## 3M Welding Safety Catalog 2016

# Passion for 

 Welding
## Empowering information

Welcome to our comprehensive guide to eye, face and respiratory protection for welders.

In this guide we have compiled our welding filters, helmets, respiratory systems, accessories, spare parts and technical data into one handbook for your easy reference.

We are proud to empower welders to select the optimized combination of 3M personal protective equipment for their improved safety, comfort and long-term health.

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## New products:



## Speedglas online

Direct access to knowledge, via your computer, laptop or mobile:
www.3M.com/Speedglas
Access our latest news, learn more about welding safety and explore the online product catalog:

- Quick product search
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Use your smartphone or tablet to explore
the new Speedglas product guide
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Powered Air Respirator
The Li-ion batteries makes the Adflo respirator even more lightweight.
Further details on page 26.

More than 35 years ago, we went to the shipyards of Sweden to study welders' working conditions. We found skilled craftsmen striking arcs as they continually nodded their shields down. From that point on, we committed ourselves to developing tools that would forever improve the world of the welder. From the first groundbreaking auto-darkening welding helmet in 1981 to our current lineup of state-of-the-art welding safety products, we continue to revolutionize your world.

## Ins pired reality $y$ your

We have a passion for welding and we know the challenges of your profession. We share the passion and pride you put into your welding. So it is natural for us to want to help address the ergonomic, safety, and health challenges facing your every day. Your thoughts and opinions are the bottom line in our continuous search for innovation. Inspired by your reality, we shape the future of welding so you can get on with the job of shaping ours.



# 3M ${ }^{T M}$ Speedglas ${ }^{T M}$ Welding Helmet Series 9100 <br> - our top-of-the-line safety platform for professional welders 

In the product development process for our 4th generation of $3 \mathrm{M}^{\text {Tw }}$ Speedglas ${ }^{\text {TM }}$ Welding Helmets, we systematically studied welders to identify global customer needs of a welding helmet.

The result was a long list of welding helmet concerns important to the welder, where the three highest ranked became key factors applied in each model within the $3 \mathrm{M}^{\text {mM }}$ Speedglas ${ }^{\text {TM }}$ Welding Helmet Series 9100.


Protection

## (1) Coverage is key!

Helmet coverage is a concern among many welders. So we made the 9100 Series Welding Helmets deeper and wider, improving coverage of ears, neck and sides of the head from heat and welding sparks. In addition there are several accessories available to extend coverage.

## More comfort, less fog

Less pressure and stable fit means improved comfort: The 9100 High-comfort Headband is designed to help avoid pressure on vulnerable areas of the head. It also provides several adjustment combinations for personal tailoring and helmet stability.
The 9100 series helmet's exhaust vents help reduce heat, humidity and fogging of the welding filter.

## Reliable performance!

The key to remember with $3 \mathrm{M}^{\text {Tw }}$ Speedglas ${ }^{\text {Tw }}$ Auto-darkening Welding Filters is consistency. They enable consistent, comfortable viewing and provide protection from ultraviolet (UV) and infrared (IR) radiation, at all times, in all states. They consistently auto-switch from light state to dark state, and back again, to help increase productivity while you weld.

## Field trials and quality verifications

Real-world validation of design concepts and international field trials of prototypes are used to verify our products before they are released. Multiple rigourous objective tests are made to ensure all products meet or exceed international safety standards and requirements well before they reach end-users.

The $3 \mathrm{M}^{\text {Tw }}$ Speedglas ${ }^{\text {tw }}$ Welding Helmet Series 9100 includes six welding helmet models offering many options, including flip-up welding shields, hard hats, and respiratory systems. If you haven't experienced these innovations in welding protection, call your local 3M reseller for a hands-on demonstration.


## Excellent Optics, Wider Views

The $3 M^{\text {TM }}$ Speedglas ${ }^{\text {TM }}$ Auto-Darkening Filters Series 9100 continue our tradition of outstanding optical quality, including uniform shading and minimal distortion across the entire filter viewing area.

- The $3 M^{T m}$ Speedglas ${ }^{T M}$ Filter 9100XX is 30\% larger than any other Speedglas welding filter.
- Seven dark shades, including 9-13 (variable), 5 for gas welding/cutting, and 8 for micro-plasma or low-amp TIG.
- Outstanding low-amp TIG performance, even on settings as low as 1 amp.
- Any shade can be "locked-in." For example, you can lock-in the light state shade 3 for grinding.
- Exclusive, innovative "tack welding comfort mode" which can help reduce eye strain -available on 9100
 $\mathrm{V}, \mathrm{X}, \mathrm{XX}$ lenses.

Magnification made easy. The magnifying lens holder is built into the welding filter, making lens installation easier.

The Speedglas welding filter series 9100 includes three auto-darkening filters: regular, large, and extra-large viewing area.

Seven user selectable dark shades for most types of arc welding.


## Seeing is believing. See your work in a brand new light.

With improvements based on input from master welders around the world, the $3 \mathrm{M}^{\mathrm{m}}$ Speedglas ${ }^{\text {m" }}$ Welding Filter 9100XXi sets a new standard for visibility, convenience and ease of use.

## A new level of visibility and control

Improved optics deliver more natural color and contrast, which may allow:

- Better control of the weld puddle with a view that appears lighter, brighter and more realistic
- Greater precision with set-up and finishing operations
- Simplified workflow with convenient, "gloves-on" memory mode switching - plus a clearer view of welding machine controls
- Auto ON/OFF
- New user interface
- Dark shades 5, 8, 9-13


Learn more at 3m.com/SpeedglasXXi.


## More natural colors

The difference is easy to see. Yes, the light state is still shade 3! But what you see through the filter seems lighter, more detailed and colorful. In fact, the improved welding filter optics can make your entire viewing experience feel more natural.


External controls and memory function
The newly redesigned silver front included in the $3 \mathrm{M}^{\mathrm{mm}}$ Speedglas ${ }^{\text {r"w }}$ Welding Filter Kit 9100XXi houses external controls, enabling fast and easy access to the grinding and memory modes. A new motion-sensor to the 9100 instantly turns ON the welding filter when you pick up the helmet.

## The headband that shapes to your head

The Speedglas 9100 series welding helmets feature a highly adjustable, comfortable headband. The outside of the human head is lined with nerves, arteries, and acupressure points. The 9100 headband specifically avoids these vulnerable areas.

And it provides multiple adjustment combinations so you can "tailor" the helmet to fit your personal preferences and comfort settings, while increasing helmet stability.

Fits head sizes 6.25 to 8

Smooth ratchet for precise tightening.


## More comfortable when raised

Lifted into the raised position, the helmet's "high point" is lower than many other helmets. From a design standpoint that means keeping the helmet as close as possible to your head. Because the helmet is more balanced, you may not need to tighten the headband as much, further increasing your wearing comfort.

## Parking position

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


## Continuous head protection for welders

Designed to fit many of the industry's hard hats*, the $3 \mathrm{M}^{\text {m" }}$ Speedglas ${ }^{\text {™ }}$ Quick Release (QR) Rail swiftly clasps onto your hard hat via a releasable ratcheting mechanism. With the rail installed, you can easily detach the welding visor, keeping your hard hat protection in place as you perform non-welding tasks.

## Quickly Connect/Disconnect

Even with a gloved hand, you can easily attach the $3 \mathrm{M}^{\mathrm{mm}}$ Speedglas"' Welding Helmet 9100-QR (or 100-QR). When your welding work is finished, you can detach the welding helmet as quickly as you take off a baseball cap. You never need to remove the hard hat from your head. As you attach and detach the welding helmet, you never need to remove your hard hat - so your head is protected at all times.
*please refer to user instructions


## Use Your Hard hat ...Or Ours

The $3 M^{\text {TM }}$ Speedglas ${ }^{\text {™ }}$ Quick Release (QR) Rail allows you to attach a Speedglas auto-darkening welding helmet to certain range of the industry's most popular hard hats. We recommend using a hard hat with a ratchet headband, for better stability.
3 M offers a complete welding helmet system including the $3 \mathrm{M}^{\text {TM }}$ Hard hat H-701.


See videos and learn more about Speedglas quick release welding helmets, visit 3M website:


## Flexible and comfortable

Your head is protected at all times because you never need to remove your hard hat as you attach and detach the welding helmet! If you prefer to keep the welding helmet attached, it is quickly parked in the raised position.

This parked position creates a low center of gravity, helping to reduce the forces on your neck while letting you move around more easily thanks to the low profile.

Even with a gloved hand, you can easily attach the $3 \mathrm{M}^{\mathrm{Tm}}$ Speedglas ${ }^{\text {r" }}$ Welding Helmet 9100-QR.

The Quick Release (QR) Rail allows you to attach the Speedglas auto-darkening welding helmet 9100-QR to many of the industry's hard hats*.

3M offers a complete welding helmet system including the $3 \mathrm{M}^{\text {™ }}$ Hard hat H-701.

Designed from inception to accept $3 \mathrm{M}^{\text {m" }}$ PELTOR ${ }^{\text {mw }}$ Earmuffs.
*please refer to user instructions


The 3M ${ }^{\text {Tw }}$ H-701 is a fullfeatured hard hat, capable of accepting integrated eyewear and earmuffs in addition to the Speedglas welding helmet 9100-QR.


## $3 M^{T M}$ Speedglas ${ }^{\text {rw }}$ Welding Helmet 9100 MP

## Multiple Features

Head, eye, face, hearing and respiratory options we've seamlessly integrated welder protection into one comfortable and easy-to-use system.

It's an ideal combination designed to ignite your confidence and productivity all shift long. APF 25.

Compatible, versatile protection: Works with Speedglas filter series 9100, including the top-of-the-line 9100XXi auto-darkening filter.

Expand your view: Two shade 5 passive side windows add peripheral welding vision.

See more: Large (approx. $8 " \times 4.25$ ") curved protective visor has excellent views up, down and peripherally.


## Look Around... <br> Really Look Around

The clear protective visor is wide (approx $8 \mathrm{in} . \times 4.25$ in), curved and offers great views up, down and side-to-side. It's perfect for prepping and inspecting welds... and just walking around your facility. Then, pull down your welding shield and appreciate the side windows views: you can have peripheral vision at all times, even when welding.

## $3 M^{T M}$ Speedglas ${ }^{T m}$ Welding Helmet 9100

## Designed for protection

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.
reddot design award best of the best 2009

## i\# <br> produc design

A selection of welding filters with superior optical performance for continuous viewing comfort. Arc detection down to 1 amp TIG.

Ultraviolet (UV) and infrared (IR) protection at all times, in all states.

Exhaled air is channeled out via side exhaust vents.

High-comfort Speedglas headband 9100.

Large coverage for ear and side of head.

Expand your view: Two-shade 5 passive side windows add peripheral welding vision.

Meets the requirements of CSA Z94.3 and the high impact requirements of ANSI Z87.1-2010.


## $3{ }^{\text {Tw }}$ Speedglas ${ }^{\text {rTM }}$ Welding Helmet 9100-Air

## Respiratory welding helmet

## All of the benefits of the 9100 welding helmets can

 be used in combination with powered or supplied air respiratory protection APF 25. See further details of respirator compatibility on page 52 .Speedglas welding filter series 9100 with superior optical performance for continuous viewing comfort.

解 CSA Z94.3 and the high impact requirements of ANSI Z87.1-2010.

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

An airduct that is an integral part of the helmet, providing a refreshing airflow across your entire breathing zone.

Assigned protection factor of 25.

Expand your view:
Two-shade 5 passive side windows add peripheral welding vision.


Extended protection: A flame-retardant headcover (used in this application) and ear/neck protection are available as accessories.


## 3M ${ }^{T w}$ Speedglas ${ }^{\text {Tw }}$ Welding Helmet 9100 FX

## Wider field of view with flip-up front

Speedglas welding helmet 9100 FX, a flip-up combination of an auto-darkening welding helmet and a protective visor. Not only is the viewing area larger
compared to previous models, we totally redesigned the geometry of the helmet for a wider field of view in all directions.
 and the high impact requirements of ANSI Z87.1-2010.


Using the hard hat adapter, you can easily fit many of the industry's hard hats with the Speedglas welding helmet 9100 FX.


As additional head and neck coverage there are flameretardant accessories to help to protect from of molten metal, sparks and flames.

## 3M ${ }^{T M}$ Speedglas ${ }^{T m}$ Welding Helmet 9100 FX-Air

## Excellent view and respiratory protection!

The Speedglas welding helmet 9100 FX-Air combines respiratory protection and excellent vision in a flip-up model.

Versatile protection and long-lasting comfort. This helmet readily connects both to powered and supplied air respirator systems. APF 25.
Meets the requirements of
CSA Z94.3 and the high impact
requirements of ANSI Z87.1-2010.
Superior optical
performance with flip-up
view. Works with Speedglas
filter series 9100 , including
the top-of-the-line 9100 XXi
auto-darkening filter.


To help increase comfort, air is directed toward the face. An optional diffuser broadens and reduces the speed of the airflow for your maximum comfort.


A quick lift of the silver front and you get a clear approx. 8 x 4.25 in . $(17 \times 10 \mathrm{~cm})$ view - perfect for precision grinding in low light conditions, while maintaining respiratory protection.

$5 \sqrt{4}+$

## $3 M^{T M}$ Speedglas ${ }^{\text {TM }}$ Welding Helmet SL

## When Your \#1 Priority is Super Light

At a mere 13 oz ( 379 grams) - including its autodarkening filter - the Speedglas welding helmet SL is $25 \%$ lighter than any other Speedglas welding helmet model.

Five adjustable dark shades 8-12 and a light shade of 3. Four sensitivity settings.

Grab \& Go: A motion sensor automatically turns ON the welding filter when you pick up the helmet.


## Quick and light, perfect for fast tasks

Using specialized manufacturing techniques, we greatly reduced the weight of the auto-darkening filter. And unlike some other lightweight helmets that can absorb moisture and become heavy, the Speedglas welding helmet SL is made from a strong, nonabsorbent material.

Designed for quick welding tasks, a motion sensor automatically turns ON the welding filter when you pick up the helmet.



## High-End Features, Affordable Price

The Speedglas welding helmet 100 allows you to take advantage of excellent optical quality and reliable light-to-dark switching at an affordable price.

In addition to the black model, you can choose from several highly creative graphic helmet designs.

Appropriate for most arc welding processes, including Stick, MIG/MAG and high amp TIG welding.

Meets the requirements of CSA Z94.3 and the high impact requirements of ANSI Z87.1-2003.

The Speedglas welding helmet 100 is compatible with select $3 \mathrm{M}^{T w}$ Disposable Welding Particulate Respirators.

## Flexible head protection

The easy-to-use Speedglas welding helmet 100 is the ideal auto-darkening helmet for the occasional welder. We can now offer a new option for head protection with the $3 \mathrm{M}^{\mathrm{Tm}}$ Speedglas ${ }^{\mathrm{mm}}$ Quick Release Welding Helmets (QR): The rail swiftly clasps onto your hard hat via a releasable ratcheting mechanism. With the rail installed, you can easily detach the welding visor so your hard hat remains in place for non-welding tasks. No more wearing a welding helmet when you do not
 need it.

Switching speed (light to dark) of $<0.1 \mathrm{~ms}$.
$\qquad$


## 3M ${ }^{\text {T" }}$ Speedglas ${ }^{\text {m" }}$ Graphic Welding Helmets Series 100

Speedglas welding helmet series 100 delivers impressive protection and performance with distinctive graphic designs - all with a specific identity.

Styles are refreshed often, contact your 3M representative to learn about the latest styles.


Tribute
07-0012-31TB


Razor Dragon 07-0012-31RD


Boneyard
07-0012-31BY


Trojan Warrior 07-0012-31TW
 07-0012-31IH


Blazed 07-0012-31BZ
 07-0012-31XT


Aces High
07-0012-31AH


Raging Skull 07-0012-31RS


Future Combatant 07-0012-31FC

## Female Graphic Edition



Steel Rose
07-0012-31SE
Toughness and patinated grace. Strong, fearless, and feminine at the same time. Steel aesthetics emphasize the protective qualities of the helmet.


Wild-N-Pink 07-0012-31WP

Pretty in pink, but do not touch! A vivacious vine flourishes behind a protective overlay of barbed wire and razor-sharp metal sculpture. Admire from a distance.

Inspired by women welders, 3M launched the first line of women specific designs. Our design team took direct inspiration from women welders to work with intricate patterns and graphics. The resulting designs are an avenue for personal expression.


## Made with Your Safety in Mind

Benefit from the superior optical performance of a Speedglas auto-darkening welding filter as well as the added safety of an L-series hard hat and the comfort of continuous airflow. Whether welding or grinding, our products may help you stay more comfortable and productive.

- Positive pressure airflow reduces breathing resistance and helps provide respiratory protection without the need for a tight faceseal. No fit testing required.
- Wideview faceshield allows for excellent peripheral and downward vision.
- Can be worn with limited facial hair, prescription eyewear or safety glasses. (Do not wear if facial hair comes between the face and respirator face seal.)
- Select from a passive welding filter or from $3 \mathrm{M}^{\text {m }}$ Speedglas ${ }^{\text {" }}$ Welding Filter Series 9100 with superior optical performance for continuous viewing comfort.
- $3 \mathrm{M}^{\text {'" }}$ Speedglas ${ }^{\text {m" }}$ Fresh-air III Supplied Air System allows workers to regulate the airflow, as well as cool or heat the air entering the headgear - ideal for extreme temperature working environments.
- For full mobility, combine with our $3 \mathrm{M}^{\mathrm{Tm}}$ Adflo ${ }^{\text {m" }}$ Powered Air Purifying Respirator and HE particulate filter.



## 3M ${ }^{\text {'" }}$ Speedglas ${ }^{\text {T" }}$ Headgear L-Series SG for Powered or Supplied Air Protection



3M ${ }^{\text {rm }}$ Headgear L-705 SG
Hard hat with welding shield and wideview faceshield.


3M ${ }^{\text {Tw }}$ Headgear L-905 SG
Welding helmet with welding shield and wideview faceshield.


# Cooler, cleaner and more comfortable welding 

The Adflo powered air purifying respirator is specially designed to meet your welding needs. It helps provide continuous filtered air to the wearer. By using the Adflo PAPR, you can get both increased protection over certain respirators and comfort for extended wear.

## Full mobility

The slim profile and ergonomic design make it easier to go into tight welding spaces and offer the quality and functions you should expect from a robust and easy-touse PAPR system. The new Li-ion battery makes it even more lightweight and balanced for even greater comfort during a full shift.

## An adaptable system that saves money

With the HE filter and OV/AG cartridge, the Adflo PAPR can help protect you against both particles and certain gases and vapors - all in one system. And you can selectively replace either the particle filter or the OV/AG cartridge as needed: you don't need to change both the filter and cartridge at the same time.


## Constant flow of clean air

The Adflo PAPR is designed to provide airflow which is at a constant nominal rate of approximately 7.2 CFM (205 liters per minute), regardless of the battery's charge or the particle loading of the filter.

## Higher altitudes



For welders working in higher altitude locations where the standard Adflo PAPR might not work properly, there is a special version that adjusts for changes in air density: $3 \mathrm{M}^{\text {TM }}$ Adflo ${ }^{\text {TM }}$ Turbo Assembly with High Altitude Compensation. With this version, you can work at altitudes up to approx. $10,000 \mathrm{ft}$ ( 3000 MASL ) with the HE filter and up to approx. $5,000 \mathrm{ft}$ ( 1500 MASL ) when using the OV/AG cartridge.


A Filter cover: holds the different available Adflo filters
B Spark arrestor.
C Prefilter: designed to increase the service life of the particle filter.
D HE particle filter: high efficiency particulate filtration.
E OV/AG cartridge: OV/AG cartridge captures certain organic vapors and acid gases. OV/AG cartridges are sold separately.
F Odor filter: removes unpleasant smells (not needed if the OV/AG cartridge is installed); sold separately.
G Li-ion battery: fully charges in 4,5 hours. Expected operating time is 7-9 hours with new particle filter, new fully-charged battery and a standard airflow.
H Brushless motor: with up to three times the life of conventional motors.
I Filter/Battery Indicator: indicates the status of the particle filter.
J Breathing tube: different options available
K 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.
L Soft, flexible face seal (removed here for clarity): creates a positive pressure environment within the helmet, keeping the surrounding pollutants at bay.


## $3 M^{T m}$ Adflo ${ }^{\text {Tw }}$ Battery Charging Stand

The new 6-position battery charging stand for Adflo batteries provides the ability to charge six batteries at the same time. Saving both time and hassle. Compatible with legacy NiMH batteries and the new Li-ion batteries. Flexible installation: either mount on wall or stand-alone.

Part No 35-0099-08N6 able to organize and hold your chargers for up to 6 batteries.

## 

Welding helmet with auto-darkening filter. Ergonomic welder protection with optimal mobility and ease-of-use.


Speedglas welding helmet 9100-Air with Adflo PAPR with HE filter: 35-1101-00SW system without welding filter
35-1101-00SWHA high altitude system without welding filter
35-1101-10SW system with Speedglas welding filter 9100V.
35-1101-20SW system with Speedglas welding filter 9100X.
35-1101-30SW system with Speedglas welding filter 9100XX.
35-1101-30iSW system with Speedglas welding filter 9100XXi.
Speedglas welding helmet 9100-Air and Adflo PAPR with HE filter and OV/SD/CL/HC cartridge:
35-3301-10SW system with Speedglas welding filter 9100V.
35-3301-20SW system with Speedglas welding filter 9100X.
35-3301-30SW system with Speedglas welding filter 9100XX.

## 3M ${ }^{\text {m" }}$ Speedglas ${ }^{\text {m" }}$ Welding Helmet 9100 FX-Air with $3 \mathbf{M}^{\text {m" }}$ Adflo ${ }^{\text {m" }}$ PAPR

Welding helmet with auto-darkening welding filter and an approx. 8 in . x 4.25 in . clear visor for weld preparations. Excellent for low-light conditions and eye, face and respiratory protection.


Speedglas welding helmet 9100 FX-Air with Adflo PAPR with HE filter: 36-1101-00SW system without welding filter
36-1101-00SWHA high altitude system without welding filter
36-1101-10SW system with Speedglas welding filter 9100V.
36-1101-20SW system with Speedglas welding filter 9100X.
36-1101-30SW system with Speedglas welding filter 9100XX.
Speedglas welding helmet 9100 FX-Air and Adflo PAPR with HE filter and OV/SD/CL/HC cartridge:
36-3301-00SW system without welding filter
36-3301-10SW system with Speedglas welding filter 9100V.
36-3301-20SW system with Speedglas welding filter 9100X.
36-3301-30SW system with Speedglas welding filter 9100XX.

## 3M ${ }^{\text {m" }}$ Speedglas ${ }^{\text {m" }}$ Welding Helmet 9100 MP with $3 \mathbf{M ~}^{\text {m" }}$ Adflo ${ }^{\text {m" }}$ PAPR

Welding helmet with hard hat, auto-darkening welding filter and an approx. $8 \mathrm{in} . \times 4.25 \mathrm{in}$. clear visor for weld preparations. Up to five levels of welder protection: head, eye, face, respiratory and optional hearing combined into one system.


Speedglas welding helmet 9100 MP with Adflo PAPR with HE filter:
37-1101-00SW system without welding filter
37-1101-00SWHA high altitude system without welding filter
37-1101-10SW system with Speedglas welding filter 9100V.
37-1101-20SW system with Speedglas welding filter 9100X.
37-1101-30SW system with Speedglas welding filter 9100XX.


## Lightweight System Delivers Maximum Airflows

For welding environments where supplied air respiratory protection is needed, the $3 \mathrm{M}^{\text {TM }}$ Speedglas ${ }^{\text {Tm }}$ Fresh-air III Supplied Air Regulator System, can be used with the $3 \mathrm{M}^{\text {mM }}$ Speedglas ${ }^{\text {Tm }}$ Welding Helmets 9100-Air, 9100 FX-Air and 9100 MP. The lightweight, belt-mounted regulator allows you to regulate the airflow from a supplied air source and cool or heat the air entering the headgear by as much as $50^{\circ} \mathrm{F}\left(28^{\circ} \mathrm{C}\right)$, ideal for extreme temperature work environments.

## Quick Connections

The belt-mounted regulator connects to an approved air hose with a quick release connector system. Oil mist, water vapor, or non-toxic, unpleasant odors in the air supply can be removed with an air filter regulator panel, such as $3 \mathrm{M}^{\text {TM }}$ Filter and Regulator Panel W-2806 or 256-02-00.


## Respirator Standards

The Speedglas Fresh-air III supplied air regulator system meets National Institute for Occupational Safety and Health (NIOSH) standards for supplied air respirators, OSHA assigned protection factor of 25 with Speedglas welding helmets 9100-Air/9100 FX-Air/9100 MP, and Fresh-air III SAR regulator ( $3 \mathrm{M}^{\text {TM }}$ Valves V-Series). Meets the requirements of CSA Z94.3 for CSA marked products and the high impact requirements of ANSI Z87.

| Available Supplied Air Hoses and Panels | $3 M^{\text {M }}$ Supplied Air Hoses |  | $3 \mathbf{M}^{\text {Tm }}$ Filter and Regulator Panels |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| Part Numbers | W-9425-25 ( 25 ft ) W-9435-50 (50 ft) W-9435-100 (100 ft) | W-2929-25 ( 25 ft ) <br> W-2929-50 ( 50 ft ) <br> W-2929-100 (100 <br> $\mathrm{ft})$ | W-2806 Filter and Regulator Panel, 50 cfm W-2808 CO Monitor Retrofit Kit | 256-02-00 Portable Filter and Regulator Panel, 50 cfm |
| Applications | 3/8 in High Pressure Hose ( 25,50 , or 100 ft ) |  | Helps to remove water, oil, particles, odors and vapors | Removes limited amounts of carbon monoxide and other contaminants without using large desiccant drying towers |

## 3M ${ }^{\text {Tw }}$ Speedglas ${ }^{\text {Tw }}$ Welding Helmet 9100-Air with $3 \mathbf{M ~}^{\text {™ }}$ Speedglas ${ }^{\text {mw }}$ Fresh-air III Supplied Air Regulator (SAR)

Welding helmet with auto-darkening welding filter combined with NIOSH-approved supplied air respirator system.


> Speedglas welding helmet 9100-Air with Fresh-air III SAR and V-100 cooling valve:

25-5702-10SW with Speedglas welding filter 9100V.
25-5702-20SW with Speedglas welding filter 9100X.
25-5702-30SW with Speedglas welding filter 9100XX
25-5702-30iSW with Speedglas welding filter 9100XXi
Speedglas welding helmet 9100-Air with Fresh-air III SAR and V-200 heating valve:
25-5802-10SW with Speedglas welding filter 9100V.
25-5802-20SW with Speedglas welding filter 9100X.
25-5802-30SW with Speedglas welding filter 9100XX.

##  Supplied Air Regulator (SAR)

Welding helmet with hard hat, auto-darkening welding filter and an approx. $8 \mathrm{in} . \times 4.25 \mathrm{in}$. clear visor for weld preparations. Excellent for low-light conditions and eye, face and respiratory protection.


Speedglas welding helmet 9100 FX-Air with Fresh-air III SAR and V-100 cooling valve:
26-5702-10SW with Speedglas welding filter 9100V.
26-5702-20SW with Speedglas welding filter 9100X.
26-5702-30SW with Speedglas welding filter 9100XX.
Speedglas welding helmet 9100 FX-Air with Fresh-air III SAR and V-200 heating valve:
26-5802-10SW with Speedglas welding filter 9100V.
26-5802-20SW with Speedglas welding filter 9100X.
26-5802-30SW with Speedglas welding filter 9100XX.

##  Supplied Air Regulator (SAR)

Welding helmet with hard hat, auto-darkening welding filter and an approx. $8 \mathrm{in} . \times 4.25 \mathrm{in}$. clear visor for weld preparations. Five levels of welder protection: head, eye, face, respiratory and optional hearing combined into one system.


Speedglas welding helmet 9100 MP with Fresh-air III SAR and V-100 cooling valve:
27-5702-00SW system without welding filter
27-5702-10SW with Speedglas welding filter 9100V.
27-5702-20SW with Speedglas welding filter 9100X.
27-5702-30SW with Speedglas welding filter 9100XX.
Speedglas welding helmet 9100 MP with Fresh-air III SAR and V-300 airregulating valve:
27-5902-10SW with Speedglas welding filter 9100V.
27-5902-20SW with Speedglas welding filter 9100X.
27-5902-30SW with Speedglas welding filter 9100XX.

## $3 M^{T M}$ Versaflo ${ }^{\text {Tw }}$ Faceshield and Helmet M-Series

## Highly versatile rigid headtops

The $3 \mathrm{M}^{\text {T" }}$ Versaflo ${ }^{\text {t" }}$ Headtops M -series feature lightweight, compact and well-balanced faceshields and helmets that can offer integrated protection from a range of respiratory, head, eye and hearing hazards, with optional offerings for neck and shoulder coverage.

The Versaflo helmet M-307 (pictured below) and faceshield M -107 can be used in combination with $3 M^{T m}$ Adflo ${ }^{\text {m" }}$ Powered Air Respirator or $3 \mathrm{M}^{\text {m" }}$ Versaflo ${ }^{\text {m" }}$ Supplied Air Regulator V-500.

Fully-adjustable suspension that includes textile straps for optimal fit and weight distribution.

Optional accessories include earmuffs, peel-off's, head covers and a chin strap. Spare parts and accessories are quick and easy to replace; for example, visors easily slide into place and are secured by quickly snapping two buttons.

A deflector allows users to direct the airflow inside the headtop for increased control and comfort.

The visor design combines excellent peripheral and downward vision with good optical clarity. Coated visors provide added chemical and scratch resistance.

## Excellent airflow

3M ${ }^{\text {TM }}$ Versaflo ${ }^{\text {TM }}$ M-Series Headtops direct a comfortable stream of flowing air to where workers need it most: the head and face. The moving airflow can make hot environments more tolerable while greatly reducing visor fogging.


## 3M $^{\text {Tw }}$ Versaflo ${ }^{\text {m" }}$ Faceshield M-107

Lightweight, compact and well-balanced faceshield offers integrated protection from a range of eye, face and hearing hazards. Features a flame-retardant faceseal for protection against hot particles.


Part no:
M-107 Versaflo faceshield M-107
35-5401-01
3M ${ }^{\text {mw }}$ Adflo ${ }^{\text {m" }}$ Powered Air Respirator*

## 3M ${ }^{\text {TM }}$ Versaflo ${ }^{\text {T" }}$ Bumpcap M-207

Lightweight, compact and well-balanced faceshield offers integrated protection from a range of eye, face and hearing hazards. Features a flame-retardant faceseal for protection against hot particles.


Part no:
M-207 Versaflo faceshield M-207
35-5401-01

3M ${ }^{\text {Tm }}$ Versaflo ${ }^{\text {Tm }}$ Helmet M-307
Features a flame-retardant faceseal for protection against hot particles. Fabric material: Polyester. Head protection approved according to ANSI Z89.1-2009 requirements for Type 1 Class $G$ hard hats.


Part no:
M-307 Versaflo helmet M-307
35-5401-01 $3 M^{m "}$ Adflo ${ }^{m \mathrm{~m}}$ Powered Air Respirator*

## 3M ${ }^{\text {TM }}$ Versaflo ${ }^{\text {rw }}$ Helmet with Shroud M-407

Features a flame-retardand shroud for protection against hot particles. Fabric material: Polyaramid. Head protection approved according to ANSI Z89.1-2009 requirements for Type 1 Class $G$ hard hats. In the U.S. its for use with Adflo system. Use with SG-50W breathing tube that is foam lined.


## Frequently Asked Questions about Hexavalent Chromium and Manganese

Hexavalent Chromium (CrVI) is a form of the metal chromium that rarely occurs naturally and is most commonly produced by industrial processes. Hexavalent chromium fume is generated when performing "hot work" such as welding on stainless steel or other alloys containing chrome.

As chrome-containing welding fume forms, it oxidizes into trivalent or hexavalent species. The hexavalent form is far more toxic than the metallic or hexavalent forms. Hexavalent Chromium is often referred to as Hex Chrom, Hex Chrome, Chromium 6, Hexa Chrom, $\mathrm{Cr}(\mathrm{VI})$, or HexChrome.

Manganese is a grey-white metal resembling iron. Manganese is used extensively in steel and other metal alloys to promote hardness and reduce cracking. Most steel welding electrodes also contain manganese. Unlike hexavalent chrome, all species of manganese oxide welding fume are presumed to be of equal toxicity.

Overexposure to manganese fume has been linked to a neurological disorder that resembles Parkinson's Disease. Symptoms may include weakness/lethargy, speech and psychological disturbances, paralysis, and tremors.

To help reduce the risk of adverse health effects caused by exposures to airborne materials such as $\mathrm{Cr}(\mathrm{VI})$ and manganese, the United States Occupational Safety and Health Administration (OSHA) has established permissible exposure limits (PELs). In addition, the American Conference of Governmental Industrial Hygienists (ACGIH) sets threshold limit values (TLVs ${ }^{\circledR}$ ) which are exposure guidelines.

## Watch our webinar on YouTube/3MSpeedglas!



## Standards, Regulations and Enforcement Cr(VI)

On February 28th, 2006 (OSHA) published the final Hexavalent Chromium (CrVI) Standard. There are three versions of the standard: General Industry (1910.1026), Construction (1910.1126), and Shipyards (1515.1026). The requirements of each standard are very similar. The OSHA PEL for all industries is 5 micrograms per cubic meter of air ( $5 \mu \mathrm{~g} / \mathrm{m}^{3}$ ), reduced from $52 \mu \mathrm{~g} / \mathrm{m}^{3}$. The PEL is a time weighted average (TWA) for an 8 -hour workday and 40-hour workweek. The action level, or the level where many of the requirements of the standard such as medical surveillance may be required, is $2.5 \mu \mathrm{~g} / \mathrm{m}^{3}$.
A copy of this instructional manual can be found at: www.osha.gov/OshDoc/Directive_pdf/CPL_02-02076.pdf

## Manganese

The current OSHA PEL for manganese is 5 milligrams per cubic meter of air ( $5 \mathrm{mg} / \mathrm{m}^{3}$ ). This PEL is based on a "total" particle size sampling method which includes particles much larger than those produced by welding processes. OSHA has had the same exposure limit for manganese since 1971. The ACGIH TLV for manganese is an 8-hour TWA limit of $0.02 \mathrm{mg} / \mathrm{m}^{3}$ respirable size fraction and $0.1 \mathrm{mg} / \mathrm{m}^{3}$ for the inhalable size fraction. The respirable fraction is the smallest size fraction (10 microns and smaller) a relevant category for fume particles.


## Respiratory Protection for $\mathrm{Cr}(\mathrm{VI})$ and Manganese Exposure

In many cases, changes in manufacturing processes and engineering controls alone can't reduce exposure levels to below the occupational exposure limits (OELs). In such cases, it may be appropriate to use respiratory protection.
For any particular application, an array of respirator types that provide an appropriate level of protection are available. The cost of these respirators may vary from around $\$ 1$ for a basic negative-pressure, disposable, filtering facepiece to $\$ 2,000$ or more for a powered or supplied-air system.

Respirators should be selected based on results from air sampling and the necessary assigned protection factor (APF) as established within OSHA 29 CFR 1910.134. OSHA requires employers to implement a written respiratory protection program when respiratory protection is used. Elements of the written program include respirator selection, use, care and maintenance, medical evaluation, training, and fit testing.

## Summary

$\mathrm{Cr}(\mathrm{VI})$ and Manganese are found in many manufacturing processes. As a precaution, review MSDS sheets for materials containing these substances in manufacturing processes. If there are questions regarding the air quality, it may be a good idea to discuss the option of air sampling with an industrial hygienist to better determine the levels of contaminants within a given process.
If the air sampling results indicate exposure levels above the occupational exposure limit (either PEL or TLV, whichever the employer is using), changes to manufacturing processes, use of other engineering controls or PPE may be suitable choices to reduce employee exposures to acceptable levels.

Further questions regarding this article or selection of respiratory protection may be directed to 3M PSD Technical Service at

1-800-243-4630

## Recommended guide for shade numbers according to ANSI Z49.1-2012



The table recommends best dark shade of welding filter for various working applications.
According to the conditions of use, the next greater or the next smaller scale number can be used.

Transmittance (\%)


## Parts directory

$3 \mathrm{M}^{\mathrm{Tm}}$ Speedglas ${ }^{\text {T" }}$ Welding Helmets (non-respiratory models)
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## Revitalize your welding respirator!

If you are using an older $3 \mathrm{M}^{\text {TM }}$ Adflo ${ }^{\text {TM }}$ Powered Air Respirator, you can easily upgrade to a new level of performance, incorporating a Li-ion battery, making the turbo almost $20 \%$ lighter in weight. As a special offer we include a free set of both particle filter and pre-filters. Regular replacement of the pre-filter extends the life of the particle filter, saving money while also increasing the battery run-time.

Read more about the new Adflo respirator on page 24 or visit www.3M.com/workersafety


Part no Adflo upgrade kit:
35-1099-17 Li-ion standard battery pack with charger, particle filter and set of pre-filters.

## 3M ${ }^{\text {"' }}$ Speedglas" ${ }^{\text {"' }}$ Welding Filter Kit 9100XXi

Your window to a new world of more realistic color and detail - to help you weld, grind and see your finish. Keep compatible with Speedglas welding helmets 9100, 9100-Air and 9100-QR.

Learn more about the new Speedglas welding filter on 3M.com/speedglasxxi


## Part No:

06-0000-30i-KIT Welding filter 9100XXi with new silver front

## Head and hearing protection

The $3 \mathrm{M}^{\mathrm{mm}}$ Speedglas ${ }^{\text {m＂}}$ Quick Release（QR）Rail allows you to attach a Speedglas auto－darkening welding helmet to many of the industry＇s most popular hard hats． 3 M offers a complete welding helmet system including the $3 \mathrm{M}^{\mathrm{m}}$ Hard hat $\mathrm{H}-701$ ． The H－701 is a full－featured hard hat capable of accepting 3 M integrated eyewear and earmuffs in addition to the $3 \mathrm{M}^{\mathrm{mw}}$ Speedglas ${ }^{\text {t＂}}$ Welding Helmet 9100－QR．

```
Internal slots for
```

accessory earmuffs.

## 3M ${ }^{T M}$ PELTOR ${ }^{T M}$ Earmuffs X－Series

Featured accessory to $3 \mathrm{M}^{\text {T }}$ Speedglas ${ }^{\text {m＂}}$ Welding Helmet 9100 MP and other Speedglas welding helmets combined with $3 \mathrm{M}^{\text {＂I }}$ Hard hats．
－New ear cushion foam technology for an effective acoustic seal and reliable protection
－Streamlined cups without compromising attenuation
－Lightweight dual mold cups with maximum space inside to help minimize heat and moisture build－up
－Integrated design for more robustness
－Color－coded for ease of selection
－Easy to clean


3M ${ }^{\text {m＂}}$ PELTOR ${ }^{\text {m＂}}$ Earmuffs X1 NRR：21dB＊

$3 M^{\text {m＂}}$ PELTOR ${ }^{\text {m＂}}$ Earmuffs X2 NRR： 24 dB ＊

$3 \mathrm{M}^{\text {＂＇}}$ PELTOR ${ }^{\text {™ }}$
Earmuffs X3
NRR： 25 dB ＊

$3 M^{m "}$ PELTOR ${ }^{m "}$
Earmuffs X4 NRR：25dB＊


3M ${ }^{\text {＂＇}}$ PELTOR ${ }^{\text {T＂}}$
Earmuffs X5
NRR：31dB＊

[^0]
## 3M ${ }^{\text {™ }}$ Speedglas ${ }^{\text {T" }}$ Welding Helmets - sorted by features




| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 06-0100-10 | Speedglas welding helmet 9100 with welding filter 9100V | 06-0100-20 | Speedglas welding helmet 9100 with welding filter 9100X | 06-0100-30HASW | Speedglas welding helmet 9100, with side windows, hard hat adapter |
| 06-0100-10HASW | Speedglas welding helmet 9100 , with side windows, hard hat adapter and welding filter 9100V, without hard hat | 06-0100-20HASW | Speedglas welding helmet 9100 , with side windows, hard hat adapter and welding filter 9100X, without hard hat | 06-0100-30HHSW | and welding filter 9100XX, without hard hat <br> Speedglas welding helmet 9100 with side windows, hard hat and welding |
| 06-0100-10HHSW | Speedglas welding helmet 9100 with side windows, hard hat and welding filter 9100V | 06-0100-20SW | Speedglas welding helmet 9100 with side windows and welding filter 9100X | 06-0100-30SW | filter 9100XX <br> Speedglas welding helmet 9100 with side windows and welding filter |
| 06-0100-10SW | Speedglas welding helmet 9100 with side windows and welding filter 9100V | 06-0100-30 | Speedglas welding helmet 9100 with welding filter 9100XX | 06-0100-30iSW | 9100XX <br> Speedglas welding helmet 9100 with side windows and welding filter kit 9100XXi |



Accessories and consumables

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 04-0023-02 | Hard hat H-701, white | 06-0200-53 | Outside protection plate high temperature,10/case | 06-0300-55-B | Part no 06-0300-55, 5/case |
| 04-0320-00 | Batteries, 2/case |  |  | 06-0400-51 |  |
| 06-0000-10 | Speedglas welding filter 9100V | 06-0200-53-B | Part no 06-0200-53, 50/case | 06-0400-51-B | Part no 06-0400-51, 5 /case |
| 06-0000-20 | Speedglas welding filter 9100X | 06-0200-54 | Comfort sweatband, $3 /$ case | 06-0400-52 | Pivot mechanism headband, left and right |
| 06-0000-30 | Speedglas welding filter 9100XX | 06-0200-54-B |  |  |  |
| 06-0000-30i | Speedglas welding filter 9100XXi Speedglas welding filter kit 9100XXi, (filter and silver front) | 06-0201-10 | Starter kit 9100V, incl 5 outside protection plates, 2 inside protection plates and 1 sweatband | 06-0400-52-B | Part no 06-0400-52, 5/case |
| 06-000030iKIT |  |  |  | 06-0400-53 | Headband front part |
|  |  |  |  | 06-0400-53-B | Part no 06-0400-53, 5/case |
| 06-0014-00NR | 9100 hardhat adapter for with assembly parts, without hard hat | 06-0201-20 | Starter kit 9100X, incl 5 outside protection plates, 2 inside protection | 06-0400-54 | Headband back part |
|  |  |  |  | 06-0400-54-B | Part no 06-0400-54, 5/case |
| 06-0200-10 | Inside protection plate 9100V, 5/ case | 06-0201-30 | plates and 1 sweatband | 06-0400-55 | Battery holder 9100, 2/case |
|  |  |  |  | 06-0400-55-B |  |
| 06-0200-10-B | Part no 06-0200-10, 25/case |  | protection plates, 2 inside protection | 06-0500-51 | Extended coverage, Crown |
| 06-0200-20 | Inside protection plate 9100X,5/case | 06-0300-51 | plates and 1 sweatband | 06-0500-52 | Extended coverage, Ear \& Neck |
|  |  |  | Welding helmet without side windows, with headband and silver | 06-0500-53 | SideWindow cover plates, |
| 06-0200-20-B | Part no 06-0200-20, 25/case |  |  |  | 2/case |
| 06-0200-30 | Inside protection plate 9100XX, 5/ |  | front panel | 06-0500-56 | Magnification plate 15x |
|  | case | 06-0300-51SW | Welding helmet with side windows, | 06-0500-57 | Magnification plate 20x |
| 06-0200-30-B | Part no 06-0200-30, 25/case |  | headband and silver front panel | 06-0500-58 | Magnification plate 25x |
| 06-0200-51 | Outside protection plate standard, |  |  | 06-0500-59 | Magnification plate 30x |
|  | 10/case | 06-0300-52 | Welding helmet without side | 06-0700-83 | Full Hood, black/grey |
| 06-0200-51-B | Part no 06-0200-51, 50/case |  | windows, without headband |  |  |
| 06-0200-52 | Outside protection plate scratch resistant, 10/case | 06-030052SW* | Welding helmet with side windows, without headband |  |  |
| 06-0200-52-B | Part no 06-0200-52, 50/case | 06-0300-55 | Silver front panel 9100 |  |  |

## 3M ${ }^{\text {™ }}$ Speedglas ${ }^{\text {TM }}$ <br> Welding Helmet 9100 FX



| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 06-0600-10SW | Speedglas welding helmet 9100 FX with welding filter 9100V | 06-0600-10HHSW Speedglas welding helmet 9100 |  | 06-0600-30HHSW Speedglas welding helmet 9100 |  |
|  |  |  | FX with hard hat and welding filter |  | FX with hard hat and welding filter |
| 06-0600-20SW | Speedglas welding helmet 9100 FX with welding filter 9100X | 9100V <br> 06-0600-20HHSWSpeedglas welding helmet 9100 |  |  | 9100XX * |
|  |  |  |  |  |  |
| 06-0600-30SW | Speedglas welding helmet 9100 FX with welding filter 9100XX |  |  |  |  |
|  |  | 9100X |  |  |  |



06-0600-00SW


# $3 \mathrm{M}^{\mathrm{Tm}}$ Speedglas ${ }^{\mathrm{m}}$ Welding Helmet 9100-QR 



| Part No | Description | Part No | Description | Part No | Description |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 06-0100-10QR | Speedglas welding helmet 9100-QR <br> with 9100V welding filter and 3M <br> Hard Hat H-701 | 06-0100-20QR | Speedglas welding helmet 9100-QR <br> with 9100X welding filter and 3M <br> Hard Hat H-701 | 06-0100-30QR | Speedglas welding helmet 9100-QR <br> with 9100XX welding filterand 3M |



## Accessories and consumables

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 04-0023-02 | 3M hard hat $\mathrm{H}-701 \mathrm{R}$, white (unvented) | $\begin{aligned} & 06-0200-52-B \\ & 06-0200-53 \end{aligned}$ | Part no 06-0200-52, 50/case Outside protection plate high | 06-0300-54QR | Welding helmet 9100-QR with quick release rail, without welding filter, |
| 04-0320-00 | Batteries 2/case |  | temperature,10/case |  | without hard hat |
| 06-0000-10 | Speedglas welding filter 9100V | 06-0200-53-B | Part no 06-0200-53, 50/case | 06-0300-55 | Silver front panel 9100 |
| 06-0000-20 | Speedglas welding filter 9100X | 06-0400-55 | Battery holder 9100, 2/case |  |  |
| 06-0000-30 | Speedglas welding filter 9100XX | 06-0400-55-B | Part no 06-0400-55, 10/case |  |  |
| 06-0000-30i | Speedglas welding filter 9100XXi | 06-0500-56 | Magnification plate 15 x |  |  |
| 06-0200-10 | Inside protection plate 9100V, | 06-0500-57 | Magnification plate 20x |  |  |
|  | 5/case | 06-0500-58 | Magnification plate 25x |  |  |
| 06-0200-10-B | Part no 06-0200-10, 25/case | 06-0500-59 | Magnification plate 30x |  |  |
| 06-0200-20 | Inside protection plate 9100X, | 18-0099-68 | Ear and neck protection in leather |  |  |
|  | 5/case | 06-0014-00QR | Quick release rail for hard hat |  |  |
| 06-0200-20-B | Part no 06-0200-20, 25/case | 06-0114-00QR | Rail retention parts |  |  |
| 06-0200-30 | Inside protection plate 9100XX, | 06-0116-00QR | Pivot cover plate kit |  |  |
|  | 5/case | 06-0119-00QR | Distance bar when using welding |  |  |
| 06-0200-30-B | Part no 06-0200-30, 25/case |  | filters 9100X/9100XX/9100XXi |  |  |
| 06-0200-51 | Outside protection plate standard, 10/case | 06-0118-00QR | Ear muff bar for Speedglas welding helmet 9100-QR |  |  |
| 06-0200-51-B | Part no 06-0200-51, 50/case | 06-0300-52QR | Welding helmet 9100-QR without |  |  |
| 06-0200-52 | Outside protection plate scratch resistant, 10/case |  | quick release rail, without welding filter, without hard hat |  |  |

## $3 \mathrm{M}^{\mathrm{Tm}}$ Speedglas ${ }^{\mathrm{mm}}$

Welding Helmet Series 100/100-QR

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 07-0012-10BL | Speedglas welding helmet 100 Black with welding filter 100S-10 | 07-0012-31BZ | Speedglas welding helmet 100 Blazed* | 07-0012-31SJ | Speedglas welding helmet 100 Skull Jewels* |
| 07-0012-11BL | Speedglas welding helmet 100 Black with welding filter 100S-11 | 07-0012-31FC | Speedglas welding helmet 100 Future Combatant* | 07-0012-31SR | Speedglas welding helmet 100 Steel Rose* |
| 07-0012-31AH | Speedglas welding helmet 100 Aces High* | 07-0012-311H | Speedglas welding helmet 100 Ice Hot* | 07-0012-31TB | Speedglas welding helmet 100 Tribute* |
| 07-0012-31BL | Speedglas welding helmet 100 Black* | 07-0012-31RD | Speedglas welding helmet 100 Razor Dragon* | 07-0012-31TW | Speedglas welding helmet 100 Trojan Warrior* |
| 07-0012-31BLQR | Speedglas welding helmet 100-QR with 3 M hard hat $\mathrm{H}-701^{*}$ | 07-0012-31RS | Speedglas welding helmet 100 Raging Skull* | 07-0012-31WP | Speedglas welding helmet 100 Wild-N-Pink* |
| 07-0012-31BY | Speedglas welding helmet 100 Boneyard* | 07-0012-31SE | Speedglas welding helmet 100 Steel Eyes* | $07-0012-31 X T$ <br> * With Speedgla | Speedglas welding helmet 100 Xterminator* elding filter100V |



07-0200-51
07-0200-52 07-0200-53


07-0000-10 07-0000-11 07-0000-31


04-0290-00 04-0290-01 04-0290-02


04-0023-02



07-0012-00BL


## Accessories and consumables

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 02-0024-00 | Sweatband, cotton fleece with padding | $\begin{aligned} & 06-0500-58 \\ & 06-0500-59 \end{aligned}$ | Magnification plate 25 x Magnification plate 30x | 07-0200-53 | Outside protection plate, high temperature, $10 /$ case |
| 02-0024-01 | Sweatband, leather | 06-0700-83 | Full hood, black/grey | 07-0212-00SV | Silver front frame 100 |
| 02-0690-00 | Throat protection, black/grey | 07-0000-10 | Speedglas welding filter 100S-10, | 07-0680-00 | Holder for magnifier, 2/case |
| 04-0023-02 | 3 M hard hat $\mathrm{H}-701 \mathrm{R}$ (unvented) |  | shade 10 | 18-0099-68 | Throat and side protector, leather |
| 04-0290-00 | Inside protection plate, 5/case | 07-0000-11 | Speedglas welding filter 100S-11, | 06-0014-00QR | Quick release rail for hard hat |
| 04-0290-01 | Inside protection plate, +1 shade, 5/case | 07-0000-31 | shade 11 <br> Speedglas welding filter 100V, | 06-0114-00QR | Rubber friction pads for quick release rail |
| 04-0290-02 | Inside protection plate, +2 shade, 5/case | 07-0012-00BL | shade 8-12 <br> Welding helmet black, without | 07-0112-00BL-QR | Welding helmet 100-QR without quick release rail, without welding |
| 04-0320-00 | Battery, 2/case |  | welding filter, without headband |  | filter, without hard hat |
| 05-0370-00 | Battery cover | 07-0024-02 | Sweatband, fleece, 2/case | 07-0114-00BL-QR | Welding helmet 100-QR with quick |
| 05-0655-00 | Comfort headband with assembly parts | 07-0200-51 | Outside protection plate, standard, 10/case |  | release rail, without welding filter, without hard hat |
| 05-0660-00 | Assembly parts for headband | 07-0200-52 | Outside protection plate, scratch |  |  |
| 06-0500-56 | Magnification plate 15x |  | resistant, 10/case |  |  |
| 06-0500-57 | Magnification plate 20x |  |  |  |  |

# $3 \mathrm{M}^{\mathrm{Tm}}$ Speedglas ${ }^{\mathrm{m}}$ Welding Helmet SL 



| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 02-0024-00 | Sweatband, cotton fleece with padding | 05-0250-00 | Outside protection plate, 5/ case | $\begin{aligned} & 06-0500-57 \\ & 06-0500-58 \end{aligned}$ | Magnification plate 20x Magnification plate $25 x$ |
| 02-0024-01 | Sweatband, leather | 05-0250-01 | Outside protection plate, | 06-0500-59 | Magnification plate 30x |
| 02-0690-00 | Throat protection black/grey |  | scratch resistant, 5/case | 06-0700-83 | Full hood, black/grey |
| 04-0290-00 | Inside protection plate, $5 /$ case | 05-0370-00 | Battery holder | 07-0024-02 | Sweatband, fleece, black 2/ |
| 04-0320-00 | Battery, 2/case | 05-0655-00 | Comfort headband with |  | case |
| 05-0000-41 | Welding filter SL, shade 8-12 |  | assembly parts | 16-0099-30 | Headcover, FR Cotton |
| 05-0013-00 | Welding helmet, without headband | $\begin{aligned} & 05-0660-00 \\ & 05-0680-00 \end{aligned}$ | Assembly parts for headband Magnifying lens holder | 18-0099-68 | Throat and side protector, leather |
| 05-0013-41 | Welding helmet SL with filter, variable shade 8-12 | $\begin{aligned} & 05-0695-00 \\ & 06-0500-56 \end{aligned}$ | Spatter protector <br> Magnification plate $15 x$ |  |  |



06-0500-56
06-0500-57
06-0500-58 06-0500-58
06-0500-59


# Speedyloop Hard Hat Options for <br> 3M ${ }^{\text {™ }}$ Speedglas ${ }^{\text {™ }}$ Welding Helmets 9100 / 100 




07-0014-00NR (not shown)


04-0023-02

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 04-0023-02 | Hard hat, white | 06-0100-20HASW | Speedglas welding helmet | 06-0100-30HHSW | Speedglas welding helmet 9100 |
| 06-0014-00NR | Hard hat adapter for Speedglas welding helmet 9100 with |  | 9100 with side windows, hard hat adapter and welding filter |  | with side windows, hard hat and welding filter 9100XX |
|  | assembly parts, without hard hat |  | 9100X, without hard hat | 07-0012-31BL-HA | Speedglas welding helmet 100 with welding filter 100 V and hard hat adapter, without hard hat Speedglas welding helmet 100 with hard hat and welding filter |
| 06-0100-10HASW | Speedglas welding helmet | 06-0100-20HHSW Speedglas welding helmet 9100 with side windows, hard hat and welding filter 9100X |  |  |  |
|  | 9100, with side windows, hard hat adapter and welding filter |  |  | 07-0012-31BL-HH |  |
|  | 9100V, without hard hat | 06-0100-30HASW | Speedglas welding helmet |  |  |
| 06-0100-10HHSW | Speedglas welding helmet 9100 with side windows, hard hat and welding filter 9100V | hat adapter and welding filter 9100XX, without hard hat |  | 07-0014-00NR | $100 \mathrm{~V}$ |
|  |  |  |  | Hard hat adapter for Speedglas welding helmet 100 with hard hat assembly parts, without hard hat (not shown) |  |
|  |  |  |  |  |  |

## 3M ${ }^{\text {m" }}$ Speedglas ${ }^{\text {m" }}$ Welding Helmet Series 9000

## Accessories and consumables*

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 02-0024-00 | Sweatband, cotton fleece with padding | 04-0126-00 | FlexView pivot "S" stop (left), 10/case | 04-0290-01 | Inside protection plate, +1 shade for welding filters 9002D/9002V, |
| 02-0024-01 | Sweatband, leather | 04-0212-02 | Speedglas 9000 silver front panel |  | 5/case |
| 02-0690-00 | Throat protection, black/grey | 04-0216-00 | Speedglas FlexView silver front | 04-0290-02 | Inside protection plate, +2 shade for |
| 04-0000-21 | Speedglas welding filter 9002X |  | panel |  | welding filters 9002D/9002V, |
| 04-0023-02 | Hard hat, white | 04-0260-00 | Speedglas FlexView protection |  | 5/case |
| 04-0025-00 | ProTop welding hood with pivot |  | plate, 10/case | 04-0315-00 | ProTop strap |
|  | mechanism, without hard hat, | 04-0270-01 | Outside protection plate, 10/case | 04-0320-00 | Battery, 2/case |
|  | welding filter, without strap | 04-0270-03 | Outside protection plate, scratch | 04-0360-00 | FlexView welding filter holder |
| 04-0025-00SW | ProTop welding hood with pivot |  | resistant, 10/case | 04-0361-00 | FlexView middle helmet panel, black |
|  | mechanism and side windows, | 04-0270-04 | Outside protection plate, high | 04-0380-00 | Battery holders blue, 2/case |
|  | without hard hat, without welding |  | temperature, 10/case | 04-0460-00 | FlexView replacement kit |
|  | filter, without strap | 04-0280-00 | Inside protection plate for welding | 04-0550-00 | FlexView locking wedge kit, holder |
| 04-0026-00 | Headband pivot " S " stop (right), |  | filters 9002X/9000XF, 5/case |  | welding filter (not shown) |
|  | 10/case | 04-0280-01 | Inside protection plate, +1 shade for | 04-0650-00 | Headband with assembly parts |
| 04-0112-00 | Speedglas welding helmet 9000 , |  | welding filters 9002X/9000XF, | 06-0700-83 | Full hood black/grey |
|  | inner shell without side windows |  | 5/case | 07-0024-02 | Sweatband fleece, 2/case |
| 04-0112-00SW | Speedglas welding helmet 9000, | 04-0280-02 | Inside protection plate, +2 shade for | 16-0099-30 | Headcover, FR cotton |
|  | inner shell with side windows |  | welding filters 9002X/9000XF, | 18-0099-68 | Throat and side protector, leather |
| 04-0116-00 | FlexView welding helmet inner shell without side windows | 04-0290-00 | 5/case <br> Inside protection plate for welding | H-700-BP | Hard hat replacement brow pad, 20/case |
| 04-0116-00SW | FlexView welding helmet inner shell with side windows |  | filters 9002D/9002V, 5/case |  |  |



## Compatibility of Air Delivery Units and Headtops

The $3 \mathrm{M}^{\text {™ }}$ Speedglas ${ }^{\text {™ }}$ Welding Helmet Series 9100 features breathing tubes with QRS connection (Quick Release Swivel), which enables one-handed connection and release. The SG-30W breathing tube comes standard with most $3 \mathrm{M}^{\text {Tm }}$ Adflo ${ }^{T m}$ PAPR HE Systems and 3M ${ }^{\text {Tm }}$ Speedglas ${ }^{\text {TM }}$ Fresh-air III Supplied Air Systems.

The SG-40W breathing tube is an option for more demanding conditions and also comes standard with complete systems that include the $3 \mathrm{M}^{\mathrm{TM}}$ Speedglas ${ }^{\mathrm{TM}}$ Welding Helmet 9100 MP. The SG-50W breathing tube is standard on the $3 \mathrm{M}^{\text {TM }}$ Adflo ${ }^{\text {TM }}$ PAPR HE/OV-AG systems.


## 3M ${ }^{\text {m" }}$ Adflo ${ }^{\text {™ }}$

## Powered Air Purifying Respirator



Accessories and consumables

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| BPK-01 | Backpack |  | (not shown) | 35-0099-08 | Charger for Li-ion battery |
| L-122SG | Breathing tube for L-series headgear | 15-0099-16 | Belt, leather | 35-0099-08N6 | Docking station for chargers |
| SG-15 | Flame resistant breathing tube cover (replaces 17-0099-54) | 15-0099-20 | Flow Indicator rubber adapter (not shown) | $\begin{aligned} & 35-0099-14 \\ & 35-0699-99 \times 01 \end{aligned}$ | Belt connection (not shown) <br> Nuisance odor filter |
| SG-30W | Breathing tube, self-adjusting, with | 15-0099-21 | Flow Indicator | 35-0699-99X01 | Nuisance odor filter pad |
|  | QRS connection | 15-0099-99×06 | Prefilter, 6/c | 35-0699-99X01 | Nuisance odor filter pad, 10/c |
| SG-40W | Breathing tube, heavy-duty, with | 15-0099-99×12 | Prefilter, 12/c | 35-1099-01 | PAPR assembly and filter cover |
|  | QRS connection | 15-0299-99×02 | HE particulate filter, 2/c | 35-1099-07 | Battery Li-ion |
| SG-50W* | Breathing tube, sound-dampening, with QRS connection | $\begin{aligned} & 15-0299-99 \times 06 \\ & 15-0299-99 \times 36 \end{aligned}$ | HE particulate filter, 6/c HE particulate filter, 36/case | $\begin{aligned} & 35-1099-81 \\ & 35-5401-01^{*} \end{aligned}$ | PAPR filter cover Adflo PAPR with SG-30W self- |
| SG-90 | Carry bag, black | 15-0499-99×02 | OV/AG cartridge, 2/case |  | adjusting breathing tube, airflow |
| 06-0500-65 | Protective bag | 15-0499-99×06 | OV/AG cartridge, 6/case |  | indicator, prefilter, spark arrestor, |
| 15-0009-99×02 | Spark arrestor, 2/c | 15-1101-99 | Battery NiMH |  | filter cover, HE particulate filter, |
| 15-0099-05 | Airflow indicator | 15-1101-99 | Adflo service kit: HE particulate |  | battery, belt and charger |
| 15-0099-06 | Leather belt front extender |  | filters $2 / \mathrm{c}$, prefilters $6 / \mathrm{c}$, spark |  |  |
| 15-0099-08 | Charger for NiMH battery |  | arrestor 2/c |  |  |
| 15-0099-10 | Breathing tube assembly (including gasket and o-ring) | 34-5401-02SG* | Adflo PAPR with L-122SG breathing tube, airflow indicator, prefilter, |  |  |
| 15-0099-11 | Gasket for non-QRS breathing tubes (not shown) |  | spark arrestor, filter cover, HE particulate filter, battery, belt and |  |  |
| 15-0099-12 | Breathing tube rubber o-ring |  | charger |  |  |

[^1]
# 3M ${ }^{\text {T" }}$ Speedglas ${ }^{\text {t" }}$ Fresh-air III Supplied Air System 



| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 19-0099-63 | Fresh-air III breathing tube V-Series | V-150 | Vortex cooling valve | W-2929-50 | High pressure air supply hose, 50 ft |
| SG-30W | Breathing tube, self-adjusting, with QRS connection | V-199 | Adapter (for use with SG-30W and SG-40W breathing tubes), 4/case | $\begin{aligned} & W-2929-100 \\ & W-2963 \end{aligned}$ | High pressure air supply hose, 100 ft Waist belt, cotton |
| SG-40W | Breathing tube, heavy-duty rubber, with QRS connection | V-200 | Vortemp heating assembly, includes valve V-250, belt W-2963 and holder | $\begin{aligned} & W-9435-25 \\ & W-9435-50 \end{aligned}$ | High pressure air supply hose, 25 ft High pressure air supply hose, 25 ft |
| V-100 | Vortex cooling assembly, includes valve V-150, belt W-2963 and holder | V-211 | Vortemp muffler kit (replacement muffler for the heating assembly | W-9435-100 | High pressure air supply hose, 25 ft |
| V-111 | Vortex muffler kit (replacement muffler for the cooling assembly V-100) | V-215 | V-200) <br> Vortemp spare parts kit (for the heating assembly V-200) |  |  |
| V-115 | Vortex spare parts kit (for the cooling assembly V-100) | $\begin{aligned} & \text { V-250 } \\ & \text { W-2929-25 } \end{aligned}$ | Vortemp heating valve <br> High pressure air supply hose, 25 ft |  |  |



## 3M ${ }^{\top T}$ Speedglas ${ }^{\text {TM }}$ Fresh-air II Supplied Air System

## Consumables (not shown)

Part No
Description
Part No
Description


| $18-0099-16$ | Comfort Belt |
| :--- | :--- |
| $18-0099-40$ | Air supply hose with couplings, 25 ft. |
| $18-0099-41$ | Air supply hose with couplings, 50 ft. |


| 18-0099-55 | Fresh-air II valve shield |
| :--- | :--- |
| 18-0099-63 | Fresh-air II breathing tube |

## 3M ${ }^{\text {TM }}$ Compressed Air Filter and Regulator Panels



Accessories and consumables

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 256-02-00 | Portable compressed air filter and regulator panel, 50 cfm , 4 outlets, with carbon monoxide filtration and monitor | W-2806 | Compressed air filter and regulator panel | $\begin{aligned} & W-3096 \\ & W-3098 \end{aligned}$ | Air pressure regulator Drain valve |
|  |  | W-2808 | CO monitor with retrofit kit (not shown) | $\begin{aligned} & W-3099 \\ & W-3182-2 \end{aligned}$ | Air pressure gauge |
|  |  |  |  |  | Socket, $3 / 8$ in MPT, $1 / 4$ in body size, schrader, 2/case (not shown) Socket, hansen S23 (3/8 in Male NPT), 2/case (not shown) |
| 256-02-01 | Portable compressed air and | W-2811-10 | Filter cartridge, 10/case | W-3281-2 |  |
|  | regulator panel, 100 cfm , | W-2915M | Aluminum filter bowl |  |  |
|  | 8 outlets, with carbon monoxide | W-2916 | Wing nut |  |  |
|  | monitor | W-2920 | Nut base |  |  |
| 529-04-50 | Adapter, 110-120 Volts AC (not | W-2921 | Bowl gasket |  |  |
|  | shown) | W-2923 | Cartridge washer |  |  |
| 529-04-48 | Calibration kit, large (not shown) | W-2924 | Air deflector |  |  |
| 529-04-49 | Calibration kit, small (not shown) | W-2925 | Air deflector gasket |  |  |
| 529-05-20 | Remote alarm and strobe audible | W-3012 | Coalescing filter assembly |  |  |
|  | (not shown) | W-3013-4 | High efficiency filter element for |  |  |
| W-1449-2 | Socket, 3/8 in MPT, 1/4 in body size, |  | W-3012 (not shown), 4/case |  |  |
|  | industrial interchange, | W-3079 | Manifold |  |  |
|  | 2/case | W-3094M | Filter housing assembly |  |  |
| W-1596 | Pressure relief valve | W-3095 | Filter housing base (part of |  |  |
| W-2119 | Socket dust cap |  | W-3094M) |  |  |

# 3M ${ }^{\text {"T" }}$ Speedglas ${ }^{\text {T" }}$ Welding Helmet 9100-Air for Respiratory Protection 

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 35-1101-00SW | Speedglas welding helmet 9100-Air without welding filter with Adflo PAPR and HE filter | 35-3301-10SW | Speedglas welding helmet 9100 -Air with welding filter 9100 V and Adflo PAPR with HE filter and OV/AG | 25-5702-30SW | Speedglas welding helmet 9100-Air with welding filter 9100XX and Fresh-air III SAR, V-100 valve |
| 35-1101-10SW | Speedglas welding helmet 9100 -Air with welding filter 9100 V and Adflo PAPR with HE filter | 35-3301-20SW | cartridge <br> Speedglas welding helmet 9100-Air with welding filter 9100X and Adflo | 25-5702-30isW | Speedglas welding helmet 9100-Air with welding filter 9100XXi and Fresh-air III SAR, V-100 valve |
| 35-1101-20SW | Speedglas welding helmet 9100-Air with welding filter 9100X and Adflo |  | PAPR with HE filter and OV/AG cartridge | 25-5802-10SW | Speedglas welding helmet 9100-Air with welding filter 9100 V and |
| 35-1101-30SW | PAPR with HE filter <br> Speedglas welding helmet 9100-Air with welding filter 9100XX and Adflo PAPR with HE filter | 35-3301-30SW | Speedglas welding helmet 9100-Air with welding filter 9100XX and Adflo PAPR with HE filter and OV/AG cartridge | 25-5802-20SW | Fresh-air III SAR, V-200 valve Speedglas welding helmet 9100-Air with welding filter 9100X and Freshair III SAR, V-200 valve |
| 35-1101-30isw | Speedglas welding helmet 9100 -Air with welding filter 9100XXi and Adflo PAPR with HE filter | 25-5702-10SW | Speedglas welding helmet 9100-Air with welding filter 9100 V and Fresh-air III SAR, V-100 valve | 25-5802-30SW | Speedglas welding helmet 9100-Air with welding filter 9100XX and Fresh-air III SAR, V-200 valve |
| 35-3301-00SW | Speedglas welding helmet 9100 -Air without welding filter, with Adflo PAPR, HE filter and OV/AG cartridge | 25-5702-20SW | Speedglas welding helmet 9100-Air with welding filter 9100 X and Fresh-air III SAR, V-100 valve |  |  |


$\begin{array}{cc}06-0000-30 i-K I T \\ & \\ & 06-0000-10 \\ 06-0200-51(B) & 06-0000-20 \\ 06-0200-52(B) & 06-0000-30 \\ 06-0200-53(B) & 06-0000-30\end{array}$


## Accessories and consumables

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 04-0320-00 | Battery, 2/case | 06-0200-51-B | Part no 06-0200-51, 50/case | 06-0400-54 | Headband back part |
| 06-0000-10 | Welding filter 9100V | 06-0200-52 | Outside protection plate scratch | 06-0400-54-B | Part no 06-0400-54, 5/case |
| 06-0000-20 | Welding filter 9100X |  | resistant, 10/case | 06-0400-55 | Battery holder 9100, 2/case |
| 06-0000-30 | Welding filter 9100XX | 06-0200-52-B | Part no 06-0200-52, 50/case | 06-0400-55-B | Part no 06-0400-55, 10/case |
| 06-0000-30i | Welding filter 9100XXi | 06-0200-53 | Outside protection plate high | 06-0500-51 | Extended coverage, crown |
| 06-000030іKIT | Welding filter kit 9100XXi, (filter and silver front) | 06-0200-53-B | temperature,10/case <br> Part no 06-0200-53, 50/case | $\begin{aligned} & 06-0500-52 \\ & 06-0500-53 \end{aligned}$ | Extended coverage, ear and neck SideWindow cover plates, |
| 06-0200-10 | Inside protection plate 9100V, 5/case | $\begin{aligned} & \text { 06-0200-54 } \\ & \text { 06-0200-54-B } \end{aligned}$ | Comfort sweatband, $3 /$ case Comfort sweatband, 12/case | 06-0500-56 | 2/case <br> Magnification plate $15 x$ |
| 06-0200-10-B | Part no 06-0200-10, 25/case | 06-0300-55 | Silver front panel | 06-0500-57 | Magnification plate 20x |
| 06-0200-20 | Inside protection plate 9100X, 5/case | $\begin{aligned} & 06-0300-55-B \\ & 06-0400-51 \end{aligned}$ | Part no 06-0300-55, 5/case Headband incl assembled parts | $\begin{aligned} & 06-0500-58 \\ & 06-0500-59 \end{aligned}$ | Magnification plate 25 x <br> Magnification plate 30x |
| 06-0200-20-B | Part no 06-0200-20, 25/case | 06-0400-51-B | Part no 06-0400-51, 5/case | 06-0700-83 | Full hood, black/grey |
| 06-0200-30 | Inside protection plate 9100XX/9100XXi, 5/case | 06-0400-52 | Pivot mechanism headband, left and right | $\begin{aligned} & 25-0099-28 \\ & 25-0099-35 \mathrm{SW} \end{aligned}$ | Face seal <br> Welding helmet 9100-Air, without |
| 06-0200-30-B | Part no 06-0200-30, 25/case | 06-0400-52-B | Part no 06-0400-52, 5/case |  | welding filter |
| 06-0200-51 | Outside protection plate standard, 10/case | $\begin{aligned} & 06-0400-53 \\ & 06-0400-53-B \end{aligned}$ | Headband front part <br> Part no 06-0400-53, 5/case | 25-0400-55 | Air duct tube |

# 3M ${ }^{\text {T" }}$ Speedglas ${ }^{\text {r" }}$ Welding Helmet 9100 FX-Air for Respiratory Protection 



26-0099-35SW


06-0200-51(B)
06-0200-52(B)
06-0200-53(B)



06-0200-10(B) 06-0200-20(B) 06-0200-30(B)


06-0500-56 06-0500-57 06-0500-58 06-0500-59



## Accessories and consumables

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 04-0320-00 | Battery, 2/case | 06-0200-53 | Outside protection plate high | 06-0500-52 | Extended coverage, ear and neck |
| 06-0000-10 | Welding filter 9100V |  | temperature,10/case | 06-0500-56 | Magnification plate 15x |
| 06-0000-20 | Welding filter 9100X | 06-0200-53-B | Part no 06-0200-53 (bulk), 50/case | 06-0500-57 | Magnification plate 20x |
| 06-0000-30 | Welding filter 9100XX | 06-0200-54 | Comfort sweatband, $3 /$ case | 06-0500-58 | Magnification plate 25x |
| 06-0000-30i | Welding filter 9100XXi | 06-0200-54-B | Comfort sweatband (bulk), | 06-0500-59 | Magnification plate 30x |
| 06-0200-10 | Inside protection plate 9100V, 5/ case | 06-0400-51 | 12/case <br> Headband incl assembled parts | 06-0700-51 | Wide-view clear grinding visor, standard, 5/case |
| 06-0200-10-B | Part no 06-0200-10 (bulk), 25/case | 06-0400-51-B | Part no 06-0400-51 (bulk), 5/case | 06-0700-54 | Wide-view clear grinding visor, anti-fog, 5/case |
| 06-0200-20 | Inside protection plate 9100X, 5/ case | 06-0400-52 | Pivot mechanism headband, left and right | $\begin{aligned} & 06-0700-63 \\ & \text { 06-0700-64 } \end{aligned}$ | Front panel, chrome Wide-view clear grinding visor |
| 06-0200-20-B | Part no 06-0200-20 (bulk), 25/case | 06-0400-52-B | Part no 06-0400-52 (bulk), |  | frame, black |
| 06-0200-30 | Inside protection plate 9100XX and 9100XXi, 5/case | 06-0400-53 | 5/case <br> Headband front part | 06-0700-73 | SideWindow cover plates, 2/case |
| $\begin{aligned} & \text { 06-0200-30-B } \\ & 06-0200-51 \end{aligned}$ | Part no 06-0200-30 (bulk), 25/case Outside protection plate standard,10/case | $06-0400-53-\mathrm{B}$ $06-0400-54$ | Part no 06-0400-53 (bulk), <br> 5/case <br> Headband back part | $06-0700-82$ $06-0700-83$ | Extended head cover, head and neck <br> Full hood, black/grey |
| 06-0200-51-B | Part no 06-0200-51 (bulk), 50/case | 06-0400-54-B | Part no 06-0400-54 (bulk), 5/case | $\begin{aligned} & 06-0700-85 \\ & 26-0099-28 \end{aligned}$ | Air diffuser <br> Face seal |
| $06-0200-52$ $06-0200-52-B$ | Outside protection plate scratch resistant, 10/case <br> Part no 06-0200-52 (bulk), 50/case | $\begin{aligned} & 06-0400-55 \\ & 06-0400-55-B \end{aligned}$ | Battery holder 9100, 2/case Part no 06-0400-55 (bulk), 10/case | $26-0099-35 \mathrm{SW}$ $26-0400-55$ | Welding helmet 9100 FX-Air without welding filter, with headband |
| 06-0200-52-B | Part no 06-0200-52 (bulk), 50/case |  | 10/case | 26-0400-55 | Duct assembly |



## Accessories and consumables

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| M-350 | Versaflo replacement head suspension (not shown above) | 06-0200-51-B | Part no 06-0200-51 (bulk), 50/ case | $\begin{aligned} & 06-0400-55 \\ & 06-0400-55-B \end{aligned}$ | Battery holder 9100, 2/case Part no 06-0400-55 (bulk), 10/ |
| M-957 | Versaflo forehead comfort pad/ sweat pad, 10/case | 06-0200-52 | Outside protection plate scratch resistant, 10/case | 06-0700-51 | case <br> Wide-view clear grinding visor, |
| M-985 | $3 \mathrm{M}^{\text {™ }}$ PELTOR ${ }^{\text {™ }}$ Earmuff Assembly Kit | 06-0200-52-B | Part no 06-0200-52 (bulk), 50/ case | 06-0700-54 | standard, 5 /case Wide-view clear grinding visor, |
| 04-0320-00 | Battery, 2/case | 06-0200-53 | Outside protection plate high |  | anti-fog, 5/case |
| 06-0000-10 | Welding filter 9100V |  | temperature,10/case | 06-0700-63 | Front panel, chrome |
| 06-0000-20 06-0000-30 | Welding filter 9100X Welding filter 9100XX | 06-0200-53-B | Part no 06-0200-53 (bulk), 50/ case | 06-0700-64 | Wide-view clear grinding visor frame, black |
| $\begin{aligned} & 06-0000-30 \\ & 06-0000-30 i \end{aligned}$ | Welding filter 9100XX Welding filter 9100XXi | 06-0202-10 | case <br> Starter kit 9100V (for 9100 M | 06-0700-73 | frame, black <br> SideWindow cover plates, 2/ |
| 06-0200-10 | Inside protection plate 9100V, 5/case |  | incl 5 outside protection plates, 2 inside protection plates, and 1 | 27-0099-28 | case <br> Face seal |
| 06-0200-10-B | Part no 06-0200-10 (bulk), 25/case | 06-0202-20 | sweat pad <br> Starter kit 9100X (for 9100 MP), | 27-0099-35SW | Welding helmet 9100 MP with hard hat, without welding filter |
| 06-0200-20 | Inside protection plate 9100X, 5/case |  | incl 5 outside protection plates, 2 inside protection plates, and 1 | $\begin{aligned} & 27-0099-52 \\ & 27-0099-53 \end{aligned}$ | Pivot kit <br> Flip-up mechanism |
| 06-0200-20-B | Part no 06-0200-20 (bulk), |  | sweat pad | 27-0099-63 | Inner shield |
|  | 25/case | 06-0202-30 | Starter kit 9100XX (for 9100 | 27-0099-68 | Outer shield |
| 06-0200-30 | Inside protection plate |  | MP), incl 5 outside protection | 27-0099-72 | Hard hat incl pivot kit |
|  | 9100XX/9100XXi, 5/case |  | plates, 2 inside protection | 27-0099-84 | Radiant heat hard hat cover for |
| 06-0200-30-B | Part no 06-0200-30 (bulk), |  | plates, and 1 sweat pad |  | 9100 MP helmet |
|  | 25/case | 06-0400-54 | Headband back part | 27-0099-85 | Throat and neck coverage |
| 06-0200-51 | Outside protection plate standard,10/case | 06-0400-54-B | Part no 06-0400-54 (bulk), 5/case | 27-0099-87 | Complete neck coverage for 9100MP |

# $3^{\text {m" }}$ Versaflo ${ }^{\text {™ }}$ Headtops M-Series 



| Part No | Description | Part No | Description | Part No |
| :--- | :--- | :--- | :--- | :--- |
| $\mathrm{M}-107$ | Versaflo Faceshield $\mathrm{M}-107$ | $\mathrm{M}-307$ | Versaflo Helmet M-307 | M-407 |
| $\mathrm{M}-207$ | Versaflo Faceshield $\mathrm{M}-207$ |  |  | Versaflo Helmet with shroud |
| $M-407$ |  |  |  |  |



## Accessories and spare parts

| Part No | Description | Part No | Description | Part No | Description |
| :--- | :--- | :--- | :--- | :--- | :--- |
| BT-30 | Breathing tube, self-adjusting | M-920 | Visor frame | M-972 | Flame resistant headtop cover |
|  | (52,5 to 85 cm ), with QRS | M-921 | Visor gasket | M-976 | Head, neck and shoulder cover |
| BT-40 | connection | Breathing tube, heavy-duty | M-925 | Visor standard (uncoated) | M-985 |

## 3M ${ }^{\text {TM }}$ Speedglas ${ }^{\text {TM }}$ Welding Helmet 9000 HWR and FlexView HWR for Respiratory Protection

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 02-0024-01 | Sweatband, leather | 04-0280-01 | Inside protection plate, | 04-0460-00 | FlexView replacement kit Magnification plate 15x |
| 02-0690-00 | Throat protection black/grey |  |  | 06-0500-56 |  |
| 04-0000-21 | Speedglas welding filter |  | 9002X/9000XF, 5/case | 06-0500-57 | Magnification plate 20x |
|  | 9002X, variable shade 9-13 | 04-0280-02 | Inside protection plate, | 06-0500-58 | Magnification plate 25x |
| 04-0026-00 | Headband pivot " S " stop, right, |  | +2 shade, for filters | 06-0500-59 | Magnification plate 30x |
|  | 10/case |  | 9002X/9000XF, 5/case | 06-0700-83 | Full hood black/grey |
| 04-0067-00 | Assembly parts for headband | 04-0290-00 | Inside protection plate for | 07-0024-02 | Sweatband, fleece, 2/case |
| 04-0126-00 | FlexView pivot "S" stop, left, |  | filters 9002D/9002V, 5/case | 14-0099-28 | Face seal 9000 HWR |
|  | 10/case | 04-0290-01 | Inside protection plate, | 14-0099-29 | Headband assembly 9000 |
| 04-0212-02 | Silver front panel |  | +1 shade, for filters |  | HWR, with air duct |
| 04-0270-01 | Outside protection plate, standard, 10/case | 04-0290-02 | 9002D/9002V, 5/case Inside protection plate, +2 shade, for filters | 14-0099-32 | Inner shell 9000 HWR, without airduct <br> FlexView HWR faceseal |
| 04-0270-03 | Outside protection plate, |  | 9002D/9002V, 5/case | 15-1699-29 | FlexView HWR faceseal |
|  | scratch resistant, 10/case | 04-0320-00 | Battery, 2/case |  | HWR, with air duct |
| 04-0270-04 | Outside protection plate, high | 04-0360-00 | FlexView welding filter holder | 16-0099-30 | Head cover, FR cotton |
|  | temperature, 10/case | 04-0361-00 | FlexView middle helmet panel, | 18-0099-68 | Throat and side protector, |
| 04-0280-00 | Inside protection plate, for |  | black |  | leather |
|  | filters 9002X/9000XF, 5/case | 04-0380-00 | Battery holder blue, 2/case |  |  |

* Please use Part No 14-0099-SW or 15-1699-32SW to replace the side windows.



## $3 \mathrm{M}^{\mathrm{Tm}}$ Headgear L-Series with $3 \mathrm{M}^{\mathrm{Tm}}$ Adflo ${ }^{\text {m" }}$ Powered Air Purifying Respirator



| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 34-0705-SGV | Hard Hat L-705SG wideview faceshield with Speedglas welding filter 9100V and Adflo PAPR with HE filter | 34-0705-SGXX | Hard Hat L-705SG wideview faceshield with Speedglas welding filter 9100XX and Adflo PAPR with HE filter | 34-0905-SGX | Helmet L-905SG wideview faceshield with Speedglas welding filter 9100X and Adflo PAPR with HE filter |
| 34-0705-SGX | Hard Hat L-705SG wideview faceshield with Speedglas welding filter 9100X and Adflo PAPR with HE filter | 34-0905-SGV | Helmet L-905SG wideview faceshield with Speedglas welding filter 9100 V and Adflo PAPR with HE filter | 34-0905-SGXX | Helmet L-905SG wideview faceshield with Speedglas welding filter 9100XX and Adflo PAPR with HE filter |



Accessories and consumables

| Part No | Description | Part No | Description | Part No | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| L-122SG | Breathing tube | L-705SG | Hardhat with welding helmet | L-905SG-F | Helmet with welding helmet |
| L-153SG | Welding helmet kit |  | and wideview faceshield, |  | and wideview faceshield |
| L-154SG | Silver front panel |  | without welding filter | 15-0099-20 | Adflo flow indicator rubber |
| L-199SG | Breathing tube cover, high temperature | L-705SG-F | Hardhat with welding helmet and wideview faceshield |  | adapter for L-SG type systems (not shown) |
| L-223-2 | Outer shroud standard | L-901SG | Helmet with wideview | 15-0099-21 | Adflo flow indicator for L-SG |
| L-225-2 | Outer shroud, flame retardant |  | faceshield |  | type systems (not shown) |
| L-226-2 | Inner shroud | L-905SG | Helmet with welding helmet | 15-5401-02SG | Adflo PAPR assembly (not |
| L-227 | Outer shroud, flame retardant, leather |  | and wideview faceshield, without welding filter |  | shown) |
| L-228-2 | Outer shroud, nylon |  |  |  |  |

## 3M ${ }^{\text {m" }}$ Faceshield ClearVisor with $3 \mathrm{M}^{\text {m" }}$ Adflo"' Powered Air Purifying Respirator

<br>16-0099-35<br>



| Part No | Description | Part No | Description | Part No | Description |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 07-0024-02 | Sweatband, fleece, 2/case | $16-0099-30$ | Headcover, FR cotton | 16-0099-35 | ClearVisor polycarbonate |
| $16-0099-27$ | Brow guard | $16-0099-32$ | Clear window with fasteners | 16-0300-99×05 Clear window strip off shielding |  |
| $16-0099-28$ | Face seal |  | and face seal, without brow <br> guard |  | film, 5/case |



## Care and Maintenance

Every day welding sparks, heat, fumes, and normal wear-and-tear grind away at your protection equipment. Therefore, we designed all $3 \mathrm{M}^{m \mathrm{~m}}$ Speedglas'"' Personal Protective Equipment with ease of maintenance in mind. Replacement parts can be installed by hand, without tools. For maximum safety and comfort, inspect your equipment daily and make it a regular habit to check and change the following items. Please consult the user instructions for further details.


| System | Component | Typically Replaced | Notes |
| :---: | :---: | :---: | :---: |
| Welding Filters | Outside Protection Plate | Once a week | Replace anytime the plate becomes deeply pitted, scratched or too dirty to clean with soft cloth or lens paper |
| Welding Filters | Inside Protection Plate | Once a month | Regularly clean with a soft cloth and replace if any pits or scratches occur |
| Welding Helmets | Visor Plate | Every two weeks | Replace more often if visibility is reduced |
| Welding Helmets | Sweatband | Once a month | Replace more often if sweatband becomes unhygienic |
| PAPR | Prefilter | Once a week | Regular replacement of the prefilter extends the life of the particle filter, saving money while also increasing the battery run-time |
| PAPR | Particle Filter | At least every month | Replace when particle fillter indicator becomes red or if filter is damaged Otherwise, replace whenever the battery operating time becomes too short, or when "fully loaded" filter triggers low airflow alarm |
| PAPR | OV/AG Cartridge | At least every 3 or 4 weeks | Immediately replace the cartridge according to the established cartridge change out schedule or any time you can smell odors while wearing the PAPR |
| PAPRs | Spark arrestor | As needed | Replace if deformed and no longer fitting well |
| Respirators | Breathing Tube | As needed | If damaged, deformed or leaking any air and if holes, cuts, or tears are noticed To extend the life of breathing tube, use a tube cover or a heavy-duty rubber reathing tube |
| Welding Helmets with PAPRs | Face Seal | At least every 2 months | Replace earlier in really dirty environments or whenever the seal becomes unhygienic, also if damaged (holes, cuts, tears) |

[^2]
## Technical Data 3M $^{\text {™ }}$ Speedglas ${ }^{\text {™ }}$ Welding Helmets and Welding Filters

Best**
Better**
Good**
Not Recommended**


|  | 3M ${ }^{\text {m" }}$ Speedglas ${ }^{\text {m" }}$ <br> Welding Helmet 9100 MP |  |  |  | 3M ${ }^{\text {™ }}$ Speedglas ${ }^{\text {"w }}$ Welding Helmets 9100 FX and 9100 FX-Air |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $3 M^{m}$ Speedglas ${ }^{\text {m" }}$ <br> Welding Filter Options | 9100XXi Filter | $\begin{aligned} & \text { 9100XX } \\ & \text { Filter } \end{aligned}$ | 9100X <br> Filter | 9100V <br> Filter | $\begin{aligned} & \text { 9100XXi } \\ & \text { Filter } \end{aligned}$ | $\begin{aligned} & \text { 9100XX } \\ & \text { Filter } \end{aligned}$ | 9100X <br> Filter | 9100V <br> Filter |
| MMAW (Electrode) |  |  |  |  |  |  |  |  |
| MIG/MAG |  |  |  |  |  |  |  |  |
| TIG (>20A) |  |  |  |  |  |  |  |  |
| TIG (1A-20A) |  |  |  |  |  |  |  |  |
| Plasma (welding and cutting) |  |  |  |  |  |  |  |  |
| Risk for hidden arc |  |  |  |  |  |  |  |  |
| Tack welding |  |  |  |  |  |  |  |  |
| Grinding (welding filter) |  |  |  |  |  |  |  |  |
| Grinding (clear visor) |  |  |  |  |  |  |  |  |
| Viewing area (welding filter) | $\begin{aligned} & 2.8 \times 4.2 \mathrm{in} . \\ & (72 \times 107 \mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 2.8 \times 4.2 \mathrm{in} . \\ & (72 \times 107 \mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 2.1 \times 4.2 \mathrm{in} . \\ & (54 \times 107 \mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 1.8 \times 3.7 \mathrm{in} \text {. } \\ & (45 \times 93 \mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 2.8 \times 4.2 \mathrm{in} . \\ & (72 \times 107 \mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 2.8 \times 4.2 \mathrm{in} \text {. } \\ & (72 \times 107 \mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 2.1 \times 4.2 \mathrm{in} . \\ & (54 \times 107 \mathrm{~mm}) \end{aligned}$ | $\begin{aligned} & 1.8 \times 3.7 \mathrm{in} \\ & (45 \times 93 \mathrm{~mm}) \end{aligned}$ |
| Battery lifetime | 1800 hours | 2000 hours | 2500 hours | 2800 hours | 1800 hours | 2000 hours | 2500 hours | 2800 hours |
| Solar cell | No |  | Yes |  | No |  | Yes |  |
| Hard hat options | Yes |  |  |  | Yes (non-air version) |  |  |  |
| Classification (per EN 379)* | 1/1/1/2 |  |  |  | 1/1/1/2 |  |  |  |
| Dark state | Shade 5, 8, 9-13 |  |  |  | Shade 5, 8, 9-13 |  |  |  |
| Light state | Shade 3 |  |  |  | Shade 3 |  |  |  |
| UV/IR Protection | Shade 13 (permanent) |  |  |  | Shade 13 (permanent) |  |  |  |
| Auto ON | Yes | No |  |  | Yes | No |  |  |
| Switching time, light -dark | $0.1 \mathrm{~ms}\left(+23^{\circ} \mathrm{C}\right)$ |  |  |  | 0.1 ms ( $+23^{\circ} \mathrm{C}$ ) |  |  |  |
| Delay (switching time, dark-light) | $40-1300 \mathrm{~ms}$ |  |  |  | 40-1300 ms |  |  |  |
| Side windows option | Yes |  |  |  | Yes |  |  |  |
| Exhaust vents | N/A |  |  |  | Yes (non-air version) |  |  |  |
| Number of sensors (arc detection) | 3 |  |  |  | 3 |  |  |  |
| Approvals Head, Eye and Face protection Welding helmet and filter, protection plates Hard Hat | ANSI Z87.1-2010 <br> ANSI Z89.1-2009 -Type 1, Class G |  |  |  | ANSI Z87.1-2010N/A |  |  |  |
| Approval Respiratory Protection Adflo powered air purifying respirator Fresh-air III supplied air valve | APF 25 APF 25 |  |  |  | with Speedglas welding helmet 9100 FX-Air <br> APF 25 <br> APF 25 |  |  |  |

[^3]

## Technical Specifications of

3M ${ }^{\text {"w }}$ Air Delivery Units for Welding Safety

| Technical Specifications | 3M ${ }^{\text {mw }}$ Adfiflo ${ }^{\text {Tm }}$ <br> Powered Air Purifying Respirator | 3M ${ }^{\text {m }}$ Speedglas ${ }^{\text {Tm }}$ Fresh-air III Supplied Air Regulator |
| :---: | :---: | :---: |
| Filters / Cartridges | HE particle filter OV/AG cartridge | N/A |
| Airflow | 7 CFM (200 1/min) | 6-15 CFM |
| Air Pressure Air Quality | $\begin{aligned} & \text { N/A } \\ & \text { N/A } \end{aligned}$ | Varies with hose length. See product user instructions. V-100/200: 62-91 psig <br> V-300: 30-63 psig |
| Weight (approx.) <br> PAPR (with belt and HE filter) / <br> Valve (without pad or belt) | 2.6 lbs | $\begin{aligned} & \text { V-100: } 12.3 \mathrm{oz} \\ & \text { V-200: } 14.8 \mathrm{oz} \\ & \text { V-300: } 9.5 \mathrm{oz} \end{aligned}$ |
| Battery Charging time Operating hours* | NiMH <br> Less than 4 hours <br> 5-6 hours (OV/AG cartridge + HE filter) <br> 8-10 hours (HE filter) | N/A |
| Belt <br> Optional extension | Leather, 30-45 in. +26 in. | Cotton, up to 53 in. |
| Temperature range Operation Storage | $23^{\circ} \mathrm{F}$ to $131^{\circ} \mathrm{F}$ <br> $-4^{\circ} \mathrm{F}$ to $131^{\circ} \mathrm{F}$ | $23^{\circ} \mathrm{F}$ to $131^{\circ} \mathrm{F}$ <br> $-4^{\circ} \mathrm{F}$ to $131^{\circ} \mathrm{F}$ |

## Technical Specifications of $3 \mathbf{M}^{m m}$ Faceshields and Helmets

| Technical Specifications | 3M ${ }^{\text {m" }}$ Versaflo ${ }^{\text {w }}$ <br> Faceshield M-107 | 3M ${ }^{\text {mw }}$ Versaflo ${ }^{\text {ww }}$ <br> Helmet M-207 | 3M ${ }^{\text {m" }}$ Versaflo ${ }^{\text {™ }}$ <br> Helmet M-307 | $3 M^{m m}$ Versaflo ${ }^{\text {m" }}$ <br> Helmet M-407 |
| :---: | :---: | :---: | :---: | :---: |
| Material Visor Faceseal | Polycarbonate Polyester | Polycarbonate <br> Polyester | Polycarbonate Polyester | Polycarbonate Polyaramid |
| Approval <br> Eye and Face protection Protective Visor (M-927) Protective Visor (M-925) | ANSI Z87.1-2010 ANSI Z87.1-2010 | ANSI Z87.1-2010 <br> ANSI Z87.1-2010 | ANSI Z87.1-2010 ANSI Z87.1-2010 | ANSI Z87.1-2010 ANSI Z87.1-2010 |
| Approval Head protection Helmet | N/A | EN 397 | EN 397 | EN 397 |
| Approval <br> Respiratory Protection Adflo powered air respirator Fresh-air III supplied air valve | APF 25 <br> APF 25 | APF 25 <br> APF 25 | APF 25 <br> APF 25 | APF 25 <br> APF 25 |

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#### Abstract

\section*{AWARNING}

These products meet the requirements of certain industrial eyewear standards and with some models certain industrial head protection standards. They do not provide complete head, eye, and face protection from severe impact and penetration and are not a substitute for good safety practices and engineering controls. Misuse may result in serious injury or death. For proper use, see supervisor refer to the product User Instructions or contact 3M Technical Service.


## AWARNING

This product is designed to help protect the wearer's eyes and face from harmful radiation including visible light, ultra-violet radiation (UV), infra-red radiation (IR), sparks and spatter resulting from welding processes. These products must be used only by qualified persons who are properly trained in their use and maintenance. Misuse may result in permanent eye injury and vision loss. Always wear ANSI Z87.1 compliant safety spectacles in addition to any welding helmet. For proper use, see supervisor, or User Instructions or call 3M OH\&ESD Technical Service in U.S.A at 1-800-243-4630 and in Canada at 1-800-267-4414.


## AWARNING

These respirators help protect against certain airborne contaminants. Before use, the wearer must read and understand the User Instructions provided as a part of the product packaging. A written respiratory protection program must be implemented meeting all the requirements of OSHA 1910.134 including training, fit testing and medical evaluation. In Canada, CSA standards Z94.4 requirements must be met and/or requirements of the applicable jurisdiction, as appropriate. Misuse may result in sickness or death. For proper use, see User Instructions, supervisor, or call 3M OH\&ESD Technical Service in USA at 1-800-243-4630 and in Canada at 1-800-267-4414.

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[^0]:    ＊For further attenuation information please visit www．3M．com／workersafety

[^1]:    *The $3 M^{\text {m" }}$ Speedglas" ${ }^{\prime \prime \prime}$ Breathing Tube SG-50W is required when used with $3 M^{\text {"w }}$ Adflo" PAPR with HE filter and OV/AG cartridge and 3M" Speedglas" Welding Helmets $9100-A i r$ or 9100 MP.

[^2]:    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

[^3]:    * Auto-darkening welding filters have a four-part classification: optical class / diffusion of light / variation on luminous transmittance / angle dependence. Classifications range fro
    ** The ratings (good - better - best) above refer to the products listed in this chart and should be seen as general recommendations based on differences in product comfort fea

