



**W.E.S.S.**

WELDING EQUIPMENT SALES & SERVICE

# Working near welders

Protect workers in close proximity to welders from welding fume.

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Featuring:

Respiratory PPE solutions that use the same spare parts as 3M™ Speedglas™ Welding Helmets with Adflo PAPR!

# How the dangers of welding fume affect non-welders

In early 2017, the International Agency for the Research on Cancer (IARC) reclassified welding fume as carcinogenic.

These risks apply not only to the welders themselves but also to the non-welders who work in close proximity to them. As such, it is important for all workers and businesses to educate themselves on the dangers of welding fume, as well as the available protective options.

## Welding fume and lung cancer

A recent 2019 study concluded that “exposure to welding fumes increases the risk of lung cancer, regardless of the type of steel welded, the welding method, and independent of exposure to tobacco smoking”<sup>1</sup>.

## Air quality after welding

When you consider a welding fume particle that is 0.5 µm in size can take 2 days to reach the floor when released from a height of 1.5 metres, you begin to understand how long these carcinogenic particles can remain suspended in the air.

This is vital to consider when sharing a work environment with welders, as the air could contain respiratory hazards long after welding has been completed.



With welding fume, the risk extends past what you can see: small particles can remain in the air for up to 48 hours

## Workplace exposure standards

The exposure standards in Australia and New Zealand “do not identify a dividing line between a healthy or unhealthy working environment... They establish a statutory upper limit”<sup>2</sup>.

Put simply, this means there is no such thing as an ‘acceptable’ amount of welding fume exposure.

Subsequently, if there is any uncertainty around the airborne concentration of welding fume particles in your work environment, air monitoring should be carried out to determine the risk to health.

## Staying protected

With all that said, protecting workers can be straightforward. Local Exhaust Ventilation (LEV) and the use of Personal Protective Equipment (PPE) including Powered Air Purifying Respirators (PAPR) are highly effective product control options in limiting exposure to welding fume.



There are several viable PPE solutions for workers who are in close proximity to, but not carrying out, direct welding (pictured: 890307)

<sup>1</sup> Honaryar MK, Lunn RM, Luce D, et al. ‘Welding fumes and lung cancer: a meta-analysis of case-control and cohort studies’, Occupational and Environmental Medicine 2019;76:422-431.

<sup>2</sup> Guidance on the interpretation of workplace exposure standards for airborne contaminants, Safe Work Australia, April 2013

# High impact headtops for working near welders

Lightweight, compact and well balanced, the 3M™ Versaflo™ M-Series Face Shields with the award-winning Adflo powered air purifying respirator combine integrated face and respiratory protection with optional hearing and head protection: all conforming to the relevant Australian and New Zealand standards.

The M-Series Face Shields have become the go-to solution for companies employing both welders and non-welders, as the Adflo PAPR is built specifically to capture welding fume particles.

Enjoy constant mobile respiratory protection that goes where you go.



## Already use Adflo onsite?

The M-Series face shields use the same respiratory spare parts as the Speedglas powered air welding helmets used by so many welders onsite.

## 3M™ Versaflo™ Shield M-207 with Adflo™ PAPR

Part Number: 890207



Face Protection: AS/NZS1337.1 (High Impact)  
Respiratory Protection: AS/NZS1716  
Optional Hearing Protection: AS/NZS1270



**NEW**

## Optional 3M™ Peltor™ earmuffs

Part Number: 197011

- Supplies 50 times cleaner air than you would otherwise breathe unprotected (RMPF = 50)
- P3 particulate protection with optional gas filters
- Adjustable air flow of 170/200 litres per minute
- Lithium-ion battery with rapid charge (0-80% in 1 hour)

- 8 hours' powerful respiratory protection
- High impact face shield with chemical/scratch resistant lens
- Excellent peripheral and downward vision
- Flame resistant face seal and optional extras including head, shoulder and neck covers
- Also available with 12 hour heavy-duty battery (part no. 890207HD)

## 3M™ Versaflo™ Shield & Safety Helmet M-307 with Adflo™ PAPR

Part Number: 890307



Head Protection: AS/NZS1801  
Face Protection: AS/NZS1337.1 (High Impact)  
Respiratory Protection: AS/NZS1716  
Optional Hearing Protection: AS/NZS1270



**NEW**

**Optional 3M™ Peltor™  
earmuffs**

Part Number: 197011

- Supplies 50 times cleaner air than you would otherwise breathe unprotected (RMPF = 50)
- P3 particulate protection with optional gas filters
- Adjustable air flow of 170/200 litres per minute
- Lithium-ion battery with rapid charge (0-80% in 1 hour)
- 8 hours' powerful respiratory protection
- Built-in safety helmet
- High impact face shield with chemical/scratch resistant lens
- Excellent peripheral and downward vision
- Flame resistant face seal and optional extras including head, shoulder and neck covers
- Also available with 12 hour heavy-duty battery (part no. 890307HD)

## 3M™ Versaflo™ Flip-Up Shield & Safety Helmet M-407 with Adflo™ PAPR

Part Number: 890407



Head Protection: AS/NZS1801  
Face Protection: AS/NZS1337.1 (High Impact)  
Respiratory Protection: AS/NZS1716

- Supplies 50 times cleaner air than you would otherwise breathe unprotected (RMPF = 50)
- P3 particulate protection with optional gas filters
- Adjustable air flow of 170/200 litres per minute
- Lithium-ion battery with rapid charge (0-80% in 1 hour)
- Flip-up high impact face shield with chemical/scratch resistant lens
- Flame resistant shroud for additional head, shoulder and neck coverage
- 8 hours' powerful respiratory protection
- Built-in safety helmet
- Excellent peripheral and downward vision
- Also available with 12 hour heavy-duty battery (part no. 890407HD)

# Mobile and adaptable respiratory protection

## 3M™ Adflo™ Powered Air Purifying Respirator (PAPR)

As one of the most popular respirators of its kind in the world, the Adflo™ Powered Air Purifying Respirator is designed to provide a constant nominal airflow rate of 170/200 litres per minute, regardless of the battery's charge or the particle loading of the filter.

With its slim profile, the Adflo respirator offers excellent lightweight, adaptable and easy-to-use respiratory protection.

**NEW Heavy Duty Adflo Available**



Technical Data	3M™ Adflo™ Powered Air Respirator
Approvals Respiratory Protection	Conforms to AS/NZS1716
Required Minimum Protection Factor (RMPF) <sup>1)</sup>	50
Airflow Standard Airflow Plus	170 litres/minute 200 litres/minute
Battery: Charging time	Li-ion with rapid charge (0-80% in an hour) <sup>2)</sup> 4.5 hours (standard), 5.5 hours (heavy duty)
<b>Operating hours</b>	<b>8 hours (standard) or 12 hours (heavy duty)</b>
Weight Respirator	960 grams
Noise level dB	Max 75 dB
Belt	Leather 75-115cm

Gas and odour filters are available as an optional extra.

1) For mechanically and thermally generated particles.

2) Standard battery will be 80% charged (6.4 hours run time) in approximately one hour.  
Heavy duty battery will be 80% charged (9.6 hours run time) in approximately one hour.

### Award-winning protection

Since its launch, the 3M™ Adflo™ powered air respirator has become synonymous with effective respiratory protection. The system is designed to meet the specific needs of welders and non-welders alike.

### Upgraded features

The new Li-ion Adflo respirator is over 15% lighter and has one-hour rapid charge. A self-adjusting quick-release breathing tube allows for simple one handed connection and release.

### Clean air to breathe

Constant, clean air flows directly into your breathing zone. Choose between 170 litres per minute or 200 litres per minute (for hot, humid jobs) with the push of a button.

### Adaptable filtration

With the right type of filter, the Adflo powered respirator effectively protects against a range of gases, vapours and particles.

### You only have one set of lungs

The Adflo respirator complies with Australian and New Zealand Standard AS/NZS1716 for powered air respirators and offers a Required Minimum Protection Factor (RMPF) of 50 for mechanically and thermally generated particles.

### All Adflo spare parts are consistent!

If you already use an Adflo™ PAPR on site, it is worth noting that all Adflo spare parts are consistent - saving you time and hassle when maintaining your powered air respirator.



# Capture welding fume at the source

Where elimination and substitution of welding fume is not possible, workers can turn to Local Exhaust Ventilation (LEV) systems combined with respiratory PPE to effectively remove welding fume from their working environment.

Non-welders are placed at risk of welding fume exposure when the fumes are allowed to spread throughout the workplace. LEV systems capture these fumes at the source, limiting the spread and minimising exposure to both welders and non-welders in the process.

AWS has teamed up with Nederman, the world's leading brand in industrial air filtration, to launch a state of the art range of Local Exhaust Ventilation systems.

## Local Exhaust Ventilation: a summary

- Collects and removes carcinogenic welding fume directly at the source
- Mobile and easy to position so as not to impede the welding process or surrounding work
- Simple, trouble-free operation
- Low running costs and energy consumption

## AWS Welding Fume Protection System 150

Part Number: FPS150

Designed to be carried to and from the working area, the FPS150 is built specifically for welding environments.

Connected to a welding torch or to an extraction nozzle, the FPS150 unit extracts the fume directly at the source with an automatic start/stop function.

- Portable and easy to carry (16kg)
- Low service costs
- Automatic start/stop function
- Simple operation
- Single phase



Extraction nozzles sold separately.



FPSN01

Focused nozzle funnel



FPSN02

Wide nozzle funnel

Power Voltage (V) / Phase	Arm or Hose length (m)	Airflow (m <sup>3</sup> /h)	Filter Type
230v / 1 phase	2.5	150	Disposable



## AWS Welding Fume Protection System 900

Part Number: FPS900

The FPS900 is a mobile, single-arm welding fume extraction unit, offering easy and trouble-free operation.

Featuring a flexible extraction arm that can be swiveled 360 degrees, the unit is easy to position, ensuring there is no impact on the welding process.

The cleanable long-life cartridge filter ensures running costs are kept to a minimum.

- 3-metre arm with unbeatable manoeuvrability
- Cartridge filter with high filtration efficiency
- Cleanable filter ensures low running costs
- Motor overload protection device
- Large air volume with low energy consumption
- Single phase
- Blow gun included for cleaning

Power Voltage (V) / Phase	Arm or Hose length (m)	Airflow (m <sup>3</sup> /h)	Filter Type
230v / 1 phase	3	500-900	Cleanable

## AWS Welding Fume Protection System 1800

Part Number: FPS1800

The FPS1800 is a mobile, twin-arm welding fume extraction unit, offering easy and trouble-free operation.

Featuring two flexible extraction arms that can be swiveled 360 degrees, the unit is easy to position, ensuring there is no impact on the welding process.

The two cleanable long life cartridge filters ensure running costs are kept to a minimum.

- 2 x 3-metre arms with unbeatable manoeuvrability
- 2 x cartridge filters with high filtration efficiency
- Cleanable filters ensure low running costs
- Motor overload protection device
- Large air volume with low energy consumption
- Three phase\*
- Blow gun included for cleaning



Power Voltage (V) / Phase	Arm or Hose length (m)	Airflow (m <sup>3</sup> /h)	Filter Type
400v / 3 phase*	3 (x2)	1000-1800	Cleanable

\*The machine is delivered without an electrical plug. Installation of a male electrical plug (max 16A) must be completed by a qualified electrician.

# W.E.S.S.

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