



# Supplied Breathing Air Filtration Systems With 3M™ Speedglas™ Welding Helmets

## The ultimate filtration & drying technology

Due to the increasing demand for improved environmental and safety control, AWS now offers a comprehensive range of wall and portable floor mounted breathable air systems suitable for use with 3M™ Speedglas™ Welding Helmets with 3M™ Versaflo™ V-500E supplied air respirator systems.

Carefully researched and tested to ensure high levels of performance, these breathable air filtration products can be installed where pure breathable compressed air is required.

The filter packages offer filtration and oil removal efficiencies down to 0.01 micron particulate size and maximum oil carryover efficiencies to 0.003 mg/m<sup>3</sup> (0.003 ppm). The operator is supplied clean, particle and liquid oil free air with the added benefit of taste and odour removal for improved user comfort and performance which exceeds the requirements of AS/NZS1715.

Knowing that each person requires 6cfm/170lpm/2.88lps of breathable air, we have made the following systems available in either wall mountable or portable:

1 person system	Provides 25 cfm*
3 person system	Provides 25 cfm*
5 person system	Provides 35 cfm*

The systems are available in 2 stage, 3 stage and 4 stage filtration varieties. When deciding how many stages are required, you need to assess the operators requirement and current quality of compressed air. See page 5 for more detailed information on stage selection.

The breathing air systems should not be used when using air pressure in excess of 10 bar.



# Breathable Air Systems Product Selection Chart



## Systems ►

**When selecting a suitable system determine -**

1. How many people will run off the system?
2. Filtration stages required? (Page 5)
3. Portable or wall mountable?

Part Number	Description
WBA12WM	BA SYSTEM 1 PERSON 2 STAGE WALL MOUNT
WBA12P	BA SYSTEM 1 PERSON 2 STAGE PORTABLE
WBA32WM	BA SYSTEM 3 PERSON 2 STAGE WALL MOUNT
WBA33WM	BA SYSTEM 3 PERSON 3 STAGE WALL MOUNT
WBA34WM	BA SYSTEM 3 PERSON 4 STAGE WALL MOUNT
WBA32P	BA SYSTEM 3 PERSON 2 STAGE PORTABLE
WBA33P	BA SYSTEM 3 PERSON 3 STAGE PORTABLE
WBA34P	BA SYSTEM 3 PERSON 4 STAGE PORTABLE
WBA52WM	BA SYSTEM 5 PERSON 2 STAGE WALL MOUNT
WBA53WM	BA SYSTEM 5 PERSON 3 STAGE WALL MOUNT
WBA54WM	BA SYSTEM 5 PERSON 4 STAGE WALL MOUNT
WBA52P	BA SYSTEM 5 PERSON 2 STAGE PORTABLE
WBA53P	BA SYSTEM 5 PERSON 3 STAGE PORTABLE
WBA54P	BA SYSTEM 5 PERSON 4 STAGE PORTABLE

## Elements & Couplings ►

**Change Frequencies -**

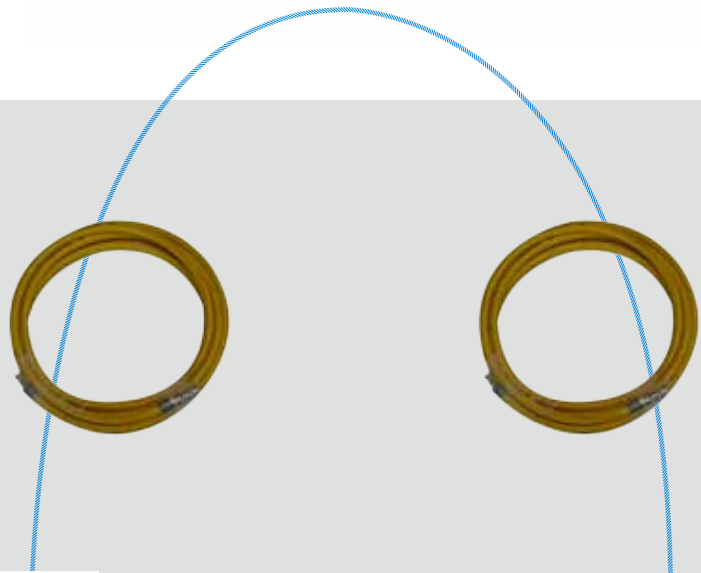
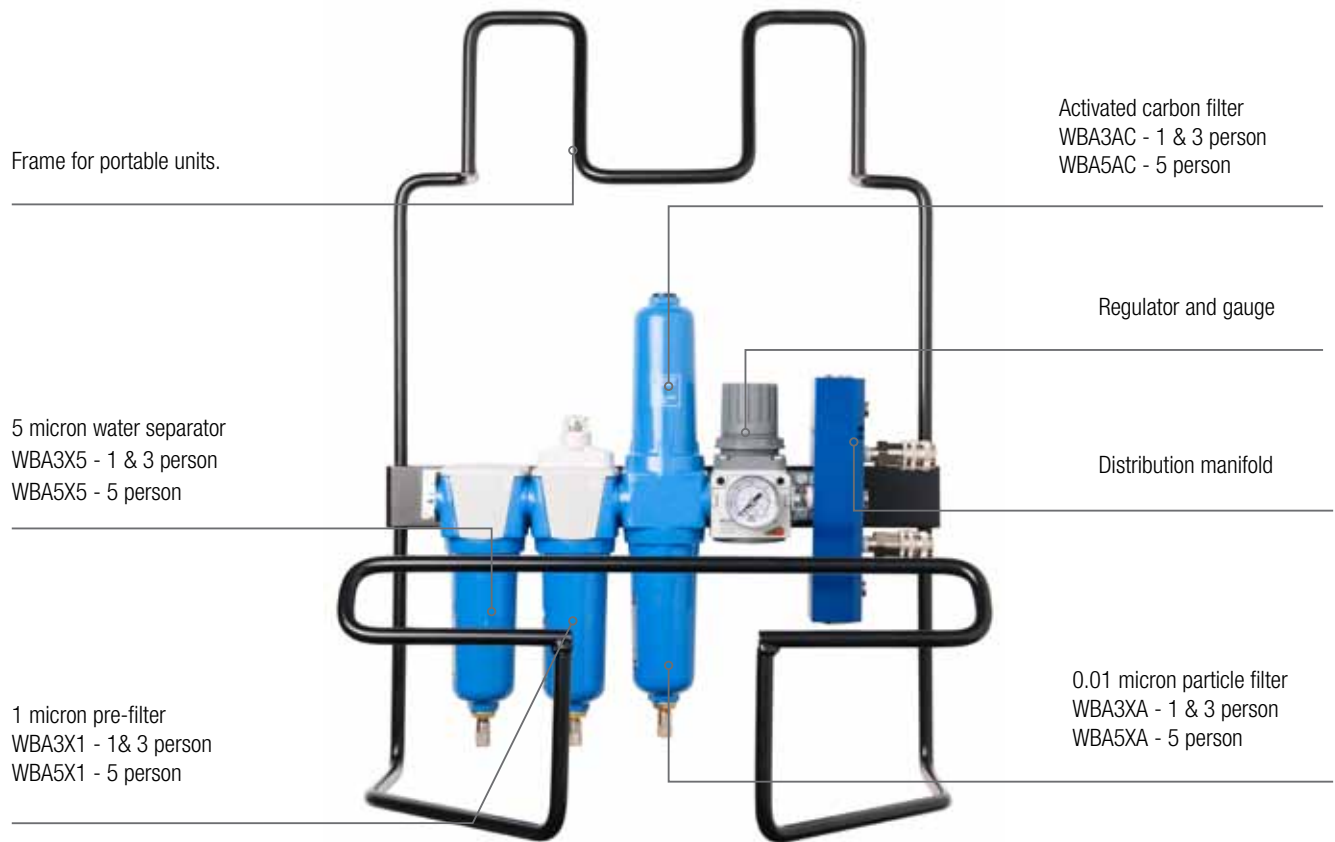
- Element change X1/XA - 8000 hours/12 months
- Element change AC - 1000 hours/6 months

Part Number	Description
WBA3AC	BA ELEMENT ACTIVATED CARBON (UPPER) 1&3 PERSON
WBA3XA	BA ELEMENT 1 MICRON PRE FILTER 3 PERSON
WBA3X1	BA ELEMENT 5 MICRON/WATER SEPARATOR 3 PERSON
WBA3X5	
WBA5AC	BA ELEMENT ACTIVATED CARBON (UPPER) 5 PERSON
WBA5XA	BA ELEMENT 0.01 MICRON (LOWER) 5 PERSON
WBA5X1	BA ELEMENT 1 MICRON PRE FILTER 5 PERSON
WBA5X5	BA ELEMENT 5 MICRON/WATER SEPARATOR 5 PERSON
C103441152	COUPLING MALE THREAD R 1/4 BAS

All 3 person systems come with one coupling part no. C103441152  
For a 2 person system order another coupling and for a 3 person system order another 2 couplings

All 5 person systems come with two couplings part no. C103441152  
For a 3 person system order another coupling, for a 4 person system order another 2 couplings & for a 5 person system order another 3 couplings

# Supplied Breathing Air Process & Components



Compressor



3M™ Speedglas™ Welding Helmet  
with 3M™ Versaflo™ V-500E Supplied Air Regulator

# Breathable Air Systems Stages Explained



## 4 Stage Breathable Air System

Where no other filtration is in place or high levels of liquid can be seen at the point where the system is to be used.



- 1 Comes standard with a centrifugal 5 micron water separator that removes larger/heavier particles of dirt and water droplets.
- 2 1 micron pre-filter which removes dirt, rust and particulate matter down to 1 micron in size, whilst coalescing liquids and gives a maximum oil carryover of 0.1ppm (does not include vapour).
- 3 0.01 micron particle filter which removes dirt, rust & particulate matter down to 0.01 micron in size, whilst coalescing liquids and gives a maximum oil carryover of 0.01 ppm (does not include vapour).
- 4 An activated carbon filter which adsorbs all smells & odours from the air, and gives a maximum oil carry over of 0.003ppm.

## 3 Stage Breathable Air System

Where the system is being used at a point of use and basic filtration (possibly only one filter and no dryer) is installed for general plant air.



- 1 1 micron pre-filter which removes dirt, rust and particulate matter down to 1 micron in size, whilst coalescing liquids and gives a maximum oil carryover of 0.1ppm (does not include vapour).
- 2 0.01 micron particle filter which removes dirt, rust & particulate matter down to 0.01 micron in size, whilst coalescing liquids and gives a maximum oil carryover of 0.01 ppm (does not include vapour).
- 3 An activated carbon filter which adsorbs all smells & odours from the air, and gives a maximum oil carry over of 0.003ppm.

## 2 Stage Breathable Air System

Where the system is being used at a point of use, where filtration (generally two filters and refrigeration dryers in many cases) is installed for general plant air.



- 1 0.01 micron particle filter which removes dirt, rust & particulate matter down to 0.01 micron in size, whilst coalescing liquids and gives a maximum oil carryover of 0.01 ppm (does not include vapour).
- 2 An activated carbon filter which adsorbs all smells & odours from the air, and gives a maximum oil carry over of 0.003ppm.

# Personal Air Conditioner

## Cool Down the Hottest Jobs

The 3M™ Supplied Air Cooling Vortex uses filtered compressed air to keep workers comfortable in extremely hot conditions.

When used with a 3M™ Speedglas™ welding helmet suitable for supplied air, the 3M™ Vortex personal air conditioner provides consistent and continuous cooling air to minimize heat stress and increase worker productivity in hot surroundings.

The Vortex cooler (AWS4590) requires 20cfm and can be run using the 1 person or 3 person filtration systems, depending on how many stages of filtration you require. See page 5 to determine your stage requirements and then use the table below to choose the most suitable system.

The 3M™ Supplied Air Cooling Vortex simply replaces your regulator. Attach the supplied air cooling vortex to your Speedglas Respiratory Welding Helmet for a refreshing, steady stream of cool air.



## Features

- Airflow range between 170 - 425 l/min (6 - 15 cfm)
- Optimised for use with the 3M™ Speedglas™ Respiratory Welding Helmets
- Provides comfort and high protection levels
- Reduces worker fatigue
- Reduces air temp by up to 25°C
- Meets performance requirements of AS/NZS1716
- Compact and lightweight, 575gms including belt & hose
- Easy temperature adjustment even with gloves



Part Number	Description
AWS4590	VORTEX COOLER INC MUFFLER EXC HOSE
WBA12WM	BA SYSTEM 1 PERSON 2 STAGE WALL MOUNT
WBA12P	BA SYSTEM 1 PERSON 2 STAGE PORTABLE
WBA33WM	BA SYSTEM 3 PERSON 3 STAGE WALL MOUNT
WBA33P	BA SYSTEM 3 PERSON 3 STAGE PORTABLE
WBA34WM	BA SYSTEM 3 PERSON 4 STAGE WALL MOUNT
WBA34P	BA SYSTEM 3 PERSON 4 STAGE PORTABLE

# Supplied Air Breathing Kits



**3M™ Speedglas™ Flip-Up Welding Helmet 9100XX FX Air with Breathing Tube & Free Premium Speedglas Carry Bag**

## With Supplied Air Cooling Kit



The 3M™ Supplied Air Cooling Vortex uses filtered compressed air to reduce air temperature by up to 25°C with adjustable flow rates between 170-425 litres per minute.



Portable four stage breathing air filtration system with 15 metre breathing air hose. Due to the flow consumption of the Vortex cooler, only one cooling Vortex can be used on this 3 person system.

Part no: 549025C34P

Speedglas Welding Helmet 9100XX FX Air, Vortex Cooler, Breathing Air Filtration System and Breathing Air Hose.

## With Supplied Air Kit



The 3M™ Versaflo™ Supplied Air Regulator V-500E is a lightweight, belt mounted regulator that allows you to adjust the airflow from 170-305 litres per minute.



Portable four stage breathing air filtration system with 15 metre breathing air hose. Breathing air filtration system comes with one user outlet fitting with the ability to fit a further two making it a 3 person system.

Part no: 54882534P

Speedglas Welding Helmet 9100XX FX Air, Supplied Air Regulator, Breathing Air Filtration System and Breathing Air Hose.



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