



# AIR FED (PAPR) AUTO DARKENING WELDING HELMET

02518



These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

# 1. INTRODUCTION

## 1.1 SCOPE


Professional users helmet with solar powered automatic shading facilities when arc is struck. Also features a dedicated grinding setting. The powered respirator is used to produce a constant clean airflow, removing dust and particles, not for gases or vapours.

This product is intended for trade use with the quality & features to meet and exceed the expectations of the most demanding user. Any application other than that it was intended for, is considered misuse.

This product is not a toy and must not be used by children or any person with reduced physical, sensory or mental capabilities or lack of experience and knowledge, or people unfamiliar with these instructions.

Local regulations may restrict the age of the operator.

## 1.2 UNDERSTANDING THIS MANUALS SAFETY CONTENT:

 **Warning!** – Information that draws attention to the risk of injury or death.

**Caution!** – Information that draws attention to the risk of damage to the product or surroundings.

## 1.3 EXPLANATION OF SYMBOLS



Warning!  
Read the instruction manual.



Warning!  
Wear suitable welding eye/face protection.



Warning!  
Wear ear defenders (During grinding operations).



Warning!  
Wear protective gloves.



Keep out of the reach of children.



**Warning!**



Danger of fumes.



Danger of ultraviolet radiation.



Danger of burning splashes.



Power source.



Shade level.



Lens switching time.



Lens size.



Tig welding.



Mig welding.



Arc welding.



Grinding.



Operating temperature.



Arc sensors.



Airflow.



Battery.



Helmet weight.



WEEE –  
Waste Electrical & Electronic Equipment.  
Do not dispose of Waste Electrical & Electronic  
Equipment in with domestic rubbish.



Do not incinerate or throw  
onto fire.



For indoor use only.  
Do not expose to rain.



UK Conformity Assessed.



European conformity.

## 2. SPECIFICATION

### 2.1 SPECIFICATION

Stock No. .... 02518  
Part No. .... WHAFVS  
Tig, Mig & Arc and Grinding .....  
.....Permanent protection against UV and IR radiation  
Lens size .....98 x 48mm  
Power supply .....Alkaline battery & solar  
Shades level..... 4, 9-13  
Adjustable shade ..... 9-13  
Lens switching time.....1/25000s  
Sensitivity control ..... Rotary dial  
Air flow rates..... 150, 180 & 220l/min  
Operating temperature ..... -10°C to +55°C  
Weight .....2.31kg

## 3. HEALTH AND SAFETY INFORMATION

### 3.1 GENERAL SAFETY INSTRUCTIONS FOR WELDING HELMETS

 **Warning! Read all safety warnings and all instructions.**

- Severe burns are possible with a damaged lens (cracks, pits and holes etc.). Do not use damaged lenses.
- Optical radiation can possibly enter in from behind the helmet from other welders welding in the immediate area.
- This helmet is not designed to protect against severe impact, explosives or fragments from spinning wheels on abrasive discs.

- Do not weld in the light state.
- If filter fails to turn dark. Immediately stop welding.
- Do not use in an excessive heat environment.
- Ensure that the sensors are kept clean.

#### Personal Protection:

- The body should be protected by suitable clothing.
- The use of neck protection may be necessary against reflected radiation.
- Wear safety glasses when chipping, wire brushing, grinding, or when near cooling welds as metal filings or slag can be thrown up. Fully enclosed goggles are advisable.
- The UV and IR radiation generated by welding is highly damaging to the eye, causing burns. This can also affect the skin. Protect the eyes and face.
- Where environments are subject to pedestrians and traffic ensure a protective screen is used to avoid accidental arc glare.
- Do not weld in the vicinity of children or animals and ensure no one is looking before striking up.
- In the welding environment, damaging levels of noise can exist. Wear hearing protection if the process dictates.
- Do not touch hot equipment or metal. Allow the weld time to cool, use the correct tool and wear protective welding gauntlets.
- Wear flame retardant clothing (leather, wool, etc.).
- The arc generates
  - ultra-violet radiation (can damage skin and eyes).
  - visible light (can dazzle eyes and impair vision).
  - infra-red (heat) radiation (can damage skin and eyes).
- Such radiation can be direct or reflected from surfaces such as bright metals and light coloured objects.
- In the vicinity of an arc, non-reflective curtains or screens shall be used to isolate persons from the arc radiation. A warning, e.g. a symbol for eye protection, should refer to the hazard of arc radiation.

## 4. UNPACKING AND CHECKING

### 4.1 PACKAGING

Carefully remove the product from the packaging and examine it for any sign of damage. Check contents against the parts shown in Fig A. If any part is damaged or missing, please contact the Draper Help Line (see back page). Do not attempt to use the product!

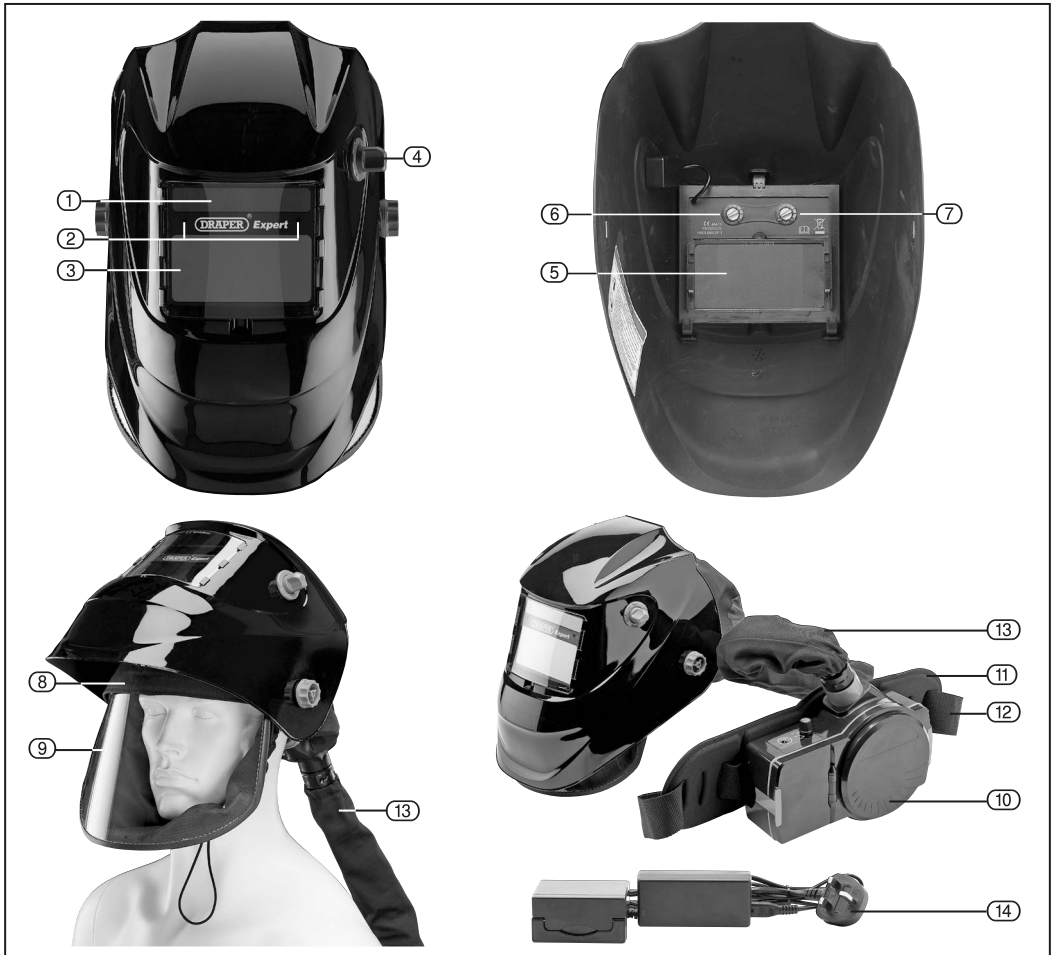
The packaging material should be retained during the warranty period, in case the product needs to be returned for repair.

 **Warning!**

- Some of the packaging materials may be harmful to children. Do not leave any of these materials in reach of children.

- If any of the packaging is to be thrown away, make sure they are disposed of correctly, according to local regulations.

## 5. TECHNICAL DESCRIPTION



- |                                       |                    |
|---------------------------------------|--------------------|
| ① Solar cell.                         | ⑧ Hood.            |
| ② Sensors x2.                         | ⑨ Visor.           |
| ③ UV. IR filter (outside PC lens).    | ⑩ Blower unit.     |
| ④ Dark shade control.                 | ⑪ Waist pad.       |
| ⑤ LCD Protect plate (inside PC lens). | ⑫ Belt.            |
| ⑥ Sensitivity control knob.           | ⑬ Air duct hose.   |
| ⑦ Delay time control knob.            | ⑭ Battery charger. |

**Note:** For details of our full range of accessories and consumables, please visit [drapertools.com](http://drapertools.com)

## 6. ASSEMBLY

### 6.1 HEADBAND INSTALLATION – FIG.1

Take out the mask and install the headband according to the exploded view:

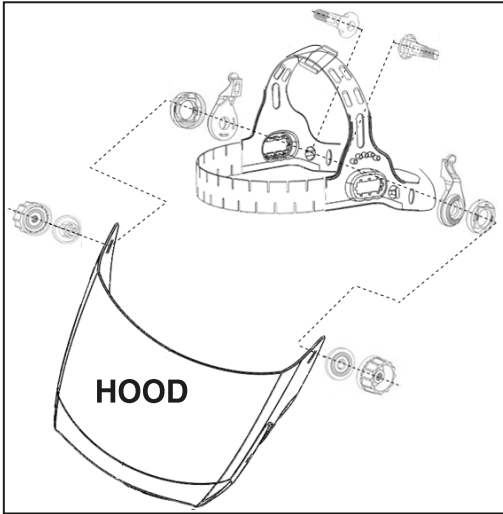


FIG. 1

### 6.2 MASK ADJUSTMENT – FIGS. 2 - 5

Around head tighten/loosen.

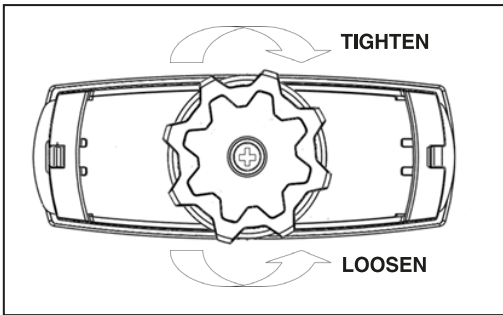


FIG. 2

Vertical between eye level to top of head up/down.

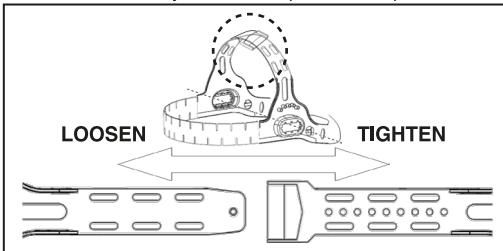


FIG. 3

Adjust the distance from viewing window to the eyes forward/backward.

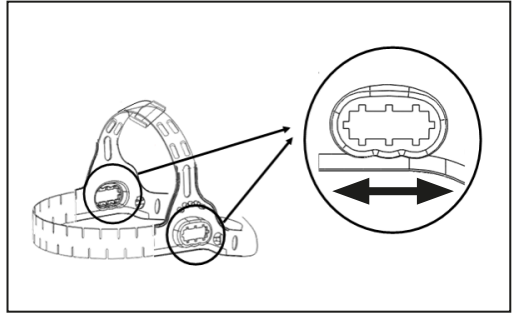


FIG. 4

Slightly adjust the window viewing angle.

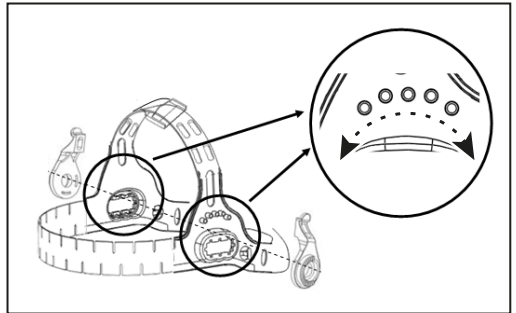


FIG. 5

## 7. BASIC OPERATION

### 7.1 AUTO DARKENING FILTER'S OPERATION

The table below is the darkness colour number comparison table; please select correct darkness colour number based on the actual working conditions so as to reach the optimal protection and work efficiency.:

Welding Process	ARC Current (Amperes)													
	0,52	.5	10	20	40	80	125	175	225	275	350	450		
	15		15	30	60	100	150	200	250	300	400	500		
SMAW				9	10	11		12			13		14	
MIG (heavy)						10	11		12			13		14
MIG (light)						10	11		12		13	14	15	
TIG, GTAW			9	10	11	12		13			14			
MAG/CO <sub>2</sub>						10	11	12		13			14	15
SAW								10	11	12	13	14	15	
PAC						11		12		13				
PAW			89	10	11	12		13			14		15	

### 7.2 SENSITIVITY ADJUSTMENT

#### – FIG.6

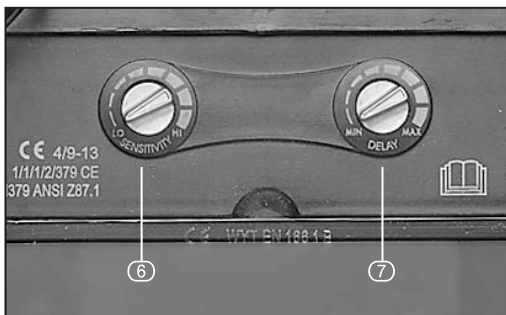


FIG. 6

- When the welding current is small, adjust the sensitivity (6) to high, so you can see the weak stable arc.
- When welding current is large, adjust the sensitivity (6) to low. You can avoid the arc interference by others.

### 7.3 DELAY TIME:

Delay time (7) is time from dark to light, Step-less control.

- When welding current is large and the light of molten pool is very strong, you need to select the delay (7) to high, so you can avoid the eye injury by the light of molten pool.
- If you want to do spot welding, you need to put the delay (7) to low, so you can improve the work efficiency.
- Adjust delay (7) to middle place is suitable for most of welding projects.

## 7.4 WELDING/GRINDING/CUTTING FUNCTION – FIG.7



FIG. 7

When switched to Grind, it enters grinding/cutting mode under which the auto-darkening filter will not turn black when detecting any arc light; therefore, please switch to the correct position based on service conditions before using.

## 8. AIR PURIFYING RESPIRATOR

A complete powered respirator apparatus consists of:

- Blower unit (10). Rechargeable battery and dust filter, installed within the apparatus.
- Belt (12) with waist pad (11).
- Hose (13) with a bayonet connector to blower unit and a bayonet connector to hood/mask.
- Battery charger (14).

### 8.1 BLOWER UNIT CONTROLS – FIG. 8

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

Switch on by pushing the ON/OFF button for two seconds.



FIG. 8



## 9. MAINTENANCE

### 9.1 MAINTENANCE – FIGS. 9 – 10



FIG. 9

After the battery (10.1) is completely charged, the charger (14) 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 6 hours a day, it is recommended that use be made of a second battery.



FIG. 10

### 9.2 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.

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

## 10. WARRANTY

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### 10.1 WARRANTY

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact:

Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF, England.

Telephone Sales Desk: +44 (0)23 8049 4333 or:

Product Helpline +44 (0)23 8049 4344.

A proof of purchase must be provided.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This warranty period covering labour is 12 months from the date of purchase except where tools are hired out when the warranty period is 90 days from the date of purchase. This warranty does not apply to any consumable parts, any type of battery or normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

**Note:** If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This warranty applies in lieu of any other warranty expressed or implied and variations of its terms are not authorised.

Your Draper warranty is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the warranty period.

Please note that this warranty is an additional benefit and does not affect your statutory rights.

**Draper Tools Limited.**

## 11. DISPOSAL

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### 11.1 DISPOSAL

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not dispose of WEEE\* as unsorted municipal waste.



\* *Waste Electrical & Electronic Equipment.*