



# Operating Instructions

Type

**PAPR BLOWER UNIT**  
European Community Design

**Extractability**

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# PAPR BLOWER UNIT

## European Community Design

Registration Number: 001421135

USA Design NO: 29/502,319

Chinese Patent No: 3025898135S

## Safety Instructions

Read these operating instructions through carefully before using the equipment.  
Incorrect use may invalidate any warranty claims against EXTRACTABILITY.

### Warnings and Safety Limitations

Only wear the welding helmet if it is connected to the blower unit and in operation before entering the working area.

**NOTE.** The PAPR unit does not provide protection against gaseous substances.

### Leave the working area immediately if:

- ⚠ The battery warning is triggered (diagram 5 A red LED illuminates and audible signal is heard).  
Either recharge the battery or replace it.
- ⚠ The airflow warning is triggered (diagram 5 C red LED illuminates and audible signal is heard). Change the filter in a safe area. A strong wind from the side or from behind may affect the protection provided by the helmet.
- ⚠ When removing the welding helmet, take all necessary precautionary measures to prevent breathing in dust or contaminated material that may have collected on the outside of the helmet.

Never immerse the blower unit or the battery in water; this could damage the unit.  
Ensure that no water enters the unit when cleaning it.

Used filters cannot be cleaned or recycled. Attempts to clean the filters by using compressed air or water will damage them.  
Make sure the connection hose is unobstructed and not blocked by other objects in the area.  
Never short-circuit the battery, this could cause fatal damage.

### The PAPR may not be used...

- ⚠ In a flammable or explosive atmosphere
- ⚠ If the inhaled air is lacking in oxygen (Europe: <17 %)
- ⚠ If the concentration of toxins is so high that it exceeds protection class TH3P (Europe)
- ⚠ In temperatures below -5 °C or above +55 °C
- ⚠ In surroundings where there is immediate danger to life and limb

### Do not use in the following situations:

- ⚠ When a strong wind is present
- ⚠ At very high work rates
- ⚠ When air flow is below 160 l/m
- ⚠ With near power failure and no respiratory protection
- ⚠ In power outages, as the Co2 concentration inside the helmet may increase

When verifying the protection level of the product, ensure that the user does not confuse the European standard EN12941 label with the label associated with other standards.

If you have any questions on the specific application, use or suitability of the PAPR unit, please contact EXTRACTABILITY – sales department.

# Warranty & Liability

Extractability will repair the product or replace it where necessary in cases of material or manufacturing defects, arising within 12 months from the date of purchase, provided the product has been used in accordance with the authorised use as provided by the operating instructions. The warranty will be invalidated if:

- ✓ The serial number has been altered, removed or rendered illegible.
- ✓ The product has been intentionally damaged, misused, opened or modified.
- ✓ Non-original replacement parts are used or it is not properly serviced.
- ✓ If the PPE is damaged or if it fails during the pre-use inspection checkpoints, the PPE has to be removed from use.

The warranty only covers repairs or the replacement of defective parts. Under no circumstances does EXTRACTABILITY undertake to provide any warranty for general breakdowns or consequential damage.

## Area of application

The PAPR unit is a powered air purifying respirator for protection against dust and particles. This system is TH3P R SL certified in accordance with European standard EN12941: 1998/A1:2003/A2:2008 TH3P R SL

The PAPR unit is used to support the ventilation process, it supplies clean air reducing the effort required to breathe. The electronic system for controlling the airflow monitors the blower unit in order to ensure a constant flow of min. 180 l/m\*.

The effective operating time of the PAPR unit with a fully charged battery depends on the battery type and filter state (see technical specifications table).

## Prior to pre-use inspection and testing

- ✓ Carefully remove the packaging of the various parts.
- ✓ Check whether the unit is complete in accordance with the scope of delivery and nothing has been damaged. If any damage is found or a part is missing, contact the sales department immediately. Never use a damaged or incomplete unit.
- ✓ On delivery the battery is not fully charged, charge the battery completely before first usage.

## Pre-use inspection and testing

**Before every use, ensure that the PAPR unit is in a faultless condition and proceed as follows:**

1. Ensure that the master filter and the pre filter is properly installed and the cover is securely fitted (cover has to close with a clicking sound).
2. Check the air hose and air connector for damage (holes, tears, cuts). Connect the air hose to the helmet and blower by inserting the male bayonet fitting into the female coupling and lock by twisting. Ensure that the male fittings have an o-ring seal in place.
3. Switch on the PAPR unit by pressing the ON button for about 1 second. During the startup of around 3 seconds all 5 LED's are switched on and an audible alarm (3 beeps) will sound. Afterwards the PAPR unit is ready for use.
4. In addition, during this start up time the PAPR unit performs an initial self-check to ensure that the unit delivers a correct flow above 180 l/min. If the red filter LED turns off after the before-mentioned 3 seconds, a flow of at least 180 l/min is maintained. Due to an in-built flow sensor the PAPR unit controls and continuously maintains a correct flow above 180 l/min during the entire operation.
5. As mentioned, the PAPR unit has a visible and audible warning for low battery, blocked filter or reduced airflow. If a warning is triggered leave the working area immediately!



## 1. Top headband

Adjust the depth of the headband, to a suitable position, in direction of the arrows (as shown).  
Adjust according to the user's head shape.

## 2. Distance of Harness

Adjust the distance, from the welders eyes to filter lens, as suitable. Left/Right symmetrical adjustment.

## 3. Back of headband

To adjust the size of the headband (loose or tighten).

## 4. Incline angle adjustment

To adjust the incline angle of helmet, related to the welder's face, and eye position.

This model is designed & equipped with a special up and down headband mechanism. When the welder turns up the helmet to head top, the headband mechanism makes the helmet's gravity center to be lower, which coincides with the center of welder's head. The design of the welding helmet greatly lowers the fatigue on the welder's head and neck.

## Adjusting the belt size:

Put the belt on and adjust the size so that the blower unit sits comfortably on your hips/waist.

## Installing the battery:

The battery has to be inserted and clipped into the locating slot on the bottom left side of the PAPR unit. Slide and push the battery until a click is heard.

## Removing and charging the battery:

Press the retaining button on the bottom right side and pull it out until it is completely removed from the blower unit.

## Connect the battery to the charger:

The charging process is signaled by the yellow illuminated LED on the charger. After charging has been completed, the LED turns green and the trickle charging mode is activated.

## Flow adjustment:

The blower has two air flow levels: 180 l/m\* and 210 l/min\*. To change the air flow level press the ON button until your requested air flow level is reached.

## Master filter and prefilter replacement:

In case of a filter alarm indication please replace the prefilter. Please monitor the time between filter alarms. As for every pre filter replacement this time period is expected to become shorter. If you feel the replacement interval becomes too short, which is at user's discretion, you are then recommended to replace the master filter and the pre filter.



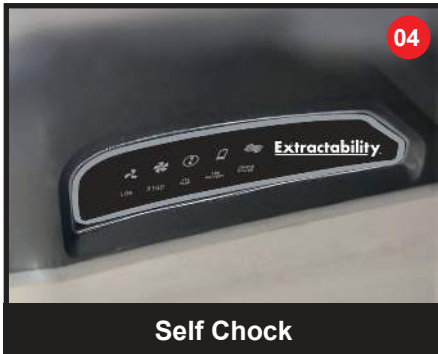
Filter Assembly



Hose Assembly



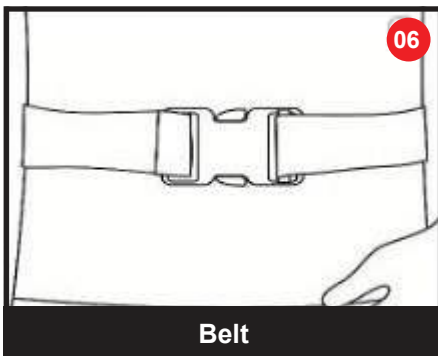
Power On



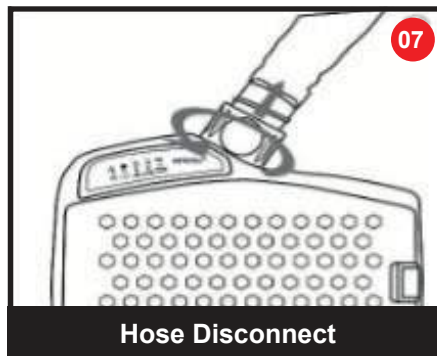
Self Check



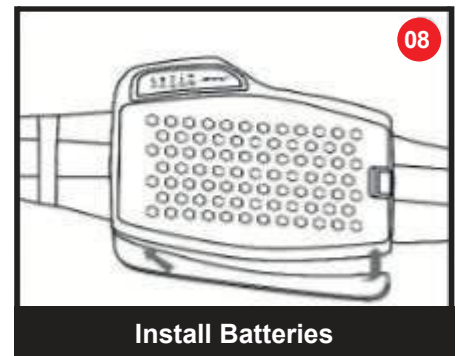
- Low battery alarm
- Filter change alarm
- Low flow alarm



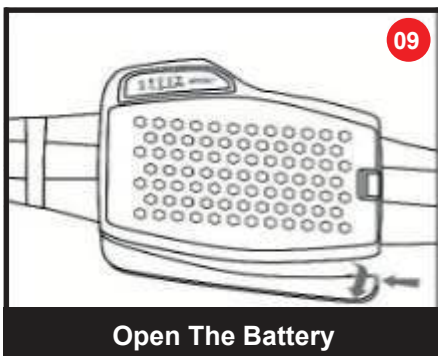
Belt



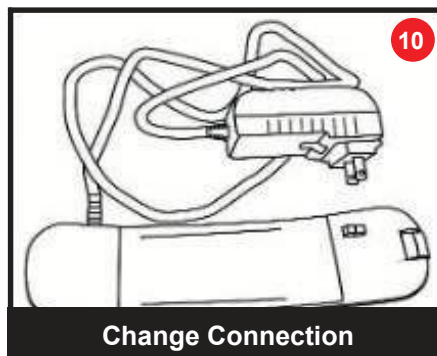
Hose Disconnect



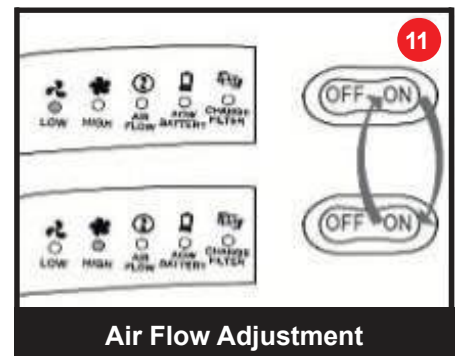
Install Batteries



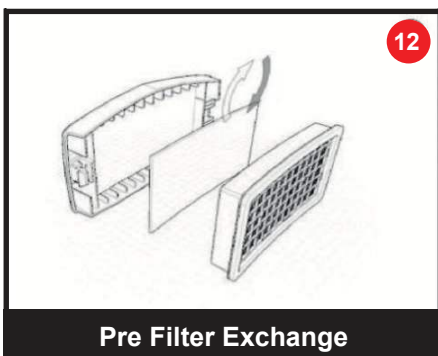
Open The Battery



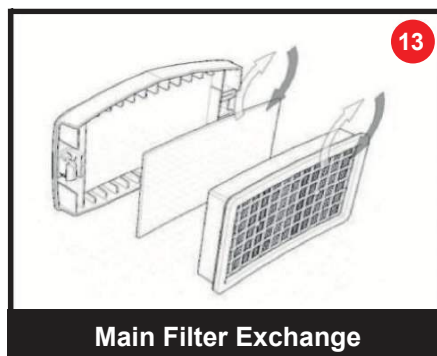
Change Connection



Air Flow Adjustment



Pre Filter Exchange



Main Filter Exchange

# Troubleshooting:

## **Blower does not start.**

- ✓ Make sure the battery is installed correctly and the battery is fully charged

## **Filter warning is on (Diagram 5 B) even when main filter and pre filter have been properly installed.**

- ✓ Check with your distributor

## **Battery running time becomes very short.**

- ✓ Defective charger or battery.
- ✓ Replace and dispose of the used battery in accordance with the national regulations for special waste.

## **Maintenance:**

- ✓ Check the welding helmet regularly in accordance with the enclosed Operating Instructions.
- ✓ Check the face seal and the air nozzle for holes, cracks or other damage and check that they are correctly positioned on the helmet (see operating instructions).
- ✓ Do not use the system until all worn or damaged parts have been replaced.

## **Maintenance Programme:**

- ✓ Cleaning and disinfection: After each use.
- ✓ Visual inspection: Before and after each use.

If the unit is in storage the battery must be recharged every 4 months.

## **Cleaning:**

- ✓ Using a clean cloth moistened with soapy water, clean the blower, the air hose and the safety helmet.
- ✓ Leave the unit to dry at room temperature.
- ✓ Do not use strong detergents, solvents, alcohol or cleaning agents containing abrasives.
- ✓ The face seal is washable (hand wash, do not spin).

## **Storage**

The PAPR unit and its accessories must be stored in a dry place.

## **Recommended storage temperature range**

-5 °C to +55°C.

## **Store Humidity**

<90%RH

Protect from sunlight hydrocarbons and solvent vapours.

## **Recommended Operating Temperature**

-5°C to +50 °C (23T - +122T), Operating Relative Humidity:<90%

## **Disposal**

Please dispose in accordance with the national regulations for special waste **NOT** with normal household waste.



# Technical specifications

Nominal protection factor TH3P R SL classification (Europe).

**Blower unit Flow rates:** Level 1: min 180 l/min \* Level 2: min. 210 l/min\*.

\* At standard conditions: 20° C, 0 meters above sea level (101.3 kPa) all levels controlled.

**Material:** PC+ABS

**Blower:** High quality ball bearing long life brushless motor

**Fuse:** Electronic fuse

**Battery Type:** Standard Long Life Type: Li-ion rechargeable Voltage / capacity: 14.8V / 2.2Ah

**Charging cycles:** > 500

**Operating time:** Level 1\* 10 h

**Operating time:** Level 2\* 8.5 h

**Charging time:** Approx. 2.5h

**Weight:** 288g

**Colour:** Black

\*min operating time is with a fully charged new battery and filter at room temperature.

**Noise level Max:** 72dB(A)

Warning signals optical and audible alarm for low power, clogged filter and reduced airflow.

**Master Filter type:** TH3P R SL for TH3P system (Europe)

**Shrinking hose Length:** 850-1200 mm (incl. connectors) with protective sleeve(1000mm). Diameter: 28 mm (inside).

**Colour:** Black/grey.

**Master Weight:** 2500g (incl. Filter and battery).

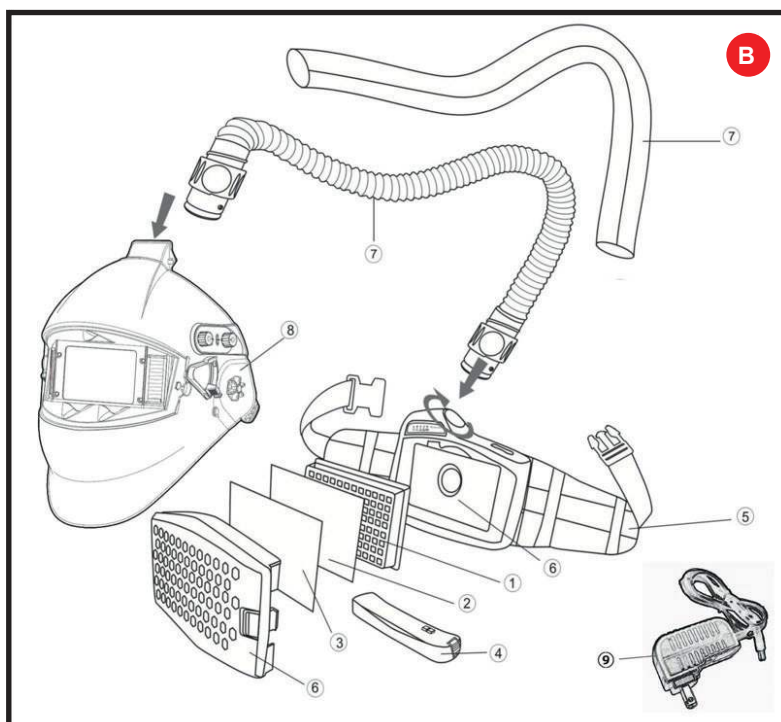
**Helmet Weight:** 736g (incl. Face seal and diffuser)

**Master Dimensions:** LxWxH: 224x190x70 mm (Max).

Standards should read EN 12941:1998/A1:2003/A2:2008 TH3P R SL ,

## Spare parts (see Diagram B)

1. HEPA filter TH3P R SL filter for TH3Psystem (Europe).
2. Pre filter
3. Spark protector.
4. Standard battery (Li-Ion 37Wh).
5. Belt with shoulder straps.
6. PAPR Master unit
7. Air Hose complete with protective sleeve.
8. Welding Helmet
9. Charger



## **EXTRACTABILITY**

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