



 **Speedglas™**  
Welding Safety

3M™ Speedglas™ Welding Helmet G5-03

# Versatility to upgrade your performance

3M Science. Applied to life.™

# Farwell to compromises

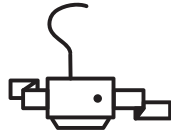
Are you a professional welder who performs a variety of welding and grinding tasks?

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 air<sup>1)</sup>



...an excellent view



...protection  
against arc welding  
radiation<sup>2)</sup>



...to perform  
grinding tasks



...a comfortable  
and well-balanced  
helmet



...safety helmet  
compatibility<sup>3)</sup>

The helmet features an option of three different auto darkening and four shades of passive welding filter<sup>4)</sup>:



Variable color



Light state 2.5  
+ Tack welding



Natural color



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**  
*(Pro Air)*

Read more on page 10

**External adjustment of air distribution**  
*(Pro Air)*

Read more on page 10

**Selection of extended coverage available**

Read more on page 15

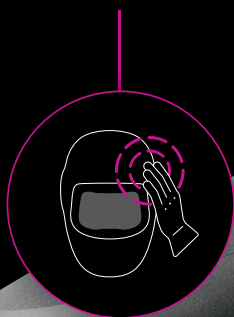
**Task light option**

Read more on page 13

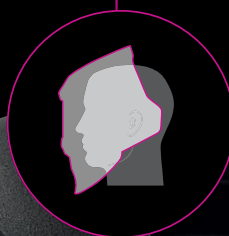


# ...two versatile helmets.

**TAP function  
for grind & cut**  
Read more on page 9



**Large coverage area**



**Side windows**

**Anti-fog treated inner  
protection plate option**

**Safety helmet  
adaptor  
(Pro)**

Read more on page 11

**Multiple welding  
filter choices**

Read more on page 6-7



**Common parts  
with G5-01**

Accessories, welding  
filters, protection plates





# Great clarity before, during and after welding

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

### Accuracy

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

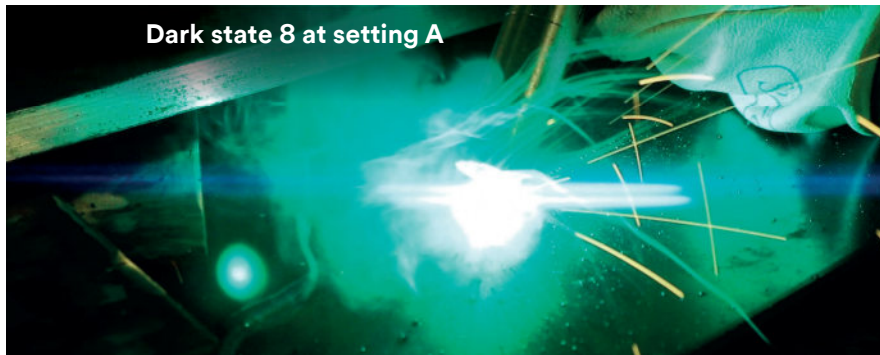
### Productivity

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

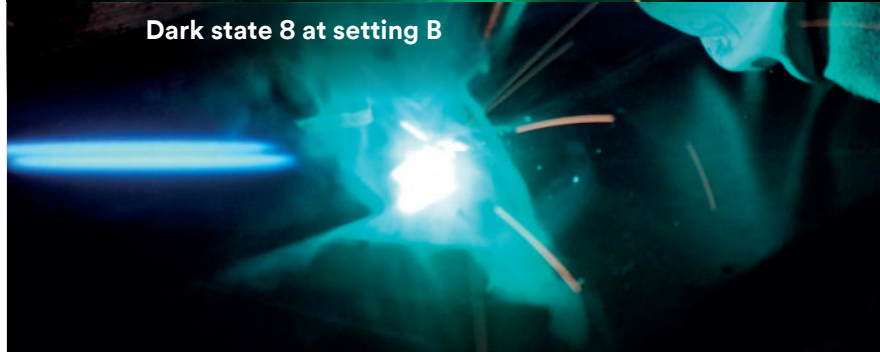
### Quality

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

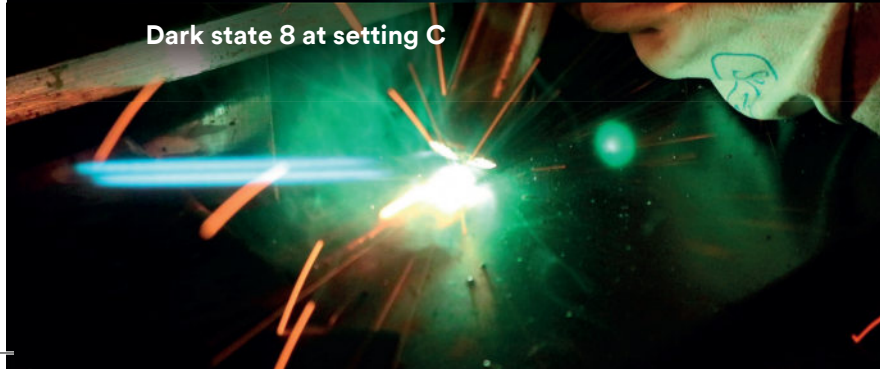
Dark state 8 at setting A



Dark state 8 at setting B



Dark state 8 at setting C



## Customize the filter color

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

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

You can switch between three different filter colors 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.



## G5-01/03VC (variable color)

Variable color technology with three selectable colors in dark state

TAP function

Shade 14 settings for higher amp welding

4 arc-detection sensors

Bluetooth connection



## G5-01/03TW (tack welding)

Light state 2.5

TAP function

4 arc-detection sensors

Bluetooth connection



## G5-01/03NC

Locks manually in light state for grinding

Locks manually in shade 5 for cutting

3 arc-detection sensors



## 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



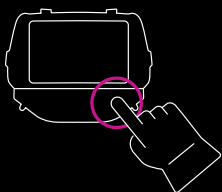
Tap on the side of the welding helmet, with or without a glove, to easily switch between grind (or cut) mode and weld mode.

# 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.

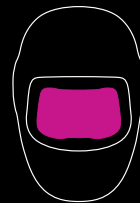
Built into the G5-01/03TW and G5-01/03VC welding filters, the TAP function may help to improve productivity with button-less control.



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



**2** TAP 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.

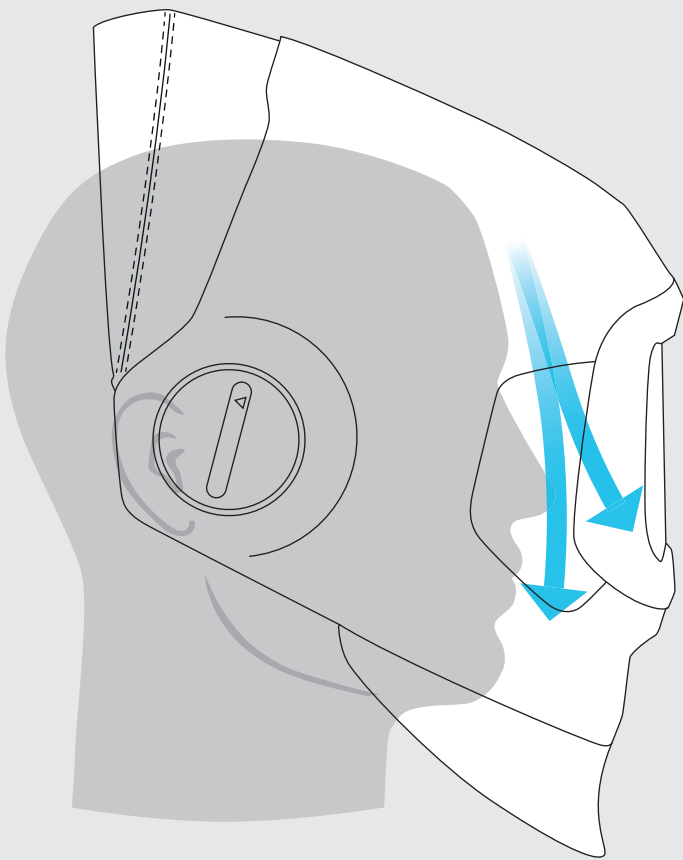


**4** Tap again and the filter switches back to welding mode.

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

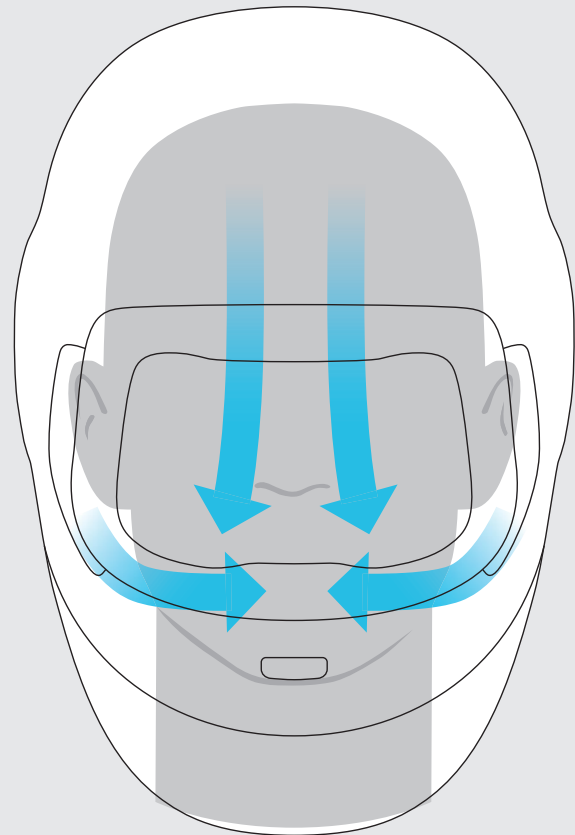
# Adjustable air distribution and air flow control

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.



Learn more about powered air kits on page 19





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 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 20

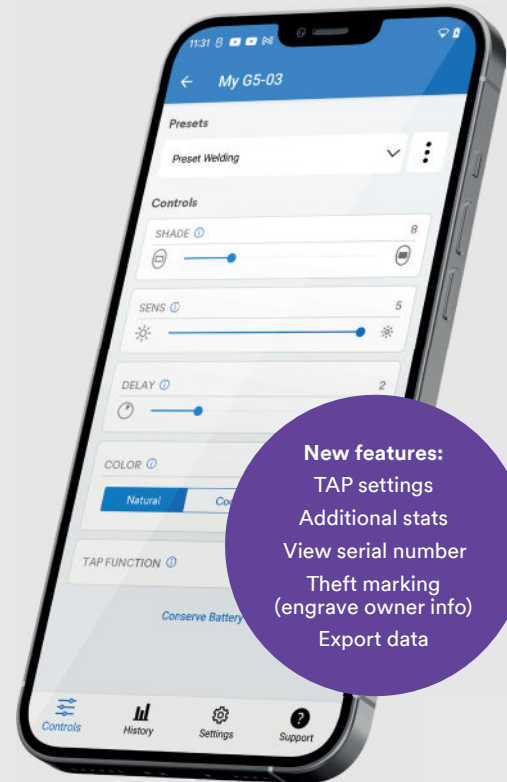


## 3M™ Speedglas™ Heavy Duty Backpack

# 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) and APF1000 (NIOSH). This level of protection significantly reduces exposure to welding respiratory hazards when the helmet is used full time.

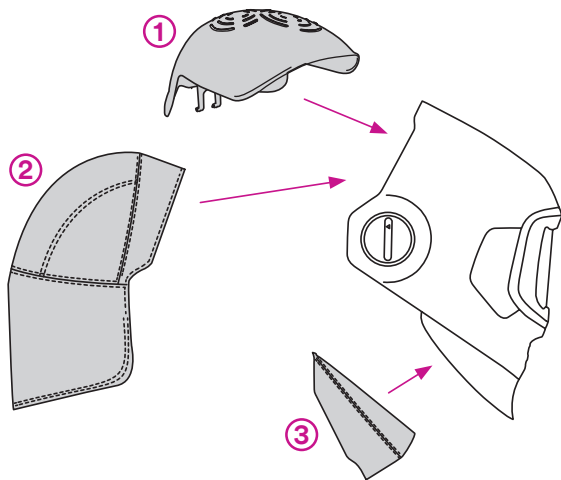
3M Speedglas Welding helmet G5-03 Pro with Safety helmet adapters is designed and tested to be used with selected 3M Safety helmets series X5000, G3000 and G3501.

Feel the safety of a certified protection system!

\* See user instruction, TH3 with particle filters, TH2 when used with approved gas and vapour filters and breathing tube.

# 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 (plow) 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 19

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





3M™ Speedglas™ Welding Helmet G5-03 E

## Designed for affordability

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



Lightweight and well balanced

Easy to adjust



3 arc-detection sensors

Grinding & cutting mode

Slim and smooth sides with no protruding parts

Task light option

Read more on page 13

Multiple welding filter choices

Read more on page 6-7



G5-03 E



9000Series

## Better coverage

Over 11% increased coverage than our previous helmets in the same price range.

## 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	107 × 55 mm
3M™ Speedglas™ Natural Color Technology	✓	✓	✓
Variable color modes (A-B-C)	✓		
TAP function	✓	✓	
Bluetooth enabled	✓	✓	
Battery lifetime	1500–2000 hours	1500–2000 hours	2500 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

	
<b>3M™ Speedglas™ Passive Filter G5-01/03</b>	
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

\* Launch date may vary between model and area



### 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 30 ●



16 90 21 ●

16 90 35 ●



16 90 30 ●



16 91 00 ●

Part No	Description
16 90 20 ●	Head protection in fabric
16 90 21 ●	Head protection in 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  
\*Only needed for G5-03 Pro

## Accessories G5-03 Pro only



X5500NVE



G3001NVE



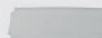
G3501



16 92 17 •



ACK081B



16 92 05 •



AL2AI/SP



16 92 15



19 71 70



19 71 71

## Accessories G5-03 Pro Air only



16 92 17 •



16 92 11 •



16 92 10 •



16 92 05 •

16 92 00 •



BPK-HD



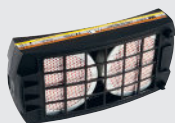
83 50 20



83 71 10



83 71 20



83 72 42  
83 75 42

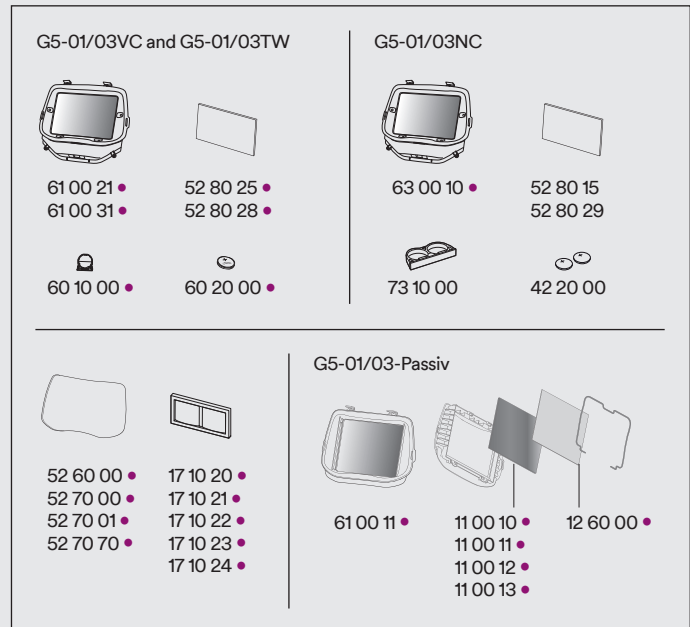
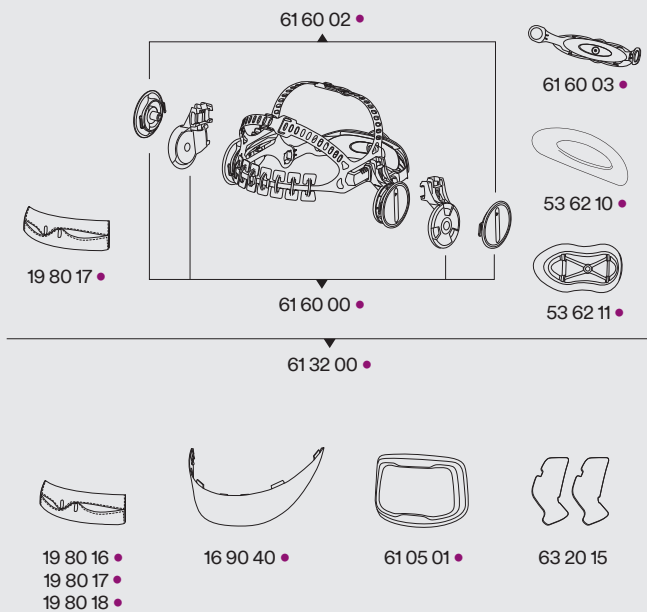


83 40 18

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	Safety Helmet Adaptor G5-03 Pro for X5500NVE	83 72 42	Adflo gas filter A1B1E1
16 92 10 •	Long power cable for task light	19 71 71	Safety Helmet Adaptor G5-03 Pro for G3001NVE and H-701T-SF	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).	ACK081B	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 ACK081B
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)
				G3501	3M™ G3501 Series High Heat Safety Helmet
				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 70 00	• Outer protection plate (scratch), pkg of 10	61 05 01	• Front frame G5-01/03
11 00 11	• Passive welding filter lens shade 11 (90×110)	52 70 01	• 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 70	• Outer protection plate (heat), pkg of 10	61 37 00	• Airduct breathing tube (short) incl. holder
11 00 13	• Passive welding filter lens shade 13 (90×110)	52 80 15	• Inner cover plate, pkg of 5	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	52 80 29	• Inner protection plate anti-fog, pkg of 5	61 60 02	• Pivot knobs
17 10 21	• Magnifying lens 1.5X	53 62 10	• Cushion part for headband G5-01/03	61 60 03	• Headband back part
17 10 22	• Magnifying lens 2.0X	53 62 11	• Large head rest	63 00 10	• Speedglas welding filter G5-01/03NC
17 10 23	• Magnifying lens 2.5X	60 10 00	• Battery holder	63 18 95	• Helmet shell G5-03 Pro, no headband
17 10 24	• Magnifying lens 3.0X	60 20 00	• Battery CR2450	63 20 15	• Sidewindow cover plates
19 80 16	• Sweatband (towelling), pkg of 3	61 00 11	• Speedglas passive welding filter kit G5-01/03 (shade 11)	63 28 90	• Helmet shell G5-03 Pro Air, no headband
19 80 17	• Sweatband (fleecy cotton), pkg of 3	61 00 21	• Speedglas welding filter G5-01/03TW	73 10 00	• Battery holder
19 80 18	• Sweatband (leather)	61 00 31	• Speedglas welding filter G5-01/03VC	79 01 05	• Carry Bag
42 20 00	• Battery CR2032 Lithium 3V, pkg of 2				
52 60 00	• Outer protection plate (standard), pkg of 10				

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



### 3M™ Speedglas™ Welding Helmet G5-03 E

G5-03 E Helmet without welding filter

Part No 63 10 00

G5-03 E Helmet with welding filter

G5-01/03NC

Part No 63 10 10

## Getting too close to your arc?

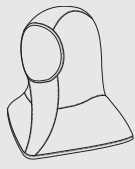
Start with the easiest solution first: replace your welding filter's outer protection plates more frequently!

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.

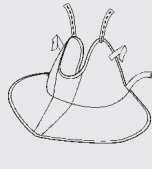


The 3M™ Speedglas™ Welding Helmet G5-03 E uses multiple parts and components from our other welding helmets.

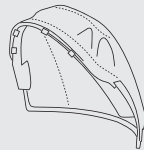
## Accessories G5-03 E



16 91 00 •



16 90 01



16 90 05



16 40 05



16 92 17 •



ACK081B



16 92 05 •



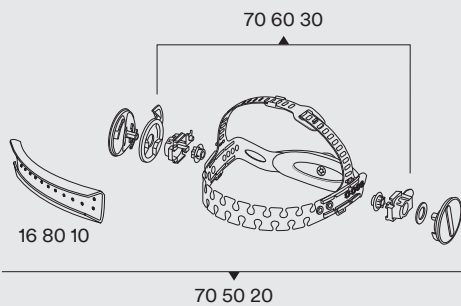
AL2AI/SP



16 92 16

16 92 15

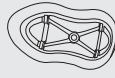
## Spare parts and consumables G5-03 E



16 80 10



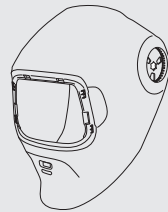
53 62 10 •



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

### G5-01/03-Passiv



52 60 00 •

52 70 00 •

52 70 01 •

52 70 70 •



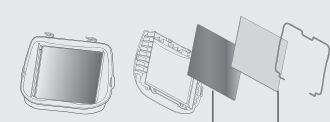
17 10 20 •

17 10 21 •

17 10 22 •

17 10 23 •

17 10 24 •



61 00 11 •

11 00 10 •

11 00 11 •

11 00 12 •

11 00 13 •

12 60 00 •

Part No	Description	Part No	Description	Part No	Description
11 00 10 •	Passive welding filter lens shade 10 (90×110)	16 91 00	Hood black/grey	60 10 00 •	Battery holder
11 00 11 •	Passive welding filter lens shade 11 (90×110)	16 92 05 •	Protection plate for task light, pkg. of 5	63 10 95	Helmet shell G5-03 E, no headband
11 00 12 •	Passive welding filter lens shade 12 (90×110)	16 92 15	Task light kit (light, cable, holder with cable & battery)	60 20 00 •	Battery CR2450
11 00 13 •	Passive welding filter lens shade 13 (90×110)	16 92 16	Welding Helmet Task Light holder for battery with attachment parts	61 00 11 •	Speedglas passive welding filter kit G5-01/03 (shade 11)
12 60 00 •	Inner cover plate for passive filter	16 92 17 •	Task light	61 00 21 •	Speedglas welding filter G5-01/03TW
17 10 20 •	Magnifying lens 1.0X	42 20 00	Battery CR2032 Lithium 3V, pkg of 2	61 00 31 •	Speedglas welding filter G5-01/03VC
17 10 21 •	Magnifying lens 1.5X	52 60 00 •	Outer protection plate (standard), pkg of 10	61 05 01 •	Front frame G5-01/03
17 10 22 •	Magnifying lens 2.0X	52 70 00 •	Outer protection plate (scratch), pkg of 10	63 00 10 •	Speedglas welding filter G5-03NC
17 10 23 •	Magnifying lens 2.5X	52 70 01 •	Outer protection plate (scratch +), pkg of 10	70 50 20	Headband with assembly parts and sweatband
17 10 24 •	Magnifying lens 3.0X	52 70 70 •	Outer protection plate (heat), pkg of 10	70 60 30	Assembly parts (pivots) for headband
16 40 05	Ear and neck protection in leather (3 parts)	52 80 15	Inner protection plate, pkg of 5	73 10 00	Battery holder
16 75 20	Sweatband, towelling, purple, pkg of 2	52 80 25 •	Inner cover plate, pkg of 5	ACK081B	Rechargeable Battery
16 76 00	Sweatband, towelling, pkg of 20	52 80 28 •	Inner protection plate anti-fog	AL2AI/SP	Battery Charging cable for ACK081B
16 80 00	Sweatband, leather	52 80 29	Inner protection plate anti-fog, pkg of 5		
16 80 10	Sweatband in fleecy cotton (length 24 cm), pkg of 2	53 62 10 •	Cushion part for headband G5-01/03		
16 80 12	Sweatband in fleecy cotton (length 21 cm), pkg of 2	53 62 11 •	Large head rest		
16 90 01	Neck protection				
16 90 05	Head protection in fabric				

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

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](https://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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