



Science.  
Applied to Life.™

3M™ Speedglas™ Welding Safety Catalogue 2018

# Step up to Speedglas

 **Speedglas**™



**One of the most important lessons we have learnt over the last 35 years is that no two welders are the same.**

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## I do a lot of grinding

Check out our flip-up welding helmets with a large, curved and clear protective grinding visor complete with the top-of-the-line Speedglas 9100XXi True-View welding lens:

see [page 17](#)



## I want large views with True-View optics

For the largest view with True-View we recommend our welding helmets with side windows that widen your field of vision:

see [page 13](#)



## I want to breathe clean air

Our award-winning powered air welding respirator has become synonymous with welders' powered air respiratory protection. Find out why:

see [page 25](#)



## I need convenient head protection

No more compromises. Safety helmet solutions tailor made for our welding helmets:

see [page 21](#)



## I want True-View optics in a slim-line helmet

It's back! The optics that forever changed the way welders see are now available in the helmet that changed everything:

see [page 30](#)



## I need spare parts

See our Spare Parts Directory and get the right part every time:

see [page 66](#)

or

Use our online spare part finder tool at

[www.awsi.com.au/spare-parts-locator](http://www.awsi.com.au/spare-parts-locator)



# What do you need?

Full-featured helmet with the maximum number of options

## 9100XXi series

External grind and memory mode



3M™ Speedglas™ 9100XXi  
Part no. 50 18 26  
See page 13

Flip-up welding lens with a big clear grinding visor underneath



3M™ Speedglas™ 9100XXi FX  
Part no. 54 18 26  
See page 17

Safety helmet head protection via quick-release attachment



3M™ Speedglas™ 9100XXi QR  
Part no. 50 36 26  
See page 21

For powered or supplied air respiratory protection

External grind and memory mode with powered or supplied air



3M™ Speedglas™ 9100XXi Air  
With Powered Air - Part no. 50 77 26  
With Supplied Air - Part no. 50 88 26  
See page 15

Flip-up welding lens with a big clear grinding visor underneath with powered or supplied air



3M™ Speedglas™ 9100XXi FX Air  
With Powered Air - Part no. 54 77 26  
With Supplied Air - Part no. 54 88 26  
See page 19

Head protection, flip-up with clear visor, powered or supplied air, optional hearing protection

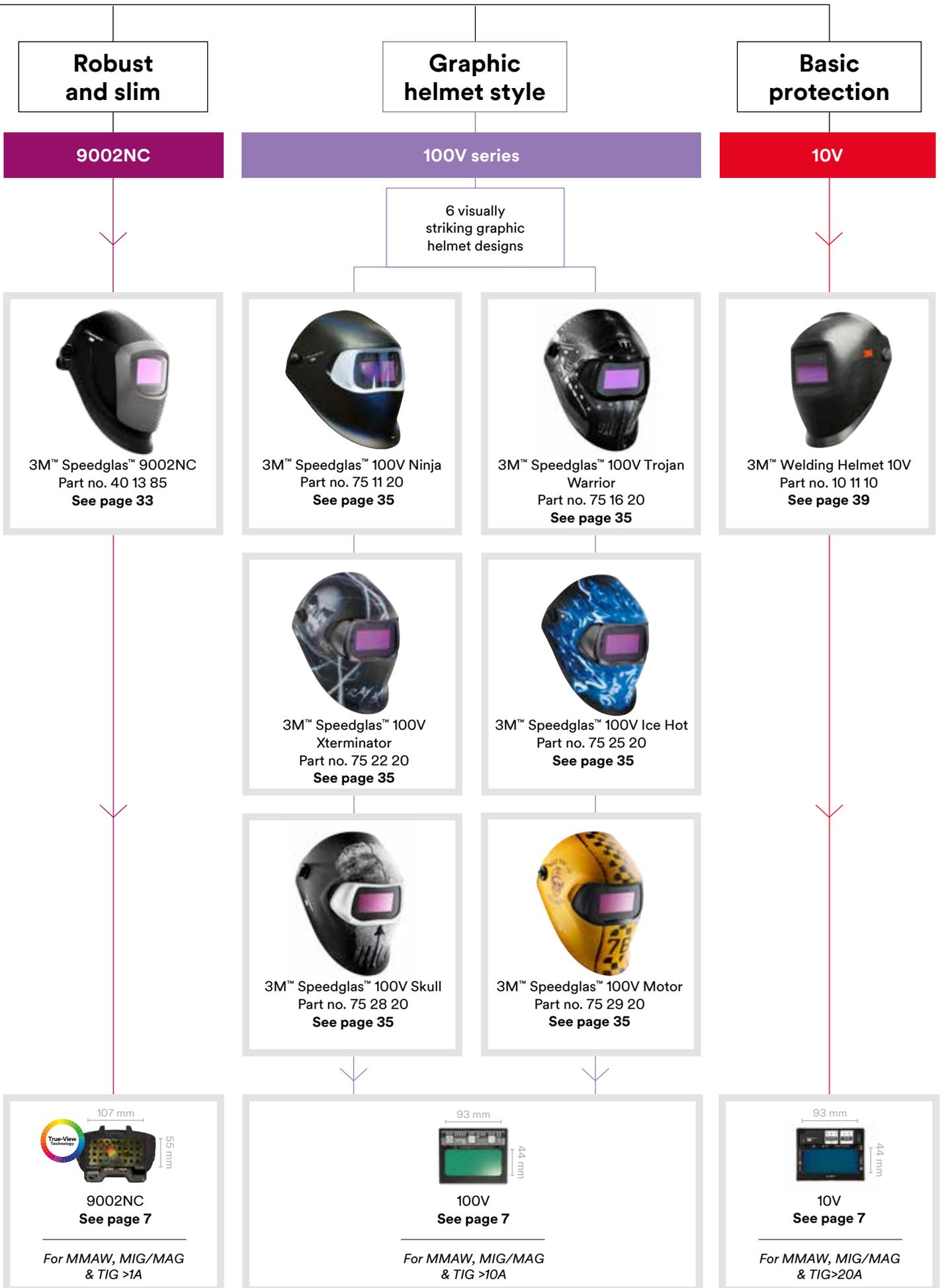


3M™ Speedglas™ 9100XXi MP Air  
With Powered Air - Part no. 57 77 26  
With Supplied Air - Part no. 57 88 26  
See page 23

The Speedglas 9100XXi ADL is excellent with virtually any arc welding process, including 'hidden arc' applications plus plasma welding and cutting. Utilise new Speedglas True-View optics for precise welding with more colour and contrast.



9100XXi  
See page 7



## 3M™ Speedglas™ Auto-Darkening Welding Lenses

# Selector table

● Best<sup>1)</sup> ● Better<sup>1)</sup> ● Good<sup>1)</sup> × Not Recommended<sup>1)</sup>

Specification	9100XXi	9002NC	100V	10V
MMAW (electrode)	●	●	●	●
MIG/MAG	●	●	●	●
TIG (>20A)	●	●	●	●
TIG (10A-20A)	●	●	●	×
TIG (1A-10A)	●	●	×	×
Plasma (welding and cutting)	●	●	×	×
Hidden arc	●	●	×	×
Tack welding	●	●	●	●
Grinding	●	●	●	×
3M™ Speedglas™ True-View Technology	Yes		No	
Switching time, dark-light	40-800 ms	60-400 ms	40-250 ms	40-250 ms
Switching time, light-dark	0.1 ms (+23° C)			
Dark state	Shade 5, 8, 9-13	Shade 8-12	Shade 8-12	Shade 10-12
Light state	Shade 3			
UV/IR Protection (permanent)	Shade 13	Shade 12		
Viewing area, approx. (mm)	73 × 107	55 × 107	44 × 93	44 × 93
External grinding mode control	Yes <sup>2)</sup>	No		
Auto-ON	Yes	No		
Battery lifetime (hours)	1800	2 000	1500	
Classification	1/1/1		1/2/2	
Complies with (welding lens)	AS/NZS 1338.1			

1) The ratings above (best - better - good - not recommended) only refer to the products listed in this chart and should be considered as general recommendations only.

2) When used with the front cover 9100XXi and the 3M™ Speedglas™ Welding Helmets 9100, 9100 QR or 9100 Air.

Our top-of-the-line ADL

### 3M™ Speedglas™ Auto-Darkening Lens 9100XXi

- True-View lets you see your welds in a new light, with more contrast and natural-looking colours.
- Grab and go welding with Auto-On.
- Increased viewing area 73×107 mm + SideWindows.
- Dark shades 5, 8 and 9-13.
- Delay settings allow the welder to prolong the dark-to-light reaction time for applications where the weld pool is still bright while cooling.
- Outstanding low-amp TIG performance, down to an industry-leading 1 amp.
- When used with the Speedglas Welding Helmets 9100, 9100 Air and 9100 QR, you'll have access to external grind and memory modes.
- Featured in all 3M™ Speedglas™ 9100 Welding Helmets, see **pages 8-23**.



### 3M™ Speedglas™ Auto-Darkening Lens 9002NC

See your welds in a new light, with more contrast and natural-looking colours.

- 55×107 mm viewing area.
- Dark shades 8-12.
- Compatible with the 9002NC and the old 9000 series welding helmets. More information on **page 31**.



### 3M™ Speedglas™ Auto-Darkening Lens 100V

- 44×93 mm viewing area.
- Dark shades 8-12.
- Available with your choice of 6 graphic welding helmets. See **page 35**.



### 3M™ Auto-Darkening Lens 10V

- 44×93 mm viewing area.
- Dark shades 10-12.
- For the 3M™ 10V Welding Helmet See **page 39**.

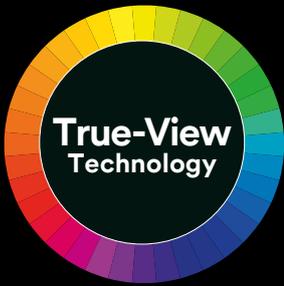


# 3M™ Speedglas™ Series 9100XXi

## Step up to Speedglas™ 9100XXi

- Large viewing area 73 × 107mm with peripheral SideWindows
- True-View technology for colour and contrast
- Market leading optical quality with the largest viewing area available<sup>1)</sup>
- Grab-and-Go with Auto-On
- Shades 5, 8, 9-13 with a light shade of 3
- Advanced TST (TIG Sensor Technology) down to an industry-leading 1 amp
- Made in Sweden with every lens checked by hand
- Superior comfort, balance and stability
- Increased coverage and protection
- Flip-up functionality with clear protective visors
- Powered or supplied air respirator welding helmet options
- Safety helmet and integrated hearing protection options
- Compliant with all relevant Australian & New Zealand Standards

<sup>1)</sup> The Speedglas Welding Lens 9100XXi combined with the peripheral Speedglas SideWindows gives the largest viewing area amongst auto-darkening welding helmets available at the time of printing.



# Still seeing green?

Imagine what more realistic-looking colours and details could do for you:

- Provide better control of your weld puddle – with a view that appears lighter, brighter, and more realistic.
- Help you focus on your welding set-up, welding technique and inspection of just-completed welds.
- Give you a clearer view of coloured welding machine controls – even with your helmet in the safe, down position.

**Literally see the difference!**



**Sample competitor lens in shade 3**



**9100XXi and 9002NC lens in shade 3**



“ The view seems lighter and less green – I can see colours far better! Even in the dark state, I see contours better. ”  
Veteran Welder

When you need coverage, control and comfort

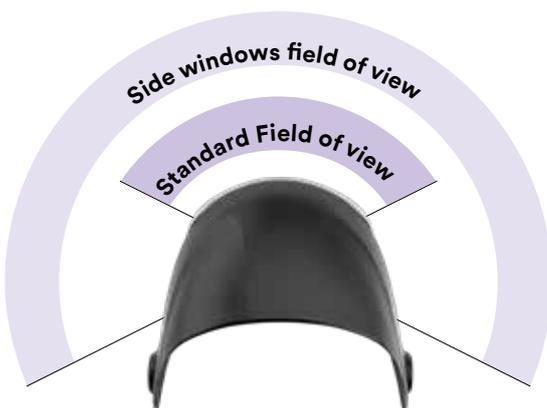
# 3M™ Speedglas™ Welding Helmet Series 9100XXi



## High-performing people need high-performing products

The Speedglas™ Welding Helmet Series 9100XXi includes six welding helmet models offering many options including flip-up welding shields, safety helmets and respiratory systems. If you haven't

experienced these innovations in welding protection, call AWS on +61 (0) 2 9439 0111 or visit [www.awsi.com.au](http://www.awsi.com.au) to book a free hands-on demonstration with your local Speedglas specialist.



## Peripheral vision

Experience excellent peripheral vision as you weld, with Speedglas SideWindows giving you the largest viewing area on the market.<sup>1)</sup> Previously hidden peripheral hazards are now visible through two shade 5 side lenses, with conventional shade 13 UV protection.

1) The Speedglas Welding Lens 9100XXi combined with the peripheral Speedglas SideWindows gives the largest viewing area amongst auto-darkening welding helmets available at the time of printing.

## The head harness designed for a tailored fit

With the Speedglas 9100 head harness, we've carefully avoided sensitive areas of the head while giving you a highly adjustable and comfortable fit. It provides multiple adjustment combinations so you can customise your head harness to your personal preferences and comfort setting.

### Ergonomic fit

Adjust the shield's distance from your face. Fits head sizes 500 to 640 mm.

### Stability

Smooth ratchet for precise tightening.

### Adapt to your position

Adjust the helmet tilt-angle while wearing the helmet on your head.



### Shape to your head

Two adjustable crown straps for better weight distribution and balance.

### Less pressure

Self-adjusting 'twin pads' contour to your head.

### Low riding comfort

Adjust the helmet's parked position (left side) and drop friction (right side). Further details below.

We designed the 9100 helmet to 'nest' down low, close to the head harness when raised, so you don't need to tighten the head harness as much.

The helmet's smooth up-and-down pivot action can be locked in the up position – a light pull lowers the helmet back down again.



### DROPS AS YOU LIKE

Drop-friction is adjusted on the wearer's right hand side:

Turn the right-hand knob clockwise to increase (or counter clockwise to decrease) the effort needed to nod down the shield.

### STABILITY WHEN RAISED

Helmet parking grip is adjusted on the wearer's left hand side:

Turn the left-hand knob clockwise to increase (or counter clockwise to decrease) how tightly the shield is held in the raised 'parked' position.



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pro

### Simplify your workflow

The 9100XXi features external controls – enabling convenient, 'gloves-on' movement between grinding and two customised welding settings with the press of a button.

### Increased vision

Peripheral SideWindows offer a wider view, allowing you to see previously hidden peripheral hazards.



### Versatility at your fingertips

Weld, Cut, Grind, Hidden Arc, Outdoor, Passive and Tack - all with the highest possible optical classification.

# 3M™ Speedglas™ Welding Helmet 9100XXi

# High-performance and comfort



Compliant with Australian and New Zealand Standard AS/NZS1337.1 for high impact eye and face protection.

High comfort head harness with two crown straps for optimum balance.

SideWindows: Shade 5 windows widen your field of vision to give you the largest viewing area on the market.<sup>1)</sup>

Speedglas™ Welding Lens 9100XXi with True-View for crisp colour and contrast.

Heat reflecting silver front with an external button for grind and welding memory settings.

Lens reacts down to an industry-leading 1 amp.

Auto-On and equipped with the all-important centre sensor for TIG welding.

Extended-length, flame-resistant head, neck and ear protection available as accessories.

Increased coverage for ears and neck.



## A class of its own

Protecting your eyes and face from radiation, heat and sparks – while providing a precise view of your work – makes your Speedglas welding helmet 9100 one of your most important welding tools.

With True-View optics, Auto-On plus grinding and memory modes, experience the 9100XXi difference!



Magnifying lens holder: allows for precise lens placement.

Exhaust vents: direct your exhaled air downward to prevent fogging of your welding lens.

Part No	Description
50 18 26	3M Speedglas Welding Helmet 9100XXi.
For spare parts breakdown, please see <b>page 68</b> .	

<sup>1)</sup> The Speedglas Welding Lens 9100XXi combined with the peripheral Speedglas SideWindows gives the largest viewing area amongst auto-darkening welding helmets available at the time of printing.

### Seamless switching

Easily switch between grind mode and two preset welding memory modes with the push of an external button and no need to break your positive pressure respiratory protection seal.

### Protection you can count on

Choose from powered or supplied air breathing options - whatever suits you best. Our highly adaptable systems offer excellent protection against a wide range of particulates, gases and vapours.

### Extend your coverage

With our optional flame-retardant head covers and ear/neck protectors.



3M™ Speedglas™ Welding Helmet 9100XXi Air

# Clean, comfortable protection



Compliant with Australian and New Zealand Standard AS/NZS1337.1 for high impact eye and face protection.

Speedglas™ Welding Lens 9100XXi with Auto-On and True-View for crisp colour and contrast.

Heat reflecting silver front with an external button for grind and welding memory settings.

The all-new face seal follows the contours of both the helmet and your face.



The air duct is an integral part of the helmet, providing a refreshing flow of air across the entire breathing zone of the helmet.



High comfort head harness with two crown straps for optimum balance.

SideWindows: Shade 5 windows widen your field of vision to give you the largest viewing area on the market.<sup>1)</sup>

An innovative quick-release attachment enables one-handed breathing tube connection and release.



Middle airflow channel to keep your welding lens fog free.

Two side channels deliver a smooth flow of fresh air directly to the breathing zone.

## Revolutionary airflow

Experience all of the benefits of the Speedglas 9100XXi helmet in combination with either the 3M™ Adflo™ powered air respirator or 3M™ Versaflo™ supplied air regulator V-500E.

Part No	Description
50 77 26	3M Speedglas Welding Helmet 9100XXi Air with Adflo™ powered air respirator.
507726HD	3M Speedglas Welding Helmet 9100XXi Air with Heavy Duty Adflo powered air respirator.
50 88 26	3M Speedglas Welding Helmet 9100XXi Air with V-500E supplied air regulator.

For spare parts breakdown, please see **page 74**.

1) The Speedglas Welding Lens 9100XXi combined with the peripheral Speedglas SideWindows gives the largest viewing area amongst auto-darkening welding helmets available at the time of printing.

### Well-balanced design

The 9100 FX is balanced in both ergonomics and functionality. A welding helmet and grinding visor that sits perfectly balanced for all-day wear.

### Continuous protection

Easy switching between welding and grinding means there is no need to remove your helmet - you're always protected.

### Expand your view

A quick lift of the front cover and you get a big, 170×100 mm, clear view – perfect for precision grinding, even in low light conditions.

### More natural colours and contrasts

The Speedglas welding filter 9100XXi helps you see your welds in a new light, providing more contrast and natural-looking colours.



3M™ Speedglas™ Welding Helmet 9100XXi FX



# Flip up to grind with a large clear view

Speedglas™ Welding Lens 9100XXi with Auto-On and True-View for crisp colour and contrast.



High comfort head harness with two crown straps for optimum balance.

Smooth flip-up function with curved 170 x 100 mm clear grinding visor.

Compliant with Australian and New Zealand Standard AS/NZS1337.1 for high impact eye and face protection.



Lens reacts down to an industry-leading 1 amp.

The entire helmet can also be locked in the perfectly balanced, up, parked position.

SideWindows: Shade 5 windows widen your field of vision to give you the largest viewing area on the market.<sup>1)</sup>

Exhaust vents to assist in removing exhaled air.



Additional spark and spatter resistant head, neck and ear covers are available as accessories. See page 47

## The perfect combination

A flip-up combination of an auto-darkening welding helmet and clear protective visor gives you a perfectly balanced and highly functional helmet for comfortable, all-day use.

Seamlessly switch between welding and grinding!

Part No	Description
54 18 26	3M Speedglas Welding Helmet 9100XXi FX.
For spare parts breakdown, please see page 70.	

<sup>1)</sup> The Speedglas Welding Lens 9100XXi combined with the peripheral Speedglas SideWindows gives the largest viewing area amongst auto-darkening welding helmets available at the time of printing.

### Comfortable all shift long

Versatile protection and long-lasting comfort. The 9100 FX Air helmet easily connects to either our powered or supplied air respirators.

### Stay protected

A face seal which shapes to your face maintains a positive pressure seal, meaning you breathe in only fresh, filtered air.

### Effortless grinding

A large flip-up 170 × 100 mm clear grinding visor gives you an increased viewing area for improved accuracy and inspection of just completed welds.

### See your welds in a new light

The True-View lens allows you to see your welds and set-up in more colour and detail.



3M™ Speedglas™ Welding Helmet 9100XXi FX Air

# Flip-up welding helmet with respiratory protection



Speedglas™ Welding Lens 9100XXi with Auto-On and True-View for crisp colour and contrast.



High comfort head harness with two crown straps for optimum balance.

Smooth flip-up function with curved 170 x 100 mm clear grinding visor.

Compliant with Australian and New Zealand Standard AS/NZS1337.1 for high impact eye and face protection.



Lens reacts down to an industry-leading 1 amp.

The breathing tube is attached to the head harness instead of the helmet for improved comfort and balance.

SideWindows: Shade 5 windows widen your field of vision to give you the largest viewing area on the market.<sup>1)</sup>

An innovative quick-release attachment enables one-handed breathing tube connection and release.

## Respiratory protection - your way

Choose between the 3M™ Adflo™ powered air respirator or the 3M™ Versaflo™ supplied air regulator V-500E - both of which are compatible with the Speedglas 9100 FX Air.



Air is supplied directly to the breathing zone, for a higher level of protection.

A diffuser evenly distributes the air flow for maximum user comfort.

Part No	Description
54 77 26	3M Speedglas Welding Helmet 9100XXi FX Air with Adflo™ powered air respirator.
547726HD	3M Speedglas Welding Helmet 9100XXi FX Air with Heavy Duty Adflo powered air respirator.
54 88 26	3M Speedglas Welding Helmet 9100XXi FX Air with V-500E supplied air regulator.

For spare parts breakdown, please see **page 76**.

1) The Speedglas Welding Lens 9100XXi combined with the peripheral Speedglas SideWindows gives the largest viewing area amongst auto-darkening welding helmets available at the time of printing.



### Your hearing matters

Safety helmet is designed for use with 3M Peltor Class 5 earmuffs - giving you constant, high-level hearing protection.



### Adaptable head protection

A Quick-Release rail allows you to easily attach or remove your 9100 QR welding helmet, while keeping your safety helmet on.



### See more of your work

Peripheral SideWindows give you shade 5 viewing with conventional shade 13 UV/IR protection.

3M™ Speedglas™ Welding Helmet 9100XXi QR

# Quick-Release welding and safety helmet



Even with a gloved hand, you can easily attach or remove the 3M™ Speedglas™ Welding Helmet 9100 QR.

The Quick Release Rail allows you to attach the Speedglas auto-darkening welding helmet 9100 QR to most types of safety helmets.



Designed from inception to accommodate 3M™ Peltor™ Earmuffs (Class 5).



Lens reacts down to an industry-leading 1 amp.

Speedglas™ Welding Lens 9100XXi with Auto-On and True-View for crisp colour and contrast.

SideWindows: Shade 5 windows widen your field of vision to give you the largest viewing area on the market.<sup>1)</sup>

Exhaled air is channeled out via side exhaust vents.

## Flexibility is key

Attach or remove your welding helmet as you need it - or keep it raised in the parked position in between use. The parked position creates a low centre of gravity, maintains a low profile and reduces the load on the neck.

Combined with the Speedglas 9100XXi welding lens, you get flexible, world-class welding protection.



Simply squeeze to attach or remove your welding helmet - even with gloved hands.

Part No	Description
50 36 26	3M Speedglas Welding Helmet 9100XXi QR.

For spare parts breakdown, please see **page 72**.

<sup>1)</sup> The Speedglas Welding Lens 9100XXi combined with the peripheral Speedglas SideWindows gives the largest viewing area amongst auto-darkening welding helmets available at the time of printing.



**Weld with confidence**

Head, eye, face, hearing and respiratory – we've seamlessly integrated five levels of welder protection into one easy-to-use system.



**See more of your work**

A large (170×100 mm) curved protective visor with excellent views up, down, and side-to-side.

**Extend coverage**

All-new shroud covers the welder's neck and shoulders, as well as the upper chest and back. See page 79.

**Flexible protection**

Available with powered or supplied air respiratory protection.



3M™ Speedglas™ Welding Helmet 9100XXi MP Air

# Multiple levels of protection



Compliant with Australian and New Zealand Standard AS/NZS1337.1 for high impact eye and face protection.

The safety helmet is made from heat-resistant polycarbonate and conforms to Australian and New Zealand Standard AS/NZS1801 for head protection.

Lens reacts down to an industry-leading 1 amp.

Speedglas™ Welding Lens 9100XXi with Auto-On and True-View for crisp colour and contrast.



Designed from inception to accept 3M™ Peltor™ H31 Earmuffs (Class 4).

Smooth flip-up function with curved 170×100 mm clear protective visor, increasing your peripheral vision to 170°.

SideWindows: Shade 5 windows widen your field of vision to give you the largest viewing area on the market.<sup>1)</sup>

An innovative quick-release attachment enables one-handed breathing tube connection and release.



## 5 levels of welding protection

Combined eye, head, face, hearing and respiratory protection. This highly integrated, comfortable welding and safety helmet 9100 MP can be used with the 3M™ Adflo™ powered air respirator or the 3M™ Versaflo™ supplied air regulator V-500E.



Part No	Description
57 77 26	3M Speedglas Welding Helmet 9100XXi MP Air with Adflo™ powered air respirator.
577726HD	3M Speedglas Welding Helmet 9100XXi MP Air with Heavy Duty Adflo powered air respirator.
57 88 26	3M Speedglas Welding Helmet 9100XXi MP Air with V-500E supplied air regulator.

For spare parts breakdown, please see **page 78**.

<sup>1)</sup> The Speedglas Welding Lens 9100XXi combined with the peripheral Speedglas SideWindows gives the largest viewing area amongst auto-darkening welding helmets available at the time of printing.

# Powered & Supplied Air

## Choose your respiratory solution

- Compatible with the 3M™ Speedglas™ Series 9100 respiratory welding helmets
- Powerful protection against welding fume
- Adaptable to suit most welding environments
- 3M™ Adflo™ Powered Air Purifying Respirator System
- 3M™ Versaflo™ V-500E Supplied Air Regulator

## 3M™ Adflo™ Powered Air Purifying Respirator

# Mobile and adaptable respiratory protection

As one of the most popular respirators of its kind in the world, the Adflo™ Powered Air Respirator is designed to provide welders 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.

### The respirator built for welders

Since its launch, the 3M™ Adflo™ powered air respirator has become synonymous with welders respiratory protection. The award-winning Adflo respirator is designed to meet your specific welding needs.

### 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 as you weld

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.



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)
Operating hours	8 hours (standard) or 12 hours (heavy duty)
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.

Part No	Description
83 77 30	3M Adflo powered air respirator - standard.
83 77 31	3M Adflo powered air respirator - heavy duty.

For spare parts breakdown, please see **page 80**.

### Better for backs

The ergonomic leather belt, shaped for maximum comfort, is extra wide around the turbo unit for additional back support.

### A system for your needs

Compatible with all Speedglas 9100 Series Respiratory Welding Helmets.

### Mobility is key

Unlike local exhaust ventilation systems, the Adflo PAPR goes where the welder goes. The slim profile and ergonomic turbo design makes it easy to navigate around tight spaces. Its ergonomics are based on the welder's need for lightweight, adaptable and easy-to-use respiratory protection.

### Upgrade to the new Heavy Duty Adflo PAPR

Choose between Standard or Heavy Duty battery options with your new Adflo Powered Air Respirator.

#### **NEW**

Heavy duty system provides up to 4 hours longer run time over standard system.

#### **NEW**

40% lighter standard and heavy duty battery.

#### **NEW**

Over 15% lighter Adflo powered air respirator system.

#### **NEW**

Self-adjusting quick release swivel breathing tube for one handed connection and release.

#### **NEW**

Now with one hour rapid charge.

## Cooler, cleaner and more comfortable welding

With the right type of filter, the Adflo respirator helps effectively protect you against both particles and gases – all in one system. And you can selectively replace either the particle or the gas filter as needed: you don't need to change both filters at the same time.

- A** Filter cover: holds the spark arrestor and filters.
- B** Spark arrestor.
- C** Pre-filter: increases the service life of the particle filter.
- D** Particle filter: high efficiency particulate filtration.
- E** Gas filter: (A1) captures organic gases and vapours. Gas filters sold separately.
- F** Odour filter: removes unpleasant smells (not needed if a gas filter is installed); sold separately.
- G** Li-ion battery: fully charges in 4.5 hours (standard) or 5.5 hours (heavy duty). Expected operating time is 8 hours (standard) and 12 hours (heavy duty) with new particle filter, new fully-charged battery and a standard flow level.
- H** Brushless motor: with an average life three times longer than conventional motors.
- I** Filter indicator: indicates the status of the particle filter.
- J** Airflow Plus: for hot, humid jobs you can increase the airflow from 170 l/min to 200 l/min with the push of a button.
- K** Breathing tube: self-adjusting or heavy duty rubber.
- L** Exclusive airflow pattern: evenly distributes filtered air throughout the entire breathing zone of the helmet. The intelligent turbo unit keeps the airflow rate at a constant, preset level. A diffuser spreads out the airflow pattern for your maximum comfort.
- M** Soft, flexible face seal (removed here for clarity): creates a positive pressure environment within the helmet, keeping the surrounding pollutants at bay.



Shown here: 3M™ Adflo™ Powered Air Respirator with 3M™ Speedglas™ Welding Helmet 9100 FX Air.

## Already have an Adflo PAPR system?

Get the most out of your helmet and Adflo system! Download your own personalised Care & Maintenance poster. Learn handy tips to prolong the life of your gear and receive a full parts breakdown of both the Adflo system and your Speedglas welding helmet.

Visit [www.awsi.com.au/care-maintenance](http://www.awsi.com.au/care-maintenance)



**High flow rates for hot or dirty environments**

Adjustable air flow between 170-305 litres per minute ensures a constant flow of fresh air, perfect for hot and humid conditions.

**Slim and lightweight**

A slim, lightweight belt-mounted regulator makes for comfortable all-day welding.

**Many helmet options**

Achieve a Required Minimum Protection Factor (RMPF) of 100+ when you combine the 3M™ Versaflo™ V-500E with our 3M™ Speedglas™ Welding Helmets 9100 Air, 9100 FX Air or 9100 MP Air.



3M™ Versaflo™ Supplied Air Regulator V-500E

# Light on your belt & heavy on protection

The balanced, belt-mounted V-500E supplied air regulator allows you to adjust the airflow between 170 litres per minute to 305 litres per minute.

A constant flow of clean, filtered air makes the V-500E regulator ideal for working in hot and humid conditions when used in combination with the 3M™ Speedglas™ welding helmet 9100 Air, 3M™ Speedglas™ welding helmet 9100 FX Air and 3M™ Speedglas™ welding helmet 9100 MP Air.



**Connects to breathable air hoses**

The V-500E regulator connects to an approved breathable air hose with a new quick-release connection. The supplied air must be of breathable quality meeting the performance standards of AS/NZS1716. A range of breathing air filtration systems are available to remove oil, water vapour or non-toxic, unpleasant odours. See **page 83**.

**Innovative & quiet**

The Versaflo regulator V-500E features a low flow warning whistle and a silencer that reduces the regulator's noise level to less than 65 dBA - the equivalent of a typical conversation. The V-500E unit can be positioned on the belt to suit both left and right handed users and a swivelling bayonet connector allows the breathing hose to move freely to the most comfortable position.

**Respiratory standards**

The Versaflo regulator V-500E complies with Australian and New Zealand standards AS/NZS1716 for supplied air respirators and delivers a Required Minimum Protection Factor (RMPF) of 100+.

Technical Data	3M™ Versaflo™ SAR V-500E
Approvals Respiratory Protection	Conforms to AS/NZS1716
Required Minimum Protection Factor (RMPF)	100+
Airflow Nominal Pressure Range Maximum Pressure	170-305 litres/minute 3.5-8 bar 10 bar
Weight	514 grams
Noise level dB	Max 65 dB
Feeder Hose	Conforming to AS/NZS1716
Inlet and auxiliary port	1/4 inch BSP thread
To view compatible breathing air filtration systems, see page 83	

Part No	Description
85 20 17	3M Versaflo V-500E regulator with belt.
For spare parts breakdown, please see <b>page 82</b> .	

# 3M™ Speedglas™ 9002NC

## A legend reborn

- True-View technology for colour and contrast
- The same LEGENDARY 3M™ Speedglas™ 9000 Series shape
- Viewing area 55 × 107mm
- Shades 8-12 with a light shade of 3
- Lightweight, slim profile helmet at just 485 grams
- Advanced TST (TIG Sensor Technology) down to an industry-leading 1 amp
- Made in Sweden with every lens checked by hand
- Compliant with all relevant Australian & New Zealand Standards

# The classic, streamlined Speedglas™ 9000 design

## 3M™ Speedglas™ Welding Helmet 9002NC

You asked and we listened. The award winning Speedglas 9000 welding helmet changed the game in helmet design by introducing the perfect combination of helmet shape, size and weight still preferred by welders today.

So we've brought it back. The exact same narrow shell profile many welders love only with advanced optics, less weight, more comfort and a new look!

### Better control

An improved optical experience with Speedglas True-View allows better control over your welds.

### Exhale

Thanks to the exhaust vents built into the helmet, the build-up of carbon dioxide is reduced, keeping you more comfortable and the lens fog free.

### Freedom of movement

The classic slim, light-weight design increases your freedom of movement. Plus, the exhaust vents allow for a close-to-the-face fit.

### The best made affordable

3M™ Speedglas™ Technology and state-of-the-art auto-darkening optics at a price point within reach of every welder, from apprentices to seasoned veterans.

## The optics that forever changed the way welders see are now available in the helmet that changed everything...

See your welds in a new light, with more contrast and natural-looking colours.

3M™ Speedglas™ True-View Technology allows you to see your weld pool with a view that appears lighter, brighter and more realistic. Read surfaces and contours better with a view that must be seen to be believed.



### Improved comfort

New head harness features a smooth ratchet for easy tightening – even while wearing gloves!

### Award-winning design

More than 20 years ago, the 3M™ Speedglas™ Welding Helmet 9000 set a new standard for rugged, dependable protection.

A helmet loved by many welders and internationally awarded for its ergonomic design.

### Better control of the weld puddle

Improved True-View optics in the 3M™ Speedglas™ Welding Lens 9002NC help you see your welds in a new light, providing more contrast and natural-looking colour.



## 3M™ Speedglas™ Welding Helmet 9002NC

# Slim and lightweight, with precision optics



Compliant with Australian and New Zealand Standard AS/NZS1337.1 for high impact eye and face protection.

The super-light, slim profile 9000 Series helmet weighs just 485 grams.

Lens reacts down to an industry-leading 1 amp and has the highest optical classification (1/1/1).

Speedglas™ 9002NC lens is compatible with existing Speedglas 9000 Series helmets.

Upgraded welding lens now has True-View for improved colour and contour recognition.

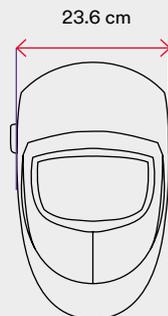


New head harness with ratchet mechanism provides a comfortable custom fit.

Aerodynamic exhaust vents assist in removing exhaled air, helping to keep your welding lens fog-free.

### Freedom of movement

Shield width



The slim profile offers increased freedom of movement in tight places.

### A legend has returned

Many welders think our classic Speedglas helmet 9000 has the ideal blend of shape and balance.

The 9002NC welding lens is also compatible with all existing Speedglas 9000 series welding helmets.

Want to see your welds in a new light? Then upgrade to 9002NC with True-View optics.

Part No	Description
40 00 85	3M Speedglas Welding Lens 9002NC.
40 13 85	3M Speedglas Welding Helmet 9002NC.
44 13 85	3M Speedglas Flip-Up Welding Helmet 9002NC FlexView.

For spare parts breakdown, please see **page 85**.

# 3M™ Speedglas™ 100V

## Image is everything!

- Speedglas optical quality and comfort
- New smooth ratchet head harness
- Extra light shade 3 grind function with high impact rating
- Shades 8-12 with a light shade of 3
- TST (TIG Sensor Technology) reacts down to 10 amps
- Made in Sweden with every lens checked by hand
- Industry-leading 3 year warranty on lens
- Choose from 6 graphic options
- High impact to Australian & New Zealand Standards (AS/NZS1337)
- Viewing area 44 × 93mm
- Magnifying lens holder for exact placement
- New delay setting (set your dark to light return time)
- Dark shades can be increased using upgrade plates

3M™ Speedglas™ Welding Helmet Series 100V

# Choose your graphic style



Ninja

751120



Trojan Warrior

751620



Xterminator

752220



Ice Hot

752520



Skull

752820



Motor

752920

## Powerful new welding lens

Speedglas welding lens 100V is equipped with five adjustable dark shades: 8-12, a light shade of 3, three sensitivity settings, two delay settings and a new grind mode. Versatility at your fingertips.

## Graphic series

Speedglas welding helmet series 100 delivers legendary Speedglas optical clarity and protection with distinctive graphic designs. Make an impact - choose from the graphics above.



## Customise your fit

The new Speedglas welding helmet series 100 head harness provides comfort and adaptability. Featuring a smooth ratchet mechanism and multiple adjustment points, the head harness provides a customised fit.

**Want to stand out?**

Make a statement with one of our powerful, distinctive graphic designs.

**Our Swedish all-rounder**

The Speedglas 100 is our Swedish all-rounder delivering legendary 3M Speedglas optical quality and comfort at a highly affordable price.

**Variable shades for flexibility**

Five adjustable dark shades 8–12, a lockable shade 3 light state for grinding and three sensitivity settings for customised light-to-dark switching.



## 3M™ Speedglas™ Welding Helmet Series 100V

# Weld with personality

Appropriate for most arc welding processes including Stick, MIG and TIG welding.

Compliant with Australian and New Zealand Standard AS/NZS1337.1 for high impact eye and face protection.

Dark shade can be increased to 13 or 14 using upgrade plates.

Choice of six quality Speedglas helmet graphics.

Made in Sweden backed by a three year warranty.

Now with advanced TST (TIG Sensor Technology).

Shade 3 sensitivity setting for grinding.



Improved head harness with smooth ratchet mechanism for precise tightening and comfort.

Built-in holder for magnifying lenses. Attaching the lens is easier and the fit is more accurate.

New delay function allows you to set the dark-to-light opening time.



## High-end performance

Get your career off to a great start with high-performance eye and face protection!

The Speedglas™ welding helmet series 100 is equipped with industry-leading features, allowing you to take advantage of Speedglas' optical clarity at a highly-affordable price.

Part No	Description
75 11 20	3M Speedglas Welding Helmet 100V Ninja.
75 16 20	3M Speedglas Welding Helmet 100V Trojan Warrior.
75 22 20	3M Speedglas Welding Helmet 100V Xterminator.
75 25 20	3M Speedglas Welding Helmet 100V Ice Hot.
75 28 20	3M Speedglas Welding Helmet 100V Skull.
75 29 20	3M Speedglas Welding Helmet 100V Motor.

For spare parts breakdown, please see **page 86**.



# 3M™ 10V

## Performance made simple

- Viewing area 44 × 93mm
- Shades 10-12 with a light shade of 3
- TIG down to 20 amps
- Superlight at just 390 grams
- Custom-fit head harness with ratchet mechanism
- Compliant with all relevant Australian & New Zealand Standards
- Longest warranty in its class - 2 years

3M™ Welding Helmet 10V

# Simple functionality in a robust design



Simple switching with two sensitivity settings.

From the number one brand in welding Personal Protective Equipment (PPE).

Three most commonly used dark shades for welding with a super light shade 3.

Designed for all-round MIG/MAG, MMAW (electrode or 'stick') and (TIG>20A) welding.

Backed by a 2 year warranty, the longest in its class.

Part No	Description
10 11 10	3M Welding Helmet 10V. See page 88.

**Confident protection**

Robust, industrial helmet design. Complies with Australian and New Zealand Standards AS/NZS1337.1 and AS/NZS1338.1

**Performance made affordable**

Auto-darkening lens performance at a price that won't break the bank.



# 3M™ Versaflo™ M-Series

## High impact headtops

- Integrated face and respiratory protection
- Optional hearing and head protection
- Clear, polycarbonate visor is scratch and chemical resistant
- Excellent peripheral and downward vision
- Exceptional optical clarity
- Compatible with the 3M™ Adflo™ powered air respirator or 3M™ Versaflo™ V-500E supplied air regulator
- Compliant with all relevant Australian & New Zealand Standards

## 3M™ Versaflo M-Series

# Lightweight, compact & well balanced

Compliant with Australian and New Zealand Standard AS/NZS1337.1 for high impact eye and face protection.



Designed from inception to accept 3M™ Peltor™ H31 Earmuffs (Class 3).<sup>1)</sup>

Coated visor provides added chemical and scratch resistance.

New visor design combines excellent peripheral and downward vision with premium optical quality.

The safety helmet is made from heat resistant polycarbonate and conforms to Australian and New Zealand Standard AS/NZS1801 for head protection.

Fully adjustable head harness that includes straps for an optimal fit and improved weight distribution.

Features a flame-resistant polyester face seal for applications with hot particles.



## Integrated protection

The Versaflo M-Series headtops are lightweight, compact and well-balanced, offering integrated face and respiratory protection with optional head and hearing protection.

The M-Series helmet can be used in combination with the 3M™ Adflo™ Powered Air Respirator or the 3M™ Supplied Air Regulator V-500E.

To find your perfect configuration, please refer to **page 43**. For spare parts breakdown, please see **page 84**.

<sup>1)</sup> Earmuffs compatible with 3M Versaflo M-Series M-100 and M-300 headtops only. Not compatible with M-400 series.

### High impact safety visor

A large, clear safety visor gives you a wide viewing area, allowing you to keep your face protection on at all times.

### Versatile protection

Choose your ideal combination of face, head, respiratory or hearing protection - all compliant with the relevant Australian and New Zealand standards.

### Respiratory systems

The M-Series face shields are compatible with both the 3M™ Adflo™ Powered Air Respirator and 3M™ Versaflo™ V-500E Supplied Air Regulator.

# Select your visor and respirator



## 3M™ Versaflo™ Shield M-107 with Respiratory Protection

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

Part No	Description
89 01 07	with 3M™ Adflo™ powered air respirator
890107HD	with Heavy Duty 3M™ Adflo™ powered air respirator
89 11 07	with 3M™ Versaflo™ supplied air regulator V-500E
19 70 11	Optional 3M™ Peltor™ earmuffs (SLC80 21dB Class 3)

For spare parts breakdown, please see [page 84](#).



## 3M™ Versaflo™ Shield & Safety Helmet M-307 with Respiratory Protection

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

Part No	Description
89 03 07	with 3M™ Adflo™ powered air respirator
890307HD	with Heavy Duty 3M™ Adflo™ powered air respirator
89 13 07	with 3M™ Versaflo™ supplied air regulator V-500E
19 70 11	Optional 3M™ Peltor™ earmuffs (SLC80 21dB Class 3)

For spare parts breakdown, please see [page 84](#).



## 3M™ Versaflo™ Flip-Up Shield & Safety Helmet M-407 with Respiratory Protection

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

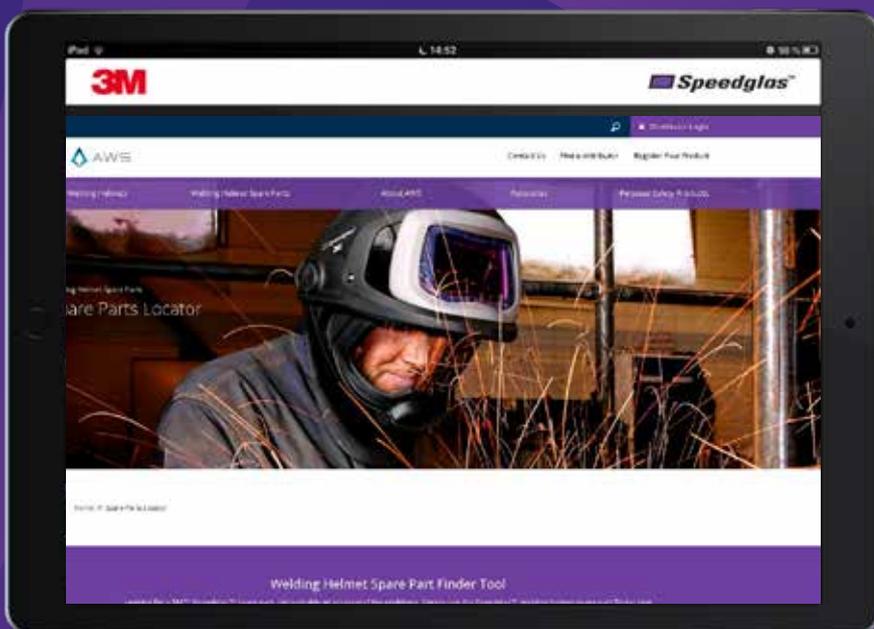
Part No	Description
89 04 07	with 3M™ Adflo™ powered air respirator
890407HD	with Heavy Duty 3M™ Adflo™ powered air respirator
89 14 07	with 3M™ Versaflo™ supplied air regulator V-500E

For spare parts breakdown, please see [page 84](#).

# Spares Parts, Care and Maintenance

Online tools also available @ [aws.com.au](http://aws.com.au) :

- Extend your 3M™ Speedglas™ Welding Helmet warranty by another year for free
- Download a care & maintenance guide for your specific welding helmet
- Easily locate the spare part you need with the Spare Part Finder Tool
- If you love your welding helmet let us know by leaving a product review
- View welding projects or post your own





As the outer cover lens becomes pitted, scratched or too dirty to clean with a soft cloth, it's time to replace it. Find your replacement outer cover lenses in the table below:

Outer cover lens		9100XXi	9002NC	100V	10V
Part No	Description				
12 60 00	Standard				●
42 60 00	Standard		●		
42 70 00	Hard coated		●		
42 70 71	High heat		●		
52 60 00	Standard	●			
52 70 00	Hard coated	●			
52 70 70	High heat	●			
77 60 00	Standard			●	
77 70 00	Hard coated			●	
77 70 70	High heat			●	

The table shows the cover lenses for our current range of welding helmets. If you have an older helmet model check page 66.

Regularly clean the inner cover lens with a soft cloth and replace if any pits or scratches are present. Find the correct inner cover lens in the table below:

Inner cover lens		9100XXi	9002NC	100V	10V
Part No	Description				
42 80 00	Clear			●	●
42 80 10	Clear		●		
52 80 25	Clear	●			

The table shows the cover lenses for our current range of welding helmets. If you have an older helmet model check page 66.

Next time, try the Spare Part Finder Tool - [www.awsi.com.au/spare-parts-locator](http://www.awsi.com.au/spare-parts-locator)

# How often should I change this part?

Component	Typically replaced	Notes
Outer cover lens	Once-twice a week	Replace anytime the lens becomes deeply scratched or too dirty to clean with a soft cloth.
Inner cover lens	Once a month	Regularly clean with a soft cloth and replace if any scratches occur.
Visor plate	Every two weeks	Replace more often if visibility is reduced.
Sweatband	Once a month	Replace more often if sweatband becomes unhygienic.
Face seal	At least every 2 months	Replace earlier in really dirty environments or whenever the seal becomes unhygienic.
Breathing tube	If damaged, deformed or leaking any air	To extend the life of the breathing tube, use a tube cover or a heavy-duty rubber breathing tube.
Pre-filter	Once-twice a week	Regular replacement of the pre-filter extends the life of the particle filter, saving money while also increasing the battery run-time.
Particle filter	At least every month	Replace when the particle filter indicator becomes red. Otherwise, replace whenever the battery operating time becomes too short, or when the low airflow alarm is triggered by a fully loaded filter.
Gas filter	According to regulations at your work place	Smell and taste is not recommended as a measure of change.
Odour filter	Any time you smell unpleasant odours	Note: odour filter is not required if a gas filter is used.
Spark arrestor	As needed	Replace if damaged or no longer fitting well.

Important information: Note that higher-than-normal levels of pollutants, heat and sparks will require more frequent replacement of components. Chart assumes minimum 4 hours usage per day. Ordering information for each series of welding helmet can be found in the Parts Directory, **page 66**.

## Care & Maintenance Guide

Learn more about welding helmet care and maintenance by downloading your personalised care & maintenance guide for your specific welding helmet from our website.

Visit [www.awsi.com.au/care-maintenance](http://www.awsi.com.au/care-maintenance)



# We've got you covered

Every welder is different and each day your tasks can change. As the owner of a 3M™ Speedglas™ Welding Helmet, you have a variety of accessories available to maximise your protection and comfort.

Plus, we now offer a new generation of additional coverage products made in flame-retardant textiles for protection against molten metal, sparks and flames.



## Quick guide to extend your protection

3M™ Speedglas™ Welding Helmet	9002NC	100	9100 + 9100 Air	9100FX + 9100 FX Air	9100 QR	9100 MP	
Head protection (Part No)		16 40 09	16 90 05	16 90 07 (large) 16 90 06 (small)	–	16 90 14 (reflective)	
Neck protection (Part No)		16 90 01 <sup>1)</sup>	16 90 10		16 40 05	16 90 15	
Hood (Part No)		16 91 00					16 90 15
Breathing tube cover (Part No)		–	83 40 18 (9100 Air and FX Air only)		–	83 40 18	

1) Alternative neck protection available in leather (part no 16 40 05).

Next time, try the Spare Part Finder Tool - [www.awsi.com.au/spare-parts-locator](http://www.awsi.com.au/spare-parts-locator)

# Increase your comfort



Maximise your welding comfort with these specially designed accessories for the Adflo respirator:

Braces (83 50 20) - to be combined with the leather Adflo belt that is supplied with the system.

Backpack (95 40 15) - for welders who prefer to wear the Adflo PAPR on their shoulders.



## Getting too close to your arc?

Start with the easiest solution first: replace your outer protection plates more frequently!

If you still can't see the detail you need, try one of our magnifying lenses. They come in x1.0, x1.5, x2.0, x2.5 and x3.0 magnification.

Or perhaps try a welding helmet with Speedglas True-View for improved clarity, colour and contour recognition.

For details, see the Accessories and Spare Parts section for each helmet.



## Need a darker shade?

Welding at very high amperages can create such an intense weld pool that you may feel eye strain, even when using the darkest shade. For the Speedglas 9002NC and the Speedglas 100 you can replace the standard (clear) inner protection plate with either a +1 or +2 shade plate. For details, see the Parts Directory on **page 66**.

# Time for an upgrade?

## Upgrade your respiratory headtop

For existing 3M™ Adflo™ PAPR customers looking to upgrade their headtop. Kit comes complete with the Speedglas™ 9100XXi lens, breathing tube, welding helmet and free carry bag. Choose from the configurations below:



### 3M™ Speedglas™ Welding Helmet 9100XXi Air Upgrade Kit

Part No	Description
50 90 26	3M Speedglas 9100XXi Air Upgrade Kit. Includes helmet, welding lens, QRS hose and carry bag.



### 3M™ Speedglas™ Welding Helmet 9100XXi FX Air Upgrade Kit

Part No	Description
54 90 26	3M Speedglas 9100XXi FX Air Upgrade Kit. Includes helmet, welding lens, QRS hose and carry bag.



### 3M™ Speedglas™ Welding Helmet 9100XXi MP Air Upgrade Kit

Part No	Description
57 90 26	3M Speedglas 9100XXi MP Air Upgrade Kit. Includes helmet, welding lens, QRS hose and carry bag.

## Upgrade your 9100 welding lens to True-View

For existing 3M™ Speedglas™ 9100 welding helmet customers looking to upgrade to the Speedglas 9100XXi welding lens.



Part no:

50 01 26 Speedglas 9100XXi lens and silver cover upgrade kit<sup>1)</sup>

50 00 26 Speedglas 9100XXi lens only

## Upgrade to a lighter Adflo battery with rapid charge

For existing 3M™ Adflo™ PAPR customers looking to upgrade to Rapid Charge and a 40% lighter battery. Kit comes complete with the new Adflo lithium-ion battery and rapid charger.



Part no:

83 76 30C Standard lithium-ion battery with rapid charger

83 76 31C Heavy duty lithium-ion battery with rapid charger

<sup>1)</sup> The Speedglas 9100XXi lens and silver cover upgrade kit gives the user access to grind and memory modes and is only compatible with Speedglas 9100, 9100 QR and 9100 Air welding helmets.

# Welding Safety

**Did you know that welding fume was recently reclassified as carcinogenic?**

Relevant to welding fume exposures, this change was primarily associated with lung cancer and limited evidence for kidney cancer.



For a closer look at the recent reclassification of welding fume from an Australian perspective download our free White Paper at [www.awsi.com.au](http://www.awsi.com.au)

**Welding fume:  
a known  
carcinogen**

A closer look at the recent reclassification of welding fume as Group 1: Carcinogenic to Humans

 **Speedglas**

# Your responsibility – our solutions...

Typically, professional welders know about the hazards to their eyes and faces. But other hazards – like welding fume – are sometimes not so well-known.

It is the responsibility of the employer to identify any hazards in a work environment, and to provide the workers with adequate protection.

Identifying hazards and assessing risk levels is crucial before selecting appropriate protective equipment. Consultation between employers and employees plays an important role in encouraging user acceptance in the workplace.



## 1. Identify the hazards

Make a list of all the risks in your welding environment (radiation, sparks, fumes, noise, trip hazards, falling objects etc.).



## 2. Assess the risk levels

By evaluating every risk you can prioritize their prevention. See more detail in each section of this catalogue. If there are any doubts or ambiguities, always consult a professional Safety Engineer or Occupational Hygienist.



## 3. Select the right type of equipment

Determine appropriate protection based on equipment type (e.g. eye, face, head, respiratory, hearing), the level of protection needed for your specific application, and your users' preferences. Personal preferences - the key to user acceptance - include comfort, style and ease of maintenance.

When all of these factors are included in the selection process, you're providing your workers not only the welding protection they need, but the ability to perform at their optimum level.



## 4. Training, motivation and maintenance

For maximum benefit from any piece of PPE, it pays to focus on user acceptance and proper use. AWS can help:

- On-site demonstrations and training from your local AWS Technical Specialist. We'll show you equipment options based on your specific needs and train you on how to best care for and maintain your equipment for optimum performance.
- We provide educational posters for your facilities, care and maintenance videos and posters, informative white papers on industry issues and multiple online tools and resources.
- For online Welding Helmet Care & Maintenance guides specific to your welding helmet, visit [www.awsi.com.au/care-maintenance](http://www.awsi.com.au/care-maintenance)



# Hazards of Welding Fume

## What is welding fume?

Welding fume is basically microscopic particles of hot metal and gases that are small enough and buoyant enough to be released from the welding arc and rise in a cloud of metal fume. This fume is then able to be inhaled by the welder and others in close proximity to the source.

Welding fume can contain a mixture of airborne gases that may include oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), ozone (O<sub>3</sub>) and shielding gases eg argon, helium.

The exact level of risk from the fume will depend on what metals are involved in the work eg iron, aluminium, copper, lead, manganese, chromium, nickel and others. Each of these can have a different toxic effect on the body so exposure needs to be effectively controlled.

## What are the health effects?

Welding fume exposure poses a range of short and long term health risks - with breathing problems, kidney issues, nervous system damage, pneumonia and cancer among the more severe effects.



## Welding fume: a known carcinogen

A closer look at the recent reclassification of welding fume as Group 1: Carcinogenic to Humans

 Speedglas



## Welding fume now reclassified as 'Carcinogenic to humans'

In early 2017, welding fume was reclassified from IARC classification Group 2B (Possibly carcinogenic to humans) to Group 1 (Carcinogenic to humans). This change was primarily associated with the effects of UV exposure on the skin and eyes and also for lung cancers and limited evidence for kidney cancer from welding fume exposures.

## More information

For a closer look at the dangers of welding fume and a strategic approach that can help to reduce exposure, visit [www.awsi.com.au](http://www.awsi.com.au) and download our **Welding Fume White Paper**.

# What's happening to your health?

What do increased clumsiness, ulcers, and flu symptoms have in common? They - and many more symptoms - might be caused by overexposure to welding fumes.

## Potential short-term health effects of certain welding fumes

- Eye, nose and throat irritation.
- Dizziness.
- Nausea.
- Headaches.
- Metal fume fever. Notably, it is more likely to occur after time away from the job (weekends, holidays, etc.)<sup>1)</sup>

## Potential long-term health effects of certain welding fumes

- Lung function abnormalities, including bronchial asthma, chronic obstructive pulmonary disease (COPD), pneumoconiosis and other pulmonary fibrosis (chronic beryllium disease, cobalt lung), and lung cancer.<sup>2)</sup>
- Larynx and urinary tract cancers.<sup>3)</sup>
- Certain fumes can lead to stomach ulcers, kidney damage, and nervous system damage.<sup>3)</sup>

## When good enough isn't enough

Working within the Australian workplace exposure standards for general welding fume (5 mg/m<sup>3</sup>), a full-time welder may inhale up to 11 grams of welding fume, a classified carcinogen, every year. How?

### 11 grams of welding particles

To illustrate a general example: working with an exposure limit of 5 mg/m<sup>3</sup> for general welding fume, a full-time welder may inhale up to 11 grams of welding fume every year.<sup>4)</sup>

1) "Prevalence and association of welding related systemic and respiratory symptoms in welders," Occupational & Environmental Medicine, El-Zein M., Malo J-L., Infante-Rivard C., Gautrin D., 2003;60:655-661.

2) "Welding-Related Respiratory Diseases" article, (translated from) Medycyna Pracy (Occupational Medicine), Wittczak T., Walusiak J., Pałczyński C., 2009;60(3):201-8.

3) "Controlling Hazardous Fumes and Gases during Welding," OSHA Fact Sheet, U.S. Department of Labor, DSG FS-3647, March, 2013.

4) The example is based on a typical respiratory rate of 20 litres of air per minute or 2300 m<sup>3</sup> of air per year. The reference used here is the workplace exposure limit for Australia for welding fume when no specific chemical is identified with a workplace exposure limit lower than the general guideline (5mg/m<sup>3</sup>).



## Powered air

The Adflo PAPR has a Required Minimum Protection Factor of 50, meaning that the wearer's exposure should be reduced to 1/50th.

# Reducing welding fumes & exposure

To address the hazards and risks of exposure to welding fume, it is best practice to use a hierarchy of controls. The idea is that the highest priority items within the hierarchy not only do the most to

reduce fumes and worker exposure, but that they also put the least burden of responsibility on the welder. However, every welding fume control has its limitations.

## 1

**Modify or substitute your welding process** to other processes that generate less fumes and/or eliminate the most toxic contaminants.

**Control limitations:** Substitutions may not be possible. For example, when the end-product requires stainless steel (chromium).

## 2

**Engineering controls** include modifying enclosures around the welder, or the general ventilation of the workshop, or local exhaust controls.

**Control limitations:** Ventilation can be difficult to achieve due to conflicting needs. For example, mobility, heating/cooling or shielding gases.

## 3

**Work practices** include the positioning of the welder in respect to the source. For example, having the welder keep their head out of the plume.

**Control limitations:** Space-restricted workpieces or the welding situation may not allow positional alternatives.

## 4

**Personal respiratory equipment.** As an addition to steps 1 through 3 we always recommend personal respiratory protection for the welder to achieve the best protection and comfort.

**Control limitations:** Establishing a respiratory protection program including selection and ongoing training on product care & maintenance.

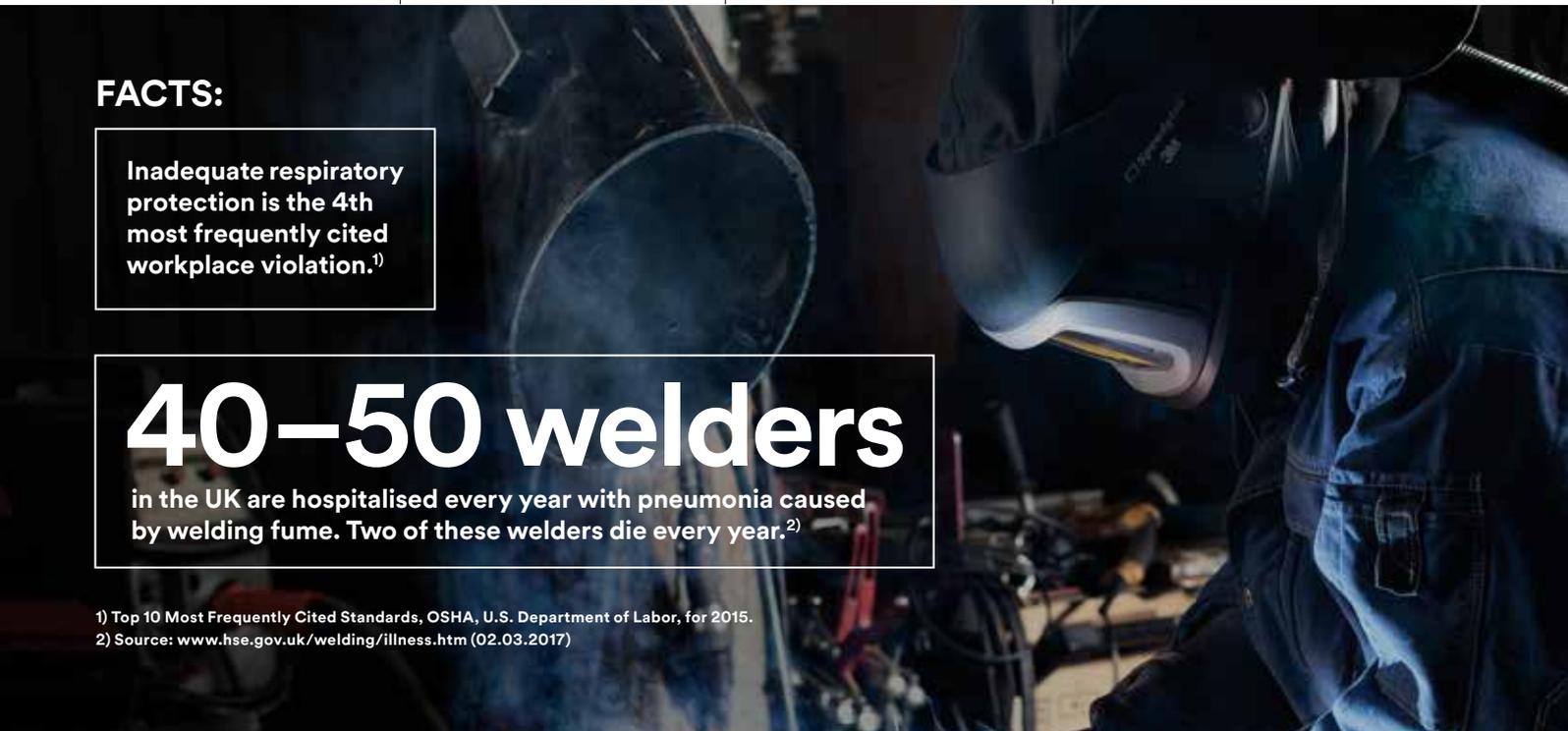
### FACTS:

Inadequate respiratory protection is the 4th most frequently cited workplace violation.<sup>1)</sup>

# 40–50 welders

in the UK are hospitalised every year with pneumonia caused by welding fume. Two of these welders die every year.<sup>2)</sup>

1) Top 10 Most Frequently Cited Standards, OSHA, U.S. Department of Labor, for 2015.  
2) Source: [www.hse.gov.uk/welding/illness.htm](http://www.hse.gov.uk/welding/illness.htm) (02.03.2017)



# Which style of respirator suits your needs?

The following is an overview of the four different types of welding respiratory protection available from 3M. In addition to your specific respiratory requirements, your selection process may

also include factors such as equipment style/configuration, personal preference/comfort and maintenance considerations.

Read more on page 25



Read more on page 29



Read more on page 92



Read more on page 92



## 3M™ Adflo™ Powered Air Respirator

- Required Minimum Protection Factor (RMPF)<sup>1)</sup> of 50.
- Can be used specifically for high efficiency particle filtration or for the filtration of both particulates and gases, depending on filter selection.
- Provides a constant nominal airflow rate of either 170 l/min or 200 l/min.
- Offers the welder complete mobility (not fixed).
- Provides a refreshing and cooling sensation for hot, humid jobs.
- May deliver lower operating costs overtime when compared to disposable and reusable respirators.

## 3M™ Versaflo™ Supplied Air Regulator

- RMPF of 100+ gives the highest protection factor compared to the other forms of respiratory protection listed on this page.
- Clean air is supplied from an external source.
- Belt-mounted regulator allows control over airflow: 170 l/min to 305 l/min.
- Requires compressed air, an air filtration unit and appropriate air supply lines.
- Restricted mobility compared to other forms of respiratory protection: connected to a filtration system and compressed air source.

## 3M™ Reusable Respirators

- RMPF of 10 (half face respirator).
- All provide protection against solid and liquid particles.
- Specific products for organic vapour/inorganic vapours and acid gas/ammonia.
- Fits under all 3M™ Speedglas™ Welding Helmet Series 9100.
- Maintenance-free or reusable models available.
- If respirator is not fitted correctly, protection may be compromised or reduced.
- Filters can become loaded extremely quickly in certain welding environments.

## 3M™ Disposable Welding Respirators

- RMPF of 10.
- For moderate levels of fine dust particles, oil- and water-based mists, metal fume and ozone (10 x OEL).<sup>2)</sup>
- Lightweight.
- No maintenance – disposable.
- Fits under virtually any welding helmet.
- If respirator is not fitted correctly, protection may be compromised or reduced.
- Filters can become loaded extremely quickly in certain welding environments.

1) RMPF = Required Minimum Protection Factor. The required minimum protection factor based on laboratory-measured performance data according to Australian and New Zealand Standards. Eg. RMPF of 50 means that if correctly fitted the air you breathe will be 50 times cleaner than the air you would be breathing unprotected.

2) OEL = Occupational Exposure Limit.

# An overview of metals, welding processes and respirator selection

3M™ Speedglas™ offers a wide range of personal respiratory protection, providing unequalled comfort and protection in the toughest conditions.

The following is a general outline of the type of 3M™ Respiratory Protection that may be appropriate for your welding applications.

## How to use this guide:

Identify the material to be welded and the welding process to be used. The concentration levels of the pollutants are affected by the ventilation conditions in the workplace. Choose the appropriate description of the working environment to determine a suitable type of respiratory protection.<sup>1)</sup>

**P** = Powered air respirator with particle filter (P).

**P** + **A** = Particle and gas filtration via powered air respirator with both a high efficiency particulate filter (P) and an A1 gas filter installed.

**S** = Supplied air via regulator and filtration unit.

Material to be welded	Welding method	Ventilation conditions of your working environment			
		Good environment, with forced ventilation	Limited ventilation	Restricted space - <small>Note: Not suitable for Confined Spaces as defined by AS2865.</small>	Classified as IDLH
Aluminium	MIG 	<b>P</b>	<b>P</b> / <b>P</b> + <b>A</b>	<b>S</b>	Powered and supplied air respirators must never be used in atmospheres Immediately Dangerous to Life or Health (IDLH). Always consult your Safety Engineer or Occupational Hygienist.
	TIG 	<b>P</b>	<b>P</b> / <b>P</b> + <b>A</b>	<b>S</b>	
	MMA (stick) 	<b>P</b>	<b>P</b> / <b>P</b> + <b>A</b>	<b>S</b>	
Stainless steel	MIG 	<b>P</b>	<b>P</b> / <b>P</b> + <b>A</b>	<b>S</b>	
	TIG 	<b>P</b>	<b>P</b> / <b>P</b> + <b>A</b>	<b>S</b>	
	MMA (stick) 	<b>P</b>	<b>P</b> / <b>P</b> + <b>A</b>	<b>S</b>	
	PLASMA (Welding and Cutting)	<b>P</b>	<b>P</b> + <b>A</b> / <b>S</b>	<b>S</b>	
Steel not coated or painted	MIG/MAG 	<b>P</b>	<b>P</b>	<b>S</b>	
	STICK WELDING 	<b>P</b>	<b>P</b>	<b>S</b>	
	PLASMA (Welding and Cutting)	<b>P</b>	<b>P</b> / <b>S</b>	<b>S</b>	
Steel painted (lead based paints)	MIG/MAG 	<b>P</b>	<b>P</b>	<b>S</b>	
	MMA (stick) 	<b>P</b>	<b>P</b>	<b>S</b>	
	PLASMA (Welding and Cutting)	<b>P</b>	<b>P</b> / <b>S</b>	<b>S</b>	
Steel galvanised	MIG/MAG 	<b>P</b>	<b>P</b>	<b>S</b>	
	MMA (stick) 	<b>P</b>	<b>P</b>	<b>S</b>	
	PLASMA (Welding and Cutting)	<b>P</b>	<b>P</b> / <b>S</b>	<b>S</b>	
Steel coated with 2-component paints or insulated with 2-part polyurethanes (risk of isocyanates)	MIG/MAG 	<b>P</b>	<b>S</b>	<b>S</b>	
	MMA (stick) 	<b>P</b>	<b>S</b>	<b>S</b>	
	PLASMA (Welding and Cutting)	<b>P</b>	<b>S</b>	<b>S</b>	
Material cleaned with trichloroethylene	MIG 	<b>S</b>	<b>S</b>	<b>S</b>	
	TIG 	<b>S</b>	<b>S</b>	<b>S</b>	
	MMA (stick) 	<b>S</b>	<b>S</b>	<b>S</b>	
	PLASMA (Welding and Cutting)	<b>S</b>	<b>S</b>	<b>S</b>	

<sup>1)</sup> 3M accepts no liability for the incorrect choice of respiratory protective equipment. This chart is only an outline. It is designed to help focus on the most appropriate respirators in the 3M range for particular applications. It should not be used as the only means of selecting a respirator. Details regarding performance and limitations are set out on the respirator packaging and user instructions.

# Respiratory filter guide

## Code Type of filter

E	Acid gases.
A	Organic gases, boiling point >65°C.
AX	Organic gases, boiling point <65°C.
P	Particle filter.
B	Inorganic gases.

## Remarks

H = The chemical can be absorbed through the skin.

K = The chemical can be cancer-inducing.

S = The chemical can be a sensitiser.

1. Argon and helium are inert gases which are not generally absorbed by canister type filters. These gases are not in themselves hazardous but can displace oxygen from the air when present in confined spaces.
2. Ozone is not readily filtered by absorption type filters. However, ozone reverts back to normal oxygen upon contact with solid surfaces. The use of a Speedglas Welding Helmet or Protective Visor with the Adflo Respirator (particle filtration) will reduce ozone exposure. (For further information please contact AWS).
3. Chemical constituents of a welding fume with very low Occupational Exposure Limits can pose special hazards and are sometimes best protected against by using a Supplied Air Regulator System. Always ask an appropriately qualified safety professional, such as an Occupational Hygienist for respiratory protection advice if you are unsure.

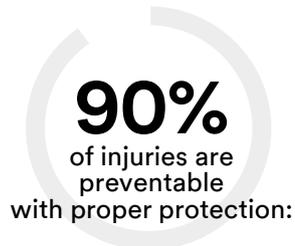
Occupational Exposure Limits (OELs) are given in each individual country's national safety requirements.

Suggested Filter Type				
Chemical	Particle	Gas	Supplied Air	Remarks
Aluminium	P			
Argon			Supplied Air	1
Beryllium	P		Supplied Air	K, S 3
Bromine		B		
Cadmium	P			K
Carbon Dioxide			Supplied Air	
Carbon Monoxide			Supplied Air	
Chlorine		B		H
Chlorine Dioxide		B		
Chromium Hexavalent	P			K
Chromium Trivalent	P			
Copper	P			
Fluorides	P			
Fluorine			Supplied Air	
Helium			Supplied Air	1
Isocyanates			Supplied Air	S
Hydrogen Chloride		B	Supplied Air	3
Hydrogen Cyanide		B	Supplied Air	H3
Hydrogen Fluoride		B	Supplied Air	3
Hydrogen Sulphide		B		
Iron Oxide	P			
Lead	P			
Magnesium	P			
Manganese	P			
Nickel	P			S
Nitrogen Dioxide			Supplied Air	
Nitric Oxide			Supplied Air	
Ozone	P	A		2
Phosgene			Supplied Air	3
Phosphine			Supplied Air	
Silicon Dioxide	P			
Sulphur Dioxide		E		
Trichloroethylene		A		K
Vanadium Oxide	P			
White Spirit		A		
Zinc	P			
Zinc Chloride	P			
Zinc Oxide	P			



Each year in the US alone, more than \$300 million is spent on costs associated with workplace eye injuries, including medical expenses, workers' compensation and lost production time.

Source: [www.osha.gov/SLTC/eyefaceprotection](http://www.osha.gov/SLTC/eyefaceprotection) (01.03.2017)



More than 90% of serious eye injuries at work can be prevented using appropriate protective eyewear.

Source: [www.preventblindness.org/eye-safety-work](http://www.preventblindness.org/eye-safety-work) (01.03.2017)

## How to beat the statistics

Welding processes typically generate hazardous ultraviolet/infrared radiation and (intense) visible light that have the potential to cause permanent eye damage. Physical eye hazards include welding spatter and grinding particles.

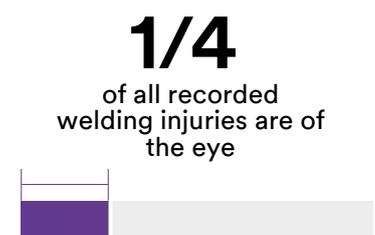
### Controlling exposure

A well-designed welding helmet and reliable welding lens protects your face and eyes from heat, spatter and radiation.

Put simply, auto-darkening welding lenses allow welders to keep their welding helmet in the safe down position at all times unlike passive welding helmets.

If you can always see clearly, the need to constantly lift your welding helmet is significantly reduced, meaning:

- You reduce the likelihood of exposure to harmful UV/IR radiation by accidentally striking an arc or being exposed to the arcs of nearby welders.
- You reduce the potential for foreign body eye injuries from grinding, sparks or weld spatter.



Eye injuries account for one quarter of all welding injuries, making them by far the most common injury for welders according to research from the Liberty Mutual Research Institute for Safety.

# Auto-darkening eye protection



## Before:

With the helmet in the safe down position, you have a clear view through the welding lens. Both of your hands are free and the electrode can be precisely positioned.



## During:

Within 0.1 milliseconds of the arc strike, the lens has switched to the dark state. The dark state shade can be adjusted using variable shade selection.



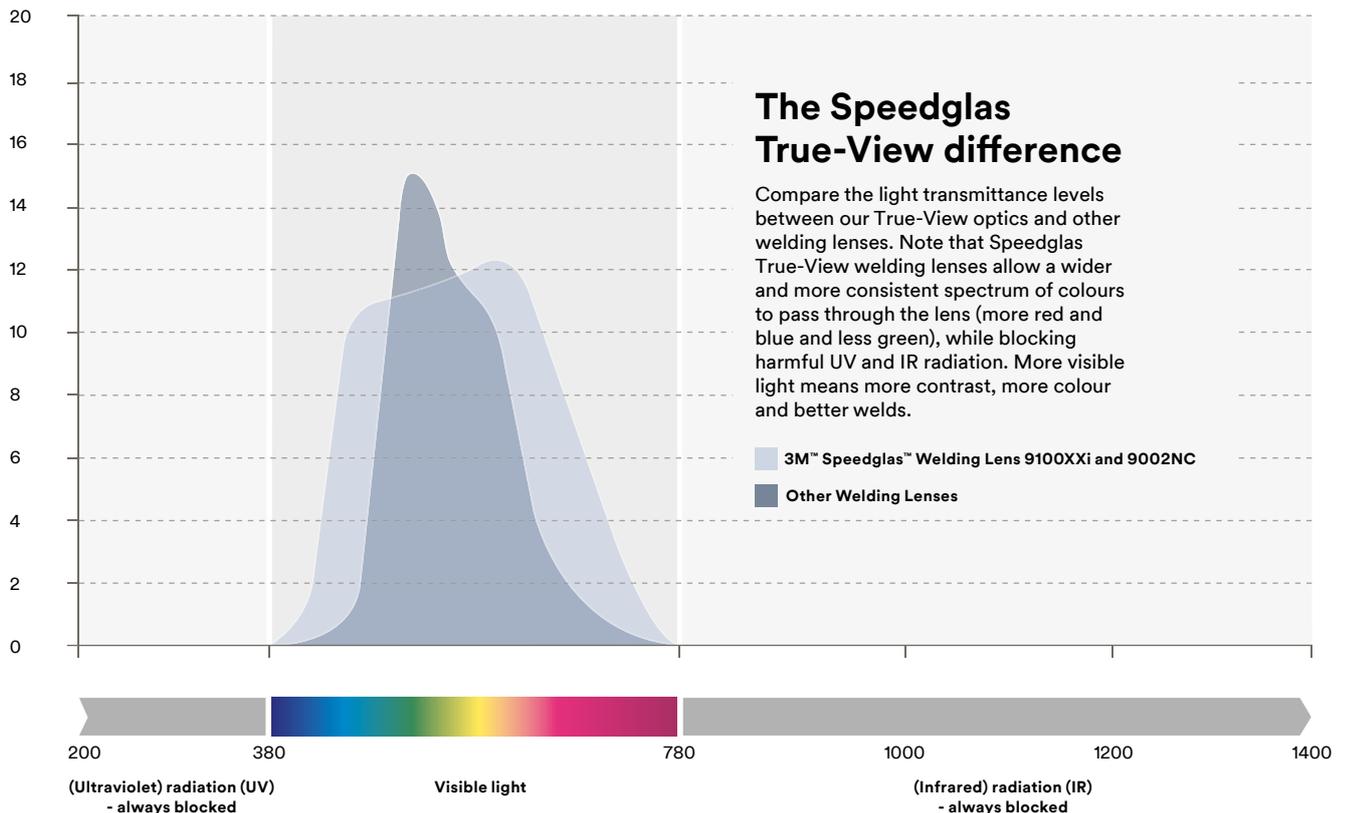
## After:

The lens automatically returns to the clear state after welding is complete, allowing for immediate and safe inspection of the weld pool and preparation for the next weld.

## Constant protection from ultraviolet (UV) and infrared (IR) radiation

Speedglas ADLs protect the welder from harmful UV and IR radiation. This protection remains constant, whether the welding lens is on, off, dark or light. The only light that passes through the ADL is visible light that can be softened through variable shade selection.

Transmittance (%)



# Variable shade selection

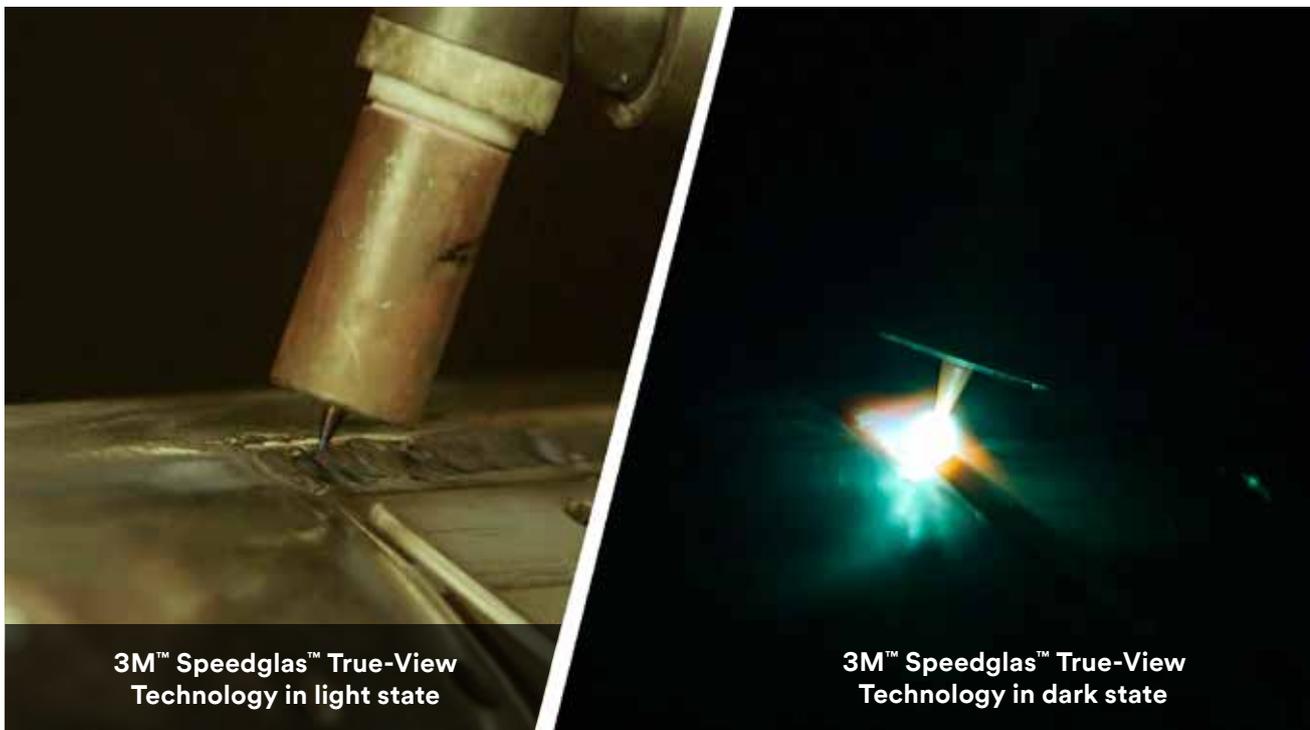
## Recommended dark state shade selection chart

Shade selection is based on visible light - the brighter the light created from the weld, the darker the shade required. Below is a table with suggested shade selections across a wide range of applications and amperage levels.

Welding process	Current in amperes A																													
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600									
MMAW (covered electrodes)	8				9				10				11				12				13				14					
MAG	8						9				10				11				12				13							
TIG	8				9				10				11				12				13									
MIG	8						9				10				11				12				13				14			
MIG with light alloys	8						9				10				11				12				13				14			
Air-arc gouging	10										11				12				13				14				15			
Plasma jet cutting	8						9				10				11				12				13							
Microplasma arc welding	4	5	6	7	8	9	10	11	12																					
	1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600									

The table features the recommended dark shades for various working applications. According to the conditions of use, the dark shade below or above the listed dark shade can be used based on personal preference.

## More clarity in the dark and light states



True-View colour and clarity before, during and after welding when using the 3M™ Speedglas™ Welding Lens 9100XXi or 9002NC. The Speedglas 9100XXi welding helmet series offers True-View combined with the largest viewing area on the market including SideWindow peripheral vision.

# The challenge of hearing protection for welders



**Gives the expected protection.**



**Significantly reduces protection.**



**Virtually no protection.**

## Five minutes of carelessness per day significantly reduces the effect of the protection

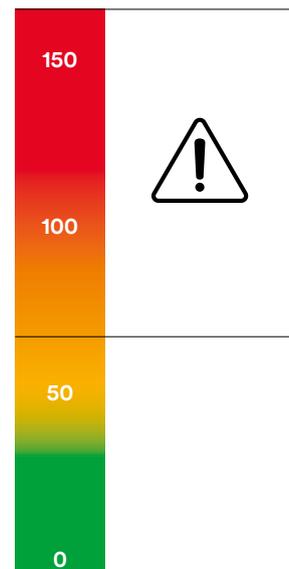
That's right: if you're in a harmfully loud workplace – at or above 85 decibels – then not having your ear protection in place just 10% of the time offers you virtually no protection. Noise-Induced Hearing Loss (NIHL) is caused by the damage and eventual death of the ear's hair cells. Unlike some other cells, human ear hair cells never grow back.<sup>1)</sup>

## Too loud may be less loud than you think

Think of all of the noises that surround you at your workplace. Your tools, of course. But also the sudden, short, yet very loud noises: metal falling onto metal or hammers banging metal into place. Those sudden noisy spikes, at or above 85 decibels, could be damaging your hearing unless your hearing protection is always in place.

### Work Scale Decibels (dBA)<sup>1)</sup>

Jet Engine	120–140
Sand Blasting	110–120
Punch Press	100–110
Tractor	97
Belt Sander	93
<b>Risk of hearing loss</b>	<b>85</b>
Air Conditioning Unit	60
Electrical Transformer	45
Watch Ticking	20



<sup>1)</sup> <https://www.nidcd.nih.gov/health/noise-induced-hearing-loss>

# 5 Levels of welding protection

## The 3M™ Speedglas™ Welding & Safety Helmet 9100 MP Air

In the past, a welder's options for integrated head, eye, face, respiratory and hearing protection were limited. Not anymore. The Speedglas™ Welding and Safety Helmet 9100 MP Air with the upgraded Adflo Powered Air Purifying Respirator (PAPR) gives welders compliance without compromise.

### Multi-Protection compliant with Australian and New Zealand Standards (AS/NZS)

1. Hearing protection compliant with AS/NZS1270
2. Powered or supplied air respiratory protection compliant with AS/NZS1716
3. Safety helmet provides head protection compliant with AS/NZS1801
4. Eye protection compliant with AS/NZS1338.1
5. High impact face protection compliant with AS/NZS1337.1

### Select hearing protection that your workers want to wear

This is the most important step in moving towards 100% usage. The Speedglas 9100 MP Air was designed from inception to accept 3M™ Peltor™ H31 Earmuffs.

#### Reduce noise exposure

Part Number	19 70 11
Description	Optional Peltor earmuffs that can be easily attached to the 9100 MP safety helmet.
Protection	SLC80 25dB Class 4 If properly worn can give the welder a 25dB reduction in hearing exposure. Not suitable for environments with consistent noise levels over and above 105dB.



## 3M™ PELTOR™ Earmuffs X-Series

### No compromises

Ear cups have a streamlined design that doesn't compromise noise attenuation

### Helmet mounted

Integrated design for more robustness. Compatible with Speedglas 9100XXi QR Welding & Safety Helmet



Part no. MX4P3EG  
Class 5 (SLC80 27dB)

### Comfortable

Lightweight dual moulded cups to help minimise heat and moisture build-up

### Stylish and reliable

New ear cushion foam technology for an effective acoustic seal and reliable protection

Despite industry regulations, 40 million workers are exposed to loud noise and 13 million suffer from hearing disorders.<sup>1)</sup>

## 3M™ PELTOR™ Welding Earmuffs H505B

### Good fit

Fit perfectly under the 3M™ Speedglas™ Welding Helmet Series 9100

SLC80 22dB Class 4 hearing protection available for the Speedglas 9100, 9100 FX, 9100 Air and 9100 FX Air.

### Less scratch sound

Semi-soft cup surface helps minimise scratch sound transmission



Part no. 19 70 12

### Reliable noise reduction

Soft ear cushions provide a comfortable seal and help reduce loud noise exposure

### Stays in place

Two-point suspension and wire neckband for a secure, comfortable fit

# What other equipment pays for itself in three months?

Not only can you weld faster when you can see more clearly, but your entire movement around your workpiece can become more efficient when you're not constantly having to raise and lower your shield. We've studied welders and their increased efficiency when using our auto-darkening welding helmets for almost four decades:

- The shorter the weld, the greater the productivity increase. Not surprisingly, applications requiring lots of tack welds have the most to gain.
- Where the final appearance of the weld is critical – for example, on high-value items – reduction in scrap alone (e.g. from bad starts) can quickly pay for our helmets.
- Since most welders do a combination of tack and longer welds, we use a conservative, generalised productivity gain estimate of 15%.

So, for example, if you're paying a welder \$30 per hour, the 3M Speedglas Welding Helmet 9100XXi FX Air with 3M Adflo Powered Air Respirator has the capacity to pay for itself in less than three months. In one year, the productivity gain may be potentially as high as \$6,611 in savings per welder.



# \$37,210\*

Average cost of injuries to the face, including disabling and non-disabling eye injuries.<sup>1)</sup>

# 20,300

Lost work days in 2012<sup>1)</sup>

## Ask yourself

Are you doing everything possible to maximise the amount of time your welders have their shield in the safe, down position?

<sup>1)</sup> Source: US National Safety Council's Injury Facts, 2015  
 \* Figure converted from USD to AUD based on the exchange rate at the time of printing (AUD=0.76 USD).



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# Try the Spare Part Finder Tool

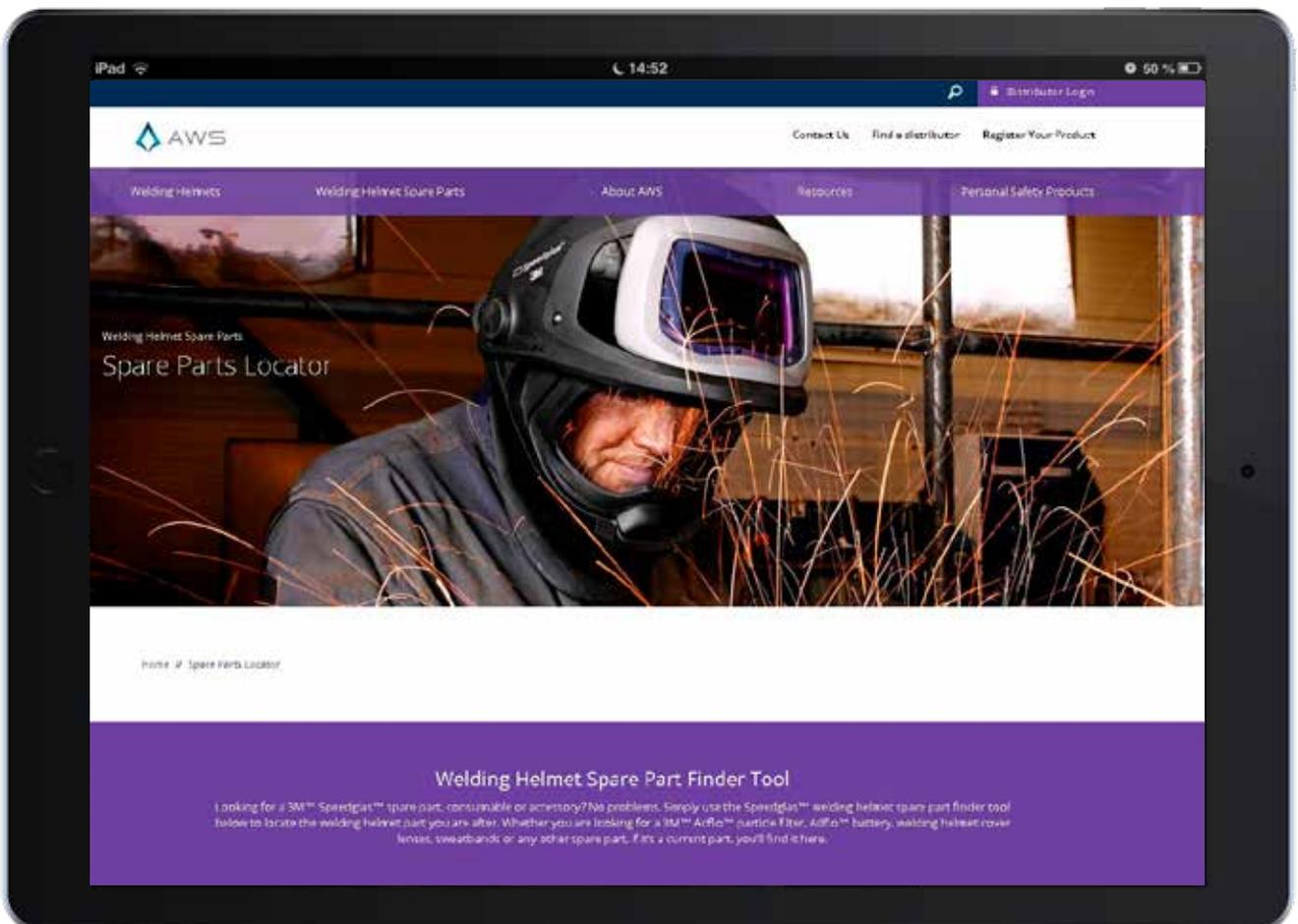
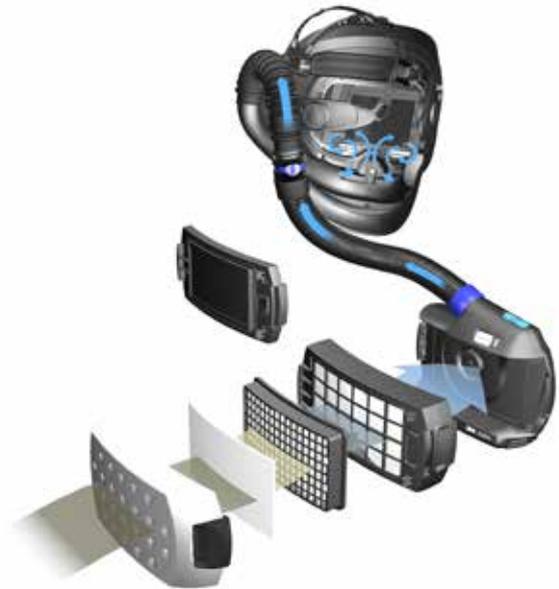
## Having trouble finding a spare part for your welding helmet or respirator?

Locate the welding helmet part you are after - every time. Whether you are looking for a 3M™ Adflo™ particle filter, Adflo™ battery, welding helmet cover lenses, sweatbands or any other spare part, if it's a current part - you'll find it here!

### Search by part number OR series

If you already know the part number - you're well on the way to getting your welding helmet spare parts.

If however you are unsure, find your spare parts by selecting the helmet series and spare part type.



Visit [www.awsi.com.au/spart-parts-locator](http://www.awsi.com.au/spart-parts-locator)

## 3M™ Speedglas™ Welding Helmet 9100



### Helmet with auto-darkening lens

Part No	Description
50 18 26	Speedglas 9100XXi welding helmet - complete.



### Helmet without auto-darkening lens

Part No	Description
50 18 00	Speedglas 9100 welding helmet excluding lens, including head harness.



### Auto-darkening welding lens

Part No	Description
50 00 26	Speedglas 9100XXi welding lens.



### Upgrade: 3M™ Speedglas™ Welding Lens Kit 9100XXi

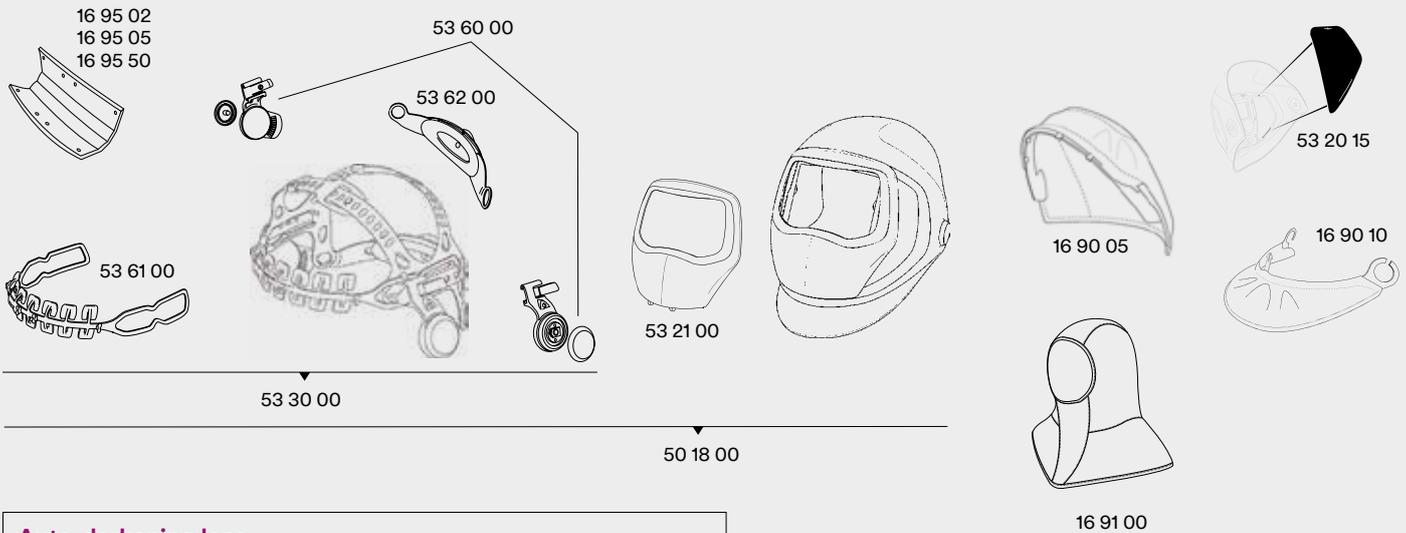
Our top-of-the-line welding lens with improved optics and a specially designed front cover with external controls for grinding and memory modes. This complete kit (front cover and welding lens) is compatible with Speedglas welding helmet models 9100, 9100 Air and 9100 QR.

Read more about the new 9100XXi welding filter on page 9.

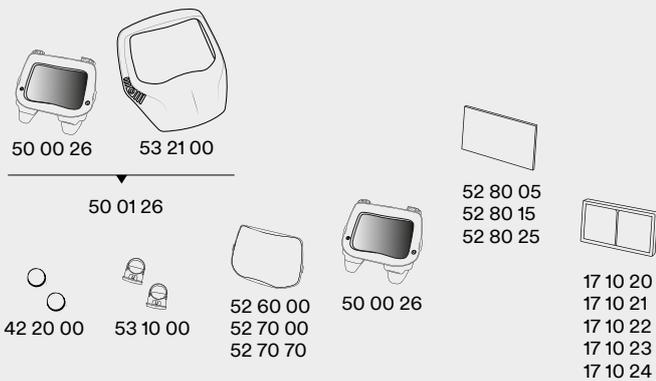


**Part No:**  
50 01 26 Speedglas 9100XXi welding lens & front cover kit.

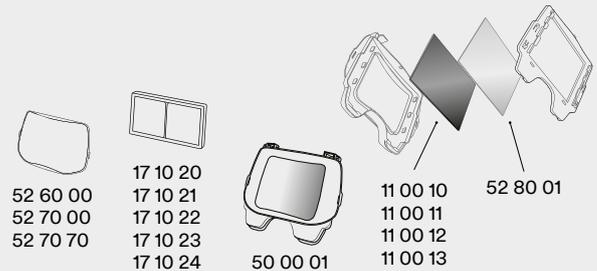
Spare parts & accessories for 3M™ Speedglas™ Welding Helmet 9100



Auto-darkening lens



Passive lens option



Part No	Description	Part No	Description	Part No	Description
11 00 10	Lens Welding Shade 10 Passive 90X110mm 9100	17 10 23	Lens Magnifying 2.5X 9100, 100 & 9000	52 80 15	Lens Cover Inner 9100X Pk=5
11 00 11	Lens Welding Shade 11 Passive 90X110mm 9100	17 10 24	Lens Magnifying 3.0X 9100, 100 & 9000	52 80 25	Lens Cover Inner 9100XX/XXi Pk=5
11 00 12	Lens Welding Shade 12 Passive 90X110mm 9100	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2	53 10 00	Holder Battery 9100
11 00 13	Lens Welding Shade 13 Passive 90X110mm 9100	50 00 01	Lens Welding Filter 9100P Shade 11 Passive	53 20 15	Cover Plates SW 9100 Pk=2
16 90 05	Head Protection 9100	50 00 26	Lens Welding 9100XXi Speedglas	53 21 00	Front Cover Silver 9100XXi
16 90 10	Throat Protection 9100	50 01 26	Lens Welding 9100XXi & Front Cover Kit Speedglas	53 30 00	Head Harness 9100
16 91 00	Head Cape Tecaweld	50 18 00	Helmet Welding 9100 Exc Lens	53 60 00	Head Harness Pivot Mechanism 9100
16 95 02	Sweatband 9100 & 9100 FX Pk=2	52 60 00	Lens Cover Outer Standard 9100 Pk=10	53 61 00	Head Harness Front Part 9100
16 95 05	Sweatband 9100 & 9100 FX Pk=5	52 70 00	Lens Cover Outer Hard Coated 9100 Pk=10	53 62 00	Head Harness Back Part 9100
16 95 50	Sweatband 9100 & 9100 FX Pk=50	52 70 70	Lens Cover Outer High Heat 9100 Pk=10		
17 10 20	Lens Magnifying 1.0X 9100, 100 & 9000	52 80 01	Lens Cover Inner 9100 Passive Pk=5		
17 10 21	Lens Magnifying 1.5X 9100, 100 & 9000	52 80 05	Lens Cover Inner 9100V Pk=5		
17 10 22	Lens Magnifying 2.0X 9100, 100 & 9000				

## 3M™ Speedglas™ Welding Helmet 9100 FX



### Helmet with auto-darkening lens

Part No	Description
54 18 26	Speedglas 9100XXi FX welding helmet - complete.

### Helmet without auto-darkening lens

Part No	Description
54 18 00	Speedglas 9100 FX welding helmet excluding lens, including head harness.

### Auto-darkening welding lens

Part No	Description
50 00 26	Speedglas 9100XXi welding lens.

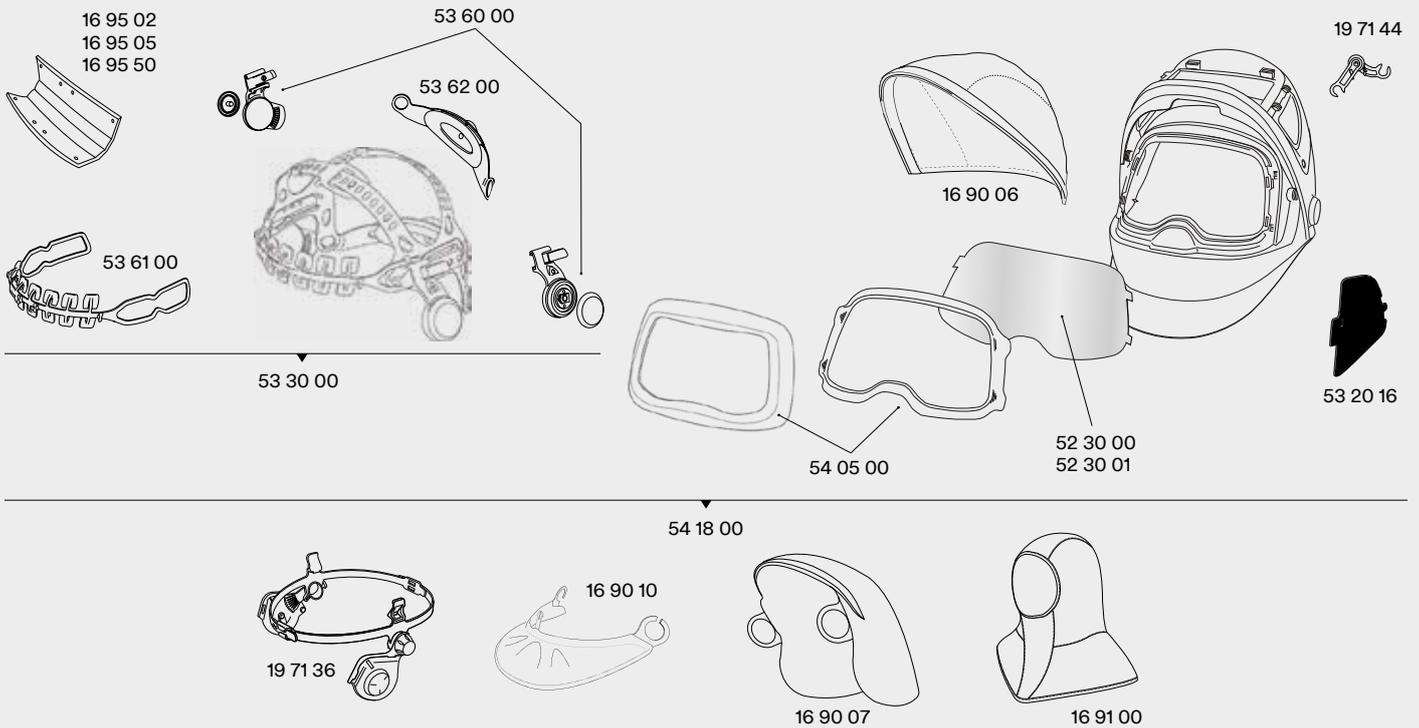
### Flip-up helmet functionality

The Speedglas welding helmet 9100XXi FX gives you a flip-up combination of an auto-darkening welding helmet and protective visor.

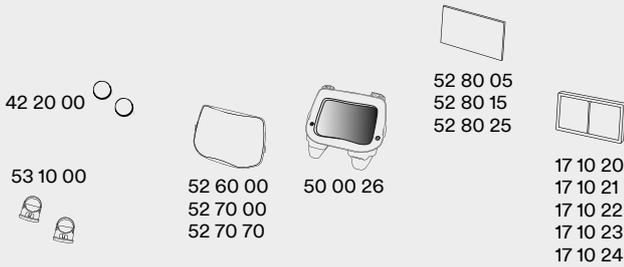
Not only is the viewing area larger compared to previous models, we redesigned the geometry of the helmet for a wider field of view in all directions.



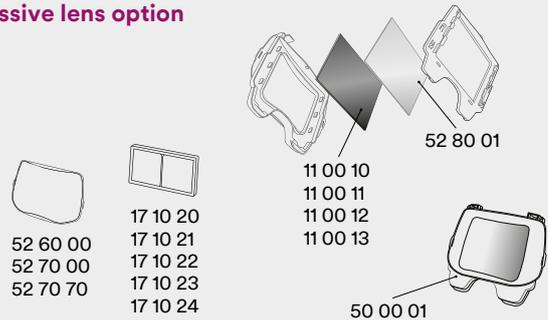
**Spare parts & accessories for 3M™ Speedglas™ Welding Helmet 9100 FX**



**Auto-darkening lens**



**Passive lens option**



Part No	Description	Part No	Description	Part No	Description
11 00 10	Lens Welding Shade 10 Passive 90X110mm 9100	17 10 24	Lens Magnifying 3.0X 9100, 100 & 9000	52 80 25	Lens Cover Inner 9100XX/XXi Pk=5
11 00 11	Lens Welding Shade 11 Passive 90X110mm 9100	19 71 36	Attachment Hard Hat Speedyloop 9100 FX	53 10 00	Holder Battery 9100
11 00 12	Lens Welding Shade 12 Passive 90X110mm 9100	19 71 44	Flip Up Mechanism 9100 FX Pk=2	53 20 16	Sidewindows Cover Plate 9100 FX & MP Pk=2
11 00 13	Lens Welding Shade 13 Passive 90X110mm 9100	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2	53 30 00	Head Harness 9100
16 90 06	Head Cover Small 9100 FX	50 00 01	Lens Welding Filter 9100P Shade 11 Passive	53 60 00	Head Harness Pivot Mechanism 9100
16 90 07	Head Cover Large 9100 FX	50 00 26	Lens Welding 9100XXi Speedglas	53 61 00	Head Harness Front Part 9100
16 90 10	Throat Protection 9100	52 30 00	Visor Plate 9100 FX & MP Pk=5	53 62 00	Head Harness Back Part 9100
16 91 00	Head Cape Tecaweld	52 30 01	Visor Plate Anti-Fog 9100 FX & MP Pk=5	54 05 00	Front Cover Kit 9100 FX & MP
16 95 02	Sweatband 9100 & 9100 FX Pk=2	52 60 00	Lens Cover Outer Standard 9100 Pk=10	54 18 00	Helmet Welding Exc Lens 9100 FX
16 95 05	Sweatband 9100 & 9100 FX Pk=5	52 70 00	Lens Cover Outer Hard Coated 9100 Pk=10		
16 95 50	Sweatband 9100 & 9100 FX Pk=50	52 70 70	Lens Cover Outer High Heat 9100 Pk=10		
17 10 20	Lens Magnifying 1.0X 9100, 100 & 9000	52 70 70	Lens Cover Outer High Heat 9100 Pk=10		
17 10 21	Lens Magnifying 1.5X 9100, 100 & 9000	52 80 01	Lens Cover Inner 9100 Passive Pk=5		
17 10 22	Lens Magnifying 2.0X 9100, 100 & 9000	52 80 05	Lens Cover Inner 9100V Pk=5		
17 10 23	Lens Magnifying 2.5X 9100, 100 & 9000	52 80 15	Lens Cover Inner 9100X Pk=5		
17 10 24	Lens Magnifying 3.0X 9100, 100 & 9000	52 80 25	Lens Cover Inner 9100XX/XXi Pk=5		

# 3M™ Speedglas™ Welding 9100 QR



## Welding helmet with safety helmet

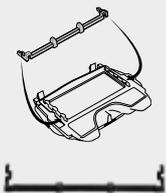
Part No	Description
50 36 26	Welding helmet 9100XXi QR - complete.

## Welding helmet without safety helmet

Part No	Description
50 26 26	Welding helmet 9100XXi QR excluding safety helmet, including welding lens.

## Auto-darkening welding lens

Part No	Description
50 00 26	Speedglas 9100XXi welding lens.



### Distance bar

We recommend using this distance bar (included when you buy a complete 9100 QR welding and safety helmet). Also sold as a spare part.

Part No 53 11 00



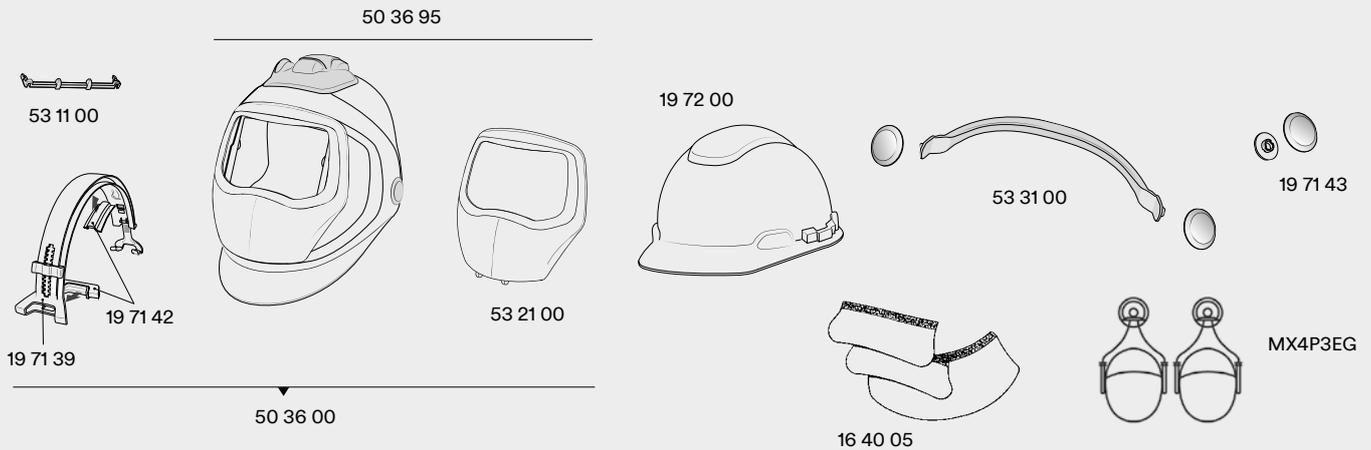
### Ear muff bar

For optimum comfort when using ear muffs, we recommend installing this ear muff bar.

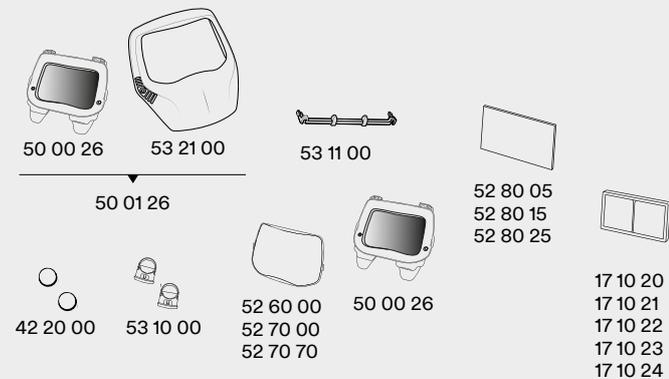
Sold as a separate accessory.

Part No 53 31 00

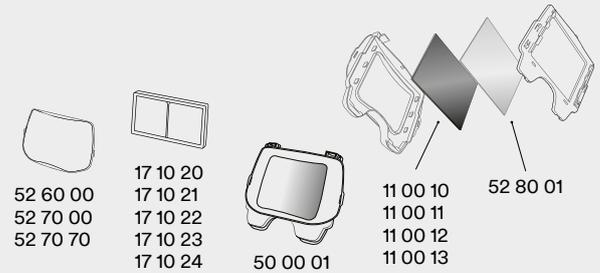
**Spare parts & accessories for 3M™ Speedglas™ Welding & Safety Helmet 9100 QR**



**Auto-darkening lens**



**Passive lens option**



Part No	Description	Part No	Description	Part No	Description
11 00 10	Lens Welding Shade 10 Passive 90X110mm 9100	19 71 39	Rail QR	52 80 25	Lens Cover Inner 9100XX/XXi Pk=5
11 00 11	Lens Welding Shade 11 Passive 90X110mm 9100	19 71 42	Pads Rubber QR	53 10 00	Holder Battery 9100
11 00 12	Lens Welding Shade 12 Passive 90X110mm 9100	19 71 43	Pivot Cover Plate QR	53 11 00	Bar Distance 9100X & 9100XX QR
11 00 13	Lens Welding Shade 13 Passive 90X110mm 9100	19 72 00	Hard Hat White with Ratchet Harness 9100	53 21 00	Front Cover Silver 9100XXi
16 40 05	Ear/Throat Protection Leather 100 & 9000	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2	53 31 00	Bar Ear Muff 9100 QR
16 75 02	Sweatband Toweling 100 & 9000 Pk=2	50 00 01	Lens Welding Filter 9100P Shade 11 Passive	MX4P3EG	Earmuffs QR
16 75 05	Sweatband Toweling 100 & 9000 Pk=5	50 00 26	Lens Welding 9100XXi Speedglas		
16 75 50	Sweatband Toweling 100 & 9000 Pk=50	50 01 26	Lens Welding 9100XXi & Front Kit Speedglas		
17 10 20	Lens Magnifying 1.0X 9100, 100 & 9000	50 36 00	Helmet Welding Exc Lens & Hard Hat 9100 QR		
17 10 21	Lens Magnifying 1.5X 9100, 100 & 9000	50 36 95	Helmet Welding Exc Lens, Hard Hat & Rail 9100 QR		
17 10 22	Lens Magnifying 2.0X 9100, 100 & 9000	52 60 00	Lens Cover Outer Standard 9100 Pk=10		
17 10 23	Lens Magnifying 2.5X 9100, 100 & 9000	52 70 00	Lens Cover Outer Hard Coated 9100 Pk=10		
17 10 24	Lens Magnifying 3.0X 9100, 100 & 9000	52 70 70	Lens Cover Outer High Heat 9100 Pk=10		
		52 80 01	Lens Cover Inner 9100 Passive Pk=5		
		52 80 05	Lens Cover Inner 9100V Pk=5		
		52 80 15	Lens Cover Inner 9100X Pk=5		

# 3M™ Speedglas™ Welding Helmet 9100 Air



## Helmet systems with powered air

Part No	Description
50 77 26 <sup>1)</sup>	Speedglas 9100XXi Air welding helmet with standard Adflo powered air respirator - complete.
507726HD <sup>1)</sup>	Speedglas 9100XXi Air welding helmet with heavy duty Adflo powered air respirator - complete.

## Helmet system with supplied air

Part No	Description
50 88 26 <sup>1)</sup>	Speedglas 9100XXi Air welding helmet with Versaflo V-500E supplied air regulator - complete.

## Auto-darkening welding lens

Part No	Description
50 00 26	Speedglas 9100XXi welding lens.

## Maintenance tips for 3M™ Speedglas™ Welding Helmet 9100 Air

For Care & Maintenance information, posters and videos, visit our website at [www.awsi.com.au](http://www.awsi.com.au)



[www.awsi.com.au](http://www.awsi.com.au)



Adjust the air duct length for a personalised fit.



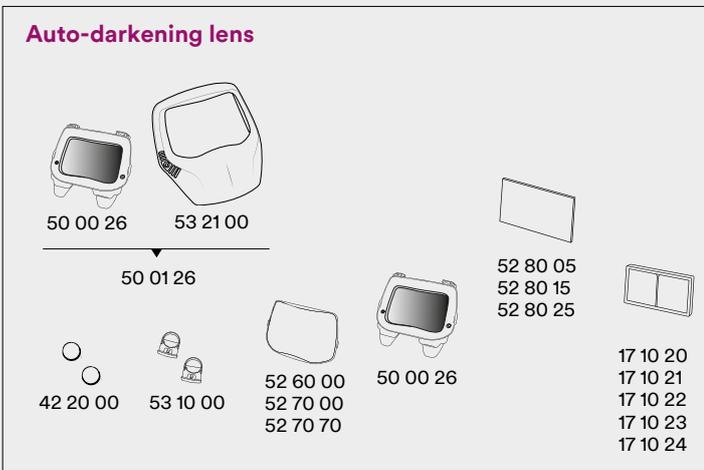
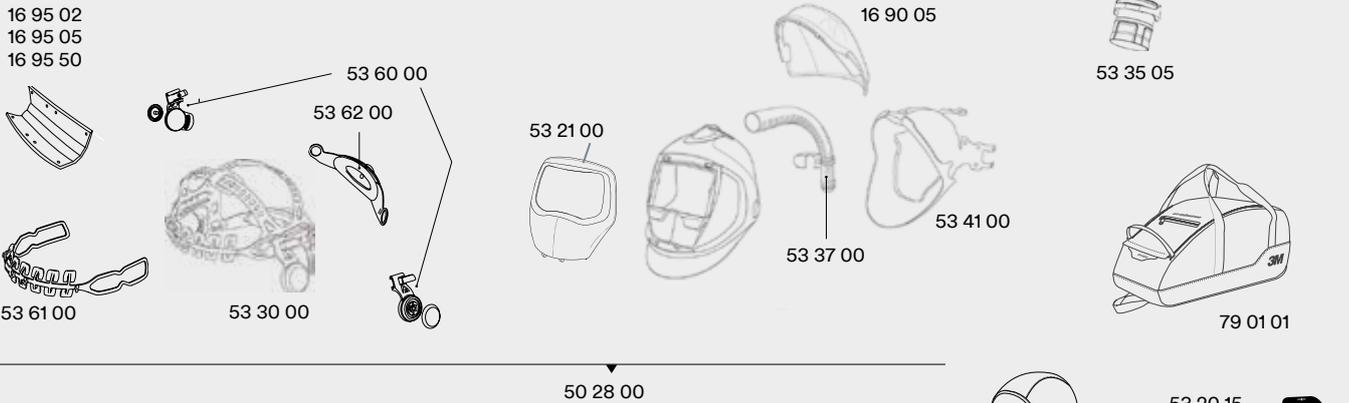
To provide protection the face seal must be in good condition. Do you know how to replace it?



Extend your head and neck coverage for additional protection from heat, sparks and splatter.

<sup>1)</sup> With storage bag (79 0101)

Spare parts & accessories for 3M™ Speedglas™ Welding Helmet 9100 Air



Part No	Description	Part No	Description	Part No	Description
16 90 05	Head Protection 9100	50 88 00	Speedglas 9100 Air with V-500E, Exc Welding Lens & Bag	79 01 01	Carry Bag Speedglas
16 90 10	Throat Protection 9100	50 90 26	Speedglas 9100XXi Air Upgrade Kit, Exc Adflo		
16 91 00	Head Cape Tecaweld	52 60 00	Lens Cover Outer Standard 9100 Pk=10		
16 95 02	Sweatband 9100 & 9100 FX Pk=2	52 70 00	Lens Cover Outer Hard Coated 9100 Pk=10		
16 95 05	Sweatband 9100 & 9100 FX Pk=5	52 70 70	Lens Cover Outer High Heat 9100 Pk=10		
16 95 50	Sweatband 9100 & 9100 FX Pk=50	52 80 05	Lens Cover Inner 9100V Pk=5		
17 10 20	Lens Magnifying 1.0X 9100, 100 & 9000	52 80 15	Lens Cover Inner 9100X Pk=5		
17 10 21	Lens Magnifying 1.5X 9100, 100 & 9000	52 80 25	Lens Cover Inner 9100XX/XXi Pk=5		
17 10 22	Lens Magnifying 2.0X 9100, 100 & 9000	53 10 00	Holder Battery 9100		
17 10 23	Lens Magnifying 2.5X 9100, 100 & 9000	53 20 15	Cover Plates SW 9100 Pk=2		
17 10 24	Lens Magnifying 3.0X 9100, 100 & 9000	53 21 00	Front Cover Silver 9100XXi		
42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2	53 30 00	Head Harness 9100		
50 00 26	Lens Welding 9100XXi Speedglas	53 35 05	Adaptor Adflo Breathing Tube 9100 Air, FX Air, MP Air		
50 01 26	Lens Welding 9100XXi & Front Kit Speedglas	53 37 00	Air Duct Back Part 9100 Air		
50 28 00	Helmet Welding 9100 Air Exc Lens	53 41 00	Face Seal 9100 Air		
50 77 00	Speedglas 9100 Air with Adflo, Exc Welding Lens & Bag	53 60 00	Head Harness Pivot Mechanism 9100		
		53 61 00	Head Harness Front Part 9100		
		53 62 00	Head Harness Back Part 9100		

# 3M™ Speedglas™ Welding Helmet 9100 FX Air



## Helmet systems with powered air

Part No	Description
54 77 26 <sup>1)</sup>	Speedglas 9100XXi FX Air welding helmet with standard Adflo powered air respirator - complete.

547726HD<sup>1)</sup> Speedglas 9100XXi FX Air welding helmet with heavy duty Adflo powered air respirator - complete.

## Helmet system with supplied air

Part No	Description
54 88 26 <sup>1)</sup>	Speedglas 9100XXi FX Air welding helmet with Versaflo V-500E supplied air regulator - complete.

## Auto-darkening welding lens

Part No	Description
50 00 26	Speedglas 9100XXi welding lens.

## Maintenance tips for 3M™ Speedglas™ Welding Helmet 9100 FX Air

For Care & Maintenance information, posters and videos, visit our website at [www.awsi.com.au](http://www.awsi.com.au)



[www.awsi.com.au](http://www.awsi.com.au)



It is important that the face seal is correctly installed and fitted to provide the correct protection factor.

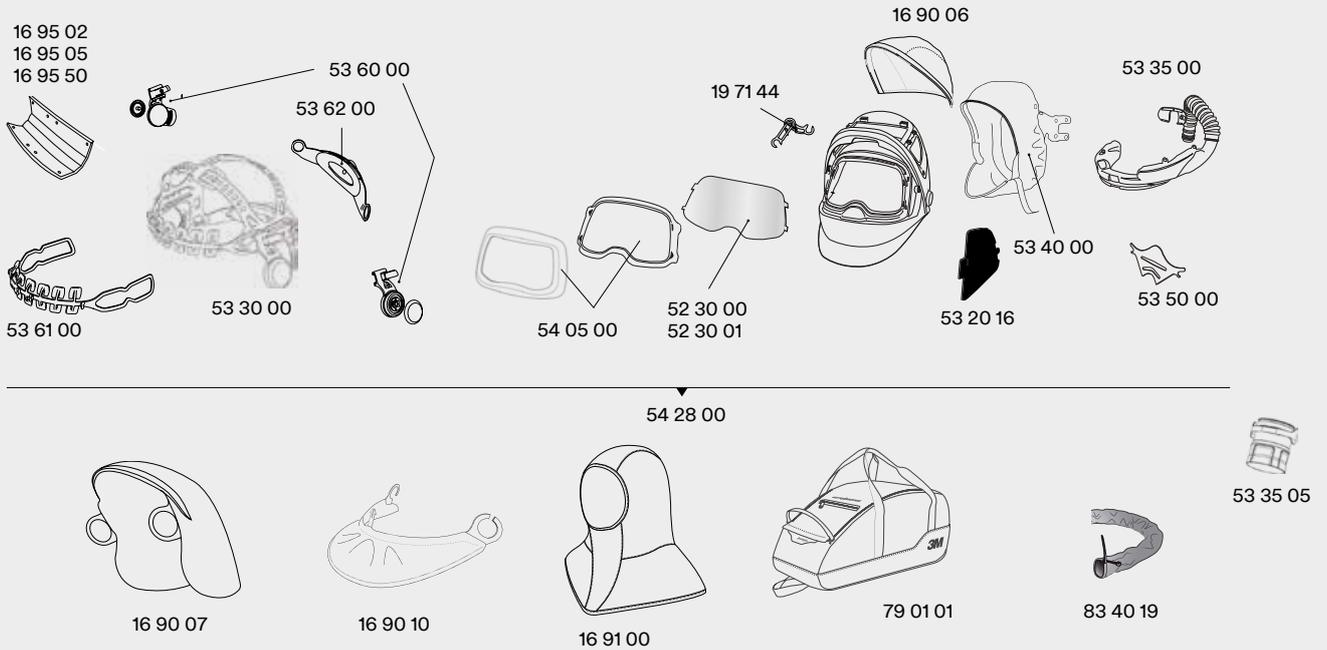


Is your clear grinding visor not so clear anymore? Learn how to replace it at [www.awsi.com.au](http://www.awsi.com.au)

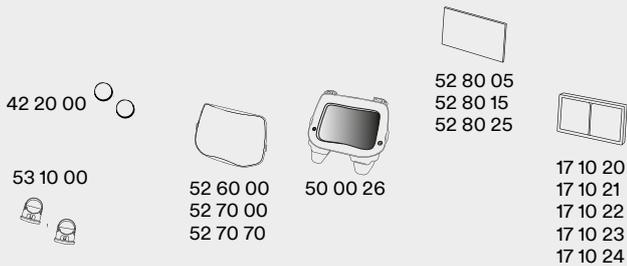


If you need additional protection for your head, watch how to install the large head cover.

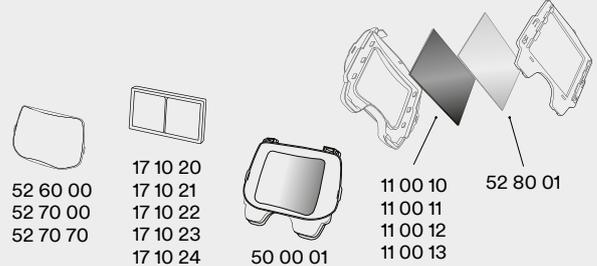
**Spare parts & accessories for 3M™ Speedglas™ Welding Helmet 9100 FX Air**



**Auto-darkening lens**



**Passive lens option**



Part No	Description	Part No	Description	Part No	Description
11 00 10	Lens Welding Shade 10 Passive 90X110mm 9100	19 71 44	Flip Up Mechanism 9100 FX Pk=2	53 35 05	Adaptor Adflo Breathing Tube 9100 Air, FX Air & MP Air
11 00 11	Lens Welding Shade 11 Passive 90X110mm 9100	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2	53 40 00	Face Seal 9100 FX Air
11 00 12	Lens Welding Shade 12 Passive 90X110mm 9100	50 00 01	Lens Welding Filter 9100P Shade 11 Passive	53 50 00	Air Deflector 9100 FX Air
11 00 13	Lens Welding Shade 13 Passive 90X110mm 9100	50 00 26	Lens Welding 9100XXi Speedglas	53 60 00	Head Harness Pivot Mechanism 9100
16 90 06	Head Cover Small 9100 FX	52 30 00	Visor Plate 9100 FX & MP Pk=5	53 61 00	Head Harness Front Part 9100
16 90 07	Head Cover Large 9100 FX	52 30 01	Visor Plate Anti-Fog 9100 FX & MP Pk=5	53 62 00	Head Harness Back Part 9100
16 90 10	Throat Protection 9100	52 60 00	Lens Cover Outer Standard 9100 Pk=10	54 05 00	Front Cover Kit 9100 FX & MP
16 91 00	Head Cape Tecaweld	52 70 00	Lens Cover Outer Hard Coated 9100 Pk=10	54 28 00	Helmet Welding 9100 FX Air Exc Lens
16 95 02	Sweatband 9100 & 9100 FX Pk=2	52 70 70	Lens Cover Outer High Heat 9100 Pk=10	54 77 00	Speedglas 9100 FX Air with Adflo, Exc Welding Lens & Bag
16 95 05	Sweatband 9100 & 9100 FX Pk=5	52 80 01	Lens Cover Inner 9100 Passive Pk=5	54 88 00	Speedglas 9100 FX Air with V-500E, Exc Welding Lens & Bag
16 95 50	Sweatband 9100 & 9100 FX Pk=50	52 80 05	Lens Cover Inner 9100V Pk=5	54 90 26	Speedglas 9100XXi FX Air Upgrade Kit, Exc Adflo
17 10 20	Lens Magnifying 1.0X 9100, 100 & 9000	52 80 15	Lens Cover Inner 9100X Pk=5	79 01 01	Carry Bag Speedglas
17 10 21	Lens Magnifying 1.5X 9100, 100 & 9000	52 80 25	Lens Cover Inner 9100XX/XXi Pk=5	83 40 19	Breathing Tube Cover Flame Resistant 9100 FX Air
17 10 22	Lens Magnifying 2.0X 9100, 100 & 9000	53 10 00	Holder Battery 9100		
17 10 23	Lens Magnifying 2.5X 9100, 100 & 9000	53 20 16	Side Windows Cover Plate 9100 FX & MP Pk=2		
17 10 24	Lens Magnifying 3.0X 9100, 100 & 9000	53 30 00	Head Harness 9100		
		53 35 00	Air Duct Assembly 9100 FX Air		

# 3M™ Speedglas™ Welding Helmet 9100 MP Air



## Helmet systems with powered air

Part No	Description
57 77 26 <sup>1)</sup>	Speedglas 9100XXi MP Air welding and safety helmet with standard Adflo powered air respirator - complete.
577726HD <sup>1)</sup>	Speedglas 9100XXi MP Air welding and safety helmet with heavy duty Adflo powered air respirator - complete.

## Helmet system with supplied air

Part No	Description
57 88 26 <sup>1)</sup>	Speedglas 9100XXi MP Air welding and safety helmet with Versaflo V-500E supplied air regulator - complete.

## Auto-darkening welding lens

Part No	Description
50 00 26	Speedglas 9100XXi welding lens.

## Maintenance tips for 3M™ Speedglas™ Welding Helmet 9100 MP Air

For Care & Maintenance information, posters and videos, visit our website at [www.awsi.com.au](http://www.awsi.com.au)



[www.awsi.com.au](http://www.awsi.com.au)



Need to refresh the head protection on your 9100MP? Find out how to remove the safety helmet.

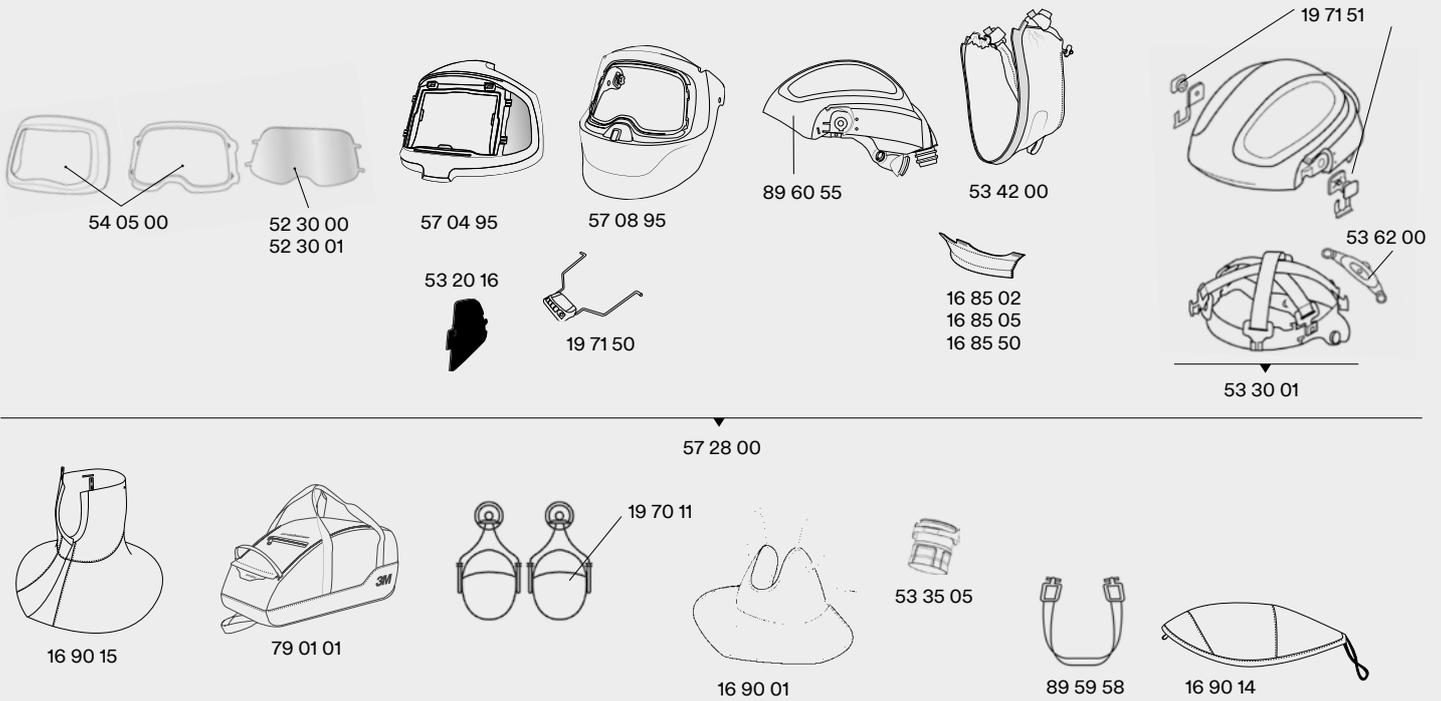


Learn how to install the heat-reflecting, silver helmet cover, helping to shield dust and particles from your helmet.

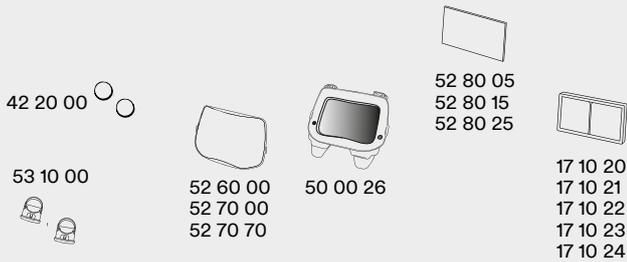


Need higher attenuation for your hearing protection, or is it just time to replace the old ones? See how to assemble the ear muffs in this video.

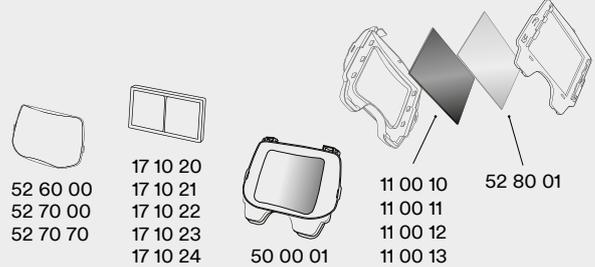
Spare parts & accessories for 3M™ Speedglas™ Welding Helmet 9100 MP Air



Auto-darkening lens



Passive lens option



Part No	Description	Part No	Description	Part No	Description
11 00 10	Lens Welding Shade 10 Passive 90X110mm 9100	17 10 24	Lens Magnifying 3.0X 9100, 100 & 9000	53 10 00	Holder Battery 9100
11 00 11	Lens Welding Shade 11 Passive 90X110mm 9100	19 70 11	Earmuffs with Helmet Attachment 9100 MP	53 20 16	SideWindows Cover Plate 9100 FX & MP Pk=2
11 00 12	Lens Welding Shade 12 Passive 90X110mm 9100	19 71 50	Flip Up Mechanism 9100 MP	53 30 01	Head Harness 9100 MP
11 00 13	Lens Welding Shade 13 Passive 90X110mm 9100	19 71 51	Pivot Kit 9100 MP	53 35 05	Adaptor Adflo Breathing Tube 9100 Air, FX Air & MP Air
16 85 02	Sweatband 100, 9002NC, SL & 9100 MP Pk=2	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2	53 42 00	Face Seal 9100 MP
16 85 05	Sweatband 100, 9002NC, SL & 9100 MP Pk=5	50 00 01	Lens Welding Filter 9100P Shade 11 Passive	53 62 00	Head Harness Back Part 9100
16 85 50	Sweatband 100, 9002NC, SL & 9100 MP Pk=50	50 00 26	Lens Welding 9100XXi Speedglas	54 05 00	Front Cover Kit 9100 FX & MP
16 90 01	Throat Protection Tecaweld 100 & 9100 MP	52 30 00	Visor Plate 9100 FX & MP Pk=5	57 04 95	Shell Outer 9100 MP
16 90 01	Throat Protection Tecaweld 100 & 9100 MP	52 30 01	Visor Plate Anti-Fog 9100 FX & MP Pk=5	57 08 95	Shell Inner 9100 MP
16 90 14	Cover Hard Hat 9100 MP	52 60 00	Lens Cover Outer Standard 9100 Pk=10	57 28 00	Helmet Welding With Hard Hat 9100 MP
16 90 15	Shroud Helmet 9100 MP	52 70 00	Lens Cover Outer Hard Coated 9100 Pk=10	57 77 00	Speedglas 9100 MP Air with Adflo, Exc Welding Lens & Bag
17 10 20	Lens Magnifying 1.0X 9100, 100 & 9000	52 70 70	Lens Cover Outer High Heat 9100 Pk=10	57 88 00	Speedglas 9100 MP Air with V-500E, Exc Welding Lens & Bag
17 10 21	Lens Magnifying 1.5X 9100, 100 & 9000	52 80 01	Lens Cover Inner 9100 Passive Pk=5	57 90 26	Speedglas 9100XXi MP Air Upgrade Kit, Exc Adflo
17 10 22	Lens Magnifying 2.0X 9100, 100 & 9000	52 80 05	Lens Cover Inner 9100V Pk=5	79 01 01	Carry Bag Speedglas
17 10 23	Lens Magnifying 2.5X 9100, 100 & 9000	52 80 15	Lens Cover Inner 9100X Pk=5	89 59 58	Chin Strap Face Shield
		52 80 25	Lens Cover Inner 9100XX/XXi Pk=5	89 60 55	Hard Hat 9100 MP

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



## Respirator without headtop – standard battery

Part No	Description
83 77 30	Adflo powered air respirator with standard battery - complete.



## Respirator without headtop – heavy duty battery

Part No	Description
83 77 31	Adflo powered air respirator with heavy duty battery - complete.



## Standard battery upgrade kit

Don't get weighed down. A lightweight Lithium-ion battery designed for the Adflo respirator.

- Run time 8 hours<sup>1)</sup>
- Charging time 4.5 hours
- Compact and lightweight
- Rapid Charge (approx. 0-80% capacity in 1 hour)
- Kit includes new Li-ion standard battery and charger

Part No: 83 76 30C



## Heavy duty battery upgrade kit

A high-capacity Lithium-ion battery pack extends the operating hours of the respirator.

- Long run time 12 hours<sup>1)</sup>
- Charging time 5.5 hours
- Compact and lightweight
- Rapid Charge (approx. 0-80% capacity in 1 hour)
- Kit includes new Li-ion heavy duty battery and charger

Part No: 83 76 31C



## 3M™ Adflo™ Battery Charging Stand

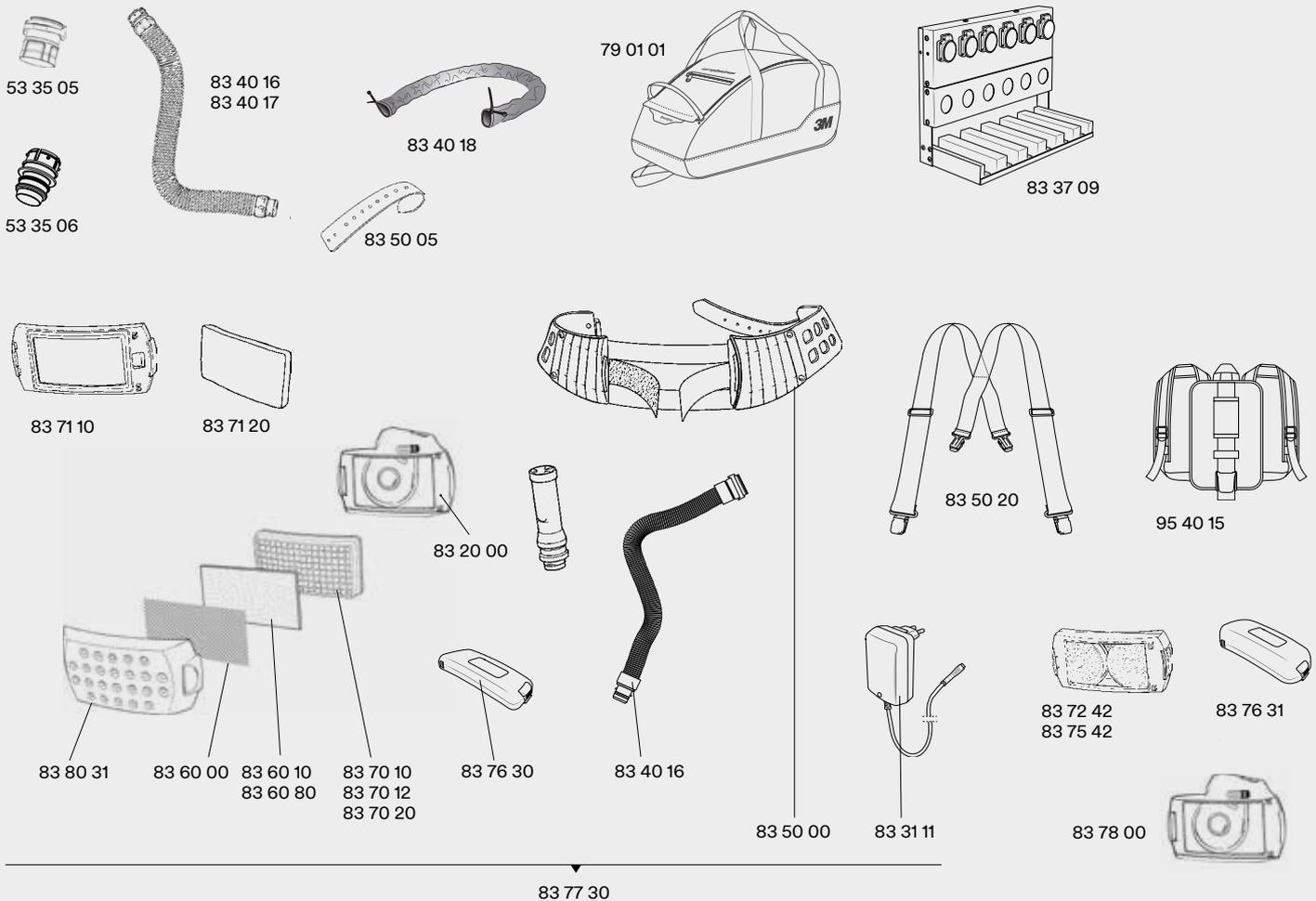
The 6-position battery charging stand for Adflo battery chargers provides the ability to charge six batteries simultaneously - saving both time and hassle<sup>2)</sup>. Compatible with legacy Ni-MH batteries and the new Li-ion batteries. Flexible installation: either wall-mounted or stand-alone.

Part No: 83 37 09

<sup>1)</sup> Expected operating times are when using a new, fully-charged battery, new particle filter and a standard airflow setting.

<sup>2)</sup> Item does not include the battery chargers or batteries displayed. Batteries and chargers sold separately.

## Spare parts &amp; accessories for 3M™ Adflo™ Powered Air Respirator



Part No	Description	Part No	Description	Part No	Description
53 35 05	Adaptor Adflo Breathing Tube 9100 Air, FX Air, MP Air	83 70 10	Filter Particle PSL Adflo	95 40 15	Backpack Adflo
53 35 06	Adaptor QRS Breathing Tube to 9000	83 70 12	Filter Particle PSL Adflo Pk=2		
79 01 01	Carry Bag Speedglas	83 70 20	Filter Particle PSL Adflo Pk=20		
80 60 20	Back Harness Adflo	83 71 10	Filter Odour Adflo		
83 20 00	PAPR Motor with Housing Adflo	83 71 20	Filter Odour Replacement Pad Adflo		
83 31 11 <sup>1)</sup>	Charger Battery Li-ion Adflo	83 72 42	Filter Nuis Level Organic Vapour/Acid Gas Adflo		
83 37 09	Battery Multi-Station Adflo	83 75 42	Filter Gas A1 Adflo		
83 40 16	Tube Breathing Self Adjusting QRS Adflo	83 76 30 <sup>1)</sup>	Battery Standard Li-ion Adflo		
83 40 17	Tube Breathing Heavy Duty Rubber QRS Adflo	83 76 30C	Upgrade Kit Standard Li-ion Battery & Charger		
83 40 18	Tube Breathing Cover Flame Resistant Adflo	83 76 31 <sup>1)</sup>	Battery Heavy Duty Li-ion Adflo		
83 50 00	Belt Adflo	83 76 31C	Upgrade Kit Heavy Duty Li-ion Battery & Charger		
83 50 05	Belt Extension Adflo	83 77 30	Respirator Standard Li-ion Adflo		
83 50 20	Braces Adflo	83 77 31	Respirator Heavy Duty Li-ion Adflo		
83 60 00	Spark Arrestor Adflo	83 78 00	PAPR Motor with Housing Adflo High Altitude		
83 60 10	Pre-Filter Adflo Pk=5	83 80 31	Filter Cover Li-ion Adflo		
83 60 80	Pre-Filter Adflo Pk=80				

<sup>1)</sup> Lithium-ion (grey) batteries (83 76 30, 83 76 31) are only compatible with the Lithium-ion battery charger (83 31 11).

# 3M™ Versaflo™ Supplied Air Regulators



**Versaflo supplied air regulator V-500E**

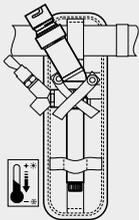
Part No	Description
85 20 17	Versaflo V-500E regulator with belt.



**Vortex cooler personal air conditioner**

Part No	Description
AWS4590	Vortex cooler including muffler, with belt.

## Spare parts & accessories for 3M™ Versaflo™ Supplied Air Regulators



AWS4590

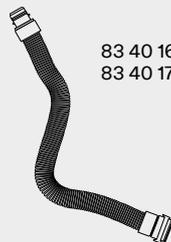


85 20 17

89 51 10



83 40 18



83 40 16  
83 40 17



53 35 06

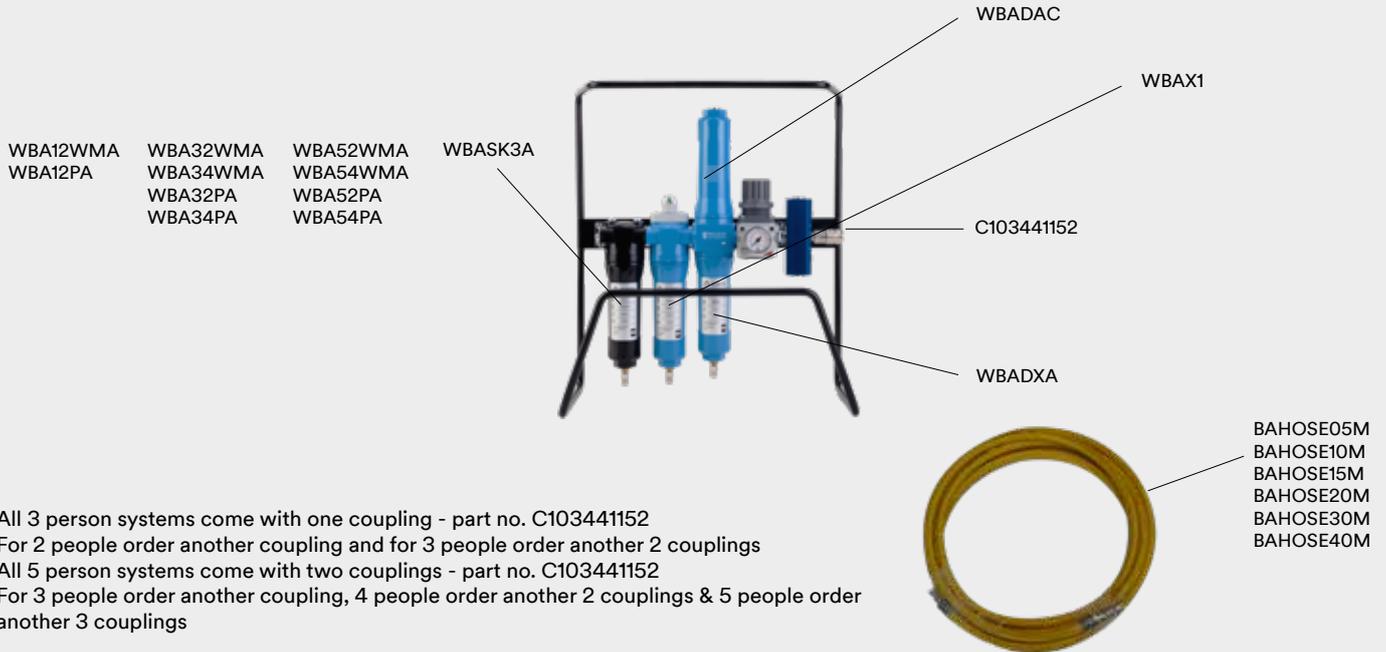


- BAHOSE05M
- BAHOSE10M
- BAHOSE15M
- BAHOSE20M
- BAHOSE30M
- BAHOSE40M

Part No	Description
53 35 06	Adaptor QRS Breathing Tube to 9000
83 40 16	Tube Breathing Self Adjusting QRS Adflo
83 40 17	Tube Breathing Heavy Duty Rubber QRS Adflo
83 40 18	Tube Breathing Cover Flame Resistant Adflo
89 51 10	Carbon Filter and Two O-Rings SAR
85 20 17	Regulator V-500E with Belt
AWS4590	Vortex Cooler Inc Muffler With Belt

Part No	Description
BAHOSE05M	Hose Breathing Air 5M with CEJN Fittings
BAHOSE10M	Hose Breathing Air 10M with CEJN Fittings
BAHOSE15M	Hose Breathing Air 15M with CEJN Fittings
BAHOSE20M	Hose Breathing Air 20M with CEJN Fittings
BAHOSE30M	Hose Breathing Air 30M with CEJN Fittings
BAHOSE40M	Hose Breathing Air 40M with CEJN Fittings

# Breathing Air Filtration Systems



All 3 person systems come with one coupling - part no. C103441152  
 For 2 people order another coupling and for 3 people order another 2 couplings  
 All 5 person systems come with two couplings - part no. C103441152  
 For 3 people order another coupling, 4 people order another 2 couplings & 5 people order another 3 couplings

Part No	Description	Part No	Description
<b>NEW 2018 ALPHA BREATHING AIR SYSTEMS</b>		<b>HOSES</b>	
<b>WBA12WMA</b>	BA System 1 Person 2 Stage Wall Mount Alpha	<b>BAHOSE05M</b>	Hose Breathing Air 5M with CEJN Fittings
<b>WBA12PA</b>	BA System 1 Person 2 Stage Portable Alpha	<b>BAHOSE10M</b>	Hose Breathing Air 10M with CEJN Fittings
<b>WBA32WMA</b>	BA System 3 Person 2 Stage Wall Mount Alpha	<b>BAHOSE15M</b>	Hose Breathing Air 15M with CEJN Fittings
<b>WBA32PA</b>	BA System 3 Person 2 Stage Portable Alpha	<b>BAHOSE20M</b>	Hose Breathing Air 20M with CEJN Fittings
<b>WBA34WMA</b>	BA System 3 Person 4 Stage Wall Mount Alpha	<b>BAHOSE30M</b>	Hose Breathing Air 30M with CEJN Fittings
<b>WBA34PA</b>	BA System 3 Person 4 Stage Portable Alpha	<b>BAHOSE40M</b>	Hose Breathing Air 40M with CEJN Fittings
<b>WBA52WMA</b>	BA System 5 Person 2 Stage Wall Mount Alpha	<b>C103441152</b>	Coupling Male Thread R 1/4 BAS
<b>WBA52PA</b>	BA System 5 Person 2 Stage Portable Alpha	<b>PRE-2018 ELEMENTS</b>	
<b>WBA54WMA</b>	BA System 5 Person 4 Stage Wall Mount Alpha	<b>WBA058</b>	BA Element Water Spinner Filter
<b>WBA54PA</b>	BA System 5 Person 4 Stage Portable Alpha	<b>WBA3AC</b>	BA Element Activated Carbon (Upper) 1&3 Person
<b>NEW 2018 ELEMENTS</b>		<b>WBA3XA</b>	BA Element 0.01 Micron (Lower) 1&3 Person
<b>WBASK3A</b>	BA Element Water Spinner Filter Alpha	<b>WBA3X1</b>	BA Element 1 Micron Pre Filter 1&3 Person
<b>WBAX1</b>	BA Element 1 Micron Pre Filter Alpha	<b>WBA5AC</b>	BA Element Activated Carbon (Upper) 5 Person
<b>WBADXA</b>	BA Element 0.01 Micron (Lower) Alpha	<b>WBA5XA</b>	BA Element 0.01 Micron (Lower) 5 Person
<b>WBADAC</b>	BA Element Activated Carbon (Upper) Alpha	<b>WBA5X1</b>	BA Element 1 Micron Pre Filter 5 Person

## Supplied Breathing Air Process & Components



Air compressor



Breathing Air Hose



Breathing Air System



Breathing Air Hose

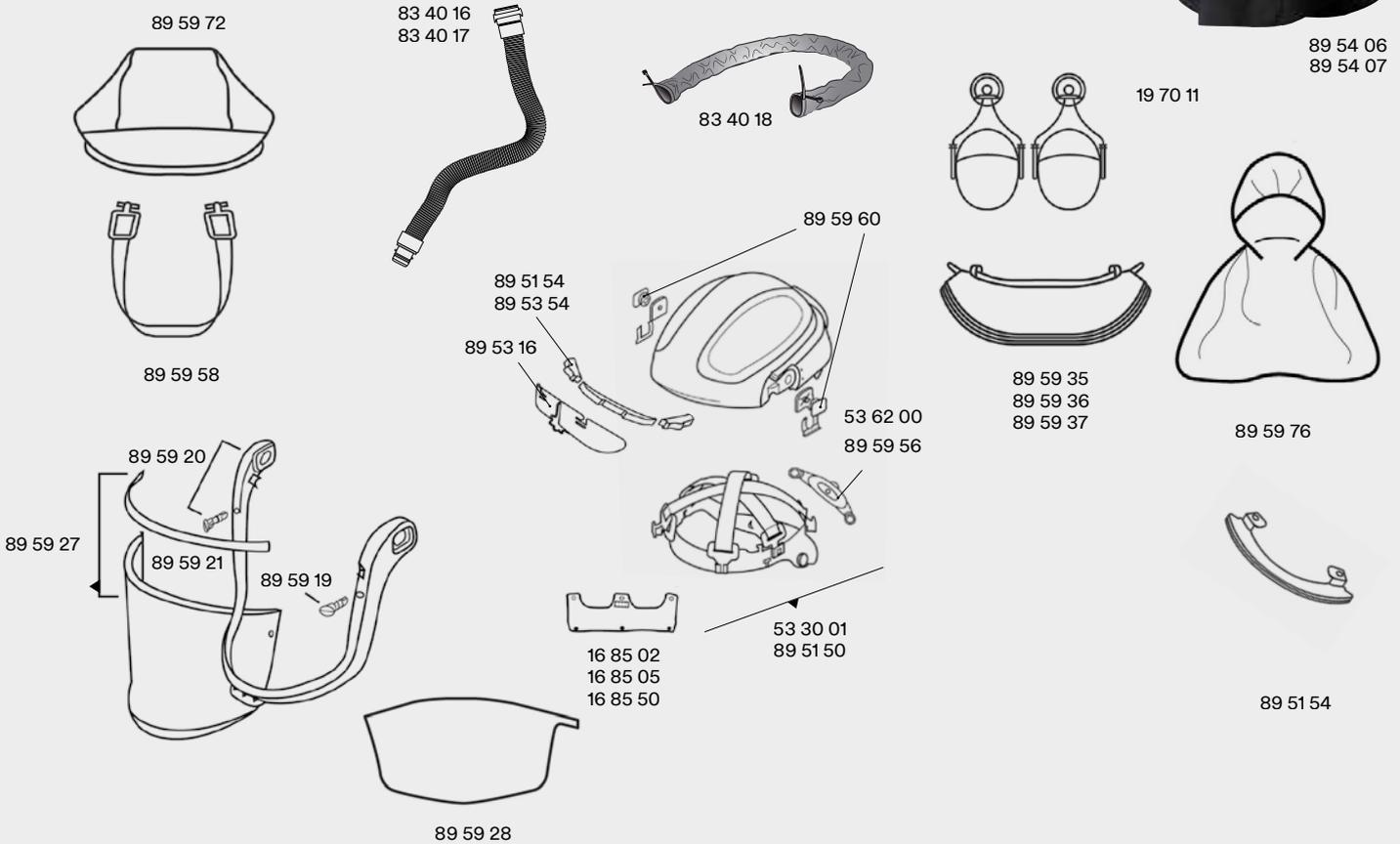


3M Speedglas welding helmet with supplied air regulator

# 3M™ Versaflo™ M-Series Headtops



**Spare parts & accessories for 3M™ Versaflo™ M-Series Headtops**



Part No	Description	Part No	Description	Part No	Description
16 85 02	Sweatband 100, 9002NC, SL & 9100 MP Pk=2	890407HD	Hard Hat Face Shield FR Shroud with Heavy Duty Adflo	89 54 48 <sup>1)</sup>	Shroud Outer FR M-400
16 85 05	Sweatband 100, 9002NC, SL & 9100 MP Pk=5	89 11 07	Face Shield FR Face Seal with V-500E SAR	89 59 19	Visor Frame Buttons Face Shield Pk=10
16 85 50	Sweatband 100, 9002NC, SL & 9100 MP Pk=50	89 13 07	Hard Hat Face Shield FR Face Seal with V-500E SAR	89 59 20	Visor Frame Face Shield
19 70 11	Earmuffs with Helmet Attachment 9100 MP, M-100, M-300	89 14 07	Hard Hat Face Shield FR Shroud with V-500E SAR	89 59 21	Visor Gasket Face Shield Pk=5
53 30 01	Head Harness 9100 MP, M-300, M-400	89 51 06	Face Shield with Std Face Seal	89 59 27	Visor Coated Face Shield Pk=5
53 62 00	Head Harness Back Part M-400	89 51 07	Face Shield with FR Face Seal	89 59 28	Peel-Off Visor Cover Face Shield Pk=40
83 40 16	Tube Breathing Self Adjusting QRS Adflo	89 51 50	Head Suspension 895107	89 59 35	Standard Face Seal Face Shield Pk=5
83 40 17	Tube Breathing Heavy Duty Rubber QRS Adflo	89 51 54	Forehead Seal 895107	89 59 36	Comfort Face Seal Face Shield Pk=5
83 40 18	Tube Breathing Cover Flame Resistant Adflo	89 51 70	Inserts Face Shield Head Pk=2	89 59 37	Flame Resistant Face Seal Face Shield Pk=5
89 01 07	Face Shield FR Face Seal with Adflo	89 53 06	Hard Hat Face Shield with Std Face Seal	89 59 56	Ratchet Comfort Pad Face Shield Pk=10
890107HD	Face Shield FR Face Seal with Heavy Duty Adflo	89 53 07	Hard Hat Face Shield with FR Face Seal	89 59 57	Comfort Pad Forehead Pk=20
89 03 07	Hard Hat Face Shield FR Face Seal with Adflo	89 53 16	Airflow Deflector 895307	89 59 58	Chin Strap Face Shield
890307HD	Hard Hat Face Shield FR Face Seal with Heavy Duty Adflo	89 53 54	Forehead Seal 895307	89 59 60	Pivot Kit Face Shield
89 04 07	Hard Hat Face Shield FR Shroud with Adflo	89 54 06	Hard Hat Face Shield with Std Shroud	89 59 72	Flame Resistant Headtop Cover Face Shield
		89 54 07	Hard Hat Face Shield with FR Shroud	89 59 76 <sup>2)</sup>	Head, Neck & Shoulder Cover Face Shield
		89 54 41	Gasket Jaw M-400		
		89 54 44	Collar Inner M-400		
		89 54 47 <sup>1)</sup>	Shroud Outer High Durability M-400		

1) Shrouds are only suitable for use with M-400 Series headtops.

2) Cover is ideal for powder coating, paint spray, or similar applications. The 895976 is designed solely to keep the wearer clean and does not provide additional respiratory protection or flame resistance.

# 3M™ Speedglas™ Welding Helmet 9002NC



### Helmet with auto-darkening lens

Part No	Description
40 13 85	Speedglas 9002NC welding helmet - complete.

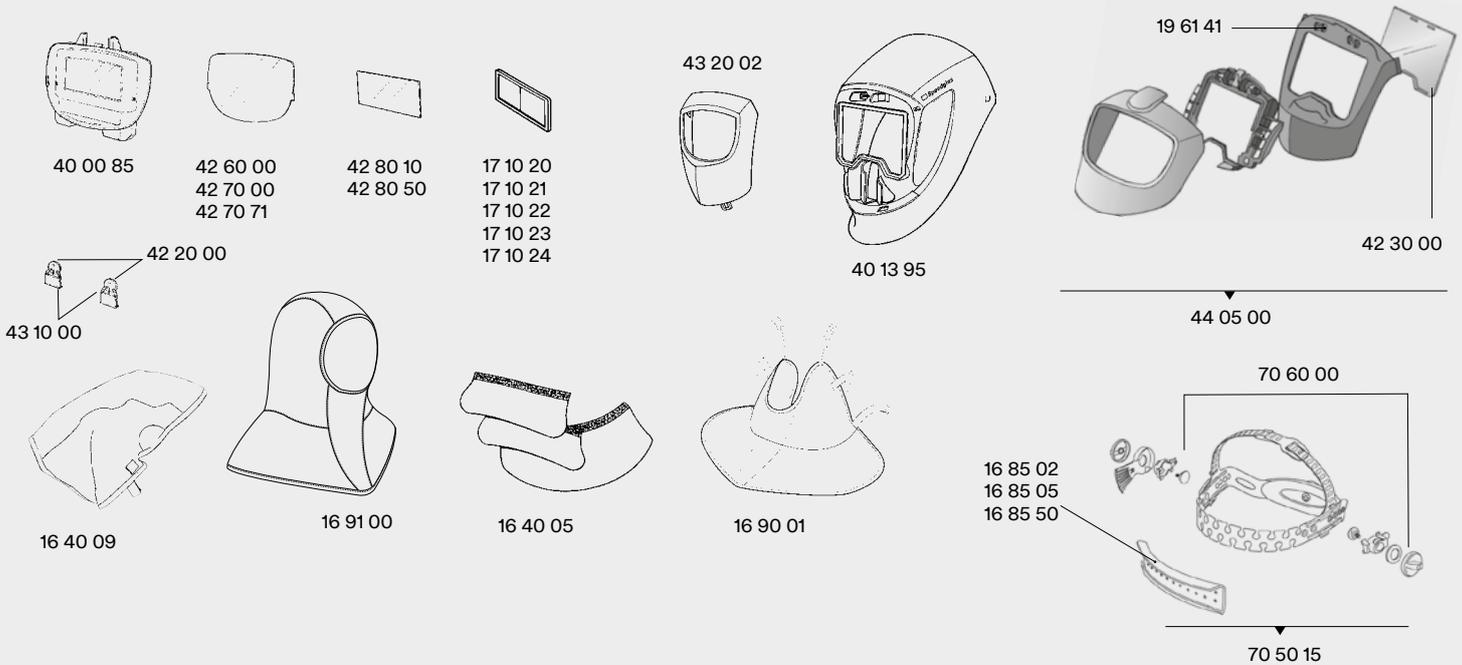
### Flip-up helmet with auto-darkening lens

Part No	Description
44 13 85	Speedglas 9002NC FlexView welding helmet - complete.

### Auto-darkening welding lens

Part No	Description
40 00 85	Speedglas 9002NC welding lens.

## Spare parts & accessories for 3M™ Speedglas™ Welding Helmet 9002NC



Part No	Description	Part No	Description	Part No	Description
16 40 05	Ear/Throat Protection Leather 100 & 9000	17 10 22	Lens Magnifying 2.0X 9100, 100 & 9000	42 70 00	Lens Cover Outer Hard Coated 9000 Pk=10
16 40 09	Head Protection Tecaweld 100 & 9000	17 10 23	Lens Magnifying 2.5X 9100, 100 & 9000	42 70 71	Lens Cover Outer High Heat 9000 Pk=10
16 85 02	Sweatband 100, 9002NC, SL & 9100 MP Pk=2	17 10 24	Lens Magnifying 3.0X 9100, 100 & 9000	42 80 10	Lens Cover Inner 9002X Pk=5
16 85 05	Sweatband 100, 9002NC, SL & 9100 MP Pk=5	19 61 41	Wedges Locking 9000 FlexView Pk=4	42 80 50	Lens Cover Inner Shade 2 9002X Pk=5
16 85 50	Sweatband 100, 9002NC, SL & 9100 MP Pk=50	40 00 85	Lens Welding Variable 9002NC Speedglas	43 10 00	Holder Battery 9000 Pk=2
16 90 01	Throat Protection Tecaweld 100 & 9100 MP	40 13 95	Shield Welding Exc Lens, Harness & Front 9002NC	43 20 02	Cover Front Silver 9002NC
16 91 00	Head Cape Tecaweld	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2	44 05 00	Conversion Kit 9000 FlexView
17 10 15	Magnifying Lens Attachments 9002NC Pk=2	42 30 00	Lens Cover 1.5mm 9000 FlexView Pk=10	70 50 15	Head Harness 100, SL & 9000
17 10 20	Lens Magnifying 1.0X 9100, 100 & 9000	42 60 00	Lens Cover Outer Standard 9000 Pk=10	70 60 00	Head Harness Attachments 100 & SL
17 10 21	Lens Magnifying 1.5X 9100, 100 & 9000				

# 3M™ Speedglas™ Welding Helmet Series 100



75 00 20

## Auto-darkening welding lens

Part No	Description
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75 00 20	Speedglas 100V welding lens.
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## Ninja welding helmet

Part No	Description
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75 11 20	Speedglas 100V Ninja - complete.
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## Trojan Warrior welding helmet

Part No	Description
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75 16 20	Speedglas 100V Trojan Warrior - complete.
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## Xterminator welding helmet

Part No	Description
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75 22 20	Speedglas 100V Xterminator - complete.
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## Ice Hot welding helmet

Part No	Description
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75 25 20	Speedglas 100V Ice Hot - complete.
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## Skull welding helmet

Part No	Description
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75 28 20	Speedglas 100V Skull - complete.
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## Motor welding helmet

Part No	Description
---------	-------------

75 29 20	Speedglas 100V Motor - complete.
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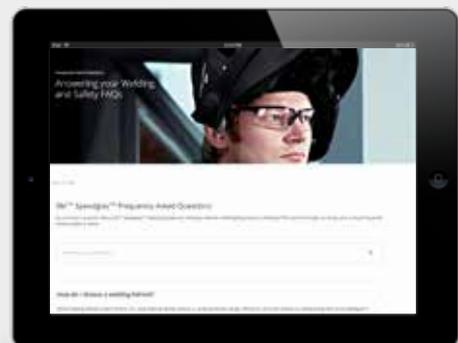
## Frequently Asked Questions

Do you have a Speedglas question but can't seem to find the answer?

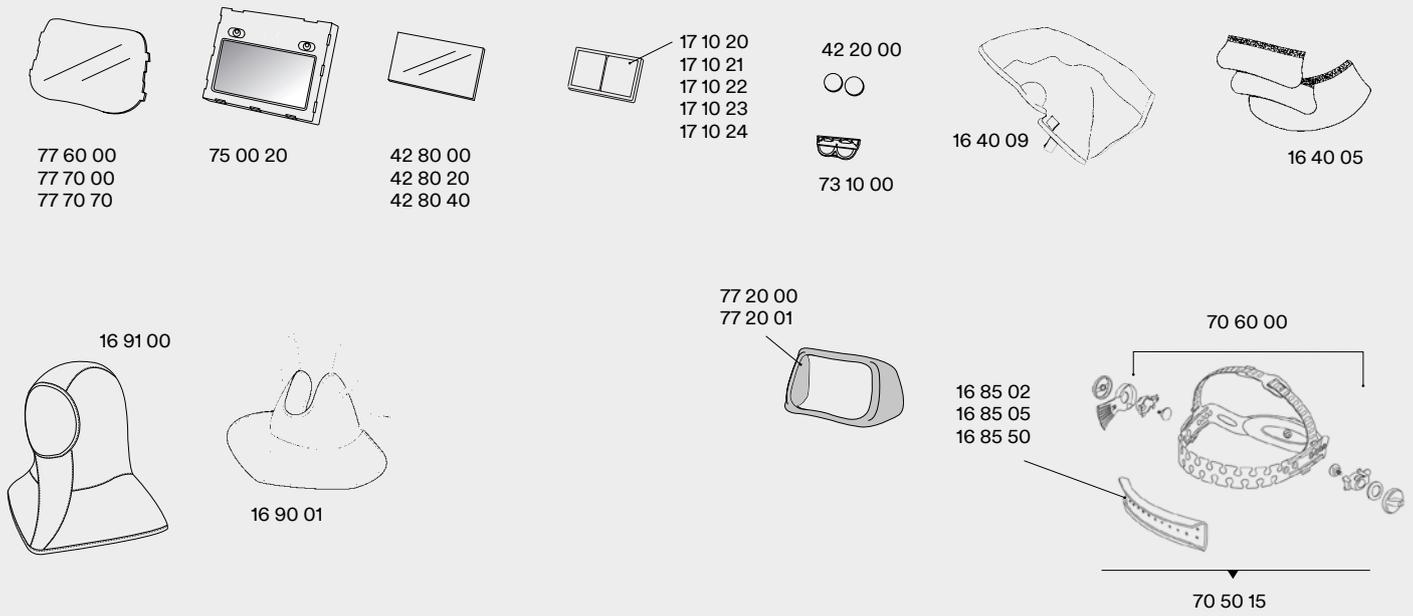
Visit our website to see our FAQ section!

Find out more about Speedglas plate markings, welding helmet classifications, how an auto-darkening welding lens works and more!

Visit [www.awsi.com.au/faq](http://www.awsi.com.au/faq)



**Spare parts & accessories for 3M™ Speedglas™ Welding Helmet Series 100**



Part No	Description	Part No	Description	Part No	Description
16 40 05	Ear/Throat Protection Leather 100 & 9000	17 10 23	Lens Magnifying 2.5X 9100, 100 & 9000	77 60 00	Lens Cover Outer Standard 100 Pk=10
16 40 09	Head Protection Tecaweld 100 & 9000	17 10 24	Lens Magnifying 3.0X 9100, 100 & 9000	77 70 00	Lens Cover Outer Hard Coated 100 Pk=10
16 85 02	Sweatband 100, 9002NC, SL & 9100 MP Pk=2	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2	77 70 70	Lens Cover Outer High Heat 100 Pk=10
16 85 05	Sweatband 100, 9002NC, SL & 9100 MP Pk=5	42 80 00	Lens Cover Inner 100 & 9002V Pk=5		
16 85 50	Sweatband 100, 9002NC, SL & 9100 MP Pk=50	42 80 20	Lens Cover Inner Shade 1 100 Pk=5		
16 90 01	Throat Protection Tecaweld 100 & 9100 MP	42 80 40	Lens Cover Inner Shade 2 100 Pk=5		
16 91 00	Head Cape Tecaweld	70 50 15	Head Harness 100, SL & 9000		
17 10 20	Lens Magnifying 1.0X 9100, 100 & 9000	70 60 00	Head Harness Attachments 100 & SL		
17 10 21	Lens Magnifying 1.5X 9100, 100 & 9000	73 10 00	Holder Battery 100, 10V & SL		
17 10 22	Lens Magnifying 2.0X 9100, 100 & 9000	75 00 20	Lens Welding 100V Speedglas		
		77 20 00	Cover Front Silver 100		
		77 20 01	Cover Front Black 100		

## Thinking of upgrading?

The new 3M Speedglas Welding Helmet 9002NC has arrived! The helmet that changed everything is now available with an upgraded True-View welding lens.

- Large 55 × 107mm viewing area
- Lightweight at just 485 grams
- Upgrade to True-View for colour and contrast
- Slim, narrow profile welders know and love

See page 31 for more details



# 3M™ Welding Helmet 10V



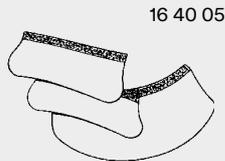
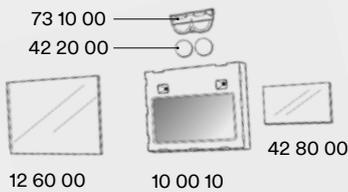
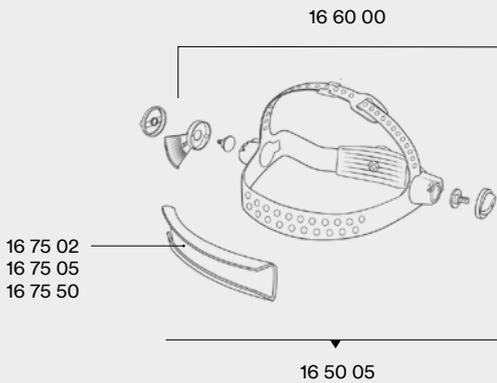
### Helmet with auto-darkening lens

Part No	Description
10 11 10	3M 10V welding helmet - complete.

### Auto-darkening welding lens

Part No	Description
10 00 10	3M 10V welding lens.

### Spare parts & accessories for 3M™ Welding Helmet 10V

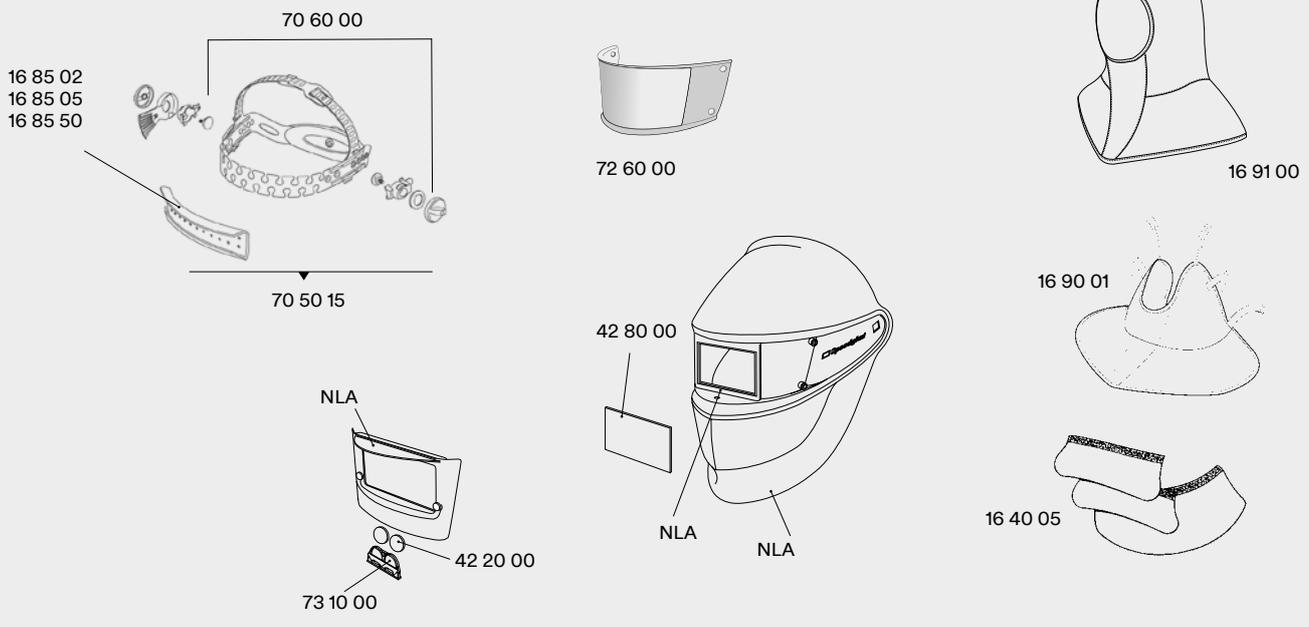


Part No	Description	Part No	Description	Part No	Description
10 00 10	Lens Welding Variable 10V	16 75 02	Sweatband Toweling 100 & 9000 Pk=2	42 80 00	Lens Cover Inner 100 & 9002V Pk=5
10 11 95	Shell Welding Exc Lens & Harness 10	16 75 05	Sweatband Toweling 100 & 9000 Pk=5	73 10 00	Holder Battery 100, 10V & SL
12 60 00	Lens Cover Outer 10 90X110X1mm Pk=2	16 75 50	Sweatband Toweling 100 & 9000 Pk=50		
16 40 05	Ear/Throat Protection Leather 100 & 9000	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2		
16 50 05	Head Harness 10				
16 60 00	Attachments Head Harness 10				

# 3M™ Speedglas™ Welding Helmet SL



Spare parts & accessories for 3M™ Speedglas™ Welding Helmet SL



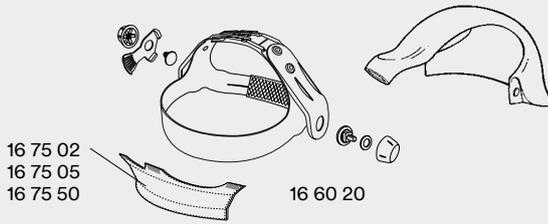
Part No	Description	Part No	Description	Part No	Description
16 40 05	Ear/Throat Protection Leather 100, SL & 9000	16 90 01	Throat Protection Tecaweld 100, SL & 9100 MP	70 60 00	Head Harness Attachments 100 & SL
16 85 02	Sweatband 100, 9002NC, SL & 9100 MP Pk=2	16 91 00	Head Cape Tecaweld	72 60 00	Lens Cover Outer Standard Frosted SL Pk=5
16 85 05	Sweatband 100, 9002NC, SL & 9100 MP Pk=5	42 20 00	Battery Lithium 9100, 100, SL & 9000 Pk=2	73 10 00	Holder Battery 100, 10V & SL
16 85 50	Sweatband 100, 9002NC, SL & 9100 MP Pk=50	42 80 00	Lens Cover Inner 100, SL & 9002V Pk=5		
		70 50 15	Head Harness 100, SL & 9000		



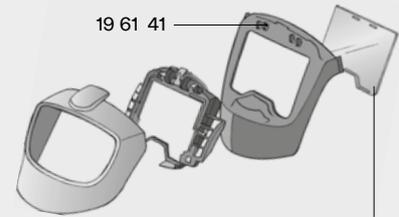
# 3M™ Speedglas™ Welding Helmet Series 9000 for Respiratory Protection



**Spare parts & accessories for 3M™ Speedglas™ Respiratory Welding Helmets 9000**

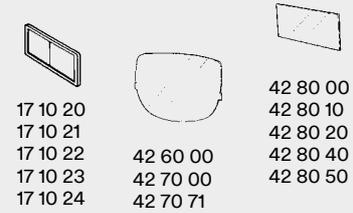
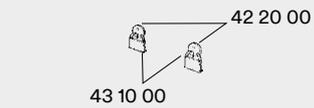
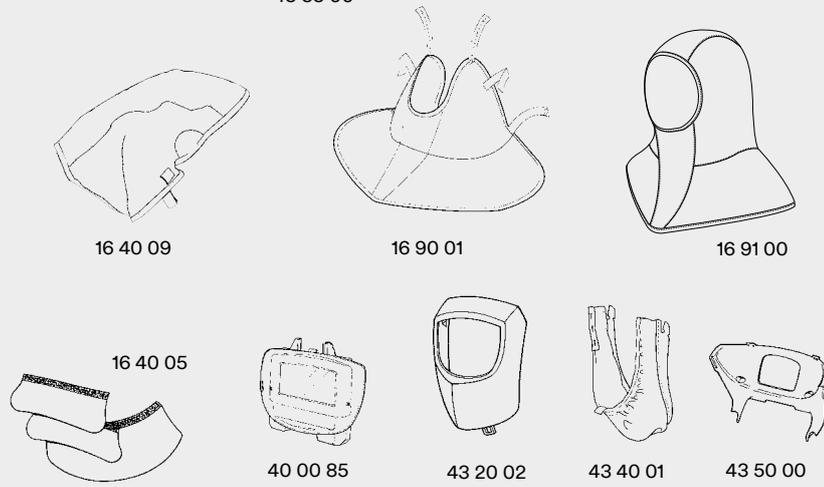


43 33 00



42 30 00

44 05 00



Part No	Description	Part No	Description	Part No	Description
16 40 05	Ear/Throat Protection Leather 100 & 9000	40 00 85	Lens Welding Variable 9002NC Speedglas	43 40 01	Face Seal for Welding Helmet 9000 Adflo/FAC
16 40 09	Head Protection Tecaweld 100 & 9000	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2	43 50 00	Air Spreader 9000 Adflo/FAC
16 60 20	Attachments Head Harness 9000	42 30 00	Lens Cover 1.5mm 9000 FlexView Pk=10	44 05 00	Conversion Kit 9000 FlexView
16 75 02	Sweatband Towelling 100 & 9000 Pk=2	42 60 00	Lens Cover Outer Standard 9000 Pk=10		
16 75 05	Sweatband Towelling 100 & 9000 Pk=5	42 70 00	Lens Cover Outer Hard Coated 9000 Pk=10		
16 75 50	Sweatband Towelling 100 & 9000 Pk=50	42 70 71	Lens Cover Outer High Heat 9000 Pk=10		
16 90 01	Throat Protection Tecaweld 100 & 9100 MP	42 80 00	Lens Cover Inner 100 & 9002V Pk=5		
16 91 00	Head Cape Tecaweld	42 80 10	Lens Cover Inner 9002X Pk=5		
17 10 20	Lens Magnifying 1.0X 9100 100 & 9000	42 80 20	Lens Cover Inner Shade 1 100 & 9002V Pk=5		
17 10 21	Lens Magnifying 1.5X 9100 100 & 9000	42 80 40	Lens Cover Inner Shade 2 100 & 9002V Pk=5		
17 10 22	Lens Magnifying 2.0X 9100 100 & 9000	42 80 50	Lens Cover Inner Shade 2 9002X Pk=5		
17 10 23	Lens Magnifying 2.5X 9100 100 & 9000	43 10 00	Holder Battery 9000 Pk=2		
17 10 24	Lens Magnifying 3.0X 9100 100 & 9000	43 20 02	Cover Front Silver 9002NC		
19 61 41	Wedges Locking 9000 FlexView Pk=4	43 30 00	Head Harness & Air Duct 9000 Adflo/FAC		

**Thinking of upgrading?**

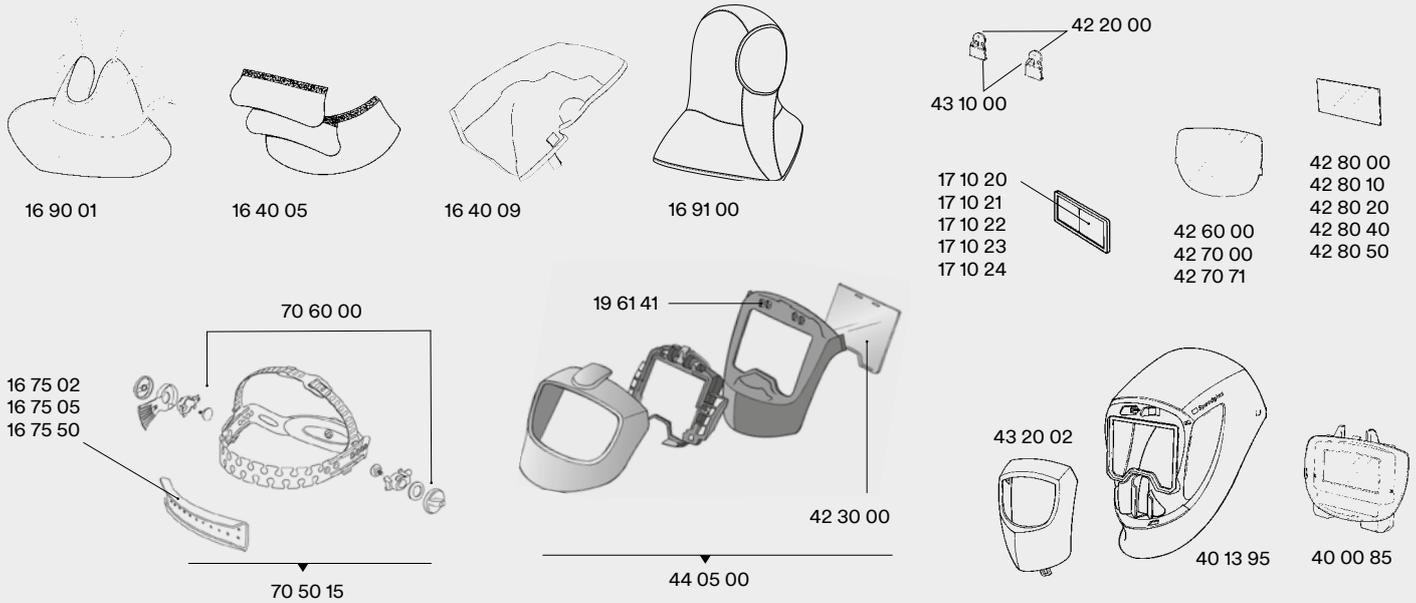
**9100XXi FX Air headtop connects directly to your Adflo PAPR**

Part No	Description
54 90 26	3M Speedglas 9100XXi FX Air Upgrade Kit. Includes helmet, welding lens, QRS hose and carry bag.

# 3M™ Speedglas™ Welding Helmets FlexView / ProTop / Utility



## Spare parts & accessories for 3M™ Speedglas™ Welding Helmets FlexView / ProTop / Utility



Part No	Description	Part No	Description
16 40 05	Ear/Throat Protection Leather 100 & 9000	40 13 95	Shield Welding Exc Lens, Harness & Front 9002NC
16 40 09	Head Protection Tecaweld 100 & 9000	42 20 00	Battery Lithium 9100, 100 & 9000 Pk=2
16 75 02	Sweatband Towelling 100 & 9000 Pk=2	42 30 00	Lens Cover 1.5mm 9000 FlexView Pk=10
16 75 05	Sweatband Towelling 100 & 9000 Pk=5	42 60 00	Lens Cover Outer Standard 9000 Pk=10
16 75 50	Sweatband Towelling 100 & 9000 Pk=50	42 70 00	Lens Cover Outer Hard Coated 9000 Pk=10
16 90 01	Throat Protection Tecaweld 100 & 9100 MP	42 70 71	Lens Cover Outer High Heat 9000 Pk=10
16 91 00	Head Cape Tecaweld	42 80 00	Lens Cover Inner 100 & 9002V Pk=5
17 10 20	Lens Magnifying 1.0X 9100 100 & 9000	42 80 10	Lens Cover Inner 9002X Pk=5
17 10 21	Lens Magnifying 1.5X 9100 100 & 9000	42 80 20	Lens Cover Inner Shade 1 100 & 9002V Pk=5
17 10 22	Lens Magnifying 2.0X 9100 100 & 9000	42 80 40	Lens Cover Inner Shade 2 100 & 9002V Pk=5
17 10 23	Lens Magnifying 2.5X 9100 100 & 9000	42 80 50	Lens Cover Inner Shade 2 9002X Pk=5
17 10 24	Lens Magnifying 3.0X 9100 100 & 9000	43 10 00	Holder Battery 9000 Pk=2
19 61 41	Wedges Locking 9000 FlexView Pk=4	43 20 02	Cover Front Silver 9002NC
40 00 85	Lens Welding Variable 9002NC Speedglas	44 05 00	Conversion Kit 9000 FlexView Head Harness 100 & 9000
		70 50 15	Head Harness 100 & 9000
		70 60 00	Head Harness Attachments 100 & SL

## Thinking of upgrading?

Upgrade to new True-View with a quick release safety helmet

See page 21

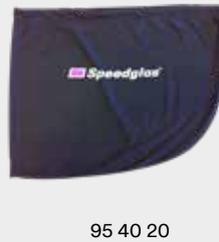


Upgrade to new True-View and flip-up to reveal a huge clear, curved, grinding visor

See page 17



# Extra Protection & Accessories



Part No	Description
16 90 05	Head Protection 9100
16 90 06	Head Cover Small 9100 FX
16 90 07	Head Cover Large 9100 FX
16 90 10	Throat Protection 9100
16 91 00	Head Cape Tecaweld
19 70 12	Earmuffs Welding Black Neckband
79 01 01	Carry Bag Speedglas
95 40 10	Speedglas Back Pack
95 40 20	Speedglas Helmet Drawstring Bag

Part No	Description
95 41 01	Speedglas Hoodie Medium
95 41 02	Speedglas Hoodie Large
95 41 03	Speedglas Hoodie Extra Large
95 44 10	Speedglas Welders Cap
95 44 11	Speedglas Bandana Welders Cap
M3121250	3M Earplugs Soft Neon Yellow Uncorded Box=200 Pairs
M7528	3M Welding Respirator Kit 7502, GP2 Protection
M9322A+	3M 9322A+ Disposable Respirators P2 Pk=10

# Ejendals™ Tegera® Welding Gloves



T126A-07  
T126A-08  
T126A-09  
T126A-10  
T126A-11

## Ejendals Tegera 126A Professional TIG Welding Gloves

- Legendary Tegera 'resting-fit'
- Must try dexterity and fingertip sensitivity
- Industry's best quality, vertically-cut, full-grain goatskin
- Unique TIG index finger design
- Long slim-fit 180° elasticated TIG cuff
- Unrivalled Tegera robustness & durability



T19-10

## Ejendals Tegera 19 Professional Welding Gauntlets

- Legendary Tegera 'resting-fit'
- Unique dexterity and fingertip sensitivity in a gauntlet
- Industry's best quality, vertically-cut, split-grain cowhide
- Reinforced seams for heavy-duty applications
- Slim-fit 180° elasticated European cuff design
- Unrivalled Tegera robustness and durability



T134-10

## Ejendals Tegera 134 Heavy Duty Welding Gauntlets

- Industry's best full-grain goatskin, turned inside-out
- Unrivalled internal comfort with maximum external durability
- Ultimate dexterity and fingertip sensitivity
- Legendary Tegera 'resting-fit' with reinforced index finger
- Extra-long, slim-fit 180° elasticated comfort cuff
- Water and oil-repellent with a Cut 4 rating
- Reinforced Kevlar® and Nomex® lining

# Ejendals™ J alas® Welding Boots

## Ejendals J alas 1848K Titan Welding Boots

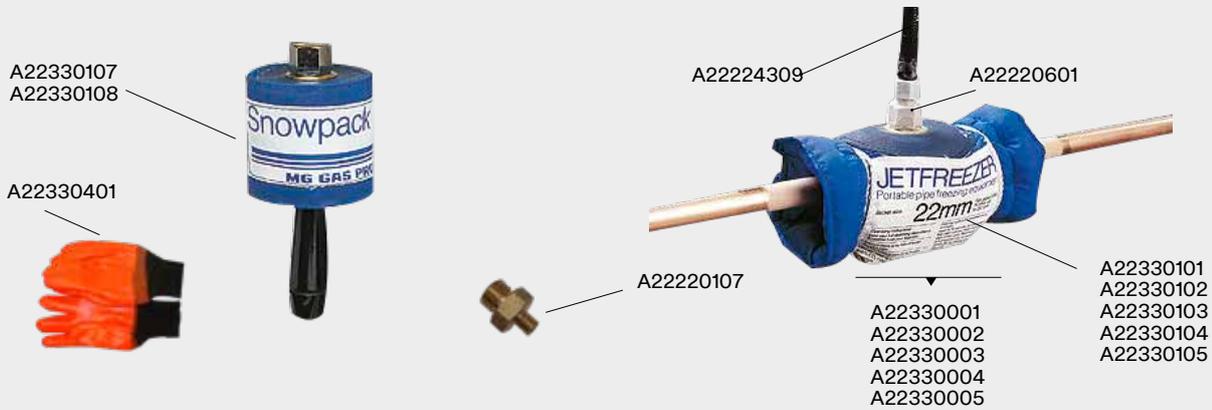
- Australian & New Zealand Standards Compliant with AS/NZS2210.3:2009
- Highest level of protection with excellent grip regardless of conditions
- PU-coated leather specifically built for welding
- Legendary J alas comfort and spacious fit based on 100 years of experience
- Heat-resistant upper and outsole with Kevlar threaded seams
- Thinsulate heat insulation for welding applications
- Aluminium toecap with toe reinforcement
- Velcro fastening for quick release
- No weld slag collection areas
- Oil-resistant and water-repellent outsole with anti-static properties
- Double shock absorption system



T1848K-39  
T1848K-40  
T1848K-41  
T1848K-42  
T1848K-43  
T1848K-44  
T1848K-45  
T1848K-46  
T1848K-47  
T1848K-48

Part No	Description	Part No	Description	Part No	Description
T126A-07	Glove TIG Tegera 126A Size 7	T1848K-39	J alas 1848K Titan Welding Boot Size 39	T1848K-44	J alas 1848K Titan Welding Boot Size 44
T126A-08	Glove TIG Tegera 126A Size 8	T1848K-40	J alas 1848K Titan Welding Boot Size 40	T1848K-45	J alas 1848K Titan Welding Boot Size 45
T126A-09	Glove TIG Tegera 126A Size 9	T1848K-41	J alas 1848K Titan Welding Boot Size 41	T1848K-46	J alas 1848K Titan Welding Boot Size 46
T126A-10	Glove TIG Tegera 126A Size 10	T1848K-42	J alas 1848K Titan Welding Boot Size 42	T1848K-47	J alas 1848K Titan Welding Boot Size 47
T126A-11	Glove TIG Tegera 126A Size 11	T1848K-43	J alas 1848K Titan Welding Boot Size 43	T1848K-48	J alas 1848K Titan Welding Boot Size 48
T134-10	Gauntlet Heavy Duty Welding Tegera 134 Size 10				
T19-10	Gauntlet Welding Tegera 19 Size 10				

# Liquid CO<sub>2</sub> Portable Freezing Equipment



Part No	Description	Part No	Description	Part No	Description
A22220107	Adaptor Hose Coupling Jetfreezer	A22330004	Pipe Freezing Kit 100mm Jetfreezer	A22330104	Pipe Freezing Jacket 100mm Jetfreezer
A22220601	Washer 1/4 Jetfreezer	A22330005	Pipe Freezing Kit 15mm Jetfreezer	A22330105	Pipe Freezing Jacket 15mm Jetfreezer
A22224309	Hose 2.4m 1/4 BSP Jetfreezer	A22330101	Pipe Freezing Jacket 22mm Jetfreezer	A22330107	Snowpack Dry Ice Maker 30 Gram
A22330001	Pipe Freezing Kit 22mm Jetfreezer	A22330102	Pipe Freezing Jacket 42mm Jetfreezer	A22330108	Snowpack Dry Ice Maker 500 Gram
A22330002	Pipe Freezing Kit 42mm Jetfreezer	A22330103	Pipe Freezing Jacket 80mm Jetfreezer	A22330401	Jetfreezer Gloves
A22330003	Pipe Freezing Kit 80mm Jetfreezer			A22330601	Tee Piece Jetfreezer

## Efficient pipe freezing

Jetfreezer reduces downtime and cost by eliminating the need to drain down pipework before maintaining, repairing or extending a system.

Utilising the intensely cold properties of solid carbon dioxide, Jetfreezer economically creates an ice plug in the required work area. Natural convection melts the ice plug, restoring supply in minutes once the work is complete.

- **Fast** - freezes water in a 15mm pipe in just 3.5 minutes
- **Reliable** - ice plugs last up to 45 minutes
- **Effective** - Jetfreezer will even freeze pipes in restricted areas

## Dry ice on demand

Snowpack allows you to create individual dry ice pellets on demand - in either 30 gram or 500 gram pellets.

The Snowpack is screwed onto the outlet of a CO<sub>2</sub> syphon cylinder and is operated by opening and closing the valve. Once the pellet is made, the cylinder valve is closed, the nylon wrapper on the Snowpack is peeled back, revealing the dry ice pellet - which can be removed wearing protective gloves.

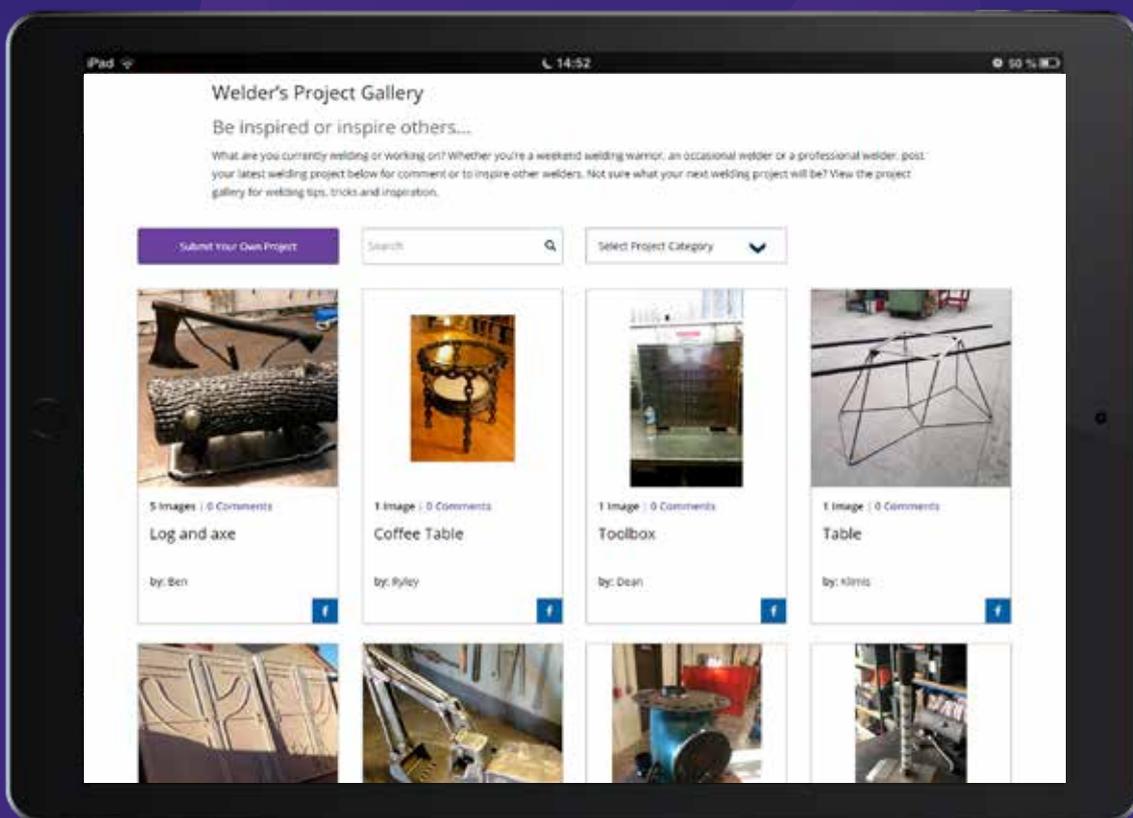
## Find out more...

For more information, explore the complete range of portable freezing equipment on our website:

[www.awsi.com.au](http://www.awsi.com.au)

# Share your welding projects

Access our Welding Project Gallery to find inspiration - or upload your own project and inspire others. The AWS Welder's Gallery lets you share your work with other welders. Whether you're a professional welder or a weekend warrior, we'd love to see what you're working on.



Visit [www.aws.com.au/project/list](http://www.aws.com.au/project/list)

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# 3M Welding Centre of Excellence

Made in Sweden:

Hundreds of thousands of times each day, welders all over the world rely on their 3M™ Speedglas™ products to achieve their best welding performance. This is a result of our close cooperation with welders, safety engineers and ergonomic specialists to constantly improve the performance and comfort of our products. The 3M Welding Centre of Excellence is located in Gagnef, Sweden.



**35** More than 35 years ago we introduced the first auto-darkening welding lens.



Today, Speedglas is proudly worn by over 1 million active welders around the world.

**12** International Design Awards since 1996.



**1<sup>st</sup>** 35 years later, Speedglas remains one of the world's leading brands of advanced personal protective equipment for welders.

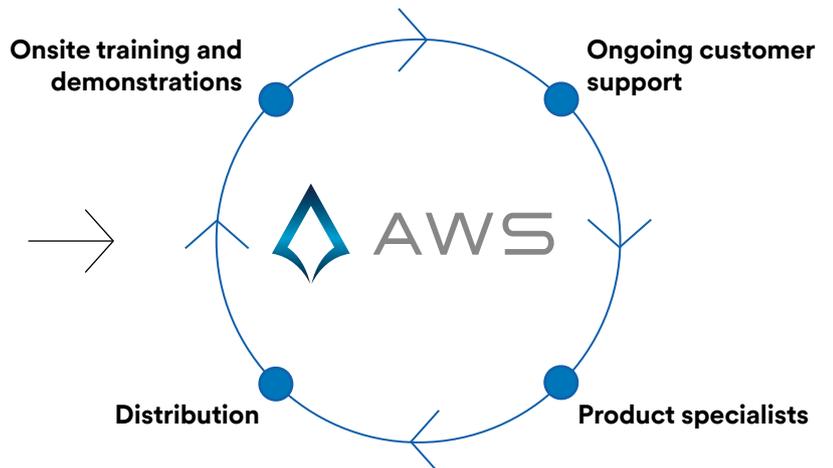
**Ground breaking innovations**



**AWS focused customer support**

When you partner with Speedglas not only do you get the best welding helmet brand on the market, you also get the best welding support team.

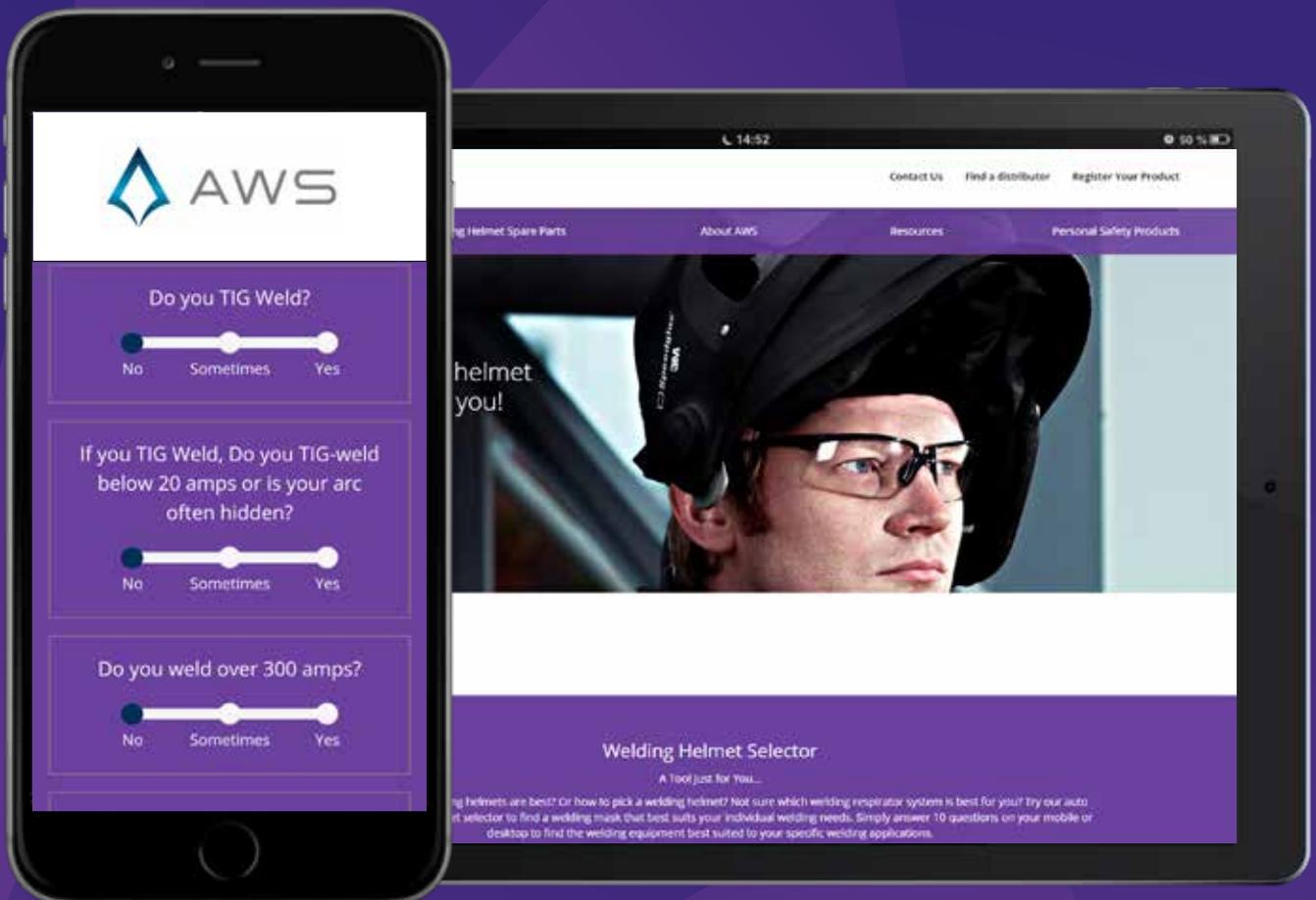
With over 100 years of Speedglas experience and over 200 years within the welding industry shared amongst our customer support team, there isn't a question regarding Speedglas welding helmets AWS can't answer.



# Quick Selection Tools

## Which welding helmet?

Your personal Welding Helmet Selection Tool. Answer 10 questions on your mobile or desktop to find the Speedglas welding helmets best suited to your specific needs.



Find your perfect welding helmet at  
[www.aws.com.au/welding-helmet-selector](http://www.aws.com.au/welding-helmet-selector)

# 3M™ Speedglas™ Products sorted by feature

	3M™ Speedglas™ Welding Helmet 9100					 Optional				
	3M™ Speedglas™ Welding Helmet 9100 Air					 Optional				
	3M™ Speedglas™ Welding Helmet 9100 FX					 Optional				
	3M™ Speedglas™ Welding Helmet 9100 FX Air									
	3M™ Speedglas™ Welding Helmet 9100 QR					 Optional				
	3M™ Speedglas™ Welding Helmet 9100 MP Air					 Optional				
	3M™ Speedglas™ Welding Helmet 9002NC								 Optional	
	3M™ Speedglas™ Welding Helmet 100									
	3M™ Versaflo™ Face Shields M-Series				 Optional	 Optional				



Eye & face protection



Side windows



Hearing protection<sup>1)</sup>



Exhaust vents



Respiratory system



Passive option



Head protection



Auto-on



Flip-up



Graphics option

1) 3M™ Peltor™ Hearing Protection available as accessories.

# 3M™ Speedglas™ Welding Helmets

● Best<sup>1)</sup> ● Better<sup>1)</sup> ● Good<sup>1)</sup> × Not Recommended<sup>1)</sup>



Specification	3M™ Speedglas™ Welding Helmet 100V See page 34	3M™ Speedglas™ Welding Helmet 9002NC 40 13 85	3M™ Speedglas™ Welding Helmet 9100XXi 50 18 26	3M™ Speedglas™ Welding Helmet 9100XXi FX 54 18 26
MMAW (electrode)	●	●	●	●
MIG/MAG	●	●	●	●
TIG (>10A)	●	●	●	●
TIG (1A-10A)	×	●	●	●
Plasma (welding and cutting)	×	●	●	●
Hidden Arc	×	●	●	●
Tack welding	●	●	●	●
Grinding (welding lens)	●	●	●	●
Grinding (clear visor)		● optional		●
Viewing area (welding lens)	44 × 93 mm	55 × 107 mm	73 × 107 mm	73 × 107 mm
Battery lifetime	1 500 hours	2 000 hours	1 800 hours	1 800 hours
Classification <sup>2)</sup>	1 / 2 / 2	1 / 1 / 1 (with True-View)	1 / 1 / 1 (with True-View)	1 / 1 / 1 (with True-View)
Dark state	Shade 8-12	Shade 8-12	Shade 5, 8, 9-13	Shade 5, 8, 9-13
Light state	Shade 3	Shade 3	Shade 3	Shade 3
UV Protection	Shade 12 (permanent)	Shade 12 (permanent)	Shade 13 (permanent)	Shade 13 (permanent)
Switching time, light-dark	0.1 ms (+23° C)	0.1 ms (+23° C)	0.1 ms (+23° C)	0.1 ms (+23° C)
Delay (switching time, dark-light)	40-250 ms	60-400 ms	40-800 ms	40-800 ms
SideWindows	No	No	Yes	Yes
Exhaust vents	No	Yes	Yes	Yes
Standards Compliance				
Eye protection	AS/NZS1338.1	AS/NZS1338.1	AS/NZS1338.1	AS/NZS1338.1
Face protection	AS/NZS1337	AS/NZS1337.1	AS/NZS1337.1	AS/NZS1337.1
Head protection				
Respiratory protection				
Optional Hearing protection				
Required Minimum Protection Factor (RMPF) <sup>3)</sup>				
Powered air respiratory protection - Adflo				
Supplied air respiratory protection - V-500E				

1) The ratings above (best - better - good - not recommended) only refer to the products listed in this chart and should be considered as general recommendations only.

2) Auto-darkening welding lenses have a classification system in European Standard EN379: optical class / diffusion of light / variation on luminous transmittance. Classification range from 1 to 3, with 1 being the best.

3) For mechanically and thermally generated particles .



3M™ Speedglas™ Welding Helmet 9100XXi QR 50 36 26	3M™ Speedglas™ Welding Helmet 9100XXi Air Powered Air: 50 77 26 Supplied Air: 50 88 26	3M™ Speedglas™ Welding Helmet 9100XXi FX Air Powered Air: 54 77 26 Supplied Air: 54 88 26	3M™ Speedglas™ Welding Helmet 9100XXi MP Air Powered Air: 57 77 26 Supplied Air: 57 88 26	3M™ Versaflo™ Headtop M-107, M-307, M-407 See page 40
●	●	●	●	NA
●	●	●	●	NA
●	●	●	●	NA
●	●	●	●	NA
●	●	●	●	NA
●	●	●	●	NA
●	●	●	●	NA
●	●	●	●	NA
		●	●	●
73 × 107 mm	73 × 107 mm	73 × 107 mm	73 × 107 mm	NA
1 800 hours	1 800 hours	1 800 hours	1 800 hours	NA
1 / 1 / 1 (with True-View)	1 / 1 / 1 (with True-View)	1 / 1 / 1 (with True-View)	1 / 1 / 1 (with True-View)	NA
Shade 5, 8, 9-13	Shade 5, 8, 9-13	Shade 5, 8, 9-13	Shade 5, 8, 9-13	NA
Shade 3	Shade 3	Shade 3	Shade 3	NA
Shade 13 (permanent)	Shade 13 (permanent)	Shade 13 (permanent)	Shade 13 (permanent)	NA
0.1 ms (+23° C)	0.1 ms (+23° C)	0.1 ms (+23° C)	0.1 ms (+23° C)	NA
40-800 ms	40-800 ms	40-800 ms	40-800 ms	NA
Yes	Yes	Yes	Yes	NA
Yes	No	No	No	NA
AS/NZS1338.1 AS/NZS1337.1 AS/NZS1801  AS/NZS1270	AS/NZS1338.1 AS/NZS1337.1  AS/NZS1716	AS/NZS1338.1 AS/NZS1337.1  AS/NZS1716	AS/NZS1338.1 AS/NZS1337.1 AS/NZS1801 AS/NZS1716 AS/NZS1270	AS/NZS1337.1 AS/NZS1801 (EXC M-107) AS/NZS1716 AS/NZS1270 (EXC M-407)
	50 100+	50 100+	50 100+	50 100+

## Welding Helmet Selector Tool

If you're still unsure about which helmet best suits your needs, try our Welding Helmet Selector Tool:

Visit [www.awsi.com.au/welding-helmet-selector](http://www.awsi.com.au/welding-helmet-selector)

# 3M™ Speedglas™ Core Spare Part Index



Spare Part Required	3M™ Speedglas™ Welding Helmet 100V	3M™ Speedglas™ Welding Helmet 9002NC	3M™ Speedglas™ Welding Helmet 9100XXi	3M™ Speedglas™ Welding Helmet 9100XXi FX
Outside Cover Lens Standard	77 60 00	42 60 00	52 60 00	52 60 00
Outside Cover Lens Hard Coated	77 70 00	42 70 00	52 70 00	52 70 00
Outside Cover Lens High Heat	77 70 70	42 70 71	52 70 70	52 70 70
Inside Cover Lens	42 80 00	42 80 10	52 80 25	52 80 25
Grinding Plate	NA	42 30 00	NA	52 30 00 (standard) 52 30 01 (anti-fog)
Sweatband (Pack of 2)	16 85 02	16 85 02	16 95 02	16 95 02
Sweatband (Pack of 5)	16 85 05	16 85 05	16 95 05	16 95 05
Replacement Batteries for Lens	42 20 00	42 20 00	42 20 00	42 20 00
Replacement Battery Holder (Pack of 2)	73 10 00	43 10 00	53 10 00	53 10 00
Magnifying Lens 1.0x, 1.5x, 2x, 2.5x, 3.0x	17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24	17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24	17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24	17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24
Extra Protection Head	16 40 09	16 40 09	16 90 05	16 90 06 (small) 16 90 07 (large)
Extra Protection Neck	16 90 01	16 90 01	16 90 10	16 90 10
Extra Protection Hood	16 91 00	16 91 00	16 91 00	16 91 00
Head Harness	70 50 15	70 50 15	53 30 00	53 30 00
Head Harness Attachments	70 60 00	70 60 00	53 60 00	53 60 00
Face Seal	NA	NA	NA	NA
Pre-Filter	NA	NA	NA	NA
Particle Filter	NA	NA	NA	NA
Odour Filter	NA	NA	NA	NA
Odour Filter Replacement Pad	NA	NA	NA	NA
Gas Filter - Organic Vapour / Acid Gas	NA	NA	NA	NA
Gas Filter - A1, Organic	NA	NA	NA	NA
Adflo Battery Standard	NA	NA	NA	NA
Adflo Battery Heavy Duty	NA	NA	NA	NA
Adflo Battery Charger	NA	NA	NA	NA
Breathing Tube QRS	NA	NA	NA	NA

1) Only suitable for use with M-400 Series headtops.

2) Ideal for powder coating, paint spray or similar applications. The 895976 is designed solely to keep the wearer clean and does not provide additional respiratory protection.

3) Lithium-ion (grey) batteries (83 76 30, 83 76 31) are only compatible with the Lithium-ion battery charger (83 3111).



3M™ Speedglas™ Welding Helmet 9100XXi QR	3M™ Speedglas™ Welding Helmet 9100XXi Air	3M™ Speedglas™ Welding Helmet 9100XXi FX Air	3M™ Speedglas™ Welding Helmet 9100XXi MP Air	3M™ Versaflo™ Headtop M-107, M-307, M-407
52 60 00	52 60 00	52 60 00	52 60 00	NA
52 70 00	52 70 00	52 70 00	52 70 00	NA
52 70 70	52 70 70	52 70 70	52 70 70	NA
52 80 25	52 80 25	52 80 25	52 80 25	NA
NA	NA	52 30 00 (standard) 52 30 01 (anti-fog)	52 30 00 (standard) 52 30 01 (anti-fog)	NA
16 75 02	16 95 02	16 95 02	16 85 02	16 85 02
16 75 05	16 95 05	16 95 05	16 85 05	16 85 05
42 20 00	42 20 00	42 20 00	42 20 00	NA
53 10 00	53 10 00	53 10 00	53 10 00	NA
17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24	17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24	17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24	17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24	NA
NA	16 90 05	16 90 06 (small) 16 90 07 (large)	16 90 14	89 59 72
16 40 05	16 90 10	16 90 10	16 90 15	89 54 48 <sup>1)</sup>
16 91 00	16 91 00	16 91 00	16 90 15	89 59 76 <sup>2)</sup>
NA	53 30 00	53 30 00	53 30 01	53 30 01 (M-307, M-407) 89 51 50 (M-107)
NA	53 60 00	53 60 00	NA	NA
NA	53 41 00	53 40 00	53 42 00	89 59 37
NA	83 60 10	83 60 10	83 60 10	83 60 10
NA	83 70 10	83 70 10	83 70 10	83 70 10
NA	83 71 10	83 71 10	83 71 10	83 71 10
NA	83 71 20	83 71 20	83 71 20	83 71 20
NA	83 72 42	83 72 42	83 72 42	83 72 42
NA	83 75 42	83 75 42	83 75 42	83 75 42
NA	83 76 30 <sup>3)</sup>	83 76 30 <sup>3)</sup>	83 76 30 <sup>3)</sup>	83 76 30 <sup>3)</sup>
NA	83 76 31 <sup>3)</sup>	83 76 31 <sup>3)</sup>	83 76 31 <sup>3)</sup>	83 76 31 <sup>3)</sup>
NA	83 31 11 <sup>3)</sup>	83 31 11 <sup>3)</sup>	83 31 11 <sup>3)</sup>	83 31 11 <sup>3)</sup>
NA	83 40 16	83 40 16	83 40 16	83 40 16

**Spare Part Finder Tool**

If you're still unsure about which spare part you need, try our Spare Part Finder Tool:

Visit [www.awsi.com.au/spare-parts-locator](http://www.awsi.com.au/spare-parts-locator)

**Welding Helmet Selector Tool**

If you're still unsure about which helmet best suits your needs, try our Welding Helmet Selector Tool:

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# Ongoing customer support

## Care & Maintenance Posters

Get the most out of your welding helmet or respirator system by downloading your own personalised Care & Maintenance Guide.

Find yours at [www.awsi.com.au/care-maintenance](http://www.awsi.com.au/care-maintenance)

## Welding Helmet Selector

Need help finding the perfect welding helmet? Try our new Welding Helmet Selector Tool. Simply answer 10 questions on your mobile or desktop to find the welding equipment best suited to your specific welding applications.

Try it at [www.awsi.com.au/welding-helmet-selector](http://www.awsi.com.au/welding-helmet-selector)

## Spare Part Finder Tool

Locate the welding helmet part you are after - every time. Whether you are looking for a 3M™ Adflo™ particle filter, Adflo™ battery, welding helmet cover lenses, sweatbands or any other spare part, if it's a current part, you'll find it here.

Visit [www.awsi.com.au/spare-parts-locator](http://www.awsi.com.au/spare-parts-locator)

## Frequently Asked Questions (FAQ's)

Do you have a question about 3M™ Speedglas™ Welding Equipment, Welding Helmets, Welding Respirators or Welding PPE? Search through our library of most frequently asked questions.

Visit [www.awsi.com.au/faq](http://www.awsi.com.au/faq)



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