FEATURES
Single-phase power-supply (keep to the values shown on the machine).
12-24 V Battery-charger - Starter.
Maximum slow charge current: 50 A.
Maximum fast charge current: 50 A. (charging time may be regulated by means of a timer).
Starting current: 350 A 12 V - 250 A 24 V.
Maximum absorbed power while charging 1,7 KW - while starting 7,4 KW.

WARNING
— The area in which the batteries are charged must be well-ventilated in order to prevent dangerous gases from building up.
— Batteries must be charged without cell caps.
— The electrolyte must be a few centimetres higher than the separators.

HOW IT IS USED
1) Turn the switch knob (6) to «OFF».
2) Turn the timer knob (7) to «OFF».
3) Make sure that the mains voltage is right for the machine.
4) Connect the mains cable to the power socket (provided with earth).
5) Connect the clamps to the battery: the red clamp (+) to the positive pole - the black clamp (−) to the negative pole.

BATTERY-CHARGER (How it works)
A) Turn switch knob (4) to position 1.
B) Turn switch knob (6) to position 12 V or 24 V according to the voltage of the battery to be charged.

SLOW CHARGING
C) Turn timer knob (7) to position 12 V.
D) Adjust charging current by turning the switch knob (4) without exceeding 50 A.
E) The charging current necessary may be determined thus:
   normal charge = capacity in Ah divided by 10
   maximum charge = capacity in Ah divided by 5.5.
   Example: 80 Ah battery at 20 hours discharge
   Normal charging current 80 : 10 = 8 Amps
   Maximum charging current 80 : 5,5 = 15 Amps.
   The battery electrolyte must not exceed 40°C during charging.
   The battery is charged when:
   a) the voltage reaches 2,7-2,8 V at each element.
   b) the electrolyte density remains constant for two hours at the values shown under «Technical Notes».

FAST CHARGING USING THE TIMER
F) Turn the timer knob to position 12 V and set it at the charging time desired (maximum 1 hour); when this time is over, the machine turns itself off automatically.
G) Adjust the charging current by turning the switch knob (4), without ever exceeding 50 A.
H) The rapid charging current must not exceed the battery’s Ah capacity. For example: for 42 Ah batteries, the current may reach 40 Amps at the beginning of charging, and then decrease.

THE TIME NEEDED WILL BE REGULATED BY THE TIMER AT THE MINIMUM. During rapid charging the temperature of the electrolyte may reach 45°C. for a short period. RAPID CHARGING OF OLD BATTERIES OR ONES IN A BAD CONDITIONS IS UNWISE.