

# INSTRUCTION MANUAL

Doc. no. MN4001E Rev. A - Feb 2016



## Extreme Blast Helmet



## Technical data

Nominal protection factor (NPF)	:	1000
Operating pressure minimum	:	5 bar (73 psi)
Minimum airflow with regulator at 5 bar working pressure and 50 mtrs. hose length	:	165 ltr/min
Ambient use temperature	:	min.: -10 degrees C. - max.: 60 degrees C.
Maximum hose length	:	50 metres
Weight on the head	:	1400 gr.

## Statutory requirements and regulations

89/686/EG : European guideline for personal protective devices (89/686/EG).  
Standard EN 271 : Respirators with compressed air hose supply for blasting applications  
System approval by : EXAM - BGG Prüf- und Zertifizier GmbH, Am Technologiepark 1,  
D-45307, Essen (German institute for research and testing)

## Production control

according to article 11A : EXAM - BGG Prüf- und Zertifizier GmbH, Am Technologiepark 1,  
D-45307, Essen  
Marks on the system : CE 0158

## WARNING

The European guideline "Personal Protection Means 89/686/EG" stipulates that only inspected protective bearing the CE mark may be traded and used. Use of substitute, none-original spare parts, invalidates the CE approval and, also all rights regarding guarantee. Original spare parts can be recognised by the affixed code numbers, supplemented with the manufacturer's mark and the "CE approval", possibly supplemented with a year of applicability.

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## 1.0 - INTRODUCTION

### 1.1 Objectives, field of application and conditions for use

The compressed air filter system is used in a working environment where protection of the respiratory organs, face and head is required against ricocheting medium, particles, mists, vapors and gasses. When the blast helmet is connected to the compressed air system, via the compressed air supply hose and the compressed air filter system, the EN 12021 filtered air flows through the entry vent at the front of the air helmet, leaving the helmet via the neck seal. The required airflow can be adjusted on the regulator. The integral airflow indicator displays whether sufficient air is passing into the blast helmet. The disposable glass or plastic foil windows fitted against the helmet window can be removed when polluted or damaged. To remove, open the frame.

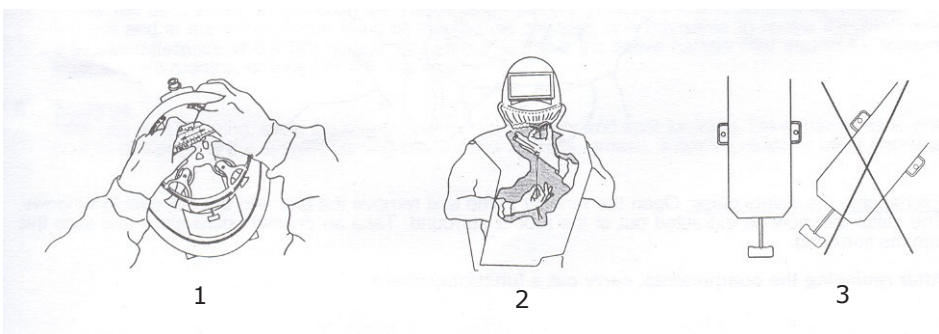
### 1.2 Limitation of usage

- The system is not suitable for working in areas with: intense heat radiation, open fires, risk of explosion or if extremely high concentrations of hazardous matter causing immediate health risk are present.
- If the ambient temperature is below the freezing point, the humidity in the compressed air circuit can result in icing-up of coupling or regulator, blocking the further supply of air. In such a case it is necessary to ensure that the humidity content in the compressed air (at atmospheric pressure) is less than  $50 \text{ mg/m}^3$ , and is in accordance with EN 12021. Standard compressed air circuits do usually not comply with this requirement.
- It is not allowed to use oxygen or oxygen enriched air.
- Couplings and hose connections must be kept clean during connecting and disconnecting.
- The maximum length of the compressed air supply hose is 50 metres and the maximum pressure is 30 Bar and the hose is anti-static. The maximum temperature is  $130^\circ \text{ C}$ .
- The working pressure must be at least 5 Bar.
- Because of extreme human effort, it is possible that a temporary negative pressure occurs in the air hood, resulting in a reduction of the protection factor of the system.
- Air speeds in excess of  $2 \text{ m/s}$  can affect the protection factor of the complete apparatus.
- The ambient usage temperature should be between the limits of  $-10^\circ \text{ C}$  and  $+60^\circ \text{ C}$ .
- When combined use is made of the compressed air, for both the air hood and the air tools (e.g. paint spray) it is necessary to ensure that, at the maximum air consumption of the air tools, sufficient air is allowed to flow into the air hood. If necessary, the working pressure can be adjusted.
- The system may be used solely by trained personnel, who are also fully aware of the hazards applicable to the work being carried out.
- The blast helmet has no EN 397 approval regarding safety helmets.

### 1.3 Prior to use

Make sure that the compressor is placed in such a way that it cannot suck in any dangerous matter and the air inlet cannot be obstructed and that the compressor is switched on. Check whether the correct operating pressure is set and clean air according to EN 12021 is supplied. If not use an approved filter unit. Check if the compressor has been equipped with a suitable and adjustable pressure relief valve and has been inspected and maintained timely. Ensure that all components have been cleaned and inspected as described in paragraph 2, 3 and 4.

Adjust the working pressure on the filter system to a minimum of 5 Bar. Connect the blast helmet via the compressed air supply hose to the filter system. Adjust the headband to the correct length (fig. 1), and if required fit a disposable comfort hood. Fit the blast helmet on your head and close the neck seal to allow the creation of sufficient pressure within the air cap (fig. 2). Buckle the belt.



### 1.4 During use

Adjust the air volume according to requirements. The integrated air flow indicator warns the user if insufficient air is being supplied. The airflow indicator has been installed in such a way that the yellow pennant will not be visible when the amount of air is sufficient and it will only function when it is positioned vertically (fig. 3). For safety reasons, the regulator cannot be closed entirely. Depart the working area immediately if there is an interruption in the air supply. Ensure that the compressed air supply hose cannot be trapped, causing interference with the air supply or preventing a rapid departure from the work area. The blast helmet will not decrease environmental sounds. Therefore supplementary hearing protection must be used.

### 1.5 After use

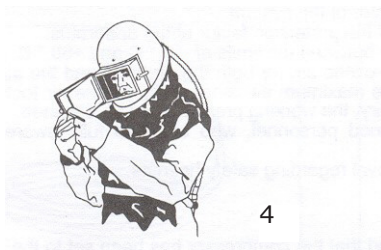
After leaving the working area, unbuckle the belt, loosen the neck bib, take off the helmet and disconnect the air supply hose. Using a brush or a cloth, remove loose residue and dirt from the components. Clean and inspect the components according to the instructions given in paragraph 3 and 4. When connecting and disconnecting take care that no pollution enters the open hose connections.

## 2.0 - CLEANING AND DISINFECTING

After each session clean the air hood, using a mixture of water and a mild detergent (e.g. EW 80 from Tremonia Chemie, Dortmund, Germany). Subsequently, rinse thoroughly with clean water. (Do not use any solvents). The face collar or neck bib can be washed in the washing machine, using a soft detergent at 30°C. Using a disinfectant, (e.g. Incidur from Henkel) clean the inner surfaces of the air hood. Refer to the instructions given by the manufacturer. For reasons of hygiene, the same person should preferably wear the helmet. Using compressed air, blow clean the coupling and the regulator. Finally, using a dry cloth, dry all the metal components, to avoid corrosion. When cleaning, take care not to inhale hazardous matter that is released during the cleaning.

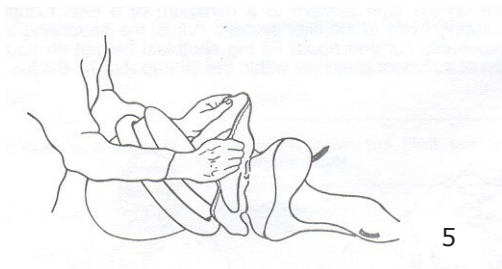
## 3.0 - MAINTENANCE AND INSPECTION BLAST HELMET

Positioning the disposable windows: After opening the window frame on the helmet, fit one disposable window (fig. 4).



Exchanging the neck bib: The neck bib can easily be exchanged by releasing the zip.

Exchanging the cape: The bib/cape can be exchanged by shoving away the rubber helmet cover partly (fig. 5).



Exchanging the safety glass: Open the window frame and remove the grid and the disposable windows. The acrylate window can now be extracted out of the rubber window gasket. Take an original spare window and slide this into the window gasket.

AFTER REPLACING THE COMPONENTS CARRY OUT A FUNCTIONAL CHECK.

### **3.1 Compressed air filter system**

For further information about the airline filter unit refer to the supplied manual documentation.

Functional check: After cleaning, disinfecting or exchanging components check the functioning of the system. Inspect all essential components for damage or pollution and, if required replace these with original spare parts. If the yellow pennant of the airflow indicator shows insufficient air in the air hood, although the pressure is correctly adjusted, this could indicate that a blockage has occurred in the filter system, the compressed air hose, coupling or silencer. During this check, hold the air hood in the vertical (normal working) position.

Checking hose system for leakages: air supply hose and coupling parts manual testing on pull force. Connect the air hood to the compressed air filter system, Adjust the supply pressure, filter system and air supply hose may not give leak sounds.

## **4.0 - MAINTENANCE FREQUENCY**

Clearance to start use: Function and leakage inspection.

Prior to use: performance check for the user, check of control valve.

After use: Cleaning and disinfecting of the respirator: cleaning, functional checking and leakage inspection of the complete system.

Every 6 months: Cleaning and disinfecting of the respirator: cleaning, functional checking and leakage inspection of the complete system.

### **4.1 Usage duration of filters**

Fluids will be drained continuously by the filtering element. Pressure lost is caused by particles on the surface and in the micro porous filling of the filtering element. It is advisable to renew the filters when a pressure difference of 0.6 Bar occurs. For safety reasons, the active carbon filter should be renewed at least every 6 months, or together with the coarse filter.

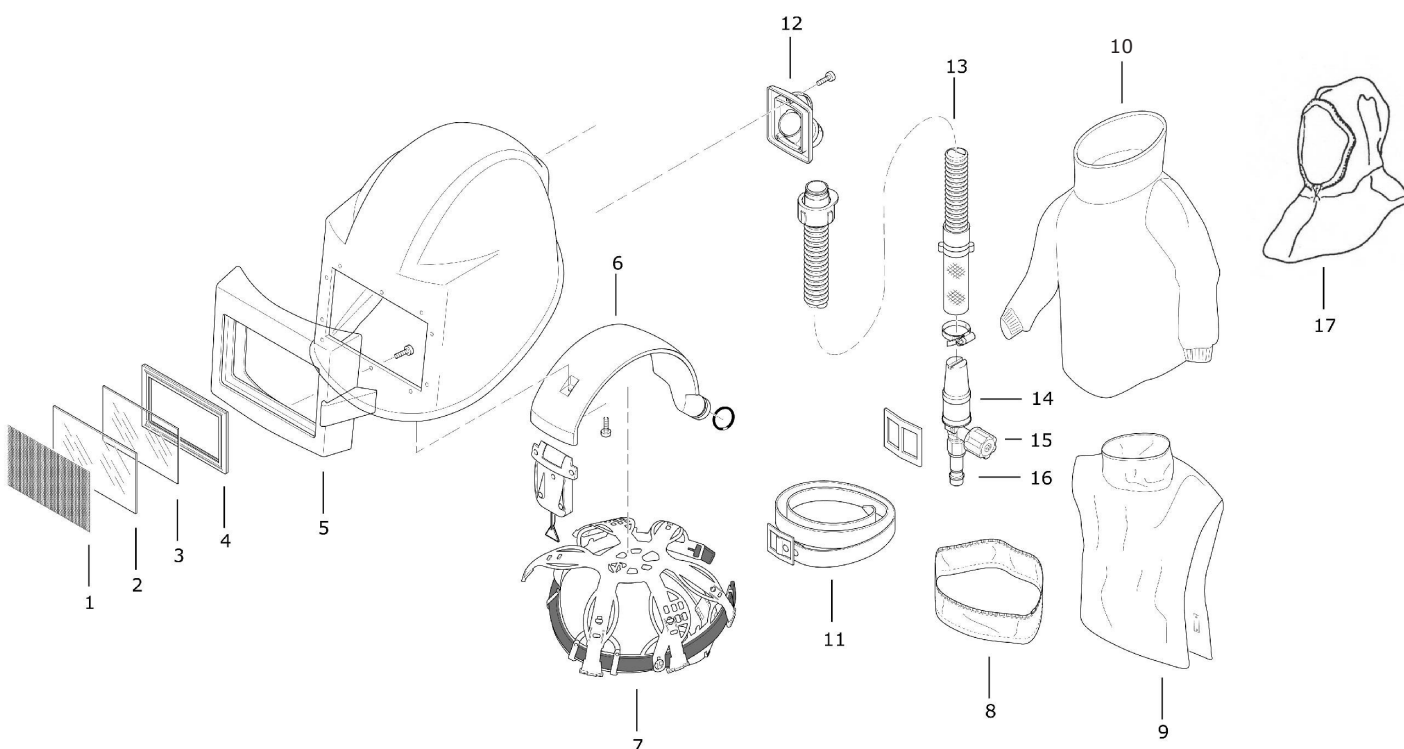
## **5.0 - STORAGE**

After use and cleaning, store the entire system in a cool, dry and dark location. Take measures to prevent component parts of the system coming into contact with oils, grease, solvents, acids or other chemicals.

## 6.0 - DRAWING & PARTS LIST

Part no.	Description
4050000	Extreme-I blast helmet, consist of helmet assembly, breathing tube, regulator, sound silencer and cape
4050100	Extreme-II blast helmet, same as above only with leather cape
4050200	Extreme-III blast helmet, bare excluding breathing tube, regulator, sound silencer and cape

Item	Part no.	Description
1	4022000	Wire mesh screen 110 x 165 mm
2	4023000	Glass window 112 x 166 x 2,5 mm
3	4024000	Acrylate window 102 x 156 x 2,5 mm
4	4025000	Rubber window gasket
5	4050600	Window assembly
6	4050800	Air flow indicator
7	4028000	Adjustable headband
8	4011000	Neck bib w/plastic zipper
9	4012000	Cape nylon
	4012100	Cape leather
10	4054000	Blouse cotton (optional)
	4054100	Blouse leather (optional)
11	4015000	Waist belt
12	4050900	Air inlet assembly
13	4051000	Corrugated hose 22mm
14	4018000	Silencer type P
15	4019000	Airflow regulator
16	4019100	Nipple CEJN 1/4" inner thread
17	4053300	Cotton comfort hood



## **GENERAL**

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## **WARRANTY**

AIRBLAST B.V. 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.

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AIRBLAST B.V. – P.O. Box 1075 – 1700 BB HEERHUGOWAARD – THE NETHERLANDS  
[www.airblast.com](http://www.airblast.com)