



Back-up Battery Pack

For NIPPY 3

Ventilator

Instructions for Use

B&D Electromedical
35 Shipston Road
Stratford-upon-Avon
Warwickshire
CV37 7LN

Helpline:- 01789 721577
Sales:- 01789 293460
Fax:- 01789 262470

INTRODUCTION

The *NIPPY3* Ventilators are designed to be powered from a universal ac mains supply or a 24 Vdc supply. To allow operation away from the mains, a pack consisting of a 24V battery and battery charger is available.

This battery pack should never be used to run any other type of equipment.

INSTRUCTIONS FOR USE

- Connect the battery to the Nippy 3 dc power input.
- The Power light will illuminate.
- Switch on the Nippy 3. The Ext Batt light will flash and a "Running on battery power" message will be displayed on the Nippy 3 screen. Press the alarm mute button to hide the message.

To Charge a Battery

- Place the charger on a smooth flat surface.
- Connect the charger to the battery socket **before switching on the mains power.**
- Connect the mains plug to the AC supply and switch on.
- The LED indicator will change colour as follows:-

Orange - Charging.	-	The battery is being charged
Green - Ready.	-	The battery is fully charged.

Batteries may produce explosive gases during charging. Always charge away from sparks or sources of ignition. Do not smoke near a battery whilst charging.

Disconnect the mains power before disconnecting the battery from the charger.

For best results leave battery connected until required for use.

Safety

Warning! High voltages exist inside the charger.

Do not remove the cover. Return to B & D Electromedical if a fault occurs.

Do Not expose to water or dust.

Do not cover the charger whilst in use

Ensure that the mains lead is not damaged.

Do not attempt to charge any other type of battery with it.

BATTERY CARE

The battery supplied is a sealed lead-acid type designed for this type of application. It must be charged using the supplied charger. **An ordinary car battery charger must not be used**, this type of charger may damage the battery and will almost certainly shorten its life.

- The battery should be recharged as soon as possible after use.
- The battery may be left on charge with the supplied charger indefinitely.
- This type of battery does not suffer from the memory effect that is widely talked about and does not need to be fully discharged before charging.
- Batteries like to be used. A new battery may require several charge/discharge cycles before it reaches its maximum performance. The same applies to a battery that is only used occasionally with long periods in storage.
- The performance of all lead-acid batteries falls with temperature. The times stated below refer to ambient charging and operating temperatures of 20°C.

BATTERY LIFE

The end of life is defined by the maximum running time falling to 75% of that of a new battery. For a battery that is used occasionally service life is 5 years. Replace the battery when running times drop below those indicated or after 5 years.

RUNNING TIMES

The following relate to charging and discharging at 20°C. The minimum times represent a battery at the end of its life and the typical times should be achieved by a good battery.

Working Pressure

	15cm		20cm		25cm		30cm	
BATTERY	MIN	TYP	MIN	TYP	MIN	TYP	MIN	TYP
0787							3h 30m	4h

The battery is fully discharged when the Nippy 3 low battery alarm sounds and the on-screen Low battery message is displayed.

BATTERY STORAGE

This type of battery must always be fully charged before storage.

A battery that is not in use will slowly discharge. This rate of discharge increases with temperature. Ideally the storage temperature should be above -20°C and below 20°C. It must be below 40°C.

After storage in a cold environment allow 24 hours for the battery to reach room temperature before use.

Fully charge the battery every 2 months.

BATTERY TEST

Test the battery if the running time seems low, a fault is suspected, or to confirm that the battery is good.

- Ensure the battery is fully charged.
- Run the ventilator from the battery until the low battery alarm operates and record the running time. Look up run time in the table. If the battery is not achieving minimum run time replace it.
- If the battery is good, fully recharge it immediately after testing.

HINTS AND TIPS FOR RELIABLE OPERATION

- Always make sure that the battery is fully charged before use.
- Do not switch off charger until battery is fully charged.
- Avoid the temptation to give the battery “a quick boost”. This is of no benefit.
- If you are in doubt about your batteries state of charge, charge for at least 24 hours.
- If running time suddenly seems considerably shorter than normal, make sure that the battery is fully charged.
- Leave your battery on charge when not in use.
- Do not charge your battery near sources of ignition.
- Check the running time of your system from time to time.
- If you have more than one battery, use them in rotation.
- Do not use if any of the cables or components show any sign of damage.
- Most reported problems arise from incorrect battery charging.

Battery Charger Technical Information

Type number	-	2040
Input voltage	-	100 – 240VAC
Frequency	-	50 – 60Hz
Max current	-	1.2 Amperes
Fuse	-	2.5 Amp slow blow (internal)
Insulation	-	Class 1

Three stage charge control:-

- 1) Constant current at 2 +/-0.3A until the battery is approx 80% charged
- 2) Constant voltage at 29.4 +/-0.2Volts for a period of 2 hours
- 3) Float charge at 27.6 +/-0.2Volts maintaining the battery fully charged until required for use.

Electrical Safety Standards

EN60950, EN60339-2-29, EN60601-1

EMC Standards

EN50081-1, EN50082-1, EN60601-2