WELDER

Features
- Single-phase power supply (keep to the values marked on the machine).
- Steepless regulation, with the welding current handwheel.
- Thermostatic protection against overloading.

Installation
Check whether the machine voltage corresponds to mains voltage.
The yellow/green wire of the mains input cable must be connected to the earth plate of the mains.

For charging the machine power supply voltage, take off the switch knob and position stop disk according to panel illustration. The switch must operate at the required voltage only.

Tighten the connecting terminals of electrode holder and earth to avoid overheating.

Checking (to be carried out by qualified personnel):
1. IF THE PERFORMANCES ARE NOT SATISFACTORY, CHECK:
   a) the mains voltage while welding must not decrease by more than 10%;
   b) the cross section of the supply mains cable;
   c) the exact position of the switch knob;
   d) whether the shunt can attain the maximum of its stroke;
   e) whether the connections are loose or broken;
   f) whether the cross section of electrode holder and earth cable is adequate;
   g) whether the cross section in possible extension of mains input cable is adequate.

IN CASE OF DIFFICULTIES WHILE WELDING CHECK:
1. whether the machine is adjusted for the proper welding current.
2. whether the electrode is dry and has a true coating.

IF THE MACHINE DOES NOT WORK, CHECK:
1. whether there is voltage in the mains;
2. whether the mains input cable is not interrupted;
3. whether the switch works regularly;
4. the voltage at the output terminals.

N.B. A temporary current failure during welding means that the machine’s capacity has been exceeded. In this case, wait several minutes before resuming works.

BATTERY CHARGER

Features
- Single-phase power-supply (keep to the values marked on the machine).
- Charging voltage: 6-12-24 Volts.
- Charging current: min. 5A - Max. 10A;
- Steepless regulation of the charging current by means of handwheel.
- Thermostatic protection against overloading.

Installation
Use the clamps (+) (31) and the clamps (-6, -12, -24V) (30) depending on the battery voltage.
- Connect red (+) crocodile clip to the positive terminal post of the battery and black (-) crocodile clip to the negative terminal post.
- Check whether the machine voltage corresponds to mains voltage.
- The yellow/green wire of the mains input cable must be connected to the earth plate of the mains.

For charging the machine power supply voltage, take off the switch knob and position stop disk according to panel illustration. The switch must operate at the required voltage only.
- Plug in the mains cable.
- Adjust the charging current by turning the handwheel (11) in such a way as to avoid exceeding the instrument’s full scale.

Checking
If the unit fails operate, check supply mains and battery, ensure that crocodile clips are making good contact with battery posts.

If thermostat (35) cuts off, remove possible overloads, wrong connections, polarity inversions.

Technical remarks
To check the state of charge in the batteries, it is necessary to use a hydrometer of good quality.
The following values refer to 25°C:
Fully charged battery 1,28 Kg/l = 32 Be - 1/2 charged battery 1,2 Kg/l = 23,5 Be - 16 Be.
Sulphatation seriously damages batteries which are left flat.
The self discharge of standard batteries is about 1/100 per day of its capacity. As a matter of fact a fully charged battery halves its charge after 60 days of inactivity.

Batteries on charge
To avoid accumulations of dangerous gas, charge the batteries in a ventilated area.
Batteries must be charged without cell caps.
The electrolyte level must be a few millimeters above the lead plates in the cells.
When two or more batteries have to be charged at the same time (provided that their tension and capacity allow it), preferably connect them in series (fig. 1).

For finding out the required value of the charging current, proceed as follows:
- normal charging current = Ah capacity divided by 10
- max. charging current = Ah capacity divided by 5.5

Example = 80 Ah battery / 20 hours rating
80 : 10 = 8A = normal charging current
80 : 5.5 = 15A = max. charging current.

During the charging time, the battery electrolyte must not exceed 40°C.
The battery is full charged when:
A) tension reaches 2.7-2.8 V per cell.
B) electrolyte density remains constant for two hours at the above mentioned values (technical remarks).

SERIES CONNECTIONS TO BE PREFERRED

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<thead>
<tr>
<th>12V</th>
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CONNECTIONS TO BE USED ONLY, IF NECESSARY

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Fig. 1

Fig. 2
La richiesta di parti di ricambio deve indicare sempre il numero di articolo, la posizione, la quantità e la data di acquisto.

In case spare parts are required please always state: item ref. n°, spare part ref. n°, quantity and purchase date.

En caso de demanda de piezas détachées, indiquer toujours: le n° de référence du produit, le n° de référence de la pièce détachée, la quantité et la date d'achat du produit.

In der Ersatzteilanfrage müssen immer Art. Nr., Ersatzteil-Nr., Menge und Einkaufsdatum angegeben werden.

Los pedidos de piezas de repuesto deben indicar siempre: el numero del articulo, la posición, la cantidad y la fecha de la compra.