

# Weltek®

## USER INSTRUCTION MANUAL

### Airkube®

CE Approved to BS EN 14594:2005

RESPIRATORY PROTECTIVE DEVICE – COMPRESSED AIR  
SYSTEM, INCORPORATING THE NAVITEK® WELDING HELMET- GT-  
2B01/2013



### **Important:**

This user instruction manual must be read and fully understood before using the Supplied Air unit.

The user instruction manual must be retained for future reference.

# **Compulsory Information for the use of a Supplied Air respirator**

## **with hood type head unit**

It is imperative that these user instructions are strictly followed when using / operating the Airkub® System. Failure to follow these instructions may invalidate any warranty protection that is offered or available to you in respect of the product(s). Please refer to the terms of your purchase contract in respect of the product(s) for the specific details of such warranty cover.

The product(s) are designed to protect your health and wellbeing. Failure to comply with these user instructions may also adversely affect your health / wellbeing.

Please read these user instructions carefully before unpacking your product(s).

No recommendation is given as regards the suitability of this product for your needs. If you have any questions regarding the suitability of this product to your task, please contact an occupational hygienist or call the manufacturer's technical help line.

Address and Telephone number contact information is printed at the back of this leaflet.

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## **1. Introduction:**

Airkube® is a respiratory protective system which is based on the principle of circulated over pressured air in the hood. The belt-mounted unit delivers air from a source of compressed air (compressor or air line system) and via an air hose into a headpiece (a hood or mask). The supply of filtered air creates positive pressure inside of the headpiece, which prevents the external contaminated air from entering the user's breathing zone.

## **2. Range of application**

Welding in unconfined spaces please see 4.0

## **3. Approvals:**

Airkube® has been designed and manufactured to comply with EN 14594:2005.

Airkube® can only provide this level of protection when used with parts provided by the manufacturer marked "Airkube®" and "EN 14594:2005"

Welding helmet Navitek® is certified to EN 175B

Airkube® is manufactured under ISO 9001:2000 Quality System.

## **4. Preconditions for use:**

This Respirator must be used strictly in accordance with this user instruction manual and the instructions supplied with the corresponding head-units (hoods).

The user must read and understand all the following "Instructions for Use" well to be able to use the respiratory protective system correctly. Any questions should be directed to the manufacturer contact points noted below.

When the unit is not connected to a compressed air source, little or no respiratory protection is to be expected. When the unit is not connected to a compressed air source a rapid build up of carbon dioxide and depletion of oxygen within the head unit may occur and so **it is essential not to use the unit when it is not connected to a compressed air source.**

## **THE UNIT MUST NOT BE USED:**

- The use of oxygen-enriched air and oxygen is forbidden in the Airkube® system due to the risk of explosion
- The system may not be used in environments with a small probability of damage to the supply hose and where the user's movement is limited.
- If addition accessories (e.g. air tools) are connected to the compressed air supply the user must make sure that a sufficient air flow to the hood is secured even at the maximum air consumption of the attached accessory.
- If the system is to be used in a high temperature environment. The supply hose must be resistant to the high temperature.
- Do not use in an explosive environment.
- The air source must be equipped with a safety valve to guarantee that the inlet pressure will not be exceeded.
- The supply pressure hoses can only be located in areas where they cannot be damaged.
- The maximum length of a pressure hose from the compressed air distribution or conditioner unit must not exceed 10M this only applies for combinations of products with a protection

level 1A-4A. For other classes the length of supply hose is unlimited

- In an area of high winds
- If the unit stops working for any reason, the user must leave the contaminated area immediately.

**It is also essential that:**

- To be aware of a higher CO<sub>2</sub> concentration in the air supply, which may occur if the compressor does not work properly and is burning oil.
- There is no attempt to modify or alter the unit or filter in any way
- Water or other liquids enter the unit in any way – in particular the unit or the filter
- Before each and every use of the unit, check that the air flow is higher than the minimum value specified in the technical parameters.
- The Air directly supplied from the compressor or air line system must be hygienically clean and must comply with the EN 12021 Standard. If it does not, then a conditioner should be used

Make sure that the headpiece fits the user's face perfectly. Only then is the efficiency of the system sufficient. The protective factor of the complete system is reduced if the seal of the headpiece is not fitted properly, for e.g. Due to beards or long hair intervening into the seal line.

There is a possibility that the hose to the head unit may become caught up in use. The unit should be positioned on the person in such a way as to reduce this possibility.

Filters cannot be fitted directly to the head units and should not be adapted to do so.

Correct respiratory protection will not be provided if any parts of the equipment are modified in any way.

At very high work rates the pressure in the device may become negative at peak inhalation flow.

Airkube® systems are for use only by competent, trained personnel.

**ATTENTION! If any of these conditions is not kept or followed, the warranty is automatically invalid.**

**The user is advised to leave the contaminated area immediately if:**

The Manufacturer's Minimum Design Flow (MMDF) warning whistle Alarm sounds.

Breathing becomes difficult.

Dizziness or distress occurs.

Any part of the system becomes damaged.

Airflow into the Head-Unit decreases or stops.

Contaminant can be smelt or tasted inside the Head-Unit

Materials that may come into contact with the user's skin are not known to cause allergic reactions to the majority of individuals but in the unlikely event of a reaction, the user should immediately leave the contaminated area, remove the unit and seek medical advice.

#### **4. System Overview:**

The Airkub® unit is a belt mounted compressed air supplied respirator. The system is certified with the helmets covered in section 10 and they cover head sizes from 535 to 600mm circumference.

The Airkub® unit will warn the user when the MMDF, is not achieved with its audible alarm. In operation once the alarm sounds, the user must immediately leave the work area and reach an area nominated to be safe. Only when the unit will function with the alarm off and the flow rate has been tested to be acceptable, should the user return to the work place.

The unit filter has been developed especially for this unit. It is used to filter the air the user will breathe. It is essential that the user checks the filter for any signs of damage or deformation that could potentially let contaminated air into the unit. The filter must be disposed of if the filter is damaged or if clogged to the point of triggering the systems alarm Whistle.

#### **6. Unpacking / Assembly / Usage:**

##### **6.1. Unpacking:**

Check that the package is complete and that no part is damaged due to the transport or for other reasons.

A package with the complete system including accessories contains:

1. Supplied air unit complete with filter
2. Belt
3. Air hose
4. Air flow indicator
5. User Instructions

##### **6.2. Assembly:**

Attach the respiratory unit onto the belt: Pass the inner strap through the back of the unit loops. The pass through the 2 belt loops and then through the buckle.



##### **6.2.1. Waist-Belt Adjustment:**

Put the belt around your waist with the unit to the back and fasten the two ends together. If the belt is too loose, slide the male adjuster down the belt, towards the female half. If the belt is too tight, slide the male adjuster away from the female half. Repeat the above processes until a comfortable and secure fit is achieved. Once the belt fits correctly, secure any excess belt material using the Velcro sections.



### 6.2.2. Noise Filter:

Use only Airkuba® filters as supplied by Weltek international. Using any other filter **will cause invalidation of any warranty protection and/ or a serious risk to the health of the user operating the product (s).**

It should first be ascertained by consulting an occupational hygienist or by calling the manufacturers technical help line as to whether or not the Airkuba® system will offer suitable protection from the hazard.

As soon as the warning alarm sounds, filter should be exchanged or checked. If the compressed air supplied is not totally clean this can be necessary on a frequent basis.

The filters must be regularly checked (see Air Flow Test) and replaced. **Filters are intended to be replaced and not cleaned / re-used.**

Make sure that the new filters are within their expiry date, unused and not evidently damaged. From the hygienic point of view the maximum working time of a nuisance is 90 hours and should not be exceeded.

### 6.2.3. Removing the Nuisance Filter:

The filter is located in the head unit hose connector neck. To remove simply lift out by pulling the tab. whilst doing this it is good practice to check all is clean and free from dust if dust is present to clean use a dry clean cloth.



### 6.2.4. Fitting a new Nuisance Filter:

Ensure the filter is clean and unused push firmly into the neck of the hose connector then replace the seal ensuring the filter is held firm and the seal has no visible gaps



### 6.2.6. Attaching the Hose to the Supplied air Unit:

Align the pins of the Hose Bayonet connector with the slots in the air outlet of the unit. Push the Bayonet connector into the unit until it reaches the bottom of the hole and then twist in a clockwise direction until the locating pins clips into place.

Fitting the hose to the hoods is the same procedure.

### 6.2.7. Donning the Welding Helmet:

First set the Welding helmets rake and adjust the welding filter to suit (See the helmet's user instructions)

Lift the helmet to its upper position.

Place 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 and at the same time pull the helmet down. Ensure the elasticated chin guard fits comfortably under the chin.



The Welding helmet is now ready for use

## 7. Before use:

### 7.1 Inspection before use:

#### Each and every time before starting work check that:

- all components are in good condition with no visible damage (like holes, tears etc) Replace any damaged or worn parts. Carefully examine the air hose, seals and the face piece.
- there is a good connection between the air hose and the headpiece as well as the unit.
- there is sufficient air flow (see 7.2.).
- the air is supplied through the whole respiratory system from the unit to the hood.

There is a good connect from the compressed source and unit

***Ensure the alarms are working correctly***

## 7.2. Air Flow Test:

1. Disconnect the air hose from the unit.



2. Insert the Airflow indicator into the air hose connector and keep the hose in vertical position at about the eye level.

3. The airflow is sufficient only if the ball indicator reaches the minimum flow rate level. If the indicator sinks below the minimum flow rate level, it is necessary to check the compressed source or change the filter. If the problem still persists, see chapter 9 for additional suggestions.

## **8. Maintenance / Cleaning:**

The unit, filter housing and head units must all be regularly cleaned to keep them in good working order.

For single users, the units can all be cleaned with a cloth moistened with luke warm water and soap.

For multiple users, the units should be disinfected when passed from one user to another.

Liquids must not be allowed to enter the workings of the unit or get on to the element of the filter. Parts should be allowed to air dry. Under no circumstances should any solvents or abrasive cleaning agents be used. The unit must not be dried using hot air or radiant heat.

The unit should continue to provide protection to the designed specification for 2 to 3 years, when maintained in accordance with these instructions. Prior to each use the user should check that the unit is free from defects, such as cracks, split filters and hoses, cracked visors and helmet components as appropriate

## **9. Fault finding:**

If there is a sudden change in air supply while using the Airkub<sup>®</sup> system, it is necessary to check the following:

- That all parts of the air-supply system are assembled properly.
- Filters and their clogging.
- That there is not a hole in the air hose.
- Whether the hood seal is not damaged.

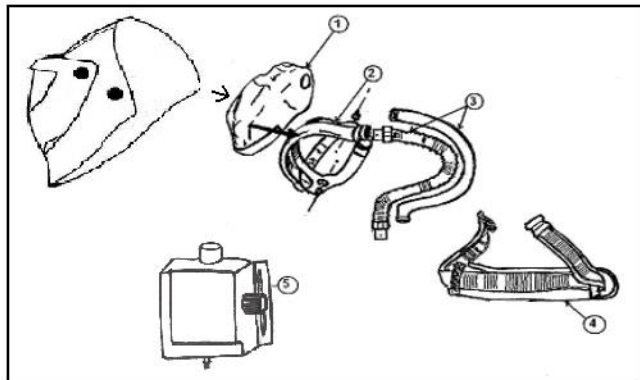


Fault	Recommendation
The Air hose or air duct blocked	Check and remove the obstacle  Contact your supplier.
Air escapes through leakages	Check all sealing elements and connections: Check that the hose is not damages and is without leaks
The nuisance filter is blocked	Replace the nuisance silencer in the unit
Unit does not supply air at all	Check the compressed source Check that connecting hoses are not damaged Contact your supplier

**10. Storage and Transportation:**

When not in use or during transportation the Supplied air unit and head units should be stored in the container in which they were provided, or other similar container, such that it is out of direct sunlight, not in contact with solvents and cannot be damaged by physical contact with hard surfaces/items. Do not store outside the temperature range of +0°C to +40°C or with humidity above 75%RH.

**11. List of Parts and Assembly Drawing:**



ITEM NUMBER	DESCRIPTION	PART NUMBER
1	Face Seal	CR7030
2	Head Gear and Air Duct Assembly	CR7025
3	Hose and Cover Assembly	CR7010
4	Belt	AC9001
5	Supplied air unit	AC9009

**12. Technical data:**

Air flow: 170 to 280 Litres/ min. Minimum flow rate 170 Litres/ min.

Supply pressure range 3-8 bar

Weight :475g

Operating temperature between 0°C and +40°C

Humidity range between 20% and 80%

Audible alarm for insufficient flow rate (below 170L/min)

Noise level: <75dBA

Waist size between 60 and 150 cm

Certification EN 14594 class 3A  
Certified by: VUBP Notified body 1024

Vyzkumny ustav bezpecnosti prace- zl  
Testing laboratory no 1024 Jeruzalemska 9, 116 52 Praha 1  
Notified body 1024

This PPE device complies with the following applicable EU standards: EN166B:2001  
EN379:2003 + A1:2009 EN175B

Notified body: ECS GmbH as Notified Body  
1883, Obere Bahnstrasse 74, 73431 Aalen, Germany



### Symbols:

Refer to the manufacturers instruction manual



Store between 0 – 40 Degrees C



Best before 2019 / 05



Maximum storage Humidity <80%



### **13. Warranty:**

The Airkube® unit is guaranteed for a period of 12 months from date of purchase against mechanical defects.

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

This guarantee is subject to:

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

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

N.B. In the event of a claim, contact the retailer from which the Airkube® unit was purchased.

This guarantee does not cover normal wear and tear.

This guarantee does not affect your legal rights.

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The EU declaration of conformity for this product can be downed from the below link  
<http://www.weltek.fr/-certificats-ce->