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Instruction manual

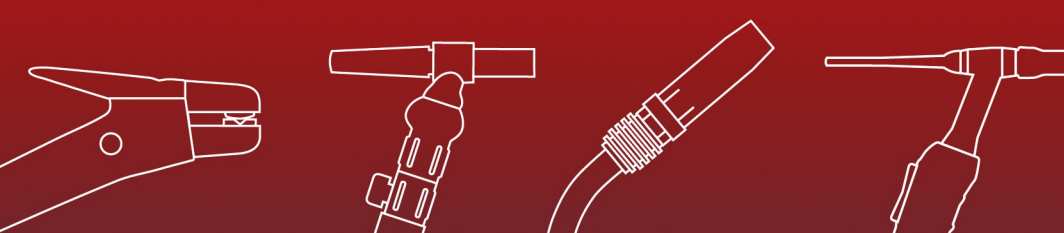
Autodim Welding Helmet with ventilation unit



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Warning

**Please read these instructions carefully before using the equipment!
Incorrect use can result in danger to life and health!**

1. Introduction

Respiratory Systems is a combined face and breathing protection device for increased safety and comfort during welding. Please read these instructions carefully before unpacking. For proper use, see User Instructions or contact your supplier for help. Address and telephone number information is printed at the back of this leaflet.

Your Air Powered Respirator system should include:

- a) Autodim welding helmet top
- b) Autodim PAPR unit with attached battery
- c) Belt
- d) Autodim Battery charger
- e) Airflow indicator
- f) Instruction manual
- g) Backpack

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

2. Approvals

The system complies with the requirements of European Standard EN 12941: 1998+A2_2008 as a THP device.

All components used in Respiratory System must be "Rohrman approved" manufacturers parts, and must be used in accordance with the instructions in 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 particle filter, gas filter and pre-filter can be used together with this system. Filters from other manufactures should under no circumstances be used.

3. Usage

The Respiratory System is designed to provide a supply of filtered air via a breathing tube to welding headpiece.

The complete system is a breathing 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.

Limitations to use

The Respiratory System must only be used with the unit switched on. If the equipment is used without the unit switched on, there is a risk of high concentration of CO₂ and the oxygen level in the head top will fall, thus little or no protection is given in the power-off state and this is considered to be an abnormal situation. Do not remove the head top 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 the industrial safety engineer. The manufacturer or supplier is not responsible for injury following incorrect use or incorrect choice of equipment.

DO NOT use the Autodim Welding helmet with the blower unit switched off.

DO NOT use the Autodim Welding helmet in an atmosphere that is immediately hazardous to user hygiene or health and or has oxygen content of less than 19,5% or contains unknown substances.

DO NOT use the Autodim helmets in an explosive atmosphere.

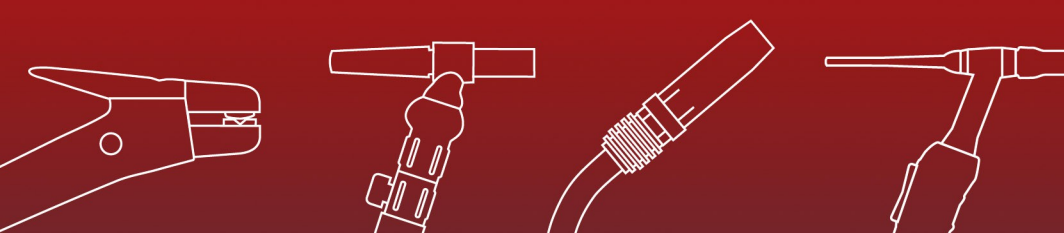
DO NOT use Autodim helmets in confined spaces or areas of poor ventilation.

DO NOT use Autodim helmets 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, the filter or battery compartment.



4. UNPACKING / ASSEMBLY

Check the 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.



– Open the Autodim PAPR unit and check the spark arrestor, pre-filter and filter, FIGURE 2 (A)

NOTE: If it is broken, please replace it.

– Replace the filter back into the casing if it's in good condition. FIGURE 2 (B)

Place the spark arrestor into the filter cover.

Place the pre-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 while 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)

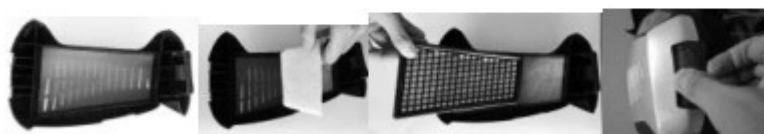


FIGURE 2(B)

– Install the Autodim PAPR blower on the belt.

Remove the released 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 belt is securely fastened.



FIGURE 3(A)



FIGURE 3(B)

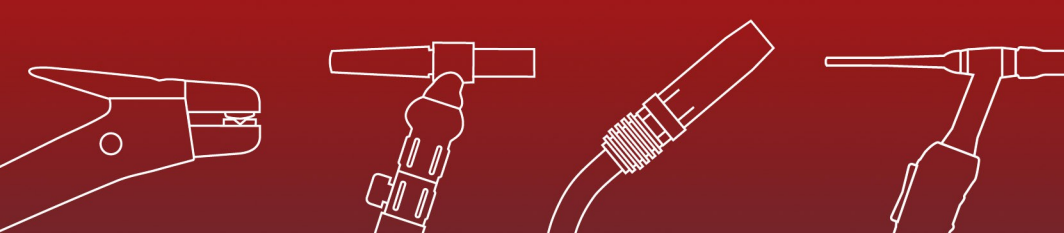


FIGURE 3(C)



FIGURE 3(D)



FIGURE 3(E)



FIGURE 3(F)

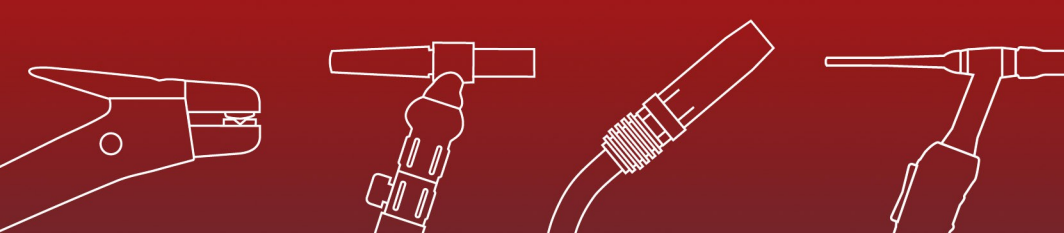
- Connect the breathing hose between the welding head top and the Autodim PAPR blower, FIGURE 4. Check that the breathing tube is securely fastened.
NOTE: If the breathing tube is broken, please replace it. The breathing tube might make a loop and get caught up by something in the surrounding area.



FIGURE 4

Carefully observe the instructions that explain how the equipment is to be used, before taking it into service.
All components must be installed / 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.

Marking on the batteries (see FIGURE 5)



5. BEFORE USE / FITTING

5.1 Battery charging, FIGURE 6.

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



FIGURE 6

WARNING: The battery can only be charged with supplied battery charger (Part.No.: 40.OA52010)

The Filter cartridges of the Autodim Welding helmets contain LI-Ion button cell batteries. The Autodim PAPR system contains a LI-ION Battery. Used batteries and accumulators do not belong in the household waste. You are committed to dispose used batteries and accumulators solely through the commerce or through special collection sites for this purpose. (legal obligation to return).

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 full charged in about 3.5 hours (also the heavy duty battery) this depends on residual capacity.

The red light goes on during the battery is charged and the light will turn green when it is full charged (FIGURE 7)

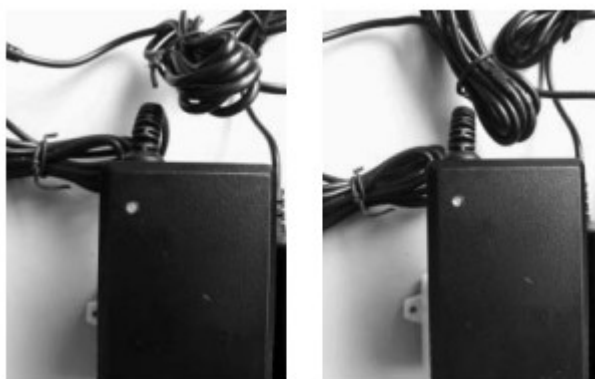


FIGURE 7

The battery will discharge during a long period in storage. For this reason, always re-charge the battery if it has been stored for more than 15 days. To achieve 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 Autodim PAPR unit and stored separately.

Points of attention:

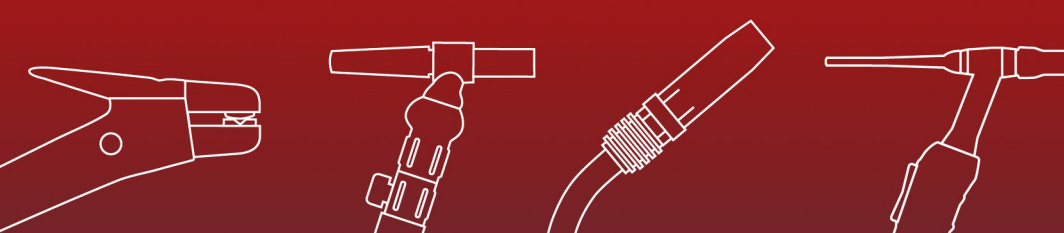
1. Check that the mains supply voltage to the charger is correct.
2. Connect the battery charger to the wall socket.
3. Connect the battery charger to the battery.

Warning:

If the Autodim PAPR unit starts, switch it off while charging. The battery icon on the Autodim PAPR 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 at charging is between 0 to 40 °C.

If the charger indicator light will not light up when connecting the charger to the battery, please check the battery's charge connector and the charger's cords and connectors.

4. After charging is completed, disconnect the battery charger from the main supply.

5. Disconnect the battery from the battery.

NOTE: The particle filter must be changed 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 Airflow indicator to the breathing connector and press the "ON" button (FIGURE 9)



FIGURE 9

WARNING: Do not use the system if the ball is below the mark line. Check the filter and the battery and retest air flow.

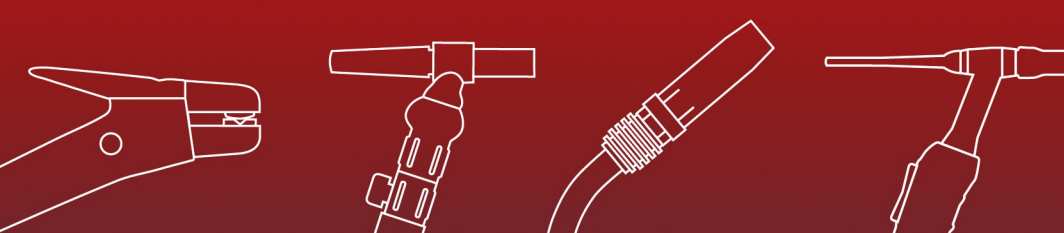
2. Test air flow alarm

Remove the breathing tube from the welding helmet, Press "ON" button. Cover the air outlet with your hand and wait about 15sec, 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 irritation occurs
- f) At very high work rates, the pressure in this Autodim PAPR device may become negative at peak inhalation flow.

5.3 Fitting

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

Pull down the face seal ring and put on the head top. Adjust the headgear to suitable tightness so that it will be stable on the head. The tightness of headgear can be adjusted by pushing and turning of the adjusting knob. See FIGURE 11 for details.

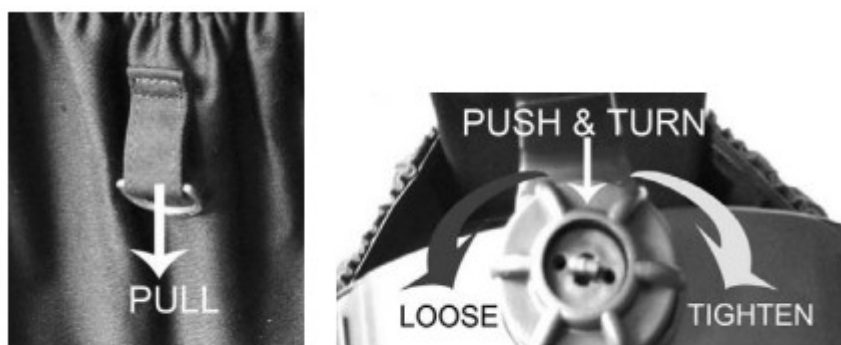


FIGURE 11

Put on the head top and adjust the headgear to 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 sufficient sealing needed to offer the correct protection factor.

6: LCD and Operation

6.1 LCD

There is a LCD display on the Autodim PAPR unit to show the Autodim PAPR working condition (Figure 12).

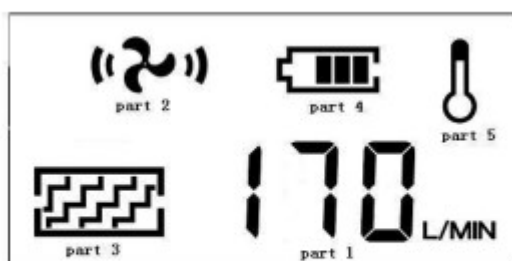


FIGURE 12
9

Part 1 shows the data of current air flow.

Part 2 shows the level of airflow.

Part 3 shows the filter condition.

Part 4 shows the battery.

Part 5 shows the temperature of the battery.

Any of them will flash if the Autodim PAPR disfunctions.

6.2 Operation

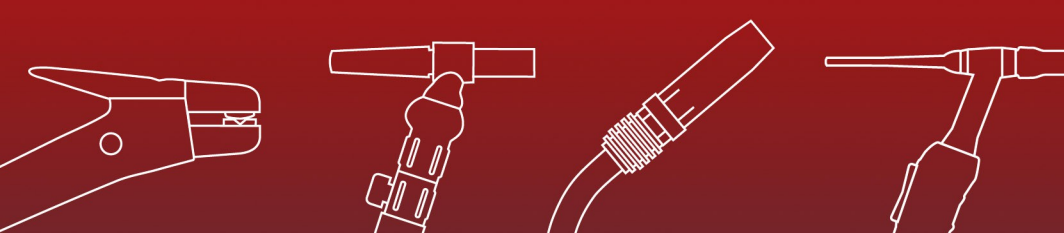
Start the Autodim PAPR unit by pressing the "on" button on the Autodim PAPR unit. The Autodim PAPR is working at level 1.

Press the "on" button again. The system is working at level 2.

Press the "on" button again. The system is working at level 3.

Press the "on" button again. The system is working back to level 1.

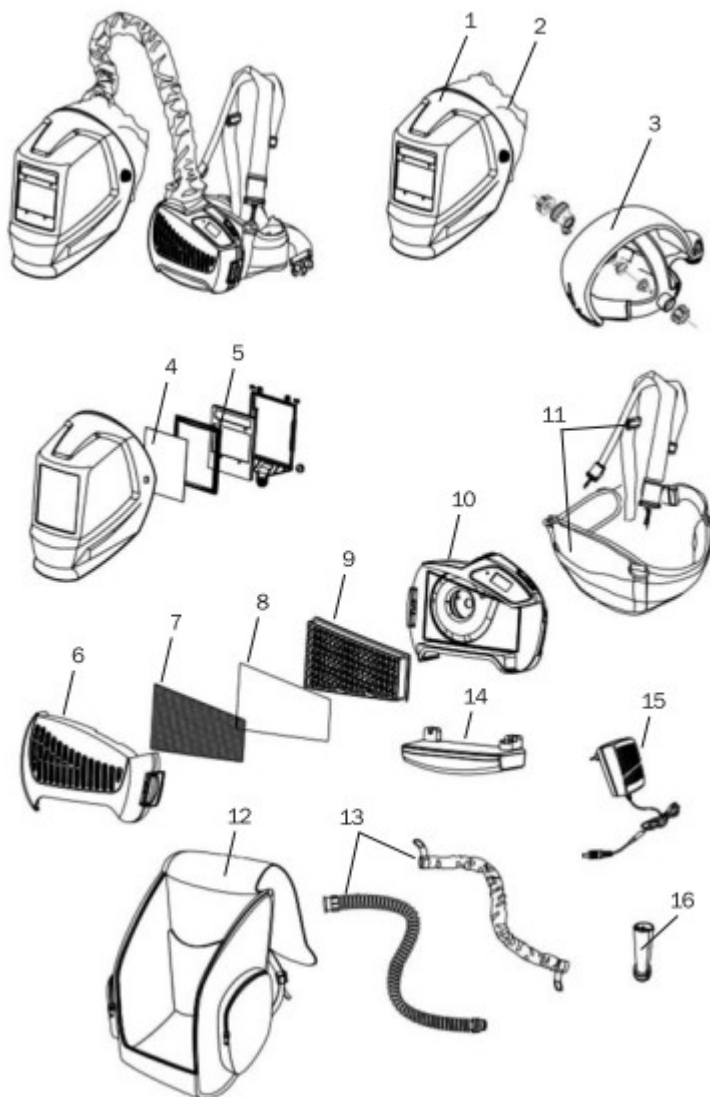
Press the "off" button for at least 3 second. The Autodim PAPR is powered off.



NOTE: There are 3 levels of air flows. Level 1 is no lower than 165L/min, Level 2 is 200L/min and Level 3 is 230L/min.

Autodim PAPR will shut down the entire circuit and switch to sleep mode if not used for more than 30 minutes. Press the "on" button to activate the system. The Autodim PAPR must be operated in the temperature range of -5°C to +55°C and relative humidity less than 90% RH.

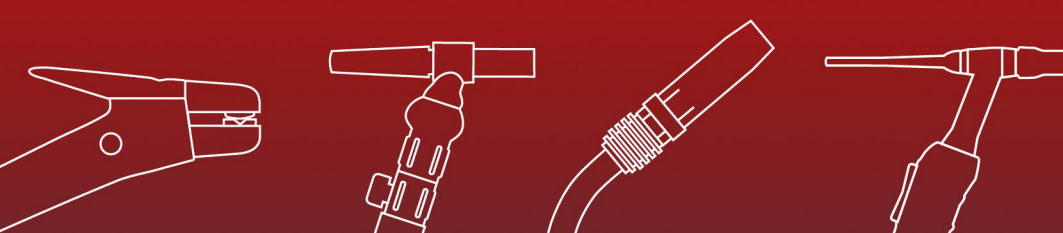
7. PART LIST





Drawing Number	Part Number	Description	Manufacturing Date
	40.OA05001A	AUTODIM PAPR HELMET WITH POWERED AIR-PERIFYING RESPIRATOR (PAPR)	
1	40.OA050011	Helmet Autodim XA-5001 Pro black	
2	40.OA51001	Face Seal Autodim PAPR	
3	40.OA51002	Airduct Autodim PAPR	
4	40.OA310005	Protection window 106,0 x 66,0 x 1,0mm Polycarbonate	
without picture	40.OA310005	Protection window 106,0 x 66,0 x 1,0mm Polycarbonate	
5	40.OA150011	Automatic filter XA-5001 Pro Autodim	
6	40.OA52001	Filter Cover Autodim PAPR	
7	40.OA52002	Filter Autodim PAPR	
8	40.OA52003	Prefilter Autodim PAPR	
9	40.OA52004	Spark Arrestor Autodim PAPR	
10	40.OA52005	Blower Unit Autodim PAPR	
11	40.OA52006	Waist Belt and Dual Shoulder strap Autodim PAPR	
12	40.OA52007	Backpag Autodim PAPR	
13	40.OA52008	Breathin tube with cloth assembled Autodim PAPR	
14	40.OA52009	LI-ION Batteries Autodim PAPR	
15	40.OA52010	Battery charger Autodim PAPR	
16	40.OA52011	Portable Airflow Testing Unit Autodim PAPR	
without picture	40.OA410001	Headgear for Autodim helmets	
without picture	40.OA420001	Sweatband strandard	
without picture	40.OA420002	Sweatband Comfort L=17cm 2pcs	





7.2 Replacement

Replacing the filter, Figure 22

- Remove the filter cover by pressing in the latch of the filter cover (Figure 19)
- Remove the used filter by lifting it out from the filter cover.
- Install a new filter in the filter cover. (NOTE: Unauthorized filter will void the warranty and 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 Autodim PAPR device when used with this filter.)
- Change the Pre-filter if needed.
- If necessary, clean or change the part arrestor (metal net) on the base of the filter cover.
- Put back the filter cover, with the filter installed, by hooking the cover on the left side of the Autodim PAPR unit and pressing the cover down so that the latch engages correctly.

8. MAINTANCE & STORAGE

8.1 Maintenance

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

The filter must be changed if it is broken, or it is blocked and 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 rings.

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 Autodim PAPR must be stored in a dry, clean area, in the temperature range of -10°C to +55°C and relative humidity less than 90% RH.

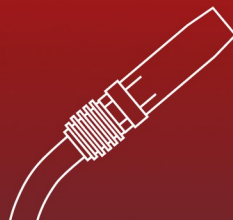
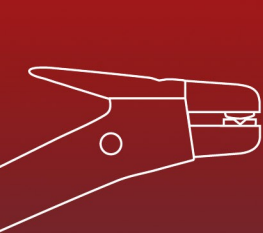
If the equipment is stored at temperature below 0°C, the battery must be allowed to warm up to achieve full battery capacity.

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 full charged, removed from Autodim PAPR unit and stored separated.

9. TROUBLE SHOOTING

Problem	Probable cause	Action
LCD defective code E01 and red light flashes	1. Motor is stuck 2. Motor damage 3. Blower structure failure caused by outer force 4. Circuit failure	Check and remove physical failure and restart the system. Return to dealer if LCD still shows E01
LCD defective code E02 and red light flashes	1. Motor damage 2. Motor impeller rubs blower shell 3. Circuit overheating	Check and remove physical failure and restart the system. Return to dealer if LCD still shows E02
LCD battery icon flashes Warning sound Red light flashes	Low battery	Charge the battery
LCD filter icon flashes Warning sound Red light flashes	Filter blocked Hose blocked	Remove obstruction, change the filter Clean hose
LCD temperature icon flashes Warning sound Red light flashes	High temperature	Stop working and rest
No flow, no alarm	1. No power	Charge the battery



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	2. Battery contact damaged	Check battery contact
Battery run time is too short	1. battery is not fully charged 2. Filter is blocked 3. Battery is damaged	Charge the battery Remove obstruction, change filter Change battery
Air supply to hood smells unusual	1. Filter broken 2. hose broken 3. ADF helmet broken	Leave current area immediately. 1. Change filter 2. Change hose 3. Change ADF helmet
Supply 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, 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
Operate Temperature	23°F to 131°F (-5°C~55°C)
Storage temperature	14°F to 131°F (-10°C~55°C)
Battery Type	Rechargeable Li-ION 4400mAh
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 a hood - Requirements, testing, marking.
TH2 P R 8SL) 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

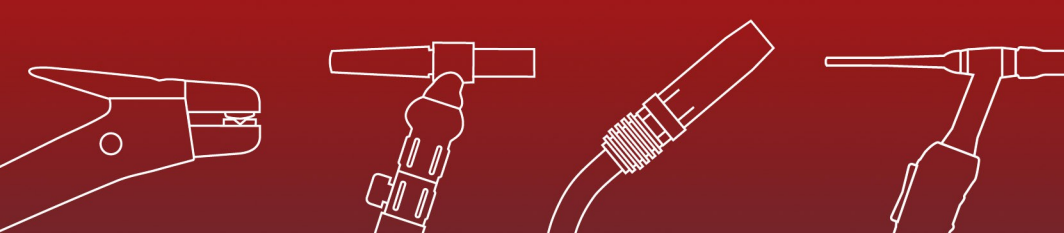
Each grid stands for a period of 100ms. Gray is the beep sound and blank grid is a quit period. If several continued grids are in gray then there is a continuous beep sound. For example, when the current is overloaded, the system sounds like beep~beep~beep~~~~~



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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 heat											
Low battery											
Filter jam											

Symbols:



=Read instructions before use

CE 0194= CE mark followed by number of notified body who carried out 11.B surveillance.

Warranty:

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

The Autodim PAPR 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 and at its discretion.

The company may replace.

This guarantee is subject to:

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

The Autodim PAPR 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 Autodim PAPR unit was purchased.

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