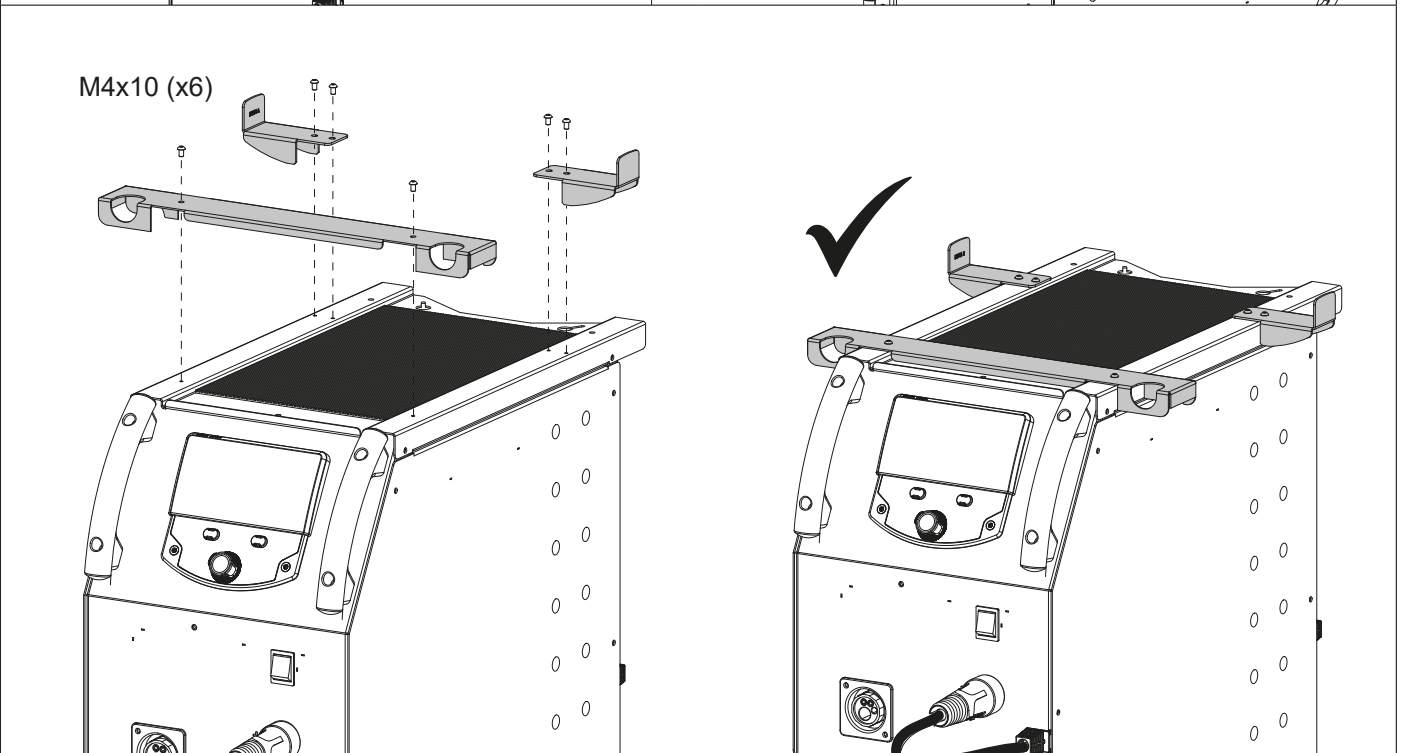
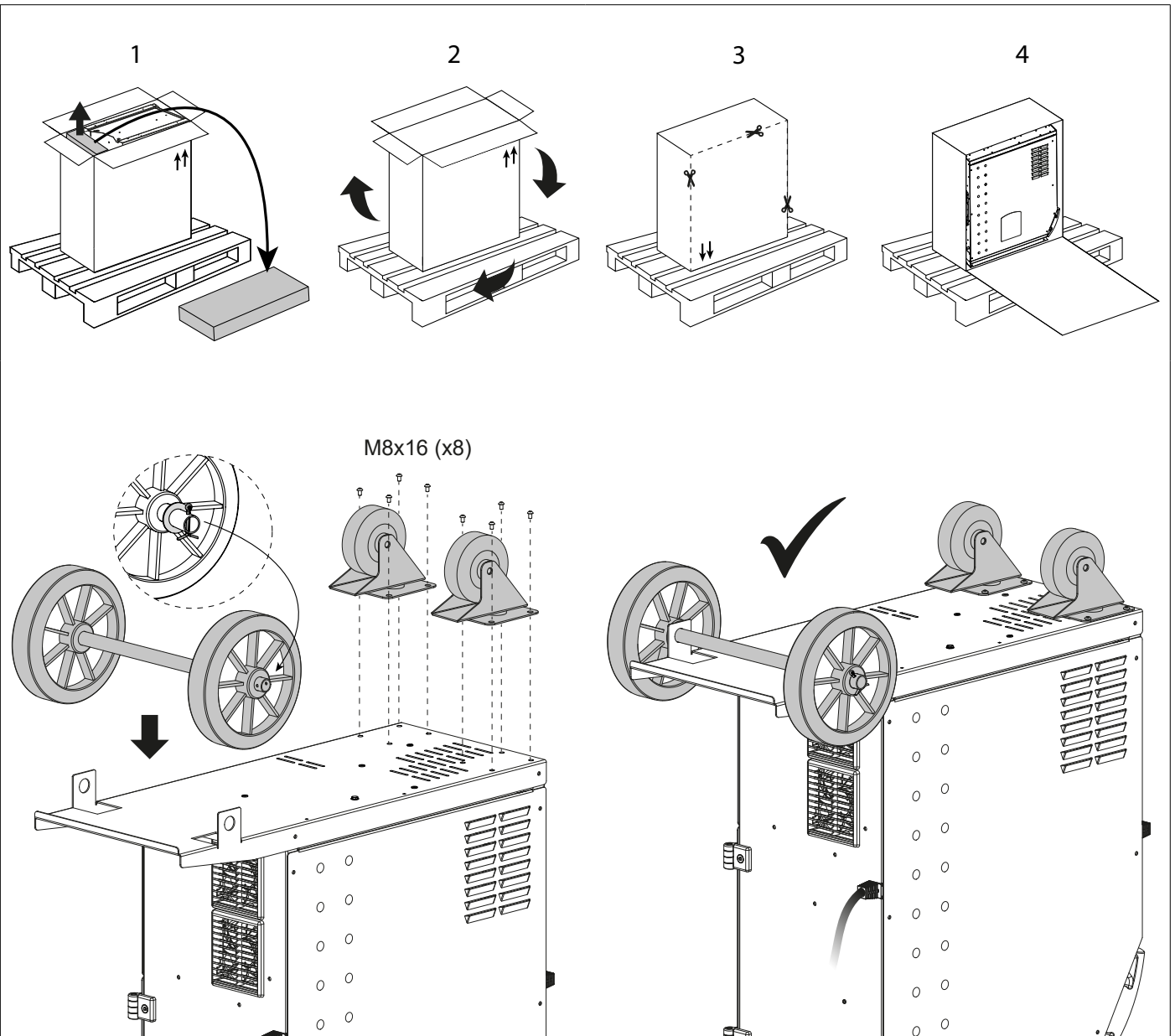


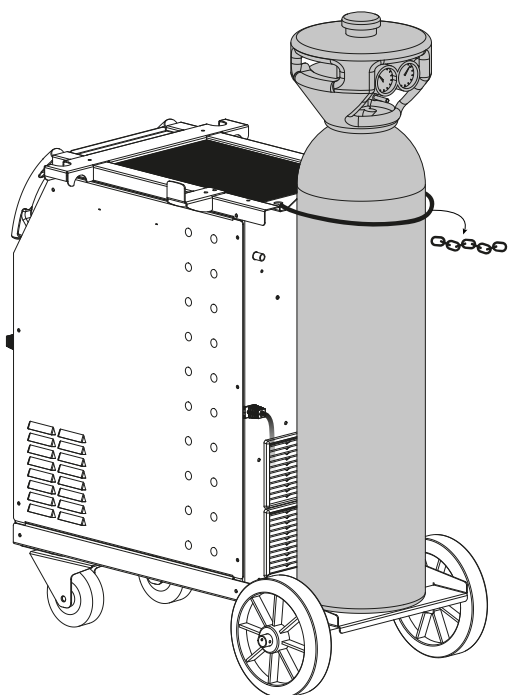
FR	02-04 / 05-17 / 96-104
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DE	02-05 / 31-43 / 96-104
ES	02-05 / 44-56 / 96-104
NL	02-05 / 57-69 / 96-104
IT	02-05 / 70-82 / 96-104
PL	02-05 / 83-95 / 96-104

KRONOS 250T / 320T

Générateur MIG/MAG - TIG - MMA
MIG/MAG - TIG - MMA welding machine
Schweissgerät für MIG/MAG - WIG - E-Hand
Equipo de soldadura MIG/MAG - TIG - MMA
Сварочный аппарат МИГ/МАГ - ТИГ - ММА
MIG/MAG - TIG - MMA lasapparaat
Dispositivo saldatura MIG/MAG - TIG - MMA



**SUPPORT BOUTEILLE / BOTTLE SUPPORT / FLASCHENHALTER / PORTABOTELLAS / FLESENHOU-
DER / PORTABOTTIGLIE**



4 m³ max

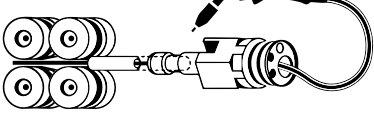
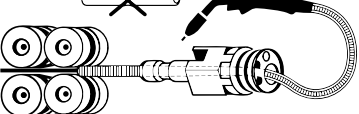

PROCÉDURE DE MISE À JOUR / UPDATE PROCEDURE

Clé USB non fournie / USB key not included.

Logiciel de mise à jour disponible sur le site GYS, partie S.A.V. / Update software available on the GYS website, After sales section.

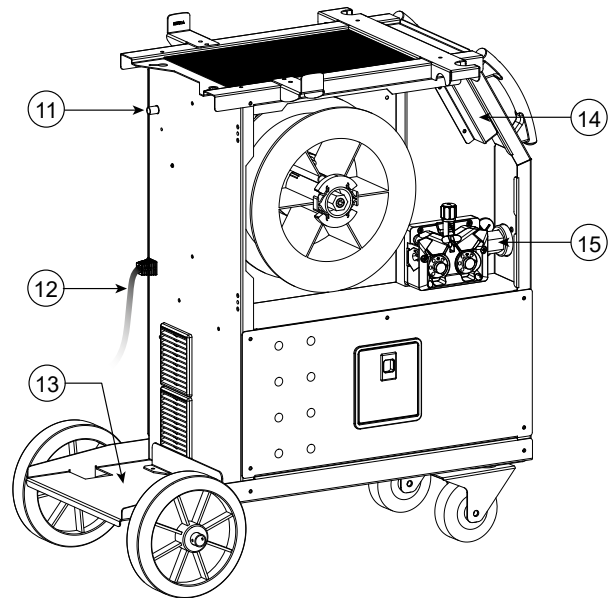
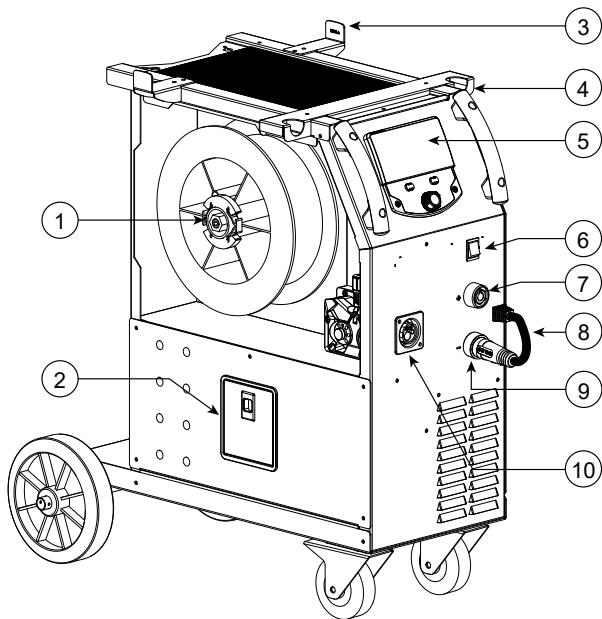
<p>1</p> <p>STOP</p>	<p>2</p> <p>M5x10 x2</p>	<p>3</p>
<p>4</p> <p>START</p>	<p>5</p> <pre> System Update - V1.02 Please Wait ... XXXXXXXXXX_Full.egf Check File Integrity </pre>	<p>6</p>

I

A	B	C
<p>Acier - Steel - Stahl - Acero - Staal - Aço Inox - Stainless steel - Edelstahl</p>  <p>Gaine acier Steel sheath Stahlseele Capillaire buis</p>	<p>Aluminium</p> <p>NO USE Tube capillaire / Capillary Pipe / Kapillarrohr</p>  <p>Gaine téflon Teflon sheath Teflon-Drahtseele Teflon mantell</p>	<p>90950</p> 

II

250T / 320T



AVERTISSEMENTS - RÈGLES DE SÉCURITÉ

CONSIGNE GÉNÉRALE



Ces instructions doivent être lues et bien comprises avant toute opération.
Toute modification ou maintenance non indiquée dans le manuel ne doit pas être entreprise.

Tout dommage corporel ou matériel dû à une utilisation non-conforme aux instructions de ce manuel ne pourra être retenu à la charge du fabricant. En cas de problème ou d'incertitude, veuillez consulter une personne qualifiée pour manier correctement l'installation.

ENVIRONNEMENT

Ce matériel doit être utilisé uniquement pour faire des opérations de soudage dans les limites indiquées par la plaque signalétique et/ou le manuel. Il faut respecter les directives relatives à la sécurité. En cas d'utilisation inadéquate ou dangereuse, le fabricant ne pourra être tenu responsable.

L'installation doit être utilisée dans un local sans poussière, ni acide, ni gaz inflammable ou autres substances corrosives. Il en est de même pour son stockage. S'assurer d'une circulation de l'air lors de l'utilisation.

Plage de température :
Utilisation entre -10 et +40°C (+14 et +104°F).
Stockage entre -20 et +55°C (-4 et 131°F).

Humidité de l'air :
Inférieur ou égal à 50% à 40°C (104°F).
Inférieur ou égal à 90% à 20°C (68°F).

Altitude :
Jusqu'à 1000m au-dessus du niveau de la mer (3280 pieds)

PROTECTION INDIVIDUELLE ET DES AUTRES

Le soudage à l'arc peut être dangereux et causer des blessures graves voire mortelles. Le soudage expose les individus à une source dangereuse de chaleur, de rayonnement lumineux de l'arc, de champs électromagnétiques (attention au porteur de pacemaker), de risque d'électrocution, de bruit et d'émanations gazeuses. Pour bien se protéger et protéger les autres, respecter les instructions de sécurité suivantes :



Afin de se protéger de brûlures et rayonnements, porter des vêtements sans revers, isolants, secs, ignifugés et en bon état, qui couvrent l'ensemble du corps.



Utiliser des gants qui garantissent l'isolation électrique et thermique.



Utiliser une protection de soudage et/ou une cagoule de soudage d'un niveau de protection suffisant (variable selon les applications). Protéger les yeux lors des opérations de nettoyage. Les lentilles de contact sont particulièrement proscrites. Il est parfois nécessaire de délimiter les zones par des rideaux ignifugés pour protéger la zone de soudage des rayons de l'arc, des projections et des déchets incandescents. Informer les personnes dans la zone de soudage de ne pas fixer les rayons de l'arc ni les pièces en fusion et de porter les vêtements adéquats pour se protéger.



Utiliser un casque contre le bruit si le procédé de soudage atteint un niveau de bruit supérieur à la limite autorisée (de même pour toute personne étant dans la zone de soudage).

Tenir à distance des parties mobiles (ventilateur) les mains, cheveux, vêtements.
Ne jamais enlever les protections carter du groupe froid lorsque la source de courant de soudage est sous tension, le fabricant ne pourrait être tenu pour responsable en cas d'accident.



Les pièces qui viennent d'être soudées sont chaudes et peuvent provoquer des brûlures lors de leur manipulation. Lors d'intervention d'entretien sur la torche ou le porte-électrode, il faut s'assurer que celui-ci soit suffisamment froid en attendant au moins 10 minutes avant toute intervention. Le groupe froid doit être allumé lors de l'utilisation d'une torche refroidie eau afin d'être sûr que le liquide ne puisse pas causer de brûlures. Il est important de sécuriser la zone de travail avant de la quitter afin de protéger les personnes et les biens.

FUMÉES DE SOUDAGE ET GAZ



Les fumées, gaz et poussières émis par le soudage sont dangereux pour la santé. Il faut prévoir une ventilation suffisante, un apport d'air est parfois nécessaire. Un masque à air frais peut être une solution en cas d'aération insuffisante. Vérifier que l'aspiration est efficace en la contrôlant par rapport aux normes de sécurité.

Attention le soudage dans des milieux de petites dimensions nécessite une surveillance à distance de sécurité. Par ailleurs le soudage de certains matériaux contenant du plomb, cadmium, zinc ou mercure voire du béryllium peuvent être particulièrement nocifs, dégraisser également les pièces avant de les souder.

WARNINGS - SAFETY INSTRUCTIONS

GENERAL INSTRUCTIONS



These instructions must be read and fully understood before use.

Do not carry out any alterations or maintenance work that is not directly specified in this manual.

The manufacturer shall not be liable for any damage to persons or property resulting from use not in accordance with the instructions in this manual. In case of problems or queries, please consult a qualified tradesperson to correctly install the product.

ENVIRONMENT

This equipment should only be used for welding operations performed within the limits indicated on the information panel and/or in this manual. These safety guidelines must be observed. The manufacturer cannot be held responsible in the event of improper or dangerous use.

The machine must be set up somewhere free from dust, acid, flammable gases or any other corrosive substances. This also applies to the machine's storage. Ensure good air circulation when in use.

Temperature range:

Use between -10 and +40°C (+14 and +104°F).

Store between -20 and +55°C (-4 and 131°F).

Air humidity:

Lower than or equal to 50% at 40°C (104°F).

Lower than or equal to 90% at 20°C (68°F).

Altitude:

Up to 1000m above sea level (3,280 feet).

PROTECTING YOURSELF AND OTHERS

Arc welding can be dangerous and cause serious injury or death.

Welding exposes people to a dangerous source of heat, light radiation from the arc, electromagnetic fields (caution to those using pacemakers) and risk of electrocution, as well as noise and fumes.

To protect yourself and others, please observe the following safety instructions:



To protect yourself from burns and radiation, wear insulating, dry and fireproof clothing without lapels. Ensure the clothing is in good condition and that covers the whole body.



Wear protective gloves which provide electrical and thermal insulation.



Use welding protection and/or a welding helmet with a sufficient level of protection (depending on the specific use). Protect your eyes during cleaning procedures. Contact lenses are specifically forbidden.

It may be necessary to section off the welding area with fireproof curtains to protect the area from arc radiation and hot spatter. Inform people in the welding area not to stare at the arc rays or molten parts and to wear appropriate clothing for protection.



Wear noise protection headphones if the welding process becomes louder than the permissible limit (this is also applicable to anyone else in the welding area).

Keep hands, hair and clothing away from moving parts (the ventilation fan, for example).

Never remove the cooling unit housing protections when the welding power source is live, the manufacturer cannot be held responsible in the event of an accident.



Newly welded parts are hot and can cause burns when handled. When maintenance work is carried out on the torch or electrode holder, ensure that it is sufficiently cold by waiting at least 10 minutes before carrying out any work. The cooling unit must be switched on when using a water-cooled torch to ensure that the liquid cannot cause burns.

It is important to secure the working area before leaving it, in order to protect people and property.

WELDING FUMES AND GAS



The fumes, gases and dusts emitted by welding are harmful to health. Sufficient ventilation must be provided and an additional air supply may be required. An air-fed mask could be a solution in situations where there is inadequate ventilation.

Check the extraction system's performance against the relevant safety standards.

Caution: Welding in confined spaces requires safety monitoring from a safe distance. In addition, the welding of certain materials containing lead, cadmium, zinc, mercury or even beryllium can be particularly harmful. Remove any grease from the parts before welding.

Cylinders should be stored in open or well-ventilated areas. They should be stored in an upright position and kept on a stand or trolley.

Welding should not be carried out near grease or paint.

RISK OF FIRES AND EXPLOSIONS



Fully shield the welding area, flammable materials should be kept at least 11 metres away. Fire fighting equipment should be kept close to wherever the welding activities are being undertaken.

Beware the expulsion of hot spatter or sparks, even through cracks, which can cause fires or explosions.

Keep people, flammable objects and pressurised containers at a safe distance.

Welding in closed containers or tubes is to be avoided. If the containers or tubes are open, they must be emptied of all flammable or explosive materials (oil, fuel, gas residues, etc.).

Grinding work must not be directed towards the source of the welding current or towards any flammable materials.

GAS CYLINDERS



Gas escaping from cylinders can cause suffocation if there is too high a concentration of it in the welding area (ensure good ventilation).

The machine must be transported in complete safety: gas cylinders must be closed and the welding power source turned off. They should be stored upright and supported to limit the risk of falling.

Close the cylinder between uses. Beware of temperature variations and exposure to the sun.

The cylinder must not come into contact with flames, arcs, torches, earth clamps or any other sources of heat or ignition.

Be sure to keep it away from electrical and welding circuits. Never weld a pressurised cylinder.

When opening the cylinder valve, keep your head away from the valve and ensure that the gas being used is suitable for the welding process.

ELECTRICAL SAFETY



The electrical network used must be earthed. Use the recommended fuse size from the rating plate. An electric shock can be the source of a serious accident, whether directly or indirectly, or even death.

Never touch live parts connected to the live current, either inside or outside the power source casing unit (torches, clamps, cables, electrodes), as these items are connected to the welding circuit.

Before opening the welding machine's power source, disconnect it from the mains and wait two minutes to ensure that all the capacitors have fully discharged.

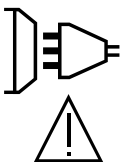
Do not touch the torch or the electrode holder and the earth clamp at the same time.

If the cables or torches become damaged, they must be replaced by a qualified and authorised person. Measure the cable cross-section according to the intended application. Always use dry and in-fact clothing to insulate yourself from the welding circuit. Alongside this, wear well-insulated footwear in all working environments.

EMC CLASSIFICATION



This Class A device is not intended for use in a residential environment where power is provided by the public low-voltage local supply network. Ensuring electromagnetic compatibility may be difficult at these sites due to conducted, as well as radiated, radio frequency interference.



This equipment does not comply with IEC 61000-3-12 and is intended to be connected to private low-voltage systems interfacing with the public supply only at the medium- or high-voltage level. On a public low-voltage power grid, it is the responsibility of the installer or user of the device to ensure, by checking with the operator of the distribution network, which device can be connected.

This equipment complies with the IEC 61000-3-11 standard.

ELECTROMAGNETIC INTERFERENCES



An electric current passing through any conductor produces localised electric and magnetic fields (EMF). The welding current produces an electromagnetic field around the welding circuit and the welding equipment.

Electromagnetic fields (EMFs) can interfere with some medical devices, for example pacemakers. Protective measures must be taken for people with medical implants. For example, restricted access for onlookers or an individual risk assessment for welders.

All welders should use the following guidelines to minimise exposure to the welding circuit's electromagnetic fields:

- position the welding cables together - securing them with a clamp if possible;
- position yourself (head and body) as far away from the welding circuit as possible,
- never wrap the welding cables around your body,

- do not position yourself between the welding cables. and keep both welding cables on your same side,
- connect the return cable to the workpiece, as close as possible to the area to be welded,
- do not work next to, sit or lean on the source of the welding current,
- do not transport the welding power source or wire feeder while welding.



Pacemaker users should consult a doctor before using this equipment.
Exposure to electromagnetic fields during welding may have other health effects that are not yet known.

RECOMMENDATIONS FOR ASSESSING THE WELDING AREA AND EQUIPMENT

General Information

It is the user's responsibility to install and use the arc welding equipment according to the manufacturer's instructions. If electromagnetic disturbances are detected, it is the user's responsibility to resolve the situation using the manufacturer's technical support. In some cases, this corrective action may be as simple as earthing the welding circuit. In other cases, it may be necessary to construct an electromagnetic shield around the welding current source and around the entire workpiece by setting up input filters. In any case, electromagnetic interference should be reduced until it is no longer an inconvenience.

Assessing the welding area

Before installing arc welding equipment, the user should assess the potential electromagnetic problems in the surrounding area. The following should be taken into account:

- a) the presence of power, control, signal and telephone cables above, below and next to the arc welding equipment,
- b) radio and television receivers and transmitters,
- c) computers and other control equipment,
- d) critical safety equipment, e.g. the protection of industrial equipment,
- e) the health of nearby persons, e.g. those using of pacemakers or hearing aids,
- f) the equipment used for calibrating or measuring,
- g) the protection of other surrounding equipment.

The operator has to ensure that the devices and equipment used in the same area are compatible with each other. This may require further protective measures;

- h) the time of day when welding or other operations are to be carried out.

The size of the surrounding area to be taken into account will depend on the building's structure and the other activities taking place there. The surrounding area may extend beyond the boundaries of the premises.

Assessment of the welding equipment

In addition to the assessment of the surrounding area, the arc welding equipment's assessment can be used to identify and resolve cases of interference. It is appropriate that the assessment of any emissions should include in situ procedures as specified in Article 10 of CISPR 11. In situ measurements can also be used to confirm the effectiveness of mitigation measures.

GUIDELINES ON HOW TO REDUCE ELECTROMAGNETIC EMISSIONS

a. The mains power grid: Arc welding equipment should be connected to the mains power grid according to the manufacturer's recommendations. If any interference occurs, it may be necessary to take additional precautionary measures such as filtering the mains power supply. Consider protecting the power cables of permanently installed arc welding equipment within a metal pipe or a similar casing. The power cable should be protected along its entire length. The shield should be connected to the welding power source to ensure that there is good electrical contact between the conduit and the welding power source enclosure.

b. The maintenance of arc welding equipment: Arc welding equipment should be subject to routine maintenance as recommended by the manufacturer. All access points, service openings and bonnets should be closed and properly locked when the arc welding equipment is in use. The arc welding equipment should not be modified in any way, except for those modifications and adjustments mentioned in the manufacturer's instructions. The spark gap of arc starters and stabilisers should be adjusted and maintained according to the manufacturer's recommendations.

c. Welding cables: Cables should be as short as possible, placed close together either near or on the ground.

d. Equipotential bonding: Consideration should be given to linking all metal objects in the surrounding area. However, metal objects connected to the workpiece increase the risk of electric shocks to the user if they touch both these metal parts and the electrode. It is necessary to insulate the operator from such metal objects.

e. Earthing the workpiece: In cases where the part to be welded is unearthed for electrical safety reasons or due to its size and location, such as ship hulls or structural steel buildings, an earthed connection can reduce emissions in some cases, although not always. Care should be taken to avoid the earthing of parts which could increase the risk of injury to users or damage to other electrical equipment. If necessary, the workpiece's connection should be earthed directly, but in some countries where a direct connection is not allowed, the connection should be made with a suitable capacitor chosen according to national regulations.

f. Protection and protective casing: The selective protection and encasing of other cables and equipment in the surrounding area may limit interference problems. The safeguarding of the entire welding area may be considered for special applications.

THE TRANSPORTING AND MOVING OF THE MACHINE'S POWER SOURCE



Do not use the cables or torch to move the welding power source. It should be moved in an upright position.
Do not carry or transport the power source overhead of people or objects.

Never lift a gas cylinder and the welding power source at the same time. Their transportation requirements are different.

It is advisable to remove the wire spool before lifting or transporting the welding power source.

SETTING UP THE EQUIPMENT

- Place the welding power source on a floor with a maximum inclination of 10°.
- Provide sufficient space to ventilate the welding power source and access the controls.
- Do not use in an area with conductive metal dust.
- The welding power source should be protected from heavy rain and not exposed to direct sunlight.
- The machine is IP23S rated, meaning:
 - its dangerous parts are protected from being entered by objects greater than 12.5 mm and,
 - it is protected against rain falling at an angle of up to 60° from vertical, providing that any moving parts (fan) are stationary.
 This product can therefore be stored outdoors in accordance with the IP23 protection rating.



Stray welding currents can destroy earthing conductors, damage electrical equipment and devices and cause component parts to overheat leading to fires.

- All welding connections must be firmly secured and regularly checked!
- Make sure that the item's attachment is firm and secure, without any electrical problems!
- Join together or suspend any electrically conductive parts of the welding source such as the frame, trolley and lifting systems so that they are insulated!
- Do not place other equipment such as drills or grinding devices etc. on the welding source, trolley, or lifting systems unless they are insulated!
- Always place welding torches or electrode holders on an insulated surface when not in use!

The power cables, extensions and welding cables must be fully uncoiled to prevent overheating.



The manufacturer assumes no responsibility for damage to persons or objects caused by improper and dangerous use of this equipment.

MAINTENANCE / RECOMMENDATIONS



- Maintenance should only be carried out by a qualified person. Annual maintenance is recommended.
- Switch off the power supply by pulling the plug and wait two minutes before working on the equipment.. Inside the machine, the voltages and currents are high and dangerous.

- Regularly remove the cover and blow out any dust. Take advantage of the opportunity to have the electrical connections checked with an insulated tool by a qualified professional.
 - Regularly check the condition of the power cable. If the power cable is damaged, it must be replaced by the manufacturer, the after sales service team or an equally qualified person to avoid any danger.
- Leave the welding power source vents free for air intake and outflow.
- Do not use this welding power source for thawing pipes, recharging batteries/storage batteries or starter motors.

INSTALLATION - USING THE PRODUCT

Only experienced personnel, authorised by the manufacturer, may carry out the machine's set-up. During set-up, ensure that the power source is unplugged from the mains. Series or parallel power source connections are not allowed. It is recommended to use the welding cables supplied with the unit in order to obtain the best possible product performance.

DESCRIPTION

This machine is a three-phase power source for semi-automatic, software-supported welding (MIG or MAG), coated electrode welding (MMA) and refractory electrode welding (TIG). It accepts 200 and 300 mm diameter wire spools.

DESCRIPTION OF THE EQUIPMENT (II)

- | | |
|----------------------------------|-----------------------------|
| 1- Reel support Ø 200/300 mm | 9- Negative polarity socket |
| 2- Accessory box hatch | 10- Euro connector (torche) |
| 3- Cable support | 11- Gas connector |
| 4- Torch support | 12- Mains cable (5 m) |
| 5- HMI (Human Machine Interface) | 13- Bottle holder 4 m³ |
| 6- START/STOP switch | 14- USB hatch |
| 7- Positive polarity socket | 15- Wire-feed motor |
| 8- Polarity reversal cable | |

HUMAN-MACHINE INTERFACE (HMI)



Please read the Interface User Guide (HMI) which forms part of the complete product literature.

POWER SWITCH

This machine is fitted with a 16A socket type EN 60309-1 which must only be used on a three-phase 400 V (50-60 Hz) four-wire earthed electrical installation.

The absorbed effective current (I_{1eff}) is indicated on the device for optimum operating conditions. Check that the power supply and its safeguards (fuse and/or circuit breaker) are compatible with the electric current being used. In some countries, it may be necessary to change the plug to allow the use at maximum settings.

- The power source is designed to operate at 400 V +/- 15%. The unit enters protection mode if the supply voltage is less than 330Vrms or greater than 490Vrms. (An error code will appear on the display screen).
- Starting is done by pressing the START/STOP switch (On), and stopping is done by pressing the same switch (Off). **Warning! Never switch off the power supply while the unit is under load.**

CONNECTING TO A POWER SOURCE

This equipment can be operated with electric generators provided that the auxiliary power supply meets the following requirements:

- The voltage must be alternating with an RMS value of 400V +/- 15% and a peak voltage of less than 700V.
- The frequency must be between 50 and 60 Hz.

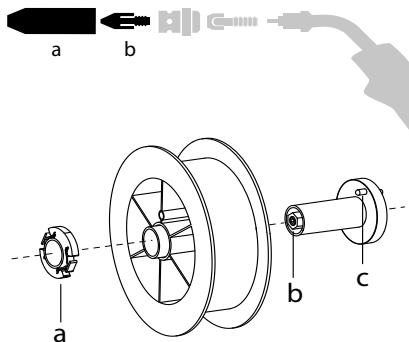
It is vital to check these conditions as many generators produce high voltage peaks that can damage equipment.

USING EXTENSION LEADS

All extension leads must be of a suitable length and width that is appropriate to the equipment's voltage. Use an extension lead that complies with national safety regulations.

Input voltage	Length - Cross-section of the extension cable (Length < 45m)
400 V	2.5 mm ²

SETTING UP THE REEL

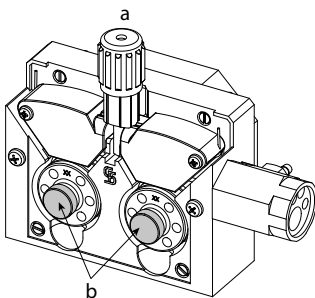


- Remove the nozzle (a) and contact tube (b) from your MIG/MAG torch.

Open the power source's hatch.

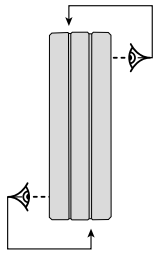
- Position the reel on its holder.
- Take into consideration the reel stands's drive lug (c). To fit a 200 mm reel, tighten the plastic reel holder (a) to the maximum.
- Adjust the brake wheel (b) to prevent the non-moving spool from tangling the wire when the welding stops. Do not over tighten as this will cause the power source to overheat.

LOADING THE FILLER WIRE



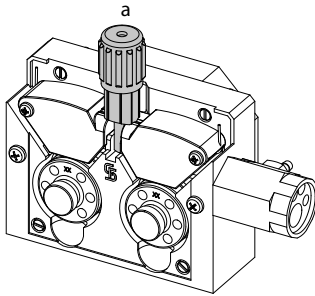
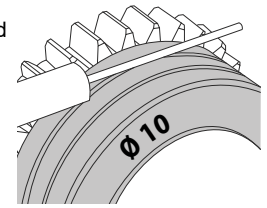
To change the rollers, do the following:

- Loosen the knob (a) to the maximum and lower it.
 - Unlock the rollers by removing the retaining screws (b)
 - Fit the appropriate drive rollers for your application and retighten the retaining screws.
- The rollers supplied are double groove rollers :
- steel Ø 1.0/1.2



- Check the inscription on the roller to ensure that the rollers are suitable for the wire diameter and the wire material (for Ø 1.0 wire, use the Ø 1.0 groove).
- Use V-grooved rollers for steel and other hard wires.
- Use U-grooved rollers for aluminium and other soft, alloyed wires.

↖ : visible inscription on the roller (example: 10 = Ø 1.0)
 → : groove to be used



To install the wire, follow the steps below:

- Loosen the knob to the maximum and lower it.
- Insert the wire, then close the motor reel and tighten the knob as shown.
- Press the trigger of the torch to activate the motor, and the procedure will be displayed on the screen..

Notes:



- Too narrow a sheath can lead to unreeling issues and can lead to the overheating of the motor.
- The torch connection must also be properly tightened to prevent it from overheating.
- Ensure that neither the wire, nor the reel, touches the device's mechanism, otherwise there is a danger of short-circuiting the machine.

RISK OF INJURY FROM MOVING COMPONENTS



The reels have moving parts that can trap hands, hair, clothing or tools causing injuries!

- Do not touch rotating, moving or driving parts of the machine!
- Ensure that the housing covers or protective covers remain fully closed when in operation.
- Do not wear gloves when threading the filler wire or changing the filler-wire's spool.

SEMI-AUTOMATIC STEEL/STAINLESS STEEL WELDING (MAG MODE)

This machine can weld steel and stainless steel wire from Ø 0.6 to 1.2mm (I-A). The unit is supplied with Ø 1.0/1.2 rollers for steel or stainless steel as standard. The contact tip, the grooved roller, and the torch sheath are designed for this application.

For operation on steel, a specific welding gas (Ar+CO2) is required. The amount of CO2 may vary depending on the type of gas used. For stainless steel, use a 2% CO2 mixture. When welding with pure CO2, it is necessary to connect a gas pre-heater to the gas cylinder. For specific gas issues, please contact your gas distributor. The gas flow rate for steel is between 8 and 15 litres per minute depending on the surroundings. To check the gas flow rate on the manometer without unwinding the welding wire, press and hold push-button n°1 and follow the procedure on the screen. This check should be done periodically to ensure the best possible welding. Refer to the HMI manual.

SEMI-AUTOMATIC ALUMINIUM WELDING (MIG MODE)

The unit can weld aluminium wire from Ø 0.8 to 1.2mm (I-B).

For use with aluminium, pure argon gas (Ar) is required. Seek advice from a gas distributor for a wide selection of gases. The gas flow rate for aluminium is between 15 and 20 l/min depending on the surrounding environment and the welder's experience.

The differences between steel and aluminium processing are as follows:

- Use specific rollers for aluminium welding.
- Put minimum pressure on the motorised reel's pressure rollers so as not to crush the thread.
- Only use the capillary tube (for guiding the wire between the feed rollers and the EURO connector) for steel/stainless steel welding (I-B)
- Use a special aluminium torch. This aluminium torch has a Teflon coating to reduce friction. DO NOT cut away the coating at the tip of the connector! This coating is used to guide the wire from the rollers.
- Contact tips: use a SPECIAL aluminium contact tip that matches the wire's diameter.



When using red or blue sheathing (for aluminium welding), it is recommended to use the accessory 90950 (I-C). This stainless steel sheath guide improves the centering of the sheath and facilitates the flow of the wire.



Video

SEMI-AUTOMATIC WELDING IN CUSI AND CUAL (BRAZING MODE)

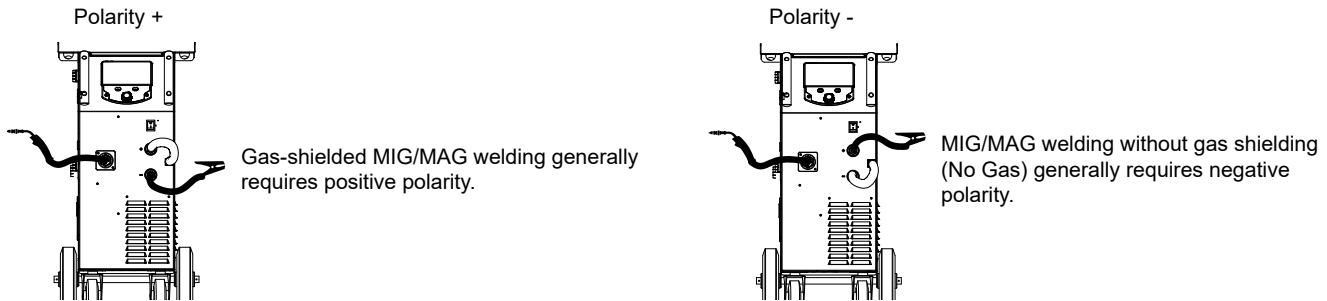
The unit can weld Ø 0.8 and 1.0 mm CuSi and CuAl wire.

In the same way as with steel, a capillary tube must be set up and a torch with a steel sheath must be used. For brazing, pure argon (Ar) should be used.

SEMI-AUTOMATIC WELDING WITH CORED WIRE

The unit can weld flux-cored wire from Ø 0.9 to 1.6mm. The original rollers must be replaced by specific cored wire rollers (available as an optional extra). Welding flux-cored wire with a standard nozzle can lead to overheating and damage to the torch. Remove the original nozzle from your MIG-MAG torch.

CHOOSING A POLARITY



In any case, refer to the wire manufacturer’s recommendations for the choice of polarity for your MIG-MAG torch.


GAS SUPPLY

- Fit a suitable pressure regulator to the gas cylinder. Connect it to the welding station with the pipe supplied. Attach the two hose clamps to prevent leaks.
- Ensure that the gas cylinder is held securely in place with a chain attached to the power source.
- Set the gas flow rate by adjusting the dial on the pressure regulator.

NB: To adjust the gas flow rate more easily, use the rollers on the motorised spool by pulling the trigger on the torch (loosen the brake wheel on the motorised reel so that no wire is drawn in). Maximum gas pressure: 0.5 MPa (5 bar).

This procedure does not apply to welding in «No Gas» mode.

RECOMMENDED COMBINATIONS

	 (mm)	Current (A)	Ø Wire (mm)	Ø Nozzle (mm)	Flow (L/min)
MIG	0.8-2	20-100	0.8	12	10-12
	2-4	100-200	1.0	12-15	12-15
	4-8	200-300	1.0/1.2	15-16	15-18
	8-15	300-500	1.2/1.6	16	18-25
MAG	0.6-1.5	15-80	0.6	12	8-10
	1.5-3	80-150	0.8	12-15	10-12
	3-8	150-300	1.0/1.2	15-16	12-15
	8-20	300-500	1.2/1.6	16	15-18

MIG / MAG (GMAW/FCAW) WELDING MODE

Settings	Settings	Welding processes		
		Manual	Synergies (pre-installed user settings)	
Torque material/gas	- FeAr 15% CO2 - ...	-	✓	Choice of the material to be welded. Synergic welding parameters
Wire diameter	Ø 0.8 > Ø 1.6mm	-	✓	Choice of wire diameter
Using the trigger	2T, 4T	✓	✓	Choice of trigger welding management mode
Spot mode	Spot, Spot-Delay			Selecting the spot mode
First Setting	Thickness Start-up Speed	-	✓	Choosing the main setting to be displayed (thickness of the workpiece, average welding current or wire speed).



WELDING PROCESSES

For more information on GYS pre-installed user settings and welding processes, scan the QR code:

SPOT WELDING MODE

• **Spot**

This welding mode allows the pre-assembly of parts before welding. Spot welding can be done manually using the trigger or timed with a predefined spot welding period. Spot welding allows for better reproduction and non-oxidised weld points.

• **Spot-Delay**

This is a welding mode similar to Spot welding but with predefined weld and dwell times, as long as the trigger is held down. This function allows welding very thin steel or aluminium metal sheet, limiting the risk of piercing and distortion (especially for aluminium welding).

CONFIGURING THE SETTINGS

	Units	
Burnback	-	Feature to help prevent the wire sticking to the bead. This is timed to coincide with the wire rising from the weld pool.
Crater Filler	%/s	This idling current is the next phase after the current is lowered. The intensity (% of welding current) and the time (seconds) can be programmed.
Delay	s	Time between the end of a point (excluding Post-Gas) and the start of a new point (including Pre-Gas).
Thickness	mm	The pre-installed user settings (synergies) allow for a fully-automatic set-up. Changing the thickness setting automatically sets the appropriate wire tension and speed.
Crater-fill feature	s	Downslope current.
Hot Start	%/s	The Hot Start is an overcurrent used at the start that prevents the wire from sticking to the workpiece. The intensity (% of welding current) and the time (seconds) can be programmed.
Current	A	The welding current is adjusted according to the type of wire used and the material to be welded.
I Start	-	Adjustment of the ignition current.
Arc length	-	Used to adjust the distance between the end of the wire and the weld pool (tension adjustment).
Pre-Gas	s	When the torch is bled and the gas shield is created before ignition.
Tack welding	s	Set duration.
Post-Gas	s	Duration of the gas protection after the arc is extinguished. It protects the workpiece and the electrode from oxidation.
Self-Induction Coil	-	Lessens the welding current more or less. To be set according to the welding position.
Spot welding	s	Set duration.
Voltage	V	Control over the cord's width.
Upslope	s	Upslope current
Approach speed	-	Progressive yarn speed. Before priming, the wire moves slowly to create the first contact without jolting.
Wire speed	m/min	Amount of filler metal deposited and consequently the welding intensity and penetration.

Access to some of the welding settings depends on the selected welding process (Manual, Standard, etc.) and the selected display mode (Easy, Expert or Advanced). Refer to the HMI manual.

GAS FLOW CONTROL

To check the gas flow rate on the manometer without unwinding the welding wire, press and hold push-button n°1 and follow the procedure on the screen. This check should be done periodically to ensure the best possible welding. Refer to the HMI manual.

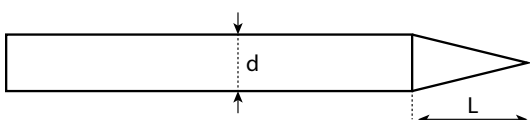
TIG (GTAW) WELDING MODE

INSTALLATION AND GUIDANCE

- DC TIG welding requires a protective gas shield (Argon).
- Connect the earth clamp to the positive (+) plug connector. Connect the optional TIG torch (ref. 046108) into the EURO connector of the power source and the polarity reversal cable into the negative (-) socket.
- Ensure that the torch is properly fitted and that the consumables (vice grip pliers, collet bodies, diffusers and nozzles) are not worn out.
- The choice of electrode will depend on the current of the DC TIG process.

ELECTRODE SHARPENING

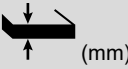
For optimum results, it is advised to use an electrode sharpened in the following way:



L = 3 x d for a low current.
L = d for a high current

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RECOMMENDED COMBINATIONS

 (mm)	Current (A)	Ø Electrode (mm)	Ø Nozzle (mm)	Argon flow rate (L/min)
0.3 - 3	3 - 75	1	6.5	6 - 7
2.4 - 6	60 - 150	1.6	8	6 - 7
4 - 8	100 - 200	2	9.5	7 - 8
6.8 - 8.8	170 - 250	2.4	11	8 - 9
9 - 12	225 - 300	3.2	12.5	9 - 10

PROCESS SETTINGS

Settings	Settings	
Welding process	Standard	Smooth current
	Pulsed	Pulsed current
	Spot welding	Smooth tacking
	Spot-Pulse	Pulsed tacking
Trigger mode	2T, 4T, Valve	Choice of trigger welding management mode.

Access to some of the welding parameters depends on the selected display mode: Settings/Display mode: Easy or Expert. Refer to the HMI manual.

SETTINGS**• Standard**

The standard DC TIG welding process allows high quality welding on most ferrous materials such as steel and stainless steel, but also copper and its alloys including titanium. The various current and gas management possibilities allow you to perfectly control your welding operation, from priming to the final cooling of your weld seam.

• Pulse

This pulsed current welding mode combines high current pulses (I = welding pulses) with low current pulses (cold I, workpiece cooling pulses). The pulsed mode allows parts to be assembled while limiting temperature rises and warping. Ideal for on site use.

Example:

The welding current (I) is set to 100 A and % (cold I) = 50%, i.e. cold current = 50% x 100 A = 50.

F(Hz) is set to 10 Hz, the signal period will be 1/10 Hz = 100 ms -> a 100 A pulse every 100 ms then followed by another at 50 A.

• Spot

This welding mode allows the pre-assembly of parts before welding. Spot welding can be done manually using the trigger or timed with a predefined spot welding period. Spot welding allows for better reproduction and non-oxidised weld points.

• Spot-Pulse

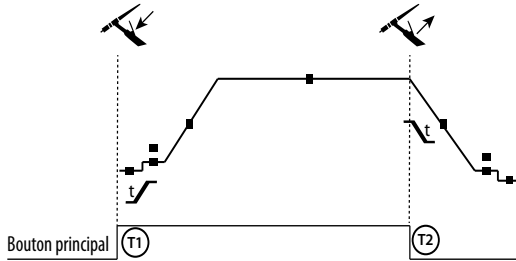
This method of welding is used to pre-assemble thin sheet metal workpieces prior to the actual welding process. Spot welding can be done manually using the trigger or timed with a predefined spot welding period. Spot welding allows for better reproduction and non-oxidised weld points.

CHOOSING THE ELECTRODE'S DIAMETER

Electrode Ø (mm)	DC TIG	
	Pure tungsten	Tungsten with oxides
1	10 > 75	10 > 75
1.6	60 > 150	60 > 150
2	75 > 180	100 > 200
2.5	130 > 230	170 > 250
3.2	160 > 310	225 > 330
Approx. = 80 A per mm Ø		

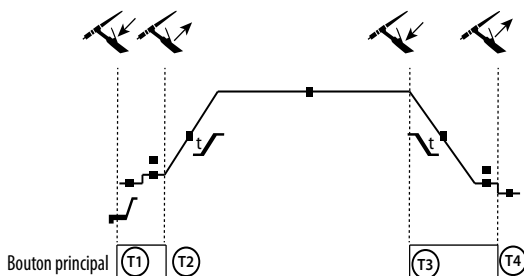
USING THE TRIGGER

• 2T



T1 - The main button is pressed, the welding cycle starts (Pre-Gas, I_Start, upslope and welding).
 T2 - The main button is released, the welding cycle is stopped (downslope, I_Stop, Post-Gas).
 For two-button torches in T2 only, the secondary button is treated as the main button.

• 4T



T1 - The main button is pressed, the cycle starts from Pre-Gas and stops at the I_Start phase.
 T2 - The main button is released, the cycle continues to upslope and welding.
 T3 - The main button is pressed, the cycle goes to downslope and stops in the I_Stop phase.
 T4 - The main button is released, the cycle ends with the Post-Gas.
 NB: for torches, double buttons and double button + potentiometer => «up/weld current» button turns on the potentiometer, the «down» button turns it off.

For dual button or dual trigger torches, the «high» trigger retains the same functionality as the single trigger torch. The «low» trigger is not active.

CONFIGURING THE SETTINGS

	Units	
End current	%	This idling current is the next phase after the current is lowered.
Starting current	%	This start-up bearing current is a warm-up phase before the current is raised.
Welding current	A	Welding current.
Cold current	%	Second welding current known as a «cold» welding current.
Pulse duration	s	Manual or time-controlled spot pulse phase
Spot duration	s	Either manual or a set time.
Crater-fill feature	s	Avoids cratering at the end of welding and the risk of cracking, particularly in light alloys.
Frequency frequency	Hz	Pulse frequency (setting guidelines): - If welding with manual filler metal, then the F(Hz) is synchronised to the filler action, - If the metal is thin and without filler (< 0.8mm), F(Hz) > 10Hz - If welding in position, then F(Hz) < 100Hz
Rising current	s	Allows a gradual increase in welding current.
Post-Gas	s	Duration of the gas protection after the arc is extinguished. It protects the workpiece and the electrode from oxidation during cooling.
Pre-Gas	s	When the torch is bled and the gas shield is created before ignition.
Stopping time	s	This idling time is a phase that comes after the current is lowered.
Starting time	s	Starting time before the current is raised.
Cold weather	%	Pulsed hot current (I) time balance

Access to some of the welding parameters depends on the selected display mode: Settings/Display mode: Easy or Expert. Refer to the HMI manual.

MANUAL GAS PURGE

The presence of oxygen in the torch can lead to a decrease in mechanical quality and can result in less corrosion resistance. To flush the gas from the torch, press and hold button no. 1 and follow the on-screen procedure. Refer to the HMI manual.

MMA (SMAW) WELDING MODE

INSTALLATION AND GUIDANCE

- Plug the cables, electrode holder and earth clamp into the plug connections.
- Respect the electrical polarities and the strength of the welding power indicated on the electrode boxes.
- Remove the coated electrode from the electrode holder when the welding power source is not in use.
- The equipment is fitted with 3 inverter-specific features:
 - Hot Start provides an overcurrent at the beginning of the welding process.
 - Arc Force creates an overcurrent which prevents the electrode from sticking to the weld pool.
 - The Anti-Stick technology makes it easier to unstick the electrode from the metal.

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PROCESS SETTINGS

Settings	Settings	Welding processes		
		Standard	Pulsed	
Electrode type	Rutile Basic	✓	✓	The type of electrode determines the settings in order to optimise its weldability depending on the type of electrode used.
Anti-Sticking	ON-OFF	✓	✓	The anti-stick feature is recommended to safely remove the electrode in the event of it sticking to the workpiece (the current is cut off automatically).

Access to some of the welding parameters depends on the selected display mode: Settings/Display mode: Easy or Expert. Refer to the HMI manual.

WELDING PROCESSES**• Standard**

This standard MMA welding mode is suitable for most welding applications. It enables welding with all types of coated, rutile, basic and cellulosic electrodes, as well as on all materials: steel, stainless steel and cast iron.

• Pulse

The pulsed MMA welding mode is suitable for upright (PF) applications. The pulsed setting keeps the weld pool cold while promoting material transfer. Without pulsing, vertical upward welding requires a 'Christmas tree' movement, i.e. a difficult triangular movement. Thanks to Pulsed MMA welding, it is no longer necessary to perform this movement. Depending on the thickness of your workpiece, a straight upward movement should suffice. However, if you want to enlarge your weld pool, a simple sideways movement similar to downheld welding is sufficient. In this case, you can set the frequency of your pulsed current on the display screen. This method offers greater control of the vertical welding operation.

CHOOSING COATED ELECTRODES

- Rutile electrodes: very easy to use in any position.
- Basic electrodes: it can be used in all positions and is suitable for safety work due to its increased mechanical properties.

CONFIGURING THE SETTINGS

	Units	
Arc Force		Arc Force is an overcurrent administered to prevent sticking when the electrode or weld bead touches the weld pool.
Welding current	A	The welding current is determined by the type of electrode chosen (see electrode packaging).
Duration of Hot Start	s	Hot Start is an overcurrent at the ignition stage which prevents the electrode from sticking to the workpiece. The intensity (% of welding current) and the time (seconds) can be programmed.
Pulse frequency	Hz	PULSE mode's PULSING frequency.
Percentage Hot Start	%	Hot Start is an overcurrent at the ignition stage which prevents the electrode from sticking to the workpiece. The intensity (% of welding current) and the time (seconds) can be programmed.
Percentage I cold	%	
Cold weather	s	

Access to some of the welding parameters depends on the selected display mode: Settings/Display mode: Easy or Expert. Refer to the HMI manual.

ADJUSTING THE WELDING INTENSITY

The following settings correspond to the applicable current range depending on the type and diameter of the electrode used. These ranges are quite large as they depend on the usage and the welding position.

electrode Ø (mm)	Rutile E6013 (A)	Basic E7018 (A)
1.6	30-60	30-55
2.0	50-70	50-80
2.5	60-100	80-110
3.15	80-150	90-140
4.0	100-200	125-210
5	150-290	200-260
6.3	200-385	220-340

ADJUSTING THE ARC FORCE

It is advisable to set the Arc Force to the middle position (0) to start welding and then adjust it according to the results obtained and individual welding preferences. Note: The adjustment range of the Arc Force is specific to the type of electrode chosen.

ROLLERS (B) OPTIONAL

Diameter	Reference (x2)	
	Steel	Aluminum
∅ 0.6/0.8	042353	-
∅ 0.8/1.0	042360	042377
∅ 1.0/1.2	046849	040915

Diameter	Reference (x2)
	Flux-cored wire
∅ 0.9/1.2	042407

DEFECTS: CAUSES & SOLUTIONS

SYMPTOMS	POSSIBLE CAUSES	SOLUTIONS
The flow rate of the welding wire is not constant.	Clogs blocking the opening.	Clean the contact tube or replace it with non-stick material.
	The wire is slipping on the rollers.	Reapply the non-stick product.
	One of the rollers is spinning.	Check the tightness of the roller screw.
	The torch cable is twisted.	The torch cable should be as straight as possible.
The unwinding mechanism is not working.	The spool's brake or roller is too tight.	Loosen the brake and rollers.
Incorrect unwinding of the wire.	Dirty or damaged wire guide.	Clean or replace.
	Roller pin key is missing.	Reposition the pin in its slot.
	Spool's brake is too tight.	Release the brake.
No current or wrong welding current.	Incorrect mains outlet connection.	Check the plug connection and verify that the plug is connected to the power supply.
	Poor earth connection.	Check the earthing cable (its connection and the condition of the clamp).
	No power.	Check the torch trigger.
The wire jams after passing through the rollers.	Crushed wire guide sheath.	Check the wire-guide sheath and body of the torch..
	Wire blockage in the torch.	Replace or clean.
	No capillary tube.	Check that the capillary tube is present.
	Wire speed too high.	Reduce the wire speed.
The weld bead is porous.	The gas flow is insufficient.	Adjustment range from 15 to 20 L / min. Clean the base metal.
	Gas cylinder empty.	Replace it.
	Unsatisfactory gas quality.	Replace it.
	Air circulation or wind influence.	Avoid draughts and protect the welding area.
	Gas nozzle is too clogged.	Clean or replace the gas nozzle.
	Bad wire quality.	Use a wire suitable for MIG/MAG welding.
	Condition of the welding surface is too poor (rusted, etc.).	Clean the workpiece before welding.
The gas is not connected.	Check that the gas is connected to the power source's inlet.	
Excessive sparks.	Arc voltage is too low or too high.	See welding settings.
	Poor earth connection.	Check and position the earth clamp as close as possible to the area to be welded.
	Insufficient gas protection.	Adjust the gas flow.
No gas coming from the torch.	Poor gas connection.	Check the connections of gas inlets.
		Check that the solenoid valve is working.
Error while downloading.	The data on the USB stick is incorrect or corrupted.	Check your data.
Backup error.	You have exceeded the maximum number of backups.	You need to delete some programs. The number of backups is limited to 200.

Automatic deletion of JOBS.	Some of your JOBS have been deleted because they were incompatible with the new pre-installed user settings (synergies).	-
USB key error.	There is no JOB detected on the USB stick.	-
	The product's memory space is full.	Free up some space on the USB key.
File error.	The file does not match the pre-installed user settings (synergies) downloaded to the product.	The file was created with pre-installed user settings (synergies) that are not present on the machine.
Update problem	The USB stick is not recognised. The visualisation of step 5 of the update procedure does not appear on the display.	<ol style="list-style-type: none"> 1- Insert the USB key into its socket. 2- Turn on the power source. 3- Hold down on the HMI thumbwheel to force the update.

WARRANTY CONDITIONS

The warranty covers any defects or manufacturing faults for two years from the date of purchase (parts and labour).

The warranty does not cover:

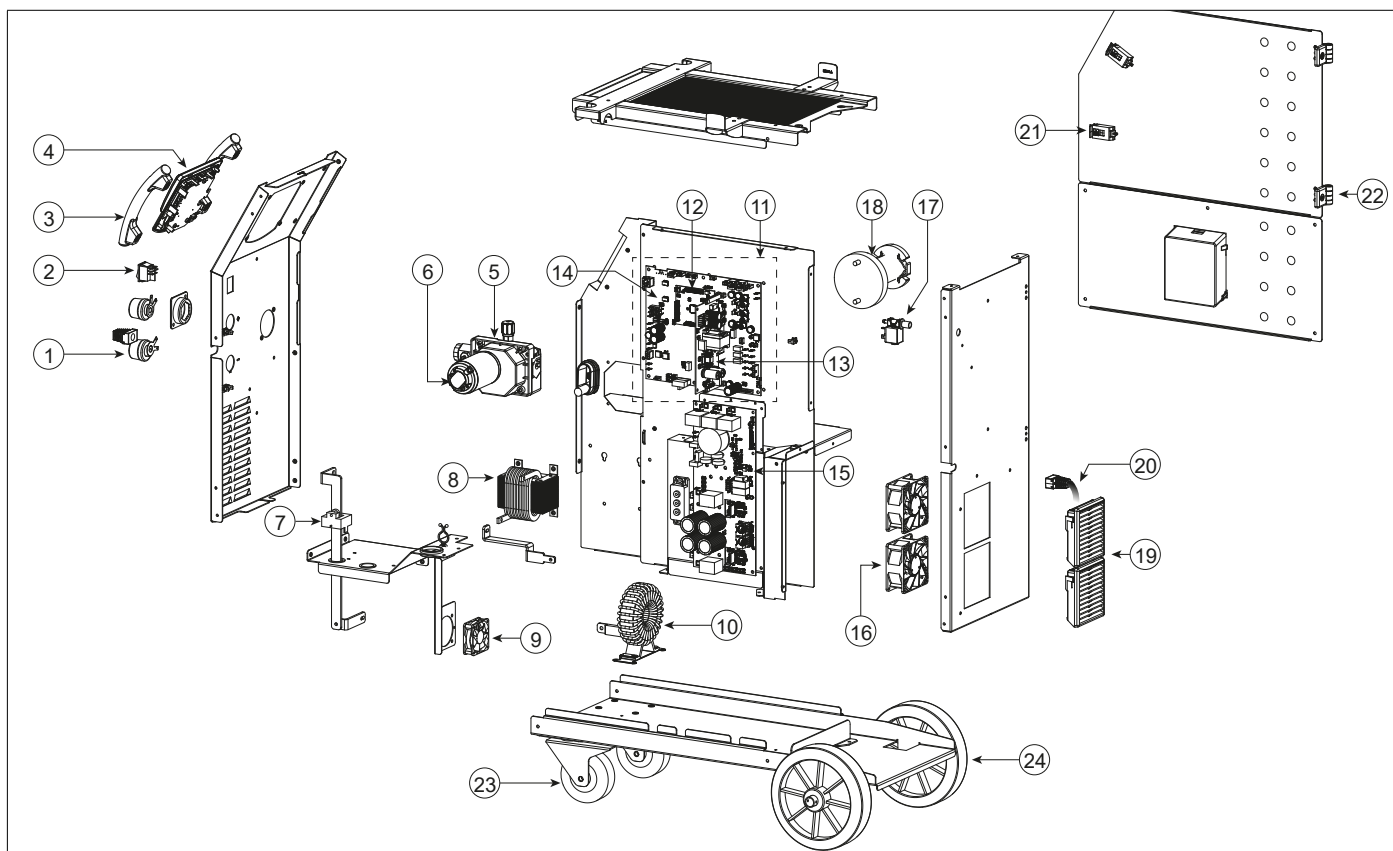
- Any other damage caused during transport.
- The general wear and tear of parts (i.e. : cables, clamps, etc.).
- Incidents caused by misuse (incorrect power supply, dropping or dismantling).
- Environment-related faults (such as pollution, rust and dust).

In the event of a breakdown, please return the appliance to your distributor, along with:

- dated proof of purchase (receipt, invoice, etc.),
- a note explaining the malfunction.

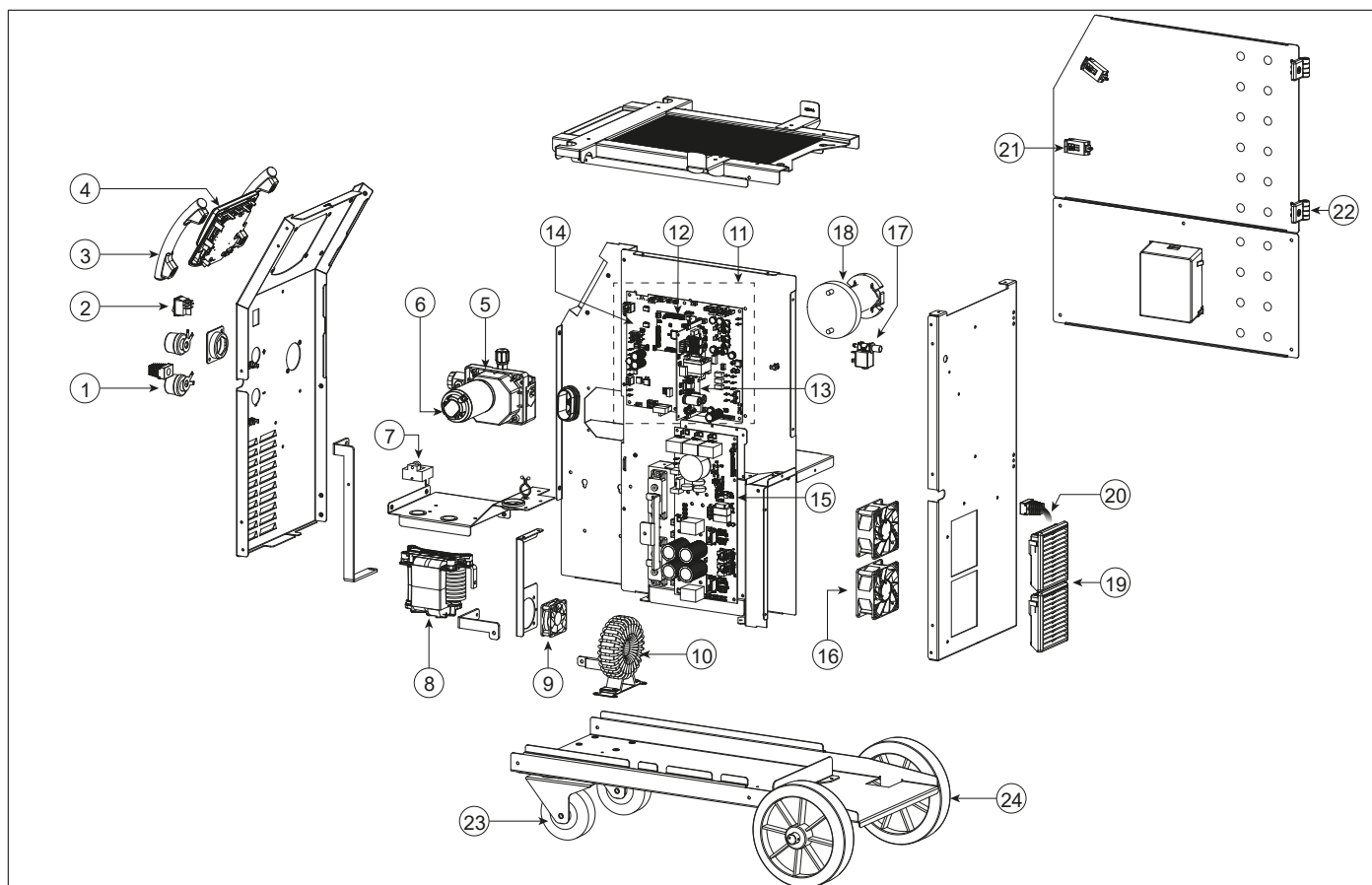
**SPARE PARTS / ERSATZTEILE / PIEZAS DE REPUESTO / ЗАПАСНЫЕ ЧАСТИ / RESERVE
ONDERDELEN / PEZZI DI RICAMBIO**

250T



		250T
1	Embase Texas Femelle / Femal Texas Socket	51468
2	Interrupteur bipolaire / Two-pole switch	52472
3	Poignée plastique / Plastic handle	56047
4	IHM / HMI	E0123C
5	Motodévidoir / Wire feeder motor	51208
6	Carte tachymétrie / Tachometer board	E0153C
7	Capteur de courant / Current sensor	64463
8	Self de sortie / Output Choke	63739
9	Ventilateur 60x60x20 / Fan 60x60x20	51018
10	Transformateur / Transformer	63833
11	Bloc faible courant / Low-current block	E5049
12	Carte contrôle / Control board	E0124C
13	Carte alimentation / Power supply board	E0167C
14	Carte principale / Primary board	E0129C
15	Carte de puissance / Power board	E0127C
16	Ventilateur 92x92x38 / Fan 92x92x38	50999
17	Electrovanne / Solenoid valve	70991
18	Support bobine / Reel Holder	71613
19	Grille plastique ventilateur / Plastic fan grill	51011
20	Cordon secteur / Mains cable	21585
21	Verrou affleurant / Flush lock	71003
22	Charnière / Plastic hinge	56239
23	Roue pivotante / Castor wheel	71360
24	Roue de diamètre 200 / Wheel diameter 200	71375
25	Module IGBT / IGBT module	52203
26	Module diodes secondaires / Secondary diode module	52225
27	Module Pont de diodes / Diode Bridge module	52196

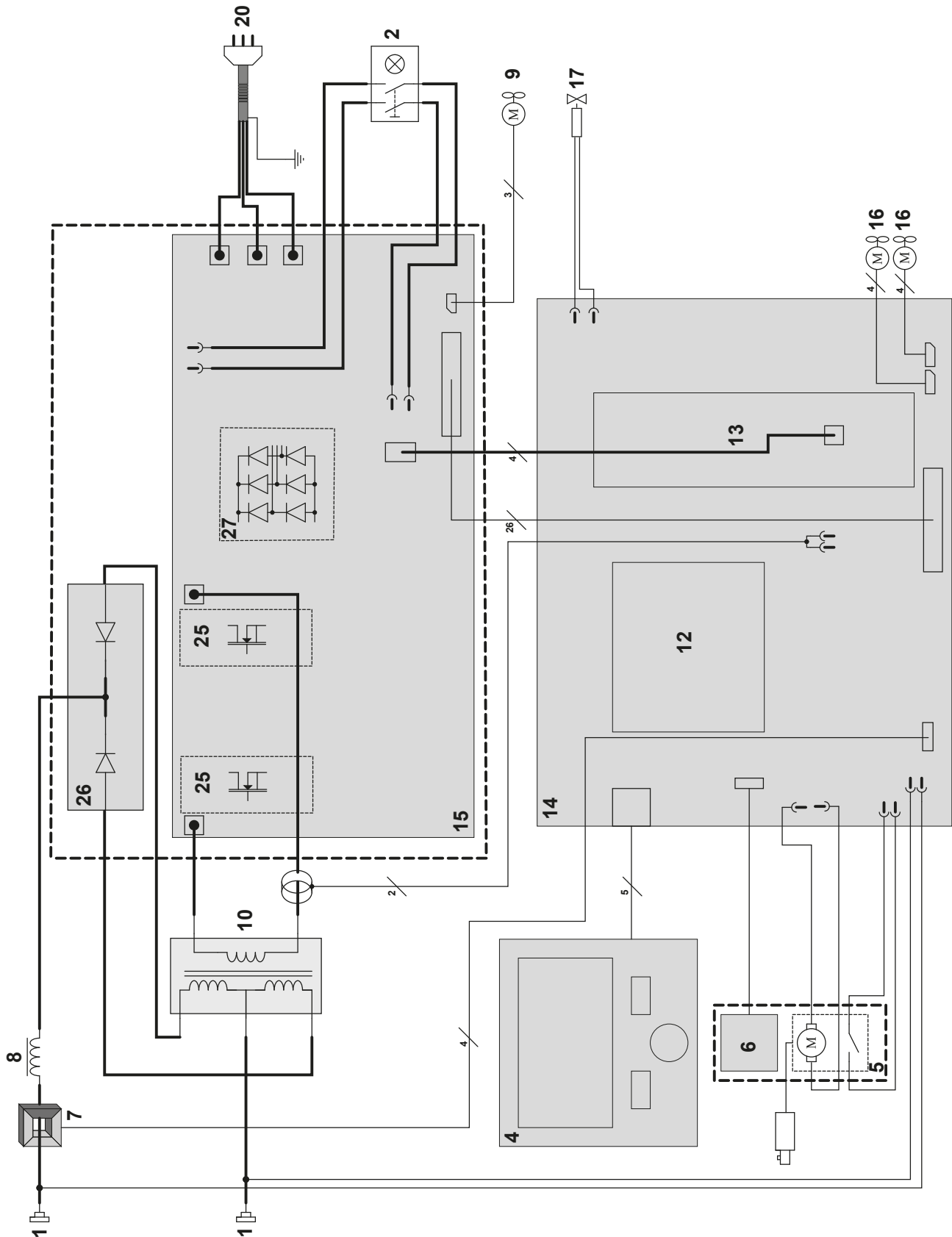
320T



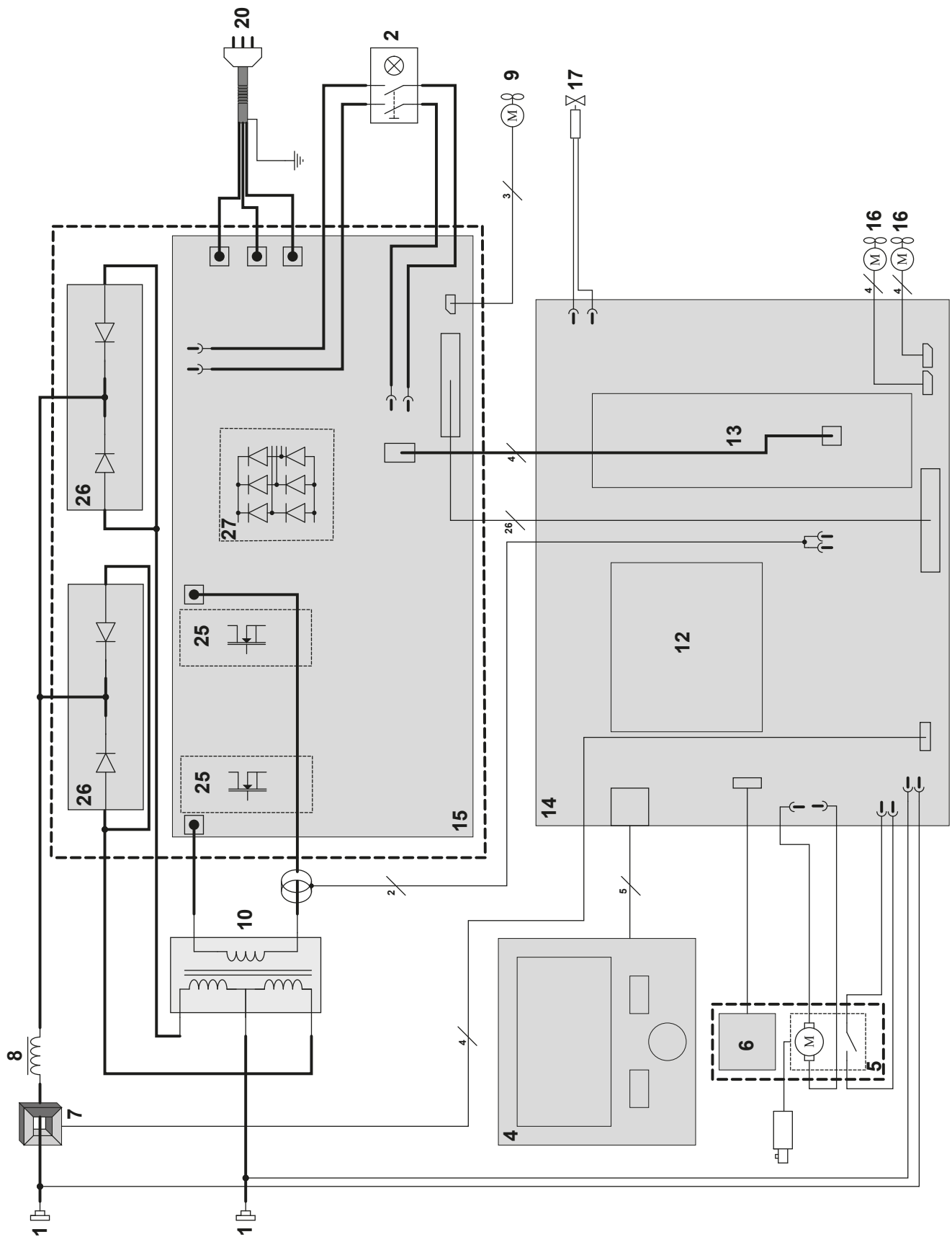
		320T
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2	Interrupteur bipolaire / Two-pole switch	52472
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5	Motodévidoir / Wire feeder motor	51208
6	Carte tachymétrie / Tachometer board	E0153C
7	Capteur de courant / Current sensor	64463
8	Self de sortie / Output Choke	96143
9	Ventilateur 60x60x20 / Fan 60x60x20	51018
10	Transformateur / Transformer	63834
11	Bloc faible courant / Low-current block	E5050
12	Carte contrôle / Control board	E0124C
13	Carte alimentation / Power supply board	E0167C
14	Carte principale / Primary board	E0137C
15	Carte de puissance / Power board	E0136C
16	Ventilateur 92x92x38 / Fan 92x92x38	50999
17	Electrovanne / Solenoid valve	70991
18	Support bobine / Reel Holder	71613
19	Grille plastique ventilateur / Plastic fan grill	51011
20	Cordon secteur / Mains cable	21587
21	Verrou affleurant / Flush lock	71003
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24	Roue de diamètre 200 / Wheel diameter 200	71375
25	Module IGBT / IGBT module	52204
26	Module diodes secondaires / Secondary diode module	52228
27	Module Pont de diodes / Diode Bridge module	52196

CIRCUIT DIAGRAM / SCHALTPLAN / DIAGRAMA ELECTRICO / ЭЛЕКТРИЧЕСКАЯ СХЕМА /
ELEKTRISCHE SCHEMA / SCHEMA ELETTRICO

250T



320T



TECHNICAL SPECIFICATIONS / TECHNISCHE DATEN / ESPECIFICACIONES TÉCNICAS / ТЕХНИЧЕСКИЕ СПЕЦИФИКАЦИИ / TECHNISCHE GEGEVENS / SPECIFICHE TECNICHE

		250T			
Primaire / Primary / Primär / Primario / Первичка / Primaire / Primario					
Tension d'alimentation / Power supply voltage / Versorgungsspannung / Tensión de red eléctrica / Напряжение питания / Voedingsspanning / Tensione di alimentazione	U1	400 V +/- 15%			
Fréquence secteur / Mains frequency / Netzfrequenz / Frecuencia / Частота сети / Frequentie sector / Frecuencia settore		50 / 60 Hz			
Nombre de phases / Number of phases / Anzahl der Phasen / Número de fases / Количество фаз / Aantal fasen / Numero di fase		3			
Fusible disjoncteur / Fuse / Sicherung / Fusible disyuntor / Плавкий предохранитель прерывателя / Zekering hoofdschakelaar / Fusibile disgiuntore		16 A			
Courant d'alimentation effectif maximal / Maximum effective supply current / Corriente de alimentación efectiva máxima / Maximale effectieve voedingsstroom / Corrente di alimentazione effettiva massima / Maksymalny efektywny prąd zasilania	I _{1eff}	16 A			
Courant d'alimentation maximal / Maximum supply current / Corriente de alimentación máxima / Maximale voedingsstroom / Corrente di alimentazione massima / Maksymalny prąd zasilania	I _{1max}	19 A			
Section du cordon secteur / Mains cable section / Sectie netsnoer / Sección del cable de alimentación / Sezione del cavo di alimentazione / Odcinek przewodu zasilającego		4 x 1.5 mm ²			
Puissance active maximale consommée / Maximum active power consumed / Consumo máximo de energía activa / Maximale actieve verbruikte vermogen / Potenza attiva massima consumata / Maksymalny pobór mocy czynnej		8.74 kW			
Consommation au ralenti / Idle consumption / Consumo en ralentizado / Stationair verbruik / Consumo al mínimo / Zużycie na biegu jałowym		21.6 W			
Rendement à I _{2max} / Efficiency at I _{2max} / Eficiencia a I _{2máx} / Rendement bij I _{2max} / Efficienza a I _{2max} / Sprawność przy I _{2max}		86 %			
Facteur de puissance à I _{2max} / Power factor at I _{2max} / Factor de potencia a I _{2max} / Inschakelduur bij I _{2max} / Ciclo di potenza a I _{2max} / Współczynnik mocy przy I _{2max}	λ	0.66			
Classe CEM / EMC class / Classe CEM / Klasse CEM / Classe CEM / Klasa EMC		A			
Secondaire / Secondary / Sekundär / Secundario / Вторичка / Secondair / Secundario		MMA (SMAW)	TIG (GTAW)	MIG-MAG (GMAW-FCAW)	
Tension à vide / No load voltage / Leerlaufspannung / Tensión al vacío / Напряжение холостого хода / Nullastspanning / Tensione a vuoto	U ₀ (TCO)	69 V			
Nature du courant de soudage / Type of welding current / Tipo de corriente de soldadura / Type lasstroom / Tipo di corrente di saldatura / Rodzaj prądu spawania		DC			
Modes de soudage / Welding modes / Modos de soldadura / Lasmodules / Modalità di saldatura / Tryby spawania		MMA, TIG, MIG-MAG			
Courant de soudage minimal / Minimum welding current / Corriente mínima de soldadura / Minimale lasstroom / Corrente minima di saldatura / Minimalny prąd spawania		20 A	20 A	15 A	
Courant de sortie nominal / Rate current output / nominaler Arbeitsstrom / Corriente de salida nominal / Номинальный выходной ток / Nominale uitgangsstroom / Corrente di uscita nominale	I ₂	20 → 250 A	20 → 250 A	15 → 250 A	
Tension de sortie conventionnelle / Conventional voltage output / entsprechende Arbeitsspannung / Условные выходные напряжения / Tensión de salida convencional / Conventionele uitgangsspanning / Tensione di uscita convenzionale	U ₂	20.8 → 30 V	10.8 → 20 V	14.75 → 26.5 V	
Facteur de marche à 40°C (10 min), Norme EN60974-1 / Duty cycle at 40°C (10 min), Standard EN60974-1. * Einschaltdauer @ 40°C (10 min), EN60974-1-Norm / Ciclo de trabajo a 40°C (10 min), Norma EN60974-1/ ПВ% при 40°C (10 мин), Норма EN60974-1. / Inschakelduur bij 40°C (10 min), Norm EN60974-1, Ciclo di lavoro a 40°C (10 min), Norma EN60974-1.	I _{max}	40 %	45 %	45 %	
		60 %	230 A	240 A	230 A
		100 %	200 A	220 A	220 A
Diamètre minimal et maximal du fil d'apport / Minimum and maximum diameter of filler wire / Minimaler und maximaler Durchmesser des Schweißfülldrahtes / Diámetro mínimo y máximo del hilo de soldadura / Минимальный и максимальный диаметр присадочной проволоки / Minimale en maximale diameter van het lasdraad / Diametro minimo e massimo del filo d'apporto	Acier / Steel	0.6 → 1.2 mm			
	Inox / Stainless	0.6 → 1.2 mm			
	Aluminium	0.8 → 1.2 mm			
	Fil fourré / Wire cored	0.9 → 1.6 mm			
	CuSi / CuA	0.8 → 1.0 mm			
Connectique de torche / Torch connector / Brenneranschluss / Conexiones de antorcha / Соединения горелки / Aansluiting toorts / Connettori della torcia		Euro			
Type de galet / Drive roller type / Drahtführungsrolle-Typ / Tipo de rodillo / Тип ролика / Type draadaanvoerrol / Tipo di rullo		B			
Vitesse de dévidage / Motor speed / Motor-Drehzahl / Velocidad de motor / Скорость двигателя / Snelheid motor / Velocità del motore		1.5 → 20 m/min			
Puissance du moteur / Motor power / Leistung des Motors / Potencia del motor / Vermogen van de motor / Potenza del motore		50 W			
Diamètre maximal de la bobine d'apport / Maximum diameter of the supply reel / Maximaler Durchmesser der Schweißfülldrahtspule / Diámetro máximo de la bobina de alambre / Максимальный диаметр проволоочной бобины / Maximale diameter van de spoel / Diametro massimo della bobina d'apporto		Ø 300 mm			
Poids maximal de la bobine de fil d'apport / Maximum weight of the filler wire reel / Maximales Gewicht der Schweißfülldrahtspule / Peso máximo de la bobina de alambre / Максимальный вес проволоочной бобины / Maximale gewicht van de spoel / Peso massimo della bobina del filo d'apporto		18 kg			
Pression maximale de gaz / Maximum gas pressure / Maximaler Gasdruck / Presión máxima del gas / Максимальное давление газа / Maximale gasdruk / Pressione massima del gas		0.5 MPa (5 bar)			
Température de fonctionnement / Functioning temperature / Betriebstemperatur / Temperatura de funcionamiento / Рабочая температура / Gebruikstemperatuur / Temperatura di funzionamento		-10°C → +40°C			
Température de stockage / Storage temperature / Lagertemperatur / Temperatura de almacenaje / Температура хранения / Bewaartemperatuur / Temperatura di stoccaggio		-20°C → +55°C			

Degré de protection / Protection level / Schutzart / Grado de protección / Степень защиты / Beschermingsklasse / Grado di protezione	IP23S
Classe d'isolation minimale des enroulements / Minimum coil insulation class / Clase minima de aislamiento del bobinado / Minimale isolatieklasse omwikkelingen / Classe minima di isolamento degli avvolgimenti / Minimalna klasa izolacji okablowania	B
Dimensions (Lxlxh) / Dimensions (LxWxH) / Abmessungen (Lxbxt) / Dimensiones (Lxlxh) / Размеры (ДхШхВ) / Afmetingen (Lxlxh) / Dimensioni (Lxlxh)	75 x 45 x 80 cm
Poids / Weight / Gewicht / Bec / Peso / Gewicht / Peso	46 kg

*Les facteurs de marche sont réalisés selon la norme EN60974-1 à 40°C et sur un cycle de 10 min. Lors d'utilisation intensive (supérieur au facteur de marche) la protection thermique peut s'enclencher, dans ce cas, l'arc s'éteint et le témoin \downarrow s'allume. Laissez l'appareil alimenté pour permettre son refroidissement jusqu'à annulation de la protection. La source de courant décrit une caractéristique de sortie de type tombante. La source de courant décrit une caractéristique de sortie de type plate. Dans certains pays, U0 est appelé TCO.

*The duty cycles are measured according to standard EN60974-1 at 40°C and on a 10 min cycle. While under intensive use (> to duty cycle) the thermal protection can turn on, in that case, the arc switches off and the indicator \downarrow switches on. Keep the machine's power supply on to enable cooling until thermal protection cancellation. The welding power source describes an external drooping characteristic. The power supply shows a flat output pattern. In some countries, U0 is called TCO.

* Einschaltdauer gemäß EN60974-1 (10 Minuten - 40°C). Bei sehr intensivem Gebrauch (>Einschaltdauer) kann der Thermoschutz ausgelöst werden. In diesem Fall wird der Lichtbogen abgeschaltet und die entsprechende Warnung \downarrow erscheint auf der Anzeige. Das Gerät zum Abkühlen nicht ausschalten und laufen lassen bis das Gerät wieder bereit ist. Das Gerät entspricht in seiner Charakteristik einer Spannungsquelle mit fallender Kennlinie. Die Stromquelle hat eine flache Kennliniencharakteristik. In einigen Ländern wird U0 als TCO bezeichnet.

*Los ciclos de trabajo están realizados en acuerdo con la norma EN60974-1 a 40°C y sobre un ciclo de diez minutos. Durante un uso intensivo (superior al ciclo de trabajo), se puede activar la protección térmica. En este caso, el arco se apaga y el indicador \downarrow se enciende. Deje el aparato conectado para permitir que se enfríe hasta que se anule la protección. La fuente de corriente de soldadura posee una salida de tipo corriente constante. La fuente de corriente describe una característica de salida de tipo plano. En algunos países, U0 se llama TCO.

*ПВ% указаны по норме EN60974-1 при 40°C и для 10-минутного цикла. При интенсивном использовании (> ПВ%) может включиться тепловая защита. В этом случае дуга погаснет и загорится индикатор \downarrow . Оставьте аппарат подключенным к питанию, чтобы он остыл до полной отмены защиты. Аппарат описывает падающую характеристику на выходе. Источник тока имеет выходную характеристику типа «плоская характеристика». В некоторых странах U0 называется TCO.

*De inschakelduur is gemeten volgens de norm EN60974-1 bij een temperatuur van 40°C en bij een cyclus van 10 minuten. Bij intensief gebruik (superieur aan de inschakelduur) kan de thermische beveiliging zich in werking stellen. In dat geval gaat de boog uit en gaat het beveiligingslampje \downarrow gaat branden. Laat het apparaat aan de netspanning staan om het te laten afkoelen, totdat de beveiliging afslaat. Het apparaat heeft een uitgaande dalende eigenschap. De stroombron heeft een vlakke uitgangskarakteristiek. In sommige landen wordt U0 TCO genoemd.

*I cicli di lavoro sono realizzati secondo la norma EN60974-1 a 40°C e su un ciclo di 10 min. Durante l'uso intensivo (> al ciclo di lavoro) la protezione termica può attivarsi, in questo caso, l'arco si spegne e la spia \downarrow si illumina. Lasciate il dispositivo collegato per permetterle il raffreddamento fino all'annullamento della protezione. La fonte di corrente di saldatura presenta una caratteristica di uscita spiovente. La fonte di corrente descrive una caratteristica di uscita di tipo piatto. In alcuni Paesi, U0 viene chiamata TCO.

		320T		
Primaire / Primary / Primär / Primario / Первичка / Primaire / Primario				
Tension d'alimentation / Power supply voltage / Versorgungsspannung / Tensión de red eléctrica / Напряжение питания / Voedingsspanning / Tensione di alimentazione	U1	400 V +/- 15%		
Fréquence secteur / Mains frequency / Netzfrequenz / Frecuencia / Частота сети / Frequentie sector / Frequenza settore		50 / 60 Hz		
Nombre de phases / Number of phases / Anzahl der Phasen / Número de fases / Количество фаз / Aantal fasen / Numero di fase		3		
Fusible disjoncteur / Fuse / Sicherung / Fusible disyuntor / Плавкий предохранитель прерывателя / Zekering hoofdschakelaar / Fusibile disgiuntore		16 A		
Courant d'alimentation effectif maximal / Maximum effective supply current / Corriente de alimentación efectiva máxima / Maximale effectieve voedingsstroom / Corrente di alimentazione effettiva massima / Maksymalny efektywny prąd zasilania	I1eff	15.4 A		
Courant d'alimentation maximal / Maximum supply current / Corriente de alimentación máxima / Maximale voedingsstroom / Corrente di alimentazione massima / Maksymalny prąd zasilania	I1max	26.1 A		
Section du cordon secteur / Mains cable section / Sectie netsnoer / Sección del cable de alimentación / Sezione del cavo di alimentazione / Odcinek przewodu zasilającego		4 x 2.5 mm ²		
Puissance active maximale consommée / Maximum active power consumed / Consumo máximo de energía activa / Maximale actieve verbruikte vermogen / Potenza attiva massima consumata / Maksymalny pobór mocy czynnej		12.2 kW		
Consommation au ralenti / Idle consumption / Consumo en ralentizado / Stationair verbruik / Consumo al minimo / Zużycie na biegu jałowym		21.1 W		
Rendement à I2max / Efficiency at I2max / Eficiencia a I2max / Rendement bij I2max / Efficienza a I2max / Sprawność przy I2max		87 %		
Facteur de puissance à I2max / Power factor at I2max / Factor de potencia a I2max / Inschakelduur bij I2max / Ciclo di potenza a I2max / Współczynnik mocy przy I2max	λ	0.67		
Classe CEM / EMC class / Classe CEM / Klasse CEM / Classe CEM / Klasa EMC		A		
Secondaire / Secondary / Sekundär / Secundario / Вторичка / Secondair / Secundario		MMA (SMAW)	TIG (GTAW)	MIG-MAG (GMAW-FCAW)
Tension à vide / No load voltage / Leerlaufspannung / Tensión al vacío / Напряжение холостого хода / Nulllastspanning / Tensione a vuoto	U0 (TCO)	69 V		
Nature du courant de soudage / Type of welding current / Tipo de corriente de soldadura / Type lasstroom / Tipo di corrente di saldatura / Rodzaj prądu spawania		DC		
Modes de soudage / Welding modes / Modos de soldadura / Lasmodules / Modalità di saldatura / Tryby spawania		MMA, TIG, MIG-MAG		
Courant de soudage minimal / Minimum welding current / Corriente mínima de soldadura / Minimale lasstroom / Corrente minima di saldatura / Minimalny prąd spawania		20 A	20 A	15 A
Courant de sortie nominal / Rate current output / nominal Arbeitsstrom / Corriente de salida nominal / Номинальный выходной ток / Nominale uitgangsstroom / Corrente di uscita nominale	I2	20 → 320 A	20 → 320 A	15 → 320 A
Tension de sortie conventionnelle / Conventional voltage output / entsprechende Arbeitsspannung / Условное выходные напряжения / Tensión de salida convencional / Conventionele uitgangsspanning / Tensione di uscita convenzionale	U2	20.8 → 32.8 V	10.8 → 22.8 V	14.75 → 30 V
* Facteur de marche à 40°C (10 min), Norme EN60974-1 / Duty cycle at 40°C (10 min), Standard EN60974-1. * Einschaltdauer @ 40°C (10 min), EN60974-1-Norm / Ciclo de trabajo a 40°C (10 min), Norma EN60974-1/ ПВ% при 40°C (10 мин), Norma EN60974-1. / Inschakelduur bij 40°C (10 min), Norm EN60974-1, Ciclo di lavoro a 40°C (10 min), Norma EN60974-1.	I _{max}	30 %	35 %	35 %
	60 %	240 A	270 A	260 A
	100 %	200 A	250 A	220 A
Diamètre minimal et maximal du fil d'apport / Minimum and maximum diameter of filler wire / Minimaler und maximaler Durchmesser des Schweißfülldrahtes / Diámetro mínimo y máximo del hilo de soldadura / Минимальный и максимальный диаметр присадочной проволоки / Minimale en maximale diameter van het lasdraad / Diametro minimo e massimo del filo d'apporto	Acier / Steel	0.6 → 1.2 mm		
	Inox / Stainless	0.6 → 1.2 mm		
	Aluminium	0.8 → 1.2 mm		
	Fil fourré / Wire cored	0.9 → 1.6 mm		
	CuSi / CuA	0.8 → 1.0 mm		
Connectique de torche / Torch connector / Brenneranschluss / Conexiones de antorcha / Соединения горелки / Aansluiting toorts / Connettori della torcia		Euro		
Type de galet / Drive roller type / Drahtführungsrolle-Typ / Tipo de rodillo / Тип ролика / Type draadaanvoerrol / Tipo di rullo		B		

Vitesse de dévidage / Motor speed / Motor-Drehzahl / Velocidad de motor / Скорость двигателя / Snelheid motor / Velocità del motore	1.5 → 20 m/min
Puissance du moteur / Motor power / Leistung des Motors / Potencia del motor / Vermogen van de motor / Potenza del motore	50 W
Diamètre maximal de la bobine d'apport / Maximum diameter of the supply reel / Maximaler Durchmesser der Schweißfülldrahtspule / Diámetro máximo de la bobina de alambre / Максимальный диаметр проволочной бобины / Maximale diameter van de spoel / Diametro massimo della bobina d'apporto	Ø 300 mm
Poids maximal de la bobine de fil d'apport / Maximum weight of the filler wire reel / Maximales Gewicht der Schweißfülldrahtspule / Peso máximo de la bobina de alambre / Максимальный вес проволочной бобины / Maximale gewicht van de spoel / Peso massimo della bobina del filo d'apporto	18 kg
Pression maximale de gaz / Maximum gas pressure / Maximaler Gasdruck / Presión máxima del gas / Максимальное давление газа / Maximale gasdruk / Pressione massima del gas	0.5 MPa (5 bar)
Température de fonctionnement / Functioning temperature / Betriebstemperatur / Temperatura de funcionamiento / Рабочая температура / Gebruikstemperatuur / Temperatura di funzionamento	-10°C → +40°C
Température de stockage / Storage temperature / Lagertemperatur / Temperatura de almacenaje / Температура хранения / Bewaartemperatuur / Temperatura di stoccaggio	-20°C → +55°C
Degré de protection / Protection level / Schutzart / Grado de protección / Степень защиты / Beschermingsklasse / Grado di protezione	IP23S
Classe d'isolation minimale des enroulements / Minimum coil insulation class / Clase mínima de aislamiento del bobinado / Minimale isolatieklasse omwikkelingen / Classe minima di isolamento degli avvolgimenti / Minimalna klasa izolacji okablowania	B
Dimensions (Lxlxh) / Dimensions (LxWxH) / Abmessungen (Lxbxt) / Dimensiones (Lxlxh) / Размеры (ДхШхВ) / Afmetingen (Lxlxh) / Dimensioni (Lxlxh)	75 x 45 x 80 cm
Poids / Weight / Gewicht / Bec / Peso / Gewicht / Peso	46 kg

*Les facteurs de marche sont réalisés selon la norme EN60974-1 à 40°C et sur un cycle de 10 min. Lors d'utilisation intensive (supérieur au facteur de marche) la protection thermique peut s'enclencher, dans ce cas, l'arc s'éteint et le témoin \downarrow s'allume. Laissez l'appareil alimenté pour permettre son refroidissement jusqu'à annulation de la protection. La source de courant décrit une caractéristique de sortie de type tombante. La source de courant décrit une caractéristique de sortie de type plate. Dans certains pays, U0 est appelé TCO.

*The duty cycles are measured according to standard EN60974-1 at 40°C and on a 10 min cycle. While under intensive use (> to duty cycle) the thermal protection can turn on, in that case, the arc switches off and the indicator \downarrow switches on. Keep the machine's power supply on to enable cooling until thermal protection cancellation. The welding power source describes an external drooping characteristic. The power supply shows a flat output pattern. In some countries, U0 is called TCO.

* Einschaltdauer gemäß EN60974-1 (10 Minuten - 40°C). Bei sehr intensivem Gebrauch (>Einschaltdauer) kann der Thermoschutz ausgelöst werden. In diesem Fall wird der Lichtbogen abgeschaltet und die entsprechende Warnung \downarrow erscheint auf der Anzeige. Das Gerät zum Abkühlen nicht ausschalten und laufen lassen bis das Gerät wieder bereit ist. Das Gerät entspricht in seiner Charakteristik einer Spannungsquelle mit fallender Kennlinie. Die Stromquelle hat eine flache Kennliniencharakteristik. In einigen Ländern wird U0 als TCO bezeichnet.

*Los ciclos de trabajo están realizados en acuerdo con la norma EN60974-1 a 40°C y sobre un ciclo de diez minutos. Durante un uso intensivo (superior al ciclo de trabajo), se puede activar la protección térmica. En este caso, el arco se apaga y el indicador \downarrow se enciende. Deje el aparato conectado para permitir que se enfríe hasta que se anule la protección. La fuente de corriente de soldadura posee una salida de tipo corriente constante. La fuente de corriente describe una característica de salida de tipo plano. En algunos países, U0 se llama TCO.











*ПВ% указаны по норме EN60974-1 при 40°C и для 10-минутного цикла. При интенсивном использовании (> ПВ%) может включиться тепловая защита. В этом случае дуга погаснет и загорится индикатор \downarrow . Оставьте аппарат подключенным к питанию, чтобы он остыл до полной отмены защиты. Аппарат описывает падающую характеристику на выходе. Источник тока имеет выходную характеристику типа «плоская характеристика». В некоторых странах U0 называется TCO.

*De inschakelduur is gemeten volgens de norm EN60974-1 bij een temperatuur van 40°C en bij een cyclus van 10 minuten. Bij intensief gebruik (superieur aan de inschakelduur) kan de thermische beveiliging zich in werking stellen. In dat geval gaat de boog uit en gaat het beveiligingslampje \downarrow gaat branden. Laat het apparaat aan de netspanning staan om het te laten afkoelen, totdat de beveiliging afslaat. Het apparaat heeft een uitgaande dalende eigenschap. De stroombron heeft een vlakke uitgangskarakteristiek. In sommige landen wordt U0 TCO genoemd.

*I cicli di lavoro sono realizzati secondo la norma EN60974-1 a 40°C e su un ciclo di 10 min. Durante l'uso intensivo (> al ciclo di lavoro) la protezione termica può attivarsi, in questo caso, l'arco si spegne e la spia \downarrow si illumina. Lasciate il dispositivo collegato per permetterne il raffreddamento fino all'annullamento della protezione. La fonte di corrente di saldatura presenta una caratteristica di uscita spiovente. La fonte di corrente descrive una caratteristica di uscita di tipo piatto. In alcuni Paesi, U0 viene chiamata TCO.

SYMBOLS / ZEICHENERKLÄRUNG / ICONOS / СИМВОЛЫ / PICTOGRAMMEN / ICONE

	FR Attention ! Lire le manuel d'instruction avant utilisation. EN Warning ! Read the user manual before use. DE ACHTUNG ! Lesen Sie diese Anleitung sorgfältig durch vor Inbetriebnahme des Geräts. ES ¡Atención! Lea el manual de instrucciones antes de su uso. RU Внимание! Прочтите инструкцию перед использованием. NL Let op! Lees aandachtig de handleiding. IT Attenzione! Leggere il manuale d'istruzioni prima dell'uso. PL Uwaga! Przed użyciem należy uważnie przeczytać instrukcję obsługi.
	FR Symbole de la notice EN User manual symbol DE Symbole in der Bedienungsanleitung ES Símbolo del manual RU Символы, использующиеся в инструкции NL Symbol handleiding IT Simbolo del manuale PL Symbol ulotki
	FR Source de courant de technologie onduleur délivrant un courant continu. EN Undulating current technology based source delivering direct current. DE Invertergleichstromquelle. ES Fuente de corriente de tecnología ondulador que libera corriente continua. RU Источник тока с технологией преобразователя, выдающий постоянный ток. NL Stroombron met UPS technologie, levert gelijkstroom. IT Fonte di corrente con tecnologia inverter che rilascia una corrente continua. PT Fonte de energia da tecnologia do inversor que fornece uma corrente contínua. PL Źródło prądu technologii falownika dostarczającego prąd stały.
	FR Soudage à l'électrode enrobée - MMA (Manual Metal Arc) EN MMA welding (Manual Metal Arc) DE Schweißen mit umhüllter Elektrode (E-Handschweißen) ES Soldadura con electrodo revestido (MMA - Manual Metal Arc) RU Сварка электродом с обмазкой: MMA (Manual Metal Arc) NL Lassen met beklede elektrode - MMA (Manual Metal Arc) IT Saldatura all'elettrodo rivestito - MMA (Manual Metal Arc) PT Soldadura a eletrodo revestido (MMA - Manual Metal Arc) PL Spawanie elektrodami otulonymi (MMA - Manual Metal Arc)
	FR Soudage TIG (Tungsten Inert Gaz) EN TIG welding (Tungsten Inert Gas) DE TIG- (WIG-)Schweißen (Tungsten (Wolfram) Inert Gas) ES Soldadura TIG (Tungsten Inert Gaz) RU Сварка TIG (Tungsten Inert Gaz) NL TIG lassen (Tungsten Inert Gaz) IT Saldatura TIG (Tungsten Inert Gaz) PT Soldadura TIG (Tungsten Inert Gaz) PL Spawanie TIG (Wolfram Gazu Obojętnego)
	FR Soudage à MIG / MAG EN MIG / MAG welding DE MIG / MAG-Schweißen ES Soldadura MIG / MAG RU Сварка MIG / MAG NL MIG/ MAG lassen IT Saldatura MIG / MAG PT Soldagem MIG / MAG PL Spawanie MIG / MAG
	FR Convient au soudage dans un environnement avec risque accru de choc électrique. La source de courant elle-même ne doit toutefois pas être placée dans de tels locaux. EN Suitable for welding in an environment with an increased risk of electric shock. However this a machine should not be placed in such an environment. DE Geeignet für Schweißarbeiten im Bereich mit erhöhten elektrischen Risiken. ES Adaptado para soldadura en lugar con riesgo de choque eléctrico. Sin embargo, la fuente eléctrica no debe estar presente en dichos lugares. RU Подходит для сварки в среде с повышенным риском удара током. В этом случае источник тока не должен находиться в том же самом помещении. NL Geschikt voor het lassen in een ruimte met verhoogd risico op elektrische schokken. De voedingsbron zelf moet echter niet in dergelijke ruimte worden geplaatst. IT Conviene alla saldatura in un ambiente a grande rischio di scosse elettriche. L'origine della corrente non deve essere localizzata in tale posto. PL Nadaje się do spawania w środowisku o zwiększonym ryzyku porażenia prądem. Samo źródło prądu nie może jednak być umieszczone w tego typu pomieszczeniach.
	FR Courant de soudage continu EN Direct welding current DE Gleichschweißstrom ES Corriente de soldadura continua. RU Постоянный сварочный ток NL Gelijkstroom IT Corrente di saldatura continuo PL Stały prąd spawania.
U0	FR Tension assignée à vide EN Open circuit voltage DE Leerlaufspannung ES Tensión asignada en vacío RU Номинальное напряжение холостого хода NL Nullaastspanning IT Tensione nominale a vuoto PL Znamionowe napięcie próżniowe
X(40°C)	FR Facteur de marche selon la norme EN60974-1 (10 minutes - 40°C). EN Duty cycle according to standard EN 60974-1 (10 minutes - 40°C). DE Einschaltdauer: 10 min - 40°C, richtlinienkonform EN60974-1. ES Ciclo de trabajo según la norma EN60974-1 (10 minutos - 40°C). RU ПВ% согласно норме EN 60974-1 (10 минут - 40°C). NL Inschakelduur volgens de norm EN60974-1 (10 minuten - 40°C). IT Ciclo di lavoro conforme alla norma EN60974-1 (10 minuti - 40°C). PL Cykl pracy zgodny z normą EN60974-1 (10 minut - 40 ° C)
I2	FR Courant de soudage conventionnel correspondant EN Corresponding conventional welding current DE Entsprechender Schweißstrom ES Corriente de soldadura convencional correspondiente. RU Соответствующий номинальный сварочный ток NL Corresponderende conventionele lasstroom IT Corrente di saldatura convenzionale. PL Odpowiedni konwencjonalny prąd spawania
A	FR Ampères EN Amperes DE Ampere ES Amperios RU Амперы NL Ampère IT Amper
U2	FR Tensions conventionnelles en charges correspondantes EN Conventional voltage in corresponding loads. DE Entsprechende Arbeitsspannung ES Tensiones convencionales en cargas correspondientes. RU Номинальные напряжения при соответствующих нагрузках. NL Conventionele spanning in corresponderende belasting IT Tensioni convenzionali in cariche corrispondenti PL Ampery
V	FR Volt EN Volt DE Volt ES Voltio RU Вольт NL Volt IT Volt PL Volt
Hz	FR Hertz EN Hertz DE Hertz ES Hercios RU Герц NL Hertz IT Hertz PL Herc
	FR Vitesse du fil EN Wire speed DE Drahtgeschwindigkeit ES Velocidad de hilo RU Скорость проволоки NL Draadsnelheid IT Velocità di filo PL Prędkość drutu
m/min	FR Mètre par minute EN Meter per minute DE Meter pro Minute ES Metro por minuto RU Метр в минуту NL Meter per minuut IT Metro per minuto PL Metr na minutę
	FR Alimentation électrique triphasée 50 ou 60Hz EN Three-phase power supply 50 or 60Hz DE Dreiphasige Netzversorgung mit 50 oder 60Hz ES Alimentación eléctrica trifásica 50 o 60Hz RU Трёхфазное электроснабжение 50 или 60Гц NL Driefasen elektrische voeding 50Hz of 60Hz. IT Alimentazione elettrica trifase 50 o 60Hz PL Trójfazowe zasilanie elektryczne 50 lub 60Hz
U1	FR Tension assignée d'alimentation EN Assigned voltage DE Netzspannung ES Tensión asignada de alimentación eléctrica. RU Номинальное напряжение питания NL Nominale voedingsspanning IT Tensione nominale d'alimentazione PL Napięcie znamionowe zasilania.
I1max	FR Courant d'alimentation assigné maximal (valeur efficace) EN Maximum rated power supply current (effective value). DE Maximaler Versorgungsstrom ES Corriente de alimentación eléctrica asignada máxima (valor eficaz). RU Максимальный сетевой ток (эффективное значение) NL Maximale nominale voedingsstroom (effectieve waarde) IT Corrente d'alimentazione nominale massima (valore effettivo) PL Maksymalny prąd znamionowy zasilania (wartość skuteczna).
I1eff	FR Courant d'alimentation effectif maximal EN Maximum effective power supply current. DE Maximaler effektiver Versorgungsstrom ES Corriente de alimentación eléctrica máxima. RU Максимальный эффективный сетевой ток NL Maximale effectieve voedingsstroom IT Corrente effettivo massimo di alimentazione PL Maksymalny skuteczny prąd zasilania
	FR Matériel conforme aux Directives européennes. La déclaration UE de conformité est disponible sur notre site (voir à la page de couverture). EN Device complies with european directives. The EU declaration of conformity is available on our website (see cover page). DE Gerät entspricht europäischen Richtlinien. Die Konformitätserklärung finden Sie auf unsere Webseite. ES Aparato conforme a las directivas europeas. La declaración de conformidad UE está disponible en nuestra página web (dirección en la portada). RU Устройство соответствует директивам Евросоюза. Декларация о соответствии доступна для просмотра на нашем сайте (ссылка на обложке). NL Apparaat in overeenstemming met de Europese richtlijnen. De verklaring van overeenstemming is te downloaden op onze website (adres vermeld op de omslag). IT Materiale in conformità alle Direttive europee. La dichiarazione di conformità è disponibile sul nostro sito (vedere sulla copertina). PL Urządzenie jest zgodne z dyrektywami europejskimi. Deklaracja Zgodności UE jest dostępna na naszej stronie internetowej (patrz strona tytułowa).

	FR Matériel conforme aux exigences britanniques. La déclaration de conformité britannique est disponible sur notre site (voir à la page de couverture). EN Equipment in compliance with British requirements. The British Declaration of Conformity is available on our website (see home page). DE Das Gerät entspricht den britischen Richtlinien und Normen. Die Konformitätserklärung für Grossbritannien ist auf unserer Internetseite verfügbar (siehe Titelseite). ES Equipo conforme a los requisitos británicos. La Declaración de Conformidad Británica está disponible en nuestra página web (véase la portada). RU Материал соответствует требованиям Великобритании. Заявление о соответствии для Великобритании доступно на нашем веб-сайте (см. главную страницу). NL Materiaal conform aan de Britse eisen. De Britse verklaring van overeenkomst is beschikbaar op onze website (zie omslagpagina). IT Materiale conforme alle esigenze britanniche. La dichiarazione di conformità britannica è disponibile sul nostro sito (vedere pagina di copertina). PL Wyposażenie spełnia wymogi brytyjskie. Brytyjska Deklaracja Zgodności jest dostępna na naszej stronie internetowej (patrz strona tytułowa).
	FR Matériel conforme aux normes Marocaines. La déclaration C _α (CMIM) de conformité est disponible sur notre site (voir à la page de couverture). EN Equipment in conformity with Moroccan standards. The declaration C _α (CMIM) of conformity is available on our website (see cover page). DE Das Gerät entspricht die marokkanischen Standards. Die Konformitätserklärung C _α (CMIM) ist auf unserer Webseite verfügbar (siehe Titelseite). ES Equipamiento conforme a las normas marroquíes. La declaración de conformidad C _α (CMIM) está disponible en nuestra página web (ver página de portada). RU Товар соответствует нормам Марокко. Декларация C _α (CMIM) доступна для скачивания на нашем сайте (см на титульной странице). NL Dit materiaal voldoet aan de Marokkaanse normen. De verklaring C _α (CMIM) van overeenstemming is beschikbaar op onze internet site (vermeld op de omslag). IT Materiale conforme alle normative marocchine. La dichiarazione C _α (CMIM) di conformità è disponibile sul nostro sito (vedi scheda del prodotto). PL Urządzenie zgodne ze standardami marokańskimi. Deklaracja zgodności C _α (CMIM) jest dostępna na naszej stronie internetowej (patrz strona tytułowa).
IEC 60974-1 IEC 60974-10 Class A	FR L'appareil respecte la norme EN60974-1 et EN 60971-10 appareil de classe A. EN The device is compliant with standard EN60974-1 and EN60971-10 class A device. DE Das Gerät erfüllt die Norm EN 60974-1 und EN 60971-10 der Geräteklasse A ES El aparato se ajusta a la norma EN60974-1 y EN 60971-10, aparato de clase A. RU Аппарат соответствует нормам EN60974-1 и EN60971-10 аппарат класса А. NL Dit klasse A apparaat voldoet aan de EN60974-1 en EN60971-10 normen. IT Il dispositivo rispetta la norma EN60974-1 e EN 60971-10 dispositivo classe A. PL Urządzenie jest zgodne z normami EN60974-1 i EN60971-10 dla urządzeń klasy A
IEC 60974-5	FR L'appareil respecte la norme EN 60974-5. EN This product is compliant with standard EN 60974-5. DE Das Gerät entspricht der Norm EN 60974-5. ES El aparato es conforme a las normas EN60974-5. RU Аппарат соблюдает нормы EN 60974-5. NL Het apparaat voldoet aan de norm EN 60974-5. IT Il dispositivo rispetta la norma EN 60974-5. PL Urządzenie spełnia wymagania normy EN 60974-5.
	FR Ce matériel faisant l'objet d'une collecte sélective selon la directive européenne 2012/19/UE. Ne pas jeter dans une poubelle domestique ! EN This hardware is subject to waste collection according to the European directives 2012/19/EU. Do not throw out in a domestic bin ! DE Für die Entsorgung Ihres Gerätes gelten besondere Bestimmungen (sondermüll) gemäß europäische Bestimmung 2012/19/EU. Es darf nicht mit dem Hausmüll entsorgt werden! ES Este material requiere una recogida de basuras selectiva según la directiva europea 2012/19/UE. ¡No tirar este producto a la basura doméstica! RU Это оборудование подлежит переработке согласно директиве Евросоюза 2012/19/UE. Не выбрасывать в общий мусоросборник! NL Afzonderlijke inzameling vereist volgens de Europese richtlijn 2012/19/UE. Gooi het apparaat niet bij het huishoudelijk afval ! IT Questo materiale è soggetto alla raccolta differenziata seguendo la direttiva europea 2012/19/UE. Non smaltire con i rifiuti domestici! PL Urządzenie to podlega selektywnej zbiórce odpadów zgodnie z dyrektywą UE 2012/19/UE. Nie wyrzucać do zwykłego kosza!
	FR Produit recyclable qui relève d'une consigne de tri. EN This product should be recycled appropriately DE Recyclingprodukt, das gesondert entsorgt werden muss. ES Producto reciclable que requiere una separación determinada. RU Этот аппарат подлежит утилизации. NL Product recyclebaar, niet bij het huishoudelijk afval gooien IT Prodotto riciclabile soggetto a raccolta differenziata. PL Produkt nadaje się do recyklingu zgodnie z instrukcjami sortowni.
	FR Marque de conformité EAC (Communauté économique Eurasienne) EN EAEC Conformity marking (Eurasian Economic Community). DE EAC-Konformitätszeichen (Eurasische Wirtschaftsgemeinschaft) ES Marca de conformidad EAC (Comunidad económica euroasiática). RU Знак соответствия EAC (Евразийское экономическое сообщество) NL EAC (Euraziatische Economische Gemeenschap) merkteken van overeenstemming IT Marca di conformità EAC (Comunità Economica Eurasiatica) PL Znak zgodności EAC (Euroazjatyckiej wspólnoty Gospodarczej)
	FR Information sur la température (protection thermique) EN Temperature information (thermal protection) DE Information zur Temperatur (Thermoschutz) ES Información sobre la temperatura (protección térmica) RU Информация по температуре (термозащита). NL Informatie over de temperatuur (thermische beveiliging) IT Informazioni sulla temperatura (protezione termiche) PL Informacja o temperaturze (ochrona termiczna)
	FR Entrée de gaz EN Gas input DE Gaseingang ES Entrada de gas RU Подача газа NL Ingang gas IT Entrata di gas
	FR Sortie de gaz EN Gas output DE Gasausgang ES Salida de gas RU Выход газа NL Uitvoer gas IT Uscita di gas PL Wylot gazu
 START	FR Marche (mise sous tension) EN On (power on) DE Ein (Einschalten) ES On (encendido) RU Вкл (включение) NL Aan (stroom aan) IT On (accensione) PT Ligar (ligar) PL On (accensione) DA On (tændt)
 STOP	FR Arrêt (mise hors tension) EN Off (power off) DE Aus (Ausschalten) ES Off (apagado) RU Выкл (выключение) NL Uit (stroom uit) IT Off (spegnimento) PT Desligar (desligar) PL Off (spegnimento) DA Off (slukket)
 OFF	FR Le dispositif de déconnexion de sécurité est constitué par la prise secteur en coordination avec l'installation électrique domestique. L'utilisateur doit s'assurer de l'accessibilité de la prise EN The safety disconnection device is a combination of the power socket in coordination with the electrical installation. The user has to make sure that the plug can be reached. DE Die Stromunterbrechung erfolgt durch Trennen des Netzsteckers vom häuslichen Stromnetz. Der Gerätanwender sollte den freien Zugang zum Netzstecker immer gewährleisten. ES El dispositivo de desconexión de seguridad se constituye de la toma de la red eléctrica en coordinación con la instalación eléctrica doméstica. El usuario debe asegurarse de la accesibilidad de la toma de corriente. RU Устройство безопасности отключения состоит из вилки, соответствующей домашней электросети. Пользователь должен обеспечить доступ к вилке. NL De veiligheidsontkoppeling van het apparaat bestaat uit de stekker samen met de elektrische installatie. De gebruiker moet zich ervan verzekeren dat de elektrische aansluitingen goed toegankelijk zijn. IT Il dispositivo di scollegamento di sicurezza è costituito dalla presa in coordinazione con l'installazione elettrica domestica. L'utente deve assicurarsi dell'accessibilità della presa PT O dispositivo de desconexão de segurança é constituído pela tomada de rede em coordenação com a instalação elétrica doméstica. O usuário deve garantir a acessibilidade da tomada. PL Rozłącznik bezpiecznikowy składa się z wtyczki sieciowej skoordynowanej z domową instalacją elektryczną. Użytkownik musi upewnić się, że ma odpowiedni dostęp do gniazdka.

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