GIANT WEAR By CID

GRP | AERFORCE

USER MANUAL

POWERED AIR PURIFYING RESPIRATOR

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POWERED AIR PURIFYING RESPIRATOR

1. Field of application and conditions for use

The powered respirator is used for dust and particles removal only, not for gases or vapours and is used to reduce or remove resistance to inhalation during respiration by producing a constant airflow. The unit is designed with manufacturer's minimum design flow rate 170 litres per minute (the flow rate at which the equipment will still fulfil the requirements of the class in EN12941:1998 + A1:2003 + A2:2008). The actual working time will be about 8 hours.

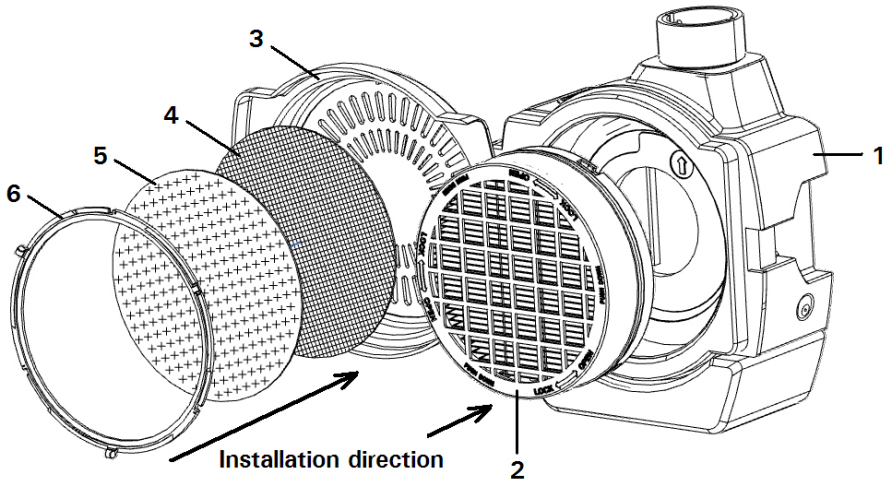
2. Description

A complete powered respirator apparatus consists of :

- ◆ Blower master unit, provided with a dust TH3 filter, a steel pre-filter and an activated carbon filter (chart 1), supplied with a belt and a comfort plate.
- ◆ Rechargeable battery, which is equipped underneath the apparatus.
- ◆ A hose with a bayonet connector to blower unit and a bayonet connector to mask,
- ◆ Battery charger, fully automatic.

Spare parts list:

1.TH3 filter (PRF03)
2.Pre-filter (stainless Steel wire mesh)
3.Activated carbon filter / Melt blown fabric filter
4.Rechargeable battery



1、Master
2、TH3 filter
3、Filter cover
4、Pre-filter
5、Melt blown fabric filter / Activated carbon filter
6、Holding frame

Chart 1

3.Use

The unit supplies an overcapacity of clean and filtered ambient air, which is fed to mask. It allows the user to breathe in air without himself 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 about 8 hours. The unit contains a warning facility to warn the user against reduced air supply, due to clogged filter or low battery.

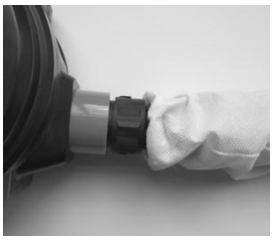
3.1 Prior to use

Before using the powered respirator, the user must ensure that all the conditions for safe use have been satisfied. See below in 8 for the applicable statutory regulations and rules.

- ◆ Check that the device is not damaged, and the filter not clogging.
- ◆ Check that the appropriate hose connector is fitted to the hose.
- ◆ Connect and tighten the two ends of the hose with the air outlet of the powered respirator and the air inlet of the hood respectively. The following picture shows how the hose is connected:

Connection of the air hose to the turbo unit:

Align the stud of the hose interface with the chute of the unit air outlet and insert to the end, then rotate the hose clockwise to lock.

Connection of the air hose to the helmet:

Align the stud of the hose interface with the chute of the hood air inlet and insert to the end, then rotate the hose to lock.


Wearing the Helmet:

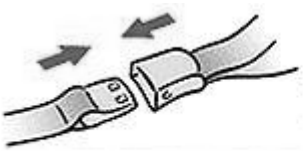
Place the helmet over the head and adjust the headgear ratchet wheel by pushing it in and twisting until a satisfactory tightness is achieved.

Pull the elasticated chin guard downwards ensure the elasticated chin guard fits comfortably under the chin.

- ◆ 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 set of filters is fitted correctly.
◆ Check that the lock of the battery box and the lid filter housing are closed.
◆ Check that the warning facilities is functioning. The device has a low flow alarm function. Users can verify this alarm function by shielding the air intake panel or the air outlet. After about 15 seconds of shielding the air intake or air outlet completely, the machine will emit a repetitive single "beep" alarm sound. Once the shield is evacuated, the alarm sound stops in about 10 seconds.
◆ Tie the respirator around the waist with a belt, then put the hood on the head, adjust the headband and the elastic cloth to the most comfortable state.

- That the headpiece must fit the user's face for total efficiency.
- Efficiency is reduced if the seal is not fitted properly (beard, long hair, etc.
- The user must ensure that the elasticated chin fits comfortably under the chin.
- For the belt, tightening or loosening is the same as Aircraft seat belt. As icons below:



Tighten

Loosen

◆ Check the flow rate by turning on the unit and observing the LCD digit that can indicate the actual flow rate.

3.1.1 Usage limitations system

◆ The space in which the unit is to be used must contain at least 17% oxygen and must not contain any explosive gases or vapours. In enclosed spaces where there is a risk of oxygen deficiency, use of the unit should be avoided.
◆ In case of physical effort, it is possible that a temporary negative pressure occurs in the blower unit, resulting in a reduction of the protection factor of the system.
◆ Air speed in excess of 2m/s can affect the protection factor.
◆ The ambient usage temperature should be between the limits of -5 and +50℃
◆ Do not use the unit in circumstances where explosive atmosphere, hazardous gases and/or vapours, corrosive liquids, solvents, hot solids, electrical hazards, infrared and ultraviolet radiation are present.
That if one of this situation is met (situation above, or any of those explained on the manual), the user must not use the device, nor enter the area and must contact the manufacturer.
The user must not modify the device or its component in any way.

⚠ Warning

If the wearer of the respirator feels dizzy or uncomfortable or can smell/taste something, he should abandon the contaminated area immediately.
The risk for which the device is intended to protect: respiratory protection (and eye protection). This excludes any other risk (head protection, etc.)
In the power-off state, little or no respiratory protection is to be expected. This is considered to be an abnormal situation. A rapid build-up of carbon dioxide and depletion of oxygen within the hood may occur.
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.

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 in a non-full charged state; the charging time for a fully discharged battery is approximately 3 hours. 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. If the unit is used for more than 8 hours a day, it is recommended that user carry a second battery for backup.

Batteries may be charged on or off the unit.

3.1.4 Filter assembling

Open the front cover by releasing the retaining clip on the side of the unit by hand (do not use tools). Fit the filter squarely into the power unit by aligning the three concave points of the filter box to the three convex points in the cavity. Then press the filter hard and rotate a small angle clockwise to lock. To unlock the filter , press it and rotate anticlockwise. When air flow alarm is caused by blockage of filter, it should be replaced in time. Spare filters must be supplied by the manufacturer.

The pre-filter and the activated carbon filter should be installed on the inner side of the upper cover, assembled in the order and direction indicated in Figure 1, and then pressed by the frame. Three notches on the frame are aligned with three buckles on the top cover. Press the frame and rotate clockwise to lock. To disassemble them, press the frame and rotate anticlockwise to unlock.

3.2 Switching on

The unit can be switched on by pushing the ON/OFF button for about three seconds. A voice signal will be heard and the LCD will display the real statuses of air flow, filter and the battery power. Then the unit will run on the low flow level. The flow digit on LCD will be stable in about 30 seconds after adjusting to each air flow level.

3.3 During use

This product has three levels of air flow. By shortly pressing the " SET" button, the flow level will change according to "low - medium - high - low..." circulation accompanied by a voice signal. The icon on LCD also changes synchronously. At the same time, the digit on LCD indicates the real air flow rate. If during use the air supply drops or fails entirely, leave the work area immediately. If a signal for low battery (2 beeps repeatedly) or a clogged filter element is given(a single short beep repeatedly), leave the workroom immediately, and check according to chapter 6.

3.4 After use

By pressing the ON/OFF button for 3 seconds, the motor will stop gradually accompanied by a long tweet. When the icons on LCD disappeared after about 15 seconds, the apparatus will turn off completely.

Cleaning and disinfecting

After each session clean the unit, using a mixture of water and a mild detergent. Subsequently, rinse thoroughly with clean water. Do not use any solvent. During cleaning ensure that no water is allowed to enter the apparatus. The unit must not be immersed in fluid. 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 his/hers own hood or mask.

4. Maintenance and inspection

Prior to use: Functional checks for the user

After use: Cleaning and disinfecting of the blower unit. Cleaning, functional checking of the complete system.

Every 6 months: Cleaning and disinfecting of the blower unit.
Cleaning, functional checking of the complete system. Check the hose for leakage and inspect the connector for damage.

For cleaning, the device must not be in contact with water.

Use only moistened cloth to clean it.

⚠ Advice

Do not clean the filter！When the filter is blocked, dirty or damaged, please replace it in time.

5. Storage

Before storing the unit in the carrying case, it should be thoroughly dry.

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

Remove the filters from the unit and seal them appropriately.

The shelf life of the filter in the unopened state is two years, and the maximum use time after unpacking is recommended to be 180 hours. If it is not in use for a long time, please put the filter into a dry sealed bag and keep it out of direct sunlight.

The unit is only recommended for storage in the temperature range -10℃ to +55℃ and in conditions where relative humidity does not exceed 85%.

6. Faults/troubleshooting

<u>Blower unit fails to supply air:</u>

- ◆ Battery is empty
- ◆ ON/SET 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, air hood or breathing helmet
◆ Suction opening clogged

Battery fails to charge:
◆ Power lead or plug connection defective
◆ Charger defective
◆ Battery defective or worn out

Battery is too fast empty:
◆ Charger defect
◆ Battery defect or worn out

Repairs

⚠ Note

All other repairs should only be carried out by the manufacturer, or an authorized service and maintenance distributor.

7. Technical specifications

7.1 Blower unit

Airflow：	170 L/min,210L/min,250L/min
Motor Speed：	Electronically controlled
Alarms：	Electronically controlled, for low flow and Low battery
Material：	Impact proof ABS
Color：	Black/ Orange red
Weight：	1080 grams (including battery and filter)
Dimensions LxWxH：	165 x 95 x 200mm

7.2 Filter

Filter class：	TH3 P R SL
Material filter medium：	Efficient filtering low resistance papers
Material support disks：	ABS
Color：	Black
Weight：	90 grams
Dimension：DxH：	ø120x38mm

7.3 Battery

Type：	Lithium, rechargeable
Voltage：	11.1 Volt
Capacity：	5200 mAh

Operating time：	Approximately 8hrs
Charging time：	3 h
Charging cycles：	＞500
Material case：	Impact proof ABS
Color：	Black
Weight：	350 grams
Dimensions：	137x50x72 mm

7.4 Battery charger

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

7.5 Hose

Length：	800 mm
Diameter(int)：	35 mm
Connection：	Bayonets for blower unit and mask
Material：	PU

8. Statutory requirements and regulations

REGULATION（EU） 2016/425
Norm EN EN12941:1998 + A1:2003 + A2:2008：
Powered filtering devices incorporating a helmet or a hood

9. General

CID Trading LTD cannot, in general terms, accept responsibility for damage incurred by the owner, user other persons using the safety product or third parties, which results either directly or indirectly from incorrect use and/or maintenance of the safety product, including use of the product for any purpose other than that for which it was supplied and/or the non compliance or incomplete observance of the instructions contained in this user manual and/or in connection with repairs to the safety product which have not been carried out by us or on our behalf. Our General Sales and Supply conditions are applicable to all transactions. CID Trading LTD continually strives to improve its products and reserves the right to change the specifications mentioned in this manual without prior notification.

⚠ Warning

The European guideline Regulation (EU) 2016/425 stipulates that only inspected protective bearing the CE mark may be traded and used. Use of substitute, non-original spare parts, invalidates the CE approval and, also, all rights regarding guarantee, whereby the user and, also, the person initially marketing these spare parts, shall be punished by the relevant authorities of the EEC member countries, whereby additionally, the entire product will be excluded from use and withdrawn from the commercial transactions respectively. Original spare parts can be recognized

by the affixed code number, supplemented with the manufacturer's mark and the "CE approval" possibly supplemented with a year of applicability.

10. Guarantee

CID Trading LTD will repair or, if necessary, replace this product free of charge in the event of a material or manufacturing defect within 6 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.

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