

3M™ Speedglas™ welding safety catalog 2025

Farewell to compromises

3M Science. Applied to life.™

3M™ Speedglas™ welding safety catalog 2025



One of the most important lessons we have learned over more than 40 years is that no two welders are the same.

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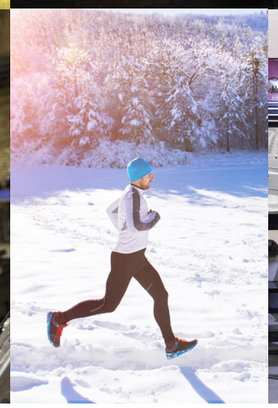
Do you have the right equipment for the job?













The right equipment for each job

Running in the forest or on ice. Climbing a new route. Flying on a dirt bike. Reaching new levels in everything you do.

Every successful activity starts with a clear mental picture of your goals. And the gear you'll need to obtain those goals.

You picture yourself in the activity: What are the conditions? Is it cold and dry, or hot and humid? Quiet or loud? Clear, dusty, or contain lots of fume? What's coming at you: snow? rocks? sparks?

Then you visualize yourself using your gear to keep your body in the correct position, perfecting your technique while staying strong and comfortable.

And you will know when you've selected the right equipment for each activity. You're confident. Relaxed. In control. Harsh conditions will not distract you. And you'll feel the pride that comes with intense, purposeful focus.

If every welder is different, how do we listen to them all?

Whether it's a formal survey or just our everyday conversations with welders, we listen closely to their everyday challenges.

Listening to welders for decades, we've collected a lot of needs, pain points, and "It would be great to have…" comments.

Welders feedback helps us develop products for the future that may help increase productivity, comfort and protection. Our prototypes are field tested by professional welders. From their input, we make iterations until we have a high-performing offering.

This approach creates high user satisfaction and a clear way forward as we launch well-received products, like the Generation 5 of welding helmets. Thank you, welders, for lending us your voice.

The right equipment for each job

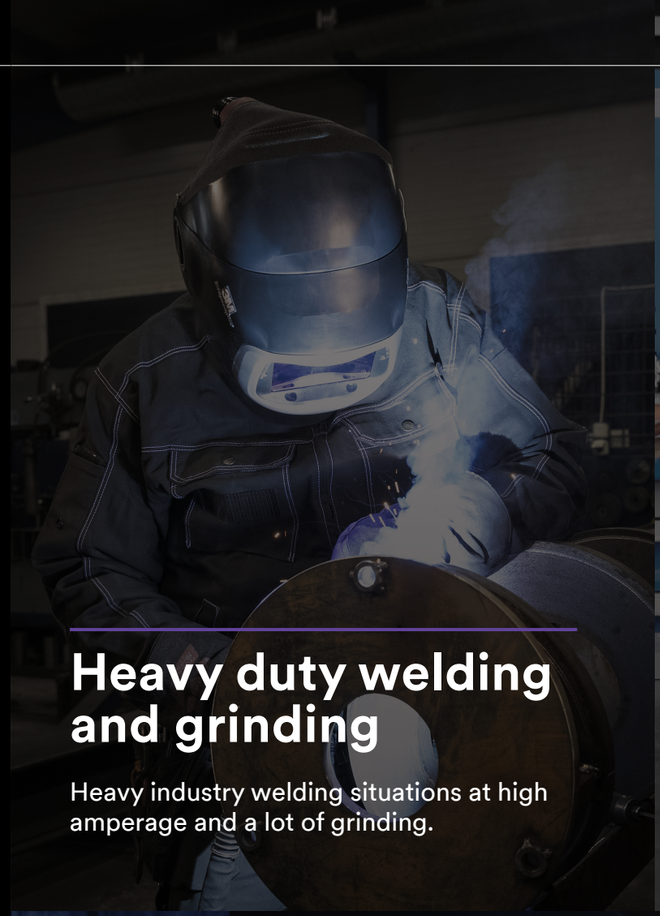
The Speedglas generation 5 welding helmets



Heavy duty welding and grinding

TIG welding

Versatile welding and grinding



Heavy duty welding and grinding

Heavy industry welding situations at high amperage and a lot of grinding.



TIG welding

High precision TIG welding situations where viewing wide and “clear” is necessary.



Versatile welding and grinding

General welding situations at mid to low amperage in a variety of materials.



3M Welding Center of Excellence

Hundreds of thousands of times each day, welders all over the world rely on their 3M™ Speedglas™ products to achieve their best welding performance. A result of our close cooperation with welders, safety engineers and ergonomic specialists to constantly improve the performance and comfort of our products.





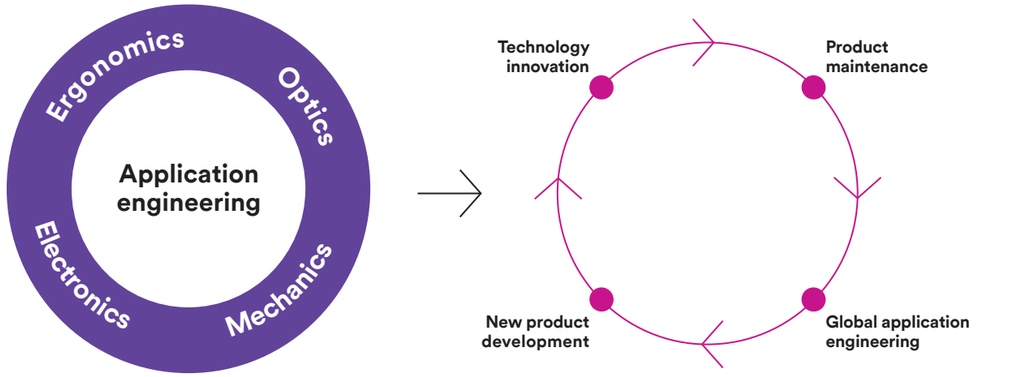
Over 40 years ago we turned the world of welding on its head by introducing the auto-darkening welding filter.

Our global Welding Lab in Gagnef, Sweden, is dedicated to making 3M your #1 supplier of welding PPE for improved productivity and profitability.

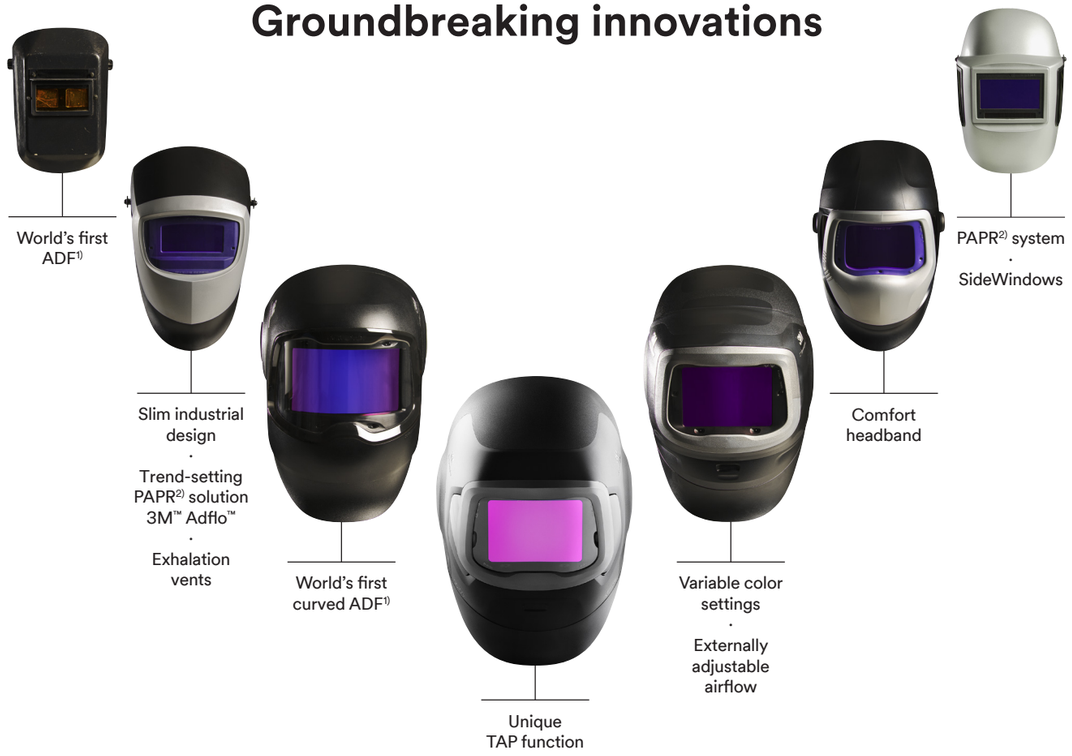
13 international design awards since 1996

reddot winner 2021 best of the best

3M Welding Lab Gagnef – areas of expertise



Groundbreaking innovations



1) ADF: Auto-Darkening Welding Filter.
2) PAPR: Powered Air Purifying Respirator.

"Last week a customer came to our factory in Gagnef, Sweden asking if we had a replacement battery they could purchase. It turned out to be a product that is over 35 years old. As a different battery was used back then, we were unfortunately unable to help on this occasion. However, this story is an example of our products: robustness, durability, reliability and very much sustainability."

Stefan Henriksson
Global Product Manager Welding
November 2024



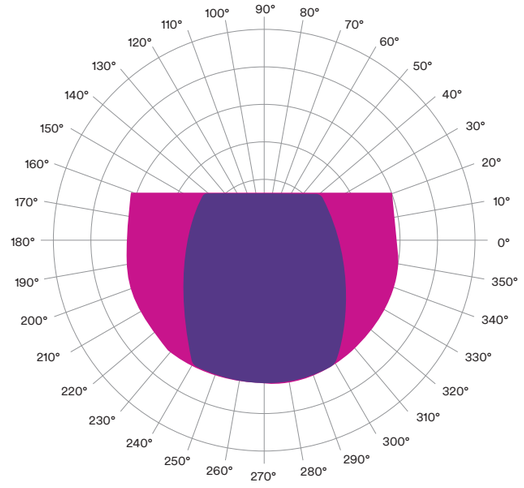
This welding filter from the late 80s was still going strong until it ran out of battery.





Constantly improving how the welder sees

To make consistently great welds, you need the best available view. Our optical and engineering experts focus on the welder's viewing experience – driven by these fundamental questions.



Using an instrument called an apertometer, we can measure the actual view angles both eyes can see through a welding filter. The purple field shows the 9100XXi filter (previously our widest). The pink field shows the G5-02 filter.

How to optimize the field of view?

In our survey of professional welders, their clear preference was a 2-to-1 aspect ratio for ADFs. But the only way to achieve a wider view without making the helmet itself wider was by inventing a curved ADF: the 3M™ Speedglas™ Welding Helmet G5-02.

"We tested – and rejected – curved ADFs made with plastic substrates," says Stefan Henriksson, 3M Welding Eye and Face Product Manager.

"We could not find anything that out-performed glass. The real challenge then became how to make the curved ADF. It took us years to design our one-of-a-kind, custom-engineered manufacturing machines. The reaction from welders to the curved filter has been overwhelmingly positive."

How to increase viewing contrast and comfort?

Everyone literally sees things slightly differently than anyone else. (For proof of this, just think about how you may have argued with others about color settings on a shared TV or computer display.)

So we experimented with different color tones for the dark state of a prototype ADF. We discovered that, broadly speaking, welders had three different color preferences – natural, cool, and warm tones – based on which color had the best contrast and most comfort for their eyes. The result is our 3M™ Speedglas™ Welding Filter G5-01/03VC ("VC" for Variable Color).

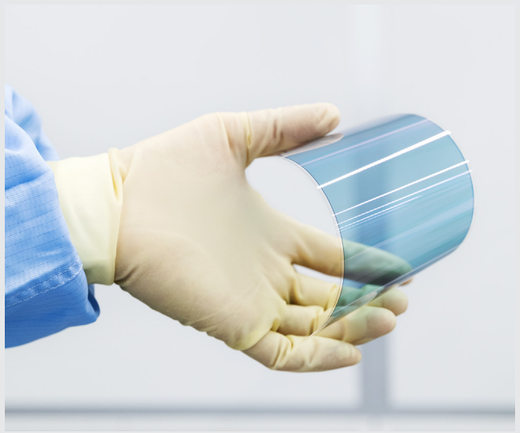


How to further refine overall optical clarity?

Since our beginning, this goal has been a core driver for our innovations. "We're constantly exploring new optical technologies that we can leverage to the welder's advantage," says Kristina Magnusson, Senior Optics Specialist at the 3M Welding Center of Excellence.

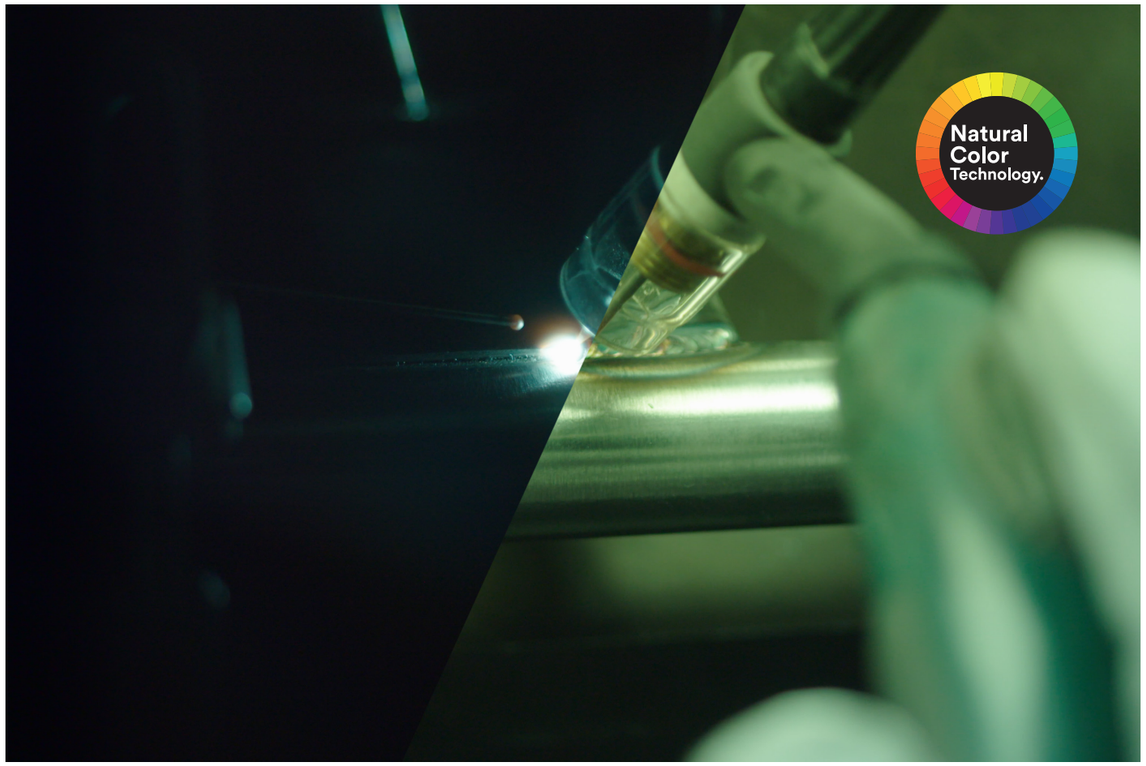
"Because we make many of our own welding filter components, we can readily test and transfer new technologies, as well as better control the entire manufacturing process."

Our latest achievement in optical clarity is the 3M™ Speedglas™ Welding Helmet G5-02. Designed with high precision TIG welding in mind, the G5-02 provides our finest optics ever, due in part to a "glass pack" that's 1/3 as thick as our thinnest flat ADF.





Technology



A brilliant light state

Great clarity before, during and after welding, with our 3M™ Speedglas™ Natural Color Technology. Colors appear brighter and more realistic in both the light and dark states. And a more realistic view enables better control over your arc.

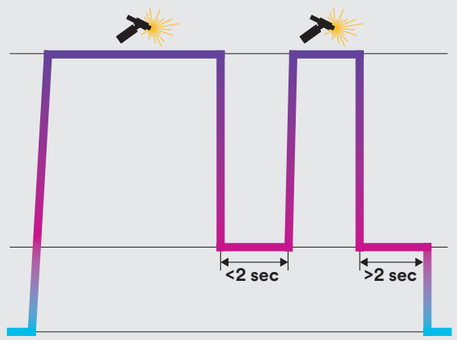
Filters with a shade 2.5 light state:



G5-02



G5-01/03TW



When tack welding...

Human eyes aren't designed for handling rapid transitions from dark to light to dark again – which describes tack welding perfectly! The G5-01/03TW welding filter uses an intermediate shade 5 light state to help minimize eye strain during extended tack welding applications. If an arc is not struck within two seconds the welding filter will switch back to its normal light state (shade 2.5).

For technical specification see page 35.

A more natural light state

See your welds in a new light, with more contrast and natural-looking colors – as demonstrated in these photos. 3M™ Speedglas™ Natural Color Technology may allow you to see your weld pool more accurately and read surfaces better. Plus, you can better discern colored machine controls and displays while looking through the 3M™ Speedglas™ NC-Technology. It's a major improvement for viewing your work and your surroundings compared to conventional ADFs.

Natural Color Technology.

The difference is easy to see. Yes, the light state is still shade 2.5 or 3! But what you see through the filter appears lighter, more detailed and colorful. In fact, the natural color technology can make our entire viewing experience feel more natural.



Sample competitor's filter shade 3



Speedglas G5-01/03NC filter shade 3

3M™ Speedglas™ Natural Color Technology is available on these filters:



G5-02



G5-01/03VC



G5-01/03TW



G5-01/03NC

Variable Dark State Colors.



Dark state 8 at variable color A



Dark state 8 at variable color B



Dark state 8 at variable color C

3M™ Speedglas™ Welding Filter G5-01/03VC

Which color tone works best for you?

To provide even better view and control of your weld puddle with 3M™ Speedglas™ Variable Color Technology: you get to choose between natural (A), cool (B) or warm (C) tones for your dark state. You determine which color tone provides the best viewing contrast for your welds, and the most comfort for your eyes.

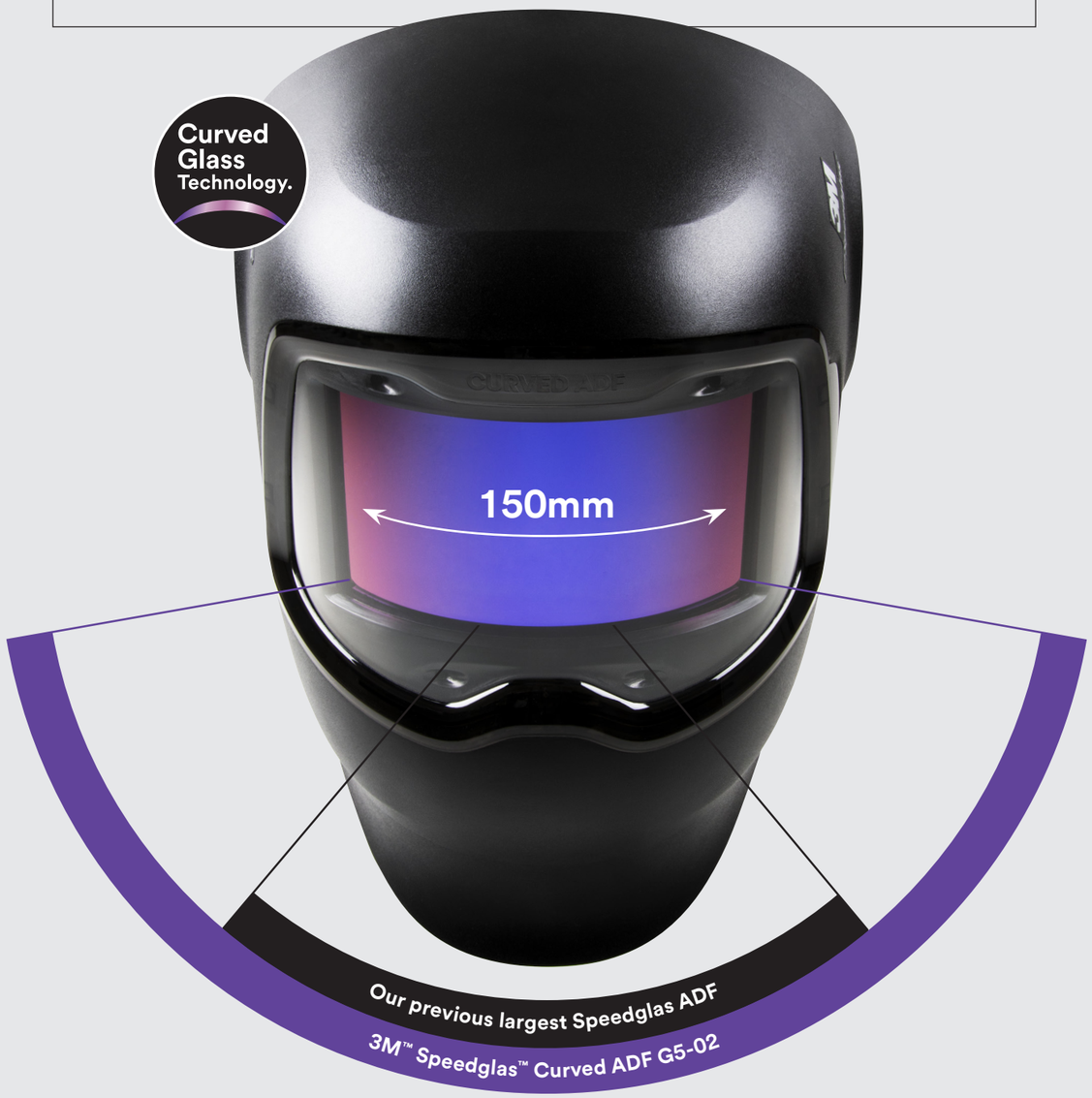
Scan this code to see how it works!

Technical information, see page 35.

Why curved?

We gave professional welders prototypes of helmets with different aperture sizes. Their favorite 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.



100% wider
ADF field of view

Get wider views in a slimmer helmet

Previously, you had to compromise: either a slim helmet or a wide view. With the curved G5-02 ADF, there are no compromises.



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 reduces "rear view" reflections and other distracting glare inside the helmet.

G5 Headband

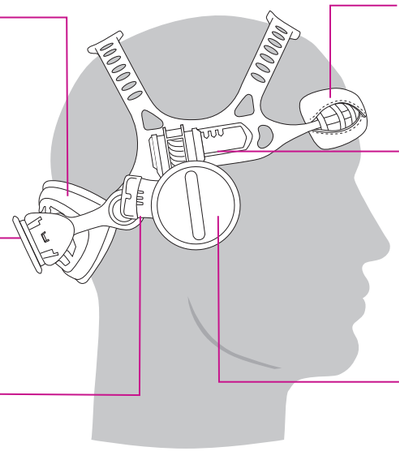
Tailor to fit your personal preferences

Designed to carefully avoid sensitive areas of the head using self-adjusting twin pads for the forehead band, multiple crown straps and a low ratchet attachment. By better contouring it around your head, our headband doesn't need to be overly tight to be comfortably secure.

Head rest options
A large and a small head rest option exists for personal preference.

Stability
Ratchet for precise tightening.

Adapt to your position
Adjust the welding helmet tilt-angle while wearing the welding helmet on your head.



Less pressure
Self-adjusting "twin pads" contour to your head.

Easy adjustment
Easy adjustment of distance to face, utilizing a button to enable sliding the welding helmet back and forth while wearing the welding helmet.

Low riding comfort
Adjust the welding helmet's parking position (left side) and friction (right side). Further details below.

We designed the welding helmet to "nest" down low, close to the headband, when raised. So you don't need to tighten the headband as much.

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



STABILITY WHEN RAISED – PARKING	DROPS AS YOU LIKE – FRICTION
Welding helmet parking grip is adjusted on the wearer's left hand side: Turn the left hand knob clockwise to increase (or counterclockwise to decrease) how tightly the welding helmet is held in the raised "parked" position.	Drop-friction is adjusted on the wearer's right hand side: Turn the right hand knob clockwise to increase (or counterclockwise to decrease) the effort needed to lower down the welding helmet.

Note: Welders are always recommended to lower their welding helmet wit their hands, and not by "nodding" it down.

3M™ Speedglas™ Welding Helmet G5-01/G5-03 Pro Air

Control the source and direction of your airflow

For more control over your comfort, the innovative externally adjustable airflow will direct the airflow to either your face, your visor, or somewhere in between.

All airflow adjustments can be made while you're wearing the welding helmet – continuously maintaining your eye, face and respiratory protection.

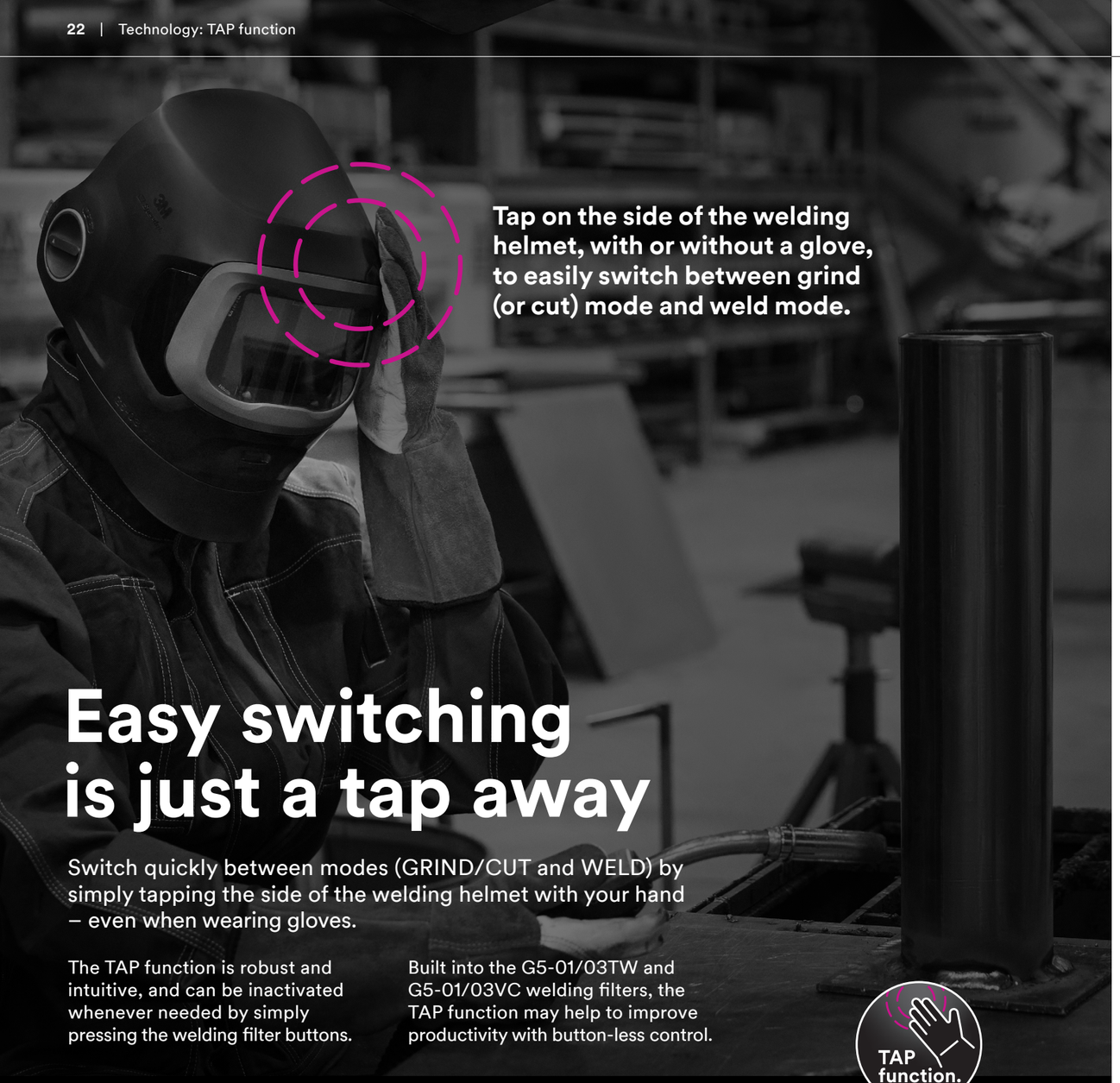
The face seal features a locking toggle designed for fast, secure adjustments. Two tabs make it easier to lift the face seal over your glasses, and installation channels on the welding helmet speed up the removal and replacement of the face seal.

Highest safety class for powered air systems

Designed for heavy-duty, high-amperage welding and grinding, the welding helmets G5-01 and G5-03 Pro Air[1)] connects to the 3M™ Adflo™ Powered Air Purifying Respirator to provide TH3 rated respiratory protection (NPF 500).



1) TH2 when used with gas and vapor filters.



Tap on the side of the welding helmet, with or without a glove, to easily switch between grind (or cut) mode and weld mode.

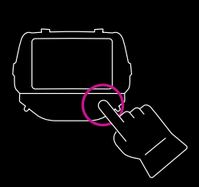
Easy switching is just a tap away

Switch quickly between modes (GRIND/CUT and WELD) by simply tapping the side of the welding helmet with your hand – even when wearing gloves.

The TAP function is robust and intuitive, and can be inactivated whenever needed by simply pressing the welding filter buttons.

Built into the G5-01/03TW and G5-01/03VC welding filters, the TAP function may help to improve productivity with button-less control.

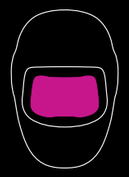
TAP function.



1
Use the interface on the welding filter to set if you want to use TAP function with grind or cut mode.



2
TAP three times on the side of the welding helmet to switch between GRIND and WELD mode or CUT and WELD mode.



3
The welding filter will switch to desired setting.



4
Tap three times again and the welding filter switches back to welding mode.



3M™ Speedglas™ Welding Helmet G5-03 Pro

We have you covered

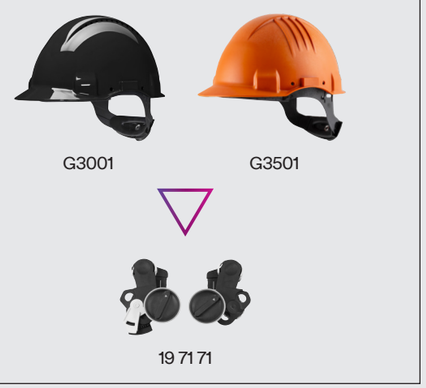
Sometimes you weld in a location that requires you to wear a safety helmet. Using a quick release system, the G5-03 Pro helmet may be utilized with an adapter to securely and easily attach the welding helmet to various 3M safety helmets.

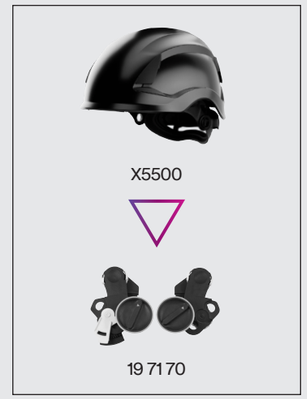


The adjustable adapters lets you attach your welding helmet to 3M selected safety helmets.

How to choose the correct adapter for your 3M safety helmets

The adapters are available in two versions. Use this guide to select the appropriate adapter for your safety helmet.







Designed to provide a uniform light at welding working distance.

Light up your workspace

The optional helmet-mounted task light may help welders stay productive in poorly lit areas. It delivers a better view of the work area before and after welding, which may help to reduce eye fatigue.

3M™ Speedglas™ Task Light is designed to be low profile and lightweight, helping welders in low light environments.

For welders requiring air delivery, the task light can be connected to the G5-01 and G5-03 Pro Air and is powered by the Adflo powered air purifying respirator, reducing the need for an additional battery and enabling extended run times.

For welders using the G5-03 Pro or G5-03 E, a battery pack is available which connects to the rear of the welding helmet for a balanced fit.

Powered by the 3M™ Adflo™ Powered Air Purifying Respirator



G5-03 Pro Air



G5-01

Powered by separate rechargeable battery



G5-03 Pro with safety helmet



G5-03 Pro



G5-03 E



Enhance your grinding

The 2.5[1)] light state in combination with an optional task light will allow you to grind with increased visibility. The TAP function allows for quick and easy switching between welding and GRIND (or CUT) mode.



Light state 2.5



TAP function



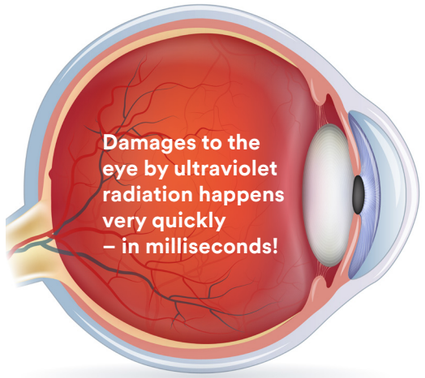
Task light

1) 2.5 state is only on the TW ADF.

Hazards

How to beat the statistics

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



Controlling exposure

Put simply, auto-darkening welding filters allow welders to keep their welding helmet in place much more often than passive welding filters.

If you can always see well, the motivation to constantly lift your shield is significantly reduced, meaning:

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



$300M/yr

in costs associated with workplace eye injuries.

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

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

90%

of injuries are preventable with proper protection.

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

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

1/4

of all welding injuries are to the eyes.

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

Source: https://www.researchgate.net/publication/7809599_Welding_related_occupational_eye_injuries_A_narrative_analysis

Respiratory protection is the 4th most frequently cited workplace violation[1] in the U.S.

40–50 welders

in UK are hospitalized every year with pneumonia associated with welding fume. Two of these welders die every year.[2]

1) Top 10 Most Frequently Cited Standards, OSHA, U.S. Department of Labor, for 2020.
2) Source: www.hse.gov.uk/welding/illness.htm (02.03.2017).



TH3

With a TH3 classed respiratory system, the Nominal Protection Factor is 500, meaning that when the respiratory system is used correctly, the wearer's exposure should be reduced to 1/500th, or approximately 0.02 mg (the thin pink line). It's becoming more common that companies set TH3 as their standard for welding respiratory protection.

TH2

TH2 classed respiratory systems have a Nominal Protection Factor of 50, meaning that when the respiratory system is used correctly, the wearer's exposure should be reduced to 1/50th. (the orange area).

Example: OEL of 1mg/m³

For example in the Netherlands, they have an OEL for welding fume of 1 mg/m³. This means that a full-time welder may inhale up to 2.2 g (the dark gray area) of welding fume every year.[4)]

One year of welding fume particles

To illustrate a general example: with an OEL of 5 mg/m³ for welding fume, a full-time welder may inhale up to 11 grams of welding fume every year.[3)]

Welding fumes at work

Approximately 11 million people work as welders worldwide and an additional 110 million are exposed to welding fumes at work[1)]. Several countries have an Occupational Exposure Limit (OEL) for welding fumes of 5 mg/m³.[1) 2)]

⚠ **The OEL should be based on a critical appraisal of all health effects of welding and take the various welding methods into account. Indeed, some countries have already introduced such OEL, eg, Denmark (0.5–1.7 mg/m3 depending on welding process and material[5)] and The Netherlands (1 mg/m3).[4) 6)]**

1) International Agency for Research on Cancer (IARC) Welding, molybdenum trioxide, and indium tin oxide. Vol. 118. Lyon: IARC; 2018. Monographs on the Evaluation of Carcinogenic Risks to Humans; p. pp310. IARC monographs on the evaluation of the carcinogenic risks of chemicals to humans. [PubMed]

2) Institut für arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA) GESTIS International Limit Values. [Updated May 2021]. Available from https://limitvalue.ifa.dguv.de/WebForm_gw2.aspx .

3) The example is based on a typical respiratory rate of 20 liters of air per minute or 2300 m³ of air per year. The reference used here is the OEL of welding fume (5mg/m³).

4) Institut für arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA) GESTIS International Limit Values. [Updated May 2021]. Available from https://limitvalue.ifa.dguv.de/WebForm_gw2.aspx .

5) Arbejdstilsynet. [Statutory order on Occupational exposure limits.] BEK nr 1426 af 28/06/2021. Copenhagen, Denmark: Arbejdstilsynet; 2021. Bekendtgørelse om grænseværdier for stoffer og materialer. https: //www.retsinformation.dk/eli/lta/2020/698 .

6) Dutch Expert Committee on Occupational Standards (DECOS) Health-based recommended occupational exposure limit for ARC welding fume particles not containing chromium and nickel. Den Haag, The Netherlands: DECOS; 1993.

Reducing welding fumes and exposure

Welding creates respirable and inhalable fumes. To address these hazards, employers and employees use a hierarchy of controls. The idea is that the highest priority items on the hierarchy not only do the most to reduce fumes and worker exposure, but that they also put the least burden of responsibility on the welder. However, welding fume control has its limitations:

1 Modify or substitute your welding process to other processes that generate less fumes and/or eliminate contaminants.

Control Limitations:
Substitutions may not be possible.

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

Control Limitations:
Ventilation can be difficult to achieve due to conflicting needs, for instance heating/cooling or shielding gases.

3 Work practices include having the welder keep their head out of the plume.

Control Limitations:
Space-restricted workpieces or the welding situation may not allow alternative placement of the welder's head.

4 Personal respiratory protection equipment. As an addition to steps 1 through 3 personal respiratory protection for the welder can help reduce exposure and increase protection and comfort.

Control Limitations:
Companies should establish a respiratory protection program that includes selection of respirators, training and maintenance.

Learn more about personal respiratory protection equipment on page 49 and 78

Selection guide

There is no one perfect welding helmet that suits everyone

We have populated our helmet matrix with carefully considered design blends of features, personal preferences, and performance to address the application needs of the vast majority of welders.

But for every welding helmet system we design, we have four driving factors:



Reliability

We know harsh welding environments: We build our products to thrive in them. From creating reliable arc sensing/ shade switching to selecting highly durable materials to designing for long-lasting mechanical operation.

Comfort

Comfort means a helmet that helps vent stagnant air. It means a headband that avoids scientifically determined pressure points around your head. And how a helmet provides eye and face protection while being comfortable for a full shift.





Protection

UV/IR radiation. High speed grinding particles. Falling objects. Respiratory hazards. Identify your workplace hazards – then find the right Speedglas helmet, accessories, and respiratory protection. Have a unique workplace hazard? Contact your local distributor for even more 3M solutions.

View

Every helmet design detail can affect your view. That's why we provide high-performance auto-darkening welding filters, our side windows lenses, and large, protective clear visors. Each of these, and many more, helmet design elements maximize your ability to see.



Quick helmet selection guide

What kind of welder are you?

High precision TIG welding situations where clear visibility and a wide field of view is essential.



General welding situations at mid- to low-amperage across a range of materials.



General welding situations at mid to low amperage in a variety of materials, when a safety helmet is needed.



Heavy industry welding situations involving high amperage and extensive grinding.



G5-02



G5-03 E



G5-03 Pro



G5-03 Pro

+ safety helmet



G5-03 Pro Air



G5-01



9100MP



Filtered air

Flip up visor

Curved glass

Head protection

Tap function

Task light option

Your decision tree when selecting a welding filter

1. Is TIG the majority of your welding?

3M™ Speedglas™ Welding Filter G5-02

For 3M Speedglas's best available optical performance during TIG welding, choose our curved welding filter for its exceptionally wide viewing area, shade 2.5 light state, and 3M™ Natural Color Technology. **More information on page 15, 18 and 64**



2. Variable Color setting for your personal preference

3M™ Speedglas™ Welding Filter G5-01/03VC

For your best viewing comfort and contrast during welding, select from three different color tones for your dark state. A world's first! **More information on page 17**



3. Would you benefit from seeing more natural colors and better contrast?

Natural Color Technology

See less green and more details: 3M™ Speedglas™ Natural Color Technology can make colors appear more natural while increasing contrast for easier viewing of details. **More information on page 16**



4. Do you do a lot of tack welding?

Tack welding comfort mode

Avoid possible eye fatigue from constantly switching from light to dark during prolonged tack welding. Our tack welding comfort mode uses an intermediate light state that can be easier on your eyes. **More information on page 15**



5. How important is the size of welding filter's viewing area?

Welding Filter viewing size

Desired viewing area is a function of both welding set-up and personal preferences. We offer a variety of filter sizes to meet many needs. **More information on page 43**



What dark shade levels are you looking for?

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

Note: Recommended use of the different shade numbers for arc welding according to EN ISO 19734.

3M™ Speedglas™ Auto-Darkening Filters

Selector table

Best[1] | Better[1] | Good[1] | Not Recommended[1]

Specification	G5-01/03 VC	G5-01/03 TW	G5-01/03 NC	G5-02	9100XXi	9100X	9100V	100B
MMAW (electrode)	●	●	●	●	●	○	○	○
MIG/MAG	●	●	●	●	●	○	○	○
TIG (>20A)	●	●	●	●	●	○	○	×
TIG (1A-20A)	●	●	●	●	●	○	○	×
Plasma (welding and cutting)	●	●	●	●[2]	●	○	○	×
Risk for hidden arc	●	●	●	●	●	○	○	×
Tack welding	●	●	○	○	●	●	●	×
Grinding	●	●	○	×	●	○	○	○
3M™ Speedglas™ Natural Color Technology	✓				✓	–		
Variable color modes (A-B-C)	✓	–			–			
TAP function	✓			–	–			
Bluetooth enabled	✓		–	✓	–			
Delay time, dark-light (ms)	50–1 300		40–470	50–1 000	40–800	40–1 300		150–250
Switching time, light -dark	0.1 ms (+23° C)				0.1 ms (+23° C)			
Dark state	Shade 8–14	Shade 8–13	Shade 8–12		Shade 5, 8, 9–13			Shade 10–12
Light state	Shade 3	Shade 2.5	Shade 3	Shade 2.5	Shade 3			
UV/IR Protection (permanent)	Shade 14	Shade 13	Shade 12		Shade 13			Shade 12
Viewing area, approx. (mm)	108×71		109 × 54	150×76	107×73	107×54	93×45	93×44
External grinding mode control	–				✓[3]	–		
Auto ON	✓				✓	–		
Solar cell	–				–	✓		–
Battery lifetime (hours)	1500–2000		2500	1 500	1 800	2 500	2 800	1 500
Number of sensors (arc detection)	4		3	4	3			2
Angular dependence classification	V2			C2	1/1/1/2			1/2/2/2
Approval (welding filter)	EN ISO 16321				EN 379			

1) The ratings (best - better - good - not recommended) above refer to the products listed in this chart and should be seen as general recommendations based on differences in product comfort features and configuration options when using these selected Speedglas welding helmet series.
2) G5-02 is very suitable for low amp plasma welding.
3) When used with the front cover 9100XXi and the 3M™ Speedglas™ Welding Helmets 9100, 9100-QR or 9100-Air.

Refine your helmet selection based on your preferences

Welding helmets for powered air respiratory protection







Specification Welding helmet systems (air)	G5-01	G5-03 Pro Air	9100MP
Eye and Face Protection (Approval)	EN ISO 16321	EN ISO 16321	EN ISO 16321
Head protection (Approval)	–	–	EN 397 Safety Helmet
Respiratory protection (Approval)[1] Adflo Powered Air Purifying Respirator Versaflo Supplied Air Regulator V-500E	EN 12941 EN 14594	EN 12941 EN 14594	EN 12941 EN 14594
Hearing protection – compatible options	Earplugs	Earplugs	Earmuffs Earplugs
① **Side windows**	–	✓	✓
② **Comfort headband**	✓	✓	–
③ **Flip-up with clear visor**	✓	–	✓
④ **Externally adjustable airflow**	✓	✓	–[2]
Auto-darkening welding filter options (see page 44)	G5-01/03VC, G5-01/03TW, G5-01/03NC	G5-01/03VC, G5-01/03TW, G5-01/03NC	9100X, 9100XXi

1) The nominal protection factor based on laboratory-measured performance data according to European Standards.
The protection factor is assigned by local authorities in each European country and can therefore be different for each country.
2) Limited adjustability of airflow.

Standard welding helmets







Specification Welding helmets (non-air)	G5-02	G5-03 Pro	G5-03 E
Eye and Face Protection (Approval)	EN ISO 16321	EN ISO 16321	EN ISO 16321
Head protection (Approval)	–	EN397[1]	–
Respiratory protection[2]	This overview shows only our welding helmets without air delivery connection. We recommend to use 3M disposable or reusable respirators with these welding helmets (see page 78). See previous page for helmets available with powered and supplied air respiratory protection.		
Hearing protection – compatible options	Earmuff H505B Earplugs	Earmuff H505B Earplugs	Earmuff H505B Earplugs
⑤ **Designed to reduce fogging**	✓	✓	✓
① **Side windows**	Curved ADF	✓	–
② **Comfort headband**	–	✓	–
③ **Flip-up with clear visor**	–	–	–
⑥ **Curved welding filter**	✓	–	–
Auto-darkening welding filter options (see page 44)	G5-02 (Curved ADF)	G5-01/03VC, G5-01/03TW, G5-01/03NC	G5-01/03VC, G5-01/03TW, G5-01/03NC

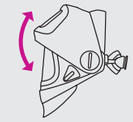
1) With selected 3M safety helmets, see page 23.



① Side windows – shade 5 filters that widen your field of vision.



② Comfort Speedglas headband with smooth ratchet for precise tightening.



③ Flip-up welding filter with big, curved clear protective visor, increasing your vision.



④ Adjust the airflow to your face or your visor, and the airflow coming from the top or side outlets – all without lifting your helmet.



⑤ Designed to reduce the risk of welding filter fogging up.



⑥ Curved welding filter follows the curvature of your head for wider total field of view in a slim helmet.

The return on investment depends on many factors

Optical quality
A great view may increase productivity

Durability
Robustness to ensure long-lasting products

Comfort
Well balanced design for all-day wear

Versatility
Common platform for accessories and consumables

Training
Increase product knowledge to boost performance

The right equipment for each job

It is the employer's responsibility to identify all welding hazards in their workplace, to explain those hazards to their welders, and to develop a documented welder safety protection plan.

That protection plan needs to be specific and cover all variables that a welder may encounter. Those variables can include changes to base metals, electrodes, the amount of sparks or splatter generated, fume intensity, the location of the weld, ventilation limitations, and so on.

The protection plan must then instruct welders how these variables impact their selection of personal protective equipment (PPE) for specific welding applications.

Fortunately, the 3M™ Speedglas™ team has developed a wide range of PPE, so welders can select the right equipment for each job. That means meeting several of the welder's protection needs – plus empowering welders to perform at their highest levels.



Identify the hazards

Make a list of all the risks in your welding environment (arc radiation, sparks, fumes, noise, trip hazards, falling objects, etc). 3M can help identify consultants and measurement tools.

Assess the risk levels

By evaluating every risk, you can prioritize their mitigation. See more details in each section of this catalog. If there are any doubts or ambiguities, always consult a professional safety engineer.

Select the right PPE

Now that you know the levels of protection needed for a specific application, you can select the right level of PPE to help protect each vulnerability: eye, face, head, hearing, and respiratory system.

Within the appropriate level of protection, let welders choose on matters of personal preference regarding comfort, style, and ease of maintenance. For example, sweatbands can be in leather, fleecy cotton, or towelling. These personalized comfort choices help to maximize user acceptance of PPE.

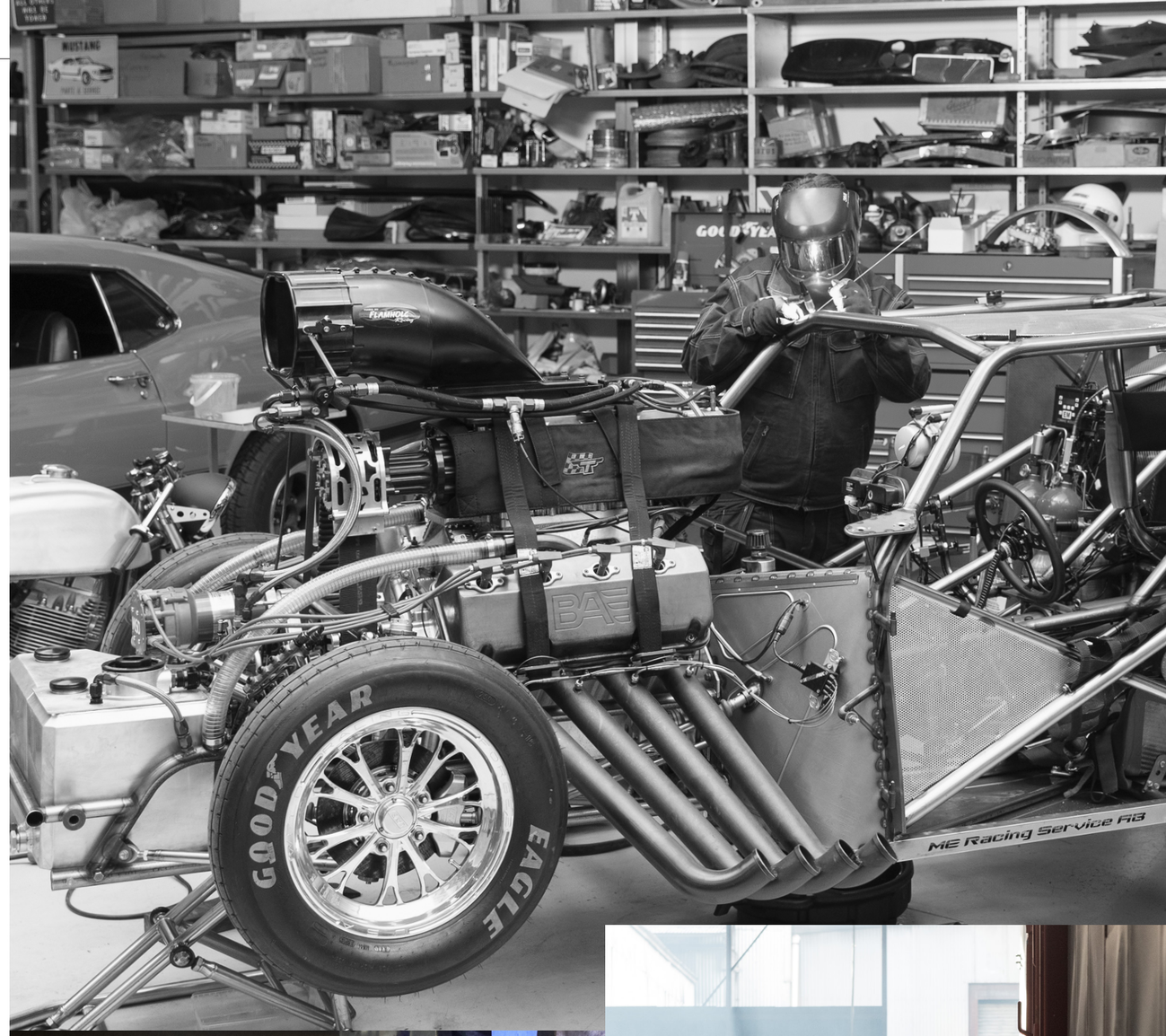
Training, motivation and maintenance

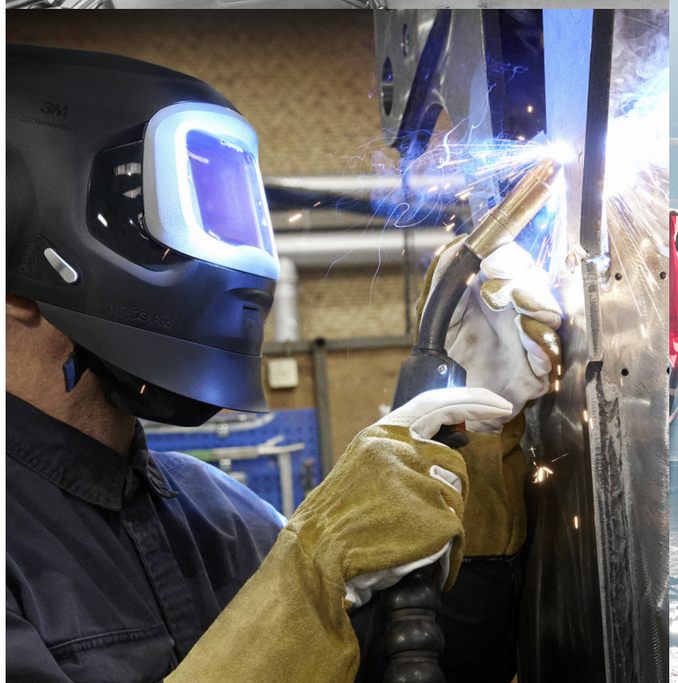
For maximum benefit from any piece of PPE, it pays to focus on user acceptance and proper use. 3M can help:

- On-site training by 3M personnel or a visit from our Welding Safety Caravan (not available in all countries). We'll show you equipment options based on your needs.
- Other techniques, such as Toolbox Talks, educational posters for your facilities, online videos, etc.
- 3M eAcademy – the flexible way to discover and learn throughout your busy day (scan QR-code below):

learn.3m.com/pages/3m-academy-en-in-safety

i For further details please visit **www.speedglas.com** and select your country to find local welding safety information from 3M.







Welding filters

A quick guide to welding filter sizes



G5-02
150 × 76 mm (curved)



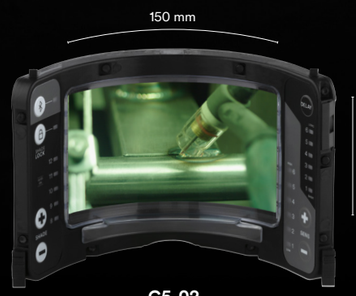
G5-01/03VC
108 × 71 mm



9100XXi
107 × 73 mm



G5-01/03NC
107 × 55 mm



G5-02
150 × 76 mm (curved)



G5-01/03VC
108 × 71 mm



G5-01/03TW
108 × 71 mm



G5-01/03NC
107 × 55 mm



G5-01/03-Passive
110 × 90 mm



9100XXi
107 × 73 mm



9100X
107 × 54 mm



9100 Passive
110 × 90 mm

3M™ Speedglas™ Auto-Darkening Welding Filter G5-02

Leading edge innovation for great view

Great clarity before, during and after welding, with our 3M™ Speedglas™ Natural Color Technology. Colors appear brighter and more realistic in both the light and dark states. And a more realistic view enables better control over your arc. Certified to shade 2.5.



3M™ Speedglas™ Auto-Darkening Welding Filter 9100 Series

Your choice of auto-darkening welding filters (ADF)



Speedglas Welding Filter 9100XXi

- Natural Color
- Auto-ON
- 73×107 mm viewing area
- Dark state 5, 8–13



Speedglas Welding Filter 9100X

- 54×107 mm viewing area
- Dark state 5, 8–13
- Any shade can be “locked-in”
- Tack Welding Mode

For more information on 3M™ Speedglas™ Welding helmet G5-02 see page 64 and for 3M™ Speedglas™ Welding Helmet 9100MP see page 60.

3M™ Speedglas™ Auto-Darkening Welding Filters G5-01/03

Great clarity before, during and after welding

There are three options of 3M™ Speedglas™ auto-darkening welding filter series G5 – all offering the popular 3M™ Speedglas™ Natural Color Technology with great clarity before, during and after welding.



G5-01/03VC

- Variable color technology with three selectable colors in dark state
- 71×108 mm viewing area
- TAP function
- Shade 14 settings for higher amp welding
- 4 arc-detection sensors
- Bluetooth connection
- Natural color and contrast



G5-01/03TW

- Light state 2.5
- 71×108 mm viewing area
- TAP function
- Tack Welding Mode
- 4 arc-detection sensors
- Bluetooth connection
- Natural color and contrast



G5-01/03NC

- 55×107 mm viewing area
- Locks manually in light state for grinding
- Locks manually in shade 5 for cutting
- 3 arc-detection sensors
- Natural color and contrast

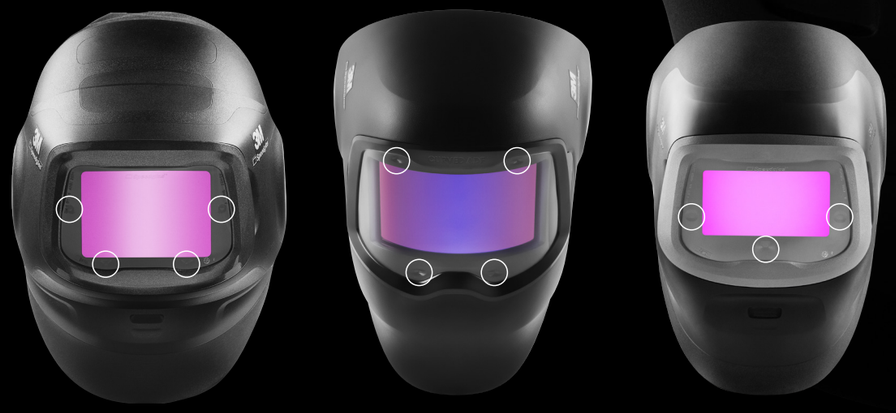
For more information on 3M™ Speedglas™ Welding helmet G5-01, see page 55 and 3M™ Speedglas™ Welding helmet G5-03 see page 58, 68 and 70.

Great arc detection delivers fast switching for precise welding

The optical arc detection sensors react independently of each other, prompting the welding filter to darken when a welding arc is struck. Thanks to the position of the sensors the filter reliably switches even in challenging applications – such as hidden arc situations.

The sensors on the welding filter must be kept clean and uncovered at all times for optimal function. Flashing light sources (e.g. safety strobe lights) can trigger the welding filter to start blinking even though no welding is occurring. The blinking will occur whilst in light state, the dark state will remain unaffected. Welding areas should be shielded from such interference.





4 sensors

4 sensors

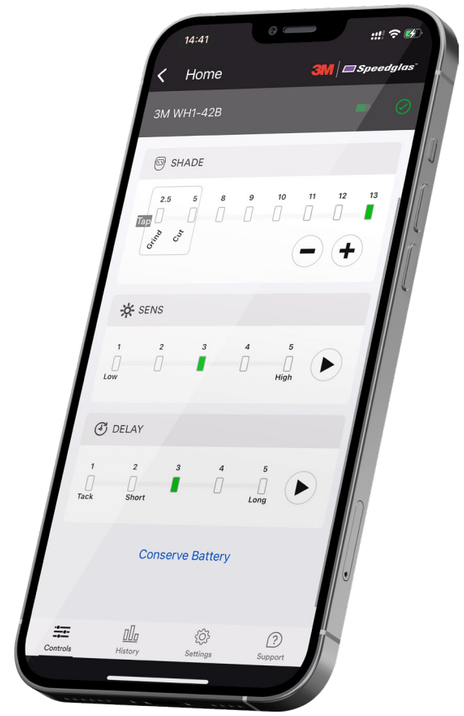
3 sensors

3M™ Connected Equipment App

Get more out of your welding helmet

Benefit from extra features by connecting your welding helmet to the 3M app.

- Opt-in by securely pairing your smartphone to your Generation 5[1] welding filter using the 3M Connected Equipment App.
- Program up to 10 ADF memory modes (i.e., settings for dark shades, sensitivity, delay, etc.) using your phone.
- Easily record your maintenance log for your welding helmet to the app.
- Instantly know statistics, including hours on; hours in dark state; hours in light state; and the number of on/off cycles.
- Get ready access to user manuals and parts lists and, when Web-connected, to how-to videos.





Bluetooth®



G5-02



G5-01/03VC



G5-01/03TW

These 3M™ Speedglas™ generation 5 welding filters have Bluetooth connectivity, enabling them to connect to the 3M™ Connected Equipment App.

1) Except for 3M Speedglas G5-01/03NC

Respiratory Protection Welding Systems



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

Your own filtered air flow – mobile and adaptable



Features	
Nominal airflow	170 – 200 l/min
Approval	EN 12941
FILTERS	
High efficiency particle filter	✓
Prefilter	✓
Gas and vapor filter	✓
Odour filter	✓
INDICATORS	
Low flow alarm	✓
Filter clogging	✓
Battery capacity	✓
COMPATIBILITY	
G5-01 G5-03 Pro Air 9100MP 9100MP-Lite M-series	

Is there a way to both provide respiratory protection against harmful welding fumes while increasing the comfort around your face and head? Tackle workplace hazards with a respiratory protection solution workers will want to wear.

As one of the most popular respirators of its kind in the world, the 3M™ Adflo™ Powered Air Purifying Respirator is designed to provide welders a constant nominal airflow rate of 170 liters per minute[1)], regardless of the battery's charge or the particle loading of the filter.

Do you prefer a belt or a backpack?

Some welders prefer to wear a heavy duty backpack which hold the PAPR flat against your back and can make it easier to move around some workspaces.



1) 205 liters per minute for the version with the larger battery

System overview: page 88 | Ordering and part info: page 94



Designed for heavy-duty, high-amperage welding and grinding, the G5-01 welding helmet connects to the 3M™ Adflo™ Powered Air Purifying Respirator to provide TH3-rated respiratory protection (NPF 500).

A system for many needs

The robust Adflo PAPR provides features you would expect in a premium system, including easy-to-use functionality.

For conditions where supplied air is required we can offer the 3M™ Versaflo™ Series Regulators (see more on page 94).

The face seal features a locking toggle designed for fast, secure adjustments. Two tabs make it easier to lift the seal over your glasses. And installation channels on the helmet speed the removal and replacement of the seal.

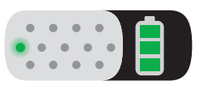
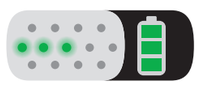
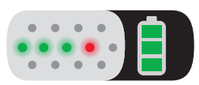
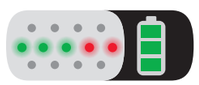


G5-01 helmet viewed from below

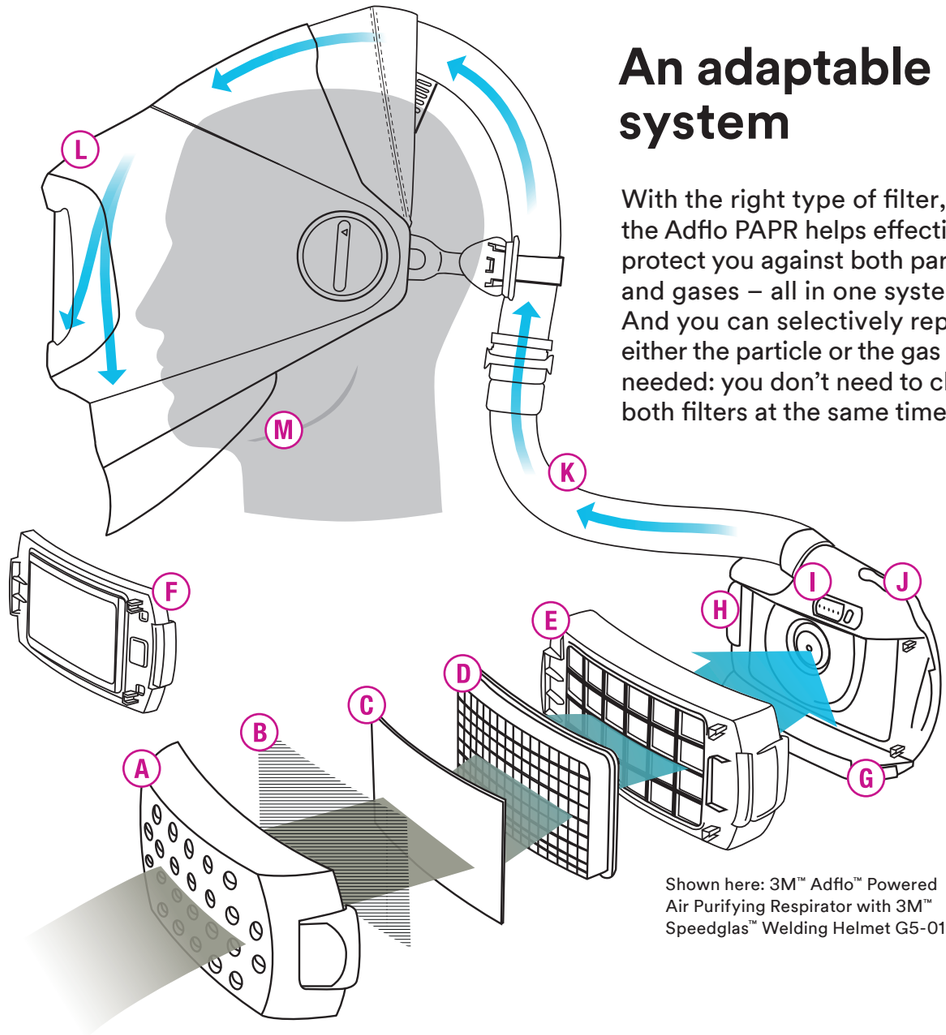
See how easy it is to adjust!

Green for go

As soon as you turn on your Adflo PAPR a display indicates the status of the filter.
Green light means that the unit is working normally. Red light indicates that the filter is clogging.

1. One green indicator: new particle filter. **Two green indicators:** if also a new gas filter is installed **.**	**2.** As the filter is clogging more indicators will lit up**.**	**3. Three green and one red light:** expect a shorter battery runtime. Particle filter replacement is recommended.	**4. Three green and two red lights:** the particle filter is clogged and must be replaced.
			

Note: Details regarding performance and limitations are set out on the respirator packaging, user instructions, or on 3M.com.



Shown here: 3M™ Adflo™ Powered Air Purifying Respirator with 3M™ Speedglas™ Welding Helmet G5-01

An adaptable system

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

A Filter cover: holds the different available Adflo filters.

B Spark arrestor.

C Prefilter: increases the service life of the particle filter.

D Particle filter: high efficiency particulate filtration (must be installed at all times).

E Gas filter: (A1B1E1 or A2) captures organic, inorganic and/or acid gases and vapors. Gas filters sold separately.

F Odour filter: removes unpleasant smells (not needed if a gas filter is installed); sold separately.

G Li-ion battery: fully charges in approx. 4.5 hours. Expected operating time is 7–9 hours at the standard 170 l/m airflow setting with a new particle filter and a new, fully-charged battery.

H Brushless motor.

I Filter/Battery Indicator: LED status for both the particle filter and battery.

J Airflow plus: for hot, humid jobs, you can increase the airflow from 170 l/min to 200 l/min with the push of a button.

K Breathing tube: different options available.

L Airflow: for your maximum comfort filtered air is distributed throughout the entire breathing zone. Plus, the intelligent PAPR keeps the airflow rate at a constant, preset level.

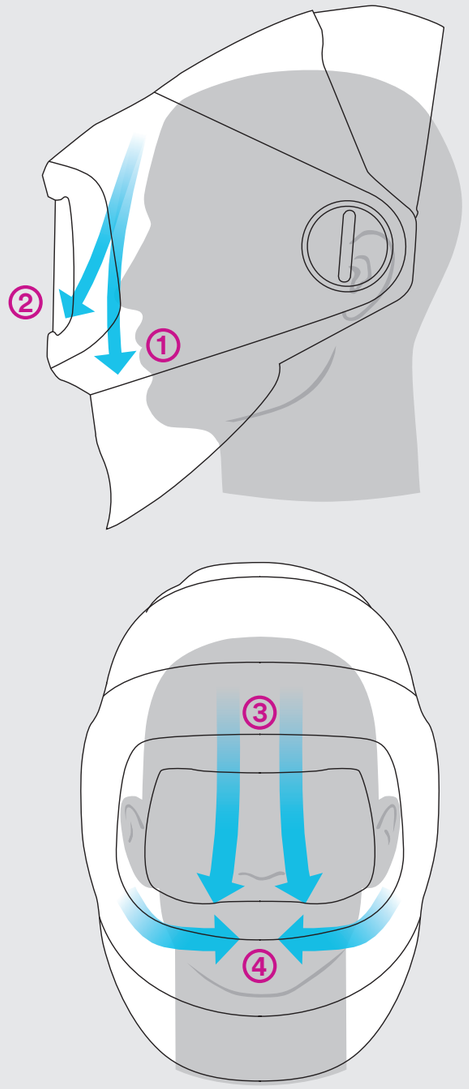
M Soft, flexible face seal (removed here for clarity): creates a positive pressure environment within the helmet.

Take control of your flow

For more control over your comfort, the innovative Variable Airflow system lets you direct the airflow to either your face ①, your visor ②, or some combination of both.

You can even adjust the amount of air coming from the top outlet ③ vs. the two side outlets ④, or choose a blend of both.

All airflow adjustments can be made while you're wearing the helmet – and continuously maintaining your eye, face and respiratory protection.



Scan this code to see how it works!

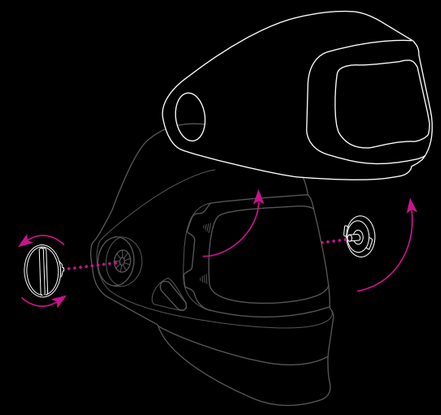


Stay protected

This flip-up functionality allows you to seamlessly switch between welding and grinding tasks while maintaining respiratory protection. The clear visor also allows you to set-up, inspect and move around the workplace without the need to remove the face protection or break the positive pressure respiratory seal.



The 3M™ Speedglas™ Welding Helmet G5-01 is designed for rough conditions.



For extended non-welding work, just unscrew the two dials to completely remove the welding visor and re-attach the dials again, reducing the helmet weight by up to 36%.



Easy to access and use controls: all adjustable functions are imprinted on the helmet, and adjustments can be made while wearing the helmet and your gloves.



3M™ Speedglas™ Welding Helmet G5-01

Farewell to compromises



Based on extensive feedback from welders who work at high amperages and frequently need to grind, the 3M™ Speedglas™ Heavy-Duty Welding Helmet G5-01 is designed to adapt to individual needs and various situations.

For a list of extended coverage options, see page 76.

Features[1]	
Mechanical strength ISO 16321	CLASS E
Side windows	
Flip-up	✓
Head protection	
WELDING FILTER FUNCTIONS	
Natural Color Technology	✓
Variable Color Technology	✓[2]
TAP Function	✓[3]
Curved Glass Technology	
Auto-ON	✓
WELDING HELMET SYSTEM	
Variable airflow distribution	✓
Powered Air EN 12941 NPF	TH3 500

1) More details about the features referenced, see page 34-37.
2) In combination with welding filter G5-01/03VC, see page 35 and 45.
3) In combination with welding filter G5-01/03VC or TW, see page 35 and 45.

Natural Color Technology.

Variable Dark State Colors.

Variable Airflow.

TAP function.

Bluetooth connectivity

Welding helmet properties: page 36 | Welding filter properties: page 35 | Respiratory systems: page 50–53 | Ordering and part info: page 87



Adjustable air distribution

Externally adjustable air distribution and airflow control may enhance comfort in your helmet.

Easy switching

Tap on the side of the welding helmet, with or without a glove, to easily switch between grind (or cut) mode and weld mode.

Quick adjustments

Easily adjust parking grip and drop-friction via external controls. See page 20.

Side windows

In shade 5, that widen your field of view.

Light Up Your Workspace

The optional welding helmet-mounted task light provides uniform illumination of your workspace.

3M™ Speedglas™ Welding Helmet G5-03 Pro Air

Versatility to upgrade your performance



Designed for the professional welder who performs a variety of welding and grinding tasks the G5-03 is made to be as versatile as you are.

The welding helmet comes with welding filters that feature excellent optics, including a light state of 2.5, variable color, and natural color technology. TAP function for easy switching between grind (or cut) mode and weld mode. Option of powered or supplied air. A wide range of consumables, accessories, and spare parts (a large part of them compatible with the G5-01 welding helmet).

Features[1]	
Mechanical strength ISO 16321	CLASS E
Side windows	✓
Flip-up	
Head protection	
WELDING FILTER FUNCTIONS	
Natural Color Technology	✓
Variable Color Technology	✓[2]
TAP Function	✓[3]
Curved Glass Technology	
Auto-ON	✓
WELDING HELMET SYSTEM	
Variable airflow distribution	✓
Powered Air[4] EN 12941 NPF	TH3[5] 500

1) More details about the features referenced, see page 34-37.
2) In combination with welding filter G5-01/03VC, see page 35 and 45.
3) In combination with welding filter G5-01/03VC or TW, see page 35 and 45.
4) See reference leaflet
5) When used with particle filter, TH2 when used with gas and vapor filters.

Natural Color Technology.

Variable Dark State Colors.

Variable Airflow.

TAP function.

Bluetooth® connectivity

Welding helmet properties: page 36 | Welding filter properties: page 35 | Respiratory systems: page 50–53 | Ordering and part info: page 90



3M™ Speedglas™ Welding Helmet 9100MP

Multiple levels of protection



Features[1]	
Mechanical strength ISO 16321	CLASS E
Side windows	✓
Flip-up	✓
Head protection	EN 397
WELDING FILTER FUNCTIONS	
Natural Color Technology	✓[2]
Variable Color Technology	
TAP Function	
Curved Glass Technology	
Auto-ON	✓
WELDING HELMET SYSTEM	
Variable airflow distribution	✓
Powered Air EN 12941 NPF	TH3 500

1) More details about the features referenced, see page 34-37.
2) Only in combination with 3M™ Speedglas™ Welding Filter 9100XXi.

Natural Color Technology.

Have you tried multi-protection systems where some component seemed to clash with the other components?

That's why we built 3M™ Speedglas™ Welding Helmet 9100MP (multi-protection) just for welders. You can now work in a highly integrated, comfortable, protective envelope, with big, wide views as you weld, prep and grind.

Welding helmet properties: page 36 | Welding filter properties: page 35 | Respiratory systems: page 50–53 | Ordering and part info: page 96

Standard welding helmets

3M™ Speedglas™ Welding Helmet G5-02

Your world is curved, not flat

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

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

Think about it:

The wider a flat welding filter gets, the wider the welding helmet must become. We like to present our solution by using a curved glass.

Light shade 2.5

•

Natural color

•

4 arc sensors





3M™ Speedglas™ Welding Helmet G5-02

World's first curved auto-darkening welding filter

Features[1]	
Mechanical strength ISO 16321	CLASS C
Side windows	
Flip-up	
Head protection	
WELDING FILTER FUNCTIONS	
Natural Color Technology	✓
Variable Color Technology	
TAP Function	
Curved Glass Technology	✓
Auto-ON	✓
WELDING HELMET SYSTEM	
Variable airflow distribution	
Powered Air EN 12941 NPF	

1) More details about the features referenced, see page 34-37.



Natural Color Technology.

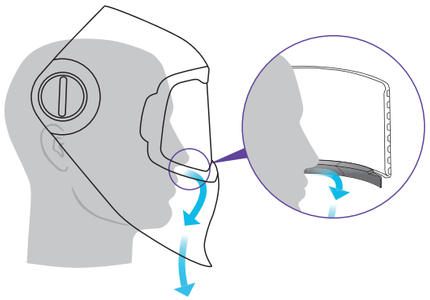
Curved Glass Technology.

Bluetooth connectivity

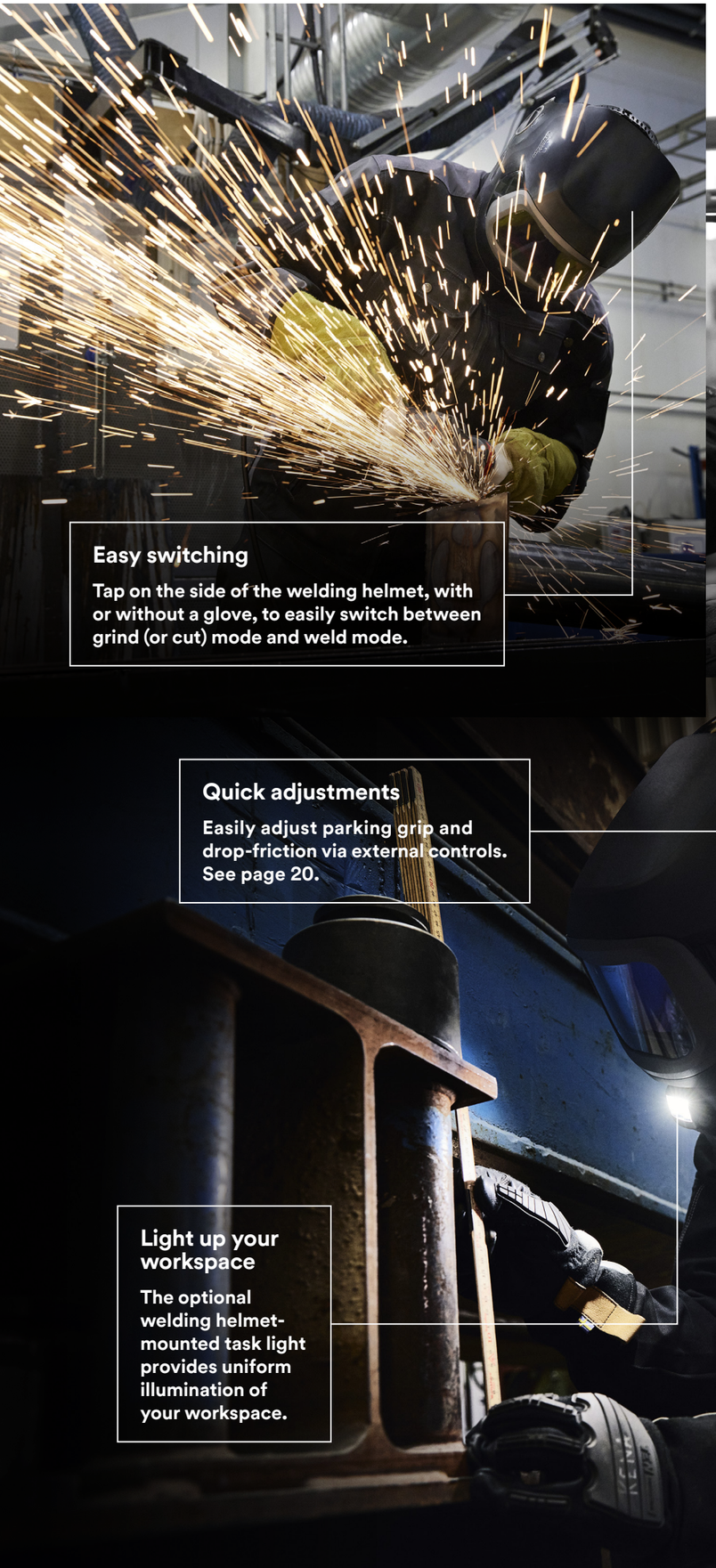
Designed for TIG welders, the G5-02 welding helmet creates a new world standard for precision welding filter viewing. This is a welding helmet for welders doing high-performance, critical work.

You'll also benefit from a lighter total welding helmet weight, due to a thin welding filter glass pack. What's more, you'll notice that the center of gravity is closer to the center of your head, giving you better weight distribution.

And for the slim welding helmet we created a new exhaled air venting design which may help you feel more comfortable.



Welding helmet properties: page 37 | Welding filter properties: page 35 | Ordering and part info: page 98



Easy switching

Tap on the side of the welding helmet, with or without a glove, to easily switch between grind (or cut) mode and weld mode.



Safety helmet adapter

Adjustable adapters lets you attach a 3M selected safety helmets.

Quick adjustments

Easily adjust parking grip and drop-friction via external controls. See page 20.

Light up your workspace

The optional welding helmet-mounted task light provides uniform illumination of your workspace.

Side windows

In shade 5, that widen your field of view.

3M™ Speedglas™ Welding Helmet G5-03 Pro

Versatility to upgrade your performance



Designed for the professional welder who performs a variety of welding and grinding tasks the G5-03 is made to be as versatile as you are.

The welding helmet comes with excellent optics including light state 2.5, variable color and natural color technology. TAP function for easy switching between grind (or cut) mode and weld mode. Option of a safety helmet. A wide range of consumables, accessories, and spare parts (a large part of them compatible with the G5-01 welding helmet).



G5-03 Pro with task light, safety helmet adapters and 3M™ Safety Helmet X5500NVE.

Features[1]	
Mechanical strength ISO 16321	CLASS E
Side windows	✓
Flip-up	
Head protection	✓[2]
WELDING FILTER FUNCTIONS	
Natural Color Technology	✓
Variable Color Technology	✓[3]
TAP Function	✓[4]
Curved Glass Technology	
Auto-ON	✓
WELDING HELMET SYSTEM	
Variable airflow distribution	
Powered Air EN 12941 NPF	

1) More details about the features referenced, see page 34-37.
2) In combination with safety helmet adapter and safety helmet, see page23.
3) In combination with welding filter G5-01/03VC, see page 35 and 45.
3) In combination with welding filter G5-01/03VC or TW, see page 35 and 45.

Natural Color Technology.

Variable Dark State Colors.

TAP function.

Bluetooth connectivity

Welding helmet properties: page 37 | Welding filter properties: page 35 | Ordering and part info: page 90



3M™ Speedglas™ Welding Helmet G5-03 E

Designed for affordability



Features[1]	
Mechanical strength ISO 16321	CLASS E
Side windows	
Flip-up	
Head protection	
WELDING FILTER FUNCTIONS	
Natural Color Technology	✓
Variable Color Technology	✓[2]
TAP Function	✓[3]
Curved Glass Technology	
Auto-ON	✓[2][3]
WELDING HELMET SYSTEM	
Variable airflow distribution	
Powered Air EN 12941 NPF	

1) More details about the features referenced, see page 34-37.
2) In combination with welding filter G5-01/03VC, see page 35 and 45.
3) In combination with welding filter G5-01/03VC or TW, see page 35 and 45.

Natural Color Technology.

If you are looking for a versatile, cost-effective welding helmet that features 3M™ Speedglas™ brand quality, consider 3M™ Speedglas™ Welding Helmet G5-03 E. This unique model in the G5-03 family offers grinding and cutting modes and good coverage, all in a slim form factor with low weight.

Better coverage

More than 11% better coverage than our previous welding helmets in the same price range.



Welding helmet properties: page 37 | Welding filter properties: page 35 | Ordering and part info: page 100

Complementary products

3M™ SecureFit™ X5500NVE Safety Helmet

Comfort for all-day wear

The 3M™ SecureFit™ Pressure Diffusion suspension system self-adjusts to the size of the head, reducing forehead pressure and increasing comfort for all-day wear.

4-point suspension
Allows wearer to customize height and fit. Helps provide weight distribution.



3M™ Uvicator™ Technology
Designed to tell you of the potential for degradation of the helmet due to prolonged exposure to UV radiation.



Ratchet headband
For easy and secure fit and adjustable in height.

3M™ G3501 Series High Heat Safety Helmet

For tough, high heat applications

Extreme temperatures, metal sparks and splashes. G3501 is designed to offer high levels of protection for tough environments without compromising compatibility, comfort or easy of use.

Electrical insulating
1000V electrical insulation in accordance with EN50365.

High heat resistance
Approved for use at temperatures ranging from −30 °C to +150 °C.



Leather sweatband





Welding helmet in standard configuration with rigid neck protection but no head cover.



For increased visibility at all times, add the fluorescent yellow extended head cover 16 90 21



To better enable you to weld when looking down, replace the rigid neck protection with, for example, the smaller fabric neck protection 16 90 41



When you need the durability of leather, attach the leather head cover 16 90 22 and the leather neck protector 16 90 43



Increase coverage of your head, neck and chest by adding the larger fabric head cover 16 90 23 and/or the extended fabric neck protection 16 90 42



To maximize coverage from sparks, add the fabric shroud 16 90 30 and the extended, larger fabric head cover 16 90 23. Also available as a kit, 16 90 35

3M™ Speedglas™ Heavy Duty Backpack

Helping to improve performance and life for welders

Some welders prefer to wear a heavy duty Backpack, which hold the powered air purifying respirator flat against your back and can make it easier to move around some workspaces.

The heavy duty backpack is designed for welding applications and aims to provide comfort, light weight, robustness, stability and good perceived balance.





Flame retardant[1] and durable

Comfortable and designed to be perceived as balanced when carried

Versatile adjustability for comfortable and stable fit

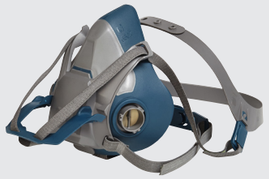
Designed to minimize contact with the back to help with ventilation

Scan this code to see how easy it is to adjust!

1) ISO 16321-1 §7.8 Resistance to ignition

Reusable and filtering facepiece respirators

Light, convenient and comfortable protection



3M™ Reusable Respirators

Choose from four different half mask series – based on your filtration needs and maintenance/personal comfort preferences.

All four series are compatible with many 3M™ Speedglas™ welding helmets.



3M™ Filtering Facepiece Respirators for welding

Provide lightweight, convenient, comfortable respiratory protection against dusts, mists, and metal fumes.

Note: Details regarding performance and limitations are set out on the respirator packaging, user instructions, or on 3M.com.



Getting too close to your arc?

Start with the easiest solution first: replace your welding filter's outer protection plates more frequently!

If you can't see the detail you need, try one of our magnifying lenses. They come in x1.0, x1.5, x2.0, x2.5 and x3.0 strengths. For details, see the Accessories and Spare Parts section for each helmet. For details, **see page 80**.





3M™ PELTOR™ Welding Earmuffs H505B

Slim line design ideal for the welding industry

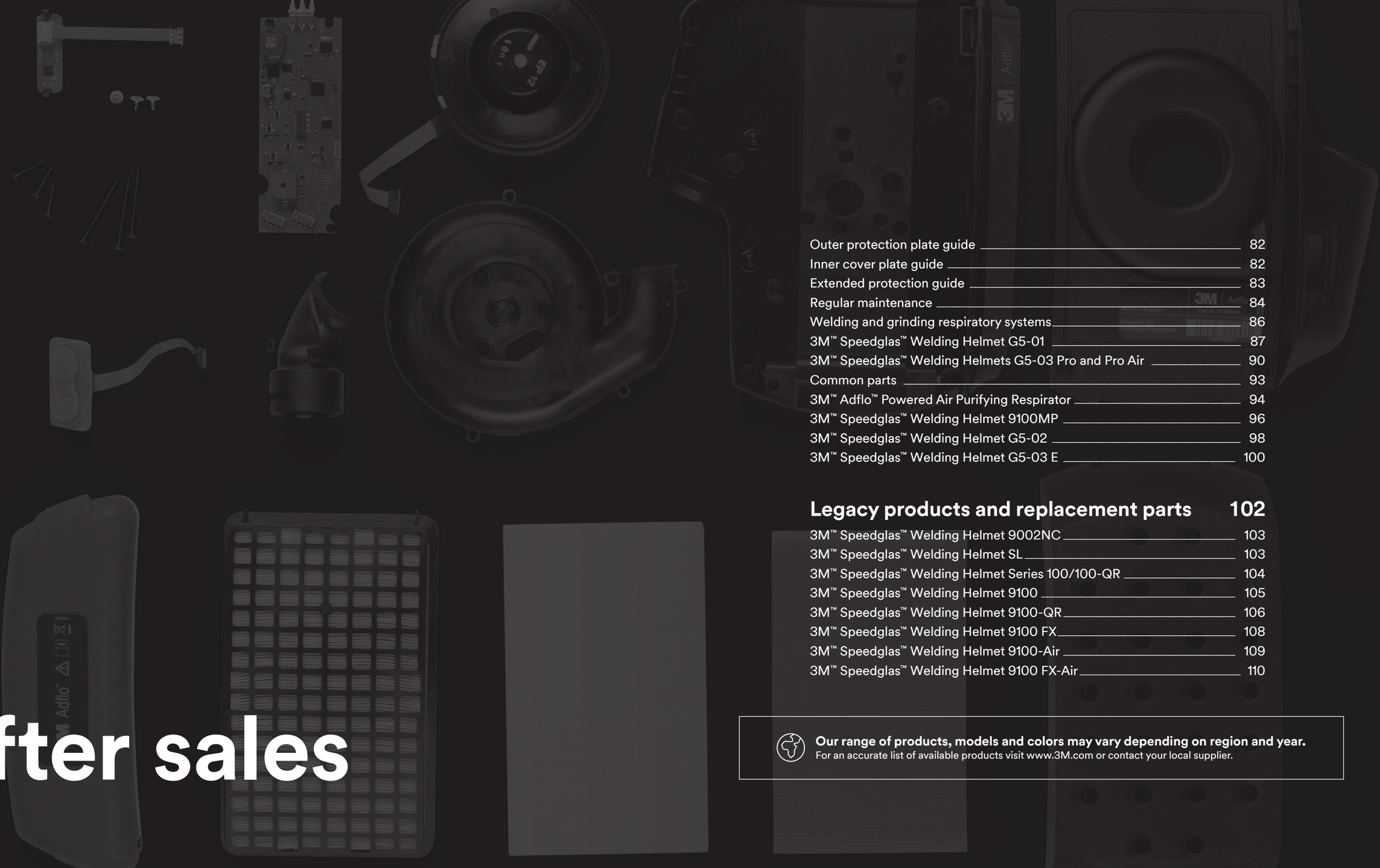
Lightweight low profile design
Fits nicely under many 3M™ Speedglas™ welding helmets

Stays in place
Two-point suspension and wire headband for a secure, comfortable fit



Less scratch sound
Semi-soft cup surface helps minimize scratch sound transmission

Comfortable noise reduction
Soft ear cushions provide a comfortable seal and helps reduce noise exposure



After sales

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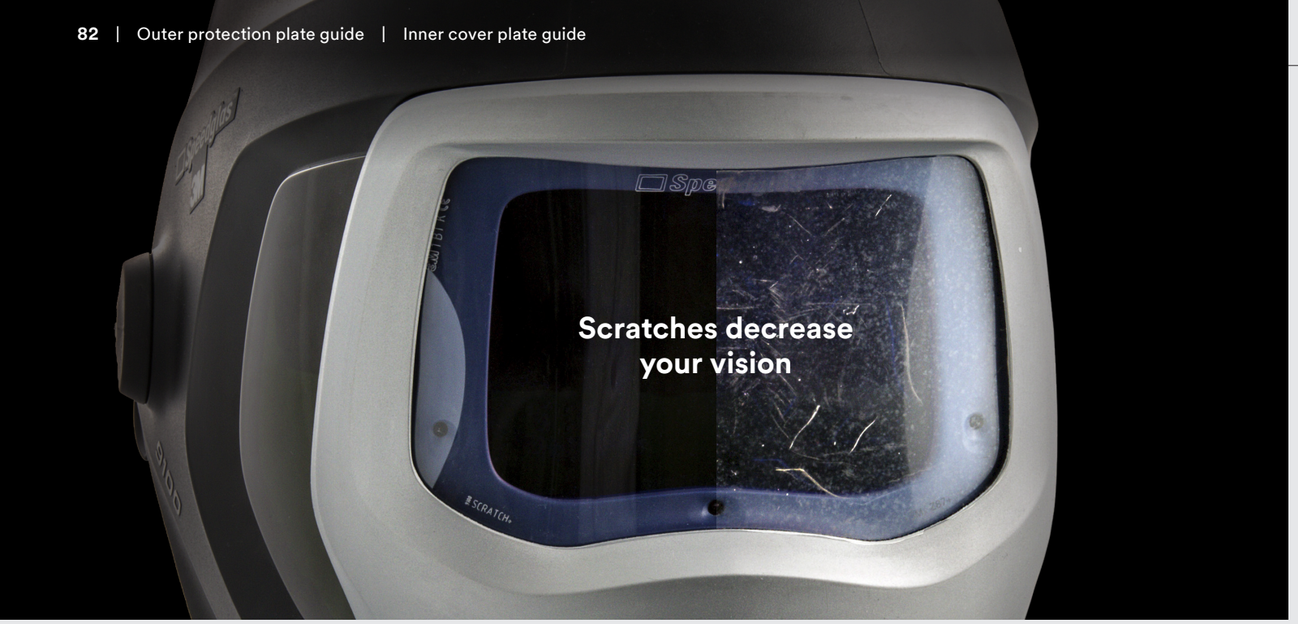
Our range of products, models and colors may vary depending on region and year.
For an accurate list of available products visit www.3M.com or contact your local supplier.



Outer protection plate guide

As the outer protection plate becomes deeply pitted, scratched or too dirty to clean with a soft cloth, it's probably time to replace it. Ensure you order the right protection plate/ cover to your welding filter:

		Generation 5 welding helmets				Welding helmet 9100MP			
Part No	Description	G5-01/03 TW + VC	G5-02	G5-01/03 NC	G5-01/03 Passive	9100V	9100X	9100XX 9100XXi	9100 Passive
52 60 00	Standard	●		●	●	●	●	●	●
52 70 00	Scratch resistant	●		●	●	●	●	●	●
52 70 01	Extra Scratch resistant	●		●	●	●	●	●	●
52 70 70	Heat resistant	●		●	●	●	●	●	●
62 60 00	Scratch resistant		●						

Inner cover plate guide

Regularly clean the inner cover plate with a soft cloth and replace if any pits or scratches occur. Ensure you order the right plate to your welding filter:

			Generation 5 welding helmets				Welding helmet 9100MP			
Part No	Description	L x H (mm)	G5-01/03 TW + VC	G5-02	G5-01/03 NC	G5-01/03 Passive	9100V	9100X	9100XX 9100XXi	9100 Passive 100 Passive
12 60 00	Clear	110×90				●				●
52 80 05	Clear	117×50					●			
52 80 15	Clear	117×61			●			●		
52 80 25	Clear	117×77	●						●	
62 40 00	Clear	150×76		●						

We got you covered

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

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



Extended protection guide

Part No	Available additional coverage	G5-01	G5-02	G5-03 Pro G5-03 Pro Air	G5-03 E	9100MP
16 90 05	Head cover, fabric		●		●	
16 90 20	Head cover, fabric (small)	●		●		
16 90 21	Head cover, fabric yellow (large)	●		●		
16 90 22	Head cover, leather (small)	●		●		
16 90 23	Head cover, fabric (large)	●		●		
16 90 24	Scrape guard, rigid	●		●		
16 90 35	Extended protection kit G5-01/03, fabric	●		●		
16 40 05	Ear and neck protection, leather		●		●	
16 90 01	Neck/shoulder protection, fabric (large)		●		●	
16 90 40	Neck protection, rigid (small)	●		●		
16 90 41	Neck protection, fabric (small)	●		●		
16 90 42	Neck protection, fabric (large)	●		●		
16 90 43	Neck protection, leather (small)	●		●		
16 90 15	Shroud, fabric (large)					●
16 90 30	Shroud, fabric (large)	●		●		
16 91 00	Hood, fabric	●	●	●	●	●
83 40 18	Breathing tube cover, fabric	●		●		●

Prolong the lifespan of your welding gear

To optimize the effective lifetime of your welding equipment and avoid the additional cost of replacement, regular maintenance is important.

To help maximize safety and comfort, make it a regular habit to check and change the following items. Typical replacement intervals are shown below, but please replace more frequently if your pre use checks suggest that this is necessary:

System	Component	Typically replaced	Notes
Welding filters	Outer protection plate	Once a week	Replace anytime the plate becomes deeply pitted, scratched or too dirty to clean with a soft cloth.
Welding filters	Inner cover 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.
Welding helmets	Face seal	As needed	Replace frequently in really dirty environments, or if it has splits or tears or whenever the seal becomes unhygienic.
Adflo PAPR	Prefilter	Once a week (based on application and environment)	Regular replacement of the prefilter extends the life of the particle filter.
Adflo PAPR	Particle filter	At least every month	Replace the particle filter when particle filter indicator becomes red. Otherwise, replace whenever the battery operating time becomes too short, or when “fully loaded” filter triggers low airflow alarm. Never clean the filter with compressed air as this will damage the filter media
Adflo PAPR	Gas filter	As needed	Replace the gas filter according to your work place requirements. It is not recommended to wait until you can sense odors or smells.
Adflo PAPR	Odour filter	Any time you smell unpleasant odors	Odour filter is not required if gas filter is used.
Adflo PAPR	Spark arrestor	As needed	Replace if deformed and no longer fitting well. Clean from dust and dirt when needed
Adflo PAPR	Breathing tube	If damaged, deformed or leaking any air	To extend the life of the breathing tube, use a tube cover or use a heavy duty rubber breathing tube.

Important Notice: 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 After sales chapter, page 80.



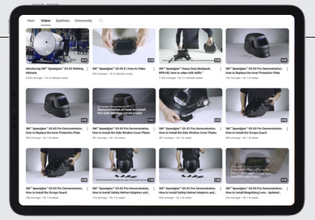
Before use

1. **Welding helmet and headband.** Inspect for cracks or any damaged parts. Replace if needed.
2. **Welding filter.** Check that the sensors are clean. Replace the battery if the low battery indicator flashes or if the indicators do not flash when the buttons are pressed.
3. **Protection plates.** Ensure that your welding filter is equipped with an outer protection plate and inner cover plate. To help provide the best possible vision, they should be clean and without scratches.
4. **Magnification.** If you can’t see the detail you need, try one of our magnifying lenses, available in x1.0, x1.5, x2.0, x2.5 and x3.0 strengths.
5. **Respiratory welding helmets: face seal.** If the face seal is damaged, there is a risk that contaminated air will get inside the welding helmet. Verify it’s in place and free from splits and tears.
6. **Respiratory welding helmets: breathing tube.** Confirm that the tube is undamaged and not leaking any air. To extend the life of the breathing tube, use a breathing tube cover or a heavy-duty breathing tube

After use

1. **Clean the welding helmet.** Wipe with a moist tissue or cloth, both inside and outside the welding helmet.
2. **Face seal and sweatband.** Clean the face seal according to the cleaning instructions. Face seal and sweatband should be replaced if they have splits or tears or whenever they become unhygienic.
3. **Protection plate/cover and visor plate.** Clean with a soft cloth and replace if any pits or scratches occur.
4. **Breathing tube.** Replace if damaged, deformed or leaking any air. If you suspect that the inside of the breathing tube is dirty, it must be changed. DO NOT rinse, immerse in water, or clean with solvents.
5. **Storage.** Store the welding helmet in a dry, clean area away from direct sunlight, high temperatures and solvents, as stated in the user instructions. Ideally use the bag that comes with the welding helmet and Adflo PAPR system or similar.

Learn more about product maintenance from Speedglas YouTube channel!Scan the QR code or visit **youtube.com/3MSpeedglas**



Welding and grinding respiratory protection systems

3M™ Speedglas™ welding helmets



G5-01



G5-03 Pro Air



9100MP

3M™ Versaflo™ headtops for grinding



M-207



M-307



M-407

3M™ Adflo™ Powered Air Purifying Respirator



3M™ Versaflo™ Supplied Air Regulators



V-100E
Air Cooling



V-200E
Air Heating



V-500E
Flow Controlled

Breathing tubes[2)]



The QRS (Quick Release Swivel) breathing tubes allow fast and easy connection. Most systems comes with the self-adjusting length for improved fit, made in polyurethane (83 40 16). As an alternative the high durability rubber tube (83 40 17) or the extra long breathing tube (83 40 19) is sold separately.

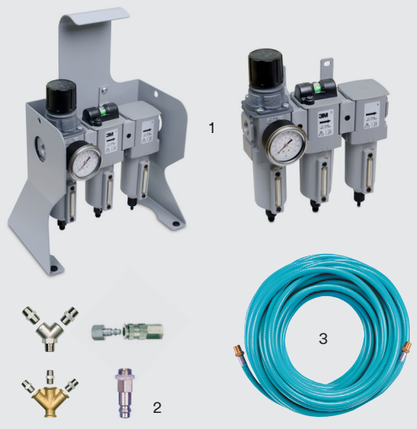
Filters and accessories



1. **Standard battery** 5–8 hours.[1)]
2. **Heavy-duty battery** 10–14 hours.[1)]
3. **Spark arrestor**[2)]
4. **Prefilter**[2)]
5. **Particle filter**[2)]
6. **Odour filter** Not needed when you use gas filter.
7. **Gas filter A1B1E1**[3)]
8. **Gas filter A2**[3)]
9. **Braces**
10. **Heavy Duty Backpack**

More information about Adflo accessories **see page 94.**

Air supply



1. **3M™ Aircare™ Filtration Units** (wall-mounted or stand alone)
2. **Couplings and branch sets**
3. **Air supply tubes** (7.5–30 m)

For more information about air supply **see 3M.com.**

1) Headtop model and certain accessories may impact estimated duration time. See user instruction for details.
2) Included as standard when you order a complete respiratory protection system with welding helmet and air delivery unit; must always be used.
3) Gas filter must always be used together with a particle filter and we recommend to use a heavy-duty battery (sold separately: 83 76 31). In some configurations it is also required to use a breathing tube with silencer, always verify approved combinations with your Safety Engineer or contact a certified Industrial Hygienist for advice.



3M™ Speedglas™ Welding Helmets G5-01

3M™ Speedglas™ Welding Helmet G5-01 fits both your 3M™ Adflo™ Powered Air Purifying Respirator[1)] as well as 3M™ Versaflo™ Supplied Air Regulators.

	Speedglas welding filter G5-01/03TW	Speedglas welding filter G5-01/03VC
Complete powered air system	Welding helmet G5-01 with welding filter G5-01/03TW and Adflo powered air purifying respirator. **Part No 61 78 20**	Welding helmet G5-01 with welding filter G5-01/03VC and Adflo powered air purifying respirator. **Part No 61 78 30**
Complete powered air system incl consumable starter kit	Welding helmet G5-01 with welding filter G5-01/03TW, consumable kit (79 20 00) and Adflo powered air purifying respirator. **Part No 61 78 29**	Welding helmet G5-01 with welding filter G5-01/03VC, consumable kit (79 20 00) and Adflo powered air purifying respirator. **Part No 61 78 39**
Upgrade your old system	Welding helmet G5-01 with welding filter G5-01/03TW. **Part No 61 11 20**	Welding helmet G5-01 with welding filter G5-01/03VC. **Part No 61 11 30**

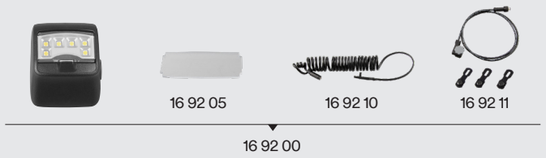
When you order a complete system, it comes with our storage bag. Featuring a fast, double-zipper opening top and large carry handles, the bag keeps your gear protected and clean when not in use.

Scan this code to see how to unbox your new system



1) The following Adflo powered air purifying respirator systems are equipped with a heavy-duty Li-ion battery with an operating time of approximately 10–14 hours (at sea level with a new, fully charged battery and new clean filter). Actual system duration are dependent on configuration and environment.

Accessories for 3M™ Speedglas™ Welding Helmet G5-01















Part No	Description
16 90 20 •	Head cover, fabric (small)
16 90 21 •	Head cover, fluorescent yellow (large)
16 90 22 •	Head cover, leather (small)
16 90 23 •	Head cover, fabric (large)
16 90 24 •	Scrape guard
16 90 30 •	Shroud
16 90 35 •	Extended protection kit, shroud and head cover (large)
16 90 40	Neck protection rigid
16 90 41 •	Neck Protection, fabric (small)
16 90 42 •	Neck Protection, fabric (large)
16 90 43 •	Neck Protection, leather (small)
16 92 00 •	Task light, incl mounting parts and cables

Part No	Description
16 92 05 •	Task light protection plate, pkg. of 5
16 92 10 •	Task light power cable (long)
16 92 11 •	Task light power cable (short)
16 92 23 •	Pouch with Adflo battery, for task light when using supplied air regulator (not shown)
83 40 18	Breathing tube cover, flame retardant
83 50 20	Braces
83 71 10	Odour filter
83 71 20	Odour filter pad
83 72 42	Gas filter A1B1E1
83 75 42	Gas filter A2
BPK-HD	Heavy duty back pack

Subscribe to our YouTube channel to learn more about product features and maintenance.

www.youtube.com/3MSpeedglas



3M™ Versaflo™ Supplied Air Regulators

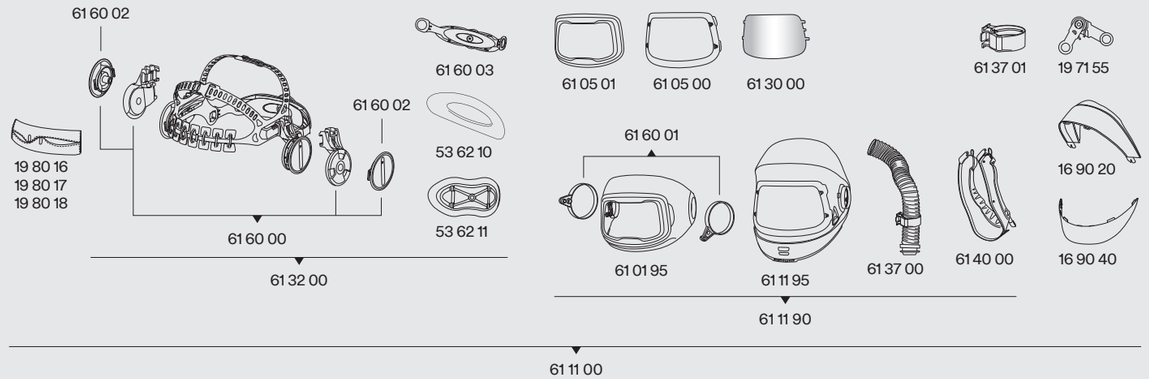




V-100E	Air cooling regulator
V-200E	Air heating regulator
V-500E	Flow controlled regulator

(•) A purple dot marks common parts with G5-03 Pro/Pro Air.

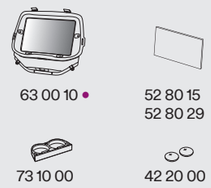
Spare parts for 3M™ Speedglas™ Welding Helmet G5-01



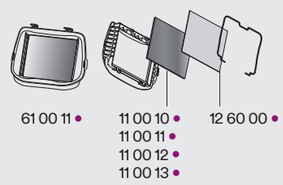
G5-01/03VC and G5-01/03TW

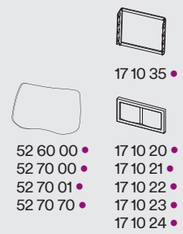


G5-01/03NC



G5-01/03-Passive









Part No	Description
11 00 10 •	Passive welding filter lens shade 10 (110×90)
11 00 11 •	Passive welding filter lens shade 11 (110×90)
11 00 12 •	Passive welding filter lens shade 12 (110×90)
11 00 13 •	Passive welding filter lens shade 13 (110×90)
12 60 00 •	Inner cover plate for passive filter
16 90 20 •	Head cover, fabric (small)
16 90 40 •	Neck protection rigid
17 10 20 •	Magnifying lens 1.0X
17 10 21 •	Magnifying lens 1.5X
17 10 22 •	Magnifying lens 2.0X
17 10 23 •	Magnifying lens 2.5X
17 10 24 •	Magnifying lens 3.0X
17 10 35	Magnifying lens holder G5-01
19 71 55	Hinge mechanism, 1 pair
19 80 16 •	Sweatband, towelling. Pkg of 3
19 80 17 •	Sweatband, fleecy cotton. Pkg of 3
19 80 18 •	Sweatband, leather
52 60 00 •	Outer protection plate (standard), pkg of 10
52 70 00 •	Outer protection plate (scratch), pkg of 10

Part No	Description
52 70 01 •	Outer protection plate (scratch+), pkg of 10
52 70 70 •	Outer protection plate (heat), pkg of 10
52 80 25 •	Inner cover plate, pkg of 5
53 62 10 •	Head rest (small)
53 62 11 •	Head rest (large)
60 10 00 •	Battery holder
60 20 00 •	Battery CR2450
61 00 11 •	Passive Welding Filter G5 (11)
61 00 21 •	Speedglas welding filter G5-01/03TW
61 00 31 •	Speedglas welding filter G5-01/03VC
61 01 95	Outer shield flip-up
61 05 00	Front frame for clear visor
61 05 01	Front frame for outer shield flip-up
61 11 00	Welding helmet G5-01, without welding filter
61 11 90	Welding helmet G5-01, without welding filter, without neck or head cover
61 11 95	Inner shield with airduct and airflow controls (including visor frame)

Part No	Description
61 30 00	Visor plate, anti-fog and hardcoated, pkg. of 5
61 32 00 •	Headband with assembly parts
61 37 00 •	Airduct breathing tube (short) incl. holder
61 37 01 •	Holder for breathing tube
61 40 00 •	Face seal
61 60 00 •	Pivot/sliding mechanism including pivot knobs
61 60 01	Pivot rings for outer shield
61 60 02 •	Pivot knobs
61 60 03 •	Headband back part
61 78 00	Welding helmet G5-01, without welding filter, with Adflo powered air purifying respirator
61 78 09	Welding helmet G5-01, without welding filter, with Adflo powered air purifying respirator and consumable starter kit
79 01 05 •	Carry Bag
79 20 00	Consumable starter kit G5-01, includes 3 different sweatbands, face seal, visor plate, inner and outer cover/protection plates.

(•) A purple dot marks common parts with G5-03 Pro/Pro Air.

3M™ Speedglas™ Welding Helmets G5-03 Pro and Pro Air



3M™ Speedglas™ Welding Helmet G5-03 Pro

G5-03 Pro welding helmet
with no welding filter
Part No 63 18 00

G5-03 Pro welding helmet
with welding filter G5-01/03TW
Part No 63 18 20

G5-03 Pro welding helmet
with welding filter G5-01/03VC
Part No 63 18 30



3M™ Speedglas™ Welding Helmet G5-03 Pro Air

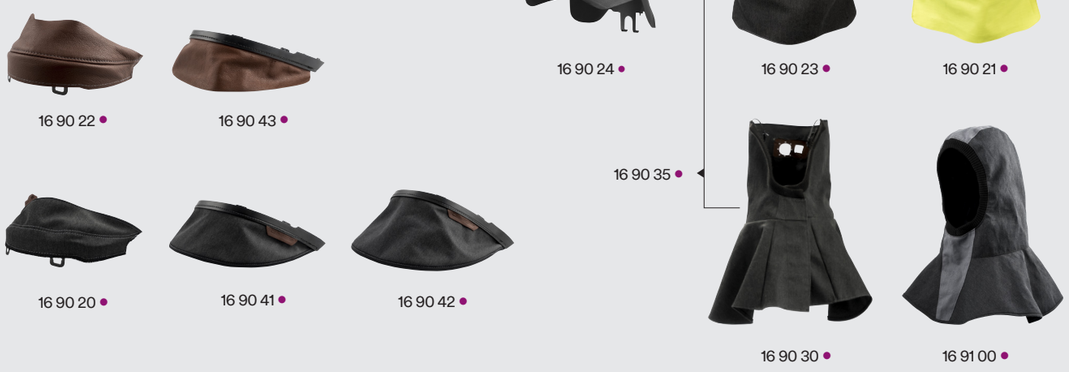
G5-03 Pro Air welding helmet
with no welding filter
Part No 63 28 00

G5-03 Pro Air welding helmet with no welding filter, Powered Air Purifying Respirator and carry bag
Part No 63 77 00

G5-03 Pro Air welding helmet with welding filter G5-01/03TW, Powered Air Purifying Respirator and carry bag
Part No 63 77 20

G5-03 Pro Air welding helmet with welding filter G5-01/03VC, Powered Air Purifying Respirator and carry bag
Part No 63 77 30

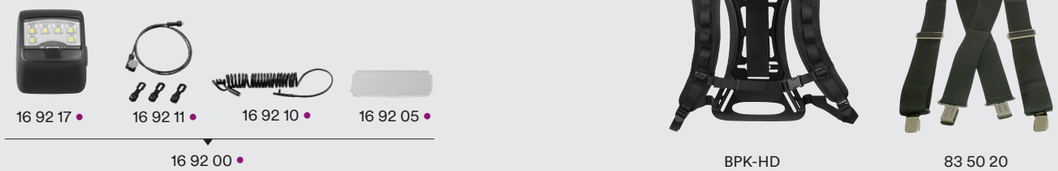
Accessories for 3M™ Speedglas™ Welding Helmets G5-03 Pro and Pro Air

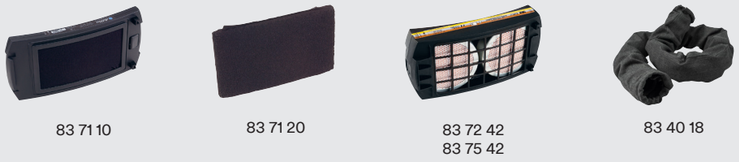


Accessories for 3M™ Speedglas™ Welding Helmet G5-03 Pro



Accessories for3M™ Speedglas™ Welding Helmet G5-03 Pro Air

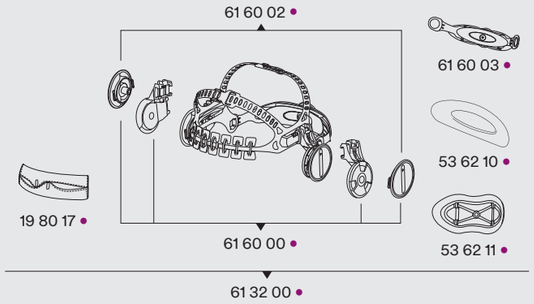


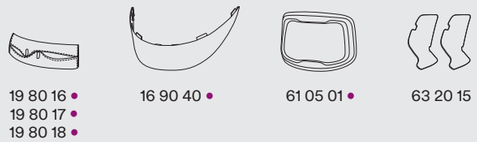


Part No	Description
16 90 20 •	Head cover, fabric (small)
16 90 21 •	Head cover, fluorescent yellow (large)
16 90 22 •	Head cover, leather (small)
16 90 23 •	Head cover, fabric (large)
16 90 24 •	Scrape guard G5-01/03
16 90 30 •	Shroud
16 90 35 •	Extended protection kit, shroud and head cover (large)
16 90 41 •	Neck Protection, fabric (small)
16 90 42 •	Neck Protection, fabric (large)
16 90 43 •	Neck Protection, leather (small)
16 91 00 •	Protective hood black/gray
16 92 00 •	Task light, incl mounting parts and cables
16 92 05 •	Task light protection plate, pkg. of 5
16 92 10 •	Task light power cable (long)
16 92 11 •	Task light power cable short
16 92 15	Task light kit (light, cable, holder with cable and battery)
16 92 16	Welding Helmet Task Light battery holder
16 92 17 •	Task light
16 92 23 •	Pouch for Adflo battery, for task light when using supplied air regulator (not shown)
19 71 70	Safety Helmet Adapter G5-03 Pro for X5500NVE
19 71 71	Safety Helmet Adapter G5-03 Pro for G3001NVE and H-701T-SF
83 40 18	Breathing tube cover, flame retardant
83 50 20	Braces
83 71 10	Adflo odour filter
83 71 20	Odour filter pad
83 72 42	Adflo gas filter A1B1E1
83 75 42	Adflo gas filter A2
ACK081B	Rechargeable Battery
AL2AI/SP	Battery Charging Cable for ACK081B
BPK-HD	Back pack for respirator
G3001NVE	3M™ Safety Helmet G3001 (non-vented)
G3501MOR	3M™ G3501 Series High Heat Safety Helmet
X5500NVE	3M™ Safety Helmet X5500NVE (non-vented)

(•) A purple dot marks common parts with G5-01.
***Suggested task light kit for G5-03 Pro Air welding helmet when using supplied air.**

Spare parts for 3M™ Speedglas™ Welding Helmets G5-03 Pro and Pro Air





G5-01/03VC and G5-01/03TW

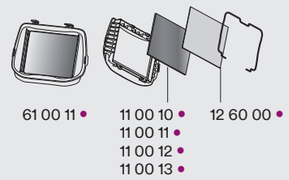


G5-01/03NC

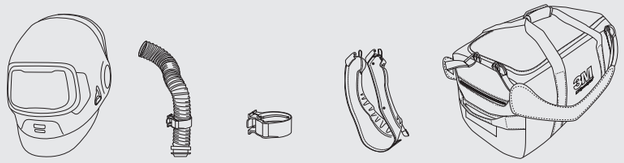




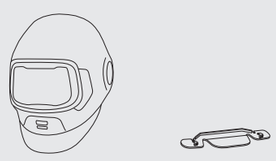
G5-01/03-Passive



Spare parts and consumables Pro Air only



Spare parts and consumables Pro only

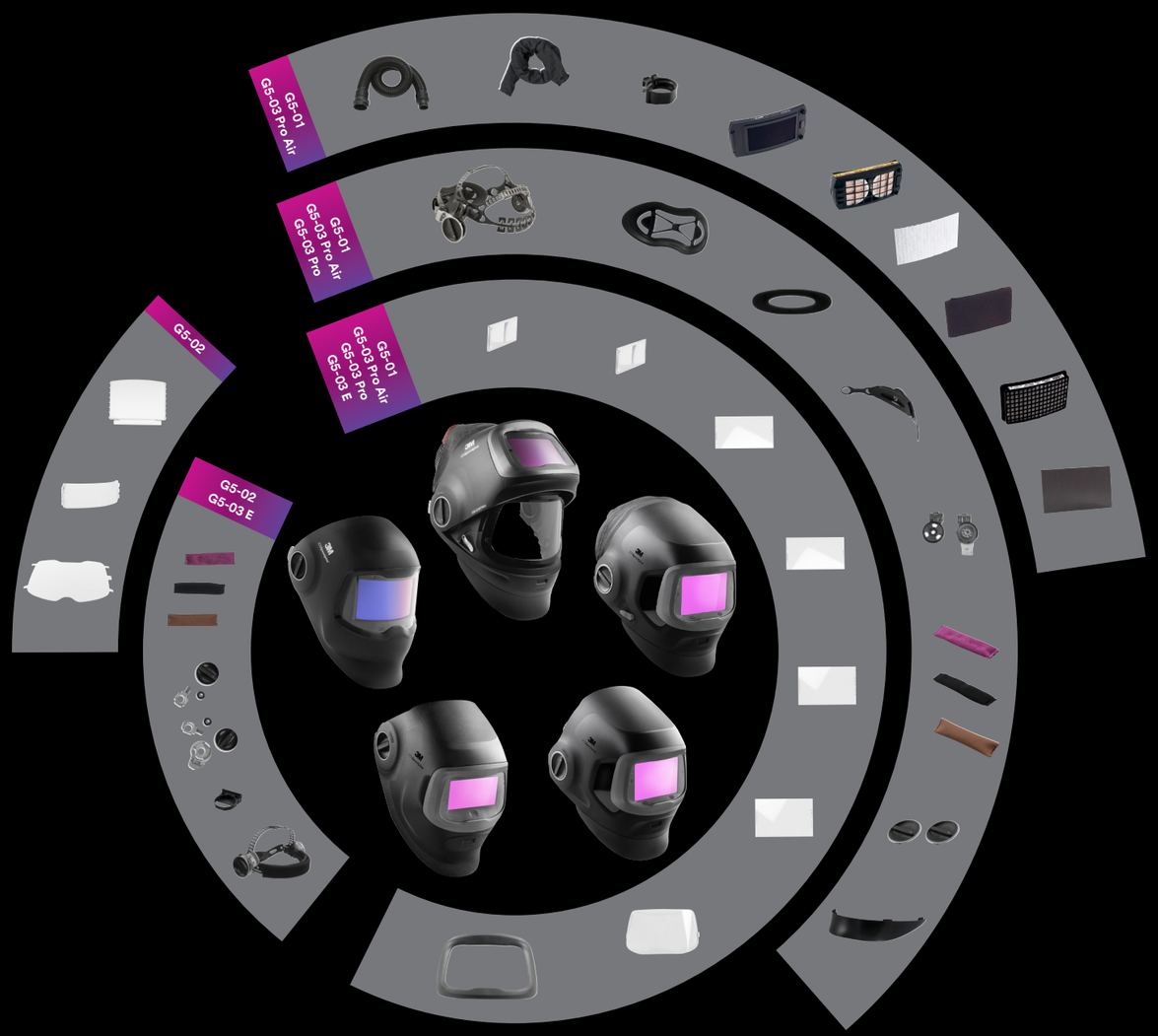


Part No	Description
11 00 10 •	Passive welding filter lens shade 10 (90×110)
11 00 11 •	Passive welding filter lens shade 11 (90×110)
11 00 12 •	Passive welding filter lens shade 12 (90×110)
11 00 13 •	Passive welding filter lens shade 13 (90×110)
12 60 00 •	Inner cover plate for passive filter
16 90 40 •	Neck protection rigid
17 10 20 •	Magnifying lens 1.0X
17 10 21 •	Magnifying lens 1.5X
17 10 22 •	Magnifying lens 2.0X
17 10 23 •	Magnifying lens 2.5X
17 10 24 •	Magnifying lens 3.0X
19 80 16 •	Sweatband, towelling. Pkg of 3
19 80 17 •	Sweatband, fleecy cotton. Pkg of 3
19 80 18 •	Sweatband, leather
42 20 00	Battery CR2032 Lithium 3V, pkg of 2
52 60 00 •	Outer protection plate (standard), pkg of 10
52 70 00 •	Outer protection plate (scratch), pkg of 10
52 70 01 •	Outer protection plate (scratch+), pkg of 10
52 70 70 •	Outer protection plate (heat), pkg of 10
52 80 15	Inner cover plate, pkg of 5
52 80 25 •	Inner cover plate, pkg of 5
52 80 28 •	Inner cover plate anti-fog
52 80 29	Inner cover plate anti-fog, pkg of 5
53 62 10 •	Head rest (small)
53 62 11 •	Head rest (large)
60 10 00 •	Battery holder
60 20 00 •	Battery CR2450
61 00 11 •	Passive Welding Filter G5 (11)
61 00 21 •	Speedglas welding filter G5-01/03TW
61 00 31 •	Speedglas welding filter G5-01/03VC
61 05 01 •	Front frame G5-01/03
61 32 00 •	Headband with assembly parts
61 37 00 •	Airduct breathing tube (short) incl. holder
61 37 01 •	Holder for breathing tube
61 40 00 •	Face seal
61 60 00 •	Pivot and sliding mechanism, including pivot knobs
61 60 02 •	Pivot knobs
61 60 03 •	Headband back part
63 00 10 •	Speedglas welding filter G5-01/03NC
63 02 01	Additional coverage holder
63 18 95	Welding helmet shield G5-03 Pro, no headband
63 20 15	Sidewindow cover plates
63 28 90	Welding helmet shield G5-03 Pro Air, no headband
73 10 00	Battery holder
79 01 05 •	Carry Bag

(•) A purple dot marks common parts between G5-01 and G5-03 Pro/Pro Air

Common parts for efficiency and ease

The modular design of the 3M Speedglas Generation 5 series offers a major benefit – many spare parts and accessories are compatible across all G5 helmets. This means less inventory for a workshop using multiple systems.



3M™ Adflo™ Powered Air Purifying Respirator



Adflo PAPR without headtop – standard battery

Part No	Description
83 77 30	Adflo PAPR with breathing tube, breathing tube adapter, airflow indicator, prefilter, spark arrestor, particle filter, battery, belt and charger.

For gas filter configuration we recommend using the Adflo PAPR with heavy-duty battery.



Adflo PAPR without headtop – heavy duty battery

Part No	Description
83 77 31	Adflo PAPR with breathing tube, breathing tube adapter, airflow indicator, prefilter, spark arrestor, particle filter, heavy-duty battery, belt and charger.

For gas filter configuration please add these items to above order: **83 72 42** for gas filter A1B1E1, or **83 75 42** for gas filter A2.



Adflo Battery Charger

Part No	Description
83 31 11	Adflo Battery Charger **for Li-ion battery**



Standard battery

Don't get weighted down. A lightweight lithium-ion battery pack designed for the Adflo PAPR.

- Run time 5–8 hours[1)]
- Charging time 4 hours
- Compact and lightweight



Heavy-duty battery

Find your endurance. A high-capacity lithium-ion battery pack extends the operating hours of the Adflo PAPR.

- Long run time 10–14 hours[1)]
- Charging time 4–5 hours



3M™ Adflo™ Battery Charger Organizing Stand

The 6-position battery charger organizing stand for Adflo battery chargers provides the ability to charge six batteries at the same time. Saving both time and hassle. Flexible installation: either mount on wall or stand-alone.

Part No: 83 37 06

1) Headtop model and certain accessories may impact estimated duration time. See user instruction for details.

Accessories for 3M™ Adflo™ Powered Air Purifying Respirator



83 50 20



BPK-HD



79 01 05



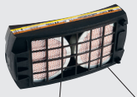
83 37 06



83 71 10



83 71 20



83 75 42



83 72 42

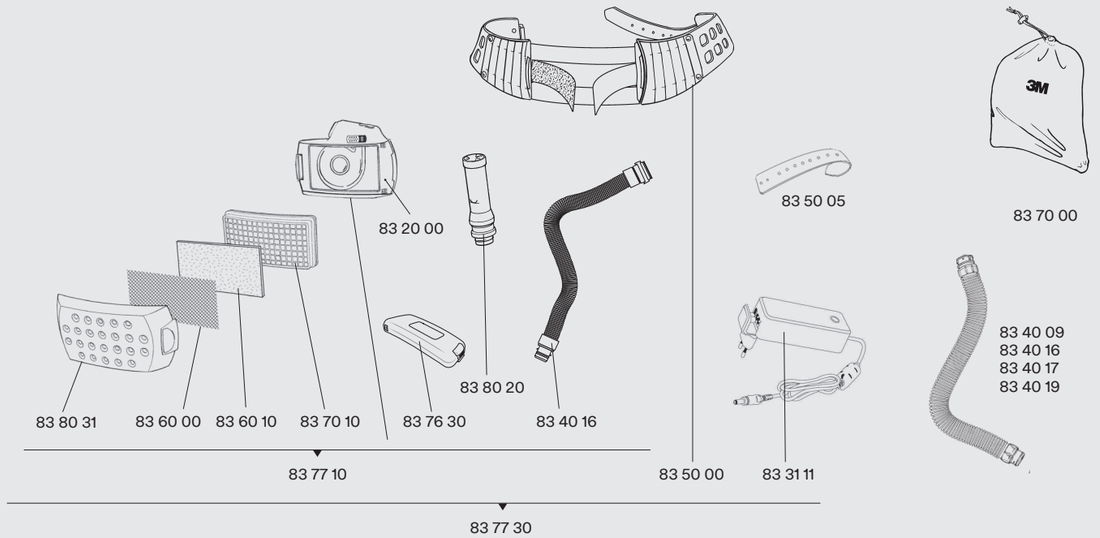
83 76 31

83 73 01



83 40 18

Spare parts for 3M™ Adflo™ Powered Air Purifying Respirator



Part No	Description	Part No	Description	Part No	Description
79 01 05	Carry Bag	**83 50 10**	Belt with quick connection, nylon/leather (not shown)	**83 72 42**	Gas filter A1B1E1
83 20 00	Adflo PAPR, without filter, without filter cover	**83 50 20**	Braces	**83 73 01**	Gas filter kit: A1B1E1 filter and Battery heavy-duty, Li-ion
83 31 11	Battery charger for Li-ion batteries	**83 60 00**	Spark arrestor	**83 75 42**	Gas filter A2
83 40 09	Breathing tube with silencer	**83 60 10**	Prefilter, pkg of 5	**83 76 30**	Battery standard, Li-ion
83 40 16	Breathing tube	**83 60 80**	Prefilter, pkg of 80	**83 76 31**	Battery heavy-duty, Li-ion
83 40 17	Breathing tube heavy duty rubber	**83 70 00**	Storage bag	**83 77 10**	Adflo PAPR with breathing tube, airflow indicator, prefilter, spark arrestor, particle filter and battery
83 40 18	Breathing tube cover, flame retardant	**83 70 10**	Particle filter (sold in 2-, 20-, 80-pack)	**83 80 20**	Airflow indicator
83 40 19	Breathing tube long	**83 70 12**	Particle filter, pkg of 2	**83 80 31**	Filter cover black
83 50 00	Belt, leather	**83 70 20**	Particle filter, pkg of 20	**BPK-HD**	Heavy duty back pack
83 50 05	Front part belt, leather	**83 70 80**	Particle filter, pkg of 80		
		83 71 10	Odour filter		
		83 71 20	Odour filter pad		

3M™ Speedglas™ Welding Helmets 9100MP



57 77 26



50 00 01



50 00 05



50 00 15



50 00 26

Welding helmet systems with powered air

Part No	Description
57 77 00[1)]	Welding helmet 9100MP without welding filter, with Adflo powered air purifying respirator
57 77 26[1)]	Welding helmet 9100MP, welding filter 9100XXi and Adflo powered air purifying respirator

3M™ Speedglas™ welding filters

Part No	Description
50 00 01	Passive filter kit 9100 (110×90 mm), shade 11
50 00 05	Auto-darkening welding filter 9100V (93×45 mm), variable shade 5, 8, 9 –13
50 00 15	Auto-darkening welding filter 9100X (107×54 mm), variable shade 5, 8, 9 –13
50 00 26	Auto-darkening welding filter 9100XXi (107×73 mm), variable shade 5, 8, 9 –13

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

Subscribe to our YouTube channel to learn more about product features and maintenance. A few examples:

Scan QR-code or use this URL:

www.youtube.com/3MSpeedglas



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



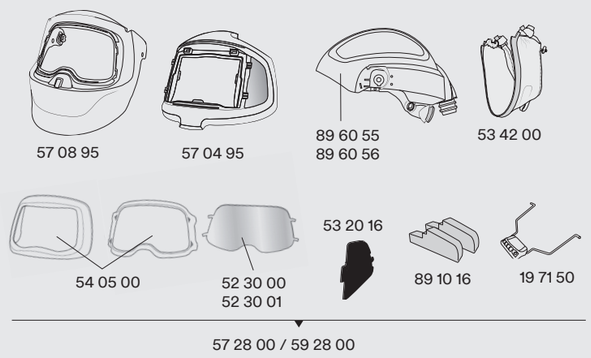
Learn how to change face seal.

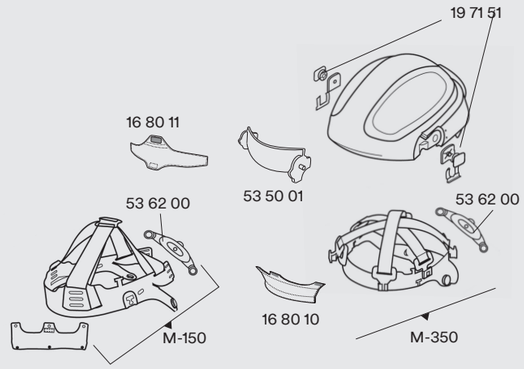


Need higher attenuation for your hearing protection, or is it just time to replace the old ones? See how to assemble the earmuffs in this video.

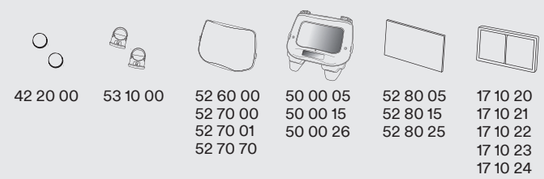
1) With storage bag (79 01 01)

Spare parts and accessories for 3M™ Speedglas™ Welding Helmets 9100MP/9100MP-Lite

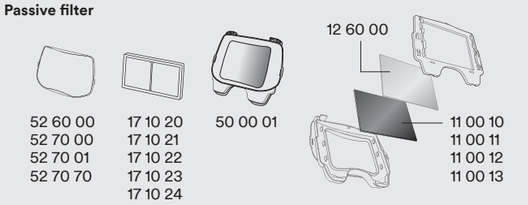




Auto-darkening filter



Passive filter



Part No	Description	Part No	Description	Part No	Description
16 80 10	Sweatband, fleecy cotton, pkg of 2	**52 60 00**	Outer protection plate, standard, pkg of 10	**54 05 00**	Front cover frame kit
16 80 11	Sweatband 9100MP-Lite, for TH3 level of protection pkg of 2 (not included in M-150)	**52 70 00**	Outer protection plate scratch, pkg of 10	**57 04 95**	Outer shield
16 90 15	Shroud	**52 70 01**	Outer protection plate extra scratch, pkg of 10	**57 08 95**	Inner shield
17 10 20	Magnifying lens 1.0	**52 70 70**	Outer protection plate heat, pkg of 10	**57 28 00**	Welding helmet 9100MP, without welding filter.
17 10 21	Magnifying lens 1.5	**52 80 05**	Inner cover plate for 9100V, pkg of 5. Plate marking 117×50	**59 28 00**	Welding helmet 9100MP-Lite, without welding filter.
17 10 22	Magnifying lens 2.0	**52 80 15**	Inner cover plate for 9100X, pkg of 5. Plate marking 117×61	**89 60 55**	Safety helmet 9100MP, incl head suspension and sweatband
17 10 23	Magnifying lens 2.5	**52 80 25**	Inner cover plate for 9100XX/ 9100XXi, pkg of 5. Plate marking 117×77	**89 60 56**	Bump cap 9100MP-Lite, incl head suspension and sweatband
17 10 24	Magnifying lens 3.0	**53 10 00**	Battery holder, pkg of 2	**79 01 01**	Carry bag
19 71 50	Flip-up mechanism	**53 20 16**	Side window cover plates	**M-350**	Head suspension for 9100MP
19 71 51	Pivot kit	**53 42 00**	Face seal	**X1P3**	3M™ Peltor™ Earmuffs X1 (26 dB)[1)]
42 20 00	Battery CR2032 Lithium 3V, pkg of 2	**53 50 01**	Welding helmet airflow deflector for 9100MP-Lite	**X2P3**	3M™ Peltor™ Earmuffs X2 (30 dB)[1)]
50 00 05	Welding filter 9100V	**53 62 00**	Headband back part	**X3P3**	3M™ Peltor™ Earmuffs X3 (32 dB)[1)]
50 00 15	Welding filter 9100X			**X4P3**	3M™ Peltor™ Earmuffs X4 (32 dB)[1)]
50 00 26	Welding filter 9100XXi			**X5P3**	3M™ Peltor™ Earmuffs X5 (36 dB)[1)]
52 30 00	Visor plate, standard, pkg of 5			**Z3AF/2**	Helmet assembly parts for Peltor X-series earmuffs, left and right
52 30 01	Visor plate, anti-fog, pkg of 5				

1) Please add assembly parts Z3AF/2 when ordering earmuffs for 9100MP and 9100MP-Lite welding helmets.

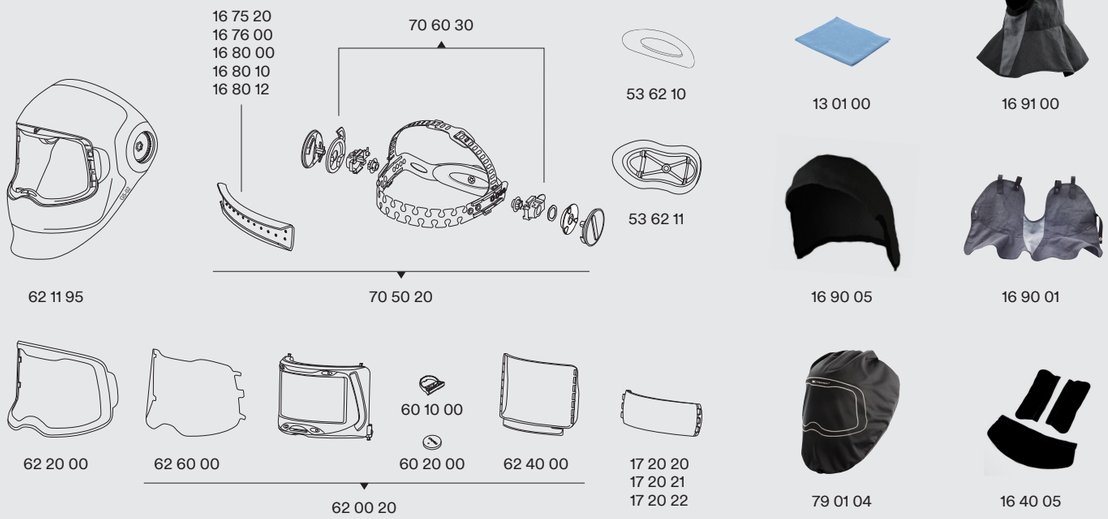
3M™ Speedglas™ Welding Helmet G5-02



3M™ Speedglas™ Welding Helmet G5-02

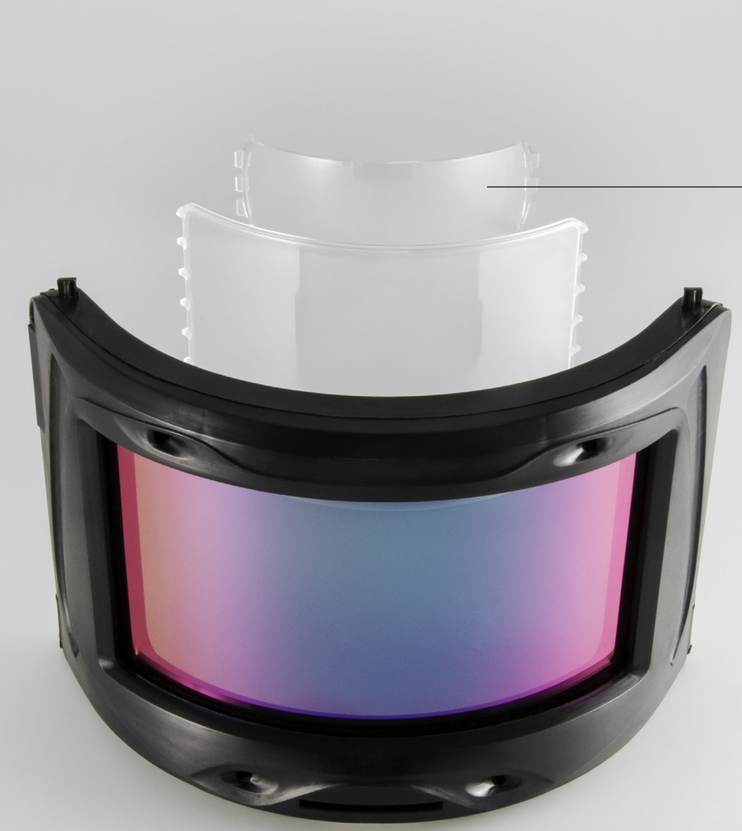
Part No	Description
62 11 20	Including curved welding filter, headband, cleaning wipe and storage bag.

Spare parts and accessories for 3M™ Speedglas™ Welding Helmet G5-02



Part No	Description
13 01 00	3M cleaning wipe
16 40 05 •	Ear and neck protection, leather (3 parts)
16 75 20 •	Sweatband, towelling, pkg of 2
16 76 00 •	Sweatband, towelling, pkg of 20
16 80 00 •	Sweatband, leather
16 80 10 •	Sweatband, fleecy cotton (length 24 cm), pkg of 2
16 80 12 •	Sweatband, fleecy cotton (length 21 cm), pkg of 2
16 90 01 •	Neck protection, fabric
16 90 05 •	Head cover, fabric
16 91 00 •	Hood, fabric
17 20 20	Magnifying lens x1.5
17 20 21	Magnifying lens x2.0
17 20 22	Magnifying lens x2.5
53 62 10 •	Head rest (small)
53 62 11 •	Head rest (large)
60 10 00 •	Battery holder
60 20 00	Battery CR2450 Lithium 3V
62 00 20	Welding filter G5-02, incl inner and outer cover/protection plates
62 11 20	Welding helmet G5-02 with welding filter, headband, cleaning wipe and bag
62 11 95	Welding helmet without welding filter, without headband, without front cover
62 20 00	Front cover
62 40 00	Inner protection cover plates, pkg of 2
62 60 00	Outer protection plate scratch, pkg of 5
70 50 20 •	Headband with assembly parts and sweatband
70 60 30 •	Assembly parts for headband.
79 01 04	Storage bag

(•) A blue dot marks common parts with G5-03 E.



Curved consumables

For the curved G5-02 welding filter we have specific consumables to optimize the view and comfort. Like the magnifying lenses, available in x1.5, x2.0 and x2.5 strengths.

Make maintenance a daily routine

It just takes a few moments every day to ensure that your 3M™ Speedglas™ equipment is in optimum shape for your next use. Those few moments will be well spent time for your increased comfort and productivity – plus the service life of your system.

Pick a maintenance routine that works best for you: beginning of shift, after lunch, or end of work.

Your reward will be high clarity views, a refreshed helmet, and equipment that's comfortable to wear and work in. Daily maintenance is especially important for respiratory systems to assure a continuous supply of filtered air.

Maintenance basics are covered **on pages 84-85**. For complete maintenance guidelines, refer to the User Instruction manual that came with your equipment.



3M™ Speedglas™ Welding Helmet G5-03 E



3M™ Speedglas™ Welding Helmet G5-03 E

Part No	Description
63 10 00	G5-03 E Welding helmet without welding filter
63 10 10	G5-03 E Welding helmet with welding filter G5-01/03NC

Accessories for 3M™ Speedglas™ Welding Helmet G5-03 E



16 91 00 •



16 90 01



16 90 05



16 40 05



16 92 17 •



ACK081B

16 92 16





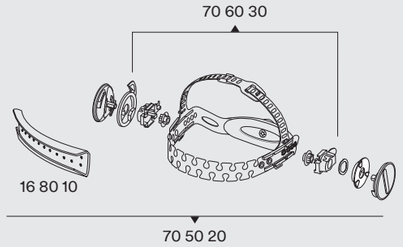
16 92 05 •



AL2AI/SP

16 92 15

Spare parts for 3M™ Speedglas™ Welding Helmet G5-03 E





53 62 10 •
53 62 11 •



16 75 20
16 76 00
16 80 00
16 80 10
16 80 12



63 10 95



61 05 01 •

G5-01/03VC and G5-01/03TW



61 00 21 •
61 00 31 •



52 80 25 •
52 80 28 •

60 10 00 •



60 20 00 •

G5-01/03NC



63 00 10 •



52 80 15
52 80 29



73 10 00



42 20 00



52 60 00 •
52 70 00 •
52 70 01 •
52 70 70 •

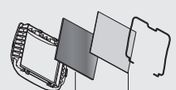


17 10 20 •
17 10 21 •
17 10 22 •
17 10 23 •
17 10 24 •

G5-01/03-Passive



61 00 11 •



11 00 10 •
11 00 11 •
11 00 12 •
11 00 13 •

12 60 00 •



Light up your workspace

Learn more about the optional helmet-mounted task light on **page 24**.

Our range of products, models and colors may vary depending on region and year.
For an accurate list of available products visit www.3M.com or contact your local supplier.

Part No	Description
11 00 10 •	Passive welding filter lens shade 10 (90×110)
11 00 11 •	Passive welding filter lens shade 11 (90×110)
11 00 12 •	Passive welding filter lens shade 12 (90×110)
11 00 13 •	Passive welding filter lens shade 13 (90×110)
12 60 00 •	Inner cover plate for passive filter
16 40 05 •	Ear and neck protection in leather (3 parts)
16 75 20 •	Sweatband, towelling, pkg of 2
16 76 00 •	Sweatband, towelling, pkg of 20
16 80 00 •	Sweatband, leather
16 80 10 •	Sweatband, fleecy cotton (length 24 cm), pkg of 2
16 80 12 •	Sweatband, fleecy cotton (length 21 cm), pkg of 2
16 90 01 •	Neck protection, fabric
16 90 05 •	Head cover, fabric
16 91 00 •	Hood, fabric
16 92 05 •	Task light protection plate, pkg. of 5
16 92 15	Task light kit (light, cable, holder with cable and battery)
16 92 16	Welding Helmet Task Light battery holder
16 92 17 •	Task light
17 10 20 •	Magnifying lens 1.0X
17 10 21 •	Magnifying lens 1.5X
17 10 22 •	Magnifying lens 2.0X
17 10 23 •	Magnifying lens 2.5X
17 10 24 •	Magnifying lens 3.0X
42 20 00	Battery CR2032 Lithium 3V, pkg of 2
52 60 00 •	Outer protection plate (standard), pkg of 10
52 70 00 •	Outer protection plate (scratch), pkg of 10
52 70 01 •	Outer protection plate (scratch+), pkg of 10
52 70 70 •	Outer protection plate heat, pkg of 10
52 80 15	Inner cover plate, pkg of 5
52 80 25 •	Inner cover plate, pkg of 5
52 80 29	Inner cover plate anti-fog, pkg of 5
53 62 10 ••	Head rest (small)
53 62 11 ••	Head rest (large)
60 10 00 ••	Battery holder TW/VC
63 10 95	Welding helmet shield G5-03 E, without headband
60 20 00 •	Battery CR2450
61 00 11 •	Passive Welding Filter G5 (11)
61 00 21 •	Speedglas welding filter G5-01/03TW
61 00 31 •	Speedglas welding filter G5-01/03VC
61 05 01 •	Front frame
63 00 10 •	Speedglas welding filter
70 50 20 •	Headband with assembly parts and sweatband
70 60 30 •	Assembly parts for headband
73 10 00	Battery holder NC
ACK081B	Rechargeable Battery
AL2AI/SP	Battery Charging cable for ACK081B

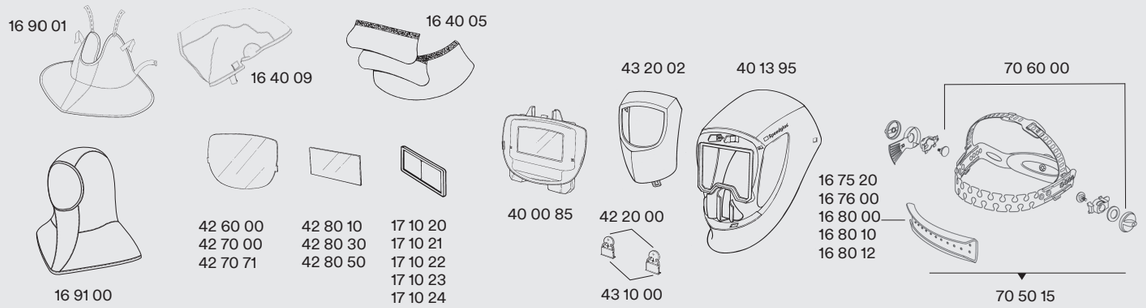
(•) A purple dot marks common parts with G5-01 and G5-03 Pro/Pro Air.
(•) A blue dot marks common parts with G5-02.



Legacy products and replacement parts

3M™ Speedglas™ Welding Helmet 9002NC

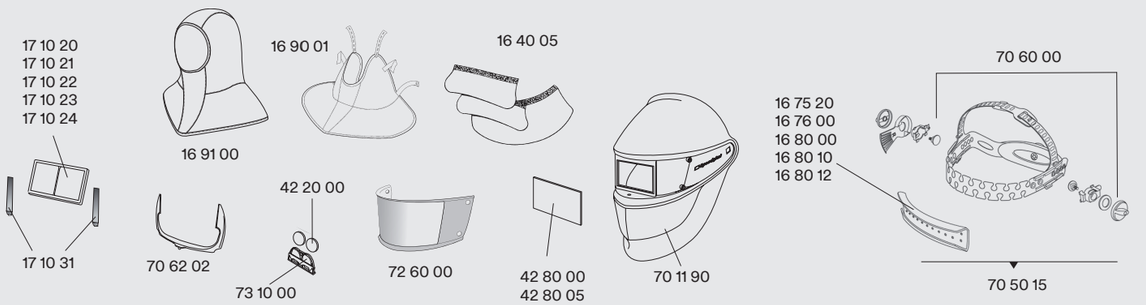
Spare parts and accessories for 3M™ Speedglas™ Welding Helmet 9002NC



Part No	Description	Part No	Description	Part No	Description
16 40 05	Ear and neck protection in leather.	**40 13 95**	Welding helmet 9000, without Side windows, without front, without headband, without filter.	**42 70 71**	Outer protection plate, heat resistant, pkg of 10. Plate marking 42 01 71 HEAT.
16 40 09	Head protection.				
16 75 20	Sweatband towelling, pkg of 2.				
16 76 00	Sweatband towelling, pkg of 20.	**40 00 85**	Speedglas welding filter 9002NC, shade 8–12.	**42 80 10**	Inner cover plate pkg of 5. Plate marking 42 02 10.
16 80 00	Sweatband, leather.				
16 80 10	Sweatband, fleecy cotton, pkg of 2.	**42 20 00**	Battery CR2032 Lithium 3V, pkg of 2.	**42 80 30**	Inner cover plate, +1 Shade, pkg of 5.
16 90 01	Neck protection.				
16 91 00	Hood.	**42 30 00**	Protective visor plate FlexView, pkg of 10.	**42 80 50**	Inner cover plate, +2 Shades, pkg of 5.
17 10 20	Magnifying lens 1.0.				
17 10 21	Magnifying lens 1.5.	**42 60 00**	Outer protection plate, standard, pkg of 10. Plate marking 42 01 50.	**43 10 00**	Battery cover, pkg of 2.
17 10 22	Magnifying lens 2.0.			**43 20 02**	Front cover
17 10 23	Magnifying lens 2.5.	**42 70 00**	Outer protection plate, scratch resistant, pkg of 10. Plate marking 42 01 00.	**44 20 00**	Front cover FlexView, silver.
17 10 24	Magnifying lens 3.0.			**70 50 15**	Headband with assembly parts.
19 71 40	Holder for welding filter (FlexView).			**70 60 00**	Assembly parts for headband.

3M™ Speedglas™ Welding Helmet SL

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



Part No	Description	Part No	Description	Part No	Description
16 40 05	Ear and neck protection in leather (3 parts).	**16 91 00**	Hood black/gray.	**42 80 05**	42 80 00, pkg of 200.
		17 10 20	Magnifying lens 1.0.	**70 11 90**	Welding helmet, without headband.
16 75 20	Sweatband, towelling, purple, pkg of 2.	**17 10 21**	Magnifying lens 1.5.		
		17 10 22	Magnifying lens 2.0.	**70 50 15**	Headband with assembly parts.
16 76 00	Sweatband, towelling, pkg of 20.	**17 10 23**	Magnifying lens 2.5.	**70 60 00**	Assembly parts for headband.
16 80 00	Sweatband, leather.	**17 10 24**	Magnifying lens 3.0.	**70 62 02**	Filter locking frame, pkg of 2.
16 80 10	Sweatband, fleecy cotton, pkg of 2.	**17 10 31**	Holder for magnifying lens.	**72 60 00**	Outer protection plate, standard, pkg of 5. Plate marking 030226.
		42 20 00	Battery CR2032 Lithium 3V, pkg of 2.		
16 80 12	Sweatband, fleecy cotton, pkg of 2.			**73 10 00**	Battery cover.
		42 80 00	Inner cover plate pkg of 5. Plate marking 42 02 00.		
16 90 01	Neck protection.				

3M™ Speedglas™ Welding Helmet Series 100/100-QR



75 11 20

3M™ Speedglas™ Welding Helmet 100 (black)

Part No	Description
75 11 01	With passive welding filter, shade 11
75 11 14	With Speedglas welding filter 100B, variable shade 10–12 (93×44 mm)
75 11 20	With Speedglas welding filter 100V, variable shade 8–12 (93×44 mm)
75 11 90	Without welding filter, without headband



75 00 14

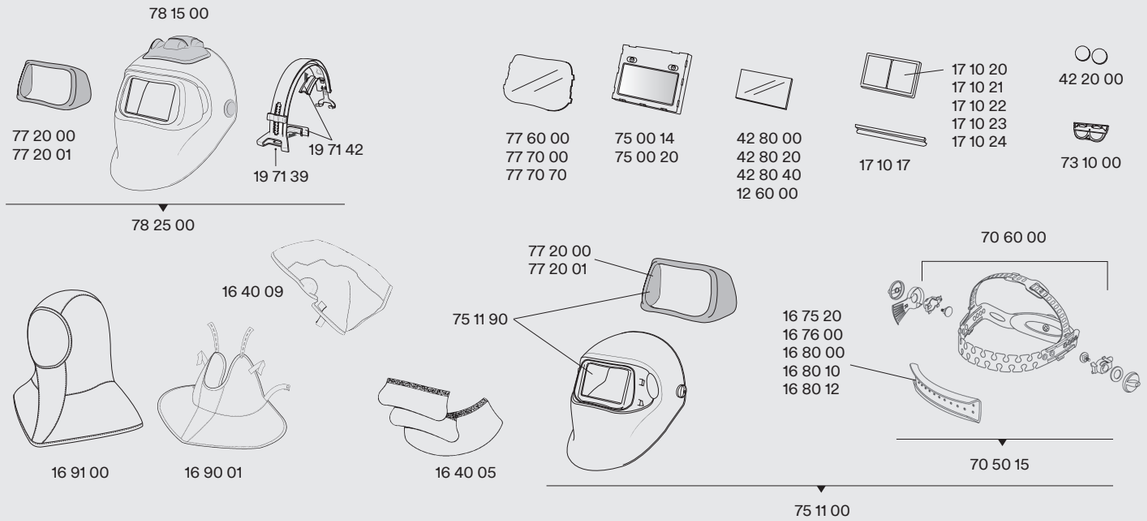


75 11 20

3M™ Speedglas™ welding filters

Part No	Description
75 00 14	Auto-darkening filter 100B, variable shade 10–12 (93×44 mm)
75 00 20	Auto-darkening filter 100V, variable shade 8–12 (93×44 mm)

Spare parts and accessories for 3M™ Speedglas™ Welding Helmet Series 100/100-QR



Part No	Description
12 60 00	Inner cover plate for 100 passive filter.
16 40 05	Ear and neck protection in leather.
16 40 09	Head protection.
16 75 20	Sweatband, towelling purple, pkg of 2.
16 76 00	Sweatband, towelling purple, pkg of 20.
16 80 00	Sweatband, leather.
16 80 10	Sweatband, fleecy cotton, pkg of 2.
16 80 12	Sweatband, fleecy cotton (short), pkg of 2.
16 90 01	Neck protection.
16 91 00	Hood.
17 10 17	Holder for magnifier (older models of welding filters).
17 10 20	Magnifying lens 1.0.
17 10 21	Magnifying lens 1.5.
17 10 22	Magnifying lens 2.0.
17 10 23	Magnifying lens 2.5.
17 10 24	Magnifying lens 3.0.
19 71 39	Quick release rail for safety helmet.
19 71 42	Rubber friction pads for quick release rail.
19 71 43	Pivot cover plate kit for quick release welding helmets (QR), pkg of 2.
42 20 00	Battery CR2032 Lithium 3V, pkg of 2.
42 80 00	Inner cover plate, pkg of 5. Plate marking 42 02 00.
42 80 20	Inner cover plate, +1 shade, pkg of 5.
42 80 40	Inner cover plate, +2 shade, pkg of 5.
70 50 15	Headband with assembly parts.
70 60 00	Assembly parts for headband.
73 10 00	Battery cover.
75 00 14	Speedglas welding filter 100B, variable shade 10–12.
75 00 20	Speedglas welding filter 100V, variable shade 8–12.
75 05 11	Speedglas 100 passive kit: 110×90 mm passive welding filter shade 11, inner cover plate, outer protection plate and filter frame (not shown).
75 11 00	100 welding helmet black, without filter, with headband.
75 11 90	100 welding helmet black, without filter, without headband.
77 20 00	Front frame, silver.
77 20 01	Front frame, black.
77 60 00	Outer protection plate, standard, pkg of 10.
77 70 00	Outer protection plate, scratch resistant, pkg of 10.
77 70 70	Outer protection plate, heat resistant, pkg of 10.
78 15 00	Welding helmet 100-QR without rail, without filter, without safety helmet.
78 25 00	Welding helmet 100-QR with rail, without welding filter, without safety helmet.

3M™ Speedglas™ Welding Helmet 9100



50 18 00

Helmets without welding filter

Part No	Description
50 11 00	Welding helmet 9100 without side windows, with headband and silver front.
50 18 00	Welding helmet 9100 with side windows, headband and front cover.



50 00 01



50 00 05



50 00 15

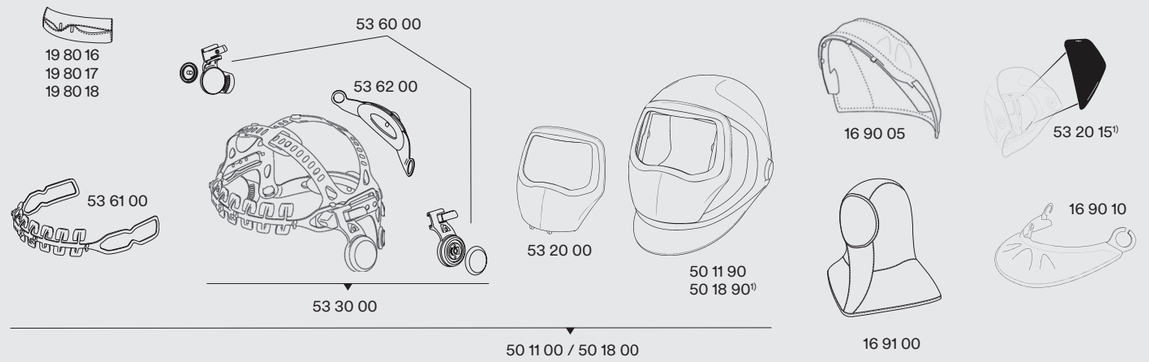


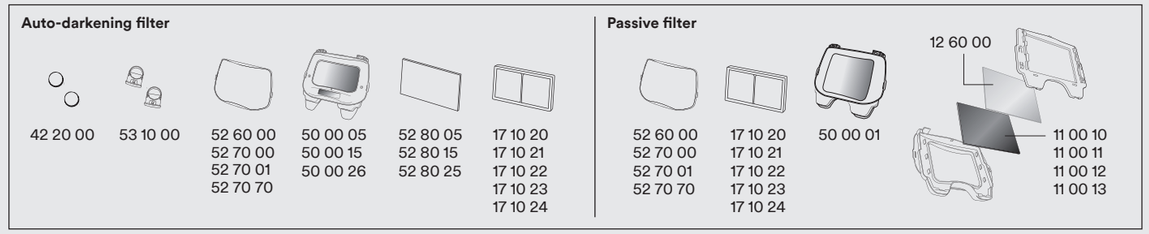
50 00 26

Alternative 3M™ Speedglas™ Welding Filters

Part No	Description
50 00 01	Passive filter kit 9100 shade 11 (110×90 mm).
50 00 05	Auto-darkening filter 9100V, variable shade 5, 8, 9 –13 (93×45 mm).
50 00 15	Auto-darkening filter 9100X, variable shade 5, 8, 9 –13 (107×54 mm).
50 00 26	Auto-darkening filter 9100XXi variable shade 5, 8, 9 –13 (107×73 mm).

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





Part No	Description
11 00 10	Passive welding filter lens shade 10 (110×90).
11 00 11	Passive welding filter lens shade 11 (110×90).
11 00 12	Passive welding filter lens shade 12 (110×90).
11 00 13	Passive welding filter lens shade 13 (110×90).
12 60 00	Inner cover plate for passive filter 9100.
16 90 05	Head protection.
16 90 10	Neck protection.
16 91 00	Hood.
17 10 20	Magnifying lens 1.0.
17 10 21	Magnifying lens 1.5.
17 10 22	Magnifying lens 2.0.
17 10 23	Magnifying lens 2.5.
17 10 24	Magnifying lens 3.0.
19 80 16	Sweatband, towelling. Pkg of 3
19 80 17	Sweatband, fleecy cotton. Pkg of 3
42 20 00	Battery, pkg of 2.
50 00 01	Speedglas passive welding filter kit 9100 (shade 11).
50 00 05	Speedglas welding filter 9100V.
50 00 15	Speedglas welding filter 9100X.
50 00 25	Speedglas welding filter 9100XX.
50 00 26	Speedglas welding filter 9100XXi.
50 11 00	Welding helmet without side windows, with headband.
50 11 90	Welding helmet without side windows, without headband, with front cover 9100.
50 18 00	Welding helmet with side windows and headband, with front cover 9100.
50 18 90 [1]	Welding helmet with side windows, without headband, with front cover.
52 60 00	Outer protection plate standard, pkg of 10.
52 70 00	Outer protection plate scratch resistant, pkg of 10.
52 70 01	Outer protection plate extra scratch resistant, pkg of 10.
52 70 70	Outer protection plate heat resistant, pkg of 10.
52 80 05	Inner cover plate for 9100V filter, pkg of 5. Plate marking 117×50.
52 80 15	Inner cover plate for 9100X filter, pkg of 5. Plate marking 117×61.
52 80 25	Inner cover plate for 9100XX filter, pkg of 5. Plate marking 117×77.
53 10 00	Battery holder, pkg of 2.
53 20 00	Heat-reflecting front cover 9100.
53 20 15 [1]	Side windows cover plate, 2 pairs.
53 21 00	Heat-reflecting front cover 9100XXi.
53 30 00	Headband with assembly parts.
53 60 00	Pivot mechanism, left and right.
53 61 00	Headband front part.
53 62 00	Headband back part.

1) Please use Part No 50 18 90 when new side windows are required.

3M™ Speedglas™ Welding Helmet 9100-QR





50 00 01



50 00 05



50 00 15



50 00 26

Welding helmets – without safety helmet

Part No	Description
58 26 00	With QR rail, without welding filter.

3M™ Speedglas™ welding filters

Part No	Description
50 00 01	Passive filter kit 9100 (110×90 mm), shade 11
50 00 05	Auto-darkening welding filter 9100V (93×45 mm), variable shade 5, 8, 9 –13
50 00 15	Auto-darkening welding filter 9100X (107×54 mm), variable shade 5, 8, 9 –13
50 00 26	Auto-darkening welding filter 9100XXi (107×73 mm), variable shade 5, 8, 9 –13







Distance bar

To avoid scratches on the larger welding filters (9100X, 9100XXi) when raising the welding helmet, we recommend using this distance bar (included when you buy a complete helmet with these welding filters). Also sold as spare part.

Part No 53 11 00



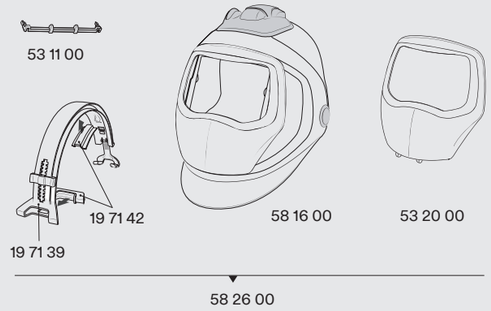
Earmuff bar

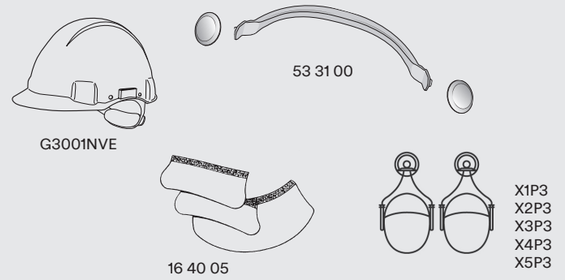
When using earmuffs, we recommend you to install this earmuff bar to widen the 9100-QR welding helmet.

Sold as separate accessory.

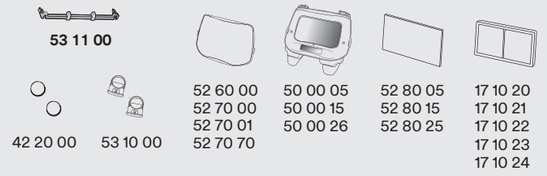
Part No 53 31 00

Spare parts and accessories for 3M™ Speedglas™ Welding Filters and Welding helmet 9100-QR parts

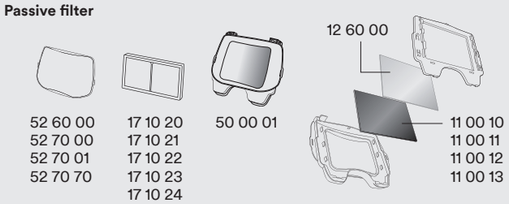




Auto-darkening filter



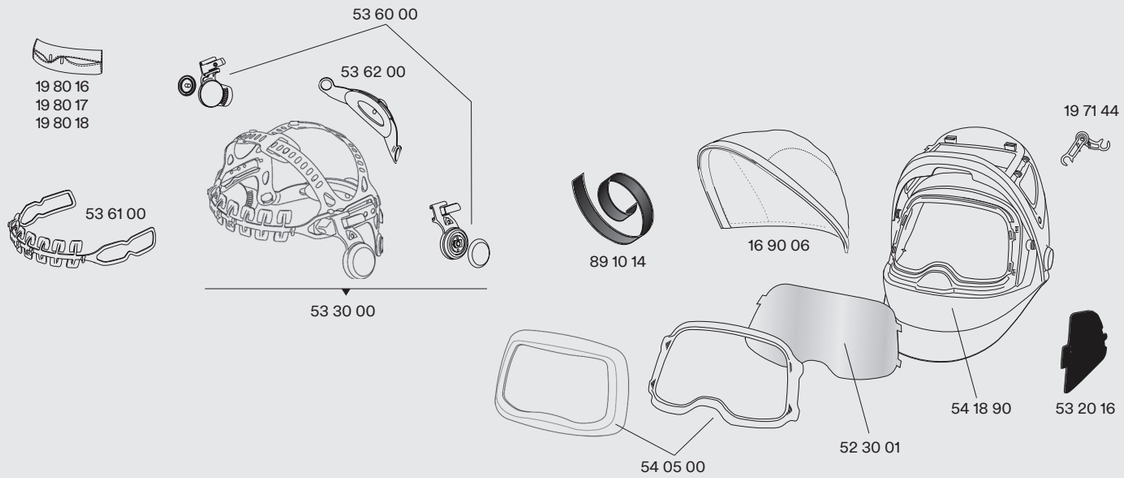
Passive filter



Part No	Description
11 00 10	Passive welding filter lens shade 10.
11 00 11	Passive welding filter lens shade 11.
11 00 12	Passive welding filter lens shade 12.
11 00 13	Passive welding filter lens shade 13.
12 60 00	Inner cover plate for passive filter 9100.
16 40 05	Ear and neck protection in leather.
19 71 39	Quick release rail for safety helmet.
19 71 42	Rubber friction pads for quick release rail.
42 20 00	Battery CR2032 Lithium 3V, pkg of 2.
50 00 01	Speedglas passive welding filter kit 9100 (shade 11).
50 00 05	Speedglas welding filter 9100V.
50 00 15	Speedglas welding filter 9100X.
50 00 26	Speedglas welding filter 9100XXi.
52 60 00	Outer protection plate standard, pkg of 10.
52 70 00	Outer protection plate scratch resistant, pkg of 10.
52 70 01	Outer protection plate extra scratch resistant, pkg of 10.
52 70 70	Outer protection plate heat resistant, pkg of 10.
52 80 05	Inner cover plate for 9100V filter, pkg of 5. Plate marking 117×50.
52 80 15	Inner cover plate for 9100X filter, pkg of 5. Plate marking 117×61.
52 80 25	Inner cover plate for 9100XX filter, pkg of 5. Plate marking 117×77.
53 10 00	Battery holder for welding filter series 9100, pkg of 2.
53 11 00	Distance bar for welding filters 9100X, 9100XX and 9100XXi.
53 20 00	Heat-reflecting front cover 9100.
53 21 00	Heat-reflecting front cover for welding filter kit 9100XXi.
53 31 00	Earmuff bar for Speedglas welding helmet 9100-QR.
58 16 00	Welding helmet 9100-QR without rail, without welding filter, without safety helmet.
58 26 00	Welding helmet 9100-QR with rail, without welding filter, without safety helmet.
G3001NVE	3M™ Safety Helmet G3001 (non-vented)
X1P3	3M™ Peltor™ Earmuffs X1 (26 dB) helmet attachment.
X2P3	3M™ Peltor™ Earmuffs X2 (30 dB) helmet attachment.
X3P3	3M™ Peltor™ EarMuffs X3 (32 dB) helmet attachment.
X4P3	3M™ Peltor™ Earmuffs X4 (33 dB) helmet attachment.
X5P3	3M™ Peltor™ Earmuffs X5 (36 dB) helmet attachment.

3M™ Speedglas™ Welding Helmet 9100 FX

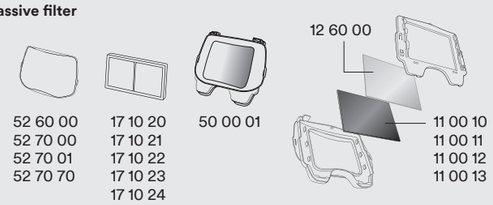
Spare parts and accessories for 3M™ Speedglas™ Welding Helmet 9100 FX



Auto-darkening filter



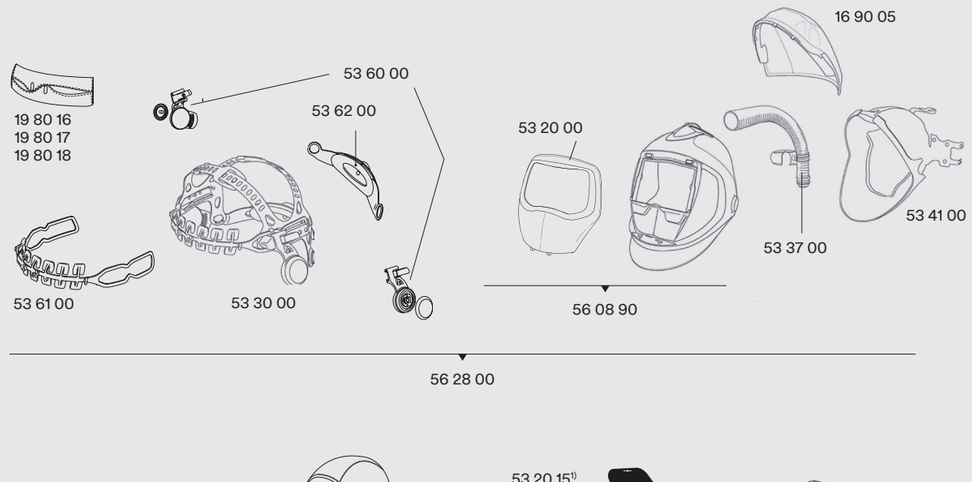
Passive filter



Part No	Description	Part No	Description	Part No	Description
11 00 10	Passive welding filter lens shade 10.	**50 00 01**	Speedglas passive welding filter kit 9100 (shade 11).	**52 80 25**	Inner cover plate for 9100XX filter, pkg of 5. Plate marking 117×77.
11 00 11	Passive welding filter lens shade 11.	**50 00 05**	Speedglas welding filter 9100V.	**53 10 00**	Battery holder, pkg of 2.
11 00 12	Passive welding filter lens shade 12.	**50 00 15**	Speedglas welding filter 9100X.	**53 20 16**	Side windows cover plate, 2 pairs.
11 00 13	Passive welding filter lens shade 13.	**50 00 26**	Speedglas welding filter 9100XXi.	**53 30 00**	Headband with assembly parts.
12 60 00	Inner cover plate for passive filter 9100.	**52 30 01**	Visor plate anti-fog, pkg of 5.	**53 60 00**	Pivot mechanism, left and right.
16 80 15	Comfort sweatband, pkg of 3.	**52 60 00**	Outer protection plate, standard, pkg of 10.	**53 61 00**	Headband front part.
16 90 06	Head protection (small).	**52 70 00**	Outer protection plate scratch resistant, pkg of 10.	**53 62 00**	Headband back part.
16 90 07	Head protection (large).	**52 70 01**	Outer protection plate extra scratch resistant, pkg of 10.	**54 05 00**	Front cover kit.
16 90 10	Neck protection, black.	**52 70 70**	Outer protection plate, heat resistant pkg of 10.	**54 18 90**	Welding helmet, without welding filter, without headband.
16 91 00	Hood, black/gray.	**52 80 05**	Inner cover plate for 9100V filter, pkg of 5. Plate marking 117×50.	**89 10 14**	Velcro for Headcover, pkg of 2.
17 10 20	Magnifying lens 1.0.	**52 80 15**	Inner cover plate for 9100X filter, pkg of 5. Plate marking 117×61.	**53 62 00**	Headband back part.
17 10 21	Magnifying lens 1.5.			**G3001NUV-VI**	3M™ Safety Helmet G3001, white (unvented).
17 10 22	Magnifying lens 2.0.				
17 10 23	Magnifying lens 2.5.				
17 10 24	Magnifying lens 3.0.				
19 71 44	Hinge mechanism, 2 pcs				
42 20 00	Battery CR2032 Lithium 3V, pkg of 2.				

3M™ Speedglas™ Welding Helmet 9100 Air

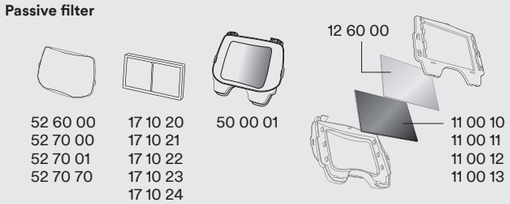
Spare parts and accessories for 3M™ Speedglas™ Welding Helmet 9100-Air



Auto-darkening filter



Passive filter

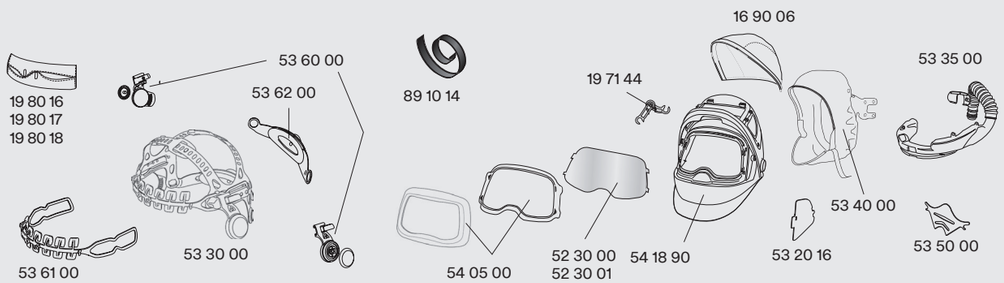


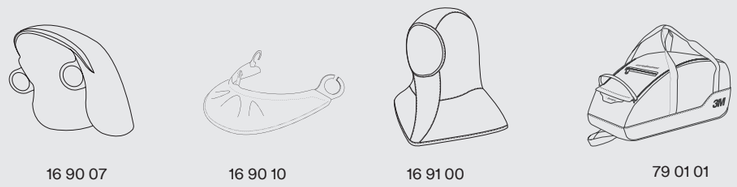
Part No	Description	Part No	Description	Part No	Description
16 90 05	Head protection.	**52 70 00**	Outer protection plate scratch resistant, pkg of 10.	**53 30 00**	Headband with assembly parts.
16 90 10	Neck protection.	**52 70 01**	Outer protection plate, extra scratch resistant, pkg of 10.	**53 37 00**	Air duct.
16 91 00	Hood.	**52 70 70**	Outer protection plate, heat resistant pkg of 10.	**53 41 00**	Face seal.
17 10 20	Magnifying lens 1.0.	**52 80 05**	Inner cover plate for 9100V filter, pkg of 5. Plate marking 117×50.	**53 60 00**	Pivot mechanism, left and right.
17 10 21	Magnifying lens 1.5.	**52 80 15**	Inner cover plate for 9100X filter, pkg of 5. Plate marking 117×61.	**53 61 00**	Headband front part.
17 10 22	Magnifying lens 2.0.	**52 80 25**	Inner cover plate for 9100XX/ 9100XXi filters, pkg of 5. Plate marking 117×77.	**53 62 00**	Headband back part.
17 10 23	Magnifying lens 2.5.	**53 10 00**	Battery holder, pkg of 2.	**56 08 90**[1)]	Speedglas welding helmet 9100 Air without headband, without air duct, without face seal, without welding filter.
17 10 24	Magnifying lens 3.0.	**53 20 00**	Heat-reflecting front cover 9100.	**56 28 00**	Speedglas welding helmet 9100 Air, without welding filter.
19 80 16	Sweatband, towelling. Pkg of 3	**53 20 15**[1)]	Side windows cover plate, 2 pairs.	**79 01 01**	Product storage bag.
19 80 17	Sweatband, fleecy cotton. Pkg of 3	**53 21 00**	Heat-reflecting front cover 9100XXi.		
19 80 18	Sweatband, leather				
42 20 00	Battery CR2032 Lithium 3V, pkg of 2.				
50 00 05	Speedglas welding filter 9100V.				
50 00 15	Speedglas welding filter 9100X.				
50 00 26	Speedglas welding filter 9100XXi				
52 60 00	Outer protection plate, standard, pkg of 10.				

1) Please use Part No 56 08 90 when new side windows are required.

3M™ Speedglas™ Welding Helmet 9100 FX-Air

Spare parts and accessories for 3M™ Speedglas™ Welding Helmet 9100 FX-Air





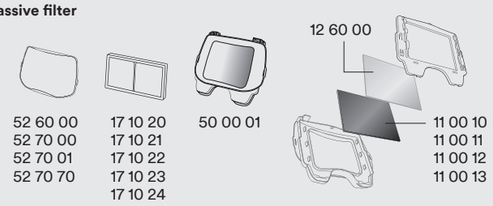
16 90 07 | 16 90 10 | 16 91 00 | 79 01 01

Auto-darkening filter



42 20 00 | 53 10 00 | 52 60 00, 52 70 00, 52 70 01, 52 70 70 | 50 00 05, 50 00 15, 50 00 26 | 52 80 05, 52 80 15, 52 80 25 | 17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24

Passive filter



52 60 00, 52 70 00, 52 70 01, 52 70 70 | 17 10 20, 17 10 21, 17 10 22, 17 10 23, 17 10 24 | 50 00 01

Part No	Description
16 80 15	Comfort sweatband, pkg of 3.
16 90 06	Head protection, (small).
16 90 07	Head protection, (large).
16 90 10	Neck protection.
16 91 00	Hood.
17 10 20	Magnifying lens 1.0.
17 10 21	Magnifying lens 1.5.
17 10 22	Magnifying lens 2.0.
17 10 23	Magnifying lens 2.5.
17 10 24	Magnifying lens 3.0.
19 71 44	Hinge mechanism, 2 pcs
42 20 00	Battery CR2032 Lithium 3V, pkg of 2.
50 00 05	Speedglas welding filter 9100V.
50 00 15	Speedglas welding filter 9100X.
50 00 26	Speedglas welding filter 9100XXi.
52 30 00	Visor plate, standard, pkg of 5.
52 30 01	Visor plate, anti-fog, pkg of 5.
52 60 00	Outer protection plate, standard, pkg of 10.
52 70 00	Outer protection plate scratch resistant, pkg of 10.
52 70 01	Outer protection plate extra scratch resistant, pkg of 10.
52 70 70	Outer protection plate, heat resistant, pkg of 10.
52 80 05	Inner cover plate for 9100V filter, pkg of 5. Plate marking 117×50.
52 80 15	Inner cover plate for 9100X filter, pkg of 5. Plate marking 117×61.
52 80 25	Inner cover plate for 9100XX/ 9100XXi filters, pkg of 5. Plate marking 117×77.
53 10 00	Battery holder, pkg of 2.
53 20 16	Side windows cover plate, 2 pairs.
53 30 00	Headband with assembly parts.
53 35 00	Air duct.
53 40 00	Face seal.
53 50 00	Air deflector parts.
53 60 00	Pivot mechanism, left and right.
53 61 00	Headband, front part.
53 62 00	Headband, back part.
54 05 00	Front cover kit.
54 18 90	Helmet without welding filter, without face seal, without air duct, without headband.
79 01 01	Product storage bag.
89 10 14	Velcro for head cover, pkg of 2.
89 10 15	9100 FX Air service kit (not shown).



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Every month we select a number of photos under #3MSpeedglas to repost to our social platforms. Find us on:

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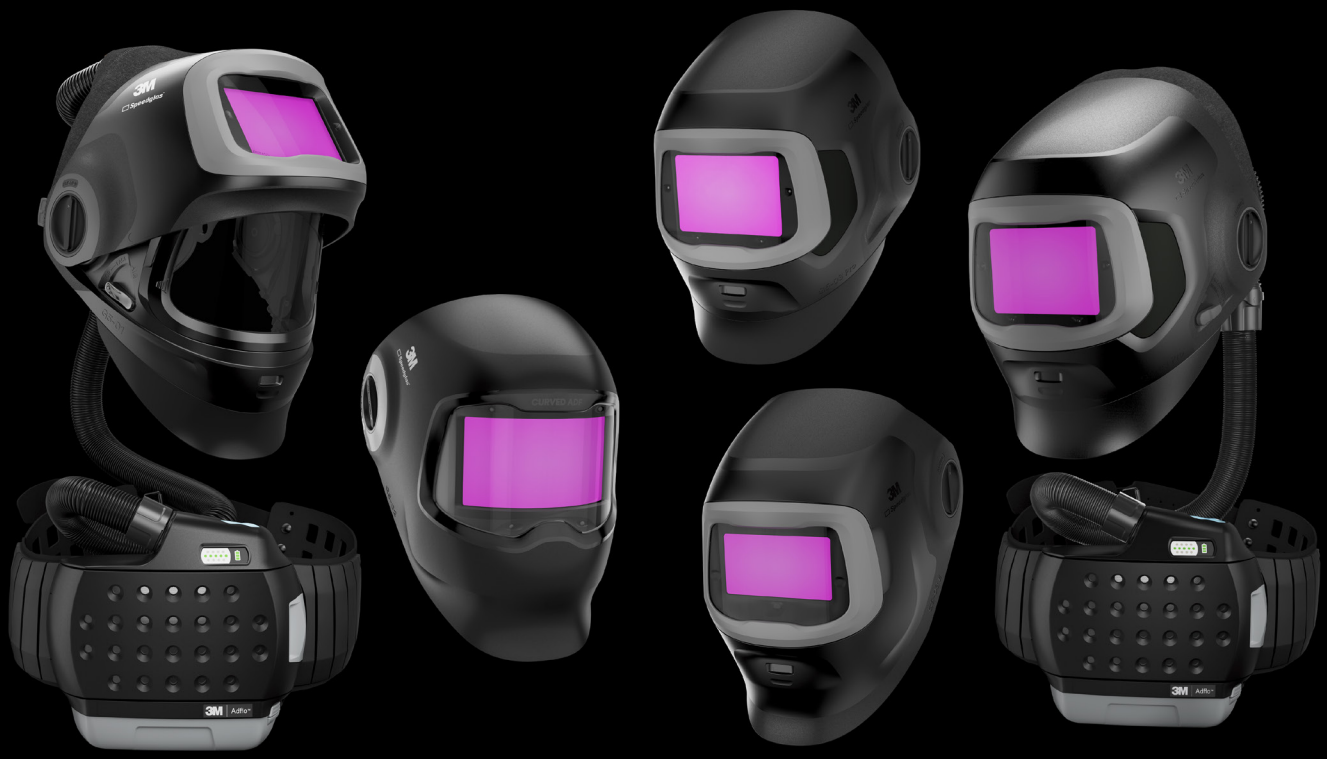
The Speedglas generation 5 welding helmets

The right equipment for each job



Heavy duty welding and grinding

3M™ Speedglas™
Welding Helmet G5-01

TIG welding

3M™ Speedglas™
Welding Helmet G5-02

Versatile welding and grinding

3M™ Speedglas™
Welding Helmet G5-03

⚠ WARNING

Product standards determine what type and level of protection is provided. Check the technical information and product markings to determine the product standard. This information should be considered but not in isolation when consulting your risk assessment. Always consider local regulation and requirements. The result of the risk assessment should determine if the PPE is an appropriate control. **For more information see the user instructions or contact 3M for technical support.**

Design by Background AB (bkgr.se)

3M Welding Center of Excellence
SE-78521 Gagnef, Sweden

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