



 **Speedglas™**

Welding Safety

3M™ Speedglas™ Welding Helmet G5-02

**The world's first curved  
auto-darkening filter.**

3M Science. Applied to life.™



# Your world is curved, not flat.

Introducing the world's first curved auto-darkening filter (ADF) with the 3M™ Speedglas™ Welding Helmet G5-02.

Utilizing the new 3M™ Speedglas™ Curved Glass Technology, its shape follows your head's curvature and the range of your peripheral vision.

Light  
shade 2.5



Natural  
colour



4 arc  
sensors



Wider  
view





**3M**  
Speedglas™

CURVED ADF

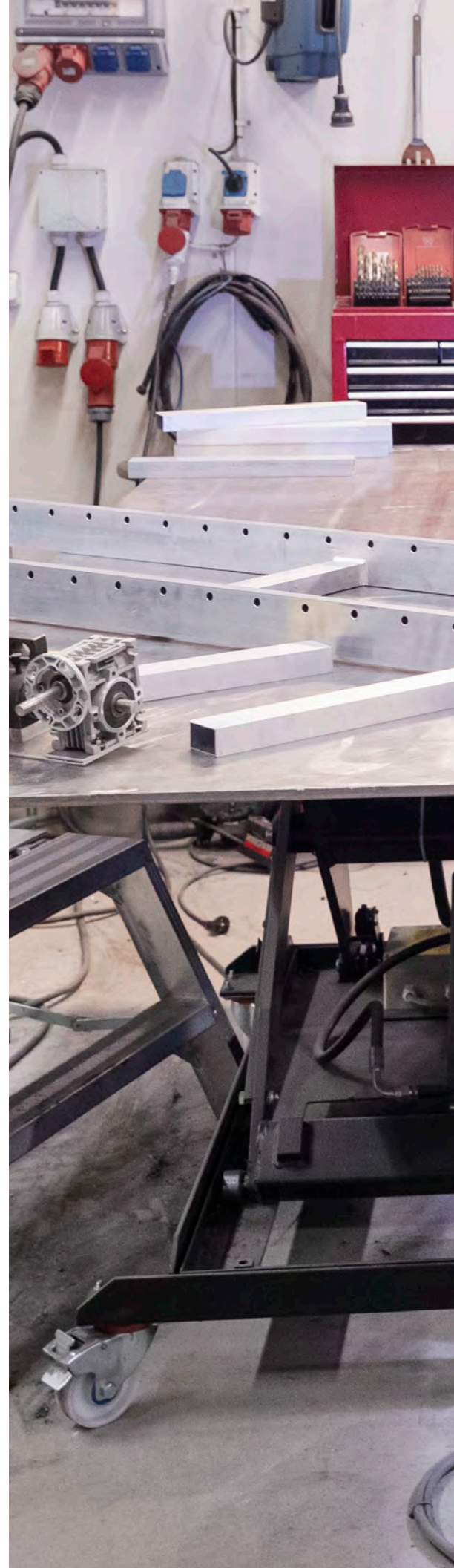
# Unleash your welding performance.

Designed for TIG welders, the 3M™ Speedglas™ Welding Helmet G5-02 creates a new standard for precision ADF viewing. This is a helmet for welders doing high-performance, critical work.

The latest, high-end, inverter-based TIG machines offer incredibly stable arcs. With our most advanced electronics ever and four arc sensors, the G5-02 welding filter reliably switches even at very low (e.g., 1 amp) TIG settings, meeting the new ISO 16321 “TIG+” standards.

You'll also benefit from a light helmet weight, due to a thin ADF glass pack. What's more, you'll notice that the centre of gravity is close to the centre of your head, giving you better weight distribution.

And for the slim helmet, we created a new venting design to help reduce heat and humidity, which may help you feel more comfortable.









# Why curved?

We gave professional TIG welders prototypes of helmets with different aperture sizes. Their favourite aperture size was the curved, 2-to-1 aspect ratio we used for designing the G5-02 ADF. A wider view was much higher rated than a taller view.

And the only way to get wider views without making the helmet wider is by inventing a curved filter.

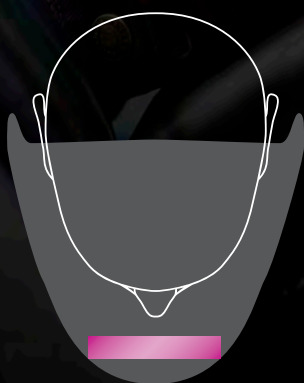
Curved  
Glass  
Technology.

150 mm

Our previous largest Speedglas ADF  
3M™ Speedglas™ Curved ADF G5-02

100% wider  
ADF field of view

# Get wider views in a slimmer helmet.



Flat ADF in a slim helmet means the ADF can't be wide.



Expanded field of view with a flat ADF requires a wider helmet.



A curved ADF can give you a wider total field of view in a slim helmet.



## Greatly reduce distracting reflections.

The combination of the curved welding filter and a slimmer helmet can help reduce reflections and other distracting glares inside the helmet.

**Dark state**

**Light state**

**New 2.5 shade light state for better visibility.**



# A brilliant light state.

Great clarity before the weld with our new 2.5 light state, and during the weld with our 3M™ Speedglas™ Natural Colour Technology. Colours appear brighter and more realistic in both the light and dark states.

Bluetooth ON →

Shade lock →

Shade 8–12  
(selected by +/-) →



← Delay

← Sensitivity  
easy to reach (+/-)

Designed to be more intuitive, you'll love our new control panel: controls are located on both sides of your viewing area.

The most frequently used controls (**Shade** and **Sensitivity**) are in the most accessible locations: the lower left and right corners.





The curved ADF is manufactured in Sweden under clean room conditions using custom-engineered machines.



## 3M™ Speedglas™ Curved Glass Technology

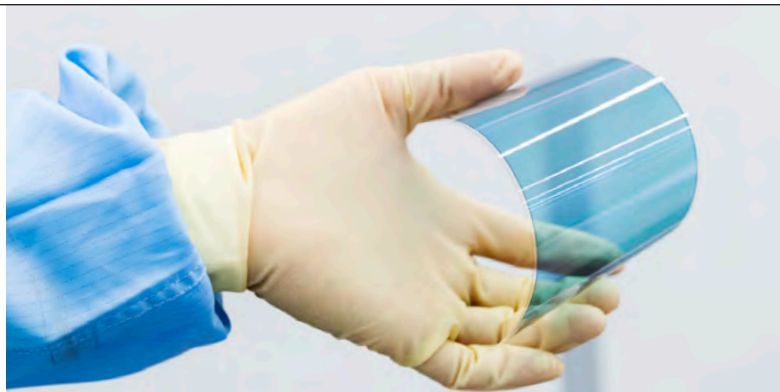
“We’ve challenged ourselves to find an appropriate solution for a curved ADF,” says Stefan Henriksson, 3M Welding Eye and Face Product Manager.

“We tested – and rejected – curved ADFs made with plastic substrates. We have found that plastic has low heat resistance and is permeable, absorbing contaminants that reduce filter visibility and longevity. Of all the materials we tested, we could not find anything that outperformed glass.”

### Is the curved glass more fragile than flat glass?

The glass we use in the G5-02 ADF is actually extremely flexible. And the ADF is certified using the same standardized impact resistance tests used for traditional flat ADFs: The welding filter and protection plate meet ANSI Z87.1-2015, meaning resistance to high speed particles at up to 45.7 m/sec (150 ft/sec).

More importantly, you’re benefitting from our finest optics ever, due in part to a “glass pack” that’s  $\frac{1}{3}$  as thick as our thinnest flat ADF.







## Curved consumables for the curved ADF.

For the slimmer helmet, we created specific consumables to optimize the view and comfort.

If you can't see the detail you need, try one of our curved magnifying lenses, available in 1.5X, 2.0X and 2.5X strengths.

## Technical Specifications

### 3M™ Speedglas™ Welding Helmet G5-02

3M™ Speedglas™ Curved Glass Technology	Yes
3M™ Speedglas™ Natural Colour Technology	Yes
Switching time, dark-light	50–1000 ms
Switching time, light-dark	0.1 ms (+23°C)
Dark state	Shade 8–12
Light state	Shade 2.5
UV/IR Protection (permanent)	Shade 12
Viewing area, (approximately)	150×76 mm 5.9×3.0 in
Weight, helmet including welding filter	535 grams 18.9 oz
Auto ON	Yes
Bluetooth™ for 3M™ Connected Equipment App	Yes
Battery lifetime (hours)	1500
Number of sensors (arc detection)	4
Classification	CE/ANSI
Approval helmet / welding filter	ANSI Z87



Compatible with most 3M filtering facepieces and reusable respirators.







## Get connected!

- Get started by securely pairing your smartphone to your G5-02 welding filter using the 3M™ Connected Equipment App
- Program up to ten memory modes (settings for dark shades, sensitivity, delay, etc) with your phone
- Easily record your welding helmet maintenance log to the App
- Instantly know statistics, including: when your ADF was first activated; hours on; hours in the dark state; hours in the light state and the number of on/off cycles
- Have instant access to User Manuals and Parts List



Learn more about the G5-02 helmet at [3M.ca/SpeedglasG502](https://3M.ca/SpeedglasG502)

## Warranty, Service and Replacement

Warranty and repair services are available for tune-ups.

**Keep your systems performing at their full potential with our robust warranties and service plans including:** Refurbishment, repairs, replacement parts and advice on how to take care of your safety equipment.

- Plastic components including helmet – 90 days
- G5-02 Auto-Darkening Filters – 3 years

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