



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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3M Science.
Applied to Life.™

3M Welding Safety Catalog 2016

Passion for Welding

www.3m.eu/speedglas

 **Speedglas**™

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.

Content

Welding eye, face and head protection	6
Welding respiratory protection	26
Frequently asked questions	34
Parts directory	37
Care and maintenance	59
Technical specifications	62
Product index	63

New products:



◀ 3M™ Speedglas™ Quick Release Rail System (QR)

Continuous head protection for welders. And no more wearing a welding helmet when you do not need it. [Read more on page 11.](#)

▶ 3M™ Speedglas™ Welding Filter Kit 9100XXi

The new auto-darkening filter kit for the 3M™ Speedglas™ Welding Helmet Series 9100 is your window to a new world of more realistic color and detail – to help you weld, grind and see your finish. [Read more on page 9.](#)



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
- Compare products
- Download information

Use your smartphone or tablet to explore the new Speedglas product guide

app.speedglas.com

- Product overview
- Sort by feature
- Selection guide, etc.



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◀ 3M™ Adflo™ 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.

Inspired by your reality

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™ Speedglas™ Welding Helmet 9100



High performing
products and people

3M™ Speedglas™ Welding Helmet Series 9100

– our top-of-the-line safety platform for professional welders

In the product development process for our 4th generation of 3M™ Speedglas™ 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 3M™ Speedglas™ Welding Helmet Series 9100.

Project start



Voice of customer summary

- 1 Protection against radiation
- 2 Comfortable to wear
- 3 Reliable performance



1 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.

2 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.

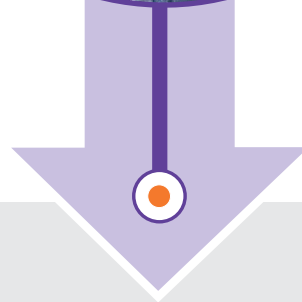
The 9100 series helmet's exhaust vents help reduce heat, humidity and fogging of the welding filter.

3 Reliable performance!

The key to remember with 3M™ Speedglas™ 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 rigorous objective tests are made to ensure all products meet or exceed international safety standards and requirements well before they reach end-users.



The 3M™ Speedglas™ 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 3M™ Speedglas™ 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 3M™ Speedglas™ 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 V, X,XX lenses.



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

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

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



The tack welding comfort mode uses an intermediate shade 5 light state to help minimize eye strain during extended tack welding applications.

The Delay function allows you to set the dark-to-light switching time.

You can adjust the sensitivity of the arc detection for switching reliability.

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

With improvements based on input from master welders around the world, the 3M™ Speedglas™ 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.



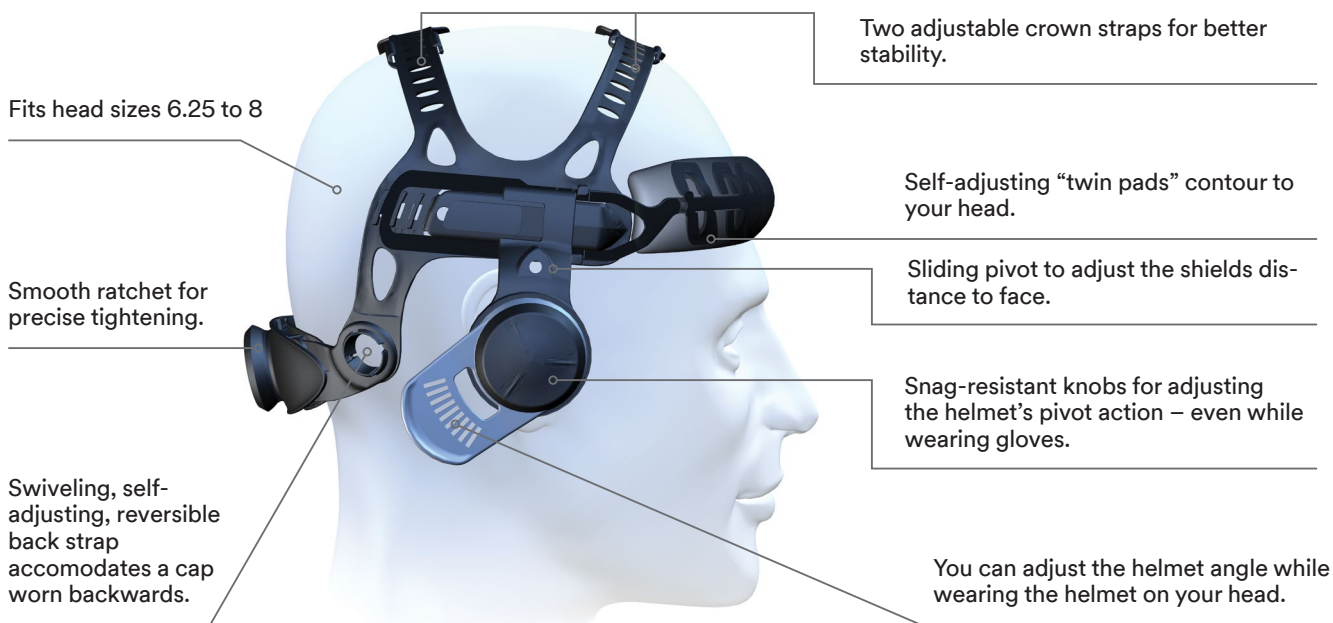
External controls and memory function

The newly redesigned silver front included in the 3M™ Speedglas™ 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.



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 3M™ Speedglas™ 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 3M™ 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 3M™ Speedglas™ 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.

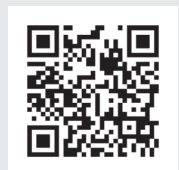
3M offers a complete welding helmet system including the 3M™ Hard hat H-701.



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

www.3M.eu/quickrelease

Or scan this QR-code:



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 3M™ Speedglas™ 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*.

*please refer to user instructions

3M offers a complete welding helmet system including the 3M™ Hard hat H-701.

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

Designed from inception to accept 3M™ PELTOR™ Earmuffs.

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.

Exhaled air is channeled out via side exhaust vents.

*please refer to user instructions



The 3M™ H-701 is a full-featured hard hat, capable of accepting integrated eyewear and earmuffs in addition to the Speedglas welding helmet 9100-QR.



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.

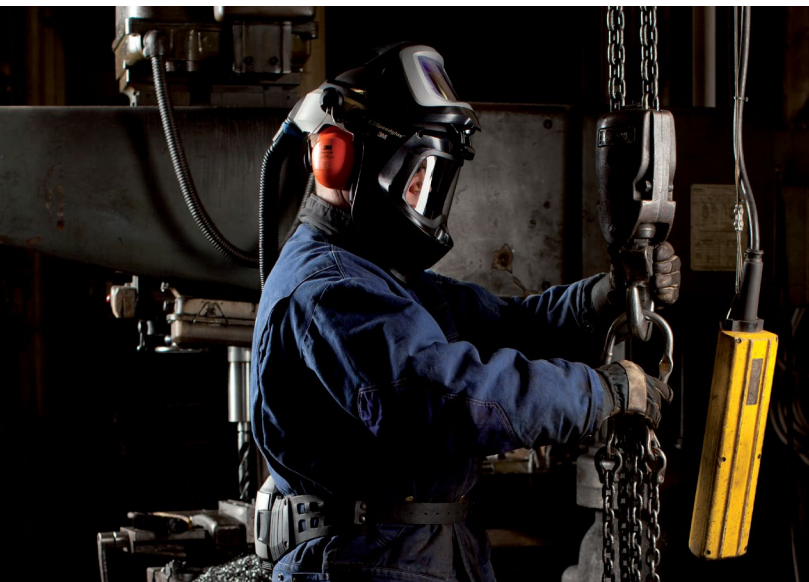
See more: Large (approx. 8” x 4.25”) curved protective visor has excellent views up, down and peripherally.



The hard hat shell is made from heat resistant polycarbonate and meets the ANSI Z89.1-2009 requirements for Type 1 Class G hard hats. An optional, aluminized fabric reflects radiant welding heat.



Designed from inception to take our optional 3M™ PELTOR™ Earmuff Assembly M-985: low-profile hearing protection with liquid/foam ear cushions and orange housings. NRR 26dB.



Look Around... Really Look Around

The clear protective visor is wide (approx 8 in. x 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.

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



product
design
award

2009

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

High-comfort Speedglas headband 9100.

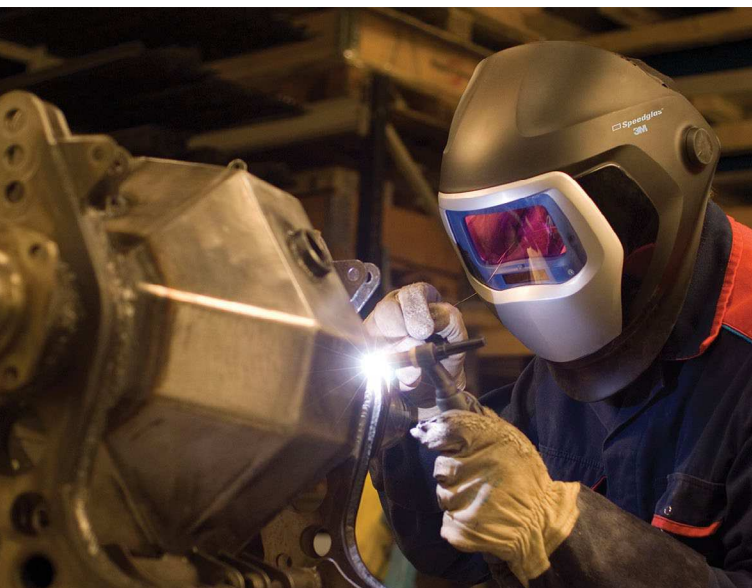
Large coverage for ear and side of head.

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

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

Exhaled air is channeled out via side exhaust vents.

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



Exhaust vents readily direct your exhaled air out of the helmet and reduces the likelihood of a foggy welding filter.

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.



Airflow: The middle channel keeps the filter virtually fog-free, while two side channels provide smoothly distributed air to the area of your mouth and nose.

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



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.

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

Can take the heat:
Spark- and spatter-retardant head cover.

High-comfort
Speedglas
headband 9100.

Exhaled air is channeled out
via side exhaust vents.



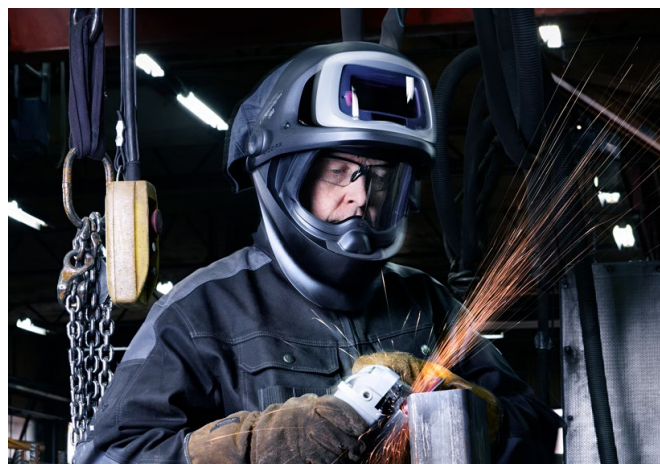
Superior optical performance with flip-up view. Works with Speedglas filter series 9100, including the top-of-the-line 9100XXi auto-darkening filter.

The approx. 8 × 4.25 in. (17 × 10 cm) clear protective visor is curved, increasing your peripheral vision.

Meets the requirements of CSA Z94.3 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 flame-retardant accessories to help to protect from molten metal, sparks and flames.

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 9100XXi auto-darkening filter.

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

Respiratory protection – APF of 25.

Can take the heat: Spark- and spatter-retardant head cover.

Assigned protection factor of 25.

Secure and stable attachment of breathing tube.

The innovative 3M™ Quick Release Swivel (QRS) enables one-handed breathing tube connection and release.



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. (17x10 cm) view – perfect for precision grinding in low light conditions, while maintaining respiratory protection.



“I forget I’m
Wearing it”

When Your #1 Priority is Super Light

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



Our narrowest helmet: perfect for many super tight spaces.

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.

Appropriate for most arc welding processes — such as Stick, MIG/MAG, TIG and plasma welding.

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



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, non-absorbent material.

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



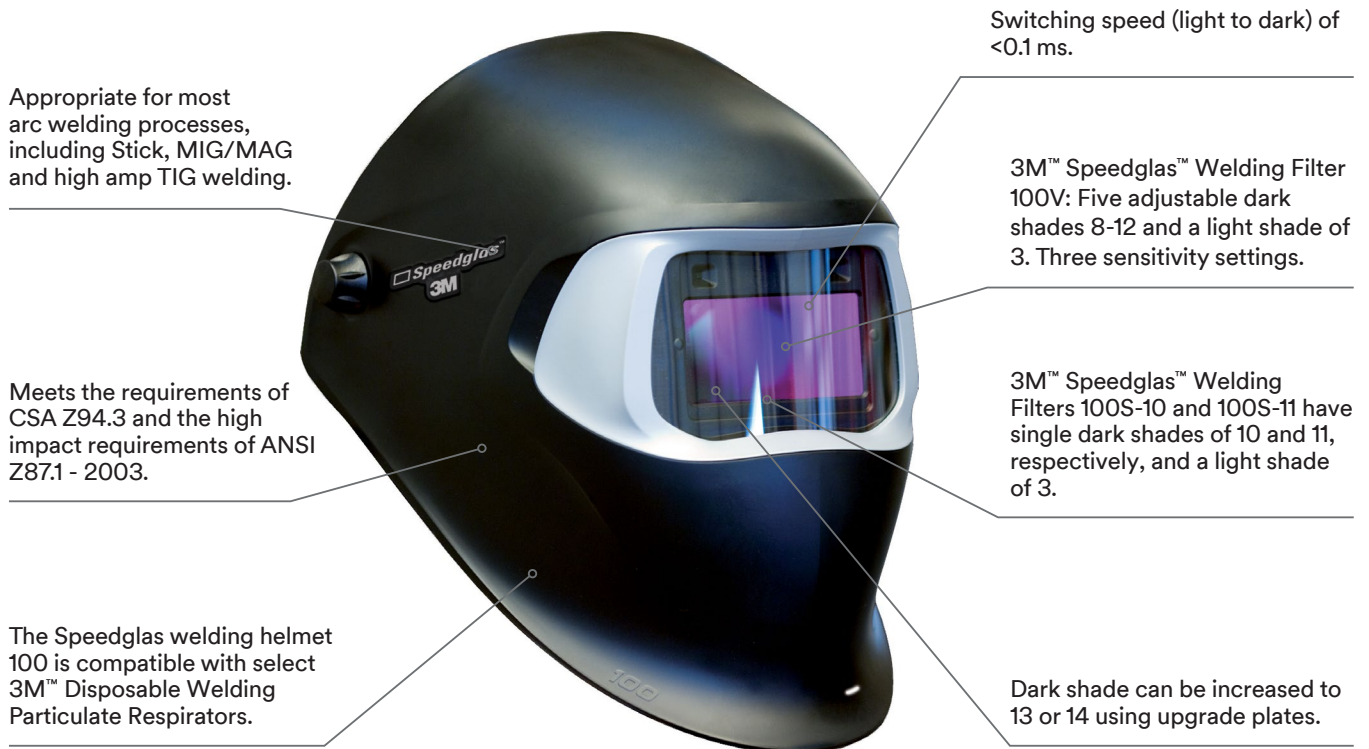


Premium
Made Affordable

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.



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 3M™ Speedglas™ 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.



3M™ Speedglas™ Welding Helmet 100-QR



Image
is Everything

3M™ Speedglas™ 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



Boneyard
07-0012-31BY



Ice Hot
07-0012-31IH



Xterminator
07-0012-31XT



Raging Skull
07-0012-31RS



Razor Dragon
07-0012-31RD



Trojan Warrior
07-0012-31TW



Blazed
07-0012-31BZ



Aces High
07-0012-31AH



Future Combatant
07-0012-31FC

Female Graphic Edition

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.



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.



Skull Jewels
07-0012-31SJ

An elaborate floral grill motif emerges into a decorative skull and covers the entire helmet. The skull and flowers engage in visual interplay as one becomes the other, and viceversa.



Steel Eyes
07-0012-31SE

Projecting inner strength, with focused eyes looking through a blaze of lilac flames.

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 face seal. 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 3M™ Speedglas™ Welding Filter Series 9100 with superior optical performance for continuous viewing comfort.
- 3M™ Speedglas™ 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 3M™ Adflo™ Powered Air Purifying Respirator and HE particulate filter.



3M™ Speedglas™ Headgear L-Series SG for Powered or Supplied Air Protection



3M™ Headgear L-705 SG
Hard hat with welding shield and wideview faceshield.



3M™ Headgear L-905 SG
Welding helmet with welding shield and wideview faceshield.



“It’s Like My Own
Private Oasis”