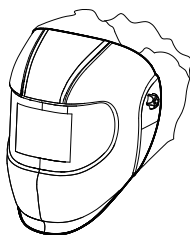
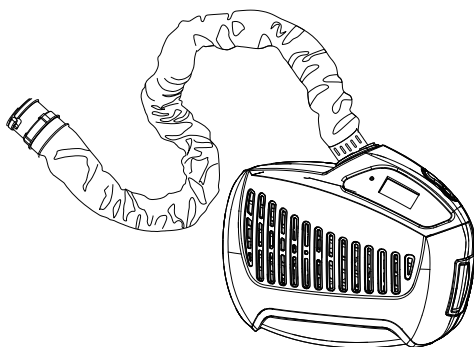


Powered Air-Purifying Respirator P1000 User Instructions



P1000



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

1. INTRODUCTION

Respiratory System is intended to be used to provide protection when the user works in the contamination environment. The equipment is able to filter the contaminate air via the filter build in to the blower and then supply fresh air from breathing tube to the welding faceshield, so that the user can continually working in contamination environment. It 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 manufacturers for help.

2. APPROVALS

The system complies with the requirements of PPE Regulation 2016/425 and European Standard EN 12941: 1998+A2:2008 class TH3 P R S L. The Respiratory System is designed to provide a supply of filtered air via a breathing tube to a welding headpiece. The equipment can be used in environment that requires a class TH3 P breathing protection device. It protects against particulate contamination.

All components used in Respiratory System must be manufacturer approved parts, and must be used in accordance with the instructions in this manual.

Notified Body:CCQS Certification Services Limited (NB2834)

Block 1 Blanchardstown Corporate Park, Ballycoolin Road, Blanchardstown, Dublin15,
D15 AKK1, Ireland



- 1. The approval is not valid if the product is incorrectly used together with non-approved parts or components.**
- 2. Only the particle filter and pre-filter can be used together with this system. Filters from other manufacturers should be used under no circumstances .**

3.WARNING AND LIMITATIONS TO USE

Before each use, inspect the Respiratory System for damage and verify it operates properly. Before using the Respiratory System, test air flow to verify it is providing an adequate volume of air.

Always wear the Respiratory System and do not remove the head top or turn off the air filter unit until outside the contaminated area, otherwise, there is a risk of high concentration of CO₂ and oxygen level in the head top will fall, thus little or no protection is given.

If you are not sure about the concentration of pollution, or about equipment performance, ask the industrial safety engineer.



The manufacturer is not responsible for injury due to the following incorrect use or incorrect choice of equipment.

Warning:

The respiratory devices should be use with well trained personal and qualified person only.

Before using the devices ensure you have understood that at very high work rates the pressure in the device may become negative at peak inhalation flow.

Before and during using the devices, attention shall be drawn to possible incorrect use and, where appropriate, the possibility of looped hoses and/or cables becoming caught up.

Before or during using the devices if the devices in the power-off state little or no respiratory protection is to be expected, and that this is considered to be an abnormal situation.

Please leave the work place and remove the headgear, when the devices in the power-off state a rapid build-up of carbon dioxide and depletion of oxygen within the hood may occur.

The filters shall only be fitted to the turbo unit and not directly to the helmet/hood.

The user should not confuse the markings on a filter relating to any standard other than

EN 12941 with the classification of this device when used with this filter.

DO NOT use P1000 with the blower unit switched off.

DO NOT use P1000 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 P1000 in an explosive atmosphere.

DO NOT use P1000 in confined spaces or areas of poor ventilation.

DO NOT use P1000 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 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.



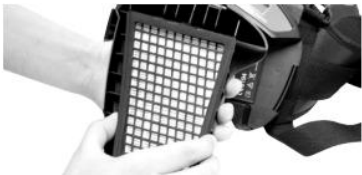
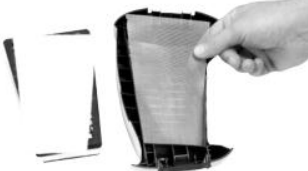
FIGURE 1

The package must include:

1. The air fed welding + welding hood
2. The respiratory protection system (turbo unit + filter + waist belt)
3. Lithium-ion battery
4. The tube, its anti-fire cloth and both end fittings
5. The shoulder harness
6. The air flow tester
7. The lithium-ion battery charger
8. The carrying bag

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

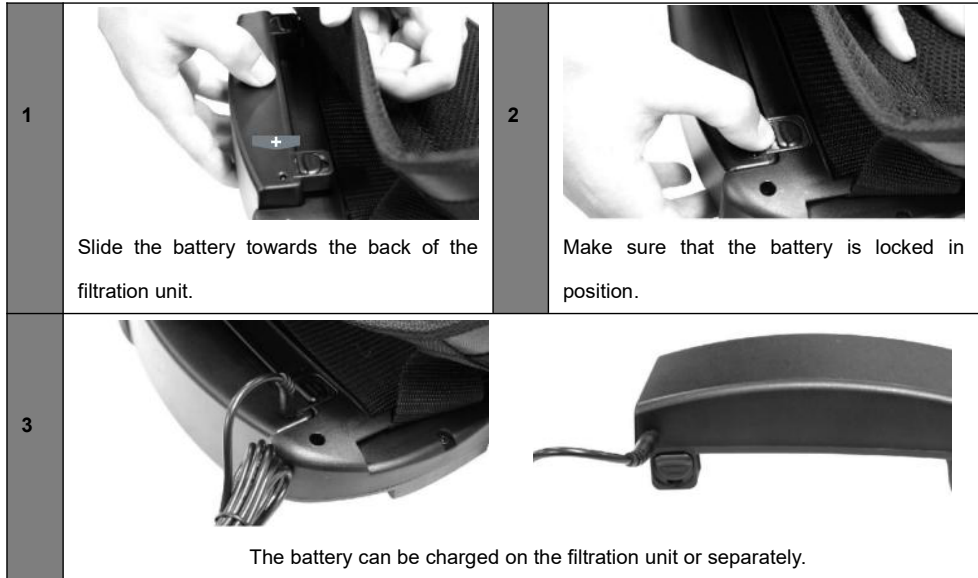
4.1 Filter replacement

1		2	 The filter cover is released.
3		4	
5	 Remove the pre-filter.	6	 Clean the spark arrestor if necessary.



If the filter is wet or heavily loaded with particles or damaged, it should be replaced. Never attempt to clean the filter by any means, it can damage the filter media easily. The pre-filter (if used) should be intact without any tears or cuts. Please replace the prefilter once it's wet or heavily loaded with particulate.

4.2 Installing the battery/Charging



The battery is partially charged when delivered. It must be charged at a 100% (4 bars) before the first use.

⚠ It is recommended to charge the batteries at a 100% before each use.



The charger must not be used for anything else than it was designed for.

Do not charge the battery in a potentially explosive area. The charger must only be used indoors.

The charger regulates the charge automatically, once the battery is fully charged, it will maintain it at a 100% (floating charge).

The charge time is 3 to 4 hours.



The battery will discharge itself after long storage periods. Always charge the battery if the device was stored for more than 15 days. When the battery is new or has been stored for more than 3 months, charge it and discharge it at least twice in a row to reach the nominal/rated charge capacity.

Battery charge :

1. Connect the battery to the charger. The connector is above the battery.
2. Connect the charger to the mains.
3. The state of charge is displayed via a red LED on the mains charger.
4. Once the charge is finished, the floating charge becomes active: the red LED switches off and a green LED switches on.
5. Disconnect the charger from the mains (do not keep the charger plugged to the mains if it's not in use).

4.3 Installing the respiratory system on the belt

1	 Remove the belt's release buckle.	2	 Remove the fastening belt from the waist connector's 2 belt loops.
3	 Make the fastening belt pass through the respiratory system's 2 belt loops.	4	 Position the Velcro® between the 2 loops.

5	 Flip the filtration system and attach the Velcro on the belt.	6	 Put the fastening belt back through the 2 belt loops.
7	 Put the buckle back.	8	 Attach the harness to the belt's 4 plastic rings.



Make sure the belt is securely fastened.

4.4 Connecting the tube

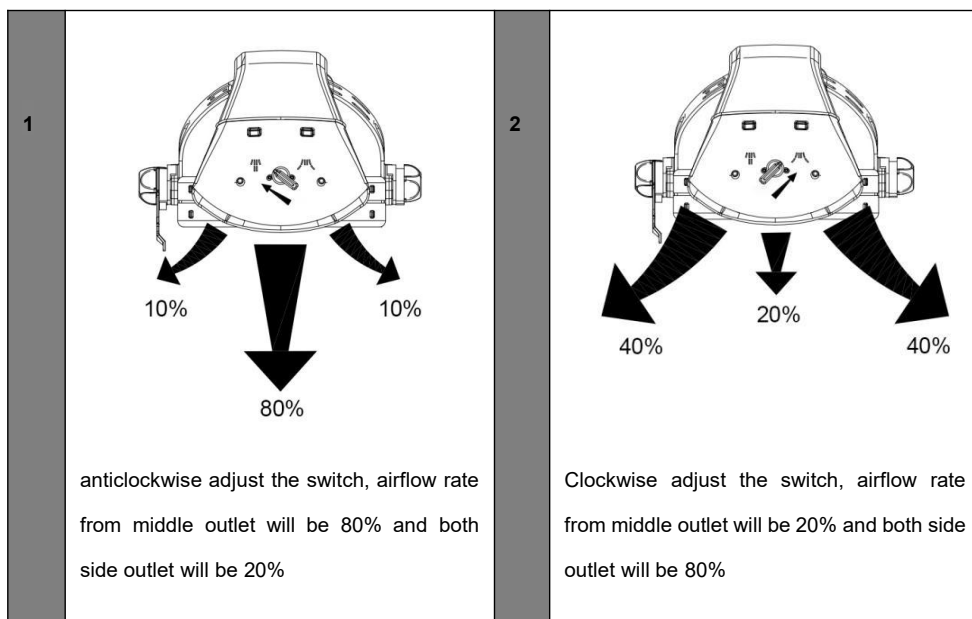
1	 Connect the air tube to the respiratory system and twist it clockwise to lock its position.	2	 Connect the other end of the tube to the headgear in the same way.
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1. Check that the respiratory tube is strongly connected. If the tube is broken, replace it.

4.5 Adjust airflow rate

The airflow rate in the middle and both side of the airduct outlet can be adjusted by a switch assembled on airduct according to personal preference.



 **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.**

5. BEFORE USE/ FITTING

5.1 Air flow test

1		2	
	Connect the breathing tube to the turbo unit and twist it clockwise to lock it.		Insert the flowmeter at the tip of the tube.
3		4	
	Press the ON button and maintain the tube in a vertical position at eyes' height.		The air flow is sufficient if the marble reaches the minimum flow level O.



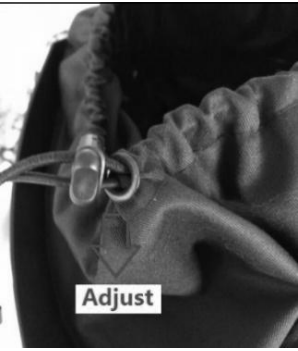
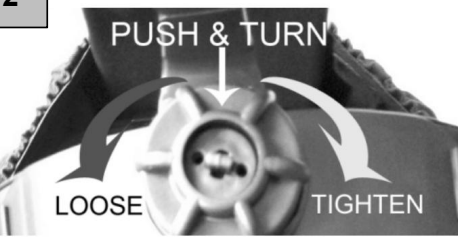
1. The airflow must be tested before using.
2. If the marble can't reach the minimum flow level, don't use the system.
Change the filter or the battery and retest the air flow.

5.2 Air flow alarm test

1	 Remove the tube from the helmet and press the ON button.	2	 Cover the air output with your hand and wait no more than 90s.
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 **If the alarm does not work, please repair or change Respiratory System**

5.3 Fitting

1	 Adjust the tightness of the face seal and put on the head top.	2	 Adjust the headgear to suitable tightness (push and turn left to loosen, turn right to tighten)
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 **Make sure the face seal is positioned properly, otherwise, you can't get sufficient sealing needed to offer the correct protection factor.**

6. LCD and Operation

6.1 LCD display screen

There is a LCD display screen on P1000 unit to show the P1000 working condition (FIGURE 3).

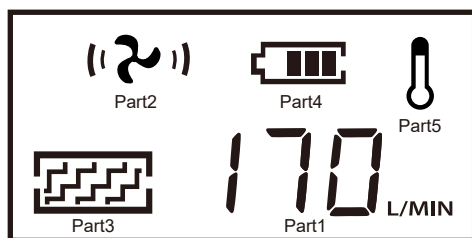


FIGURE 3

Part 1 shows the data of current air flow.

Part 2 shows the level of the 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 there are P1000 disfunctions.

6.2 Operation

1x ON



Switch the device on by pressing the ON button once.



2x ON



Press the ON button once again, the air flow is at level 1 (~170L/min).



3x ON



Press the ON button once again, the air flow is at level 2 (~200L/min).



4x ON



Press the ON button once again, the air flow is at level 3 (~230L/min).

Press the ON button once again, the air flow reverts to level 1 (~170L/min).



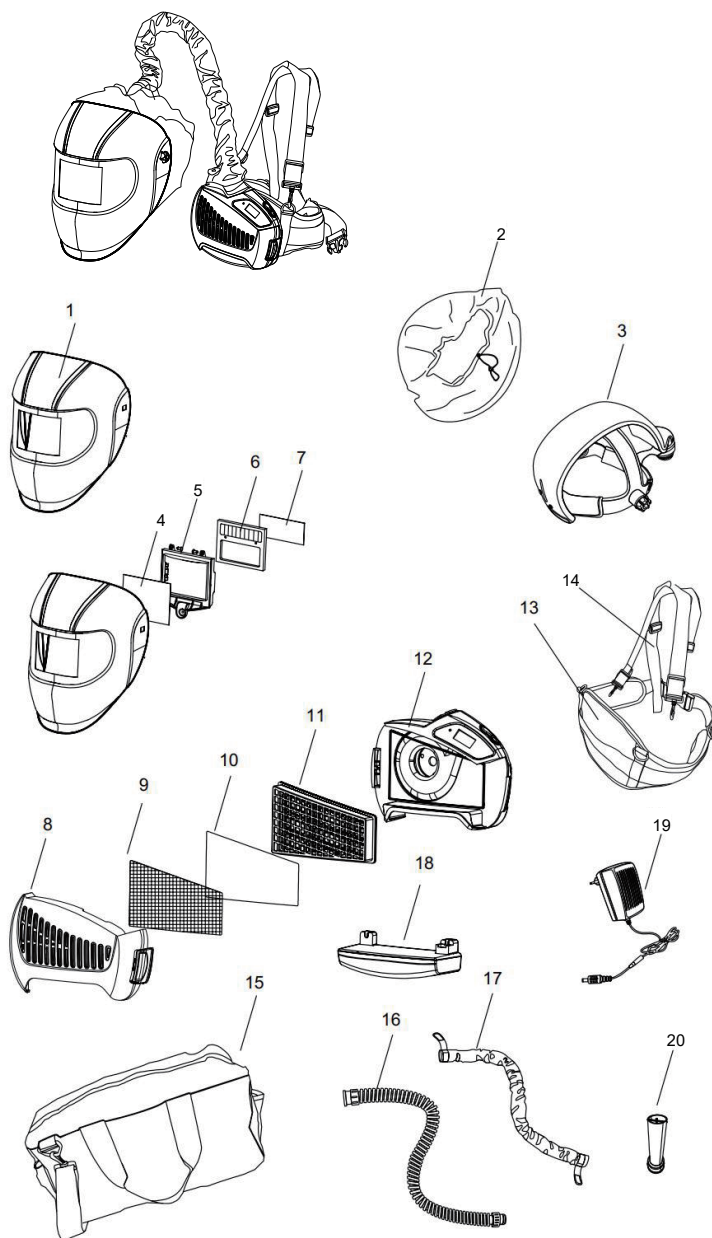
1. **Respiratory system will turn off the turbo unit if long press the OFF button more than 3 seconds.**
2. **Respiratory system will cut off the entire circuit and switch to sleep mode if the turbo unit has turned off for more than 30 minutes. Pressing the ON button can activate the system.**
3. **The Respiratory system must be operated in the temperature range of -5°C to +55°C and relative humidity less than 90%RH.**

7. PARTS LIST

7.1 P1000

Drawing No.	Part No.	Description
1	P-01 01 001	Helmet Shell
2	P-01 02 005	Face Seal
3	P-02 01 008	Air duct with headgear
4	PL-2002	Outer Protection Lens
5		ADF Cradle
6		Auto-Darkening Filter(ADF)
7		Inner Protection Lens
8	P-04 01 001	Filter Cover
9	P-04 02 001	Spark Arrestor
10	P-04 03 001	Pre-filter
11	P-04 04 001	Filter
12	P-04 05 001	Turbo Unit
13	P-05 01 002	Waist Belt
14	P-05 02 001	Shoulder Harness
15	P-05 03 001	Carrying Bag
16	P-06 01 001	Breathing Tube
17	P-06 02 001	Anti-fire Cloth of Breathing Tube
18	P-03 01 001	Standard Battery
	P-03 01 002	Heavy Duty Battery(optional)
19	P-06 03 001	Battery Charger
20	P-06 04 001	Air Flow Tester

P1000



8. MAINTANCE & STORAGE

Inspect the equipment daily and always check it if any sign of malfunction occurs.

8.1 Maintenance

The Respiratory system 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. Don't use water!

Disinfect the equipment with disinfectant not having any adverse effect on the PPE or the user. Dettol disinfectant is recommended. Dilute the disinfectant and water in a ratio of 1:99. Wipe the surface of the equipment with a clean lint-free tissue or cloth that takes the solvent. Then wipe the surface of the equipment with another clean lint-free tissue or cloth that takes water.

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

8.2 Storage

The Respiratory system 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 fully charged, removed from Respiratory system unit and stored separately.

Transport the equipment with original packaging box and away from direct sunlight.

9. TROUBLE SHOOTING

Problem	Probable cause	Action
Fault code «E01» +  Warning blinks	1.Motor is stuck 2.Motor is damaged 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
Fault code «E02» +  Warning blinks	1.Motor is damaged 2.Motor impeller rubs blower shell 3.Circuit has excessive current.	Check and remove physical failure and restart the system. Return to dealer if LCD still shows E02
 blinks +  Warning blinks + alarm sounds	Low battery	Charge the battery
 blinks +  Warning blinks + alarm sounds	Filter blocked Tube blocked	Remove obstruction, change the filter Clean tube
 blinks +alarm sounds	Battery high temperature	Stop working and rest
No air 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 is damaged	Charge the battery Remove obstruction, change filter Change battery
Air supply to hood smells unusual	1. Filter broken 2. Tube broken 3. ADF helmet broken	Leave current area immediately. 1. Change filter 2. Change tube 3. Change ADF helmet
Supply insufficient air to hood	1. Breathing tube broken off 2. Breathing tube broken 3. Filter is blocked	1. Check tube connection to hood and Respiratory system 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	1.1KG	
Particle Filter	1*TH3 P R SL	
Air Flow	Manufacturer minimum design flow rate: 165L/min Nominal airflow : Level 1: 170L/min Level 2: 200L/min Level 3: 230L/min	
Noise Level	Max 75dBA	
Operate Temperature	23°F to 131°F (-5°C~55°C)	
Storage temperature	14°F to 131°F (-10°C~55°C)	
Battery Type	1)Standard Battery Rechargeable Li-ION 4400mAh 2)Heavy Duty Battery Rechargeable Li-ION 6800mAh (optional)	
Expected Battery Operation Time	Standard battery Level 1>10h Level 2>8h Level 3>6h	Heavy Duty battery (optional) Level 1>15h Level 2>12h Level 3>10h
Battery Charging Time	3.5 Hours	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.
- TH3 P R (SL) classification of the unit. "TH3" 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 indication

This P1000 PAPR has sound and vibration alarm function.

Each grid stands for a period of 100ms. Gray is the beep sound and blank grid is a quiet period. If several continued grids are in gray then there's a continuous beep sound.

For example, when the current is overloaded, the system sounds like beep~beep~beep~~~~~.

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 2834= CE mark followed by number of notified body who carried out module D surveillance.

Warranty:

The P1000 Blower unit is guaranteed for a period of 12 months from date of purchase against mechanical or electrical defects.

The P1000 battery is guaranteed for a period of 6 months from the date of purchase.

The company undertakes to exchange or repair without charge, if any part found to be defective within this period alternatively and at its discretion. The Company may replace.

This guarantee is subject to:

The P1000 unit has been used solely for the purpose for which it is intended.

The P1000 unit has not been subject to misuse, accident, modification or repair.

In the event of a claim, contact the retailer from which the P1000 unit was purchased.

The guarantee does not cover normal wear and tear.



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