft	WE01-00044
16.	Chassis	WE01-00045
17.	Earth return lead c/w earth clamp	WE01-00046
18.	Electrode holder lead c/w electrode holder	WE01-00047
19.	On/Off switch	WE01-00048
20.	Thermal overload indicator	WE01-00049
21.	Fault indicator	WE01-00050
22.	Plastic frame	WE01-00051
23.	Clear window	WE01-00052
24.	Thermostat (fault indicator)	WE01-00076
N/A.	Electrode holder	02700
N/A.	Earth clamp	02735

SAFETY INSTRUCTIONS...cont

VENTILATION

- Ventilation must be adequate to remove the smoke and fumes during welding (see the relevant safety standard for acceptable levels).
- Toxic gases may be given off when welding, especially if zinc or cadmium coated materials are involved, welding should be carried out in a well ventilated area and the operator should always be alert to fume build-up.
- Areas with little or no ventilation should always use a fume extractor.
- Vapours of chlorinated solvents can form the toxic gas phosgene when exposed to U.V radiation from an electric arc. All solvents, degreasers and potential sources of these vapours must be removed from the arc area.
- Severe discomfort, illness or death can result from fumes, vapours, heat, oxygen enrichment or depletion that welding (or cutting) may produce. This will be prevented by adequate ventilation or using a fume extractor. **NEVER** ventilate with oxygen.
- Lead, cadmium, zinc, mercury, beryllium bearing and similar materials when welded may produce harmful concentrations of toxic fumes. Adequate ventilation must be provided for every person in the area. The operator should also wear an air supplied respirator, for beryllium both must be used.
- Metals coated with or containing materials that emit toxic fumes should not be heated unless coating is removed from the work surface. The area should be well ventilated or the operator should wear an air supplied respirator.
- Work in a confined space only while it is being ventilated and if necessary whilst wearing an air supplied respirator.
- Gas leaks in a confined space should be avoided, leaking gas in large quantities can change oxygen concentration dangerously. **DO NOT** bring gas cylinders into a confined space.
- Leaving a confined space you must shut off the gas supply at the source to prevent possible accumulation of gases in the space if down stream valves are left open. Check to be sure that the space is safe before re entering it.
- Vapours from chlorinated solvents can be decomposed by the heat of the arc (or flame) to form phosgene a highly toxic gas and other lung and eye-irritating products. The ultra violet (radiant) energy of the arc can also decompose trichloroethylene and perchlorethylene vapours to form phosgene. **DO NOT WELD** or cut where solvent vapours can be drawn into the welding atmosphere, or where the radiant energy can penetrate to atmospheres containing even minute amounts of trichloroethylene or perchlorethylene.

SAFETY INSTRUCTIONS....cont



When using the arc welder always ensure the operator as well as those in the area use a welding mask with the correct shade filter lens.

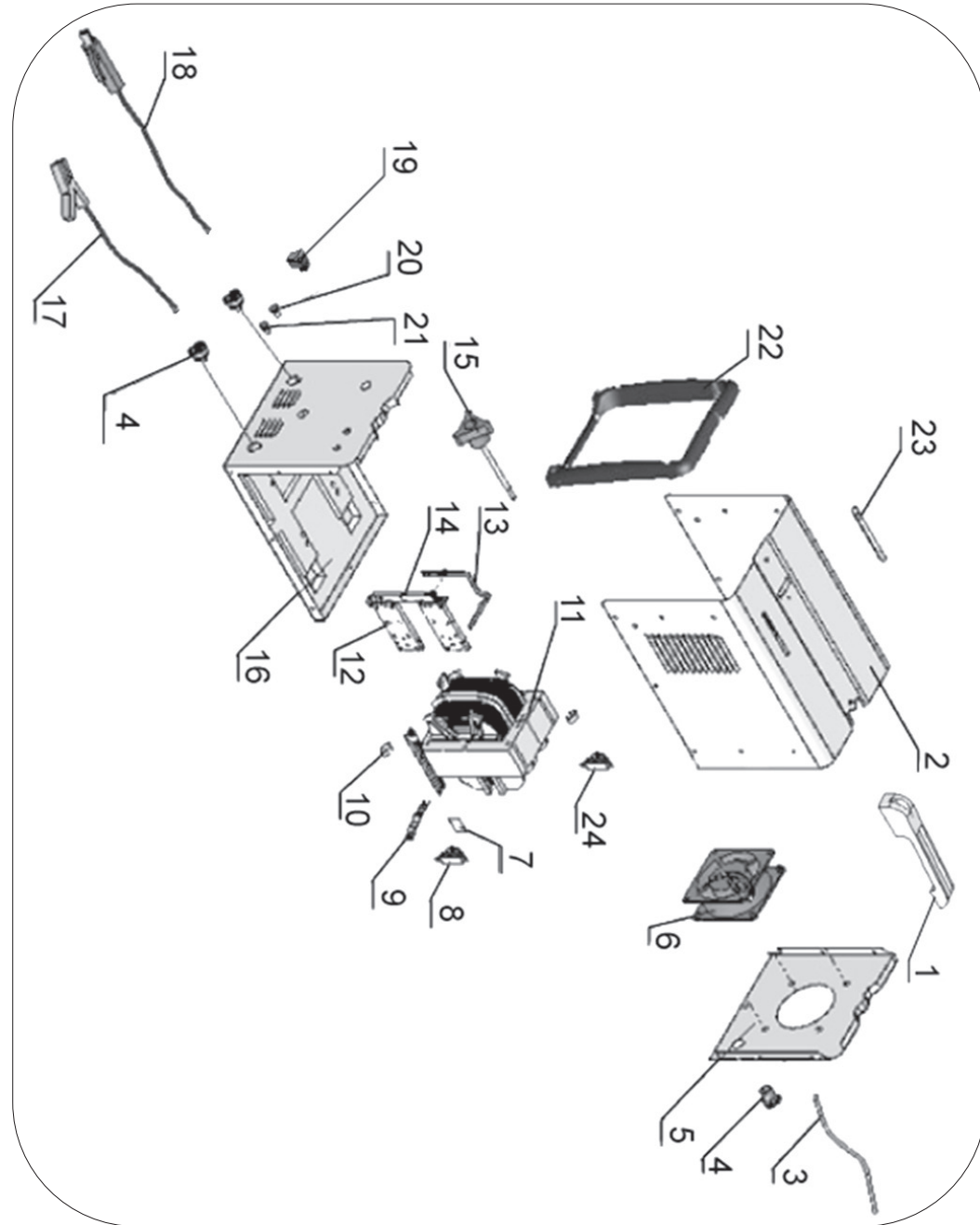


Some metals and metal composites have the potential to be highly toxic; always wear a face mask .



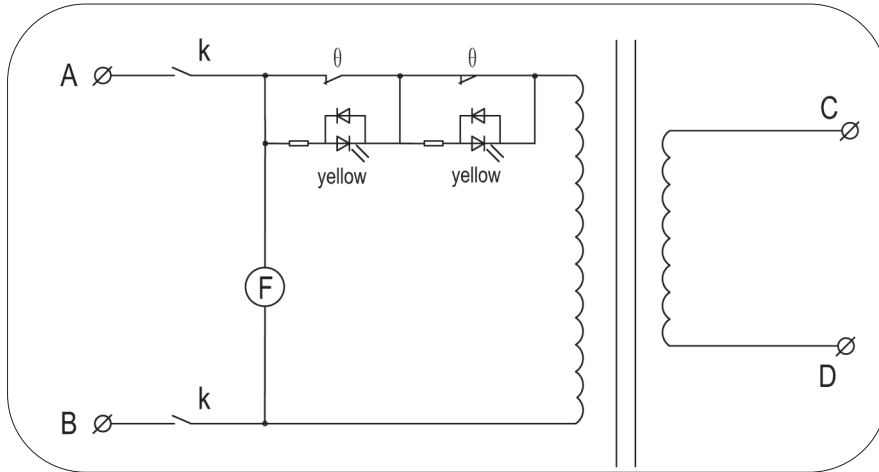
CAUTION: The warnings and cautions mentioned in this user manual can not cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be applied.

EXPLODED DRAWING WELDMATE T141P (05741)

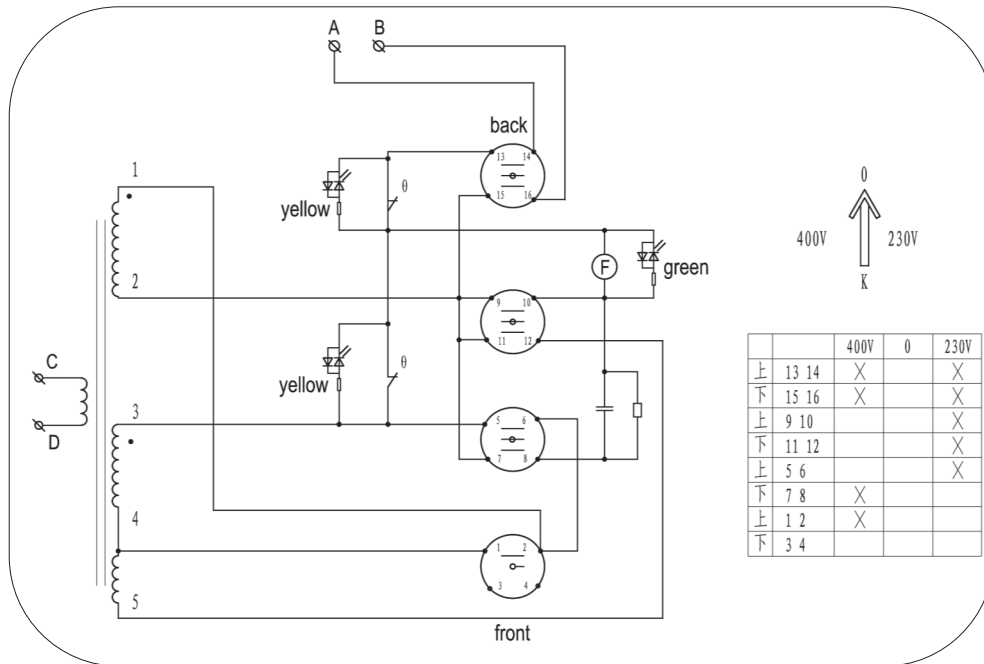


WIRING DIAGRAM

T141P & T161P



T211P & T251P



ELECTRICAL CONNECTION

WARNING! It is the responsibility of the owner and the operator to read, understand and comply with the following:

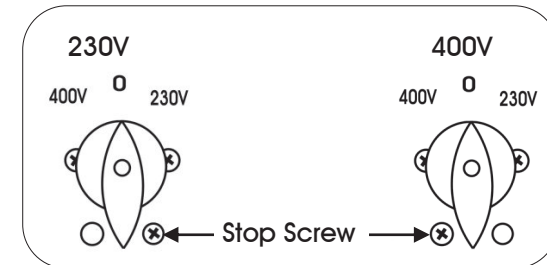
You must check all electrical products, before use, to ensure that they are safe. You must inspect power cables, plugs, sockets and any other connectors for wear or damage.

You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices; A residual current circuit Breaker (RCCB) should be incorporated in the main distribution board. We also recommend that a residual current device (RCD) is used. It is particularly important to use an RCD with portable products that are plugged into a supply which is not protected by an RCCB. If in any doubt consult a qualified electrician.

Electrical supply:

The 05741 and 05761 are to be powered from a 230v ~ supply.

The 05721 and 05725 can be powered from a 230v ~ or a 400v~ supply. The power switch needs to be set to match the mains supply, this is done by moving the stop screw as shown on the diagram below.



Connecting to the power supply:

The 05741 is supplied with a 13A plug pre-fitted.

The 05761, 05721 and the 05725 are supplied without a plug fitted, they must not be connected to a standard 13A supply, consult the technical specification table (page 14) for the required rating, if in doubt contact a qualified electrician.

The wires for the plug are coloured in the following way: For 230V operation.

Yellow / green Earth
 Blue Neutral
 Brown Live

ELECTRICAL CONNECTION...cont

As the colours of the wires may not correspond with the markings in your plug, proceed as follows:

The wire which is coloured brown, must be connected to the terminal, which is marked L or coloured red.

The wire which is coloured blue, must be connected to the terminal marked with N or coloured black.

The wire which is coloured yellow / green should be connected to the terminal which is coloured the same or marked with this symbol



Always secure the wires in the plug terminal carefully and tightly. Secure the cable in the cord grip carefully.

The wires for the plug are coloured in the following way: For 400V operation. 05721 and 05725 only.

Yellow / green	Earth
Blue	Live/Phase
Brown	Live/Phase

The wire which is coloured brown, must be connected to the terminal marked L1.

The wire which is coloured blue, must be connected to the terminal marked L2

The wire which is coloured yellow / green must be connected to the terminal which is marked with E or this symbol



Warning: Never connect live or neutral wires to the earth terminal of the plug. Only fit an approved plug with the correct rated fuse. If in doubt consult a qualified electrician.

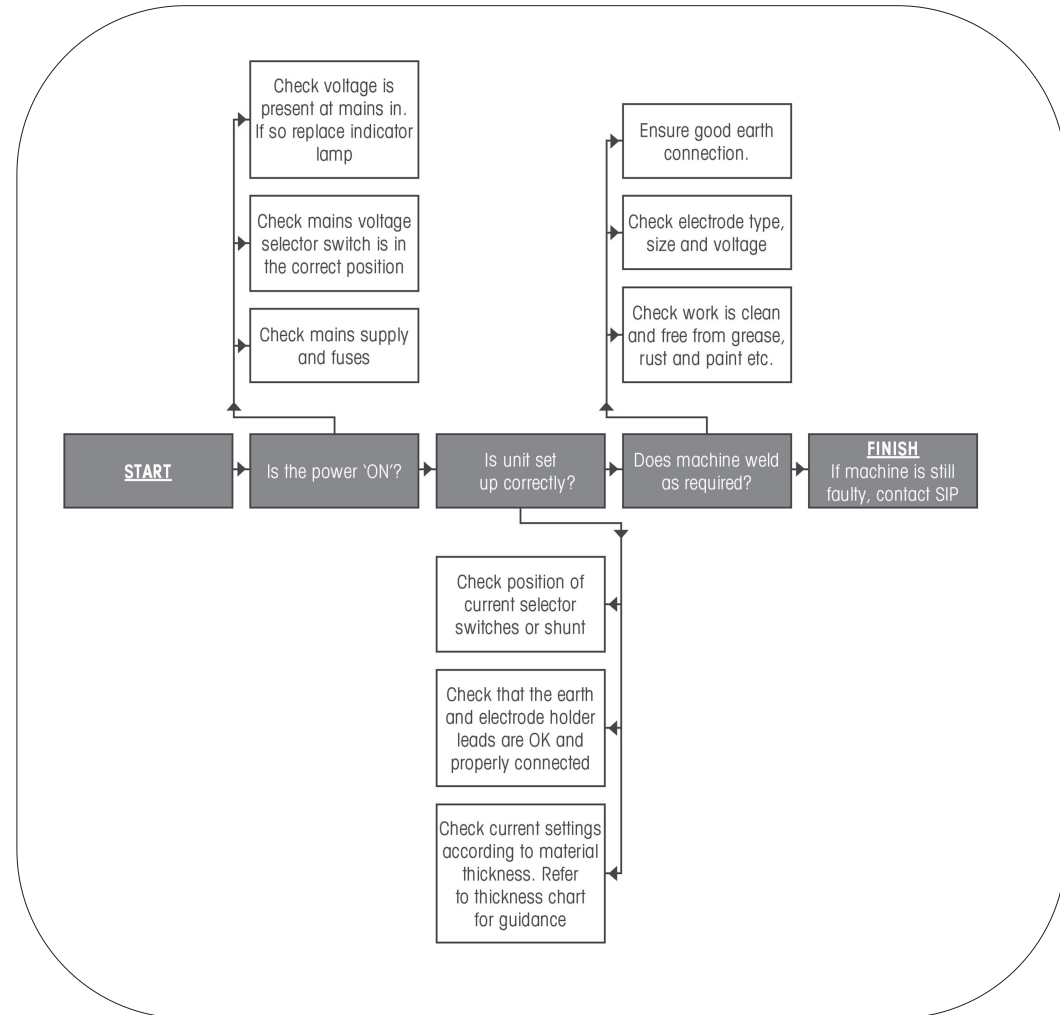


Note: Always make sure the mains supply is of the correct voltage and the correct fuse protection is used. In the event of replacing the fuse always replace the fuse with the same value as the original.



Note: If an extension lead is required in order to reach the mains supply; ensure that this too is rated for the correct voltage and fuse rating.

TROUBLESHOOTING



Note: If none of the above solutions work then contact your local distributor for repair, or contact SIP technical for more advise.

OPERATING INSTRUCTIONS...cont

- When the weld is complete simply remove the electrode from the work piece.
- Remove any excess weld / slag with the wire brush.

IMPORTANT INFORMATION: These units can be set to deliver different output currents at a duty cycle that is written as a percentage on page 14. This percentage represents the welding time in a 10 minute cycle, e.g. 60% means that the welding time is 6 minutes and the rest time is 4 minutes. If a unit is used beyond its duty cycle the temperatures of some components might become too high due to over use; The internal thermal protector will then prevent the unit from operating. Its Intervention is Indicated by a yellow light on the front panel, If this happens leave the machine switched on with the fan running and allow it to cool down. The transformer thermal protector will re-set automatically after a short period of time when the components have cooled you will be able to restart welding.

MAINTENANCE

- If the fault light illuminates you should contact your distributor, or SIP directly to have the welder checked / repaired.
- Clear dust from the machine at regular intervals, if used in a dirty environment the machine should be cleaned once a month.
- Check all connections are clean and tight, if there is any oxidization clean the connection with a mild abrasive or wire brush.
- Check all cables for damaged or degradation to the insulation, replace if any found.
- Check electrode holder and earth clamps condition ensure they clamp tightly, replace if damaged or loose.
- If the machine is not to be used for a long time, store it in the original packing a dry place.

GUARANTEE

Guarantee:

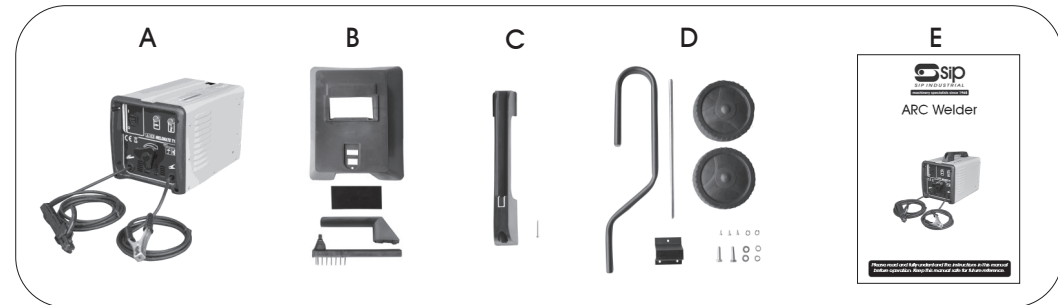
These SIP arc welders are covered by a 12 month parts and labour warranty covering failure due to manufacturers defects. This does not cover failure due to misuse or operating the arc welder outside the scope of this manual - any claims deemed to be outside the scope of the warranty may be subject to charges Including, but not limited to parts, labour and carriage costs, failure to regularly clean your arc welder will shorten its working life and reduce performance.

The warranty does not cover consumable items such as electrode holders & clamps, etc.



Note: Proof of purchase will be required before any warranty can be honoured.

CONTENTS AND ACCESSORIES



Ref. No.	Description
A.	Arc Welder
B.	Welding Mask & Wire Brush
C.	Handle (T141P & T161P)
D.	Handle & Wheel Kit (T211P & T251P)
E.	Manual



Note: If any of the above are missing or damaged, contact your distributor immediately.

TECHNICAL SPECIFICATION

Model	05741 Weldmate T141P	05761 Weldmate T161P	05721 Weldmate T211P	05725 Weldmate T251P
Input Voltage	230v ~ 50Hz	230v ~ 50Hz	230v / 400v ~ 50hz	230v / 400v ~ 50hz
Input Current	13 amps	16 amps	20A / 10A	20A / 10A
OCV	48v	50v	50v	50v
Output Current Range (Amps)	40 - 140 (Peak)	45 - 160 (Peak)	60 - 180 (Peak)	85 - 250 (Peak)
Welding Voltage	19.6v - 22.6v	19.8v - 23.6v	20.4v - 25.2v	21.4v - 26v
Weld Thickness	1.5mm - 5mm	1.5mm - 6mm	2.0mm - 8mm	2.0mm - 9mm
Duty Cycle	115 amps @ 10%	140 amps @ 10%	180 amps @ 10%	200 amps @ 10%
Power Factor	0.6	0.6	0.6	0.6
Efficiency	42%	42%	46%	45%
Insulation Class	F	F	F	F
Protection	IP21S	IP21S	IP21S	IP21S
Net Weight	15kg	16.5kg	20.7kg	22.6kg



Note: Only the Weldmate T141P can be operated from a 13A supply.

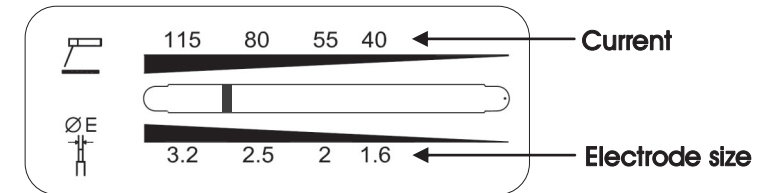


Note: Operation of the Weldmate T161P, T211P and T251P from a 13A supply will invalidate the warranty.

OPERATING INSTRUCTIONS...cont

POWER CONTROL

The welder should be set to either a specific current or to match the electrode size. The current control is operated by rotating the large knob on the front of the welder; Rotate the knob clockwise to increase the current and anticlockwise to reduce the current. The current setting can be checked by looking at the indicator through the viewing window on the top of the welder and comparing it with the printed scales. Once the control is set do a short weld and check for correct fusion.



PREPARATION FOR WELDING

- Clean the area to be welded, and the earthing point of all rust, paint and contaminants etc.
- Place the earth clamp on to a cleaned area of the work piece.
- Connect the welder to the electrical supply but do not switch on.

WELDING



Caution: Ensure all protective equipment is worn and bystanders are not in the vicinity.

- Fit the required electrode securely into the electrode holder.
- Switch the welder on.
- Place the face mask over your face.



Note: Be aware that the electrode is now live, simply by touching any part of the work piece will create a spark.

- Bring the electrode into contact with the work piece using a light tapping action and withdrawing to create a gap of 1.5 mm – 3.0 mm.
- When the arc is created, proceed steadily in one direction keeping the gap between the electrode and the work piece constant.

ASSEMBLY INSTRUCTIONS....cont

FITTING THE WHEEL KIT & FRONT FOOT



Note: The Weldmate T141P and T161P do not come with a wheel kit, and can not be fitted with one.

WELDMATE T211P & T251P

- Fit a circlip over the slot at one end of the axle and slide a wheel from the opposite end the axle so that it hits the circlip.
- Slide the axle all the way through the pre-drilled holes on the rear of the cover.
- Slide the remaining wheel on and secure with the other circlip.
- Push the wheel caps onto both wheels.
- Place the welder on its side, and use the three screws to attach the front foot.

OPERATING INSTRUCTIONS

There are no hard and fast rules by which a particular gauge of electrode is selected, usually this is determined by the type of welding required and the thickness of the work piece e.g. a butt weld in 1.5mm (1/16") sheet metal can be done by a 1.6mm or 2.0mm electrode, the difference being that the 2.0mm electrode will do the job more quickly.

The table below gives a guide as to which electrode is most suitable according to the material thickness. This table is only a guide, and values given are a indication only.

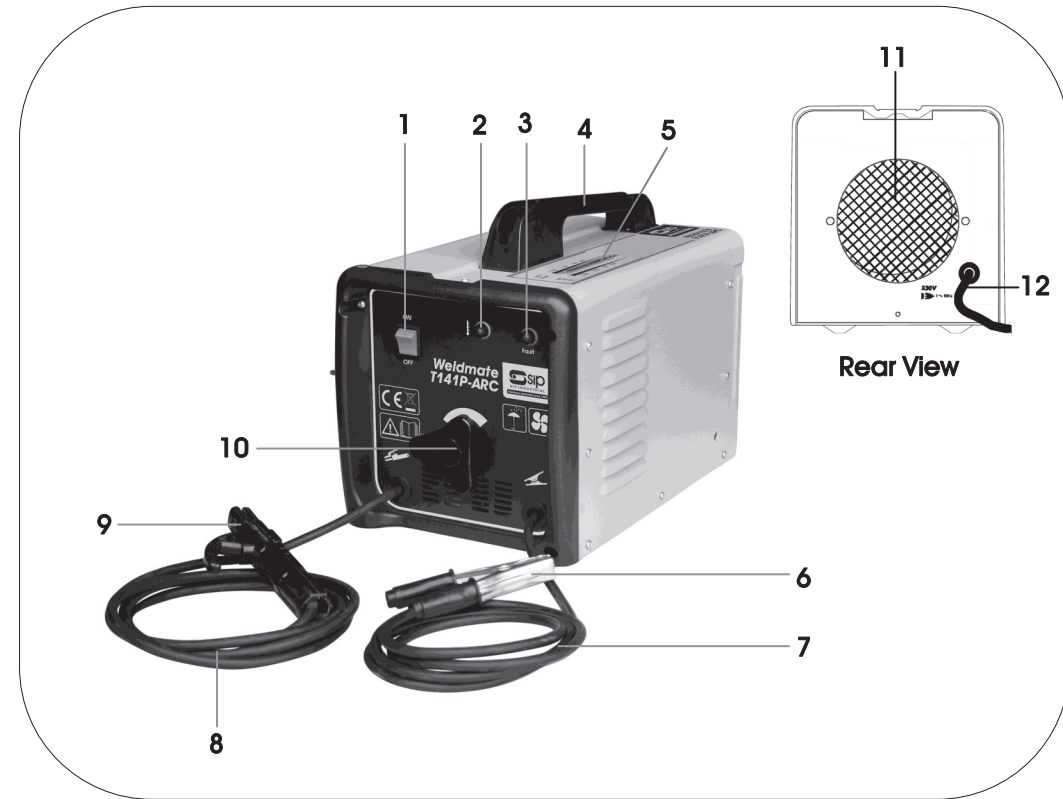
These welding current values are for the E6013 electrodes, for other types of electrode consult their data sheet.

Electrode Size mm	Material Thickness mm	Welding Current (A)
1.6	1 - 1.6	25 - 40
2.0	1.6 - 2.6	40 - 70
2.5	2.6 - 4.0	60 - 100
3.25	3.0 - 5.0	80 - 130
4.0	5.0 - 7.0	130 - 170



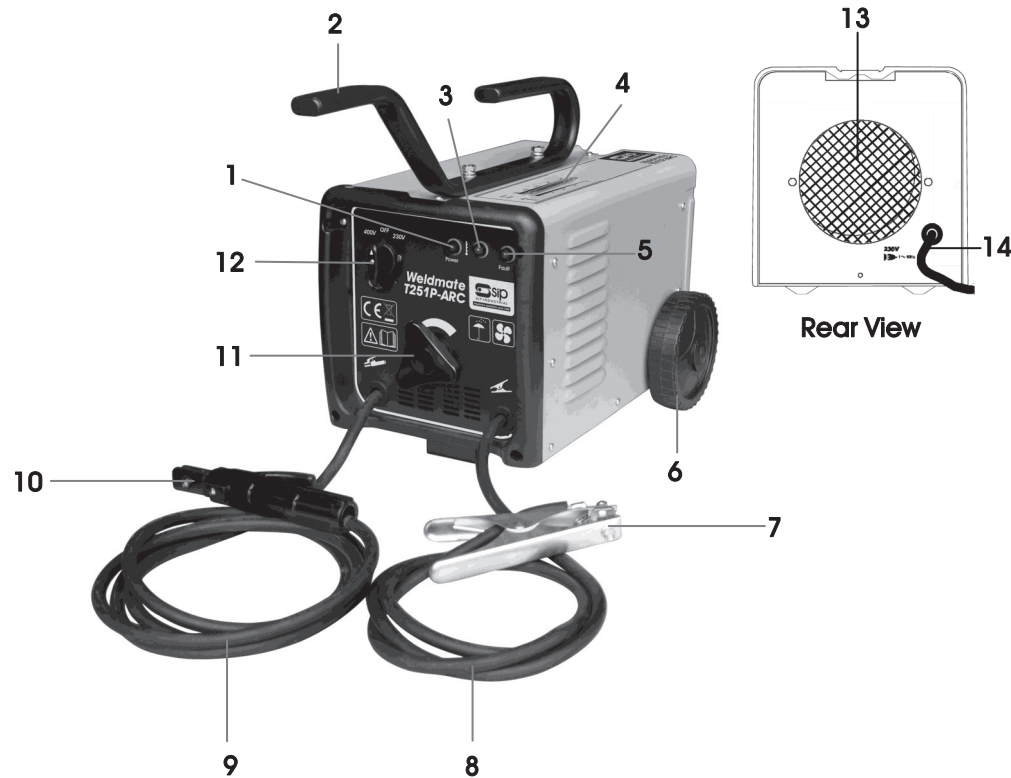
Note: The above is a guide only; always try a short weld test at the setting selected. It is normal to make minor adjustments to achieve the required weld.

GETTING TO KNOW YOUR ARC WELDER T141 & T161



Ref. No.	Description	Ref. No.	Description
1.	Power Switch	7.	Earth Return Lead
2.	Thermal Overload Indicator	8.	Electrode Holder Lead
3.	Fault Indicator	9.	Electrode Holder
4.	Carrying Handle	10.	Current Control Knob
5.	Output Scale	11.	Cooling Fan Grill
6.	Earth Clamp	12.	Mains Lead

GETTING TO KNOW YOUR ARC WELDER T211 & T251

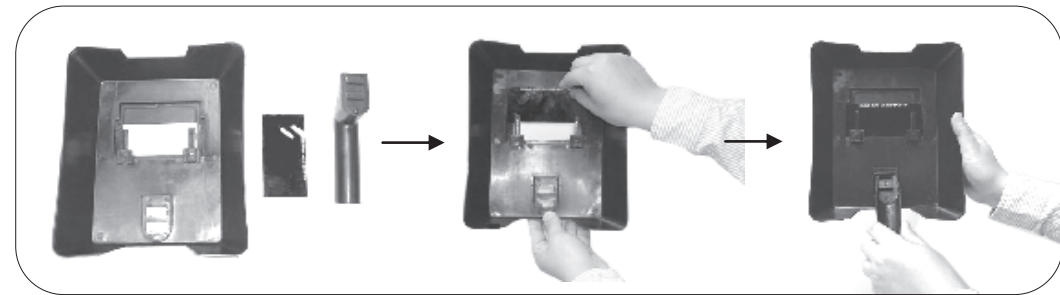


Ref. No.	Description	Ref. No.	Description
1.	Power Indicator	8.	Earth Return Lead
2.	Handle	9.	Electrode Holder Lead
3.	Thermal Overload Indicator	10.	Electrode Holder
4.	Output Scale	11.	Current Control Knob
5.	Fault Indicator	12.	Power / Voltage Switch
6.	Wheel	13.	Cooling Fan Grill
7.	Earth Clamp	14.	Mains Lead

ASSEMBLY INSTRUCTIONS

WELDING MASK

- The welding mask does not provide unlimited body protection.
- Use the welding mask only for eye and face protection from sparks, spatters and harmful rays from the arc welder.
- The filter lens is not suitable for any other application or process.
- To ensure your safety, we suggest using impact resistant flash goggles designed for eye protection when using this welding mask.
- Inspect the mask frequently, if damaged in any way **DO NOT** use until the damaged parts have been replaced.



- Locate the welding mask, handle and filter lens (above, left).
- Slide the filter lens all the way down between the two lens holders on the rear of the shield (above, middle).
- Push the handle through the two slots on the bottom of the welding mask, once through push the handle up until the pin slots in to the hole on the mask.

FITTING THE HANDLE

WELDMATE T141P & T161P

- Slide the handle into the slot at the rear of the cover.
- Use the screw supplied to secure it tightly to the cover.

WELDMATE T211P & T251P

- Place the metal handle over the two holes on top of the cover.
- Secure using both bolts & washers.