

Airflo 24

User Instructions



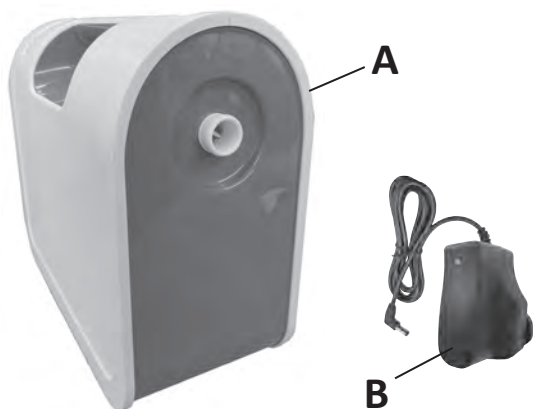
Healthcare solutions designed for life



This Quick Start Guide is not intended to replace the full user instructions. Please read the full user instructions before using the Airflo 24.



STANDARD PACKAGE CONTENTS



1 x Airflo 24 compressor (A) fitted with a 24v - 2200mAh Ni-MH battery pack.

1 x Battery charger (with mains adaptors) (B).

1 x User Instructions.

1 x Mains Power Adaptor (*Optional*).

BEFORE USE

CAUTION: The Airflo 24 must be put on charge for 12 Hours before first use. To calibrate the battery and battery indicator, it is essential before the first use to charge for 12 hours and then disconnect from the charger and leave for 90 minutes to allow the battery management software to correctly calibrate. Failure to do this could lead to incorrect battery charging and battery ladder indication.

Fit the appropriate mains adaptor to the charger (see '**Battery Charging**' page 8).

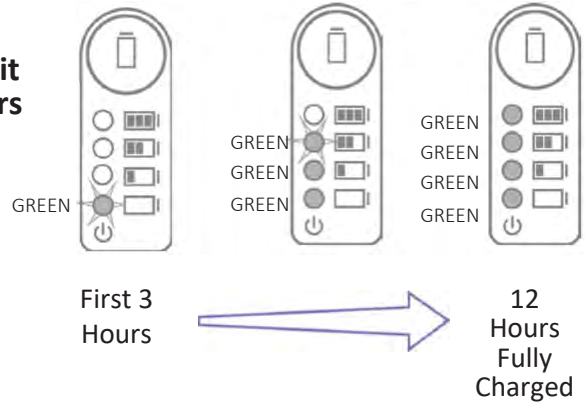
Connect the battery charger to a mains power socket and the Airflo 24 charging socket.



CHARGE THE BATTERY FOR 12 HOURS BEFORE USE. To calibrate the battery and battery indicator, it is essential before the first use to charge for 12 hours and then disconnect from the charger and leave for 90 minutes to allow the battery management software to correctly calibrate.

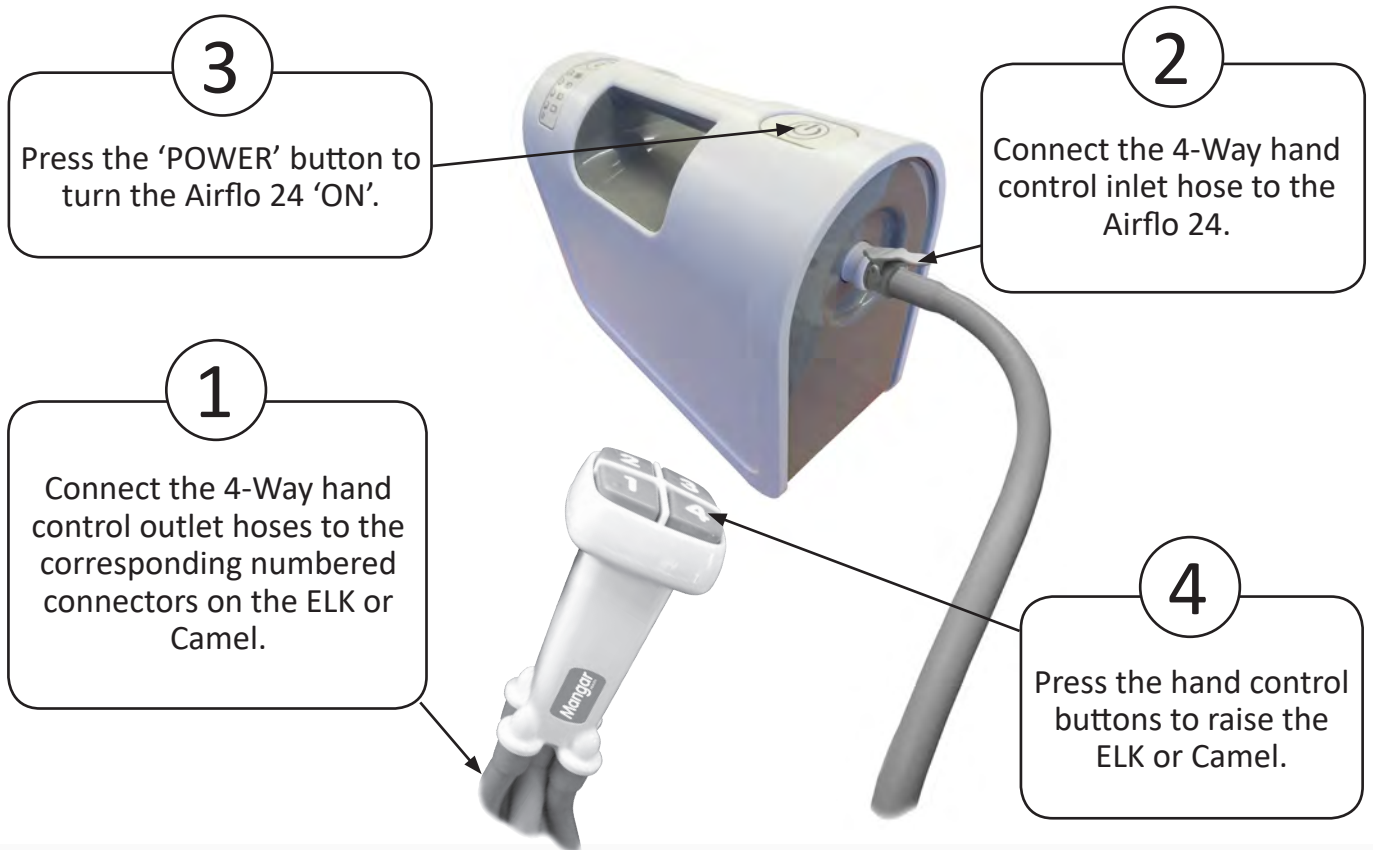
For the first 3 hours, the bottom light will flash green. After 3 hours the first light will become a steady green and the second light will start flashing. After 6 hours the bottom 2 lights will remain green and the third light will flash. After 9 hours the bottom 3 will remain green and the top will be flashing. Then after 12 hours the charge is complete and the top light will remain flashing and other 3 will be off.

NOTE: In the case of a power cut, switching the power socket off or disconnecting the charging lead, the charging process will not be interrupted as the unit remembers the previous charge state.



OPERATING

NOTE: Disconnect the battery charger before using the Airflo 24.



UNDERSTANDING THE BATTERY STATUS INDICATOR LIGHTS

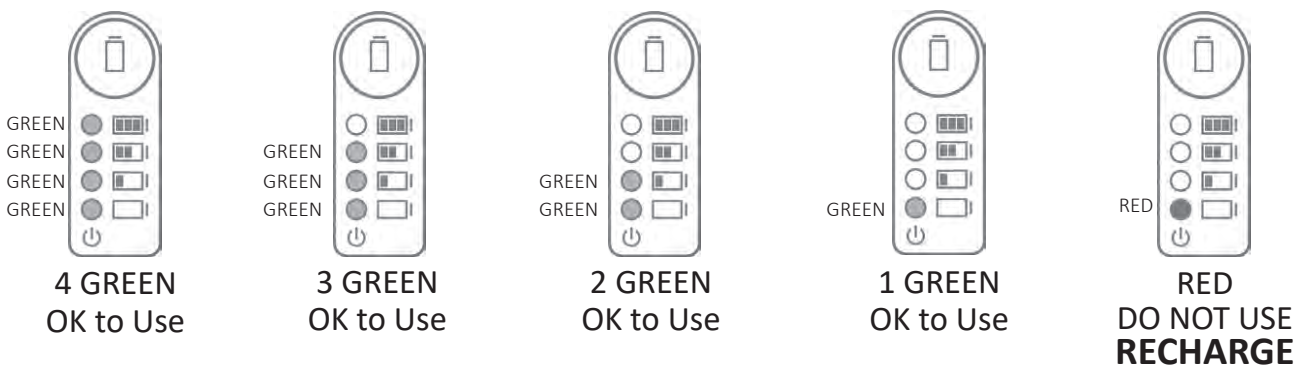
The Battery Status Indicator lights serve 2 purposes:

- 1 - Whilst charging, the lights indicate which part of the charging cycle the battery is at.
- 2 - When the Battery Status Indicator Button is pressed (**with the Airflo 24 removed from charge**), the lights indicate how much charge remains in the battery.








Battery Status Indicator Button

TO DETERMINE THE BATTERY CHARGE STATE, YOU MUST DISCONNECT THE CHARGING LEAD OR REMOVE THE AIRFLO 24 FROM THE STOWAGE BOARD AND THEN PRESS THE 'BATTERY STATUS INDICATOR' BUTTON TO ACTIVATE THE BATTERY STATUS INDICATOR LIGHTS



DURING A LIFT

Each time the hand control is operated the unit does a battery test and indicates the battery state. The hand control button is then released when a compartment in the lifting device is filled.

 <p>GREEN GREEN GREEN GREEN</p>	 <p>GREEN GREEN GREEN</p>	 <p>GREEN GREEN</p>	 <p>GREEN</p>	 <p>RED</p>
<p>4 GREEN OK to Use</p>	<p>3 GREEN OK to Use</p>	<p>2 GREEN OK to continue the lift</p>	<p>1 GREEN OK to continue the lift</p>	<p>RED OK to continue the lift - Recharge when the lift is complete</p>

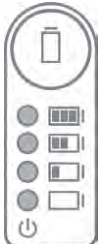




If you see a single solid red light (if this is within a lift - the lift can be completed), the Airflo should be put on unbroken charge immediately for a minimum of 3 hours. This will provide sufficient capacity to complete one more lift.

Once the red light shows to achieve full capacity a full 12 hour charge is required.

AFTER COMPLETING A LIFT

Disconnect the inflatable unit and hand control and pack away. Turn off the compressor and the bottom green light will go out. The product will also auto turn off after 2.5 minutes of inactivity.

Press the Battery Status Indicator Button.

 <p>GREEN GREEN GREEN GREEN</p>	 <p>GREEN GREEN GREEN</p>	 <p>GREEN GREEN</p>	 <p>GREEN</p>	 <p>RED</p>
<p>4 GREEN OK to Use</p>	<p>3 GREEN OK to Use</p>	<p>2 GREEN OK to Use</p>	<p>1 GREEN OK to Use</p>	<p>RED DO NOT USE RECHARGE</p>



WARNINGS

- Be sure that you have read and understood these instructions and those provided with any other Mangar Health product, before operating the equipment.
- To avoid the risk of electric shock, NEVER recharge the battery in the bathroom, outdoors or in a damp environment.
- Always disconnect from the battery charger before cleaning.
- Use only the supplied battery charger.
- Do not operate the Airflo 24 compressor in the presence of flammable anaesthetic mixtures with air, oxygen or nitrous oxide, as these mixtures can create a combustible environment leading to the potential for fire or even an explosion in the presence of a spark.
- Ensure that when in use, the Airflo 24 and its connected hoses are laid out in such a way as to avoid any risk of tripping or strangulation.
- Ensure that children and pets do not interfere with the safe operation of the Airflo 24 and inflatable product.
- Keep the Airflo 24 and inflatable product away from sources of heat.
- Disconnect the Airflo 24 compressor from the inflatable product before transporting so as to avoid accidental inflation.
- The Airflo 24 should only be used for its stated purpose and should not be modified in any way.
- The optional mains power adaptor is specific to the Airflo 24 and is the only approved unit to be used for this purpose.
- Do not operate the compressor outside of the specified duty cycle of 20% 'Operating Time' and 80% 'Non-Operating Time'. Maximum continuous operating time = 5 minutes.
- To calibrate the battery and battery indicator, it is essential before the first use to charge for 12 hours and then disconnect from the charger and leave for 90 minutes to allow the battery management software to correctly calibrate. Failure to do this could lead to incorrect battery charging and battery ladder indication.

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Intended Use

The Airflo 24 by Mangar Health is a low pressure air compressor, which has been designed to inflate the Mangar 'Camel' and 'ELK' pneumatic lifting equipment through a 4-Way pneumatic hand control. The 4-Way hand control is supplied with the Camel and ELK.

Applied Parts (Accessories) for the Airflo 24:

- Mangar ELK (Emergency lifting cushion)
- Mangar Camel (Emergency lifting cushion)

The ELK requires assistance to help lift a patient from the floor to an elevated sitting position. Once in a sitting position, the patient can be transferred to a chair or helped to a standing position.

The Camel can be operated with or without assistance and when inflated, lifts the patient into a raised seated position ready to stand.

No special skills or training are required to operate the Airflo 24 and its accessories.

Further guidance on operation can be found in the individual accessory User Instructions. The Airflo compressor and applied parts are intended for continual re-use as required and no special actions or operations are needed to achieve this.

This product and associated packaging does not contain latex.

Power Button

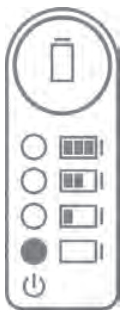


When the 'Power' button is pressed, the compressor will momentarily run and then stop. The bottom light on the indicator will show GREEN.

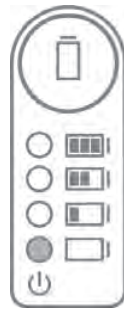
Battery Status Indicator



When the Battery State Indicator button is pressed, the lights indicate how much charge remains in the battery.



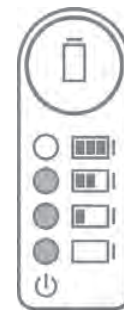
RED
Recharge
Immediately



1 GREEN
OK to Use



2 GREEN
OK to Use



3 GREEN
OK to Use



4 GREEN
OK to Use

WARNING: The battery must be put on charge immediately as soon as the red indicator light appears. Running the Airflo24 on RED until the battery is exhausted will damage the battery.

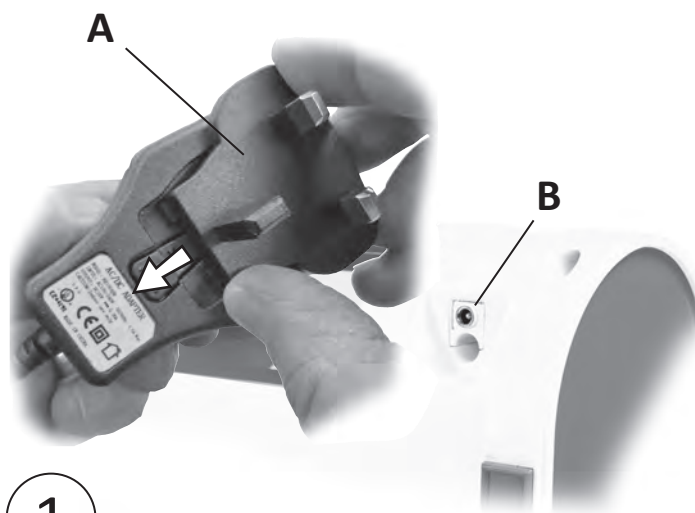
When the compressor is running, the battery status indicator lights will only indicate the state of battery charge as it was at the start of the lift. When the compressor stops running, the battery status indicator will show a bottom green light (this will be red if the battery charge has become low).

IMPORTANT: To maximize the life and lifting performance of the battery, fully recharge the battery after use.

Fully charge the battery for a minimum of 12 hours before using the Airflo 24 for the first time and when a new battery has been fitted. Then disconnect from the charger and leave for 90 minutes to allow the battery management software to correctly calibrate. Failure to do this could lead to incorrect battery charging and battery ladder indication.

Battery Charging - fig. ①

- Check the battery charger casing and lead for signs of damage and if damaged DO NOT USE.
- Fit the appropriate mains plug adaptor to the battery charger (A).
- Plug the battery charger into a mains power socket and connect the charger output lead to the Airflo 24 charging socket (B).

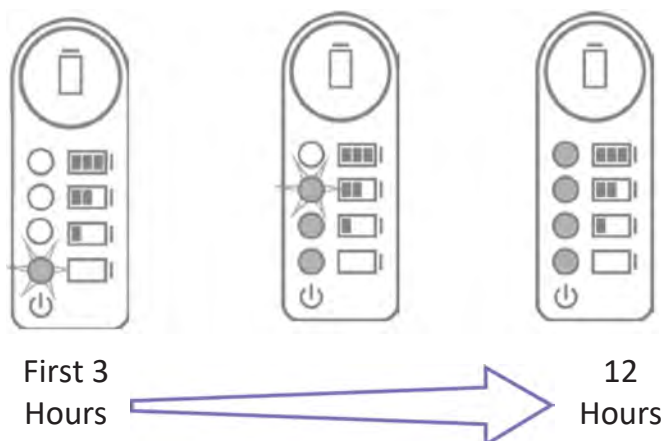


1

NOTE: When first fitting a battery they must be charged for a minimum of 12 hours to achieve full capacity and then disconnect from the charger and leave for 90 minutes to allow the battery management software to correctly calibrate. On subsequent charges the Airflo calculates the charging period based on usage and will not necessarily start on the bottom light flashing.

When the battery is charged:

- For the first 3 hours, the bottom light will flash green. After 3 hours the first light will become a steady green and the second light will start flashing. After 6 hours the bottom 2 lights will remain green and the third light will flash. After 9 hours the bottom 3 will remain green and the top will be flashing. Then after 12 hours all lights will briefly become steady green.
- The compressor will move into an energy saving mode with the top LED flashing every 6 seconds and the other 3 will be off.



NOTE: The compressor will not run whilst the charger is connected.

To maintain battery condition, it is recommended that the Airflo 24 is left continuously on charge when not in use. The batteries cannot be overcharged using this charger.

WARNING: DO NOT recharge the batteries in a bathroom or in a damp environment.



2

Mains Power Adaptor (optional)

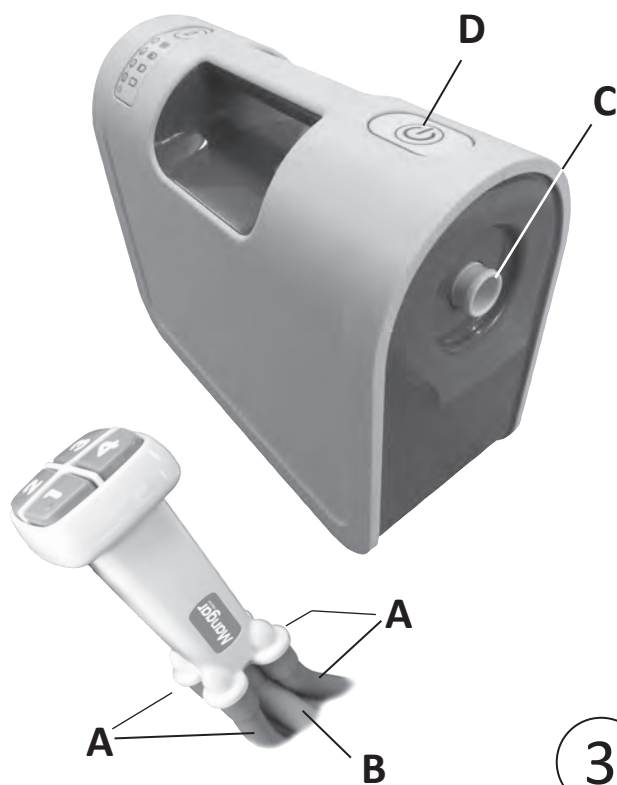
An optional mains power adaptor is available to power the Airflo 24 directly from a mains power socket. The adaptor is specific to the Airflo 24 and is the only approved unit to be used for this purpose. Connect the adaptor between a mains power socket and the adaptor inlet socket on the end of the Airflo 24 (Fig. 2).

NOTE: This adaptor, has a non-standard output connector and powers the Airflo 24 directly, it will not charge the battery. The only way to charge the battery is to use the charger which was supplied with the Airflo 24. With the power adaptor connected, the Airflo 24 behaves in the same way as if it was running on the battery, the only functional difference is that the battery indicator will show bottom LED orange whilst the Airflo is running. With the adaptor connected, the Airflo 24 will also run if there is no battery fitted.

Operation - fig. 3

Disconnect the Airflo 24 from the battery charger and place it in a safe and convenient position. **NOTE:** The Airflo compressor should not be placed in a position where it is difficult to operate the 'Power' button in an emergency.

- Connect the four hoses (A) from the 4-Way Hand Control to the corresponding numbered and coloured connectors on the Mangar Camel or ELK.
- Connect the hose (B) from the hand control to the Airflo 24 air outlet socket (C). The connector will 'click' into place when firmly pushed onto the socket.
- To switch on, press the 'Power' button (D). The compressor will run when a button on the hand control is pressed and stop when the button is released. An internal pressure switch will stop the compressor running when each corresponding section of the inflatable product has reached full pressure.



3

- Pressing any of the numbered hand control buttons will deliver air to the corresponding numbered hose (follow the User Instructions for the Mangar Health product that is to be inflated).
- To switch the Airflo 24 off after use, press the 'Power' button. The bottom indicator light will go out. The pump will also automatically turn off after 2.5 minutes of inactivity.

Cleaning

Unless contamination is suspected, periodic cleaning is all that is recommended. The Airflo 24 should be cleaned/disinfected as follows:

- Unplug the Airflo 24 from the battery charger. Clean the external surfaces using a non abrasive damp cloth with warm water. Wipe dry thoroughly with a dry towel before reconnecting to the battery charger. Do not allow moisture to enter any part of the compressor.
- Do not use solvent-based products.

Disinfecting

- Pre-clean using a damp cloth and then disinfect using a hard surface alcohol impregnated wipe.

Storage

- When not in use, store in a dry place together with these instructions. To maintain the batteries, when being stored for long periods, leave the Airflo 24 on charge.

Maintenance - fig. ④

The Airflo 24 has been designed to be maintenance free and apart from replacing the battery, the Airflo contains no other user serviceable parts.

Battery replacement:

- Turn the Airflo 24 onto its end containing the air outlet socket, remove the screw (A) and slide the end panel (B) away from the housing.
- Disconnect the wire from the battery pack and remove the battery pack from the battery compartment.
- Fit the replacement battery pack, ensuring that the connector is secure, refit the end panel and secure the screw (A).
- To calibrate the battery indicator, it is essential before use to charge for 12 hours and then disconnect from the charger and leave for 90 minutes to allow the battery management software to correctly calibrate.



When it becomes apparent that the Airflo 24 is producing fewer than expected lifting cycles, the battery is probably reaching the end of its working life and should be replaced.

If a fault should develop or if you require assistance in setting up using or maintaining the equipment, please contact your supplier.

Disposal

When the Airflo 24 has reached the end of its working life, remove the battery for safe disposal in accordance with local regulations, and dispose of the Airflo 24 at your local household waste recycling centre (civic amenity site).

Trouble shooting guide

Problem	Remedy
<ul style="list-style-type: none"> Compressor does not run when the 4 way hand control buttons are pressed. 	<ul style="list-style-type: none"> Ensure that the Airflo 24 has been switched on. Ensure the charger is disconnected from the Airflo Check that there are no kinks in the air hose.
<ul style="list-style-type: none"> Compressor keeps stopping when trying to inflate the lifting aid. 	<ul style="list-style-type: none"> Check that there are no kinks in the air hose.
<ul style="list-style-type: none"> No Battery status indicator Lights 	<ul style="list-style-type: none"> Unit switched off -turn unit on. Thermal fuse on battery has tripped – Allow unit to cool down 60-90minutes. A solid red LED will display after temperature normalizes and fuse resets. This will have reset the charge sequence. To avoid damage to the Airflo after 12hour charge, disconnect from charger and allow another 60-90minutes for battery cool down.
<ul style="list-style-type: none"> Bottom Battery status indicator solid Red Light 	<ul style="list-style-type: none"> Low Battery Capacity, recharge.
<ul style="list-style-type: none"> Bottom Battery status indicator Flashing Red every 2 seconds 	<ul style="list-style-type: none"> Internal Pump Temperature too high – allow Airflo to cool down 60-90mins before attempting a lift.
<ul style="list-style-type: none"> Bottom Battery status indicator flashing Red every ½ second 	<ul style="list-style-type: none"> Battery Voltage low – Re charge. If occurs repeatedly replace the battery.
<ul style="list-style-type: none"> Compressor causes electrical interference with another piece of electrical equipment. 	<ul style="list-style-type: none"> Move either the compressor or other item further away from each other until the interference stops.

Specifications

Airflo 24

Weight: 4.1Kg

Output pressure: 0.35 bar

Batteries: 1 x 24v- 2200mAh Ni-MH Airflo 24 Battery Pack (Mangar Prt No. CD0314)

Battery Life: Greater than 500 charging cycles (2 years depending on usage)

Environmental protection: IP41 (Protection from entry by solid objects with a diameter or thickness greater than 1.0mm & dripping water)

Type BF equipment

This equipment has been tested and meets the requirements of current EMC legislation






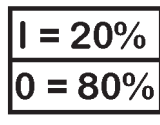


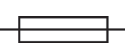



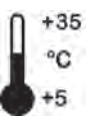



Charger: Model number - HX2902SR

Input: AC 100v - 240v, 50-60Hz, 0.5A Max DC











Output: 30v, 0.45A

Class II Double insulated equipment.

Symbols used on Airflo 24 and Charger labels

	Warning		Class II Double Insulated equipment
	Attention consult instructions		Dangerous voltage
	Type BF equipment (protection against electric shock)		Duty cycle I = Operating time O = Non operating time (Max continuous operating time = 5 minutes)
	Alternating current (AC)		Recycle
	Fuse (with rating)		Do not dispose of in household waste
	Direct current (DC)		Date of manufacture
	Max/Min operating environment temperature		Power Button
	For indoor use only. Do Not connect to mains power in a bathroom or outdoors.		Battery Status Indicator Button

Symbols used on packaging

	Keep packaging dry		Recycle packaging
	Handle with care		Do not dispose of in household waste
	Max/Min storage temperature		Max/Min humidity when transporting or in storage
	Net & gross weights		Max/Min pressure when transporting or in storage
	Stack no more than five high		Max/Min temperature when transporting or in storage

Warranty

The warranty is given against defects in material and workmanship and comprises piece, parts and labour. The warranty is not valid in the case of fair wear and tear, wilful damage, common neglect, misuse or unauthorised alteration or repair by unqualified persons.

The following statements do not affect the consumer's statutory rights. This product is sold on the understanding that in the event of any defect of manufacture or material appearing within the warranty period, the defect will be rectified free of charge providing that:

- (a) Reasonable evidence is provided (e.g. purchase invoice, delivery note) that the claim is being made within the warranty period.
- (b) The defect is not attributable to accidental damage (either in transit or otherwise), misuse or unauthorised repair.

Airflo 24 serial number:

Date of purchase:

Invoice/Delivery note number: