
3M
Speedglas™
Welding Safety
3M™ Speedglas™ Welding Helmet G5-03
Versatility to upgrade your performance
3M Science. Applied to life.™

Farewell 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[1)]	...an excellent view
...protection against arc welding radiation[2)]	...to perform grinding tasks
...a comfortable and well-balanced helmet	...safety helmet compatibility[3)]

The helmet features an option of three different auto darkening and four shades of passive welding filter[4)]:



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

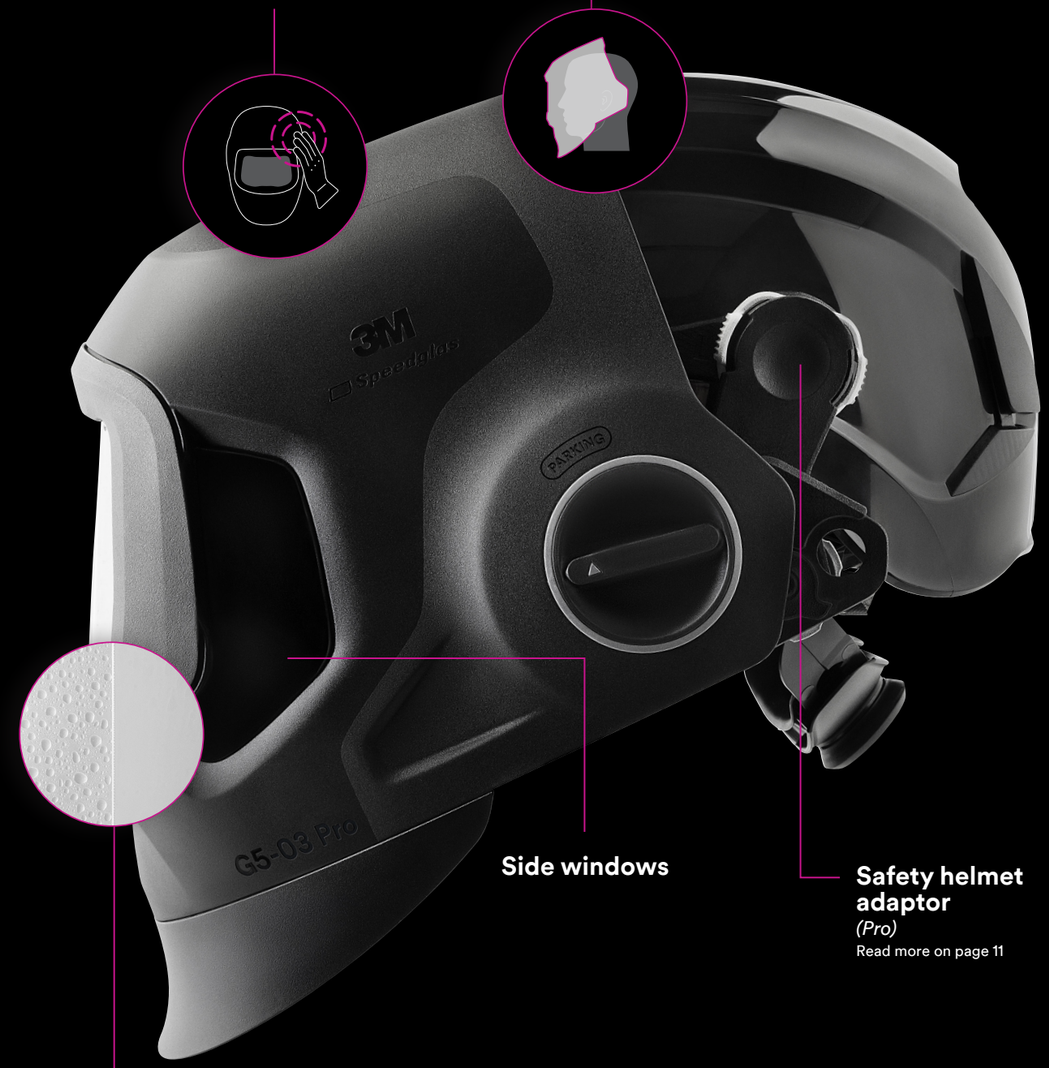
Selection of extended coverage available
Read more on page 15

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

Safety helmet adaptor
(Pro)
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



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

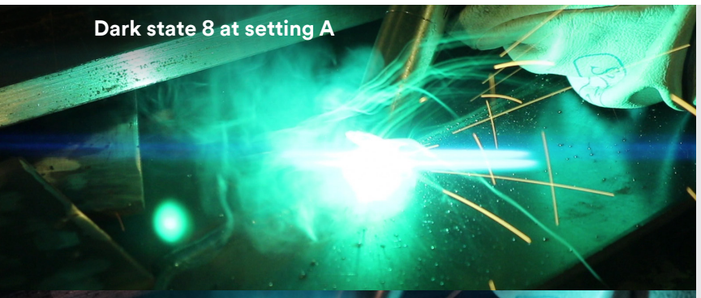
Recognize color and contrast and see more details when using the welding filter.

Productivity

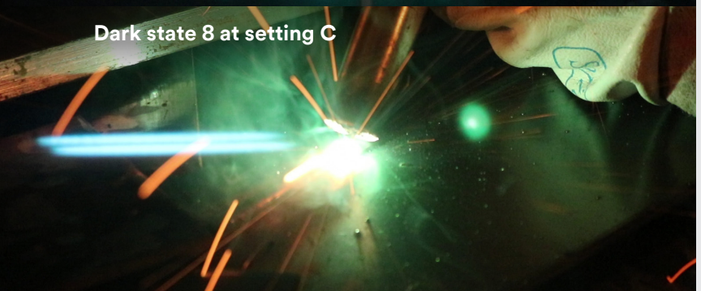
Better focus on the welding setup, welding technique and inspection of just-completed welds.

Quality

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







Variable Dark State Colors.

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.

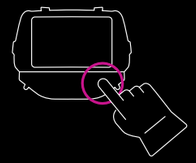
Easy switching is just a tap away

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.

TAP function.



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.

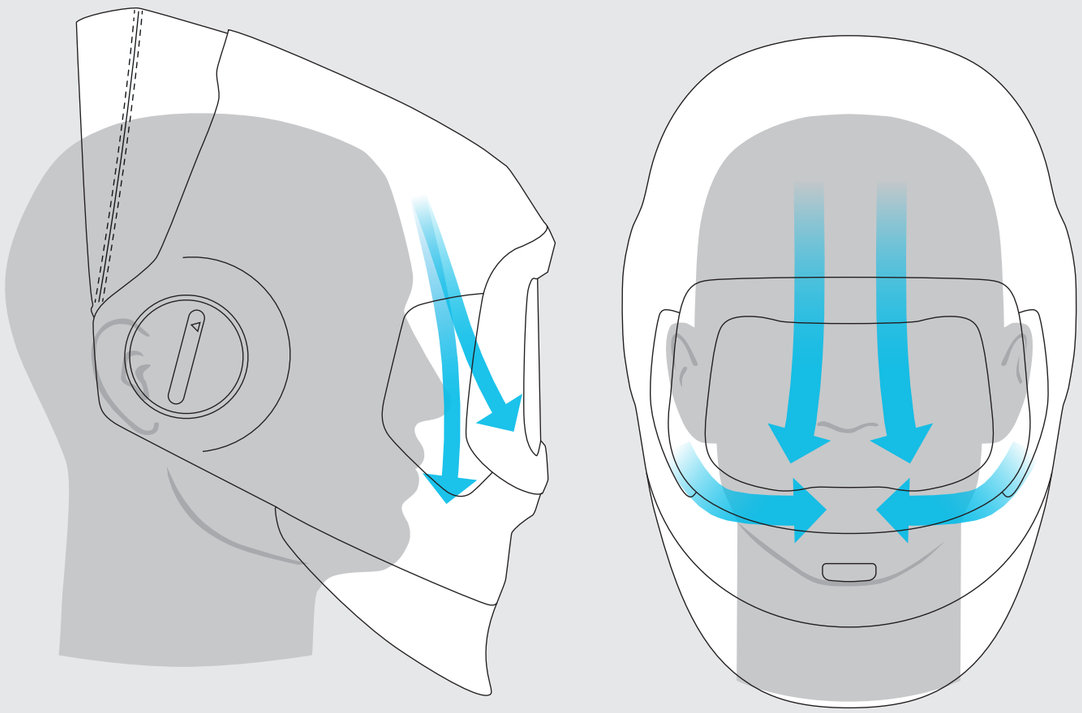


4
Tap again and the filter switches back to welding mode.

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 hemet.



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

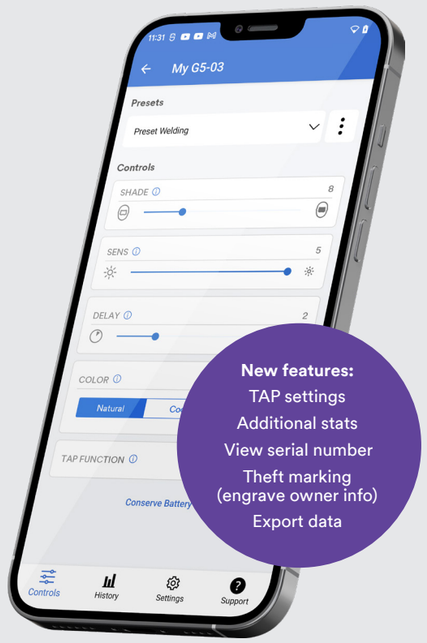
Helping to improve performance and life for welders

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 percieved 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 rechargable 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.

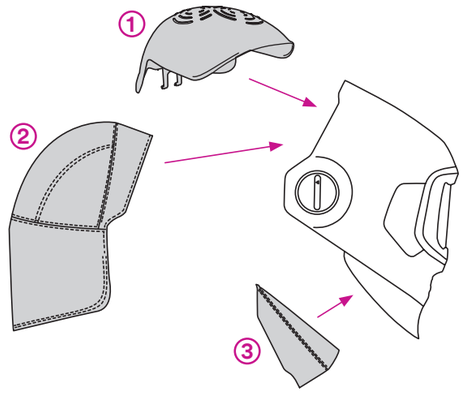
3M Speedglas Welding helmet G5-03 Pro with Safety helmet adapters is designed and tested to be used with selected 3M Safety helmets series X5000, G3000 and G3501.

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

9000 Series

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



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



Part No	Description	Part No	Description	Part No	Description
16 90 20 •	Head protection in fabric	**16 90 24** •	Scrape guard G5-01/03	**16 90 42** •	Neck protection in fabric (large)
16 90 21 •	Head protection fluorescent yellow	**16 90 30** •	Shroud	**16 90 43** •	Neck protection in leather
16 90 22 •	Head protection in leather	**16 90 35** •	Extended cover kit (shroud and large head cover in fabric)	**16 91 00** •	Protective hood black/grey
16 90 23 •	Head protection in fabric (large)	**16 90 41** •	Neck protection in fabric (small)		

(•) A purple dot marks common parts with G5-01
*Only needed for G5-03 Pro

Accessories
G5-03 Pro only



X5500NVE



19 71 70



G3001NVE



19 71 71



G3501M-VI



16 92 17 •



ACK081B



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 •



BPK-HD



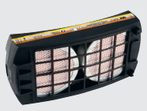
83 50 20



83 71 10



83 71 20



83 72 42
83 75 42

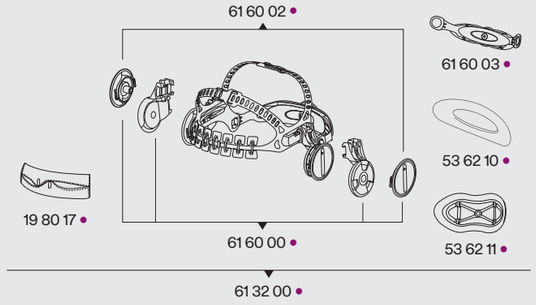


83 40 18

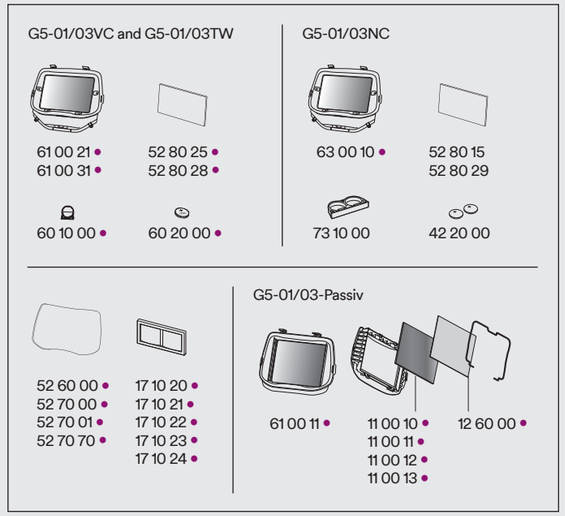
Part No	Description
16 92 00 •	Task light, incl mounting parts and cables
16 92 05 •	Protection plate for task light, pkg. of 5
16 92 10 •	Long power cable for task light
16 92 11 •	Short power cable for task light
16 92 15	Task light kit (light, cable, holder with cable & battery)
16 92 16	Welding Helmet Task Light holder for battery with attachment parts
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 Adaptor G5-03 Pro for X5500NVE
19 71 71	Safety Helmet Adaptor G5-03 Pro for G3001NVE and H-701T-SF
83 40 18	Flame resistant breathing tube cover (recommended when using the task light).
83 50 20	Braces for respirator
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)
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



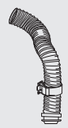
61 60 02 •
61 60 03 •
53 62 10 •
53 62 11 •
19 80 17 •
61 60 00 •
61 32 00 •
19 80 16 •
19 80 17 •
19 80 18 •
16 90 40 •
61 05 01 •
63 20 15



Spare parts and consumables
G5-03 Pro Air only



63 28 90



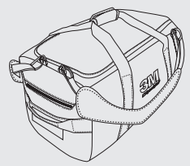
61 37 00 •



61 37 01 •



61 40 00 •



79 01 05 •

Spare parts and consumables
G5-03 Pro only



63 18 95

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 protection plate anti-fog
52 80 29	Inner protection plate anti-fog, pkg of 5
53 62 10 •	Cushion part for headband G5-01/03
53 62 11 •	Large head rest
60 10 00 •	Battery holder
60 20 00 •	Battery CR2450
61 00 11 •	Speedglas passive welding filter kit G5-01/03 (shade 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 18 95	Helmet shell G5-03 Pro, no headband
63 20 15	Sidewindow cover plates
63 28 90	Helmet shell G5-03 Pro Air, no headband
73 10 00	Battery holder
79 01 05 •	Carry Bag

(•) 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 •

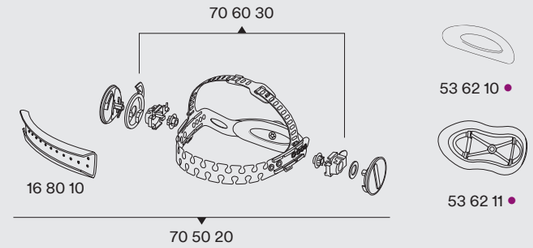

ACK081B


16 92 05 •


AL2AI/SP



Spare parts and consumables
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

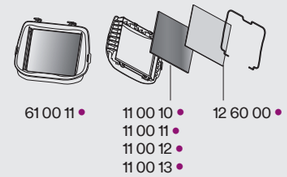

73 10 00

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-Passiv


61 00 11 •
11 00 10 •
11 00 11 •
11 00 12 •
11 00 13 •
12 60 00 •

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
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
16 40 05	Ear and neck protection in leather (3 parts)
16 75 20	Sweatband, towelling, purple, pkg of 2
16 76 00	Sweatband, towelling, pkg of 20
16 80 00	Sweatband, leather
16 80 10	Sweatband in fleecy cotton (lenght 24 cm), pkg of 2
16 80 12	Sweatband in fleecy cotton (lenght 21 cm), pkg of 2
16 90 01	Neck protection
16 90 05	Head protection in fabric

Part No	Description
16 91 00	Hood black/grey
16 92 05 •	Protection plate for task light, pkg. of 5
16 92 15	Task light kit (light, cable, holder with cable & battery)
16 92 16	Welding Helmet Task Light holder for battery with attachment parts
16 92 17 •	Task light
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 protection plate, pkg of 5
52 80 25 •	Inner cover plate, pkg of 5
52 80 28 •	Inner protection plate anti-fog
52 80 29	Inner protection plate anti-fog, pkg of 5
53 62 10 •	Cushion part for headband G5-01/03
53 62 11 •	Large head rest

Part No	Description
60 10 00 •	Battery holder
63 10 95	Helmet shell G5-03 E, no headband
60 20 00 •	Battery CR2450
61 00 11 •	Speedglas passive welding filter kit G5-01/03 (shade 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
63 00 10 •	Speedglas welding filter G5-03NC
70 50 20	Headband with assembly parts and sweatband
70 60 30	Assembly parts (pivots) for headband
73 10 00	Battery holder
ACK081B	Rechargeable Battery
AL2AI/SP	Battery Charging cable for ACK081B

(•) 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

⚠ 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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Personal Safety Division
3M United Kingdom plc
3M Centre
Cain Road, Bracknell
Berkshire RG12 8HT
Tel: 0870 60 800 60
www.3M.co.uk/safety

3M Ireland Limited
The Iveagh Building
The Park, Carrickmines
Dublin 18
T: 1 800 320 500

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