PROLINE PAPR

Powered Air Purifying Respirator (PAPR) System

IMPORTANT NOTICE

Please read these instructions carefully before using this unit.

Failure to comply with the instructions may void your warranty and adversely affect your health and safety.

1. INTRODUCTION

The SWP Proline Respiratory System is a combined face and breathing protection device designed for increased safety and comfort during welding.

Please read these instructions carefully before unpacking. Should you need clarity on its operational features contact your Health & Safety officer or contact your local Specialised Welding Products Ltd distributor.

Your SWP Proline Air Powered Respirator system should include the following:

a) Auto-darkening welding helmet

b) SWP Proline unit with attached battery and filter

c) Belt

d) Battery charger

e) Airflow indicator

f) Lithium-iron battery

g) Instruction manual

h) Backpack

If any of the above components are not included in your kit, please contact your supplier immediately.

2. APPROVALS

The SWP Proline system complies with the requirements of European Standard EN 12941: 1998+A2:2008 as a TH2P device.

All components used in the SWP Proline Respiratory System must be genuine approved manufacturer's components. They must be used in accordance with the instructions supplied within this manual.

Notified Body: INSPEC International Limited, 56 Leslie Hough Way, Salford, Greater Manchester, M6 6AJ United Kingdom (Notified body number 0194)

NOTE: The approval is not valid if the product is incorrectly used together with non-approved parts or components.

NOTE: Only the SWP Proline particle filter, gas filter and pre-filter can be used together with this system. Filters from other manufacturers should under no circumstances be used.

3. USAGE

The SWP Proline Respiratory System is designed to provide a supply of filtered air via a breathing tube to a welding helmet. The complete system is a breathing protection device complying with EN 12941: 1998+A2:2008, class TH2 P R SL.

The equipment can be used in environment that requires a class TH2P breathing protection device. It protects against articulate contamination.

WARNINGS AND LIMITATIONS TO USE

The SWP Proline Respiratory System must only be used with the unit switched on. If the equipment is used without the unit switched on, protection from hazardous fumes will be reduced substantially. Do not remove the helmet or turn off the air filter unit until you have vacated the contaminated area. If you are not sure about the concentration of pollution, or about equipment performance, ask your safety manager. The manufacturer or supplier is not responsible for injury following incorrect use or incorrect choice of equipment.

DO NOT use respiratory device with the blower unit switched off.

DO NOT use the respiratory device when the concentration of hazardous substances has not been determined by a trained health and safety officer.

DO NOT use in an explosive atmosphere.

DO NOT use in confined spaces or areas of poor ventilation.

DO NOT use in high winds.

DO NOT alter or modify in any way.

DO NOT touch any of the moving parts.

DO NOT allow water or other liquids to enter the impeller chamber, filter or battery compartment.

4. UNPACKING/ASSEMBLY

Check that correct number of components has been supplied as in FIGURE 1.

Check that the apparatus is complete, undamaged and correctly assembled.

Any damaged or defective parts must be replaced before use.

FIGURE 1

Open the unit, check the spark arrestor, pre-filter and filter. See FIGURE 2 (A).

If components are broken replace them before use.

Replace the filter back into the casing if it is in good working condition. FIGURE 2 (B).

Place the spark arrestor into the filter cover.

Place the pre-filter into the above combination.

Place the filter into the above combination.

Click the above combination into the Turbo unit.

NOTE: Make sure that the filter is properly placed into the casing whilst installing.

WARNING: The filter can only be fitted to the turbo unit. **DO NOT** directly fit the filter to the helmet / hood.

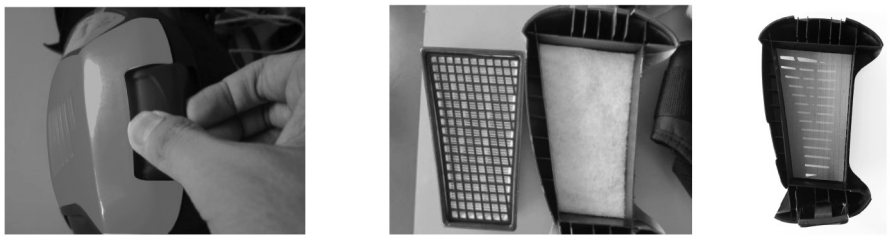


FIGURE 2 (A)

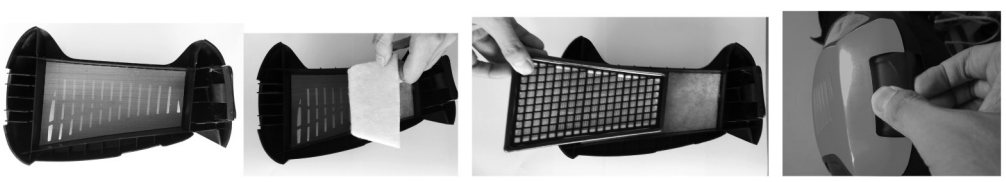


FIGURE 2 (B)

Install the blower on the belt.

Remove the release buckle out of the belt. FIGURE 3 (A).

Draw the fasten belt out from the waist connector. FIGURE 3 (B)

Slide the fasten belt into the blower unit through the two blower slots. FIGURE 3 (C).

Slide the fasten belt back into the waist connector. FIGURE 3 (D).

Put the release buckle back into the belt. FIGURE 3 (E).

Adjust the belt tightness so it can fit well with your shoulder and waist. FIGURE 3 (F).

NOTE: Check that the belt is securely fastened.

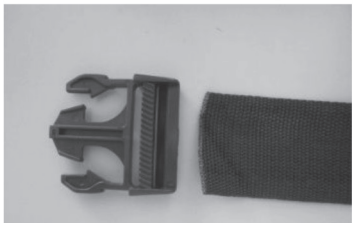


FIGURE 3 (A)

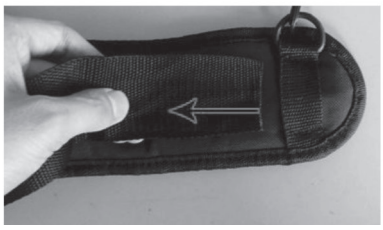


FIGURE 3 (B)

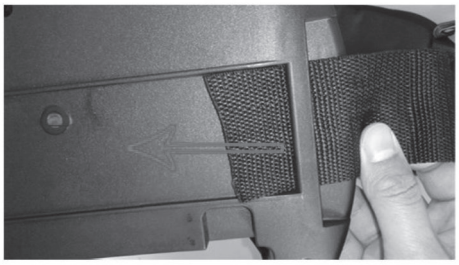


FIGURE 3 (C)

FIGURE 3 (D)

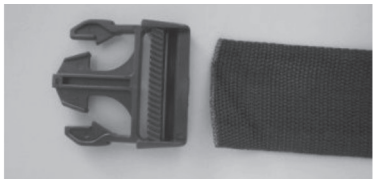


FIGURE 3 (E)

FIGURE 3 (F)

Connect the breathing hose between the welding helmet and the blower as shown in FIGURE 4. Check that the breathing tube is securely fastened.

NOTE: If the breathing tube is broken, please replace it.

FIGURE 4

Carefully observe the instructions that explain how the equipment is to be used before using in operation. All components must be installed and used in accordance with this manual if the equipment is to offer the specified protection. If any component is missing, or if anything is not clear, contact the supplier.

Markings on the battery (see FIGURE 5).

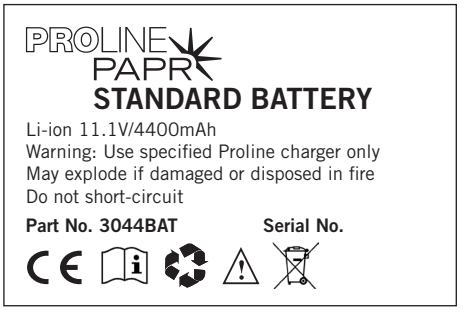


FIGURE 5

5. BEFORE USE / FITTING

5.1 Battery charging see FIGURE 6.

The system has a 100-240Volt 1.5A battery charger. The battery can be charged when installed in the unit or separately.

FIGURE 6

WARNING: The battery can only be charged with the supplied battery charger (Part No. 3044CHA).

NOTE: All new units must be charged before they are used for the first time.

The charger must not be used in any circumstances for any other purpose than for which it was manufactured. It is intended for indoor use (must be protected from damp) and must not be used to charge non-rechargeable batteries.

The battery will be fully charged in around 3.5 hours depending on the residual capacity.
The red light will show during charging turning green when the battery is fully charged.
See (FIGURE 7).

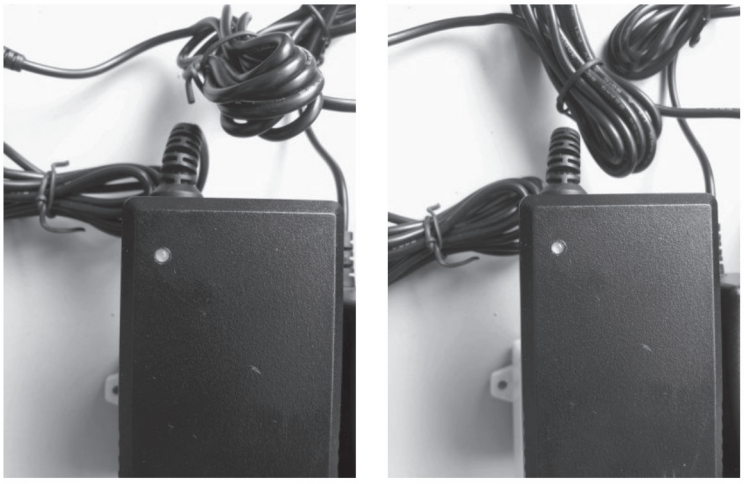


FIGURE 7

The battery will discharge during long periods of storage with no use.

For this reason always re-charge the battery if it has been stored for more than 15 days.

To achieve the maximum power when the battery is new or has been stored for more than 3 months, charge and discharge the battery at least twice.

Remove the battery out of the unit and store it separately.

Checklist:

1. Check that the mains supply voltage to the charger is correct.
2. Connect the battery charger to the wall socket.
3. Connect the battery charger to the battery.

WARNING:

If the unit starts, switch it off while charging.

The battery icon on the SWP Proline unit is used for battery capacity instead of charging state indicating (FIGURE 8). Always refer to charging light to tell the charging state.

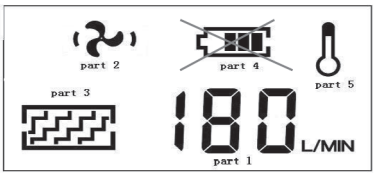


FIGURE 8 (Not for charging state indicating)

Recommended surrounding temperature for charging is between 0 to 40 degrees centigrade.
If the charger indicator light does not light up when connecting the charger to the battery, check the battery's charge connector along with all cords and connectors.

4. After charging is completed, disconnect the battery charger from the mains supply.
5. Disconnect the battery from the battery charger.

NOTE: The particle filter may require changing if the battery operating time becomes too short.

5.2 Checking of airflow and checking of low airflow alarm

The airflow and alarm system must always be checked before using.

1. Test air flow

The system is equipped with an air flow indicator. Connect the Air flow indicator to the breathing connector and press the "ON" button (FIGURE 9).

FIGURE 9

WARNING: Don't use the system if the ball is below the marked line. Check the filter and the battery and then retest the air flow.

2. Test air flow alarm

Remove the breathing tube from the welding helmet, Press the “ON” button.

Cover the air outlet with your hand and wait for 15 seconds, the alarm will be heard and the red light on the PAPR unit will flash. The filter mark on screen will also flash. (See FIGURE 10).

NOTE: If the alarm does not work, please repair or change a PAPR unit.

FIGURE 10

WARNING: Leave the contaminated area immediately if:

a) Any part of the system becomes damaged

b) Airflow into the head top decreases or stops

c) Breathing becomes difficult

d) Dizziness or other distress occurs

e) You taste or smell contaminants or an irritation occurs

f) At very high work rates, the pressure in this PAPR device may become negative at peak inhalation flow.

5.3 Fitting

Adjust the waist belt and dual shoulder strap size, so that the unit sits easily and is accessible and comfortable on your hips.

Put on the head top and adjust the headgear to a suitable tightness so that it will be stable on the head.

The face seal should rest against your face with a comfortable pressure on your temples.

If the face seal doesn’t make contact with your face, you will not get the sufficient sealing needed to offer the correct protection factor.

6: LCD and Operation

6.1 LCD

There is a LCD display on unit to show the working condition (FIGURE 11).

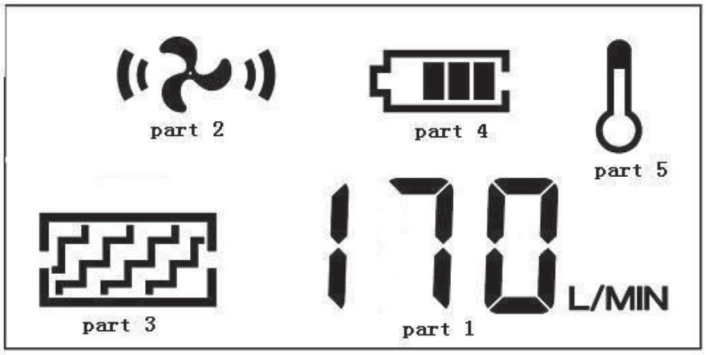


FIGURE 11

Part 1 shows the current air flow.

Part 2 shows the level of the airflow.

Part 3 shows the filter condition.

Part 4 shows the battery charge.

Part 5 shows the temperature of the battery.

Any of them will flash if not functioning correctly.

6.2 Operation

Start the PAPR unit by pressing the ON button on the PAPR unit.
The PAPR will then be working at level 1

Press the “on” button again. The system will go to working at level 2.

Press the “on” button again. The system will go to working at level 3.

Press the “on” button again. The system will go to working back to level 1.

Press the “off” button for at least 3 seconds thus activating the PAPR to power off.

NOTE: there are 3 levels of air flows.

Level 1 is no lower than 165L/min.

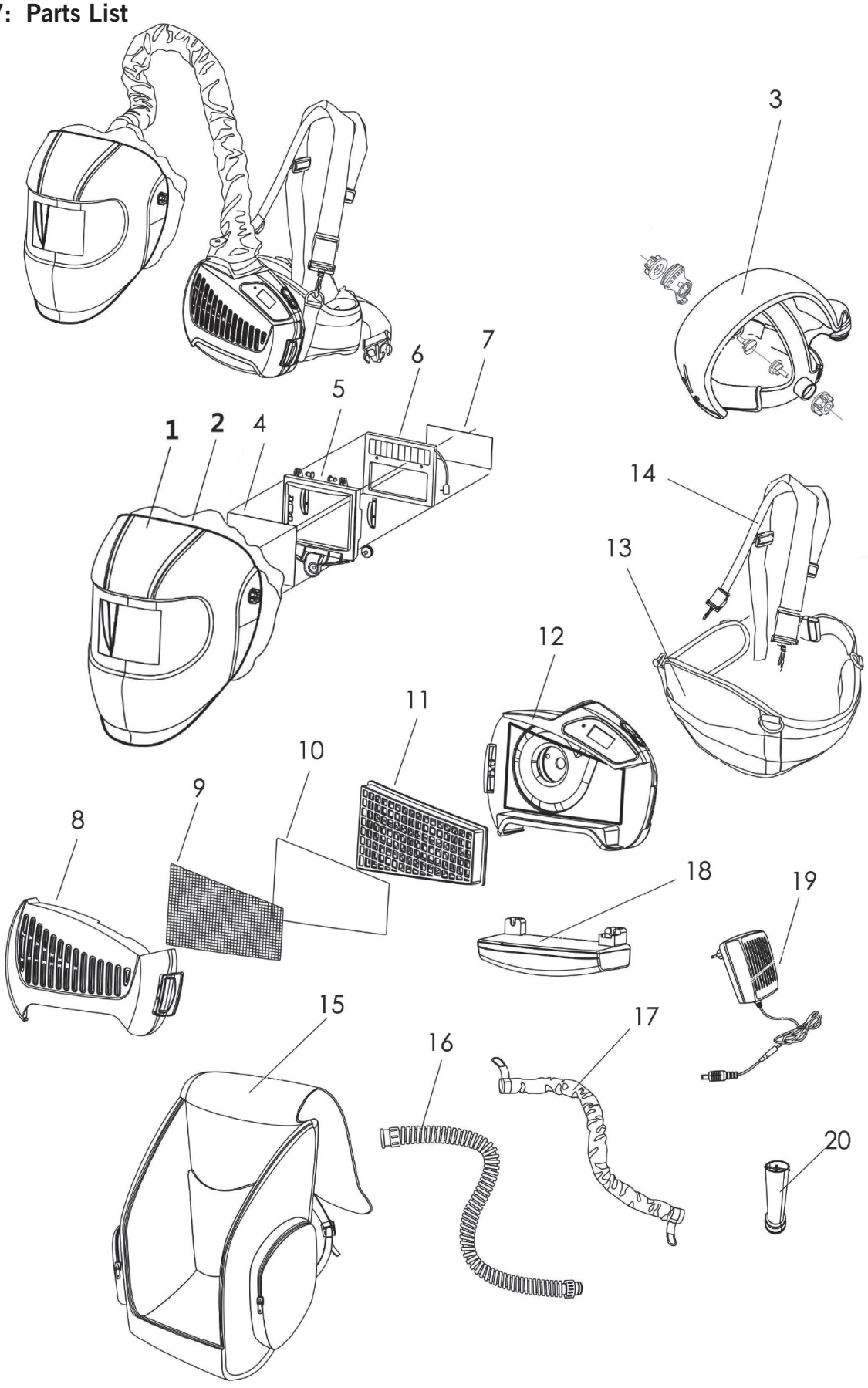
Level 2 is 200L/min.

Level 3 is 230L/min.

PAPR will shut down and switch to sleep mode if not used for more than 30 minutes. Press the “on” button to re-activate the system.

The PAPR must be operated in the temperature range of -5 degrees centigrade to +55 degrees centigrade and relative humidity less than 90%RH.

7: Parts List



Drawing No.	Part No.	Description	MFG DATE
1	3044HELM	Helmet Shell complete with Face Seal	
2	3044SEAL	Face Seal	
3	3044BAND	Air Duct/Headband	
4	3024	Outer Protection Lens	
5	3039CRAD	ADF Cradle	
6	3039	Auto-Darkening Filter(ADF)	
7	3020	Inner Protection Lens	
8	3044COV	Filter Cover	
9	3044GAU	Gauze Filter	
10	3044PRE	Pre-filter	
11	3044P2	Filter	
12	3044BLOW	Turbo Unit	
13	3044BLT	Waist Belt	
14	3044HARN	Shoulder Harness	
15	3044BAG	Carrying Bag	
16	3044HOSE	Breathing Hose	
17	3044HCOV	Breathing Hose Cover	
18	3044BAT	Rechargeable Battery	
19	3044CHA	Battery Charger	
20	3044TEST	Air Flow Tester	

7.2 Replacement

Replacing the filter

a) Remove the filter cover by pressing on the latch of the filter cover.

b) Remove the used filter by lifting it out from the filter cover.

c) Install a new filter in the filter cover. (NOTE: Unauthorized filters will void the manufacturer's warranty and potentially expose the user to the risk of personal injury). Do not confuse the markings on a filter relating to any standard other than EN 12941 with the classification TH2 P R SL of device when used with this filter.

d) Change the pre-filter if needed.

e) If necessary clean or change the part arrestor (metal net) on the base of the filter cover.

f) Put back the filter cover with the filter installed by hooking the cover on the left side of the unit and pressing the cover down so that the latch engages correctly.

8: MAINTENANCE & STORAGE

Inspect the equipment daily and always check it for any signs of malfunction.

8.1 Maintenance

The PAPR unit must be checked regularly and must be changed if it is damaged.

The filter must be changed if it is broken, blocked or does not give enough airflow.

The breathing tube must be changed if it is broken or has crevasse.

The battery must be charged when the low battery alarm sounds.

Use a soft cloth to wipe the external surfaces. Do not use water.

The filter should be replaced together with the pre-filter.

8.2: Storage

The PAPR must be stored in a dry clean area, in a temperature range of -10 degrees centigrade to +55 degrees centigrade and relative humidity less than 90% RH.

If the equipment is stored at temperature below 0 degrees centigrade, the battery must be allowed to warm up to achieve the full battery capacity. The equipment must be protected from dust, particles and other contamination.

If the equipment is not used for a long time, the battery should be fully charged, removed from PAPR unit and stored separately.

9: TOUBLESHOOTING

Problem	**Probable cause**	**Action**
Continuous alarm, red light flash and LCD flash	1. Low power 2. Filter blocked 3. High temperature	Charge battery charger Remove obstruction Change filter Stop working and rest
No flow, no alarm	1. No power 2. Battery contact damaged	Charge the battery Check battery contact
Battery run time is too short	1. Battery is not fully charged 2. Filter is blocked 3. Battery damaged	Charge the battery Check block / change filter Change battery
Air supply to hood smells unusual	1. Filter broken 2. Hose broken 3. ADF helmet broken	Leave area at once 1. Change filter 2. Change hose 3. Change ADF helmet
Supply of insufficient air to hood	1. Breathing tube break off 2. Breathing tube broken 3. Filter is blocked	1. Check hose connect to hood and PAPR unit 2. Change breathing tube 3. Remove obstruction and change filter

10: SPECIFICATION

Size (Blower Assembly)	9-2/5 x 6-1/2 x 2-3/4 in. (240 x 165 x 70 mm)
Weight	2.4KG
Air Filter	1*TH2 P R SL
Air Flow	Level 1: >=165L/min Level 2: 200L/min Level 3: 230L/min
Noise Level	Max 73dB
Operating Temperature	23º to 131º (-5º~55º)
Storage temperature	14º to 131º (-10º~55º)
Battery Type	Rechargeable Li-ION 4400m Ah
Expected Battery Operation Time	Level 1>8h Level 2>6h Level 3>4h
Battery Charging Time	3.5 Hours
Battery Life	500 Charges Run Time Dependent On Air Flow Rate and Filter Load.
LCD Display	Air flow level and data Battery capacity Filter status
Belt Size	35-2/5 x 51-2/5 in. (900mm to 1300mm)

11: MARKING EXPLANATION

Powered filtering device:

- EN 12941:1998 Respiratory protective devices - Powered filtering devices incorporating a helmet or hood – Requirements, testing, marking
- TH2 P R (SL) classification of the unit. “TH2” defines the level of protection, “P R” indicates the filter type (“P”=Particle filter, “R”=Reusable type of particle filters) and “SL” reflects the filter has been tested against particles of liquid and solid matter.

Warning sound indication:

100ms per grid											
	0	1	2	3	4	5	6	7	8	9	10
Install the battery	■										
Turn on the system	■										
Change the air flow speed	■										
Turn off the system	■	■	■	■	■						
Current overload	■		■		■	■	■	■	■		
Air outlet jam	■		■	■	■	■	■				
Over heating	■		■		■		■	■	■	■	■
Low battery	■		■								
Filter jam	■		■		■						

 **= Read instructions before use**

CE 0194 **= Identification code for approved test authority.**

Warranty:

The blower unit is guaranteed for a period of 12 months from date of purchase against mechanical or electrical defects.

The battery is guaranteed for a period of 6 months from the date of purchase.

The company undertakes to exchange or repair without charge, any part found to be defective within this period. Alternatively at the company's discretion, the Company may choose to replace.

This guarantee is subject to:

The unit has been used solely for the purpose for which it is intended.

The unit has not been subject to misuse, accident, modification or repair.

N.B. In the event of a claim, contact the retailer from which the unit was purchased.

The guarantee does not cover normal wear and tear. This guarantee does not affect your legal rights.