



PeRSo 2.0 USER MANUAL

Powered Air-Purifying Respirator



Please read these instructions carefully before using the equipment. Incorrect use can result in risk to life and health.

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1. Application and conditions for use

The PeRSo 2.0 Powered Air-Purifying Respirator (PAPR) system is intended to be used to provide protection when the user works in a contaminated environment. It is to be used for dust and particles only, not for gases or vapors and is used to reduce or remove resistance to inhalation during respiration – by producing a constant airflow. There are three levels of flow rate, low, medium and high. The PeRSo system complies with the requirements of European Standard EN 12941 class TH1.

2. Description

A complete PeRSo 2.0 PAPR system consists of:

- Blower unit, provided with a dust filter unit, supplied with a belt and comfort plate, a hose with a bayonet connector (Blower unit) and an EN thread connector (mask).
- Rechargeable battery, which is placed inside the apparatus.
- Battery charger, fully automatic.
- The complete set is supplied in a carton carrier box.

3. Use

The unit supplies an overcapacity of clean and filtered ambient air, which is fed into the mask. It allows the user to breathe in air without having to overcome the resistance of the filter. Considering that an adult person requires some 50 litres of air per minute, the overcapacity ensures an overpressure and thus a high degree of protection.

With a fully charged battery the unit will operate for 8 hours. The unit contains a warning facility to warn the user against reduced air supply, due to clogged filter or low battery.

3.1 Prior to use

Before using the PeRSo 2.0 PAPR, the user must ensure that all the conditions for safe use have been satisfied. See section 8 for the applicable statutory regulations and rules.

- Check that the appropriate hose connector is fitted to the hose
- Check before use that the battery is sufficiently charged and that the free flow of air is not obstructed by a blocked hose or other causes.
- Check that a filter is fitted correctly.
- Check that the lids of the battery and filter housing are closed.

3.1.1 Usage limitations system

The space in which the unit is to be used must contain at least 19.5% oxygen and must not contain any explosive gases or vapors. In enclosed spaces where there is a risk of oxygen deficiency, use of the unit should be avoided.

- Air speed in excess of 2m/s can affect the protection factor.
- The ambient usage temperature should be between -10 and +50.
- Do not use the unit in circumstances where hazardous

gases and/or vapors are present.



Warning

If the user of the respirator feels dizzy or uncomfortable or can smell/taste anything, he should abandon the contaminated area immediately and check the unit.

3.1.2 Usage limitations filter element

Used filter elements cannot be cleaned.



Warning

Never attempt to clean a filter element; the filter media may be damaged, resulting in loss of protection.

3.1.3 Charging batteries

The battery is supplied partially charged. The charging time for a fully discharged battery is approximately 5 hours. To ensure maximum working time, it is recommended batteries are fully charged before use. The automatic setting of the charger prevents damage to the batteries when the charging time is exceeded. Under normal circumstances the battery can be charged and discharged approximately 500 times. After the battery is completely charged, the charger will switch over to trickle charging. This will expand the lifetime of the battery beyond 500 charge cycles.

3.2 Switching on

The unit can be switched on by pushing the ON/OFF button for three seconds. A sound signal will be heard to indicate that the

electronic control unit is working correctly.

3.3 During use

After turn on, the system runs and self-checks first at full speed for 3 seconds. After you can set the low-medium-high air flow speed.

Note: the LED light is on for 5 seconds, if you need to adjust the air flow later, first press the "ON/OFF/SET" button to turn on the light, and then set the air flow speed. During usage, if the air supply drops or fails entirely, leave the work area immediately. If the sound signal for low battery (two continuous short beeps repeatedly) is heard or a clogged filter element (a single short beep repeatedly), leave the workroom immediately, and check the unit in accordance with section 6.

3.4 After use

Press the button "ON/OFF/SET" for 2 seconds, when you see the three LED lights flash twice, the device is turned off.

3.4.1 Cleaning and disinfecting

After each session clean the unit, do not use any solvent. During cleaning ensure that no water is allowed to enter the apparatus. The unit must not be immersed. Dry the unit with a cloth and/or leave it to dry in the open air.



Advice

For reasons of hygiene each operator should be equipped with their own hood or mask.

4. Maintenance and inspection

Prior to use: Check unit is fully functional.

After use: Clean and disinfect check functionality of the complete system.

Every 6 months: Clean and disinfect the blower unit;

Clean and check functionality of the complete system. Check the hose for leakage's and inspect the connector for damage.

5. Storage

Before storing the unit it should be thoroughly dry.

Do not keep soiled filter canisters together with the unit and the mask in the same enclosed storage space.

Remove the filters from the unit and seal them.

6. Faults/troubleshooting

Blower unit fails to supply air:

- Battery is empty
- ON/OFF button is in "OFF" position
- ON/OFF button defective
- Plug connection defective
- Motor bearings defective
- Printed circuit-board defective

Blower supplies insufficient air:

- Filter unit blocked
- Hose blocked or leaking
- Blockage or leakage in mask
- Suction opening clogged

Battery fails to charge:

- Power lead or plug connection defective
- Charger defective
- Battery defective or worn out

Battery is losing charge too quickly:

- Charger defect
- Battery defect or worn out
- Battery not charged sufficiently

6.1 Repairs



All other repairs should only be carried out by the manufacturer

7. Technical specifications

7.1 Blower unit

Airflow:	150 L/min, 180L/min, 220L/min adjustable
Motor Speed:	Electronically controlled
Alarms:	Electronically controlled, for low flow and Low battery
Material:	Impact proof ABS
Color:	Black/blue
Weight (incl.filter. battery and hose):	1280 grams
Dimensions LxWxH:	235x145x85mm

7.2 Filter

Filter class:	P3
Material filter medium:	Glass fibre paper
Material support disks:	ABS
Color:	Black
Weight:	135 grams
Dimension(DxH):	ø120x35mm

7.3 Battery

Type:	Lithium,rechargeable
Voltage:	12 Volt
Capacity:	4300 mAh
Operating time:	> 8hrs
Charging time:	3hrs typically, upon 5hrs recommend.
Charging cycles:	> 500
Material case:	Impact proof ABS
Color:	Black
Weight:	315 grams
Dimensions:	87x43x63 mm

7.4 Battery charger

Type:	Fully automatic, overcharge protection
Primary voltage:	100-240 v, 50/60 Hz
Secondary voltage:	12.6 Volt
Material case:	Noryl
Color:	Black
Weight:	200 g
Dimensions:	110x48x30 mm

7.5 Hose

Length:	1000 mm
Diameter(int):	32 mm
Connection:	Bayonet couplings
Material:	HDPE

8. Statutory requirements and regulations

89/686/EC: European directive for Personal protective devices (89/686/EC).

Norm EN 12941: Powered filtering devices incorporating a helmet or a hood

Norm EN 12942: Power assisted filtering devices incorporating fill face masks, half masks or quarter masks.

Marks: CE

10. Guarantee

The supplier will repair or, if necessary, replace this product free of charge in the event of a material or manufacturing defect within 12 months of the purchase date, provided that the product has only been subjected to normal usage in accordance with the user manual. The guarantee is invalidated if the type or serial number marking is modified, removed or made illegible.

The guarantee is subject to the PeRSo 2.0 unit being used solely for the purpose for which is it intended. Has not been subject to misuse, accident, modification or repair.

The guarantee does not cover normal wear and tear.



Hops House, Brockenhurst, SO42 7UF

+44 (0)1590 607201