ISTRUZIONI PER L'USO
INSTRUCTION MANUAL
BETRIEBSANWEISUNG
MANUEL D'INSTRUCTIONS
INSTRUCCIONES DE USO
MANUAL DE INSTRUÇÕES

GEBRUIKSAANWIJZING
BRUKSANVISNING
BRUGERVEJLEDNING
BRUKSANVISNING
KÄYTTÖOHJEET
ΟΔΗΓΙΕΣ ΧΡΗΣΗΣ

Genesis 200 AC-DC/TLH
Genesis 202 AC-DC/TLH

CE

ENGLISH

USE AND MAINTENANCE MANUAL

This manual is an integral part of the unit or machine and must accompany it when it changes location or is resold.
The user must assume responsibility for maintaining this manual intact and legible at all times.
SELCO s.r.l. reserves the right to modify this manual at any time without notice.

Edition '02

CONFORMITY CERTIFICATE CE

Company

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dichiara che l'apparecchio tipo **GENESIS 200 AC-DC/TLH**
GENESIS 202 AC-DC/TLH

è conforme alle direttive: **73/23/CEE**
89/336 CEE
92/31 CEE
93/68 CEE

e che sono state applicate le norme: **EN 50199**
EN 60974-1

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Onara di Tombolo (PADOVA) Rappresentante legale

Lino Frasson

CONTENTS

SYMBOLS

Imminent danger of serious bodily harm and dangerous behaviours that may lead to serious bodily harm.

Important advice to be followed in order to avoid minor injuries or damage to property.

The notes preceded by this symbol are mainly technical and facilitate operations.

1.0 SAFETY

WARNING

Prior to performing any operation on the machine, make sure that you have thoroughly read and understood the contents of this manual.
Do not perform modifications or maintenance operations which are not prescribed.
For any doubt or problem regarding the use of the machine, even if not described herein, consult qualified personnel.
The productor cannot be held responsible for damage to persons or property caused by the operator's failure to read or apply the contents of this manual.

1.1 Operator and other persons' protection

The welding process is a noxious source of radiations, noise, heat and gas emissions. Persons fitted with pacemakers must consult their doctor before undertaking arc welding or plasma cut operations. If the above prescription is not observed, the manufacturer accepts no liability for any damages sustained in the event of an accident.

Personal protection:

- Do not wear contact lenses!!!
- Keep a first aid kit ready for use.
- **Do not underestimate any burning or injury.**
- Wear protective clothing to protect your skin from the arc rays, sparks or incandescent metal, and a helmet or a welding cap.
- Wear masks with side face guards and suitable protection filter (at least NR10 or above) for the eyes.
- Use headphones if dangerous noise levels are reached during the welding.
  Always wear safety goggles with side guards, especially during the manual or mechanical removal of welding slags.
  If you feel an electric shock, interrupt the welding operations immediately.

Other persons' protection:

- Position a fire-retardant partition to protect the surrounding area from rays, sparks and incandescent slags.
- Advise any person in the vicinity not to stare at the arc or at the incandescent metal and to get an adequate protection.
- If the noise level exceeds the limits prescribed by the law, delimit the work area and make sure that anyone getting near it is protected with headphones or earphones.

1.2 Fire/explosion prevention

The welding process may cause fires and/or explosions.

- Compressed gas cylinders are dangerous; consult the supplier before handling them.
  Protect them from:
  - direct exposure to sun rays;
  - flames;
  - sudden changes in temperature;
  - very low temperatures.
  Compressed gas cylinders must be fixed to the walls or to other supports, in order to prevent them from falling.
- Clear the work area and the surrounding area from any infiammable or combustible materials or objects.
- Position a fire-fighting device or material near the work area.
- Do not perform welding or cutting operations on closed containers or pipes.
- If said containers or pipes have been opened, emptied and carefully cleaned, the welding operation must in any case be performed with great care.
- Do not weld in places where explosive powders, gases or vapours are present.
- Do not perform welding operations on or near containers under pressure.
- Don't use this machine to defrost pipes.

1.3 Protection against fumes and gases

Fumes, gases and powders produced during the welding process can be noxious for your health.

- **Do not use oxygen for the ventition.**
- Provide for proper ventilation, either natural or forced, in the work area.
- In case of welding in extremely small places the work of the operator carrying out the weld should be supervised by a colleague standing outside.
- Position gas cylinders outdoors or in places with good ventilation.
- Do not perform welding operations near degreasing or painting stations.

1.4 Positioning the power source

Keep to the following rules:

- Easy access to the equipment controls and connections must be provided.
- Do not position the equipment in reduced spaces.
- Do not place the generator on surfaces with inclination exceeding 10° with respect to the horizontal plane.

1.5 Installing the apparatus

- Comply with the local safety regulations for the installation and carry out the maintenance service of the machine according to the constructor's directions.
- Any maintenance operation must be performed by qualified personnel only.
- The connection (series or parallel) of the generators is prohibited.
- Before operating inside the generator, disconnect the power supply.
- Carry out the routine maintenance on the equipment.
- Make sure that the supply mains and the earthing are sufficient and adequate.
- The earth cable must be connected as near the area to be welded as possible.
- Take the precautions relevant to the protection degree of the power source.
- Before welding, check the condition of the electric cables and of the torch, and if they are damaged repair or change them.
- Neither get on the material to be welded, nor lean against it.
- **The operator must not touch two torches or two electrode holders at the same time.**

- **The manufacturer accepts no liability if the above prescription is not duly observed and complied with at all times.**

2.0 ELECTROMAGNETIC COMPATIBILITY (EMC)

WARNING

This device is built in compliance with the indications contained in the harmonized standard EN50199, to which the operator must refer for the use of this apparatus.

- **Install and use the apparatus keeping to the instructions given in this manual.**
- **This device must be used for professional applications only, in industrial environments It is important to remember that it may be difficult to ensure the electromagnetic compatibility in other environments.**

2.1 Installation, use and area examination

- The user must be an expert in the sector and as such is responsible for installation and use of the equipment according to the manufacturer's instructions.
  If any electromagnetic disturbance is noticed, the user must soave the problem, if necessary with the manufacturer's technical assistance.
- In any case electromagnetic disturbances must be reduced until they are not a nuisance any longer.
- Before installing this apparatus, the user must evaluate the potential electromagnetic problems that may arise in the surrounding area, considering in particular the health conditions of the persons in the vicinity, for example of persons fitted with pacemakers or hearing aids.

2.2 Emission reduction methods

MAINS POWER SUPPLY

- **The welding power source must be connected to the supply mains according to the manufacturer's instructions.**

In case of interference, it may be necessary to take further precautions like the filtering of the mains power supply.
It is also necessary to consider the possibility to shield the power supply cable.

WELDING POWER SOURCE MAINTENANCE

The welding power source needs routine maintenance according to the manufacturer's instructions.
When the equipment is working, all the access and operating doors and covers must be closed and fixed.
The welding power source must not be modified in any way.

WELDING AND CUTTING CABLES

The welding cables must be kept as short as possible, positioned near one another and laid at or approximately at ground level.

EQUIPOTENTIAL CONNECTION

The earth connection of all the metal componente in the welding installation and near it must be taken in consideration.
However, the metal componente connected to the work-piece will increase the risk of electric shock for the operator, if he touches said metal componente and the electrode at the same time. Therefore, the operator must be insulated from all the earthed metal componente.
The equipotential connection must be made according to the national regulations.

EARTHING THE WORKPIECE

When the workpiece is not earthed for electrical safety reasons or due to its size and position, the earthing of the workpiece may reduce the emissione. It is important to remember that the earthing of the workpiece should neither increase the risk of accidents for the operators, nor damage other electric equipment.
The earthing must be made according to the national regulations.

SHIELDING

The selective shielding of other cables and equipment present in the surrounding area may reduce the problems due to interference. The shielding of the entire welding installation can be taken in consideration for special applications.

3.0 RISK ANALYSIS

Risks posed by the machine	Solutions adopted to pervent them
Risk of wrong installation.	A manual with the instructions for use has been produced for this purpose.
Electrical risks.	Application of the **EN 60974-1** Standard.
Risks connected with electromagnetic disturbances produced by the welding power source and induced on the welding power source.	Application of the **EN 50199** Standard.

The contents of this chapter are of vital importance and therefore necessary for operation of the warranties. The manufacturer accepts no liability if the operator fails to observe the above precautions and instructions.

4.0 MACHINE DESCRIPTION

The Genesis 200 TLH and Genesis 202 TLH power sources offer excellent performance in the following welding procedures:
- MMA;
- TIG with remote arc striking with high frequency (TIG HF-START) and gas delivery control via torch button;
- TIG with contact start with reduction of short circuit current (TIG LIFT-START) and gas delivery control via torch button.

The Genesis 200 AC-DC and Genesis 202 AC-DC units also permit welding in TIG AC with square, sinusoidal and triangular wave.
In inverter welders the output current is insensitive to variations in the power supply voltage and length of the arc and is perfectly levelled, providing best weld quality.
The power source features the following devices:
- a positive socket (+), a negative socket (-) and a central socket for connection of the TIG torch
- a front control panel with socket for remote controls
  - RC16 potentiometer remote control for MMA and TIG welding
  - RC12 pedal remote control for TIG welding
- a rear control panel with gas socket.

The Genesis 200/202 TLH e 200/202 AC/DC can be supplied with WU15 cooling unit for liquid cooling of the TIG torch.
The Genesis 202 TLH and Genesis 202 AC-DC can be connected to 115Vac or 230Vac single phase power supply voltages.
An electronic circuit automatically changes the protections, the output current ranges and the characteristics of the generator.

When the Genesis 202 TLH and Genesis 202 AC-DC are powered at 115Vac, the cooling unit is de-activated.

4.1 Front control panel

4.1.1 FP106 front control panel for Genesis 200 TLH and Genesis 202 TLH (fig. 1)

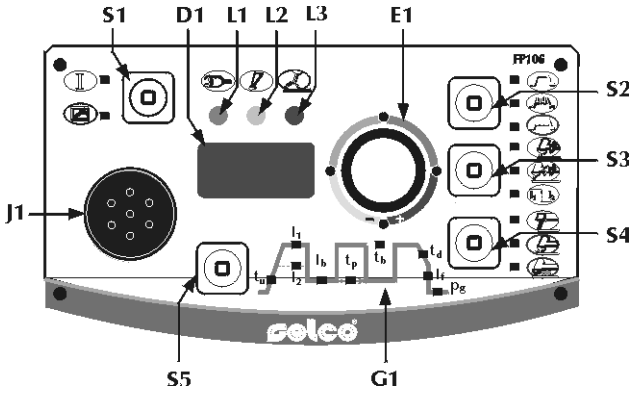


Fig. 1

* **L1: Power on: green led**
Comes on when the ignition switch on the rear panel (Fig. 3) "**I1**" is in position "**I**". Indicates that the system is on and powered.

* **L2: Protection device: yellow led**
Indicates cut-in of the thermal protection device or protection due to incorrect power supply voltage. With **L2** on, an alarm code blinks on **D1**. The power source remains connected to the mains but does not deliver power at the output. If an overtemperature has occurred, **L2** remains on until the internal temperatures have returned to normal; in this case, leave the power source on and wait for the welder to cool. In the event of alarms connected to the mains voltage, press any button to resume operations.

* **Alarm codes**
The following alarms are provided:
10 thermal alarm
11 power supply voltage too high (only AC-DC)
12 power supply voltage too low (only AC-DC)
20 serial memory error (chip ST24C16 8 pin)
24 the remote control has not yet been calibrated; this happens when testing has not been performed or there are problems with the serial memory.
Solution: enter parameter 66 with a remote control connected and set to scale end.
25 serial memory fault: storage not performed correctly. It may be necessary to replace the non-volatile memory (chip ST24C16 8 pin).

* **L3: Voltage output (work): red led**
Indicates presence of voltage at the output.

* **Display D1**
Displays the welding current or value of the welding parameter chosen via **S5** on the graph **G1**. It is used to show alarm and error messages and to enter the set-up parameters.

* **E1: Encoder for entering the welding current, welding parameters and set-up values**
Allows you to change the value shown in **D1** of the parameter selected via **S5** in graph **G1** (also during welding).
Allows you to enter the required set-up line and vary the value.
Allows you to continuously adjust the welding current both in TIG and MMA. (This current remains unchanged during welding when the power supply and welding conditions vary within the ranges declared in the technical specifications).
In MMA the presence of HOT-START and ARC-FORCE means that the mean output current can be higher than the one set.

* **S1: Current regulation system key**
Selects the welding current regulation system:
- from front panel in "internal" mode
- from remote control in "external" mode

In this case via **E1** it is possible to enter the maximum current value that can be selected via the remote control.

* **J1: 7-pole military standard connector**
For connection of the remote controls RC16 and RC12.

* **S2: Key for selecting type of TIG welding current**
- CONSTANT current with or without SLOPES.
- PULSED current with or without SLOPES.
- MEDIUM FREQUENCY current with or without SLOPES.

Switch-on of the led at the side of the symbol confirms the selection.

* **S3: Key for selecting control mode in TIG**
- 2-stroke welding (2T)
- 4-stroke welding (4T)
- 2-level welding (BILEVEL)

Switch-on of the led at the side of the symbol confirms the selection.
With the RC12 pedal control, only the 2T mode is possible.
In **2-stroke**, when the button is pressed the gas flows and the arc is struck; when the button is released, the current goes to zero in the slope-down time; once the arc is off, the gas flows for the post-gas time.

In **4-stroke**, the first time the button is pressed the gas flows for the manual pre-gas time; when the button is released, the arc is struck. If the button is pressed again and definitively released, the current slope-down and post-gas time begin.
In **BILEVEL** the welder can weld with 2 different currents previously set via **S5**.
The first time the torch button is pressed, the pre-gas time is run, the arc is struck and welding is performed with the initial current.
The first time it is released, slope-up to current "**I1**" occurs. If the welder presses and quickly releases the button, the machine will go to "**I2**"; by pressing and quickly releasing the button it returns to "**I1**" and so on.
If the button is pressed for longer, the current slope-down begins which leads to the final current.
When the button is released the arc goes out while the gas continues to flow for the post-gas time.

* **S4: Welding procedure selection key**
Permits selection of the welding procedure.
Switch-on of the led at the side of the symbol confirms the selection.
Procedures:
- MMA (electrode)
- TIG LIFT-ARC start
- TIG HIGH FREQUENCY start

* **S5: SET-UP/parameters key**
Permits access to the SET-UP and welding parameter values.
When pressed at switch-on, it permits access to the set-up parameters while the software version appears on **D1**.
If pressed after the end of the welder switch-on procedure, it selects in sequence the welding parameters presented in the graph **G1** with value shown by **D1** and variable with **E1**.

Tu	Slope-up time
I	Welding current
Ib	Basic current in pulsed and medium frequency welding
Tp	Peak time in pulsed and medium frequency welding
Tb	Basic time in pulsed and medium frequency welding
Td	Slope-down time
If	Final current
Pg	Post-gas time
I2	Second welding current in BILEVEL

When in MEDIUM FREQUENCY operation, the leds Tp and Tb come on simultaneously and the pulse frequency value appears on the display D1.

4.1.2 FP122 front control panel for Genesis 200 AC-DC and Genesis 202 AC-DC (fig. 2)

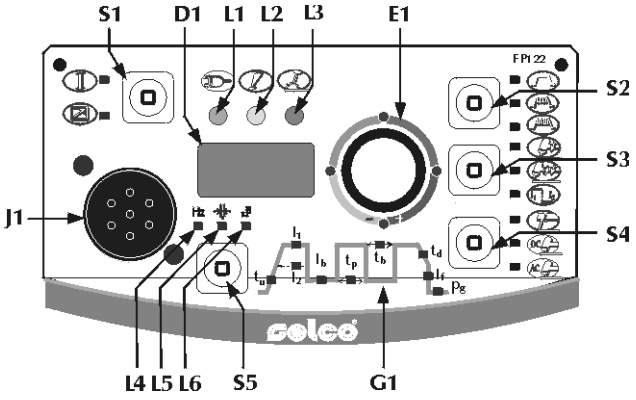


Fig.2

* **L1: Power on: green led**
See 4.1.1
* **L2: Protection device: yellow led**
See 4.1.1
* **Alarm codes**
See 4.1.1
* **L3: Voltage output (work): red led**
See 4.1.1
* **Display D1**
See 4.1.1
* **E1: Encoder for entering the welding current, welding parameters and set-up values**
See 4.1.1
* **S1: Current regulation system key**
See 4.1.1
* **J1: 7-pole military standard connector**
See 4.1.1
* **S2 : Key for selecting type of TIG welding current.**
Key for selecting type of TIG welding current
- CONSTANT current with or without SLOPES.
- PULSED current with or without SLOPES.
- MEDIUM FREQUENCY current with or without SLOPES.
Switch-on of the led at the side of the symbol confirms the selection.
The MEDIUM FREQUENCY function is not enabled in AC.
* **S3: Key for selecting control mode in TIG**
See 4.1.1
* **S4: Welding procedure selection key.**
Permits selection of the welding procedure.
Switch-on of the led at the side of the symbol confirms the selection.
Procedures:
- MMA (electrode)
- TIG DC
- TIG AC
* **S5: SET-UP/parameters key**
Permits access to the SET-UP and welding parameter values.
When pressed at switch-on, it permits access to the set-up parameters while the software version appears on **D1**.
If pressed after the end of the welder switch-on procedure, it selects in sequence the welding parameters presented in the graph **G1** with value shown by **D1** and variable with **E1**.

Tu Slope-up time
I Welding current
Ib Basic current in pulsed and medium frequency welding
Tp Peak time in pulsed and medium frequency welding
Tb Basic time in pulsed and medium frequency welding
Td Slope-down time
If Final current
Pg Post-gas time
I2 Second welding current in BILEVEL

When in MEDIUM FREQUENCY operation, the leds Tp and Tb come on simultaneously and the pulse frequency value appears on the display D1.

By keeping the key "**S5**" pressed for 1 second, you access adjustment of the following parameters:
- frequency in AC (Led **L4**);
- electrode diameter setting in AC (Led **L5**);
  by setting this value on the power source the Genesis 200/202 AC-DC can optimise (using the FUZZY LOGIC) the welding start parameters in AC;
- balance AC (Led **L6**); adjustment in % of the positive wave value during the AC period.
  A higher value indicates greater cleaning action of the electric arc on the weld pool; a lower value indicates greater penetration and melting action of the arc.

4.1.3 Set-up parameters

When **S5** is pressed after switch-on, the set-up menu is accessed (confirmed by a central "0" on the display **D1**) while the software version appears on **D1**. Via **E1** the set-up line is varied, via **S5** the required line is confirmed, via **E1** the value is varied, via **S5** the value is confirmed and so on.

0 Quit and save
1 Initial current as a percentage with respect to welding current
2 Pre-gas time
3 HOT-START percentage
4 ARC-FORCE percentage
5 Waveform in AC (only G200/202 AC-DC)

The following table shows the correspondence between the numbers and half waves:

Number	Half wave -	Half wave +
0	Sine	Sine
1	Triangle	Triangle
2	Square	Square
3	Sine	Triangle
4	Sine	Square
5	Triangle	Sine
6	Triangle	Square
7	Square	Sine
8	Square	Triangle

6 Min current value in TIG EXT
7 Max current value in TIG EXT welding
8 LIFT start in TIG DC (1) or HF start (0) (only G200 AC/DC) (default =0)
9 Reset of all parameters
12 Welding in DC+ (1) or DC - (0) (only G200/202 AC-DC) (default =0)
14 Pulsed TIG basic I setting mode (0=in amps, 1=percentage of peak I) (default=0)
23 TIMER mode setting
(23 = 0: 2-stage mode, 23 ≠ 0: welding time)
99 Reset of all parameters

If we enter lines "9" and "99" and press S5, all the set-up parameters will go to the factory-set values.

To quit set-up and save the set values, return to line 0 and press S5.

Parameter	*um*	*Notes*	*min*	*max*	*predef.*
Pre-gas time	s	Can be entered only from set-up	0.0	25.0	0.1
Initial current	%	Percentage of welding current, only set-up	2	200	50
Slope-up time tu	s	Can be entered from front panel	0.0	10.0	0.0
Welding curr. I	A	Can be entered from front panel	6	200	100
Back curr. Ib	A (%)	Only pulsed, adjustable from front panel	6 (1%)	200 (100%)	6 (50%)
Pulse time tp	s	Only pulsed slow, adjustable from front panel	0.02 (AC 0.2)	2.00	0.24
Frequency tp & tb	Hz	Only in fastpulse, adjustable from front panel	20	500	100
AC frequency	Hz	Adjustable from panel (only AC/DC)	20	100	50
AC balance	%	Adjustable from panel (only AC/DC)	15	65	35
AC waveforms	n°	Selectable from set-up (only AC/DC)	0	8	2
Electrode diameter	mm	Selectable from panel (only AC/DC)	1.0	5.0	2.4
Back time tb	s	Only pulsed slow, adjustable from front panel	0.02 (AC 0.2)	2.00	0.24
Slope-down time td	s	Adjustable from front panel	0.0	10.0	0.0
Final current If	A	Adjustable from front panel	6	200	8
Post-gas time	s	Adjustable from front panel	0.0	25.0	5.0
Current in MMA	A	Adjustable from front panel	6	180	100
I max in external mode	A	Adjustable from front panel and from set-up	6	200	200
I min in external mode	A	Can be entered only from set-up	6	200	6
I2 in BILEVEL	A	Adjustable from front panel	6	200	50
Hot-Start	%	MMA, can be entered only from set-up	0	100	80
Arc-force	%	MMA, can be entered only from set-up	0	100	30

4.2 Rear control panel (Fig. 3)

*** I1: Ignition switch**

Controls electric ignition of welder.
It has two positions: "**O**" off and "**I**" on.

WARNING

*** With I1 set to the position "I" on, the welder is operational and voltage is present between the positive (+) and negative sockets (-) on the electrode. In TIG the welder requires the pedal or torch button start for voltage to be present between the sockets (+) and (-).**

*** When the welder is connected to the mains, even with I1 set to the "O" position some of the internal parts will be live. Carefully follow the warnings given in this manual.**

*** 1: Power supply cable**

*** 2: Gas fitting**

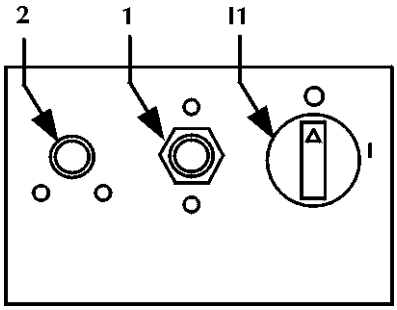


Fig.3

4.3 Operation

The machine stores the last welding status and displays it when switched back on.

* Set the ignition switch **I1** to **I**; switch-on of the power led **L1** (green led) confirms that the system is powered.

* The display **D1** shows the figure 200/202 and all the leds come on (for control) for 3 seconds. The leds on the front panel then go out and **D1** shows the welder software version (e.g. 1.0) for 4 seconds; during this time it is possible:
- to enter the SET-UP mode by pressing the key **S5**
- or proceed with welding (or parameter variation).

* If chosen, entry to the SET-UP mode is confirmed by a central **0** on the display **D1**:
- Turn the potentiometer **E1**: the numbers corresponding to the parameters appear (in sequence) on the display **D1**; stop on the parameter required and press S5. Via parameter (9) all the modifications performed in the SET-UP are cancelled and you return to the standard values set by SELCO.
- The number on the display **D1** is replaced by the value of the parameter which is modified via the potentiometer **E1**.

* If it is necessary to modify the welding parameter values of the graph **G1**:
- Let 4 seconds elapse from switch-off of the panel leds; led **I** (welding current) will remain on in the graph.
- Press **S5**; every time it is pressed one of the leds in the graph **G1** will come on (in clockwise sequence) and the value of the related parameter will appear on the display **D1**; stop on the parameter required.
- Turn the potentiometer **E1** and modify the parameter value.
- Press the **S5** SET-UP/parameters key again to go on to another parameter or wait 5 seconds (led "**I**" in the graph **G1** will automatically come back on).

The machine is always ready to weld and the status is indicated by the set of leds lit up on the panel.

The fan only starts once the system has warmed up.

4.4 Cooling unit WU15

It is optional and permits liquid cooling of the TIG torch. There is one single electrical connection between WU15 and Genesis 200/202 TLH/AC-DC and once assembled, they form one single body.

* All WU15 replacement, repair or connection operations must be performed by expert personnel instructed by SELCO.

* Filling or topping up of the tank with cooling liquid must be performed with the power source and WU15 assembled and positioned on a horizontal surface.

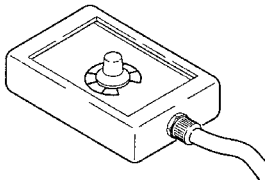
* Filling or topping up of the tank must be performed with Selco cooling liquid, code 18.91.001.

* In order not to damage the cooling unit, always fit the by-pass pipe when the torch is not connected to the cooling liquid inlet/outlet terminals.

4.5 Remote controls

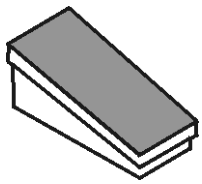
4.5.1 RC16 potentiometer remote control for MMA and TIG welding

This device allows you to vary, by remote control, the amount of current necessary without interrupting the welding process or abandoning the work area. 5, 10 and 20 m connection cables are available.



4.5.2 RC12 pedal remote control for TIG welding

Once the power source has been switched to the EXTERNAL CONTROL mode, the output current is varied from a minimum to a maximum value (can be entered from SETUP) by varying the angle between the pedal surface (where the foot rests) and base. A microswitch provides the weld start signal at minimum pressure.



4.6 Technical characteristics

	G 200 TLH	G 200 AC-DC	G 202 TLH	G 202 AC-DC
Supply voltage (50/60Hz)	1x230V ± 15%	1x230V ± 15%	1x230V ± 15% (1x115V ± 15%)	1x230V ± 15% (1x115V ± 15%)
Max. absorbed power in TIG (x=40%)	4.9kW	5.3kW	4.9kW (3.86 kW)	5.3kW (4.15 kW)
Max. absorbed current in TIG (x=40%)	21.8 A	23.4 A	21.8 A (33.9 A)	23.4 A (36.6 A)
Absorbed current in TIG (x=100%)	12.9 A	14.2 A	12.9 A (22.2 A)	14.2 A (23.9 A)
Max. absorbed power in MMA (x=40%)	6.0 kW	6.6 kW	6.0 kW (4.51 kW)	6.6 kW (4.76 kW)
Max. absorbed current in MMA (x=40%)	26.7 A	28.8 A	26.7 A (39.7 A)	28.8 A (41.2 A)
Absorbed current in MMA (x=100%)	17.9 A	18.7 A	17.9 A (24.4 A)	18.7 A (25.6 A)
Power factor	0.99	0.99	0.99	0.99
Cosj	0.99	0.99	0.99	0.99
Welding current in TIG (x=40%) (x=60%) (x=100%)	 200 A 170 A 140 A	 200 A 170 A 140 A	 200 A (160 A) 170 A (130 A) 140 A (120 A)	 200 A (160 A) 170 A (130 A) 140 A (120 A)
Current in MMA (x=35%) (x=60%) (x=100%)	 180 A 150 A 130 A	 180 A 150 A 130 A	 180 A (130 A) 150 A (110 A) 130 A (90 A)	 180 A (130 A) 150 A (110 A) 130 A (90 A)
Adjustment range in TIG (MMA)	6-200 (180 A)	6-200 (180 A)	6-200/6-180 A (6-160/6-130 A)	6-200/6-180 A (6-160/6-130 A)
Open-circuit voltage	53.7 V	53.7 V	53.7 V	53.7 V
Protection rating	IP23C	IP23C	IP23C	IP23C
Insulation class	H	H	H	H
Construction standards	EN60974-1 EN50199	EN60974-1 EN50199	EN60974-1 EN50199	EN60974-1 EN50199
Dimensions (lxdxh)	179x430x293 mm	179x430x293 mm	179x430x293 mm	179x430x293 mm
Weight	16 Kg.	16 Kg.	16 Kg.	16 Kg.

Data at 40°C ambient temperature.

	WU15
Supply voltage (50/60 Hz)	1x230 V ± 15%
Nominal input current	0.8 A
Capacity of reservoir	1.7 l
Cooling power	900 W
Protection rating	IP23C
Dimensions (lxdxh)	179x430x160 mm
Weight with liquid	9.5 Kg.

5.0 TRANSPORT - UNLOADING

Never underestimate the weight of the equipment, (see technical specifications)

Never make the cargo pass or leave it suspended over people or things.

Neither let the equipment or the single unit fall, nor put it down with force.

Once it has been removed from the packing, the power source is supplied with an extendible belt which can be used to move it in the hand or on the shoulder.

6.0 INSTALLATION

Choose an adequate installation area by following the criteria provided in Section "1.0 SAFETY" and "2.0 ELECTROMAGNETIC COMPATIBILITY (EMC)".

Do not position the power source and the equipment on surfaces with inclination exceeding 10° with respect to the horizontal plane.
Protect the installation from heavy rain and sun.

Do not use the power source to thaw pipes.

6.1 Electrical connection to mains

The system is provided with one single electrical connection with 5 m cable at the rear of the power source.

Power source input cable and fuse sizing table:

Power source	G 200 TLH e AC-DC
Rated voltage	1x230 V ± 15%
Voltage range	195 V - 265 V
Delayed fuses	16 A
Power supply cable	3x2.5 mm2

Power source	G 202 TLH e AC-DC
Rated voltage	1x115 V /1x230 V
Voltage range	95-140 V / 195-265 V
Delayed fuses	25 A / 16 A
Power supply cable	3x2.5 mm2

WARNING

* **The electrical system must be made by skilled technicians with the specific professional and technical qualifications and in compliance with the regulations in force in the country where the equipment is installed.**
* **The welding power source supply cable is provided with a yellow/green wire that must ALWAYS be earthed. This yellow/green wire must NEVER be used with other voltage conductors.**
* **Verity the existence of the earthing in the used plant and the good condition of the socket/s**
* **Install only plugs that are homologated according to the safety regulations.**

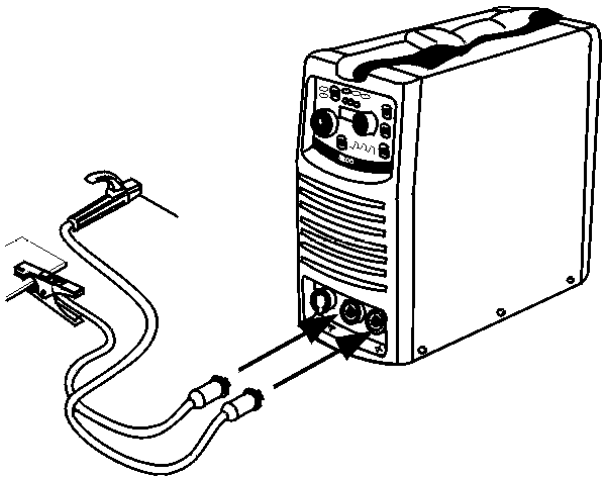
6.2 Connecting the equipment components

Keep to the safety regulations contalned in section "1.0 SAFETY".

Connect the componente carefully, in order to avoid power losses.

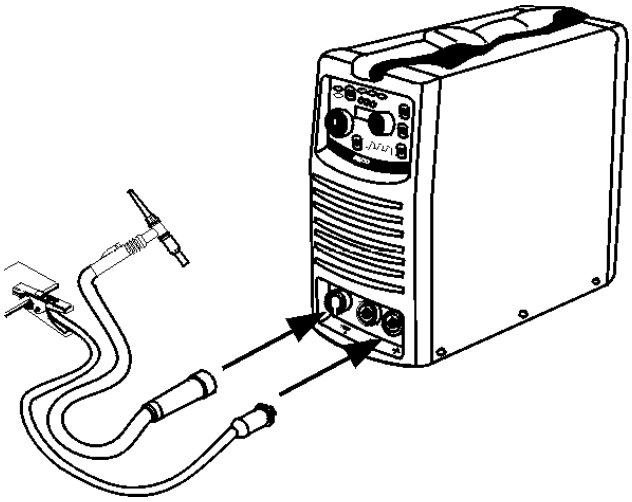
Connection for MMA welding

The connection in the figure results in welding with inverse polarity. To obtain welding with direct polarity, invert the connection.



Connection for TIG welding

- Connect the gas pipe from the cylinder to the rear gas connection.



In the case of TIG welding with torch provided with liquid cooling and WU15 unit, make the following connections:

* Connect the TIG torch liquid delivery pipe to the fitting on the WU15 front panel.

* Connect the TIG torch return pipe to the fitting on the WU15 front panel.

7.0 PROBLEMS - CAUSES

7.1 Possible faults in the MMA welding

Fault	Cause
Excessive spatter	1) Long arc 2) High current
Craters	1) Fast movement of the electrode away from piece.
Inclusions	1) Poor cleanliness or distribution of the passes 2) Defective movement of the electrode
Insufficient penetration	1) High progression speed 2) Welding current too low 3) Narrow chamfering 4) Deseaming failure on top
Sticking	1) Arc too short 2) Current too low
Blow-hole and porosity	1) Humidity in electrode 2) Long arc
Cracks	1) Current too high 2) Dirty materials 3) Hydrogen in weld (present on electrode coating)

7.2 Possible faults in the TIG welding

Fault	Cause
Oxidations	1) Insufficient gas. 2) No protection on the reverse.
Tungsten inclusions	1) Incorrect electrode sharpening. 2) Electrode too small. 3) Operating failure (contact of the tip with the workpiece).
Porosity	1) Dirt on the edges. 2) Dirt on the filler material. 3) High advancement speed. 4) Current intensity too low.
Hot cracks	1) Unsuitable filler material. 2) High heat supply. 3) Dirty materials.

7.3 Possible electrical failures

Fault	Cause
Machine does not come on. (Green led off)	1) No voltage at power supply socket. 2) Faulty power supply plug or cable. 3) Internal fuse blown.
Power delivery not correct. (Green led on)	1) Incorrect setting of welding parameters. 2) Mains voltage low. 3) Faulty current regulation potentiometer.
No current at output. (Green led on)	1) Yellow led on and “10” blinking on D1: equipment overheated. Wait for cooling with welder on. 2) "11" blinking on "D1": power supply voltage too high 3) "12" blinking on "D1": power supply voltage too low 4) "20" flashing on "D1": serial memory error (contact service). 5) “24” blinking on D1: RC calibration error (call technical support). 6) “25” blinking on D1: serial memory error (call technical support).

If you have any doubts or problems, do not hesitate to consult your nearest technical service centre.

8.0 NECESSARY ORDINARY MAINTENANCE

Avoid accumulation of metal dust near and on the ventilation fins.

Disconnect the system before all operations!

Periodical checks on the power source and WU15:
*** Clean the inside using compressed air at low pressure and soft bristle brushes.**
*** Check the electrical connections and all connection cables.**

For maintenance and use of the pressure reducers, consult the specific manuals.

For maintenance and replacement of the components of the TIG torches, electrode gun and/or ground cables:

*** Disconnect the system before all operations.**
*** Check the temperature of the components and ensure that they are not overheated.**
*** Always use gloves in compliance with regulations.**
*** Use suitable spanners and tools.**

NOTA: Failure to perform said maintenance will invalidate all warranties and exempt the manufacturer from all liability.

9.0 GENERAL INFORMATION ON THE DIFFERENT WELDING PROCESSES

9.1 Coated electrode welding (MMA)

Preparing the edges
To obtain good welding joints it is advisable to work on clean parts, free from oxidations, rust or other contaminating agents.

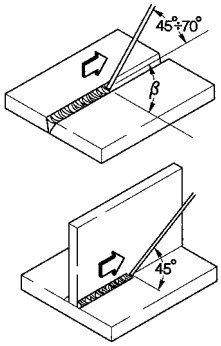
Choosing the electrode
The diameter of the electrode to be used depends on the thickness of the material, the position, the type of joint and the type of preparation of the piece to be welded.
Electrodes with considerable diameter obviously require very high currents with consequent high heat supply during the welding.

Type of coating	Property	Use
Rutile	Ease of use	All positions
Acid	High melting speed	Flat
Basic	Mechanical charact.	All positions

Choosing the welding current
The range of welding current in relation to the type of electrode used is specified by the manufacturer on the electrode container.

Striking and maintaining the arc
The electric arc is produced by rubbing the electrode point on the workpiece connected to the earth cable and, once the arc has been striken, by rapidly withdrawing the rod to the normal welding distance.
Generally, to improve the striking of the arc an initial current increase with respect to the base welding current is very useful (Hot Start).
Once the arc has been striken, the central part of the electrode starts melting and is deposited on to the workpiece in the form of drops.
The external coating of the electrode is consumed and this supplies the protective gas for the welding, the good quality of which is thus ensured.
To prevent the molten material drops from extinguishing the arc by short-circuiting the electrode with the weld pool because of their accidental proximity to each other, a temporary increase of the welding current until the end of the short-circuit is very useful (Arc Force).
If the electrode sticks to the piece to be welded, it is useful to minimise the short circuit current (antisticking).

Carrying out the welding
The electrode inclination angle varies depending on the number of runs; the electrode movement is normally carried out with oscillations and stops at the sides of the bead, in such a way as to avoid an excessive accumulation of filler material at the centre.

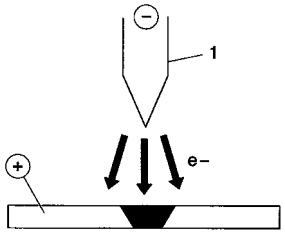


Removing the slag
The welding through coated electrodes requires the removal of the slag after each run.
The slag is removed by means of a small hammer or is brushed away if friable.

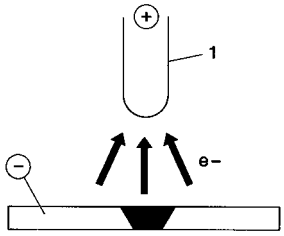
9.2 TIG welding (continuos arc)
Introduction
The TIG (Tungsten Inert Gas) welding process is based on the presence of an electric arc striken between a non-consumable electrode (pure or alloyed tungsten with an approximate melting temperature of 3370°C) and the work-piece; an inert gas (argon) atmosphere protects the weld pool.
To avoid dangerous inclusions of tungsten in the joint, the electrode must never get in contact with the workpiece; for this reason the spark is started through an H.F. power source, thus ensuring the remote striking of the electric arc.
Another type of start is also possible, with reduced tungsten inclusions: the lift start, which does not require high frequency, but only an initial short-circuit at low current between the electrode and the workpiece; when the electrode is lifted, the arc will be started and the current will increase until reaching the set welding value.
To improve quality of the end of the welding bead it is important to control carefully the slope down of the current and it is necessary that the gas goes on flowing in the welding pool some seconds after the arc blowout.

Under many operational conditions, it is useful to be able to use two preset welding currents and to be able to move easily from one to the other (BILEVEL).

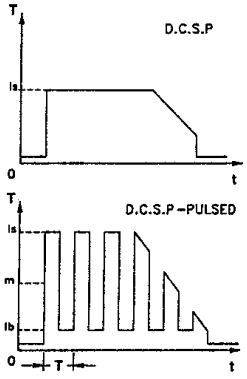
Welding polarity
D.C.S.P. (Direct Current Straight Polarity)
This is the most used polarity and ensures limited wear of the electrode (1), since 70% of the heat concentrates on the anode (piece).
Narrow and deep weld pools are obtained, with high advancement speeds and low heat supply.
Most materials, exception made for aluminium (and its alloys) and magnesium, are welded with this polarity.



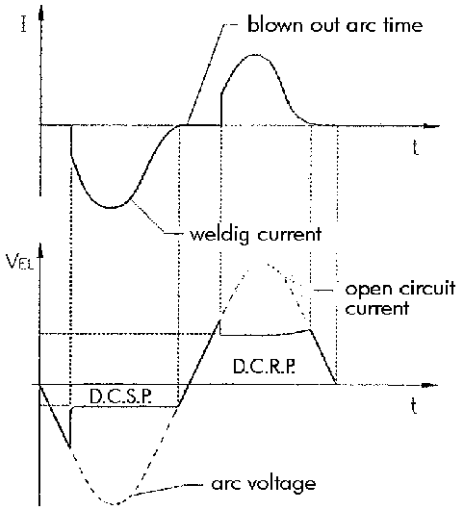
D.C.R.P. (Direct Current Reverse Polarity)
The reverse polarity is used for welding alloys covered with a layer of refractory oxide with higher melting temperature in comparison with metals.
High currents cannot be used, since they would cause an excessive wear of the electrode.



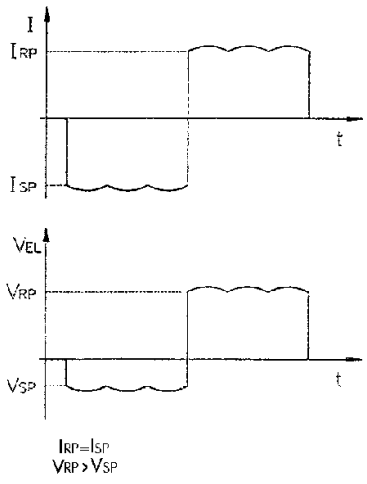
D.C.S.P.-Pulsed (Direct Current Straight Polarity Pulsed)
The use of pulsed direct current allows the welding bath to be better controlled in particular operating conditions.
The welding bath is formed by the peak pulses (Ip), while the base current (Ib) keeps the arc ignited.
This method helps to weld thinner sheets with fewer deformations, a better form factor and consequently a lower danger of hot cracks and gas penetration.
Increasing the frequency (MF) the arc gets thinner, more concentrate, more stable and the quality of welding on thin sheets is further increased.



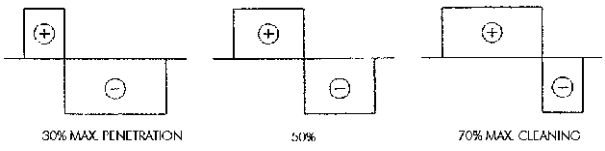
A.C. (Alternating Current)
Alterntating current welding is amployed when it is necessary ti weld aluminium (and its alloys) or magnesium with high currents (> 50A).
A mains frequency of 50/60 Hz is normally used.
During the positive half-wave (D. C. R. P.) the oxide is broken, whereas when the electrode is negative (D.C.S.P.) it cools down and the weld material penetrates easily since the heat supply on the workpiece increases.
The behaviour of the arc, however, varies considerably according to polarity. By using a simple sinusoidal generator, when the voltage dorps to zero. It caises the arc to blow out.



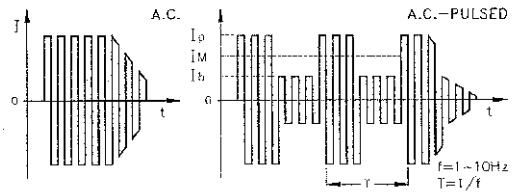
These continuoius blowouts make the arc unstable and difficult to control. These setbacks can be dealt with by using stabilizing generators with square wave gained from the tree-phase source.



The voltage and current will then instantly drop to zero, thus ensuring arc stability. You can thus deduce the functions of wave balancing, which allow the ratio between the cleaning current and the penetration current to be controlled by varying the ratio between D.C.S.P. and D.C.R.P.



A.C.-Pulsed (Alternating Current Pulsed)
Also when welding aluminuium, a pulsed current can be used, with similiar effects to those described in pulsed direct current welding.



9.2.1 Steel TIG welding

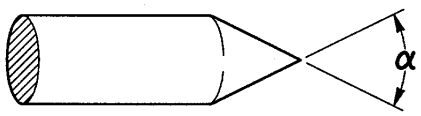
The TIG procedure is very effective for welding both carbon and alloyed steel, for first runs on pipes and for welding where good appearance is important.
Straight polarity is required (D.C.S.P.).

Preparing the edges
An accurate cleaning and preparation of the edges are required.

Choosing and preparing the electrode
You are advised to use thorium tungsten electrodes (2% thorium-red colouring) or alternatively cerium or lanthanum electrodes with the following diameters:

Ø electrode (mm)	current range (A)
1.0	15÷75
1.6	60÷150
2.4	130÷240

The electrode must be pointed as shown in the figure.



α (°)	current range (A)
30	0÷30
60÷90	30÷120
90÷120	120÷250

Filler material
The filler rods must have mechanical characteristics comparable to those of the base material.
Do not use straps obtained from the base material, since they may contain working impurities that can negatively affect the quality of the welding.

Protective gas
Practically, pure argon (99.99%) is always used.

Welding current (A)	Ø Electrode (mm)	Gas nozzle n°	Gas nozzle Ø (mm)	Argon flow (l/min)
6-70	1.0	4/5	6/8.0	5-6
60-140	1.6	4/5/6	6.5/8.0/9.5	6-7
120-240	2.4	6/7	9.5/11.0	7-8

9.2.2 Copper TIG welding

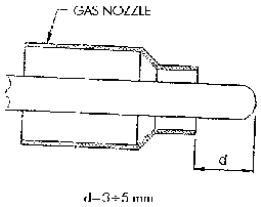
Since the TIG welding is a process characterized by high heat concentration, it is particularly suitable for welding materials with high thermal conductivity, like copper.
For TIG welding of copper, follow the same directions as for TIG welding of steel or specific instructions.

9.2.3 TIG welding of aluminium in alternating current (only G 200/202 AC/DC)

The process can be applied to all the positions, but, given the difficulties in bath support, flat welding is preferable.
Cleaning of edges of welding material is essential for successful weldings. A brushing operation, eliminating part of the aluminium formed on the surface, also proves to be useful.
In full penetration joints, it is important to use stainless steel rests that enable the bath to be supported on reverse and protect it against oxidising. The bests results in protecting the bath on the reverse are gained by causing the inert gas to flow along the welding.

Preparing the edges
An accurate cleaning and preparation of the edges are required.

Setting up and use of electrode
Since the electrode is subjected to high heat supply in alternating current TIG welding, it cannot have conical tip; it is rounded as shown in the figure. In order to obtain the indicated appearance, you simply need to round off the sharp edges of the electrode, the arc will then ensure that a circular head is formed. If the tip acquires a drop shape during welding, this indicates overloading, the electrode is replaced with one having a wider diameter. Otherwise, you can operate the Balance control by moving it to 20%.



In the following table we give the electrode selection criteria on the basis of the maximum amperage with Balance equal to 50%.

Electrode diameter (mm)	Amperage for pure tungsten (green colour) (A)	Amperage for tungsten+zirkonium (white colour) (A)
1.0	30	30
1.6	70	55
2.4	120	100
3.2	170	150
4.0	220	210
4.8	280	280
6.0	400	400

Welding material
The welding material is selected in accordance with the base material on which you have to work. On the market there are bars made of silicon alloy aluminium (Si = 5%) for welding Al-Si alloys and Al-Mg-Si alloys with 10% and bars made of alloy with base magnesium composed of corrosion-resistent Al-Mg alloys.

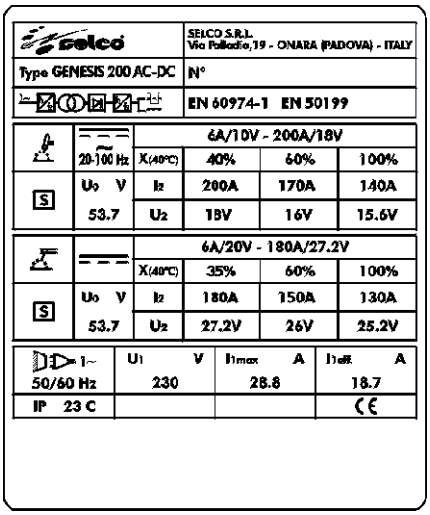
Protective Gas
Both argon and helium can work when welding aluminium. The recommended gas outputs are:

Current (A)	Argon (l/min)	Elio (l/min)
50	7	14
100	7	14
150	8	20
200	9	20
250	10	25
300	12	25

NOTES

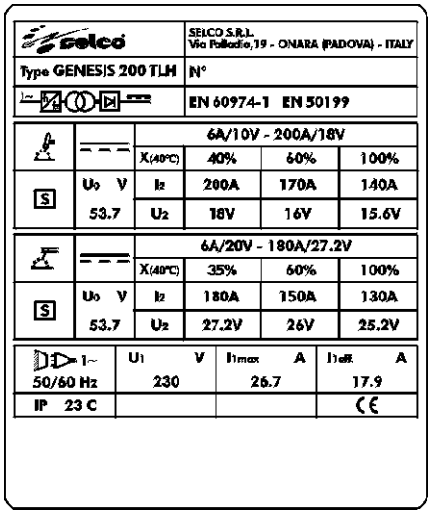
Targa dati, Nominal data, Leistungschilder, Plaque donées, Placa de características, Placa de dados, Technische gegevens, Märkplåt, Dataskilt, Identifikasjonsplate, Arvokilpi, ΠΙΝΑΚΙΔΑ ΧΑΡΑΚΤΗΡΙΣΤΙΚΩΝ

GENESIS 200 AC-DC



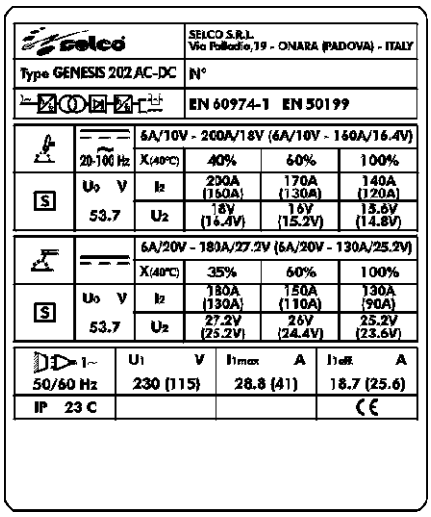
selco		SELCO S.R.L. Via Palladio,19 - ONARA (PADOVA) - ITALY			
Type GENESIS 200 AC-DC		N°			
		EN 60974-1 EN 50199			
		6A/10V - 200A/18V			
	20-100 Hz	X(40°C)	40%	60%	100%
S	U0 V	I2	200A	170A	140A
	53.7	U2	18V	16V	15.6V
		6A/20V - 180A/27.2V			
		X(40°C)	35%	60%	100%
S	U0 V	I2	180A	150A	130A
	53.7	U2	27.2V	26V	25.2V
1~ 50/60 Hz	U1 V 230	I1max A 28.8	I1eff A 18.7		
IP 23 C			CE		

GENESIS 200 TLH



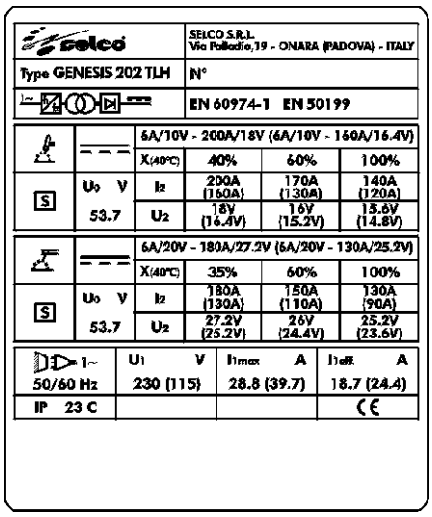
selco		SELCO S.R.L. Via Palladio,19 - ONARA (PADOVA) - ITALY			
Type GENESIS 200 TLH		N°			
		EN 60974-1 EN 50199			
		6A/10V - 200A/18V			
		X(40°C)	40%	60%	100%
S	U0 V	I2	200A	170A	140A
	53.7	U2	18V	16V	15.6V
		6A/20V - 180A/27.2V			
		X(40°C)	35%	60%	100%
S	U0 V	I2	180A	150A	130A
	53.7	U2	27.2V	26V	25.2V
1~ 50/60 Hz	U1 V 230	I1max A 26.7	I1eff A 17.9		
IP 23 C			CE		

GENESIS 202 AC-DC



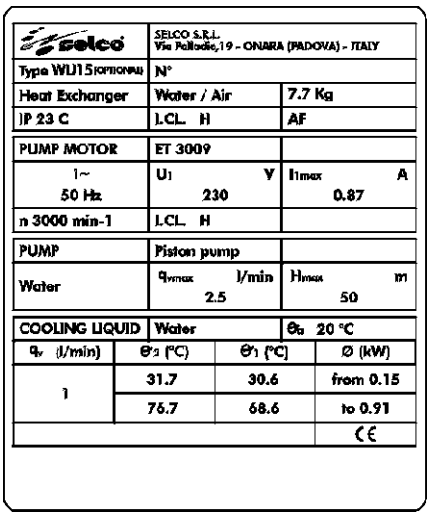
selco		SELCO S.R.L. Via Palladio,19 - ONARA (PADOVA) - ITALY			
Type GENESIS 202 AC-DC		N°			
		EN 60974-1 EN 50199			
		6A/10V - 200A/18V (6A/10V - 160A/16.4V)			
	20-100 Hz	X(40°C)	40%	60%	100%
S	U0 V	I2	200A (160A)	170A (130A)	140A (120A)
	53.7	U2	18V (16.4V)	16V (15.2V)	15.6V (14.8V)
		6A/20V - 180A/27.2V (6A/20V - 130A/25.2V)			
		X(40°C)	35%	60%	100%
S	U0 V	I2	180A (130A)	150A (110A)	130A (90A)
	53.7	U2	27.2V (25.2V)	26V (24.4V)	25.2V (23.6V)
1~ 50/60 Hz	U1 V 230 (115)	I1max A 28.8 (41)	I1eff A 18.7 (25.6)		
IP 23 C			CE		

GENESIS 202 TLH



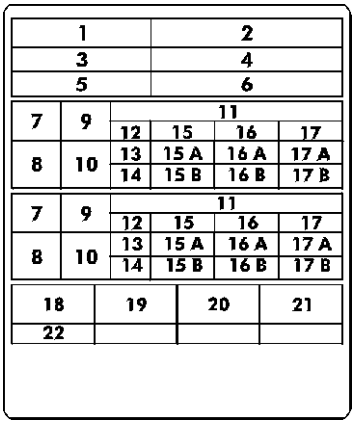
selco		SELCO S.R.L. Via Palladio,19 - ONARA (PADOVA) - ITALY			
Type GENESIS 202 TLH		N°			
		EN 60974-1 EN 50199			
		6A/10V - 200A/18V (6A/10V - 160A/16.4V)			
		X(40°C)	40%	60%	100%
S	U0 V	I2	200A (160A)	170A (130A)	140A (120A)
	53.7	U2	18V (16.4V)	16V (15.2V)	15.6V (14.8V)
		6A/20V - 180A/27.2V (6A/20V - 130A/25.2V)			
		X(40°C)	35%	60%	100%
S	U0 V	I2	180A (130A)	150A (110A)	130A (90A)
	53.7	U2	27.2V (25.2V)	26V (24.4V)	25.2V (23.6V)
1~ 50/60 Hz	U1 V 230 (115)	I1max A 28.8 (39.7)	I1eff A 18.7 (24.4)		
IP 23 C			CE		

WU 15



selco	SELCO S.R.L. Via Palladio,19 - ONARA (PADOVA) - ITALY		
Type WU15 (OPTIONAL)	N°		
Heat Exchanger	Water / Air	7.7 Kg	
IP 23 C	I.CL. H	AF	
PUMP MOTOR	ET 3009		
1~ 50 Hz	U1 V 230	I1max A 0.87	
n 3000 min-1	I.CL. H		
PUMP	Piston pump		
Water	qvmax l/min 2.5	Hmax m 50	
COOLING LIQUID	Water	θa 20 °C	
qv (l/min)	θ2 (°C)	θ1 (°C)	Ø (kW)
1	31.7	30.6	from 0.15
	76.7	68.6	to 0.91
			CE

Significato targa dati del generatore, Meaning of POWER SOURCE data plate, Bedeutung der Angaben auf dem Leistungsschild des Generators, Signification des données sur la plaque du générateur, Significado da chapa de dados do gerador, Significado da chapa de dados do gerador, Betekenis gegevensplaatje van de generator, Innebörden av uppgifterna på GENERATORNS märkplåt, Betydning af dataskiltet for Strømkilden, Betydning av informasjonsteksten på Generatorns skilt, Generaattorin arvc Σημασία πινακίδας χαρ ακτηριστικών της ΓΕΝΝΗΤΡΙΑΣ



ITALIANO

1 Marchio di fabbricazione
2 Nome ed indirizzo del costruttore
3 Modello dell'apparecchiatura
4 N° di serie
5 Simbolo del tipo di saldatrice
6 Riferimento alle norme di costruzione
7 Simbolo del processo di saldatura
8 Simbolo per le saldatrici idonee a lavorare in un ambiente a rischio accresciuto di scossa elettrica
9 Simbolo della corrente di saldatura
10 Tensione assegnata a vuoto
11 Gamma della corrente assegnata di saldatura massima e minima e della corrispondente tensione convenzionale di carico
12 Simbolo del ciclo di intermittenza
13 Simbolo della corrente assegnata di saldatura
14 Simbolo della tensione assegnata di saldatura
15-16-17 Valori del ciclo di intermittenza
15A-16A-17A Valori della corrente assegnata di saldatura
15B-16B-17B Valori della tensione convenzionale di carico
18 Simbolo per l'alimentazione
19 Tensione assegnata d'alimentazione
20 Massima corrente assegnata d'alimentazione
21 Massima corrente efficace d'alimentazione
22 Grado di protezione
IP23 C Grado di protezione dell'involucro in conformità alla EN 60529:
IP2XX : Involucro protetto contro l'accesso a parti pericolose con un dito e contro corpi solidi estranei di diametro maggiore/uguale a 12.5 mm.
IPX3X : Involucro protetto contro pioggia a 60° sulla verticale.
IPXXC : Involucro protetto contro il contatto di un calibro di prova di 2.5 mm di Ø lungo 100 mm con le parti attive pericolose.

ENGLISH

1 Trademark
2 Name and address of manufacturer
3 Machine model
4 Serial no.
5 Welder type symbol
6 Reference to construction standards
7 Welding process symbol
8 Symbol for welders suitable for operation in environments with increased electrical shock risk
9 Welding current symbol
10 Assigned loadless voltage
11 Range of maximum and minimum assigned welding current and corresponding conventional load voltage
12 Intermittent cycle symbol
13 Assigned welding current symbol
14 Assigned welding voltage symbol
15-16-17 Intermittent cycle values
15A-16A-17A Assigned welding current values
15B-16B-17B Conventional load voltage values
18 Power supply symbol
19 Assigned power supply voltage
20 Maximum assigned power supply current
21 Maximum effective power supply current
22 Protection rating
IP23 C: Casing protection rating in compliance with EN 60529
IP2XX: Casing protected against access to dangerous parts with fingers and against solid foreign bodies with diameter greater than/equal to 12.5 mm
IPX3X: Casing protected against rain hitting it at 60°
IPXXC :Casing protected against contact with test piece Ø 2.5 mm, length 100 mm with dangerous live parts.

DEUTSCH

1 Marke
2 Herstellername und -adresse
3 Gerätemodell
4 Seriennr.
5 Symbol des Schweißmaschinentyps
6 Bezugnahme auf die Konstruktionsnormen
7 Symbol des Schweißprozesses
8 Symbol für die Schweißmaschinen, die sich zum Betrieb in Räumen mit großer Stromschlaggefahr eignen
9 Symbol des Schweißstroms
10 Zugeteilte Leerlaufspannung
11 Bereich des zugeteilten Höchst- und Mindestschweißstroms und der entsprechenden Ladespannung
12 Symbol für den intermittierenden Zyklus
13 Symbol des zugeteilten Schweißstroms
14 Symbol der zugeteilten Schweißspannung
15-16-17 Werte des intermittierenden Zyklus
15A-16A-17A Werte des zugeteilten Schweißstroms
15B-16B-17B Werte der üblichen Ladespannung
18 Symbol der Versorgung
19 Zugeteilte Versorgungsspannung
20 Zugeteilter, maximaler Versorgungsstrom
21 Maximaler, wirksamer Versorgungsstrom
22 Schutzart
IP23 C Schutzart des Gehäuses in Konformität mit EN 60529:
IP2XX: Gehäuse mit Schutz vor Zutritt zu gefährlichen Teilen mit einem Finger und vor Fremdkörpern mit einem Durchmesser von/über 12,5 mm.
IPX3X: Gehäuse mit Regenschutz auf 60° an der Vertikalen.
IPXXC: Gehäuse mit Schutz vor dem Kontakt durch eine Probelehre von 2.5 mm Ø und 100 mm Länge bei aktivierten, gefährlichen Teilen.

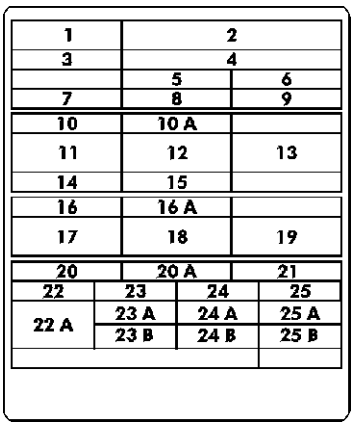
FRANÇAIS

1 Marque de fabrique
2 Nom et adresse du constructeur
3 Modèle de l'appareil
4 Numéro de série
5 Symbole du type de soudeuse
6 Référence aux normes de construction
7 Symbole du processus de soudure
8 Symbole pour les soudeuses en mesure de travailler dans un local où il y a un gros risque de secousse électrique
9 Symbole du courant de soudure
10 Tension attribuée à vide
11 Gamme du courant de soudure maximum et minimum attribué et de la tension conventionnelle de charge correspondante
12 Symbole du cycle d'intermittence
13 Symbole du courant attribué de soudure
14 Symbole de la tension attribuée de soudure
15-16-17 Valeurs du cycle d'intermittence
15A-16A-17A Valeurs du courant attribué de soudure
15B-16B-17B Valeurs de la tension conventionnelle de charge
18 Symbole pour l'alimentation
19 Tension attribuée d'alimentation
20 Courant maximum attribué d'alimentation
21 Courant maximum efficace d'alimentation
22 Degré de protection
IP23 C Degré de protection du boîtier conformément à la norme EN 60529:
IP2XX : Boîtier de protection contre l'accès aux parties dangereuses avec un doigt et contre les corps solides étrangers ayant un diamètre supérieur/ égal à 12,5 mm.
IPX3X : Boîtier de protection contre la pluie à 60° sur la verticale.
IPXXC : Boîtier de protection contre le contact d'un calibre d'essai de 2,5 mm de Ø, longueur 100 mm, avec les parties actives dangereuses.

ESPAÑOL

1 Marca de fabricación
2 Nombre y dirección del fabricante
3 Modelo del aparato
4 N° de serie
5 Símbolo del tipo de soldadora
6 Normas de construcción de referencia
7 Símbolo del proceso de soldadura
8 Símbolo para las soldadoras adecuadas para trabajar en un ambiente en donde existan riesgos de descargas eléctricas
9 Símbolo de la corriente de soldadura
10 Tensión en vacío asignada
11 Gama de la corriente de soldadura máxima y mínima asignada y de la tensión convencional de carga correspondiente
12 Símbolo del ciclo de intermitencia
13 Símbolo de la corriente de soldadura asignada
14 Símbolo de la tensión de soldadura asignada
15-16-17 Valores del ciclo de intermitencia
15A-16A-17A Valores de la corriente de soldadura asignada
15B-16B-17B Valores de la tensión convencional de carga
18 Símbolo para la alimentación
19 Tensión de alimentación asignada
20 Corriente de alimentación máxima asignada
21 Corriente de alimentación máxima eficaz
22 Clase de protección
IP23 C Clase de protección de la envoltura según EN 60529:
IP2XX: Envoltura protegida contra el acceso a piezas peligrosas con un dedo y contra cuerpos sólidos extra ños de diámetro mayor o igual que 12,5 mm.
IPX3X: Envoltura protegida contra lluvia con 60° de inclinación.
IPXXC: Envoltura protegida contra el contacto de un calibre de prueba de 2,5 mm de Ø y 100 mm de longi tud con las piezas activas peligrosas.

Significato targa dati del WU, Meaning of WU data plate, Bedeutung der Angaben auf dem Leistungsschild des WU, Signification des données sur la plaque du groupe WU, Significado da chapa de dados do WU, Significado da chapa de dados do WU, Betekenis gegevensplaatje van de WU, Innebörden av uppgifterna på WU-enhetens märkplåt, Betydning av informasjonsteksten på WUs skilt, WU-yksikön arvokilven tiet Σημασία πινακίδας χαρ ακτηριστικών της WU



ITALIANO

1 Marchio di fabbricazione
2 Nome ed indirizzo del costruttore
3 Modello dell'apparecchiatura
4 N° di serie
5 Tipo di scambiatore
6 Peso dell'apparecchiatura
7 Grado di protezione
IP23 C Grado di protezione dell'involucro in conformità alla EN 60529:
IP2XX : Involucro protetto contro l'accesso a parti pericolose con un dito e contro corpi solidi estranei di diametro maggiore/uguale a 12.5 mm.
IPX3X : Involucro protetto contro pioggia a 60° sulla verticale.
IPXXC : Involucro protetto contro il contatto di un calibro di prova di 2.5 mm di Ø lungo 100 mm con le parti attive pericolose.
8 Classe d' isolamento
9 Tipo di raffreddamento
10 -10A Modello motore/bobina
11 Frequenza d'alimentazione (nominale)
12 Tensione d'alimentazione (nominale)
13 Corrente assorbita in ingresso (nominale)
14 N° di giri/pulsazioni della pompa (nominale)
15 Classe d'isolamento della pompa
16-16A Tipo di pompa
17 Liquido d'utilizzo
18 Portata massima della pompa
19 Prevalenza massima della pompa
20-20A Tipo di liquido di raffreddamento
21 Temperatura ambiente a cui sono riferiti i dati di targa
22-22A Portata del gruppo di raffreddamento
23-23A-23B Temperatura del liquido entrante nel gruppo di raffreddamento alle potenze indicate in 25
24-24A-24B Temperatura del liquido uscente dal gruppo di raffreddamento alle potenze indicate in 25
25-25A-25B Potenze fornite durante il test

ENGLISH

1 Trademark
2 Name and address of manufacturer
3 Machine model
4 Serial no.
5 Exchanger type
6 Weight of equipment
7 Protection rating
IP23 C Casing protection rating in compliance with EN 60529
IP2XX Casing protected against access to dangerous parts with fingers and against solid foreign bodies with diameter greater than/equal to 12.5 mm
IPX3X Casing protected against rain hitting it at 60°
IPXXC Casing protected against contact with test piece Ø 2.5 mm, length 100 mm with dangerous live parts
8 Insulation class
9 Type of cooling
10-10A Motor/coil model
11 Power supply frequency (rated)
12 Power supply voltage (rated)
13 Current absorbed in input (rated)
14 No. of pump revs/pulses (rated)
15 Pump insulation class
16-16A Pump type
17 Liquid used
18 Pump maximum flow rate
19 Pump maximum head
20-20A Type of cooling liquid
21 Rating plate specification ambient reference temperature
22-22A Cooling unit flow rate
23-23A-23B Temperature of liquid entering cooling unit at powers specified in 25
24-24A-24B Temperature of liquid leaving cooling unit at powers specified in 25
25-25A-25B Powers supplied during the test

DEUTSCH

1 Marke
2 Herstellername und -adresse
3 Gerätemodell
4 Seriennr.
5 Austauschertyp
6 Gewicht der Apparatur
7 Schutzart
IP23 C Schutzart des Gehäuses in Konformität mit EN 60529:
IP2XX: Gehäuse mit Schutz vor Zutritt zu gefährlichen Teilen mit einem Finger und vor Fremdkörpern mit einem Durchmesser von/über 12,5 mm.
IPX3X: Gehäuse mit Regenschutz auf 60° an der Vertikalen.
IPXXC: Gehäuse mit Schutz vor dem Kontakt durch eine Probelehre von 2.5 mm Ø und 100 mm Länge bei aktivierten, gefährlichen Teilen.
8 Isolationsklasse
9 Kühlungsart
10 -10A Modell Motor/Spule
11 Versorgungsfrequenz (Nennfrequenz)
12 Versorgungsspannung (Nennspannung)
13 Stromaufnahme im Eingang (Nennstrom)
14 Umdrehungen/Pulsationen der Pumpe (Nenndrehzahl)
15 Isolationsklasse der Pumpe
16-16APumpentyp
17 Benutzte Flüssigkeit
18 Maximale Förderleistung der Pumpe
19 Maximale Förderhöhe der Pumpe
20-20AKühlflüssigkeitstyp
21 Umgebungstemperatur, auf die sich die Daten auf dem Schild beziehen
22-22ALeistung des Kühlaggregats
23-23A-23B Temperatur der in das Kühlaggregat einlaufen den Flüssigkeit bei den unter 25 angegebenen Leistungen
24-24A-24B Temperatur der aus dem Kühlaggregat auslau fenden Flüssigkeit bei den unter 25 angegebenen Leistungen
25-25A-25B Beim Test gelieferte Leistungen

FRANÇAIS

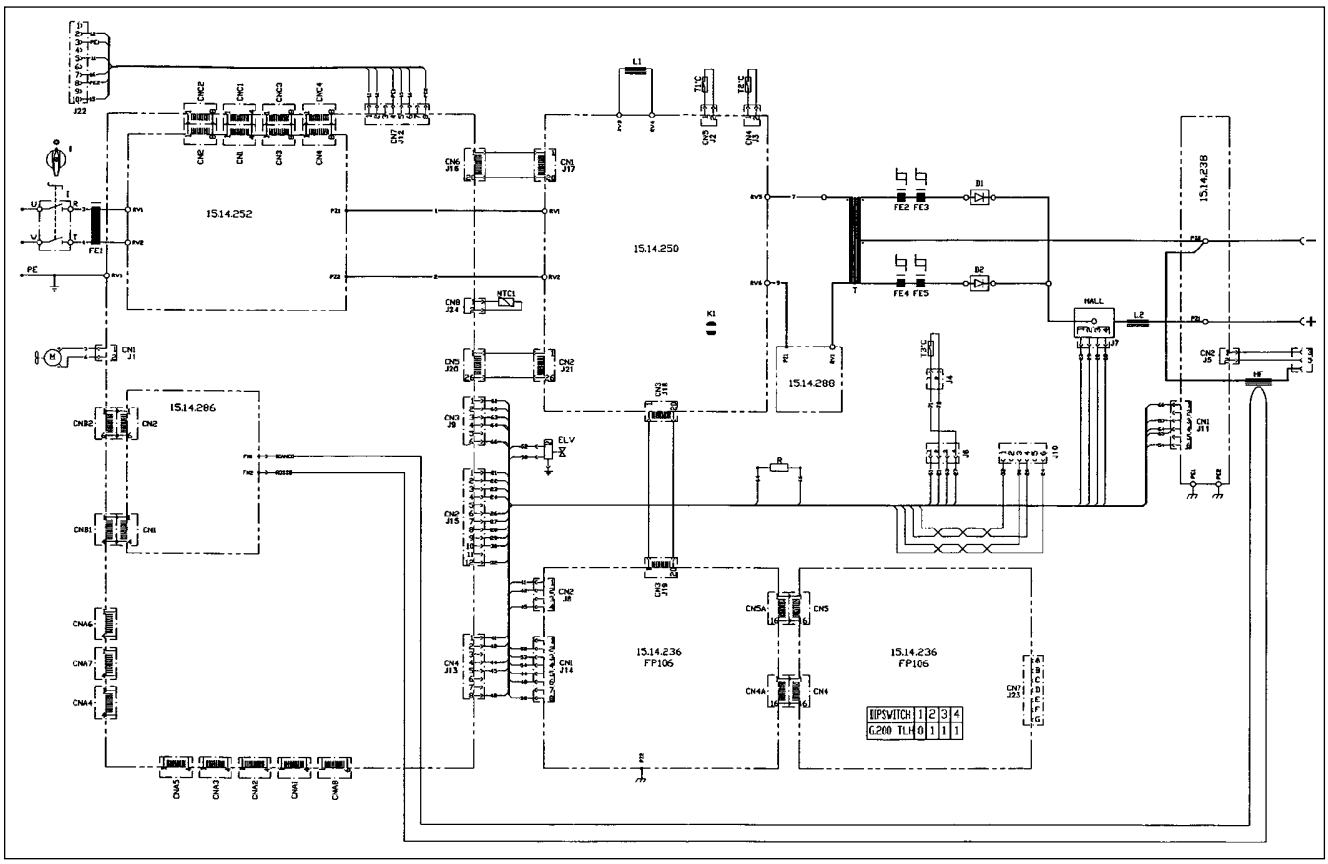
1 Marque de fabrique
2 Nom et adresse du constructeur
3 Modèle de l'appareil
4 Numéro de série
5 Type d'échangeur
6 Poids de l'appareil
7 Degré de protection
IP23 C Degré de protection du boîtier conformément à la norme EN 60529:
IP2XX : Boîtier de protection contre l'accès aux parties dangereuses avec un doigt et contre les corps solides étrangers ayant un diamètre supérieur/ égal à 12,5 mm.
IPX3X : Boîtier de protection contre la pluie à 60° sur la verticale.
IPXXC : Boîtier de protection contre le contact d'un calibre d'essai de 2,5 mm de Ø. longueur 100 mm. avec les parties actives dangereuses.
8 Classe d'isolation
9 Type de refroidissement
10 -10A Modèle moteur/ bobine
11 Fréquence d'alimentation (nominale)
12 Tension d'alimentation (nominale)
13 Courant absorbé à l'entrée (nominal)
14 Nombre de tours/ pulsations de la pompe (nominal)
15 Classe d'isolation de la pompe
16-16A Type de pompe
17 Liquide d'utilisation
18 Débit maximum de la pompe
19 Hauteur d'élévation maximum de la pompe
20-20A Type de liquide de refroidissement
21 Température ambiante à laquelle se réfèrent les données de la plaque
22-22A Débit du groupe de refroidissement
23-23A-23B Température du liquide qui entre dans le groupe de refroidissement aux puissances indiquées au n° 25
24-24A-24B Température du liquide qui sort du groupe de refroidissement aux puissances indiquées au n° 25
25-25A-25B Puissances fournies durant le test

ESPAÑOL

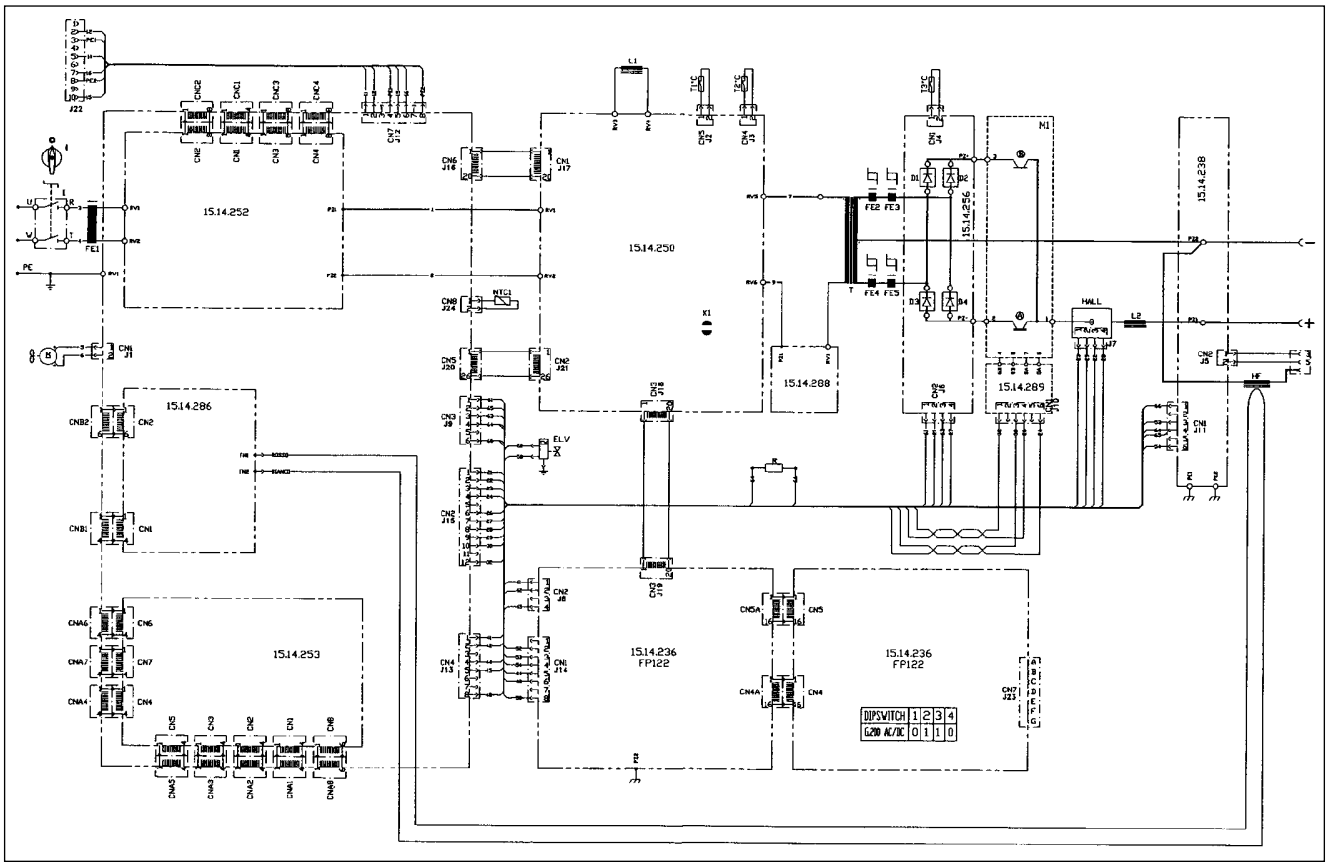
1 Marca de fabricación
2 Nombre y dirección del fabricante
3 Modelo del aparato
4 N° de serie
5 Tipo de cambiador
6 Peso del aparato
7 Clase de protección
IP23 C Clase de protección de la envoltura según EN 60529:
IP2XX : Envoltura protegida contra el acceso a piezas peligrosas con un dedo y contra cuerpos sólidos extraños de diámetro mayor o igual que 12,5 mm.
IPX3X : Envoltura protegida contra lluvia con 60° de inclinación.
IPXXC : Envoltura protegida contra el contacto de un calibre de prueba de 2,5 mm de Ø y 100 mm de longitud con las piezas activas peligrosas.
8 Clase de aislamiento
9 Tipo de refrigeración
10 -10A Modelo motor/bobina
11 Frecuencia de alimentación (nominal)
12 Tensión de alimentación (nominal)
13 Corriente absorbida en entrada (nominal)
14 N° de revoluciones/pulsaciones de la bomba (nominal)
15 Clase de aislamiento de la bomba
16-16A Tipo de bomba
17 Líquido empleado
18 Caudal máximo de la bomba
19 Altura máxima de la bomba
20-20A Tipo de líquido de refrigeración
21 Temperatura ambiente a la que se refieren los datos nominales
22-22A Capacidad del grupo de refrigeración
23-23A-23B Temperatura del líquido que entra al grupo de refrigeración a las potencias indicadas en 25
24-24A-24B Temperatura del líquido que sale del grupo de refrigeración a las potencias indicadas en 25
25-25A-25B Potencias suministradas durante el ensayo

Schema, Diagram, Schaltplan, Schéma, Esquema, Diagrama, Schema, kopplingsschema, Oversigt, Skjema, Kytkentäkaavio, ΔΙΑΓΡΑΜΜΑ

GENESIS 200 TLH

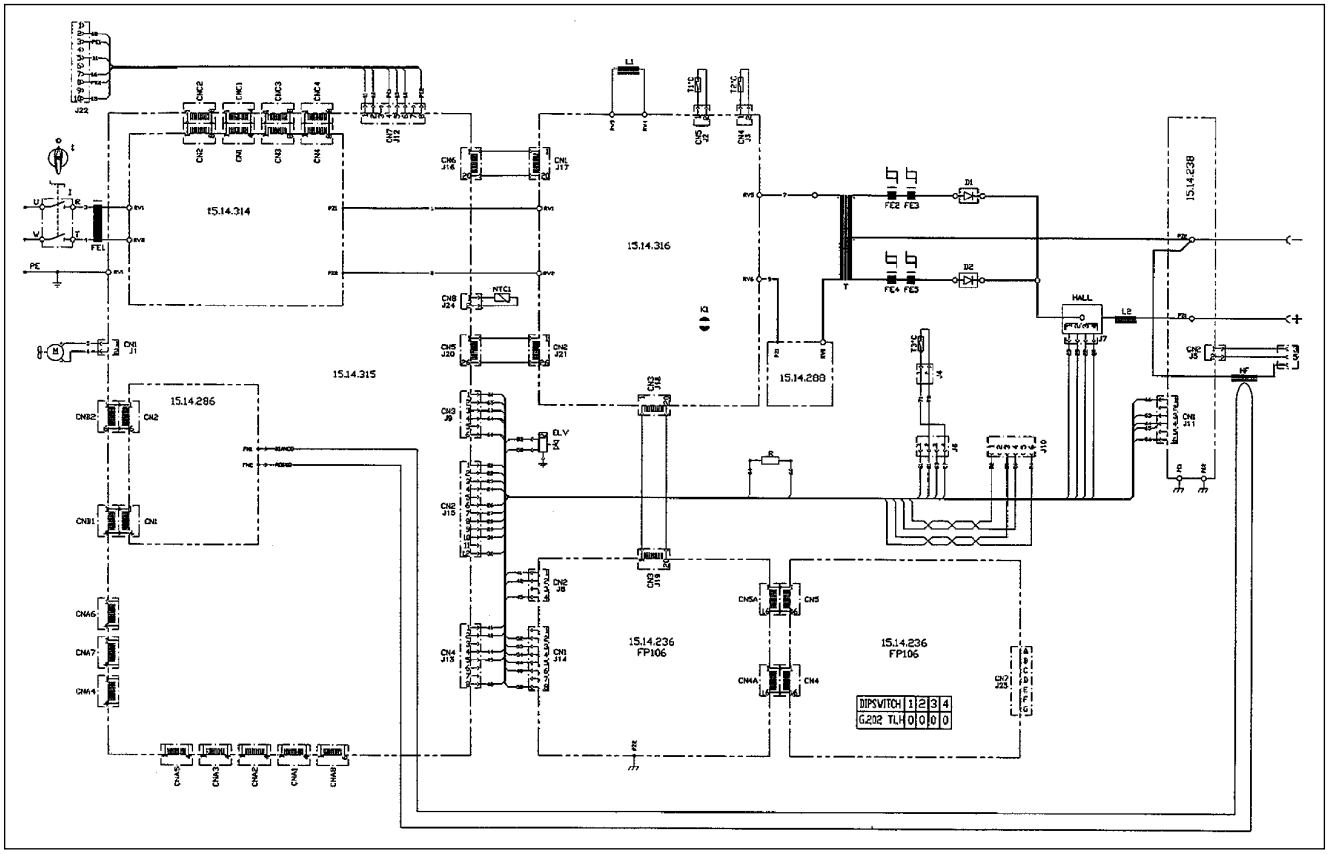


GENESIS 200 AC-DC

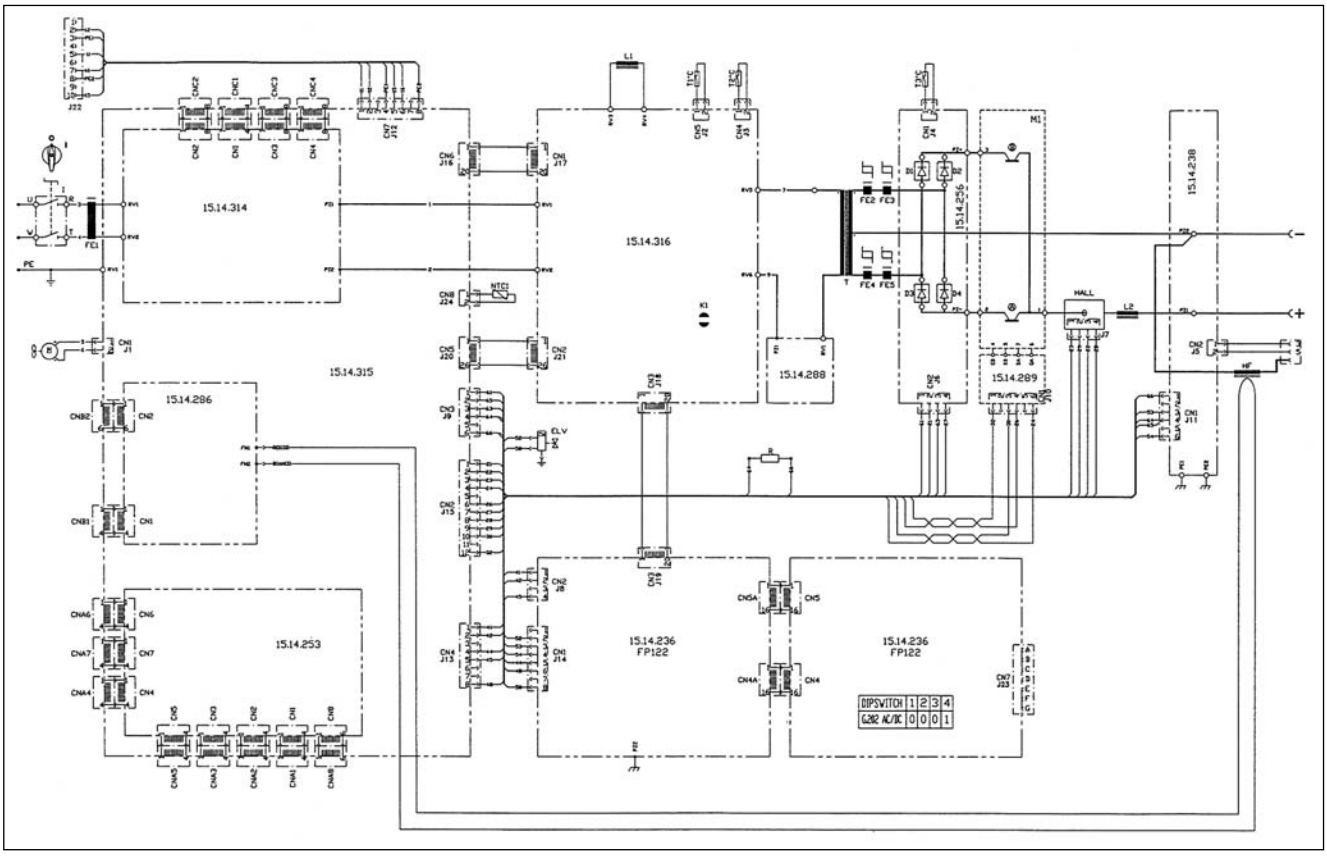


Schema, Diagram, Schaltplan, Schéma, Esquema, Diagrama, Schema, kopplingsschema, Oversigt, Skjema, Kytkentäkaavio, ΔΙΑΓΡΑΜΜΑ

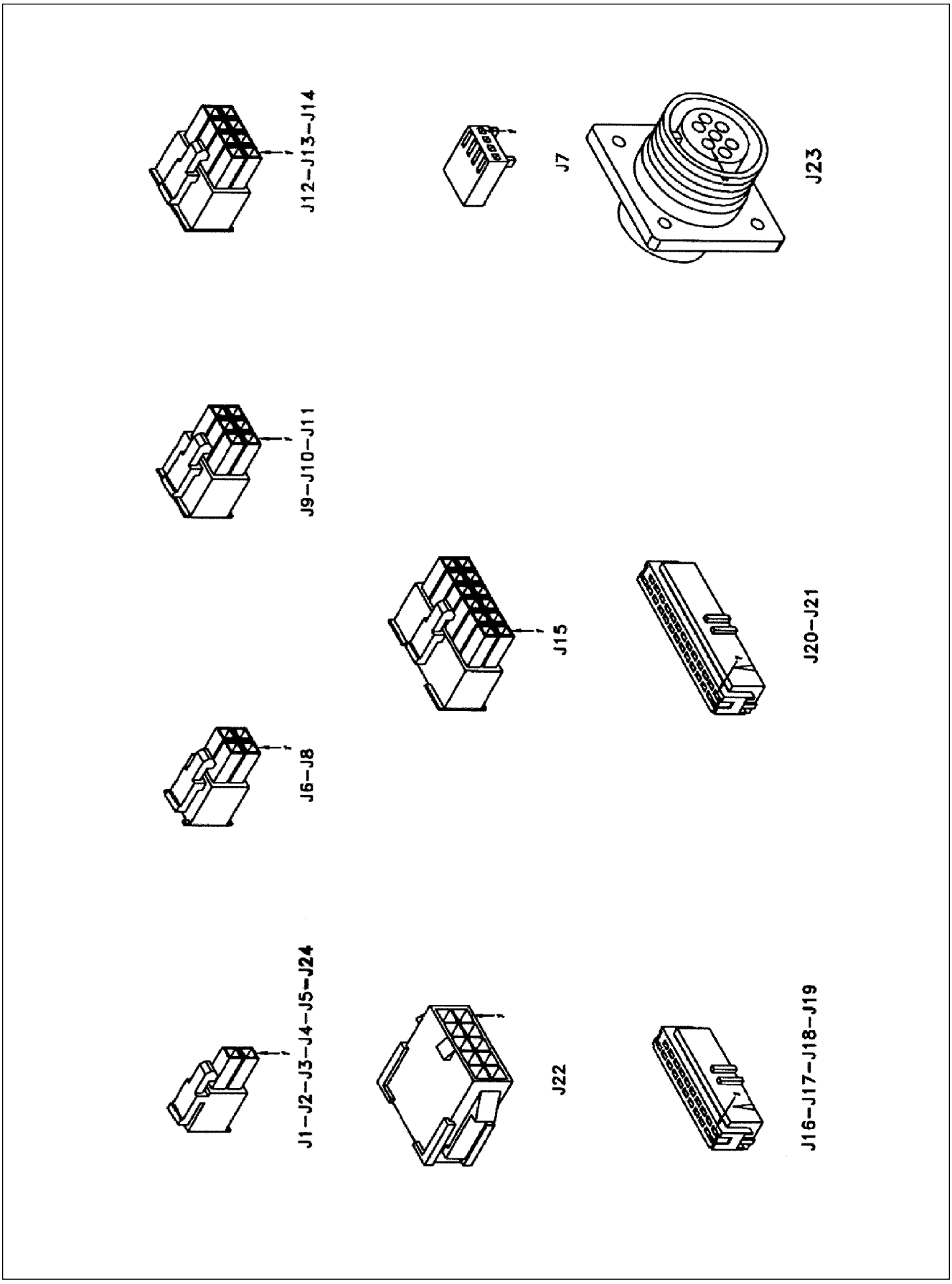
GENESIS 202 TLH



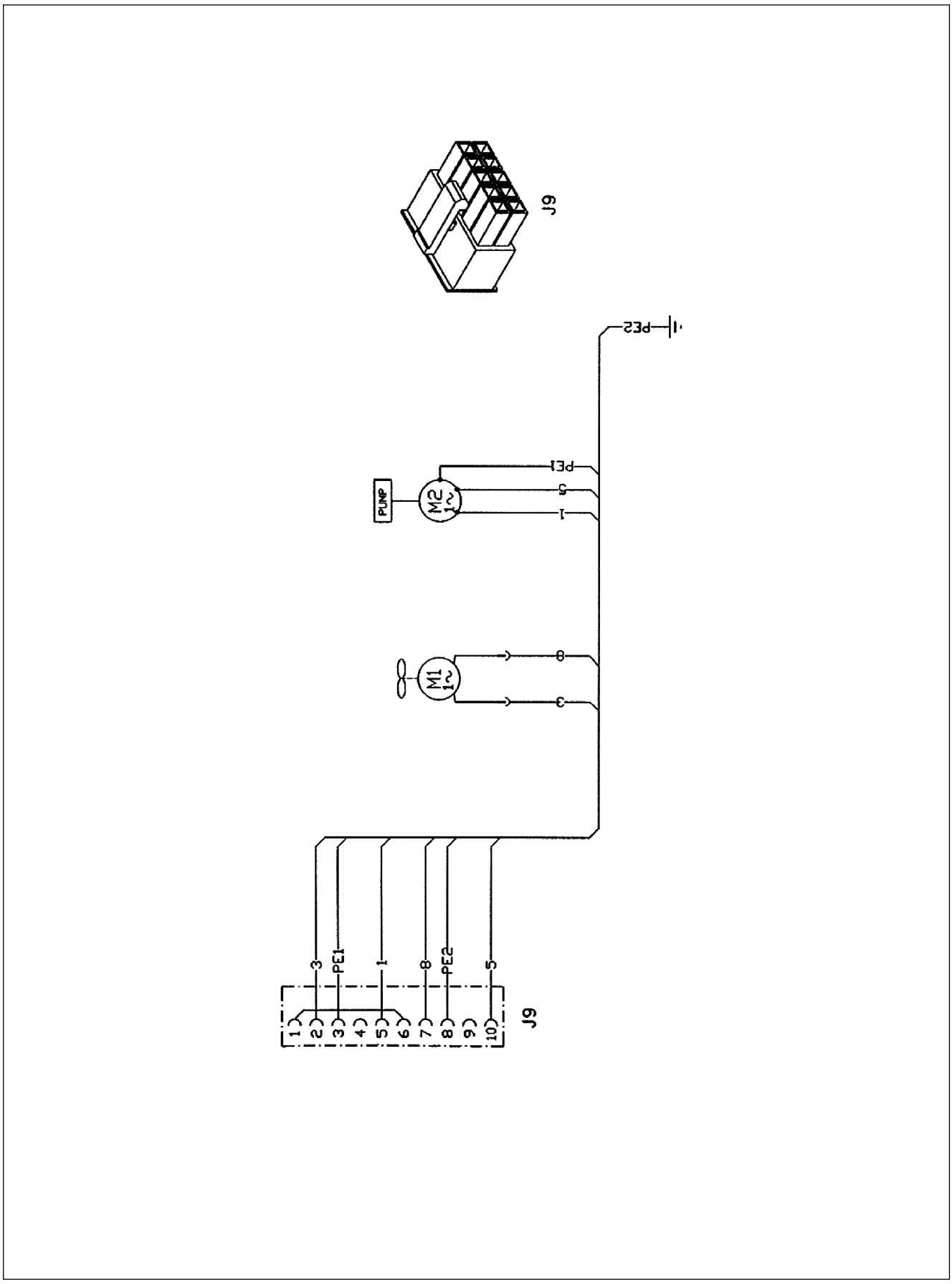
GENESIS 202 AC-DC



Connettori, Connectors, Verbinderer, Connecteurs, Conectors, Connectoren, Conectores, Liittimet, Kontaktdon, Skjøtemunstykken, Konnektorer, ΣΥΝΔΕΤΗΡΕΣ

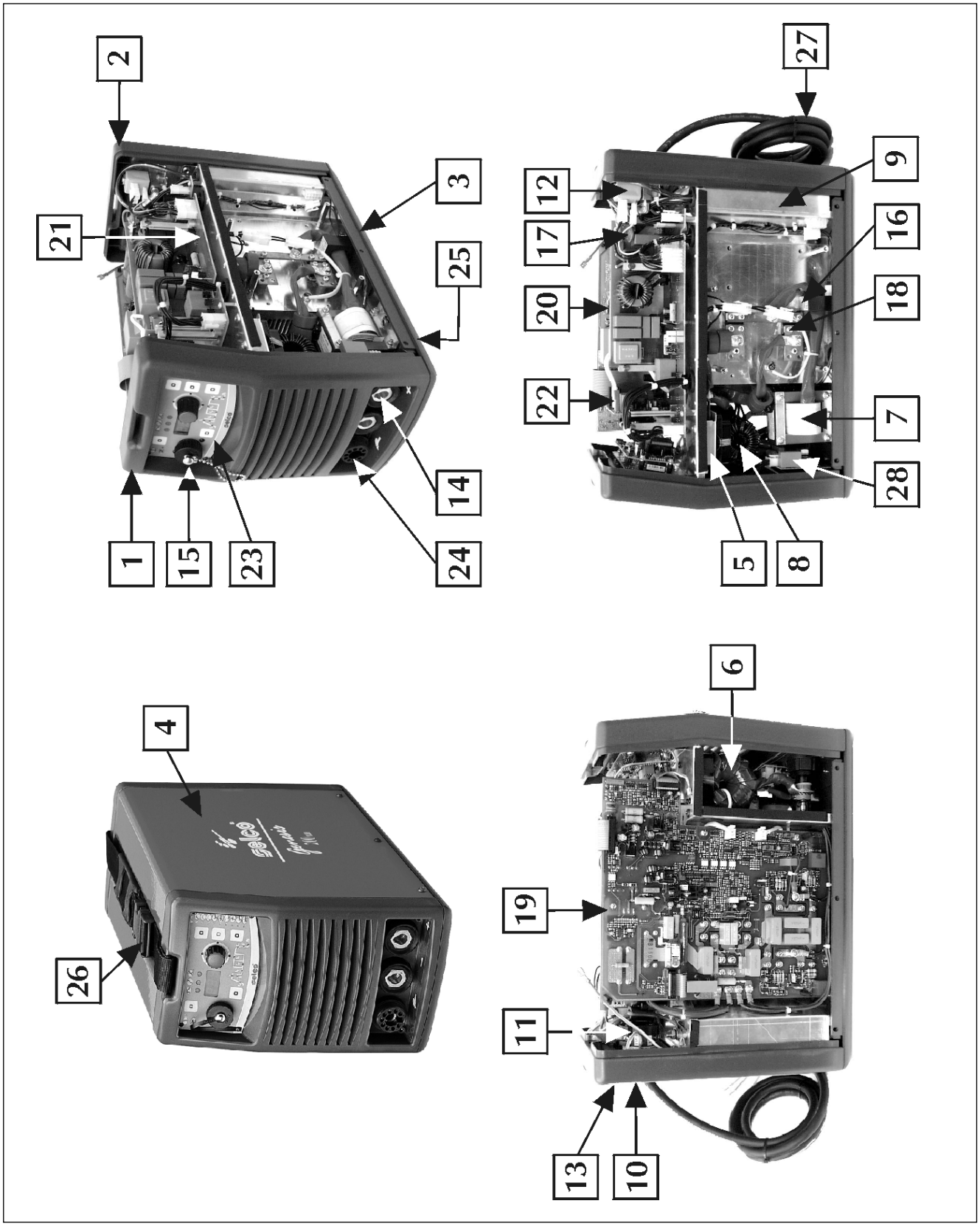


WU 15



55.07.020	GENESIS 200 TLH 1x230V
55.07.02001	GENESIS 200 TLH 1x230V H_2O
55.07.026	GENESIS 202 TLH 1x115/230V
55.07.02601	GENESIS 202 TLH 1x115/230V H_2O

Lista ricambi, Spare parts list, Ersatzteilverzeichnis, Liste de pièces détachées, Lista de repuestos, Lista de peças de reposição, Reserveonderdelenlijst, Reservdelslista, Liste med reservedele, Liste over reservedeler, Varaosaluett(ΚΑΤΑΛΟΓΟΣ ΑΝΤΑΛΛΑΚΤΙΚΩΝ



ITALIANO

POS.	DESCRIZIONE	CODICE
1	Pannello plastico frontale	01.04.262
2	Pannello plastico posteriore	01.05.220
3	Fondo plastico	01.06.100
4	Cofano serigrafato (G 200 TLH)	03.07.077
	Cofano serigrafato (G 202 TLH)	03.07.121
5	Trasformatore	05.02.025
6	Trasformatore H.F.	05.03.018
7	Induttanza di livellamento	05.04.224
8	Induttore	05.18.003
9	Ventilatore	07.10.020
10	Serracavo	08.22.001
11	Interruttore	09.01.005
12	Elettrovalvola	09.05.010
13	Manopola	09.11.009
14	Presa fissa	10.13.020
15	Tappo	10.01.151
16	Sensore Hinode	11.19.011
17	Varistore	11.26.001
18	Diodo	14.05.083
19	Kit ricambio monoscheda (G 200 TLH) (contiene la scheda 15.14.250 e i componenti di potenza)	15.18.017
	Kit ricambio monoscheda (G 202 TLH) (contiene la scheda 15.14.316 e i componenti di potenza)	15.18.021
20	Scheda ingresso (G 200 TLH)	15.14.252
	Scheda ingresso (G 202 TLH)	15.14.314
21	Scheda bus	15.14.315
22	Scheda HF	15.14.286
23	Pannello comandi FP106 (contiene la scheda 15.14.236 e la serigrafia frontale)	15.22.106
24	Adattatore	19.06.005
25	Piedino antiscivolo	21.03.003
26	Cinghia	21.06.004
27	Cavo alimentazione	49.04.055
28	Scheda filtro	15.14.238

ENGLISH

POS.	DESCRIPTION	CODE
1	Front plastic panel	01.04.262
2	Rear plastic panel	01.05.220
3	Plastic bottom	01.06.100
4	Silk-screen panel (G 200 TLH)	03.07.077
	Silk-screen panel (G 202 TLH)	03.07.121
5	Transformer	05.02.025
6	H.F. transformer	05.03.018
7	Leveling inductor	05.04.224
8	Inductor	05.18.003
9	Fan	07.10.020
10	Cable clamp	08.22.001
11	Switch	09.01.005
12	Solenoid valve	09.05.010
13	Knob	09.11.009
14	Fixed socket	10.13.020
15	Plug	10.01.151
16	Hinode sensor	11.19.011
17	Varistor	11.26.001
18	Diode	14.05.083
19	PC board spare kit (G 200 TLH) (contains board 15.14.250 and power components)	15.18.017
	PC board spare kit (G 202 TLH) (contains board 15.14.316 and power components)	15.18.021
20	Input card (G 200 TLH)	15.14.252
	Input card (G 202 TLH)	15.14.314
21	Bus board	15.14.315
22	H. F. card	15.14.286
23	Control panel FP106 (contains board 15.14.236 and screen-printed plate)	15.22.106
24	Adapter	19.06.005
25	Vibration-damping foot	21.03.003
26	Belt	21.06.004
27	Supply cable	49.04.055
28	Filter board	15.14.238

DEUTSCH

POS.	BESCHREIBUNG	CODE
1	Stimplastiktafel	01.04.262
2	Hintere Plastkatel	01.05.220
3	Plastikboden	01.06.100
4	Siebdruck seitenteil (G 200 TLH)	03.07.077
	Siebdruck seitenteil (G 202 TLH)	03.07.121
5	Transformator	05.02.025
6	Transformator H.F.	05.03.018
7	Glättungsdrosselspule	05.04.224
8	Drosselspule	05.18.003
9	Ventilator	07.10.020
10	Kabelschelle	08.22.001
11	Schalter	09.01.005
12	Solenoidventil	09.05.010
13	Drehknopf	09.11.009
14	Feste Steckdose	10.13.020
15	Stöpsel	10.01.151
16	Sensor Hinode	11.19.011
17	Varistor	11.26.001
18	Diode	14.05.083
19	Kartenersatzteilenset (G 200 TLH) (enthält die Karte 15.14.250 und die Leistungsteile)	15.18.017
	Kartenersatzteilenset (G 202 TLH) (enthält die Karte 15.14.316 und die Leistungsteile)	15.18.021
20	Eingangskarte (G 200 TLH)	15.14.252
	Eingangskarte (G 202 TLH)	15.14.314
21	Buskarte	15.14.315
22	HF-Karte	15.14.286
23	Bedienungsfeld FP106 (enthält die Karte 15.14.236 und siebgedrucktes Schild)	15.22.106
24	Adapter	19.06.005
25	Antirutschfuß	21.03.003
26	Riemen	21.06.004
27	SpeiseKabel	49.04.055
28	Filterplatine	15.14.238

FRANÇAIS

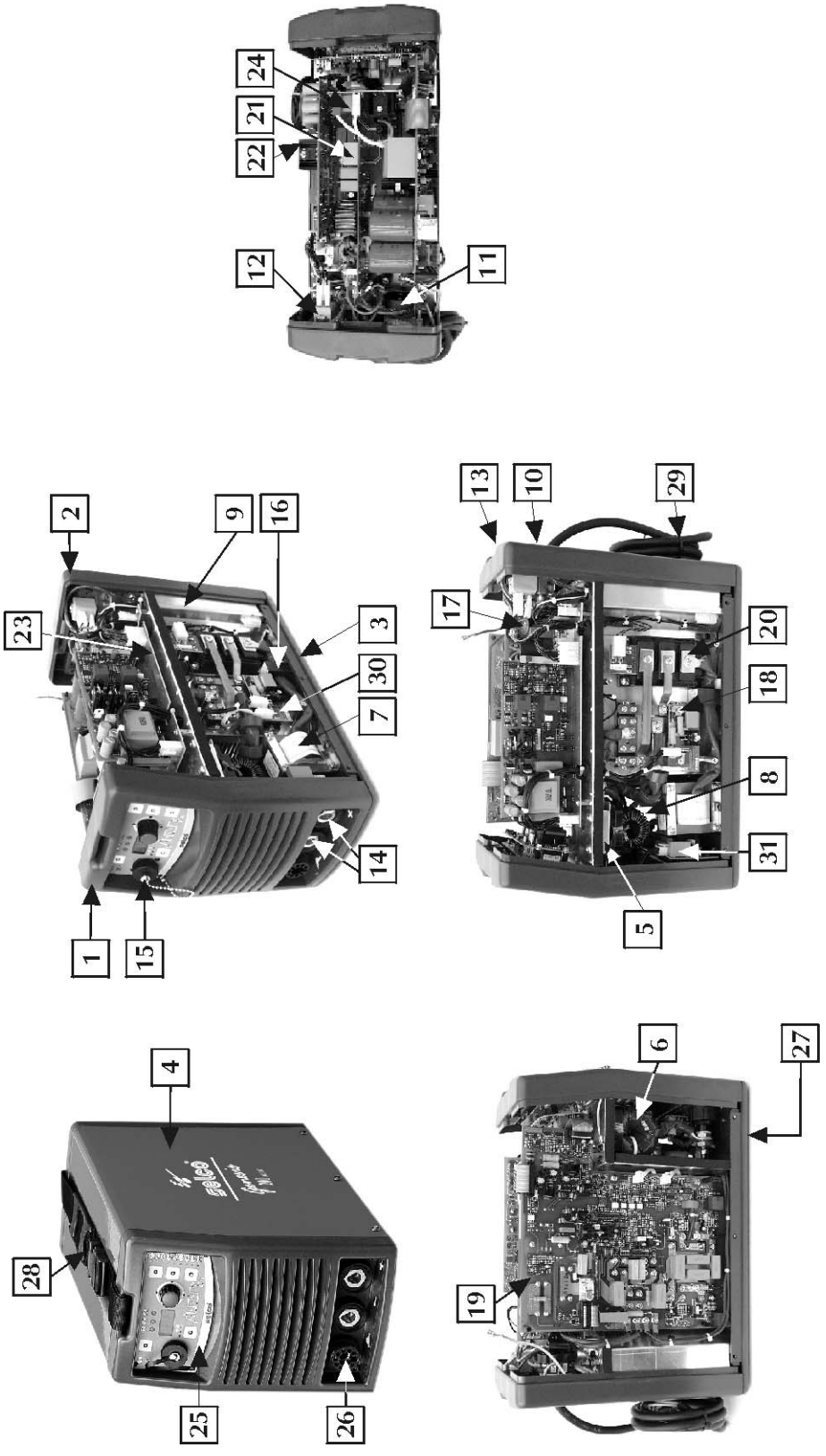
POS.	DESCRIPTION	CODE
1	Panneau plastique antérieur	01.04.262
2	Panneau plastique postérieur	01.05.220
3	Fond plastique	01.06.100
4	Panneau avec serigraphie (G 200 TLH)	03.07.077
	Panneau avec serigraphie (G 202 TLH)	03.07.121
5	Transformateur	05.02.025
6	Transformateur H.F.	05.03.018
7	Inductance d'écrêtage	05.04.224
8	Inducteur	05.18.003
9	Ventilateur	07.10.020
10	Serre-câble	08.22.001
11	Interrupteur	09.01.005
12	Electrovanne	09.05.010
13	Bouton	09.11.009
14	Prise fixe	10.13.020
15	Capot	10.01.151
16	Détecteur Hinode	11.19.011
17	Varistance	11.26.001
18	Diode	14.05.083
19	Kit de rechange platine (G 200 TLH) (il contient la carte 15.14.250 et les composants de puissance)	15.18.017
	Kit de rechange platine (G 202 TLH) (il contient la carte 15.14.316 et les composants de puissance)	15.18.021
20	Carte d'entrée (G 200 TLH)	15.14.252
	Carte d'entrée (G 202 TLH)	15.14.314
21	Platine bus	15.14.315
22	Carte H.F.	15.14.286
23	Panneau de reglage FP106 (il contient la carte 15.14.236 et la plaque sérigraphiée)	15.22.106
24	Adaptateur	19.06.005
25	Pied anti-vibrations	21.03.003
26	Courroie	21.06.004
27	Câble d'alimentation	49.04.055
28	Platine filtre	15.14.238

ESPAÑOL

POS.	DESCRIPCION	CODIGO
1	Panel plastico anterior	01.04.262
2	Panel plástico posterior	01.05.220
3	Fondo plástico	01.06.100
4	Panel con serigrafia (G 200 TLH)	03.07.077
	Panel con serigrafia (G 202 TLH)	03.07.121
5	Transformador	05.02.025
6	Transformador H.F.	05.03.018
7	Bobina de inductancia stabilizadora de corriente	05.04.224
8	Inductor	05.18.003
9	Ventilador	07.10.020
10	Abrazadera	08.22.001
11	Interruptor	09.01.005
12	Electroválvula	09.05.010
13	Botón	09.11.009
14	Toma fija	10.13.020
15	Tapón	10.01.151
16	Captador Hinode	11.19.011
17	Varistor	11.26.001
18	Diodo	14.05.083
19	Juego de repuestos tarjeta (G 200 TLH) (contiene la tarjeta 15.14.250 y los componentes de potencia)	15.18.017
	Juego de repuestos tarjeta (G 202 TLH) (contiene la tarjeta 15.14.316 y los componentes de potencia)	15.18.021
20	Tarjeta entrada (G 200 TLH)	15.14.252
	Tarjeta entrada (G 202 TLH)	15.14.314
21	Tarjeta bus	15.14.315
22	Tarjeta H. F.	15.14.286
23	Panel de control FP106 (contiene la tarjeta 15.14.236 y placa serigrafiada)	15.22.106
24	Adaptador	19.06.005
25	Pie antivibrador	21.03.003
26	Correa	21.06.004
27	Cable de alimentación	49.04.055
28	Tarjeta filtro	15.14.238

55.08.020	**GENESIS 200 AC-DC 1x230V**
55.08.02001	**GENESIS 200 AC-DC 1x230V H_2O**
55.08.021	**GENESIS 202 AC-DC 1x115/230V**
55.08.02101	**GENESIS 202 AC-DC 1x115/230V H_2O**

Lista ricambi, Spare parts list, Ersatzteilverzeichnis, Liste de pièces détachées, Lista de repuestos, Lista de peças de reposição, Reserveonderdelenlijst, Reservdelslista, Liste med reservedele, Liste over reservedeler, Varaosaluette ΚΑΤΑΛΟΓΟΣ ΑΝΤΑΛΛΑΚΤΙΚΩΝ



ITALIANO

POS.	DESCRIZIONE	CODICE
1	Pannello plastico frontale	01.04.262
2	Pannello plastico posteriore	01.05.220
3	Fondo plastico	01.06.100
4	Cofano serigrafato (G 200 AC-DC)	03.07.059
	Cofano serigrafato (G 202 AC-DC)	03.07.120
5	Trasformatore	05.02.025
6	Trasformatore H.F.	05.03.018
7	Induttanza di livellamento	05.04.224
8	Induttore	05.18.003
9	Ventilatore	07.10.020
10	Serracavo	08.22.001
11	Interruttore	09.01.005
12	Elettrovalvola	09.05.010
13	Manopola	09.11.009
14	Presa fissa	10.13.020
15	Tappo	10.01.151
16	Sensore Hinode	11.19.011
17	Varistore	11.26.001
18	Diodo	14.05.083
19	Kit ricambio monoscheda (G 200 AC-DC) (contiene scheda 15.14.250 e componenti di potenza)	15.18.017
	Kit ricambio monoscheda (G 202 AC-DC) (contiene scheda 15.14.316 e componenti di potenza)	15.18.021
20	Kit ricambio modulo secondario (contiene modulo IGBT secondario e scheda 15.14.289)	15.18.018
21	Scheda ingresso (G 200 AC-DC)	15.14.252
	Scheda ingresso (G 202 AC-DC)	15.14.314
22	Scheda comando e sovrapposizione	15.14.253
23	Scheda bus	15.14.315
24	Scheda HF	15.14.286
25	Pannello comandi FP122 (contiene scheda 15.14.236 e targa serigrafata)	15.22.122
26	Adattatore	19.06.005
27	Piedino antiscivolo	21.03.003
28	Cinghia	21.06.004
29	Cavo alimentazione	49.04.055
30	Scheda clamp secondario	15.14.256
31	Scheda filtro	15.14.238

ENGLISH

POS.	DESCRIPTION	CODE
1	Front plastic panel	01.04.262
2	Rear plastic panel	01.05.220
3	Plastic bottom	01.06.100
4	Silk-screen panel (G 200 AC-DC)	03.07.059
	Silk-screen panel (G 202 AC-DC)	03.07.120
5	Transformer	05.02.025
6	H.F. transformer	05.03.018
7	Leveling inductor	05.04.224
8	Inductor	05.18.003
9	Fan	07.10.020
10	Cable clamp	08.22.001
11	Switch	09.01.005
12	Solenoid valve	09.05.010
13	Knob	09.11.009
14	Fixed socket	10.13.020
15	Plug	10.01.151
16	Hinode sensor	11.19.011
17	Varistor	11.26.001
18	Diode	14.05.083
19	PC board spare kit (G 200 AC-DC) (contains board 15.14.250 and power components)	15.18.017
	PC board spare kit (G 202 AC-DC) (contains board 15.14.316 and power components)	15.18.021
20	Secondary spare kit (contains secondary IGBT moduleand board 15.14.289)	15.18.018
21	Input card (G 200 AC-DC)	15.14.252
	Input card (G 202 AC-DC)	15.14.314
22	Superposition and control board	15.14.253
23	Bus board	15.14.315
24	H. F. card	15.14.286
25	Control panel FP122 (contains board 15.14.236 and screen-printed plate)	15.22.122
26	Adapter	19.06.005
27	Vibration-damping foot	21.03.003
28	Belt	21.06.004
29	Supply cable	49.04.055
30	Secondary clamp board	15.14.256
31	Filter board	15.14.238

DEUTSCH

POS.	BESCHREIBUNG	CODE
1	Stirnplastiktafel	01.04.262
2	Hintere Plastkatel	01.05.220
3	Plastikboden	01.06.100
4	Siebdruck seitenteil (G 200 AC-DC)	03.07.059
	Siebdruck seitenteil (G 202 AC-DC)	03.07.120
5	Transformator	05.02.025
6	Transformator H.F.	05.03.018
7	Glättungsdrosselspule	05.04.224
8	Drosselspule	05.18.003
9	Ventilator	07.10.020
10	Kabelschelle	08.22.001
11	Schalter	09.01.005
12	Solenoidventil	09.05.010
13	Drehknopf	09.11.009
14	Feste Steckdose	10.13.020
15	Stöpsel	10.01.151
16	Sensor Hinode	11.19.011
17	Varistor	11.26.001
18	Diode	14.05.083
19	Kartenersatzteilenset (G 200 AC-DC) (enthält die Karte 15.14.250 und die Leistungsteile)	15.18.017
	Kartenersatzteilenset (G 202 AC-DC) (enthält die Karte 15.14.316 und die Leistungsteile)	15.18.021
20	Sekundärersatzteilenset (enthält das Sekundärmodul IGBT und Karte 15.14.289)	15.18.018
21	Eingangskarte (G 200 AC-DC)	15.14.252
	Eingangskarte (G 202 AC-DC)	15.14.314
22	Steuerungskarte	15.14.253
23	Buskarte	15.14.315
24	HF.-Karte	15.14.286
25	Bedienungsfeld FP122 (enthält die Karte 15.14.236 und siebgedrucktes Schild)	15.22.122
26	Adapter	19.06.005
27	Antirutschfuß	21.03.003
28	Riemen	21.06.004
29	SpeiseKabel	49.04.055
30	Sekundärkarte	15.14.256
31	Filterplatine	15.14.238

FRANÇAIS

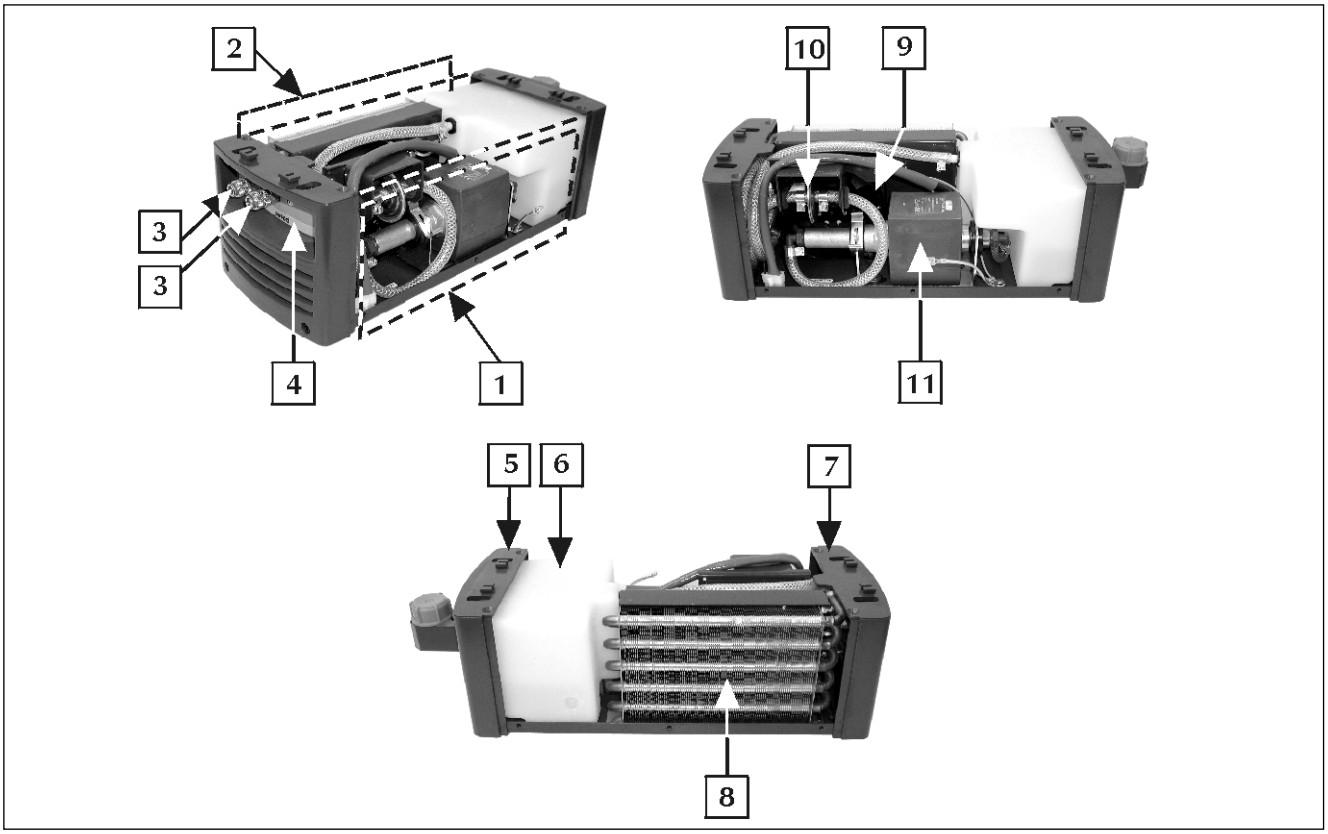
POS.	DESCRIPTION	CODE
1	Panneau plastique antérieur	01.04.262
2	Panneau plastique postérieur	01.05.220
3	Fond plastique	01.06.100
4	Panneau avec serigraphie (G 200 AC-DC)	03.07.059
	Panneau avec serigraphie (G 202 AC-DC)	03.07.120
5	Transformateur	05.02.025
6	Transformateur H.F.	05.03.018
7	Inductance d'écrêtage	05.04.224
8	Inducteur	05.18.003
9	Ventilateur	07.10.020
10	Serre-câble	08.22.001
11	Interrupteur	09.01.005
12	Electrovanne	09.05.010
13	Bouton	09.11.009
14	Prise fixe	10.13.020
15	Capot	10.01.151
16	Détecteur Hinode	11.19.011
17	Varistance	11.26.001
18	Diode	14.05.083
19	Kit de rechange platine (G 200 AC-DC) (il contient la carte 15.14.250 et les composants de puissance)	15.18.017
	Kit de rechange platine (G 202 AC-DC) (il contient la carte 15.14.316 et les composants de puissance)	15.18.021
20	Kit de rechange secondaire (il contient le module IGBT secondaire et la carte 15.14.289)	15.18.018
21	Carte d'entrée (G 200 AC-DC)	15.14.252
	Carte d'entrée (G 202 AC-DC)	15.14.314
22	Platine de contrôle et superposition	15.14.253
23	Platine bus	15.14.315
24	Carte H.F.	15.14.286
25	Panneau de reglage FP122 (il contient la carte 15.14.236 et la plaque sérigraphiée)	15.22.122
26	Adaptateur	19.06.005
27	Pied anti-vibrations	21.03.003
28	Courroie	21.06.004
29	Câble d'alimentation	49.04.055
30	Platine clamp secondaire	15.14.256
31	Platine filtre	15.14.238

ESPAÑOL

POS.	DESCRIPCION	CODIGO
1	Panel plastico anterior	01.04.262
2	Panel plástico posterior	01.05.220
3	Fondo plástico	01.06.100
4	Panel con serigrafia (G 200 AC-DC)	03.07.059
	Panel con serigrafia (G 202 AC-DC)	03.07.120
5	Transformador	05.02.025
6	Transformador H.F.	05.03.018
7	Bobina de inductancia stabilizadora de corriente	05.04.224
8	Inductor	05.18.003
9	Ventilador	07.10.020
10	Abrazadera	08.22.001
11	Interruptor	09.01.005
12	Electroválvula	09.05.010
13	Botón	09.11.009
14	Toma fija	10.13.020
15	Tapón	10.01.151
16	Captador Hinode	11.19.011
17	Varistor	11.26.001
18	Diodo	14.05.083
19	Juego de repuestos tarjeta (G 200 AC-DC) (contiene la tarjeta 15.14.250 y los componentes de potencia)	15.18.017
	Juego de repuestos tarjeta (G 202 AC-DC) (contiene la tarjeta 15.14.316 y los componentes de potencia)	15.18.021
20	Juego de repuestos secundario (contiene módulo IGBT secundario y tarjeta 15.14.289)	15.18.018
21	Tarjeta entrada (G 200 AC-DC)	15.14.252
	Tarjeta entrada (G 202 AC-DC)	15.14.314
22	Tarjeta de mando y superposición	15.14.253
23	Tarjeta bus	15.14.315
24	Tarjeta H. F.	15.14.286
25	Panel de control FP122 (contiene la tarjeta 15.14.236 y placa serigrafiada)	15.22.122
26	Adaptador	19.06.005
27	Pie antivibrador	21.03.003
28	Correa	21.06.004
29	Cable de alimentación	49.04.055
30	Tarjeta clamp secundario	15.14.256
31	Tarjeta filtro	15.14.238

71.03.018 WU 15

Lista ricambi, Spare parts list, Ersatzteilverzeichnis, Liste de pièces détachées, Lista de repuestos, Lista de peças de reposição, Reserveonderdelenlijst, Reservdelslista, Liste med reservedele, Liste over reservedeler, Varaosaluette ΚΑΤΑΛΟΓΟΣ ΑΝΤΑΛΛΑΚΤΙΚΩΝ



ITALIANO

POS.	DESCRIZIONE	CODICE
1	Pannello laterale destro	01.03.027
2	Pannello laterale sinistro	01.03.026
3	Innesto rapido H2O	19.50.043
4	FP 115	03.05.305
5	Pannello posteriore plastico	01.05.218
6	Serbatoio	20.04.505
7	Pannello frontale plastico	01.04.261
8	Condensatore	18.81.003
9	Ventilatore	07.10.016
10	Polmone antivibrazioni	07.21.100
11	Pompa	07.21.002

Liquido antigelo in latta da 10 Kg. cod. 18.91.001

ENGLISH

POS.	DESCRIPTION	CODE
1	Right side panel	01.03.027
2	Left side panel	01.03.026
3	Quick coupling H2O	19.50.043
4	FP 115	03.05.305
5	Plastic back panel	01.05.218
6	Tank	20.04.505
7	Plastic front panel	01.04.261
8	Capacitor	18.81.003
9	Fan	07.10.016
10	Vibration damping device	07.21.100
11	Pump	07.21.002

Antifreeze liquid in 10 kg tin 18.91.001

DEUTSCH

POS.	BESCHREIBUNG	CODE
1	Seitenteil re	01.03.027
2	Seitenteil l'	01.03.026
3	Schnellkupplung H2O	19.50.043
4	FP 115	03.05.305
5	Hinteres Plastikpaneel	01.05.218
6	Behälter	20.04.505
7	Stirnseitiges Plastikpaneel	01.04.261
8	Kondensator	18.81.003
9	Ventilator	07.10.016
10	Schwingungsdämpfende vorrichtung	07.21.100
11	Pumpe	07.21.002

Frostschutzflüssigkeit in 10 kg Kanister 18.91.001

FRANÇAIS

POS.	DESCRIPTION	CODE
1	Panneau lateral droit	01.03.027
2	Panneau lateral gauche	01.03.026
3	Embrayage rapide H2O	19.50.043
4	FP 115	03.05.305
5	Panneau arrière plastique	01.05.218
6	Reservoir	20.04.505
7	Panneau avant plastique	01.04.261
8	Condensateur	18.81.003
9	Ventilateur	07.10.016
10	Dispositif antivibratoire	07.21.100
11	Pompe	07.21.002

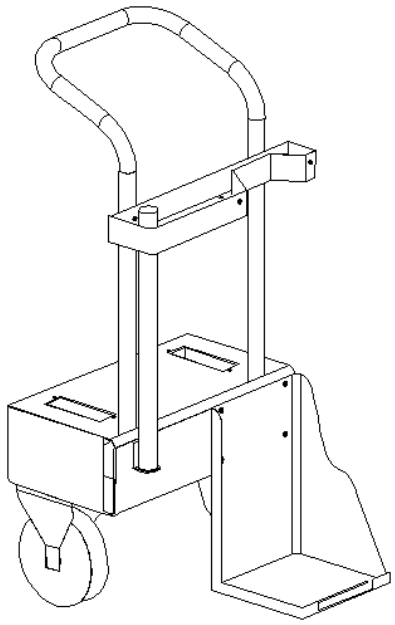
Liquide antigel en bidon de 10 kg 18.91.001

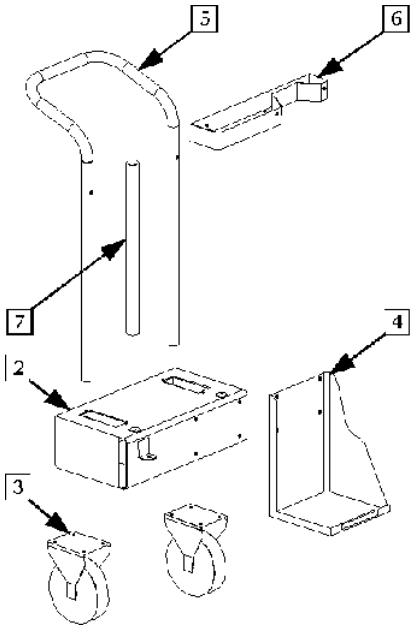
ESPAÑOL

POS.	DESCRIPCION	CODIGO
1	Panel lateral derecho	01.03.027
2	Panel lateral izquierdo	01.03.026
3	Embraque rapido H2O	19.50.043
4	FP 115	03.05.305
5	Panel posterior plástico	01.05.218
6	Tanque	20.04.505
7	Panel frontal plástico	01.04.261
8	Condensador	18.81.003
9	Ventilador	07.10.016
10	Dispositivo antivibrador	07.21.100
11	Bomba	07.21.002

Líquido anticongelante en lata de 10 kg 18.91.001

Carrello portageneratore monobombola, Single-bottle power source trolley, Gerätewagen 1 Flasche, Chariot porte-générateur 1 bouteille, Carro porta-gerador mono-botija, Carro porta-gerador mono-botija, Generatorwagen voor 1 gasfles, Generatorvagn med en behållare, Generatorvogn til én flaske, Generatorholdervogn for en beholder, Yhdellä kaasupullolla varustetun generaattorin kuljetuskärry, Καρότσι γεννήτριας μι ας φιάλης





ITALIANO

POS.	DESCRIZIONE	CODICE
1	Carrello portageneratore GT 18	71.03.019
2	Fondo completo carrello GT 18	02.07.040
3	Ruota fissa PBF 180	04.04.003
4	Porta bombola carrello	02.07.041
5	Manico a tubo carrello GT 18	01.15.032
6	Supporto bombola carrello	02.07.042
7	Tubo porta elettrodi GT 18	02.07.044

FASI DI MONTAGGIO

1) Unire le ruote (3) alla base del carrello (2) con viti e dadi M8
2) Assemblare il supporto bombola inferiore (4) alla base del carrello (2) con viti e dadi M8
3) Inserire il manico (5) negli appositi fori ed avvitare sul fondo (2) con viti M8
4) Unire il supporto bombola superiore (6) al manico con viti M6 ed inserire il porta elettrodi (7) ed unirlo al fondo con viti M8
5) Completare aggiungendo la catena e gli occhioli al supporto superiore della bombola

ENGLISH

POS.	DESCRIPTION	CODE
1	Generator trolley GT 18	71.03.019
2	Bottom GT 18	02.07.040
3	Wheel PBF 180	04.04.003
4	Cylinder holder	02.07.041
5	Handle GT 18	01.15.032
6	Cylinder locking unit	02.07.042
7	Electrode holder GT 18	02.07.044

ASSEMBLY

1) Fix the wheels (3) under the bottom (2) with M8 screws and nuts
2) Fix the cylinder holder (4) to the bottom (2) with M8 and nuts
3) Put the handle (5) in the specific holes and fix to the bottom (2) with M8 screws
4) Fix the locking unit (6) to the handle (5) with M6 screws and put the electrode holder in with M8 screws
5) Fix the metal chain on the cylinder locking unit

DEUTSCH

POS.	BESCHREIBUNG	CODE
1	Gerätewagen GT 18	71.03.019
2	Unterteil GT 18	02.07.040
3	Rad PBF 180	04.04.003
4	Flaschenhalter	02.07.041
5	Stiel GT 18	01.15.032
6	Flaschenverriegelungseinricht.	02.07.042
7	Elektrodenhalter GT 18	02.07.044

AUFBAU

1) Räder (3) unter den Unterteil (2) durch Schrauben und Mutter M8 befestigen
2) Flaschenhalter (4) auf den Unterteil durch Schrauben und Mutter M8 befestigen
3) Stiel (5) in die entsprechenden Löcher einfügen und mit Schrauben M8 festmachen
4) Flaschenverriegelungseinrichtung (6) auf den Stiel (5) anschrauben (M6) und Elektrodenhalter einfügen (M8)
5) Kettchen auf die Verriegelungseinrichtung anbringen

FRANÇAIS

POS.	DESCRIPTION	CODE
1	Chariot générateur GT 18	71.03.019
2	Parti inférieure GT 18	02.07.040
3	Roue PBF 180	04.04.003
4	Support bouteille	02.07.041
5	Manche GT 18	01.15.032
6	Unité ablocage bouteille	02.07.042
7	Etui électrodes GT 18	02.07.044

ASSEMBLAGE

1) Fixer les roues (3) sous la partie inférieure (2) par vis et écrous M8
2) Fixer le support bouteille (4) sur la partie inférieure (2) par vis et écrous M8
3) Insérer le manche dans les trous correspondants et fixer le par vis M8
4) Fixer l'unité ablocage bouteille sur le manche par vis M6 et insérer l'étui électrodes (vis m8)
5) Fixer la chaîne sur l'unité ablocage bouteille

ESPAÑOL

POS.	DESCRIPCION	CODIGO
1	Carro generador GT 18	71.03.019
2	Fondo GT 18	02.07.040
3	Rueda PBF 180	04.04.003
4	Soporte bombona	02.07.041
5	Mango GT 18	01.15.032
6	Bloqueo bombona	02.07.042
7	Portaelectrodos GT 18	02.07.044

MONTAJE

1) Fijar las ruedas (3) debajo del fondo (2) con tornillos y tuercas M8
2) Fijar el soporte bombona (4) al fondo (2) con tornillos y tuercas M8
3) Poner el mango (5) en los agujeros apropiados y fijar en el fondo con tornillos M8
4) Fijar el bloqueo bombona (6) al mango (5) con tornillos M6 y colocar el portaelectrodos (M8)
5) Colocar la cadenilla en el bloqueo bombona

Legenda simboli, Key to Sumbols, Legende der Symbole, Legende des Symboles, Legenda dos símbolos, Legenda dos símbolos, Legenda van de symbolen, Teckenförklaring, Symbolforklaring, Symbolbeskrivelse, Merkkien selitykset, Υπόμνημα συμβόλων

	ITALIANO	ENGLISH	DEUTSCH	FRANÇAIS	ESPAÑOL
	Alimentazione del generatore	Power source power supply	Versorgung des Generators	Alimentation du générateur	Alimentación del generador
	Saldatura	Welding	Schweißung	Soudure	Soldadura
	Allarme generale	General alarm	Generalalarm	Alarme générale	Alarma general
	Funzionamento in interno	Operation with internal components	Interner Betrieb	Fonctionnement à l'intérieur	Funcionamiento en interiores
	Funzionamento in esterno	Operation with external components	Externer Betrieb	Fonctionnement à l' extérieur	Funcionamiento en exteriores
	Entrata liquido refrigerante	Cooling liquid inlet	Einlauf für Kühlflüssigkeit	Entrée du liquide réfrigérant	Entrada líquido refrigerante
	Uscita liquido refrigerante	Cooling liquid outlet	Auslauf für Kühlflüssigkeit	Sortie du liquide réfrigérant	Salida líquido refrigerante
	Procedimento MMA	MMA process	MMA-Verfahren	Procédé MMA	Procedimiento MMA
	Procedimento TIG partenza LIFT	LIFT start TIG process	WIG-Verfahren, LIFT-Start	Procédé TIG démarrage LIFT	Procedimiento TIG cebado LIFT
	Procedimento TIG partenza HF	HF start TIG process	WIG-Verfahren, HF-Start	Procédé TIG démarrage HF	Procedimiento TIG cebado HF
	Procedimento TIG modalità 2 tempi	2-stage TIG process	WIG-Verfahren, 2-taktig	Procédé TIG mode 2 temps	Procedimiento TIG modo 2 tiempos
	Procedimento TIG modalità 4 tempi	4-stage TIG process	WIG-Verfahren, 4-taktig	Procédé TIG mode 4 temps	Procedimiento TIG modo 4 tiempos
	Procedimento TIG Bi-level	TIG Bi-level process	WIG Bi-level -Verfahren	Procédé TIG Bi-level	Procedimiento TIG Bi-level
	Procedimento TIG in corrente continua	TIG process in direct current	WIG-Verfahren in Gleichstrom	Procédé TIG en courant continu	Procedimiento TIG en corriente continua
	Procedimento TIG in corrente alternata	TIG process in alternating current	WIG-Verfahren in Wechselstrom	Procédé TIG en courant alterné	Procedimiento TIG en corriente alterna
	Procedimento TIG in corrente costante	TIG constant current process	WIG-Dauerstromverfahren	Procédé TIG en courant constant	Procedimiento TIG en corriente constante
	Procedimento TIG in corrente pulsata	TIG pulsed current process	WIG-Verfahren in pulsiertem Strom	Procédé TIG en courant pulsé	Procedimiento TIG en corriente pulsatoria
	Procedimento TIG in media frequenza	TIG medium frequency process	WIG-Verfahren in Mittelfrequenz	Procédé TIG en fréquence moyenne	Procedimiento TIG en media frecuencia
	Frequenza AC	AC frequency	AC-Frequenz	Fréquence AC	Frecuencia AC
	Balance AC	AC balance	AC-Balance	Balance AC	Balance AC
	Diametro elettrodo in TIG AC	Electrode diameter in TIG AC	Elektrodendurchmess er in WIG AC	Diamètre électrode en TIG AC	Diámetro electrodo en TIG AC

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