



 **Speedglas™**

Welding Safety

3M™ Speedglas™ Welding Helmet G5-03

Versatility to upgrade your performance

3M Science. Applied to life.™



Farwell to compromises

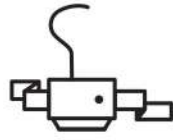
Are you a professional welder who performs a variety of welding and grinding tasks?

You need a welding helmet versatile enough so that you do not have to compromise on function, performance OR safety.

That's why we have designed the 3M™ Speedglas™ Welding Helmet G5-03.

Versatility to upgrade your performance!

This welding helmet is designed for the welder who may need...



...filtered air¹⁾



...an excellent view



...protection against arc welding radiation²⁾



...to perform grinding tasks



...a comfortable and well-balanced helmet



...safety helmet compatibility³⁾

The helmet features an option of three different auto darkening and four shades of passive welding filter⁴⁾:



Variable colour



Light state 2,5 + Tack welding



Natural colour



Passive

1) G5-03 Pro Air only

2) Protection against radiation caused by welding light (UV, IR and visible radiation)

3) G5-03 Pro only

4) Availability may vary between model and area

One great design...

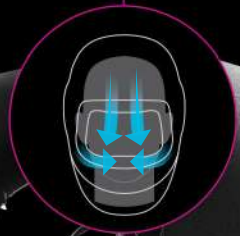
Designed for the professional welder, 3M Speedglas™ G5-03 Series welding helmets offer modularity and multiple choice of accessories.

Ergonomic headband



Designed for adjustable air distribution

Read more on page 10



External adjustment of air distribution

Read more on page 10



Selection of extended coverage available

Read more on page 15



Task light option

Read more on page 13



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

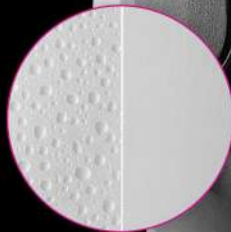
...two versatile helmets.

TAP function for grind & cut

Read more on page 9



Large coverage area



G5-03 Pro

Side windows



Safety helmet adaptor

Read more on page 11



Anti-fog treated inner protection plate option



Multiple welding filter choices

Read more on page 6-7



Common parts with G5-01

Accessories, welding filters, protection plates



3M™ Speedglas™ Welding Helmet
G5-03 Pro



Great clarity before, during and after welding

With 3M™ Speedglas™ Natural Colour Technology colours appear brighter and more realistic in both the light and dark states. A more realistic view may enable:

Accuracy

Recognize colour and contrast and see more details when using the welding filter.

Productivity

Better focus on the welding setup, welding technique and inspection of just-completed welds.

Quality

May help to increase the quality and precision of the welds.

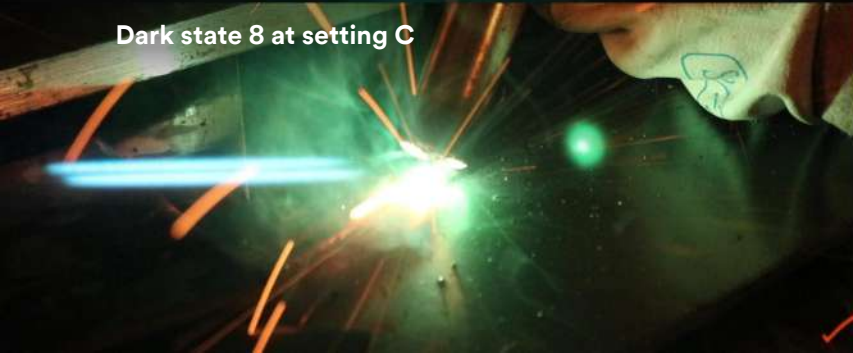
Dark state 8 at setting A



Dark state 8 at setting B



Dark state 8 at setting C



Customize the filter colour

To provide even better view and control of your weld puddle, joint and arc choose our filter with the 3M™ Speedglas™ Variable Colour Technology. It changes the colours seen through the welding filter in the dark state.

When not welding, the filter displays colours as they appear naturally (Natural Colour Technology).

You can switch between three different filter colours depending on welding method and work piece material.

Choose the welding filter most suitable for your work and preference

3M offers a range of updated* auto-darkening filters and passive-lens alternatives. For maximum benefit, 3M™ Speedglas™ G5-01 filters also fit the G5-03 helmet and vice versa.



The image shows the front view of a 3M Speedglas G5-01/03VC auto-darkening filter. The lens displays a green-tinted view of a welding process. The control panel below the lens features a 'SHADE' dial with a minus sign, a 'SENS' dial with a plus sign, and a 'DELAY' dial with a plus sign. There are also buttons for 'TAP', 'LOCK', and 'UNLOCK'. To the right of the lens, there are three circular icons: 'Natural Color Technology' (a rainbow circle), 'Variable Dark State Colors' (a circle with three colored dots), and 'function.' (a circle with a white dot). A Bluetooth symbol is also visible on the right side.

G5-01/03VC (variable colour)

- Variable colour technology with three selectable colours in dark state
- TAP function
- Shade 14 settings for higher amp welding
- Four arc-detection sensors
- Bluetooth connection



The image shows the front view of a 3M Speedglas G5-01/03TW auto-darkening filter. The lens displays a yellow-tinted view of a welding process. The control panel below the lens features a 'SHADE' dial with a minus sign, a 'SENS' dial with a plus sign, and a 'DELAY' dial with a plus sign. There are also buttons for 'TAP', 'LOCK', and 'UNLOCK'. To the right of the lens, there are three circular icons: 'Natural Color Technology' (a rainbow circle), 'function.' (a circle with a white dot), and a Bluetooth symbol.

G5-01/03TW (tack welding)


- Light state 2.5
- TAP function
- Four arc-detection sensors
- Bluetooth connection



The image shows the front view of a 3M Speedglas G5-01/03NC auto-darkening filter. The lens displays a green-tinted view of a grinding process. The control panel below the lens features a 'SHADE' dial with a plus sign, a 'SENS' dial with a plus sign, and a 'DELAY' dial with a plus sign. There are also buttons for 'TAP', 'LOCK', and 'UNLOCK'. To the right of the lens, there is one circular icon: 'Natural Color Technology' (a rainbow circle).

G5-01/03NC

- Locks manually in light state for grinding
- Locks manually in shade 5 for cutting
- 3 arc-detection sensors



The image shows the front view of a 3M Speedglas G5-01/03-Passive passive lens. It is a simple, dark, rectangular lens with a black frame.

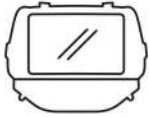
G5-01/03-Passive

- Shade 11 (also available shade 10,12,13)

* Launch date may vary between model and area

Enhance your grinding

The 2.5* 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



*2.5 state is only on the TW ADF

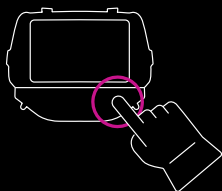
Tap on the side of the welding helmet, with or without a glove, to easily switch between grind (or cut) mode and weld mode.

Easy switching is just a tap away

Switch quickly between modes (GRIND/CUT and WELD) by simply tapping the side of the 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 ADF buttons.

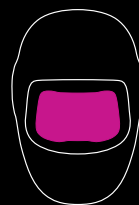
Built into the G5-01/03TW and G5-01/03VC welding filters, the TAP function may help to improve productivity with button-less control.



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



2
TAP 3 times on the side of the welding helmet to switch between GRIND and WELD mode or CUT and WELD mode.



3
The filter will switch to desired setting.

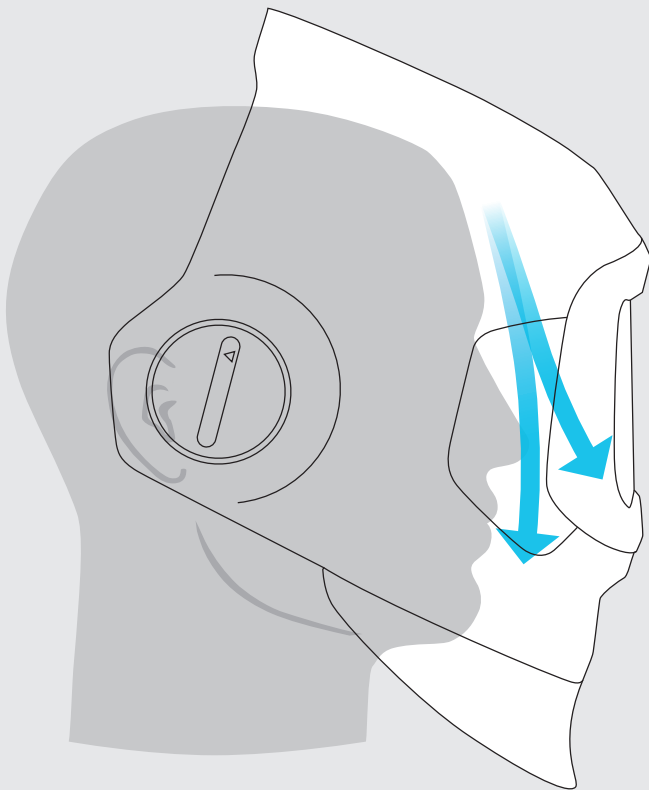


4
Tap again and the filter switches back to welding mode.

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

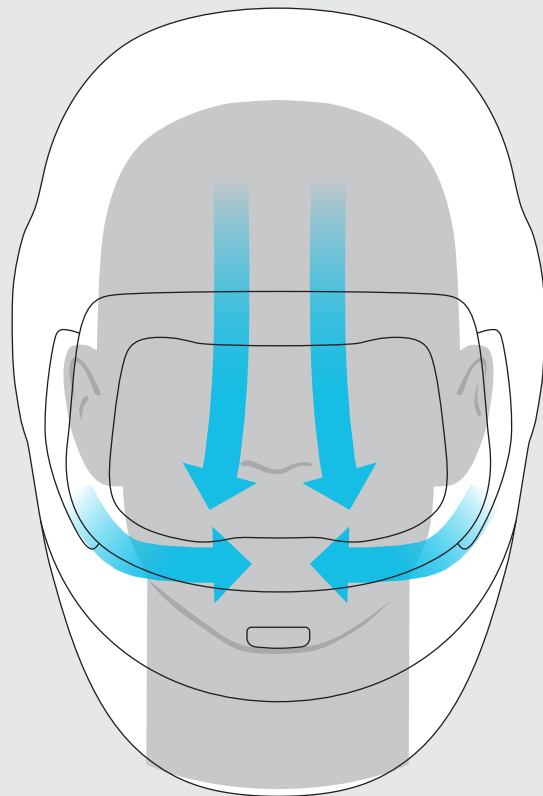
Adjustable air distribution and air flow control

Direct the air flow over your face, head, or both. Optimized air distribution and air flow-control helps prevent your eyes from drying out. All this leads to increased comfort in your helmet.



Right side control

Direct the airflow to either your face, your visor, or some combination of both.



Left side control

Adjust the amount of air coming from the top outlet vs. the two side outlets, or choose a blend of both.

Your choice of powered or supplied air

3M offers a range of powered and supplied air respirators that both provide protection against harmful welding fumes while increasing the comfort around your face and head.



Learn more about
powered and supplied
air choices on page 18





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 can be utilised with an adaptor to securely and easily attach the welding helmet to various 3M safety helmets.



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



Learn more about safety helmet choices on page 18

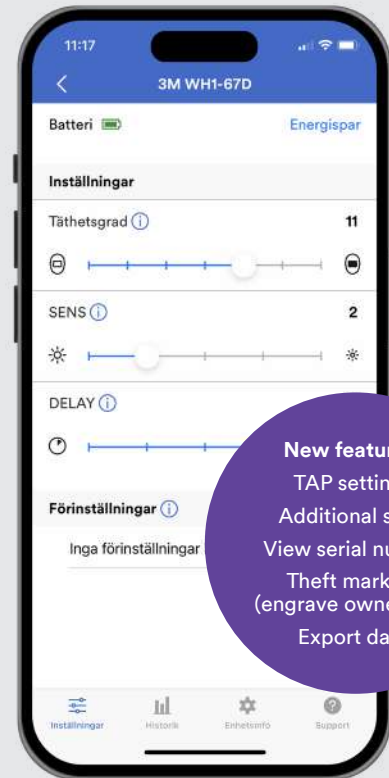
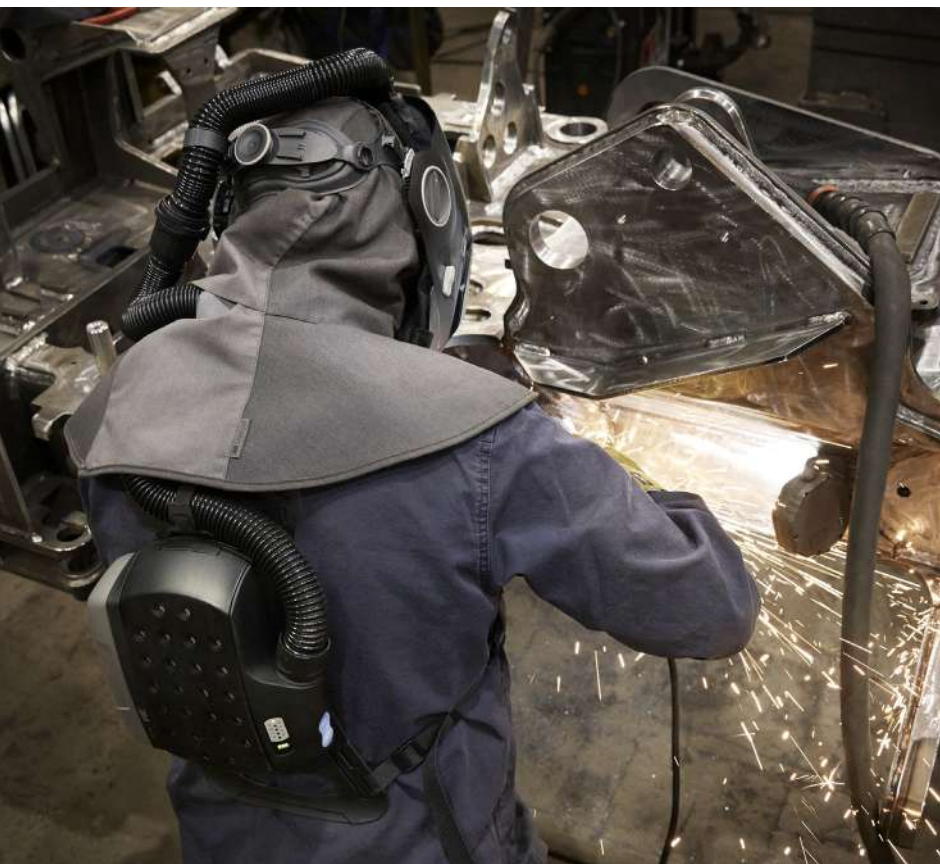


3M™ Speedglas™ Heavy Duty Backpack

Helping to improve performance and life for welders

Some welders prefer to wear a heavy duty PAPR Backpack, which hold the Powered Air Purifying Respirator (PAPR) flat against your back and can make it easier to move around some workspaces.

The heavy duty backpack is designed for welding applications and the 3M™ Adflo PAPR and aims to provide comfort, light weight, robustness, stability and good perceived balance.



New features:
 TAP settings
 Additional stats
 View serial number
 Theft marking (engrave owner info)
 Export data

3M™ Connected Equipment App

Get the most from your G5-03 welding helmet by connecting it to the 3M equipment app.

- Set up your equipment
- Get reminders for maintenance
- Have instant access to user manuals
- Program memory modes for dark shades, sensitivity, delay and more
- Log ADF activity like hours on, hours in dark state, or number of on/off cycles

Bluetooth®

The Bluetooth connection to the welding helmet to gives you the possibility to:

- Extract usage data
- Update firmware
- Review helmet maintenance logs

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 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 3M™ G5-03 Pro Air and is powered by the 3M™ Adflo™ powered air respirator, reducing the need for an additional battery and enabling extended run times.

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

Powered by the Adflo



Separate rechargeable battery





Welding Safety in focus

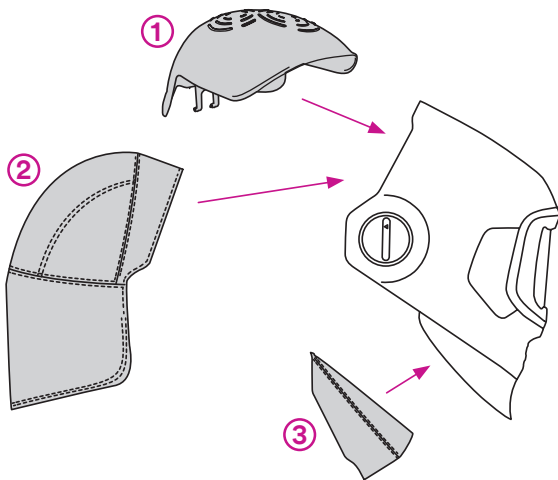
3M™ Speedglas™ Welding Helmet G5-03 Pro Air is certified TH3 (CE). This level of protection significantly reduces exposure to welding respiratory hazards when the helmet is used full time.

3M Speedglas Welding helmet G5-03 Pro with Safety helmet adapters is designed and tested to be used with selected 3M Safety helmets series X5000, G3000 and H700. 3M Speedglas Welding helmet G5 03 Pro can be used with 3M passive air purifying respirator solutions, e.g. 3M™ Particulate Respirator Aura™ Series.

Feel the safety of a certified protection system!

Extend Your Protection

Do you require additional protection from heat, radiation, spatter and sparks? There is a range of extended coverage options available to give you a more comfortable and protective environment.



① Scrape guard*

Helps to protect the welder against head scrapes.

② Head cover

Increase coverage of your head by adding a fabric head cover

③ Neck Protection

Interchangeable lower part of the welding helmet (plough) allows welders to customize neck protection according to their welding situation depending on head size, working position, and working application.

Spark Protection

Flame-retardant fabrics protect the welder from sparks and spatter.




> Learn more about our range of extended head and neck protection on page 17

To maximize coverage from sparks, add the fabric shroud and the extended, larger fabric head protection



Technical Specification

			
3M™ Speedglas™ Auto-darkening Welding Filter Series G5-01/03	G5-01/03VC	G5-01/03TW	G5-01/03NC*
MMAW (Electrode)	✓	✓	✓
MIG/MAG	✓	✓	✓
TIG (>20A)	✓	✓	✓
TIG (1A-20A)	✓	✓	✓
Plasma (welding and cutting)	✓	✓	✓
Risk for hidden arc	✓	✓	✓
Tack welding		✓	
Grinding	✓	✓	✓
Viewing area (welding filter)	109 × 73 mm	109 × 73 mm	109 × 54 mm
3M™ Speedglas™ Natural Colour Technology	✓	✓	✓
Variable colour modes (A-B-C)	✓		
TAP function	✓	✓	
Bluetooth enabled	✓	✓	
Battery lifetime	1500–2000 hours	1500–2000 hours	2000 hours
Classification (ISO)	V2	V2	V2
Dark state	Shade 8–14	Shade 8–13	Shade 8–12
CUT mode	Yes shade 5	Yes shade 5	Yes shade 5
Tack welding mode		✓	
Light state	Shade 3	Shade 2.5	Shade 3
UV/IR Protection	Shade 14 (permanent)	Shade 13 (permanent)	Shade 12 (permanent)
Auto ON	✓	✓	
Switching time, light -dark	0.1 ms (+23° C)	0.1 ms (+23° C)	0.1 ms (+23° C)
Memory mode	Yes, via mobile device app	Yes, via mobile device app	
Delay (switching time, dark-light)	50 – 1300 ms	50 – 1300 ms	40–470 ms
Number of sensors (arc detection)	4	4	3

	
3M™ Speedglas™ Passive Filter G5-01/03	
Size	110 × 90 mm
Shade	10, 11, 12, 13

Common parts between G5-01 and G5-03



For ease of flexibility onsite, many G5-01 spare parts are also compatible with G5-03. This allows you to hold less spare inventory, while retaining the flexibility you need to customise your equipment.

All parts common with G5-01 is marked with a dot (•) after the parts number.

Example: 16 90 30 • Shroud



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

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

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

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



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

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

G5-03 Pro Air helmet with no welding filter,
3M™ Adflo™ Powered air Respirator
and carry bag
Part No 63 77 00

G5-03 Pro Air helmet with welding filter
G5-01/03TW, 3M™ Adflo™ Powered air
Respirator and carry bag
Part No 63 77 20

G5-03 Pro Air helmet with welding filter
G5-01/03VC, 3M™ Adflo™ Powered air
Respirator and carry bag
Part No 63 77 30

Accessories

Common for G5-03 Pro and G5-03 Pro Air



16 90 22 •



16 90 43 •



16 90 20 •



16 90 41 •



16 90 42 •



16 90 24 •



16 90 23 •



16 90 21 •



16 90 30 •



16 91 00 •

16 90 35 •

Part No	Description
16 90 20 •	Head protection in fabric
16 90 21 •	Head protection fluorescent yellow
16 90 22 •	Head protection in leather
16 90 23 •	Head protection in fabric (large)

Part No	Description
16 90 24 •	Scrape guard G5-01/03
16 90 30 •	Shroud
16 90 35 •	Extended cover kit (shroud and large head cover in fabric)
16 90 41 •	Neck protection in fabric (small)

Part No	Description
16 90 42 •	Neck protection in fabric (large)
16 90 43 •	Neck protection in leather
16 91 00 •	Protective hood black/grey

(•) A purple dot marks common parts with G5-01

Accessories G5-03 Pro only



X5500NVE



G3001NVE



H-701T-SF



19 71 70



19 71 71



16 92 17 •



ACK081



16 92 05 •



AL2AI/SP

16 92 16



16 92 15

Accessories G5-03 Pro Air only



16 92 17 •



16 92 11 •



16 92 10 •



16 92 05 •

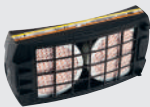
16 92 00 •



83 71 10



83 72 42



83 75 42



83 40 18



BPK-HD



83 50 20

3M™ Versafflo™ Supplied Air Regulators



V-100E



V-200E



V-500E

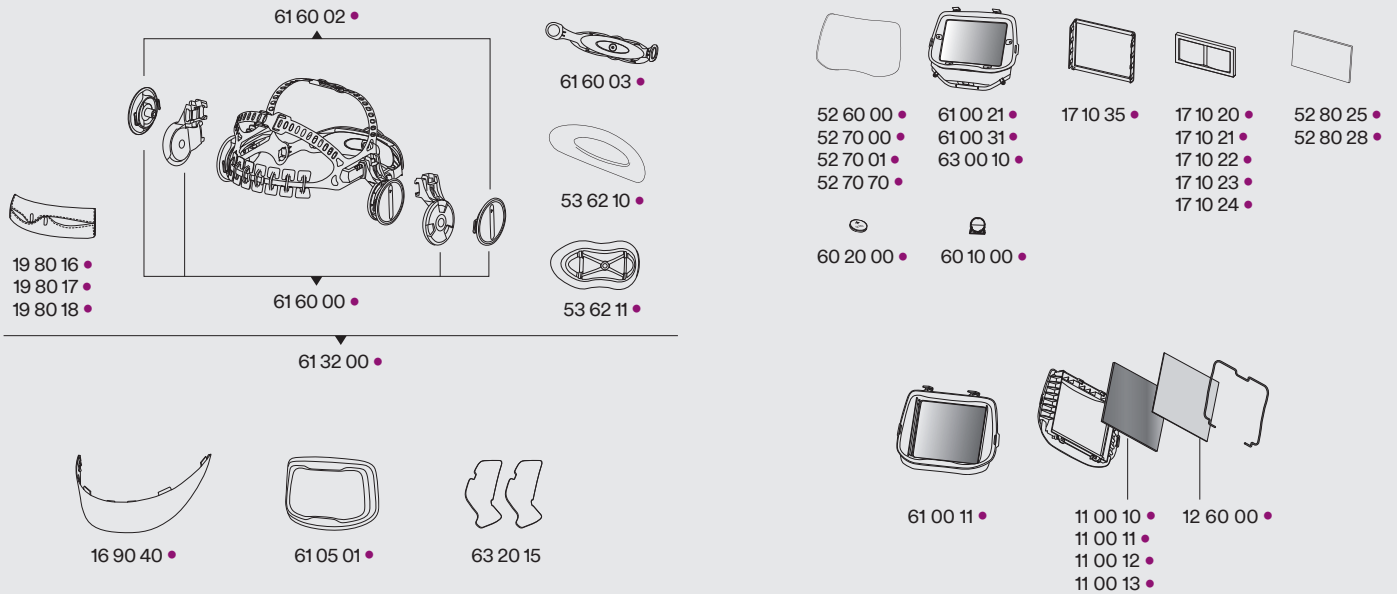
- V-100E Air cooling regulator
- V-200E Air heating regulator
- V-500E Flow controlled regulator

For further details to buy a complete supplied air system please reference the 3M Welding Safety Catalog.

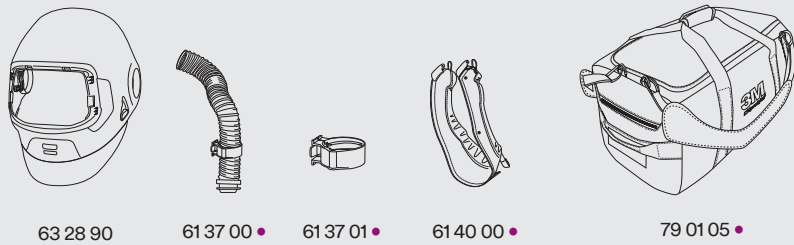
Part No	Description	Part No	Description	Part No	Description
16 92 00 •	Task light, incl mounting parts and cables	16 92 23 •	Pouch for Adflo battery, for task light when using supplied air regulator (not shown)	83 71 20	Odour filter pad
16 92 05 •	Protection plate for task light, pkg. of 5	19 71 70	Hard Hat Adaptor G5-03 Pro (X5)	83 72 42	Adflo gas filter A1B1E1
16 92 10 •	Long power cable for task light	19 71 71	Hard Hat Adaptor G5-03 Pro (H7/G3)	83 75 42	Adflo gas filter A2
16 92 11 •	Short power cable for task light	83 40 18	Flame resistant breathing tube cover (recommended when using the task light).	ACK081	Rechargeable Battery
16 92 15	Task light kit (light, cable, holder with cable & battery)	83 50 20	Braces for respirator	AL2AI/SP	Battery Charging Cable for ACK081
16 92 16	Welding Helmet Task Light holder for battery with attachment parts	83 71 10	Adflo odour filter	BPK-HD	Back pack for respirator
16 92 17 •	Task light			G3001NVE	3M™ Safety Helmet G3001 (non-vented)
				H-701T-SF	3M™ Safety Helmet H-701R (non-vented)
				X5500NVE	3M™ Safety Helmet X5500NVE (non-vented)

(•) A purple dot marks common parts with G5-01

Spare parts and consumables Common for G5-03 Pro and G5-03 Pro Air



Spare parts and consumables G5-03 Pro Air only



Spare parts and consumables G5-03 Pro only



Part No	Description	Part No	Description	Part No	Description
11 00 10 •	Passive welding filter lens shade 10 (90×110)	52 60 00 •	Outer protection plate (standard), pkg of 10	61 05 01 •	Front frame G5-01/03
11 00 11 •	Passive welding filter lens shade 11 (90×110)	52 70 00 •	Outer protection plate (scratch), pkg of 10	61 32 00 •	Headband with assembly parts
11 00 12 •	Passive welding filter lens shade 12 (90×110)	52 70 01 •	Outer protection plate (scratch +), pkg of 10	61 37 00 •	Air duct breathing tube (short) incl. holder
11 00 13 •	Passive welding filter lens shade 13 (90×110)	52 70 70 •	Outer protection plate (heat), pkg of 10	61 37 01 •	Holder for breathing tube
12 60 00 •	Inner cover plate for passive filter	52 80 25 •	Inner cover plate, pkg of 5	61 40 00 •	Face seal
16 90 40 •	Neck protection rigid	52 80 28 •	Inner protection plate anti-fog	61 60 00 •	Pivot and sliding mechanism, including pivot knobs
17 10 20 •	Magnifying lens 1.0X	53 62 10 •	Cushion part for headband G5-01/03	61 60 02 •	Pivot knobs
17 10 21 •	Magnifying lens 1.5X	53 62 11 •	Large head rest	61 60 03 •	Headband back part
17 10 22 •	Magnifying lens 2.0X	60 10 00 •	Battery holder	63 00 10 •	Speedglas welding filter G5-03NC
17 10 23 •	Magnifying lens 2.5X	60 20 00 •	Battery CR2450	63 18 95 •	Helmet shell G5-03 Pro, no headband
17 10 24 •	Magnifying lens 3.0X	61 00 11 •	Speedglas passive welding filter kit G5-01/03 (shade 11)	63 20 15	Sidewindow cover plates
17 10 35 •	Magnifying lens holder	61 00 21 •	Speedglas welding filter G5-01/03TW	63 28 90	Helmet shell G5-03 Pro Air, no headband
19 80 16 •	Sweatband (towelling), pkg of 3	61 00 31 •	Speedglas welding filter G5-01/03VC	79 01 05 •	Carry Bag
19 80 17 •	Sweatband (fleecy cotton), pkg of 3				
19 80 18 •	Sweatband (leather)				

(•) A purple dot marks common parts with G5-01

The Speedglas generation 5 welding helmets

The right equipment for each job



3M™ Speedglas™
Welding Helmet G5-01

Heavy duty welding and grinding

3M™ Speedglas™
Welding Helmet G5-02

Tig welding

3M™ Speedglas™
Welding Helmet G5-03

Welding and grinding



Learn more about the G5-03 helmet
Scan this QR-code or go to youtube.com/3MSpeedglas

⚠ 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.

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 youtube.com/3MSpeedglas



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