

OPERATING

IMPORTANT: Before use **ALWAYS CHECK THE RESPIRATOR** is complete (with a filter), undamaged and fully charged. Don the respirator before entering the contaminated area.

Press the “On” button on the power unit.

Note: the motor will not trigger until it detects breathing.

Note: There is no “Off” button, the unit will go to standby mode in approximately 5-10 seconds when no breath is detected.



IMPORTANT: Always doff **AFTER** leaving the contaminated area

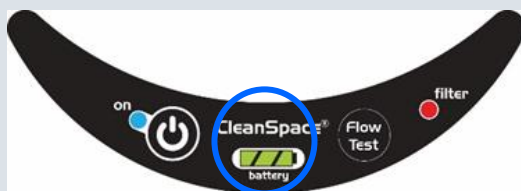
The Alarms

The CleanSpace Respirator has alarms to alert the wearer for low battery charge and end-of-life filter (particulate ONLY). CHECK the respirator before use:

- If less than 2 GREEN battery lights ON - charge the unit.
- If the RED Filter light is ON - change the filter.

1. LOW BATTERY CHARGE

Hear 3 beeps repeated every second. A single battery (GREEN) lights will be flashing.



YOUR ACTION: There is 5 minutes to leave the contaminated area and RECHARGE the battery.

2. END-OF-LIFE FILTER

Hear 2 beeps repeated every second with the filter (RED) light illuminated.



YOUR ACTION: Leave the contaminated area and CHANGE the filter

IMPORTANT: When using the combination filters for gas or vapour hazards always consult your safety manager or respiratory specialist to confirm the required frequency of gas filter replacement.

Charging the Battery

CHECK the respirator before use: If there are less than 2 GREEN battery lights on CHARGE THE BATTERY using the following steps:

1. Turn the power unit over and find the CHARGER PORT. Lift the protective rubber cover and connect the power cable to the socket.
2. Time to charge (flat to full charge): ~ 2 hours.
3. Once charged, remove the battery charger and replace the cover over the charging socket.



IMPORTANT: Do NOT don the respirator while still connected to the battery charger.

Changing the Filters

IMPORTANT: Always check there is a filter in place before use.

1. To replace the standard P3 filter: Lift the locking pin located at the back of the unit.



2. Open the filter cover and remove the used filter and pre-filter. Replace with clean filter and pre-filter. Note: Dispose of the used filter responsibly.



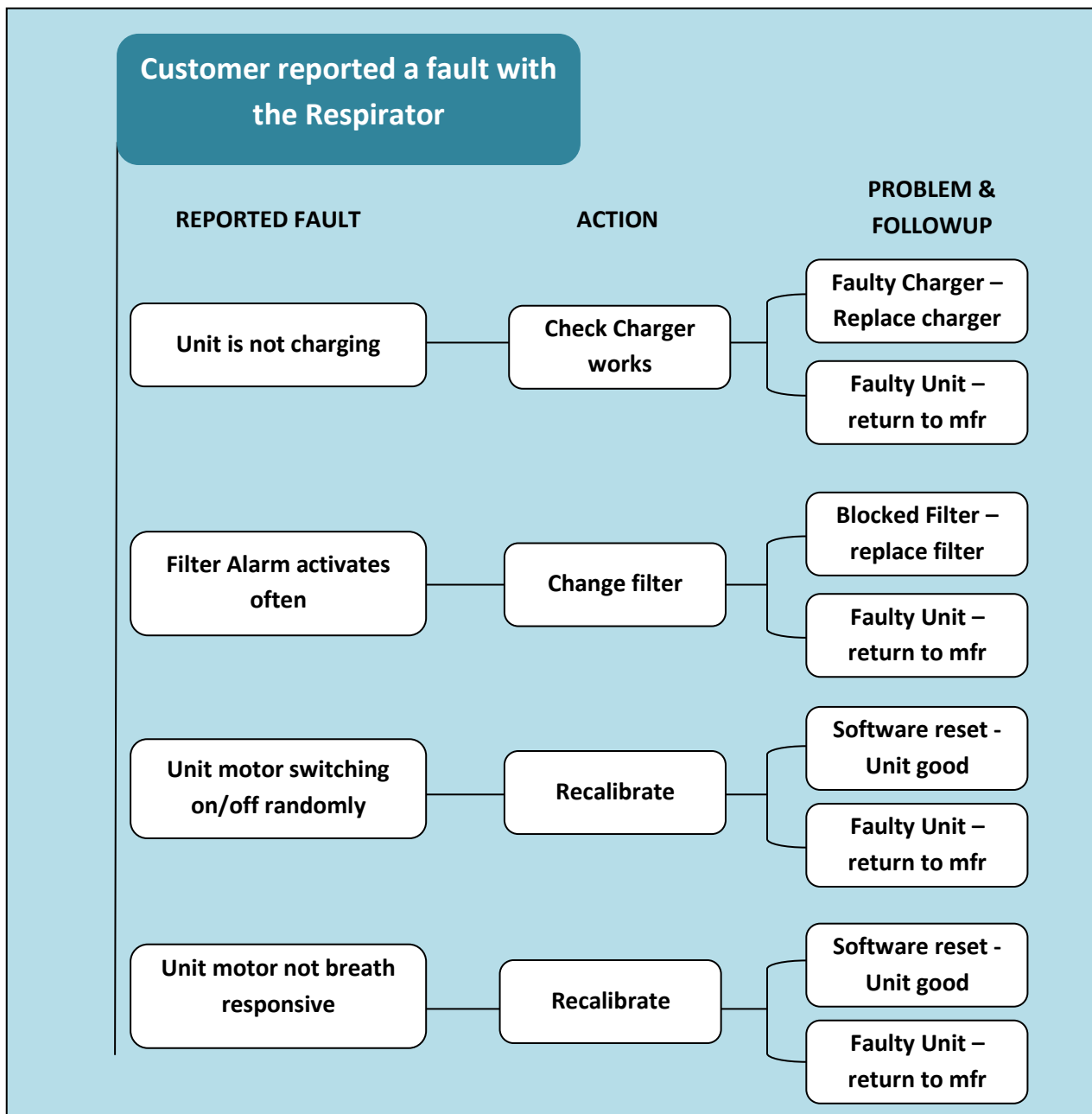
3. Close the filter cover and push the pin back in place to secure the filter cover.



IMPORTANT: If using the combination filters for gas or vapour hazards always consult your safety manager or respiratory specialist to confirm the required frequency of gas filter replacement.

It is recommended wearers complete the **CLEANSPACE ONLINE TRAINING PROGRAM**. To access the online training email: sales@paftec.com.

CleanSpace Respirators - Quick Troubleshooting Flowchart



STEPS FOR RECALIBRATING THE RESPIRATOR

To perform a recalibration on your CLenSpace2® respirator follow these steps:

1. Place a finger over the Power Button and Airflow Button at the same time.
2. Press and hold the Buttons at the SAME TIME.
3. The buttons should be held until both the Blue and Red lights come on (approximately 1-3 seconds), after which the Buttons should be released

The lights will stay on for 10 seconds while the respirator recalibrates itself. The recalibration is completed when the blue and red lights switch off.

PRODUCT CODE: PAF-0034, PAF-0060 and PAF-0070

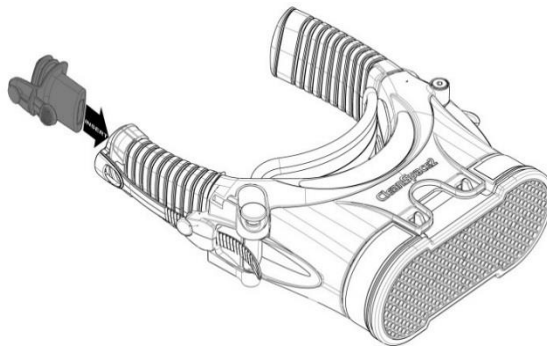
PRODUCT NAME: CleanSpace™ PAPR Power Units



STEPS TO CONDUCT AN AIR FLOW RATE TEST

This test checks that the power unit air flow and can deliver the Manufacturer's Minimum Design Flow of 120 litres/minute. Follow the steps below to conduct the air flow test.

1. Fit the yellow Flow Test Cap to the left bellow. See Figure 1.



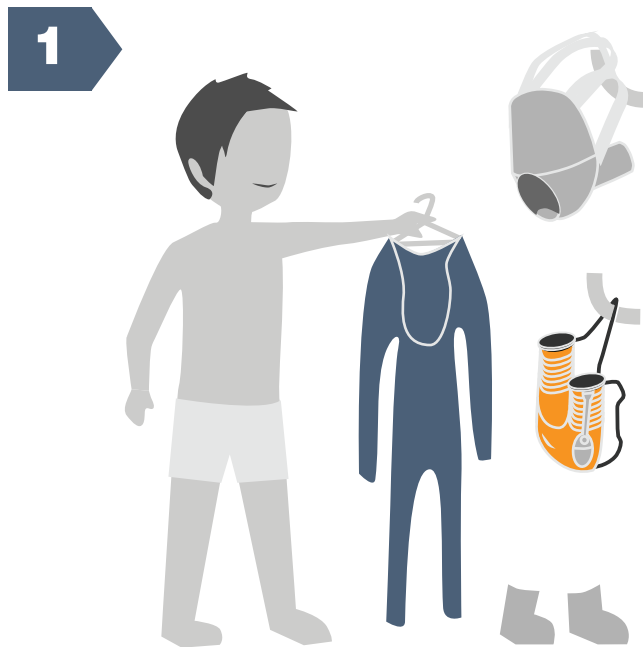
To avoid unnecessary filter changes, it is important to fit the Flow Test Cap to the **LEFT** bellow.

No air flows out of the right bellow. Fitting the Flow Test Cap to the right bellow will result a **FAIL** result, even if the filter is clean and battery fully charged.

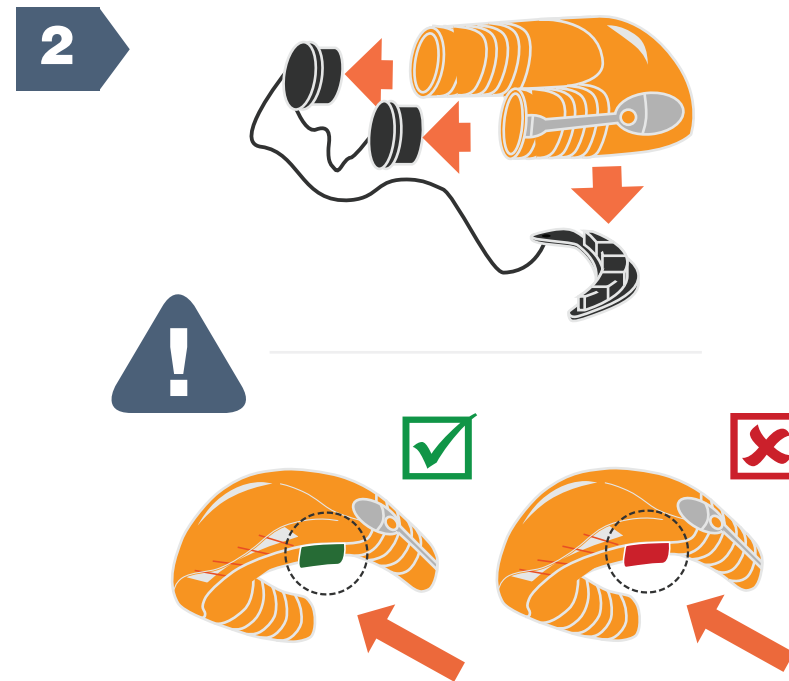
Figure 1 - Flow Test (Note – respirator shown here with Filter Adaptor fitted, but test is the same regardless of respirator configuration)

2. Make sure nothing is blocking the Flow Test Cap or the filter inlet. Place CleanSpace Ultra flat on a table or other support.
3. Press and release the button marked “Flow Test”
4. CleanSpace Ultra automatically runs the Flow Test. The motor will run fast and air will be discharged from the Flow Test Cap.
5. After 2 seconds CleanSpace Ultra reports the result of the test using the LEDs on the keypad. Use the table below to interpret the LEDs.

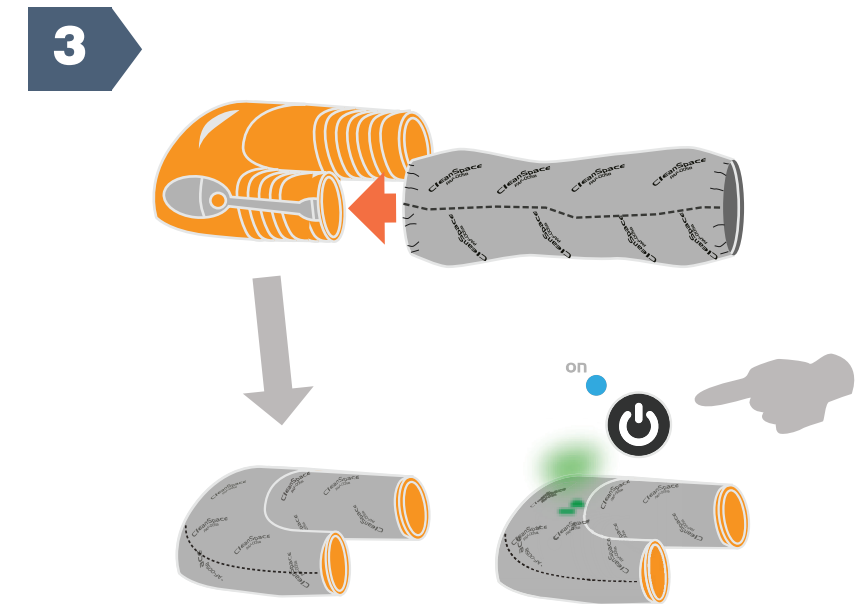
LIGHTS	DEFINITION
3 LEDs:	PASS (Excellent: flow >180 l/min)
2 LEDs:	PASS (Good)
1 LED:	PASS (Acceptable)
ALL LEDs FLASH	FAIL (Flow <120 l/min) Do NOT use CleanSpace PAPR. REPLACE THE FILTER and ensure the BATTERY IS FULLY CHARGED. Before use repeat the airflow test for a PASS result. Reset the respirator by pressing the Power button. Repeat the flow test. If filter is new and battery fully charged AND CleanSpace PAPR™ fails the test, contact PAFtec Australia and do not use.



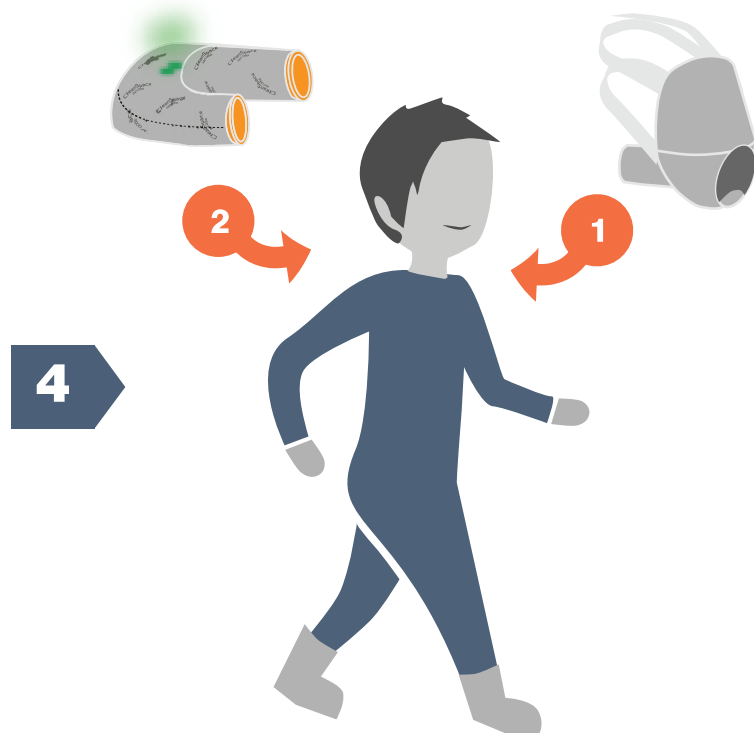
DON OVERALLS (PAF-0058)



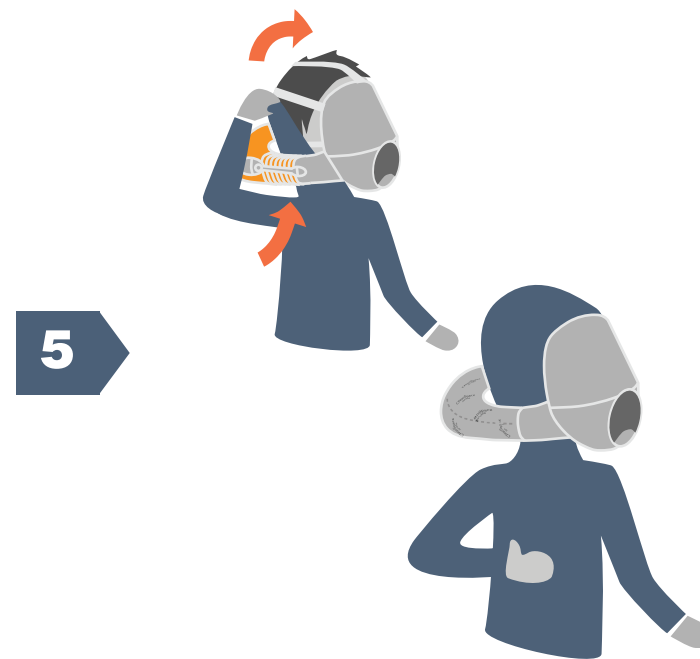
REMOVE PLUGS. CHECK FILTER



**FIT COVER. POWER ON
(COVER PAF-0058)**



FIT MASK THEN ULTRA

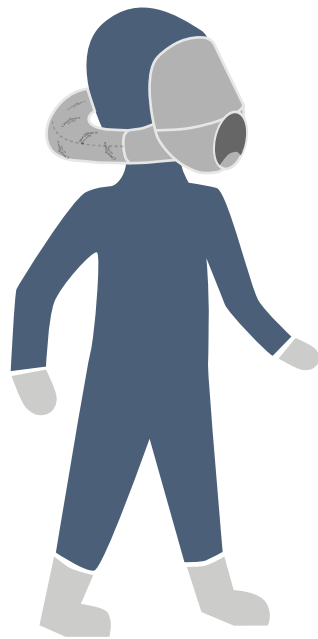


FIT HOOD



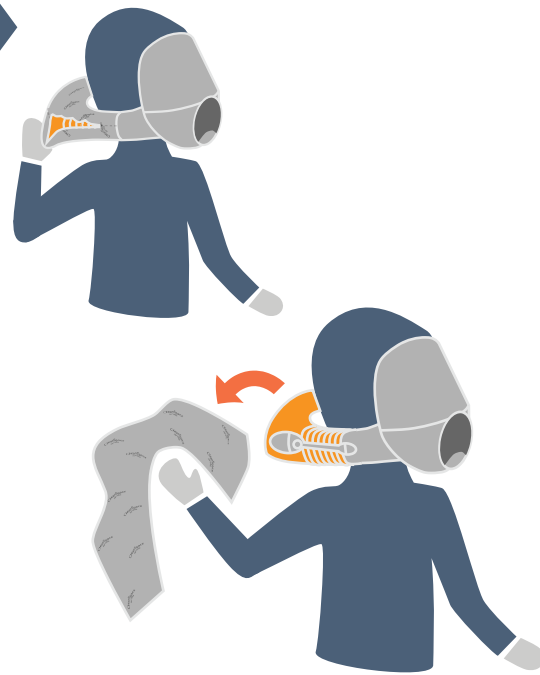
READY TO WORK!

1



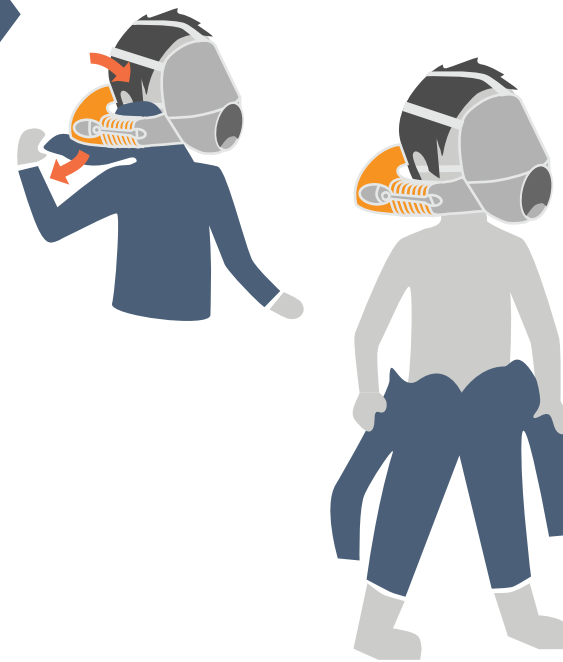
FACE MASKS

2



TEAR OFF COVER (PAF-0058)

3



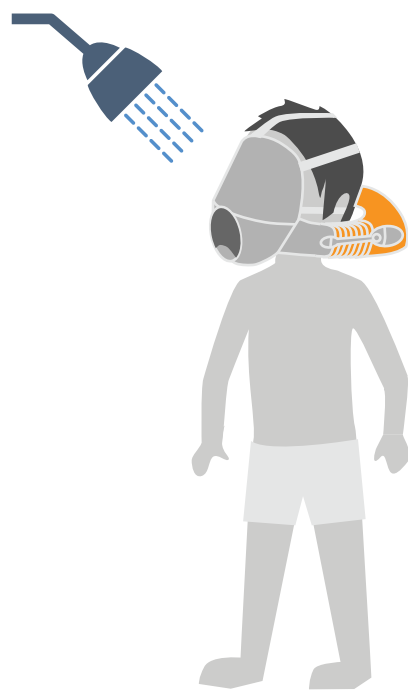
REMOVE OVERALLS
FIRST PULL HOOD BETWEEN
ULTRA AND NECK

4



BIN OVERALLS AND COVER

5



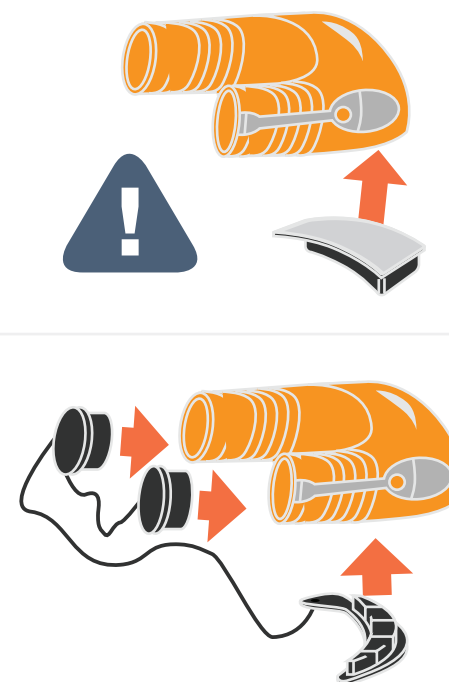
SHOWER

6



DISCARD FILTER

7



! FIT NEW FILTER
FIT DECONTAMINATION PLUG SET

8



DONE!

BATTERY CHARGE INDICATOR

ALL CleanSpace Respirators are equipped with an indicator of battery charge.

There are three (3) battery indicator lights. Three green lights are lit up when the battery is fully charged and has minimum four (4) hours of operating time. The Respirator should be fully charged before use.



CleanSpace Respirators will function with one (1) or two (2) green battery lights illuminated. If two (2) battery indicator lights are on, the Respirator has between 25% and 75% charge and will typically operate for between 1 and 3 hours. If only one (1) battery indicator light is on, the battery has less than 20% charge and we recommend that you charge the Respirator before use. When the battery approaches a level at which it would not be able to supply the Manufacturer's Minimum Design Flow, an alarm sounds (3 beeps, repeated once per second). All green battery lights are extinguished. **If the low battery alarm sounds you must leave the contaminated area immediately and recharge the battery.**

Operating time is strongly affected by work rate, altitude, and other factors. The operating times quoted above are average durations at moderate work rates at sea level. Actual operating times may vary widely from average durations.

LOW BATTERY ALARM

All CleanSpace™ respirators have a battery indicator light and low battery alarm. The battery alarm is triggered when the battery has approximately 5 minutes life remaining. If the battery alarm sounds (one beep), leave the contaminated area immediately, re-charge the battery or attach a charged CleanSpace2™ Endurance Pack.

CHARGING THE INTERNAL BATTERY

CleanSpace respirators have internal charging circuits that require a suitable DC source to charge. The charging is automatic and requires no user intervention. Use only the PAFtec specified power source to charge. ONLY CleanSpace™ chargers should always be used to charge the CleanSpace™ batteries or you will invalidate your warranty.

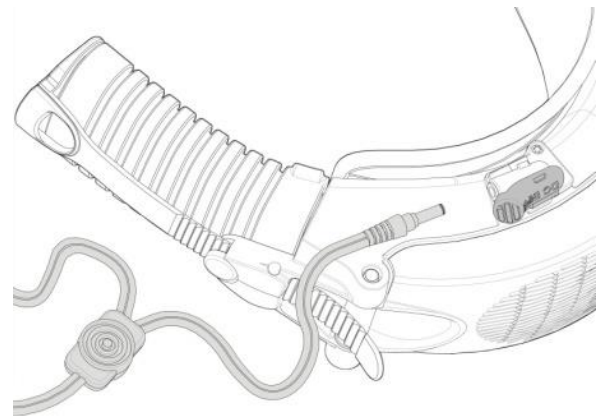
STEP 1. Turn the Respirator upside down, and locate the charging port.

STEP 2. Lift off the flexible polymer charging port cover. Slide the charger cable connector into the charging port.

STEP 3. Ensure the charger is plugged into a power socket.

STEP 4. Charging is complete when the Power Unit shows three (3) green solid lights. A fully charged internal battery typically gives you 6 hours of operating time.

STEP 5. When the Respirator is fully charged, disconnect the charger cable from the Power Unit charging port. **IMPORTANT** Replace the charging port cover to prevent dirt and contaminants getting into the port.



NOTES ON CHARGING:

- **DO NOT CHARGE THE POWER UNIT WHEN THE UNIT IS BEING WORN.**
- Your CleanSpace™ charger comes with a lead with two connectors. This is so you can charge two CleanSpace™ Power Units at the same time.
- The CleanSpace2™ Power Unit cannot be charged at temperatures below 0°C.

GENERAL BATTERY INFORMATION

The CleanSpace™ Respirator has an internal 13.5V lithium ion (Li-ion) polymer battery. Lithium ion (Li-ion) batteries have the highest energy density of all battery types, and are widely used today in portable electronic devices across many different industries. The commonly available Li-ion polymer batteries are similar to Li-ion batteries, except they are packaged in a soft polymer film as opposed to the metal case commonly used for Li-ion cells. The soft packaging allows the cells to expand slightly under extreme heat, making them safer. The optimal performance for an internal lithium ion polymer battery lasts for 3 to 5 years. After 3-5 years, the battery's operating time will reduce and will require to be charged more often.

RESPIRATOR STORAGE AND CARE

To maintain the integrity of the internal battery, the Respirator should be stored under the following conditions when not being used:

Long term storage (> 3 months)	18°C to 28°C @ 45-85% RH
Medium term storage (< 90 days)	-10°C to 35°C
Short term storage (< 30 days)	-10°C to 45°C

For added safety, all CleanSpace™ internal batteries have a built-in Protection Circuit Module (PCM) to ensure the batteries are protected against over-charge and over-discharge.

Like all batteries, care must be taken to ensure best performance, battery life, reliability and safety. The following precautions must be followed during use:

- Avoid mechanical shocks or impacts from any sharp or hard objects
- Do not use or place the Respirator in extreme heat, such as in direct sunlight, near heat sources, etc. The battery will be damaged if its temperature goes above +100°C. Note: The CleanSpace™ will stop functioning if its internal temperature rises above +60°C
- Do not dispose of the Respirator or Endurance Packs in fire
- Do not use CleanSpace™ Respirator in heavy rain, or allow it to get wet or immersed in liquid
- Do not disassemble the Power Unit case. There are no user serviceable parts inside. Disassembling the power unit will void the manufacturer's warranty.
- Do not use the CleanSpace™ Respirator if there are any signs of severe mechanical damage

IMPORTANT: IN THE EXTREMELY RARE CIRCUMSTANCE WHERE THE BATTERY IS DAMAGED AND ELECTROLYTE COMES IN CONTACT WITH EYES, FLUSH WITH WATER IMMEDIATELY AND SEEK URGENT MEDICAL ATTENTION