

## GUARANTEE

1. All URANIO batteries are guaranteed against manufacturing or assembly defects for a period of 12 months from the date of manufacture or delivery, indicated by:
  - the code in the supplied booklet
  - the battery adhesive identification plate
  - the user manual of the machine.
2. All service must be performed by engineers approved by URANIO or FROMM, any exception will invalidate the guarantee.
3. In the event of any problem telephone the nearest approved agency or FROMM distributor, or alternative to:
 

**FROMM Italiana S.r.l.** (Stretch wrapping Division)  
 Viale del Lavoro, 21  
 37013 Caprino V.se (VR) ITALY  
 Phone +39 045 6245500  
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### CHARGING USE AND MAINTENANCE OF TRACTION BATTERIES WITH LEAD ACID CELLS

**Charge the battery when the voltage per cell drops below 1.7 volts**

**On the display of the Robot is only the tension of the battery displayed. For the exact power in the battery use the supplied tool.**

- *For safety reasons the entire instruction manual should be read before setting in operation the machine/installation, solving failures and executing maintenance.*

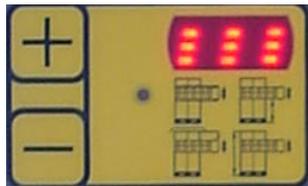
The battery of the Robot is charged by the so called equaliser system, regulated by the on board charging system. Charging will be done in three different steps. The complete charging of the battery takes place in 8 hours.

Step 1: Charging by tension up to 28 volts during the first 4 hours

Step 2: Boiling of the battery for the next 4 hours

Step 3: Equaliser system 5 minutes charging each hour. (This systems prevents the battery for overloading)

Indications on the Robot:



LED's for indicating the battery charge status:

- 1- **two blinking LED's: the battery is charging**
- 2- **left LED on and Right LED blinking: final charging**
- 3- **Both LED's ON: charging finished**

- left LED ON: battery flat

- right LED ON: battery charged

- red blinking led: the battery is running down

The automatic indication of the battery's charge appears on the display if no operations have been performed for 10 seconds

The battery must be charged before the voltage per cell drops below 1.7 volts and before the electrolyte density drops to 1.140 kg/L at 25 C.

Before beginning to charge, check that the battery temperature is below 30 C and that the electrolyte level is not below the splash guard line. (Top up with distilled water to the splash guards if this is the case).

Initial and final current intensities must never exceed the values shown on page 1. When charging is terminated check that all cells have reached a density between 1.270 / 1,290 kg/L at 25 C and the voltage per cell is about 2,7 Volt. Overcharging will destroy the battery.

The battery temperature must never exceed 45 C. If this problem occurs, stop charging, let the battery cool down and then recommence the charging process at a lower charge level.

After charging has terminated check that the electrolyte levels are 5-7 mm above the level of the splash guard, if necessary top up with distilled water or remove excess electrolyte to achieve this level. Excess electrolyte may overflow in operation and cause damage and corrosion of the battery box or other electrical parts. Under normal conditions topping up can be generally done once a week.

### DISCHARGE

Battery discharge must stop when about 80% of the rated capacity has been used. Excessive discharge will irretrievably destroy the battery and invalidate the guarantee cover.

### CLEANING

Keep plugs and connections covered and dry. Do not grease connections. Grease only terminals, using pure Vaseline or neutral greases. Proper cleaning maintains electrical insulation and favours proper battery operation and life.

### CAUTIONS

- Before charging, open plugs
- Charge the battery in a well-ventilated place, lifting up the cover of the Robot
- Never expose the battery to naked flames. Fires may occur from the formation of explosive gases
- Terminal points must be well tightened and free of scale. Cable insulation must be in good condition
- Keep the battery clean, dry and free of rust using an antistatic cloth
- Never place tools or other metal objects on the battery
- During recharging, check the temperature of the electrolyte, which must not exceed 45 C max.
- Make sure the level of the electrolyte is 5-7 mm above the splash guard level
- Make sure the operational procedures given in this battery instruction booklet for the eventual automatic topping up system are carefully adhered to.
- Avoid contact between skin and acid.

### OVERALL

Following the recommendations above the lifetime of the battery should be 4 to 5 years, the battery can be re-charged for approx. 2500 times.

With one full battery the Robot can wrap approx. 220 Euro-pallets.

It can run continuously for 5 hours with a speed of max 4.9 km per hour

- *The duration of guarantee is provided the following are observed: the uses for which the machine was designed, built and protected, in addition to recommendations, information - including matters of general knowledge - details plus the safety and health technical limits notified to by the Manufacturer to the User by virtue of the Operating, Use.*
- *If the machine is used beyond its operating limits and if the manufacturer's features are altered in any way, such use is considered **improper**. In this case **MANUFACTURER** is relieved of any liability for injury/damage caused to people/property due to failure to comply with these guidelines. The same holds true if non-original spare parts are utilized.*