

USER MANUAL

S-MULTI 525H UK

SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

IMPOTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product: This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING: WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE: NOTICE is used to address practices not related to personal injury.

SAFETY WARNINGS AND PRECAUTIONS

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

WARNING!

READ AND UNDERSTAND ALL INSTRUCTIONS

Failure to follw all instructions listed below may result in electric shock fire, and/or serious injury.

Save these isntuctions

Work Area Precautions

1. Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
2. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.
3. Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control. Protect others in the work area from debris such as chips and sparks. Provide barriers or shields as needed.

Electrical Safety

1. Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt whether the outlet is properly grounded. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
2. Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
3. Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded.
4. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
5. Do not abuse the Power Cord. Never use the Power Cord to carry the tool or pull the Plug from an outlet. Keep the Power Cord away from heat, oil, sharp edges, or moving parts. Replace damaged Power Cords immediately. Damaged Power Cords increase the risk of electric shock.
6. When operating a power tool outside, sue an outdoor extension cord marker "W-A" or "W". These extension cords are rated for outdoor use, and reduce the risk of electric shock.

Personal Safety

1. Stay alert. Watch what you are doing, and use common sense when operating a power tool. Do not use a power tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

2. Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.
3. Avoid accidental starting. Be sure the Power Switch is off before plugging in. Carrying power tools with your finger on the Power Switch, or plugging in power tools with the Power Switch on, invites accidents.
4. Remove adjusting keys or wrenches before turning the power tool on. A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.
5. Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the power tool in unexpected situations.
6. Use safety equipment. Always wear eye protection. Dust mask, nonskid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

1. Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform. Holding the work piece by hand or against your body is unstable and may lead to loss of control.
2. Do not force the tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
3. Do not use the power tool if the Power Switch does not turn it on or off. Any tool that cannot be controlled with the Power Switch is dangerous and must be replaced.
4. Disconnect the Power Cord Plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
5. Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
6. Maintain tools with care. Keep cutting tools maintained and clean. Properly maintained tools are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools "Do not use" until repaired.
7. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
8. Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used on another tool.

Service

1. Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
2. When servicing a tool, use only identical replacement parts. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES

1. Maintain labels and nameplates on the tool. These carry important information. If unreadable or missing, contact our service team for a replacement.
2. Always wear the approved safety impact eye goggles and heavy work gloves when using the tool. Using personal safety devices reduce the risk for injury. Safety impact eye goggles and heavy work gloves are available from Harbor Freight Tools.
3. Maintain a safe working environment. Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use a power tool in areas near flammable chemicals, dusts, and vapors. Do not use this product in a damp or wet location.
4. Avoid unintentional starting. Make sure you are prepared to begin work before turning on the tool.
5. Never leave the tool unattended when it is plugged into an electrical outlet. Turn off the tool, and unplug it from its electrical outlet before leaving.
6. Always unplug the tool from its electrical outlet before performing and inspection, maintenance, or cleaning procedures.
7. Prevent eye injury and burns. Wearing and using the approved personal safety clothing and safety devices reduce the risk for injury.
 - a. Wear the approved safety impact eye goggles with a welding helmet featuring at least a number 10 shade lens rating.
 - b. Leather leggings, fire resistant shoes or boots should be worn when using this product. Do not wear pants with cuffs, shirts with open pockets, or any clothing that can catch and hold molten metal or sparks.
 - c. Keep clothing free of grease, oil, solvents, or any flammable substances. Wear dry, insulating gloves and protective clothing.
 - d. Wear an approved head covering to protect the head and neck. Use aprons, cape, sleeves, shoulder covers, and bibs designed and approved for welding and cutting procedures.
 - e. When welding/cutting overhead or in confined spaces, wear flame resistant ear plugs or ear muffs to keep sparks out of ears.
8. Prevent accidental fires. Remove any combustible material from the work area.
 - a. When possible, move the work to a location well away from combustible; protect the combustibles with a cover made of fire resistant material.

- b. Remove or make safe all combustible materials for a radius of 35 feet (10 meters) around the work area. Use a fire resistant material to cover or block all open doorways, windows, cracks, and other openings.
 - c. Enclose the work area with portable fire resistant screens. Protect combustible walls, ceilings, floors, etc., from sparks and heat with fire resistant covers.
 - d. If working on a metal wall, ceiling, etc., prevent ignition of combustibles on the other side by mobbing the combustibles to a safe location. If relocation of combustibles is not possible, designate someone to serve as a fire watch, equipped with a fire extinguisher, during the welding process and for at least one half hour after the welding is completed.
 - e. Do not weld or cut on materials having a combustible coating or combustible internal structure, as in walls or ceilings, without an approved method for eliminating the hazard.
 - f. Do not dispose of hot slag in containers holding combustible materials. Keep a fire extinguisher nearby and know how to use it.
 - g. After welding or cutting, make a thorough examination for evidence of fire. Be aware that easily visible smoke or flame may not be present for some time after the fire has started. Do not weld or the fire has started. Do not weld or h. Dangerously reactive or flammable gases, vapors, liquids, and dust.
 - i. Provide adequate ventilation in work areas to prevent accumulation of flammable gases, vapors, and dust. Do not apply heat to a container that has held an unknown substance or a combustible material whose contents, when heated, can produce flammable or explosive vapors. Clean and purge containers before applying heat. Vent closed containers, including castings, before preheating, welding, or cutting
9. Avoid overexposure to fumes and gases. Always keep your head out of the fumes. Do not breathe the fumes. Use enough ventilation or exhaust, or both, to keep fumes and gases from your breathing zone and general area.
- Where ventilation is questionable, have a qualified technician take an air sampling to determine the need for corrective measures. Use mechanical ventilation to improve air quality. If engineering controls are not feasible, use an approved respirator.
 - Work in a confined area only if it is well ventilated, or while wearing an air-supplied respirator
 - Follow OSHA guidelines for Permissible Exposure Limits (PEL's) for various fumes and gases.
 - Follow the American Conference of Governmental Industrial Hygienists recommendations for Threshold Limit Values (TLV 's) for fumes and gases.
 - Have a recognized specialist in Industrial Hygiene or Environmental Services check the operation and air quality and make recommendations for the specific welding or cutting situation.
10. Always keep hoses away from welding/cutting spot. Examine all hoses and cables for cuts, burns, or worn areas before each use. If any damaged areas are found, replace the hoses or cables immediately.

- 11. Read and understand all instructions and safety precautions as outlined in the manufacturer's Manual for the material you will weld or cut.
- 12. Proper cylinder care. Secure cylinders to a cart, wall, or post, to prevent them from falling. All cylinders should be used and stored in an upright position. Never drop or strike a cylinder. Do not use cylinders that have been dented. Cylinder caps should be used when moving or storing cylinders. Empty cylinders should be kept in specified areas and clearly marked "empty."
- 13. Never use oil or grease on any inlet connector, outlet connector, or cylinder valves.
- 14. Use only supplied Torch on this Inverter Air Plasma Cutter. Using components from other systems may cause personal injury and damage components within.
- 15. People with pacemakers should consult their physician(s) before using this product. Electromagnetic fields in close proximity to a heart pacemaker could cause interference to, or failure of the pacemaker.
- 16. USE PROPER EXTENSION CORD.
Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. A 50 foot extension cord must be at least 12 gauges in diameter, and a 100 foot extension cord must be at least 10 gauges in diameter. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Manual arc welding

Manual arc welding, briefly called MMA (Manual Metal Arc Welding), is one of the oldest electric welding procedures used for metallic materials, which is still used today. In 1891 Nikolai Gavrilovich Slawjanow replaced the carbon electrodes commonly used in his time for arc welding by a metal rod that was both the arc carrier and filler metal. Since the first rod electrodes were not coated, the weld itself was not protected from oxidation. Therefore these electrodes were difficult to weld. The electric arc burning between an electrode and the workpiece is used as the heat source for welding. The high temperature of the arc melts the material in the welding area. The rod electrode simultaneously melts off acting as a filler material to form the weld bead. Both AC and DC currents can be used to power the process.

Rod electrodes are used as filler material in arc welding. For each welding type there are appropriate electrodes, e.g. for build-up welding and joint welding. Information concerning the nature, characteristics and application of an electrode is provided by the brief label, which is printed on each electrode package. The gases produced by the melting of the electrode coating are used to stabilise the arc and separate the liquid metal transfer in the arc from the influences of the surrounding air and to reduce the burning of alloy components. Apart from that the melted coating also produces slag.

This liquid is lighter than liquid steel and is washed onto the weld. This enables a slow cooling process and thus lower shrinkage stress. The anode (positive pole) is heated by electron bombardment and positive metal ions flow from there to the workpiece. Therefore consumable electrodes are mostly used as anodes with the workpiece material acting as a negative pole. In TIG welding the electrode has a negative pole in order to keep the degree of removal low. Arc welding is used in the construction industry (bridge supports) but also in precision engineering.

The following rule applies regardless of application: The thinner the material, the more expensive the equipment. Due to low current levels (necessary not to burn through materials under 1 mm wall thickness), a significantly more complex control process is required.

Tungsten inert gas welding (deu. WIG; eng. TIG)

The tungsten inert gas welding technology (TIG welding) comes from the U.S., where it became known in 1936 as argon welding. Only after the second World War II was it introduced in Germany. In English-speaking countries this method is called TIG, after the English word for tungsten. The method offers several interesting advantages over other fusion welding processes. For example, it is universally applicable: if a metallic material is at all suitable for welding, then it can be processed with this procedure. Additionally it is also a very „clean“ process, which produces very little pollution and little splashes and, when used correctly, guarantees a high quality welded joint. A particular advantage of TIG welding is also the fact that compared to other methods employing a consumable electrode, the addition of a filler material and the current are not linked.

Therefore the welder has control over the power:

- it may be optimally matched to the welding task and it is only necessary to add as much filler as is currently required. This makes the process particularly suitable for welding root passes and for welding in forced positions.
- due to the relatively low and small-scale heat input there is little tendency for the workpieces to warp during welding.
- these advantages have caused the process to be particularly suitable for welding of air planes and space vehicles, construction elements used in nuclear installations and installation components and equipment for chemical plants.

Current regulation

The automatic current suppression circuit protects against over-voltage up to the value indicated in the technical datasheet.

Heat protection

The thermal protection circuit takes action when the device exceeds the duty cycle. This means stopping the machine.

Duty Cycle

The duty cycle is the percentage of the operating time (measured in minutes) of a 10-minute period in which the machine is used continuously in normal temperature conditions. If the values of the duty cycle are exceeded, this will trigger the overheat protection function, which stops the machine until it is cooled down to normal operating temperature. Repeated situations of exceeding the duty cycle values may lead to serious damage of the machine.

CURRENT

Voltage of the power source: AC220/230/ 240V $\pm$ 10%

Frequency: 50Hz

Display on the front of the machine is illuminated. The fan will probably continue to run until the equipment cools. When the machine reaches a suitable temperature, it will be operational again.

Properties of this model range:



CERTIFICATES = this welder was produced according to strict European regulations and rules and is therefore CE certified and RoHS compliant. This guarantees the long life and maximum quality of this device.



This inverter uses MOS-FET technology. More than any other technology, the MOS-FET enables the achievement of maximum effectiveness. In comparison to the amount of electricity used the user will obtain disproportionate effectiveness. The result is an efficiency of 93%! Therefore the current is kept constant and ensures a perfect weld. Only by using the MOS-FET technology is it possible to keep this device as compact and lightweight.



NORMAL CURRENT: The device uses a 1-phase connection (230V $\pm$ 10%).



HF IGNITION = A non-contact high frequency ignition used in TIG welding, which ensures a cleaner weld starting point



HOT -START = This feature enables igniting problematic electrodes through automatic increase of the voltage at startup. After ignition the unit automatically returns to the preset voltage.



ANTI-STICK = This feature prevents overheating of the electrode, by reducing the current automatically.



GAS PROTECTION = For TIG welding an inert gas is necessary (e.g. argon).



POWER-FANS = the high quality fans ensure optimal reduction of the heat generated during works performed with this high-end device

LEGENDE

0.



On/off switch

1.



CURRENT = main current is adjustable

2.



POST TIME = gas flow variable at second intervals. This regulation is important for the cooling of the melted weld metal after the welding process and to protect against oxidation..

3.



ERROR INDICATOR = The indicator lights in the following two situations:

a) If the machine has malfunctioned and can not be operated.

b) If the cutting device has exceeded the standard working time the protection mode is initiated and the machine will stop functioning. This means that the machine is now being cooled in order to be able to restore temperature control again after the device has overheated. Therefore the machine is stopped. During this process, the red warning light on the front panel lights up. In this case it is not necessary to remove the power plug from the socket. The ventilation system may be left on in order to enhance the cooling of the machine. When the red light goes dark, this means that the temperature is now down to the normal level and the unit can be put back into operation.

4.



MMA-connection = Manual arc welding, briefly called MMA, is one of the oldest electric welding procedures used for metallic materials, which is still used today. An electronic arc, formed between an electrode melted as a filler metal and the workpiece, is used as a heat source for welding.

5+6.



TIG-/PLASMA TOR CH CONNECTION

Unlike the metal-inert gas MIG/MAG, in TIG welding the arc burns between a non-consumable tungsten electrode and the base material. In order to protect the tungsten electrode and the weld pool it is necessary to use inert gases, such as argon or helium or gas mixtures with nonoxidizing components. TIG welding may be used for all weldable metals.

The selection of the current, polarity and protective gas depends on the base material. This machine works with a TIG torch, which is equipped with a tungsten electrode and uses the additional protection of argon gas. Depending on the material, a filler material is supplied. Our welding specialists recommend red tungsten electrodes for steel and stainless steel, green electrodes for aluminium, black electrodes for steel and cast iron and gold and grey electrodes for universal application.

Depending on the thickness of the sheet the following tungsten electrodes are recommended:

- Thin sheet (0.5-1 mm) = 1.6 mm electrode
- Normal sheet (1-6 mm) = 2.4 mm electrode
- Thick sheet (over 6 mm) = 3.2 mm electrode

As for gas nozzles, we recommend a size 7 in the universal scope and a size 5 for precision welding.

Compressed air - plasma cutting:



The high energy density of the plasma arc enables a high cutting speed with a warp-free cut quality. No special gas is required and the possibility to use regular air pressure along with easy handling of the unit are a guarantee of easy use in car bodies, containers, steel construction, the HVAC industry as well as in installations and plumbing.

7.



Grounding cable connection



At the back of each welder there is a screw and a label to provide the necessary grounding. Before operating the unit it is necessary to ground the shell of the welding apparatus by means of a cable with not less than 6 mm diameter, in order to prevent potential problems caused by electricity leakages.



GAS/air connection

10.



Power indicator = When someone turns the machine on, this indicator lights.

11.



LED – Display:
Displays the actual value of the current

12.



Functions switch = By pressing this button you can choose between the different functions of the machine. Durch Schaltung dieses Hebels wählen Sie zwischen den verschiedenen Funktionen des Gerätes. (TIG/MMA/CUT)

Machine view



Accessories



1. MMA electrode holder
2. WIG / TIG wearing parts
3. Pressure valve and manometer
4. Wearing parts plasma torch
5. Grounding clamp cable

6. Air hose
7. Bag
8. Plasma torch
9. TIG/WIG hose
10. Brush

Technical details

S-MULTI 525H UK	WIG	MMA	CUT
Network frequency (Hz)	50		
Ignition	HF: high frequency	Contact	Contact
Open circuit voltage (V)	67	69	250
Input current (A)	25	30	32
Welding current (A)	10 - 180	10 - 180	10 - 50
Compressor connection (Bar))	-	-	4,5
Gas flow (L/min.)	2 - 5	-	80 - 200
Electrode diameter max	1-3,2mm	1 - 4mm	1,2mm
Cutting capacity at max. 50 A	-	-	1 - 16mm
Model input voltage	230V, 1-Phase		
Power factor (COSf)	0.93		
Performance (%)	85		
Weight (KG)	13		
Dimensions (mm)	425x215x380		
Protection class	IP23		

INITIATING OPERATION

A. Unpacking

Unpack all the items out of the box and make sure that you have received all items listed on the packing list.

B. Work environment

Make sure that the work area is well ventilated. The unit is cooled by an axial fan that provides an air flow for the electronics through the rear panel.

(Note! The panel must be installed in a way where the vent holes are located closer to the front of the device.)

Leave at least approx. 15 cm at the front and 15 cm on each side for cleaning.

If the machine is operated without adequate cooling, the length of the duty cycle will be reduced greatly.

(Hinweis! Die Verkleidung muss so installiert werden, dass sich die Entlüftungslöcher näher an der Vorderseite des Gerätes befinden.)

Lassen Sie mindestens ca. 15 cm am Vorderteil und 15 cm an beiden Seiten zur Säuberung frei.

Wenn das Gerät ohne ausreichende Kühlung bedient wird, reduziert sich die Einschaltdauer stark.

C. Cable connections

Each unit is equipped with a main power cable, which is responsible for providing current and voltage to the device. If the device is connected to power which exceeds the required voltage, or if the wrong phase is set, it may lead to severe damage to the unit. This is not covered by the warranty for the equipment and the user will be responsible for such situations.

D. Torch connection

Connect the torch to the inverter by connecting the air tube that is attached at the end of the torch to the torch connector on the front part of the machine. Ensure that the connection is secure by tightening it slightly with a spanner. However you should not make it too tight.

E. Assembling the pistol

Put the pistol the protective cap facing up and turn the cap away from the gun. (The protective cap holds the tip, the ceramic swirl ring and the electrode together). Remove the cap, the ceramic swirl ring and the electrode. Assemble the electrode, the ceramic swirl ring and the tip back together. Replace worn parts if necessary. Put the protective cap on the head of the pistol and screw it on with your hand until it is snug. If any resistance is present during this process, check the thread and the arrangement of the items before resuming work.

Note

Bei einigen Pistolen, die keine umschaltbaren Elektroden haben, ist es notwendig die Elektrode noch zusätzlich, durch das Anwenden einer Kneifzange festzuziehen um somit eine verlässliche elektrische Verbindung zu gewährleisten.

INSTRUCTION

A. The beginning

Turn the power switch to „ON“. Take up a position at the unit in which you can easily read the air pressure from the device. Press the pistol switch (air will flow out from the pistol), adjust the air valve to approximately 6-7 (bar) and press the pistol switch again.

Note

The generally accepted value range of air pressure is 5-8 bar. You can now perform tests as needed, but you should remember not to reduce the air pressure too much because it may damage the consumables. Secure the ground terminal on the workpiece. Connect the clamp to the main part of the workpiece and not to part which is to be removed.

B. Cutting

1. Drag-cutting

Hold the tip of the pistol above the workpiece, press the pistol switch and move the pistol

tip until it comes into contact with the workpiece and the cutting arc is established.

Once the cutting arc is generated you may move the pistol in the desired direction with the tip of the pistol always at a slight angle and maintaining contact with the workpiece. This working method is called drag cutting. Excessively rapid movements should be avoided. A sign of this are sparks, which can spray from the top of the workpiece. Move the pistol with a speed that ensures gathering of the sparks under the workpiece and before proceeding make sure that the material is cut through completely. Set the drag speed as required.

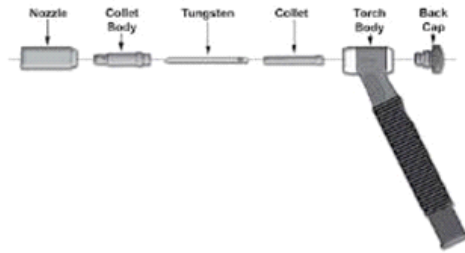
2. Weekly activities

Verify the proper operation of the air flow. Blow off or suck in dust or dirt from the entire machine, including the air filter.

3. Distance cutting

In some cases it may be advantageous to perform cutting with the tip of the pistol at a height of approximately 1/16" to 1/8" above the workpiece in order to reduce the amount of material which is once again blown back into the tip and to maximize the penetration of thick cuts through the material. Distance cutting should be used when penetration cutting or or grooving is executed. The distance technique may also be used when cutting sheet metal in order to minimize the risk of material back splashing, which could damage the tip.

F. TIG cutting torch



Take the pistol in your hand and first turn the small black cap (back cup). Now turn to the long black cap. Put the tungsten electrode into the clamping sleeve (Collet). Then insert the collet body and screw the ceramic head (nozzle) to the front part of the pistol.

WORKING PROCEDURES

Argon arc welding (TIG) Cleaning before welding

The tungsten arc welding is very sensitive to contamination of the surfaces to be processed.

Therefore prior to welding all traces of paint layers, lubricant left after manufacturing and oxidized film have to be removed.

DC Argon arc welding (DCTIG)

- Connect the gas hose to the gas input port of the welder.
- Connect the gas hose of the welding pistol to the argon port of the welder.
- Connect the workpiece to be processed to the ground terminal of the welder output (+).
- Attach the connector of the welding torch to the argon arc control socket

Gastest: Ensure that power is being supplied and turn the machine on, open the argon cylinder valve and press the switch of the flow measurement device. Hold the pistol switch and select the appropriate argon flow. Release the switch and the gas flow will turn off automatically after a few seconds. If high-frequency arc ignition is used, the tungsten electrode should be removed 2-3 mm before coming in contact with the workpiece. Press the switch and the arc will be ignited. When the switch of the welding torch is turned off again, the welding current is reduced and the arc stops working immediately. The welding torch can not be removed before stopping the arc. Let the protective gas cool to prevent oxidization of the weld. When the welding process is finished, turn off the argon cylinder switch and disconnect the power supply of the welder. Do not pull the power plug out when the switch is turned on

Manual welding with electrode

- Connect the MMA hose to the minus pole (-).
- Set the current control to the appropriate welding current (pulse current control to minimum position). Use the empirical formula: $I = 40d$, d is the diameter of the electrode.
- Positive and negative connection during welding.
- Connect the welder to the power circuit, then press the power switch and the power indicator light comes on.
- Observe the relative weld current value and the duty cycle of the machine. Overloading can cause damage and should be avoided.
- After using the welder you should leave it to cool down and only then turn off the power switch

MAINTENANCE

Check the pistol for wear damage, cracks or exposed wire sections. Replace or repair any such defects before using the device. A heavily worn pistol tip/nozzle contributes to the reduction of speed, voltage drops and crooked cuts. An indication of a worn pistol tip/nozzle is an elongated or oversized nozzle opening. The external part of the electrode may be recessed no more than 3.2 mm. Replace the electrode if it is worn, as indicated by the above measurement. If the cap cannot be re-attached easily, check the thread.

Weekly activities

Check that the ventilation is working properly.

Umwelt- und Entsorgungshinweise

Hersteller an Verbraucher

Sehr geehrte Damen und Herren,

gebrauchte Elektro- und Elektronikgeräte dürfen gemäß europäischer Vorgaben **[1]** nicht zum unsortierten Siedlungsabfall gegeben werden, sondern müssen getrennt erfasst werden. Das Symbol der Abfalltonne auf Rädern weist auf die Notwendigkeit der getrennten Sammlung hin. Helfen auch Sie mit beim Umweltschutz. Sorgen Sie dafür, dieses Gerät, wenn Sie es nicht mehr weiter nutzen wollen, in die hierfür vorgesehenen Systeme der Getrenntsammlung zu geben.



In Deutschland sind Sie gesetzlich **[2]** verpflichtet, ein Altgerät einer vom unsortierten Siedlungsabfall getrennten Erfassung zuzuführen. Die öffentlich - rechtlichen Entsorgungsträger (Kommunen) haben hierzu Sammelstellen eingerichtet, an denen Altgeräte aus privaten Haushalten ihres Gebietes für Sie kostenfrei entgegengenommen werden. Möglicherweise holen die rechtlichen Entsorgungsträger die Altgeräte auch bei den privaten Haushalten ab.

Bitte informieren Sie sich über Ihren lokalen Abfallkalender oder bei Ihrer Stadt- oder Gemeindeverwaltung über die in Ihrem Gebiet zur Verfügung stehenden Möglichkeiten der Rückgabe oder Sammlung von Altgeräten.

[1] RICHTLINIE 2002/96/EG DES EUROPÄISCHEN PARLAMENTS UND DES RATES
ÜBER ELEKTRO- UND ELEKTRONIK - ALTGERÄTE

[2] Gesetz über das Inverkehrbringen, die Rücknahme und die umweltverträgliche Entsorgung
von Elektro- und Elektronikgeräten (Elektro- und Elektronikgerätegesetz - ElektroG).

Utylizacja produktu

Produkty elektryczne i elektroniczne po zakończeniu okresu eksploatacji wymagają segregacji i oddania ich do wyznaczonego punktu odbioru. Nie wolno wyrzucać produktów elektrycznych razem z odpadami gospodarstwa domowego. Zgodnie z dyrektywą WEEE 2012/19/UE obowiązującą w Unii Europejskiej, urządzenia elektryczne i elektroniczne wymagają segregacji i utylizacji w wyznaczonych miejscach. Dbając o prawidłową utylizację, przyczyniasz się do ochrony zasobów naturalnych i zmniejszasz negatywny wpływ oddziaływania na środowisko, człowieka i otoczenie. Zgodnie z krajowym prawodawstwem, nieprawidłowe usuwanie odpadów elektrycznych i elektronicznych może być karane!

For the disposal of the device please consider and act according to the national and local rules and regulations.

CONTACT

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