



 **Speedglas**[™]
Welding Safety

3M[™] Speedglas[™] Welding Helmet G5-03

Versatility to upgrade your performance

3M Science. Applied to life.[™]

Farwell to compromises

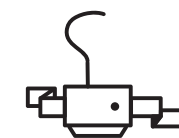
Are you a professional welder who performs a variety of welding and grinding tasks?

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 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

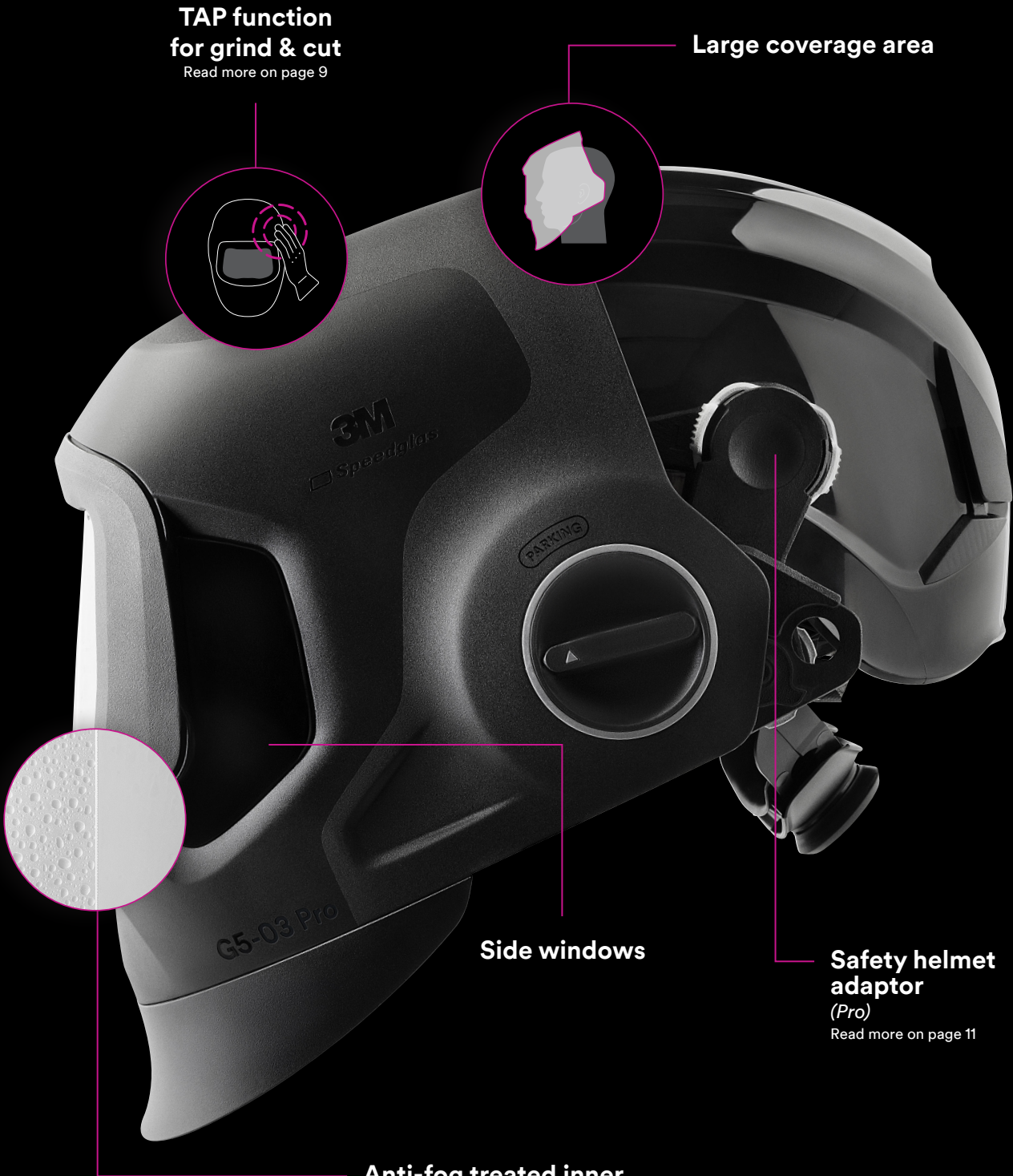
Designed for adjustable air distribution
(Pro Air)
Read more on page 10

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.



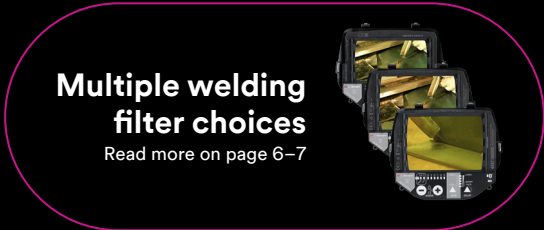
TAP function for grind & cut
Read more on page 9

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.

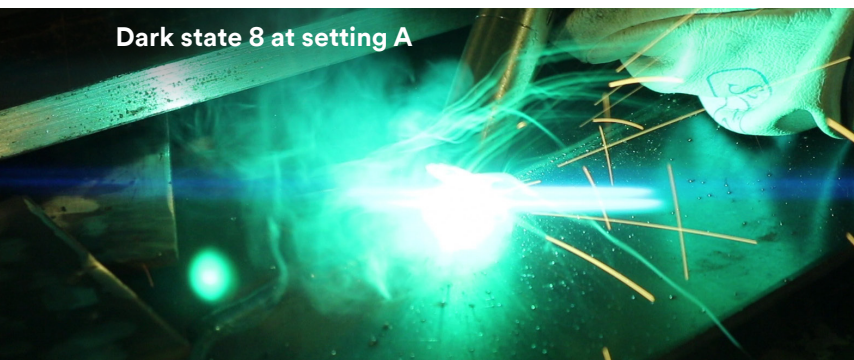
Productivity

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

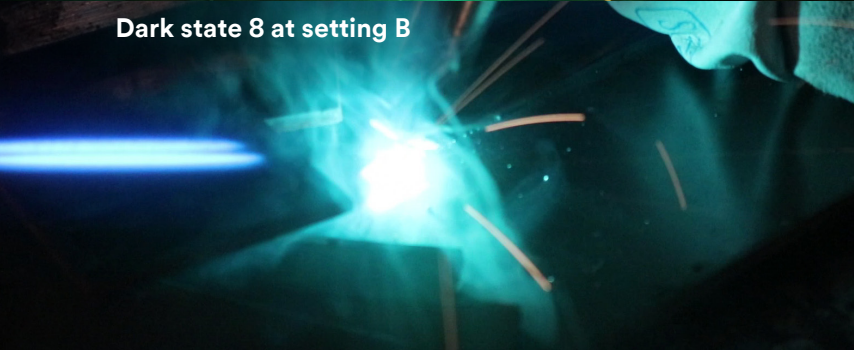
Quality

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

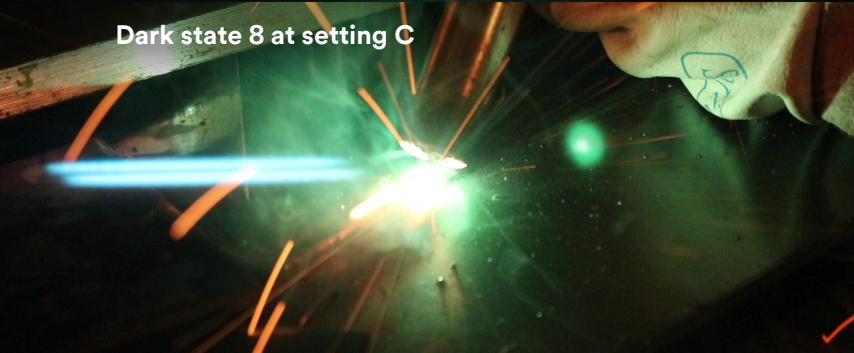
Dark state 8 at setting A



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

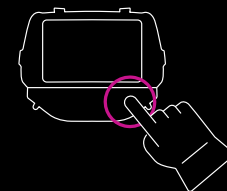
Tap on the side of the welding helmet, with or without a glove, to easily switch between grind (or cut) mode and weld mode.

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.



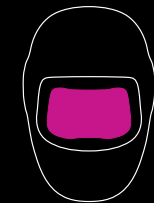
1

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.



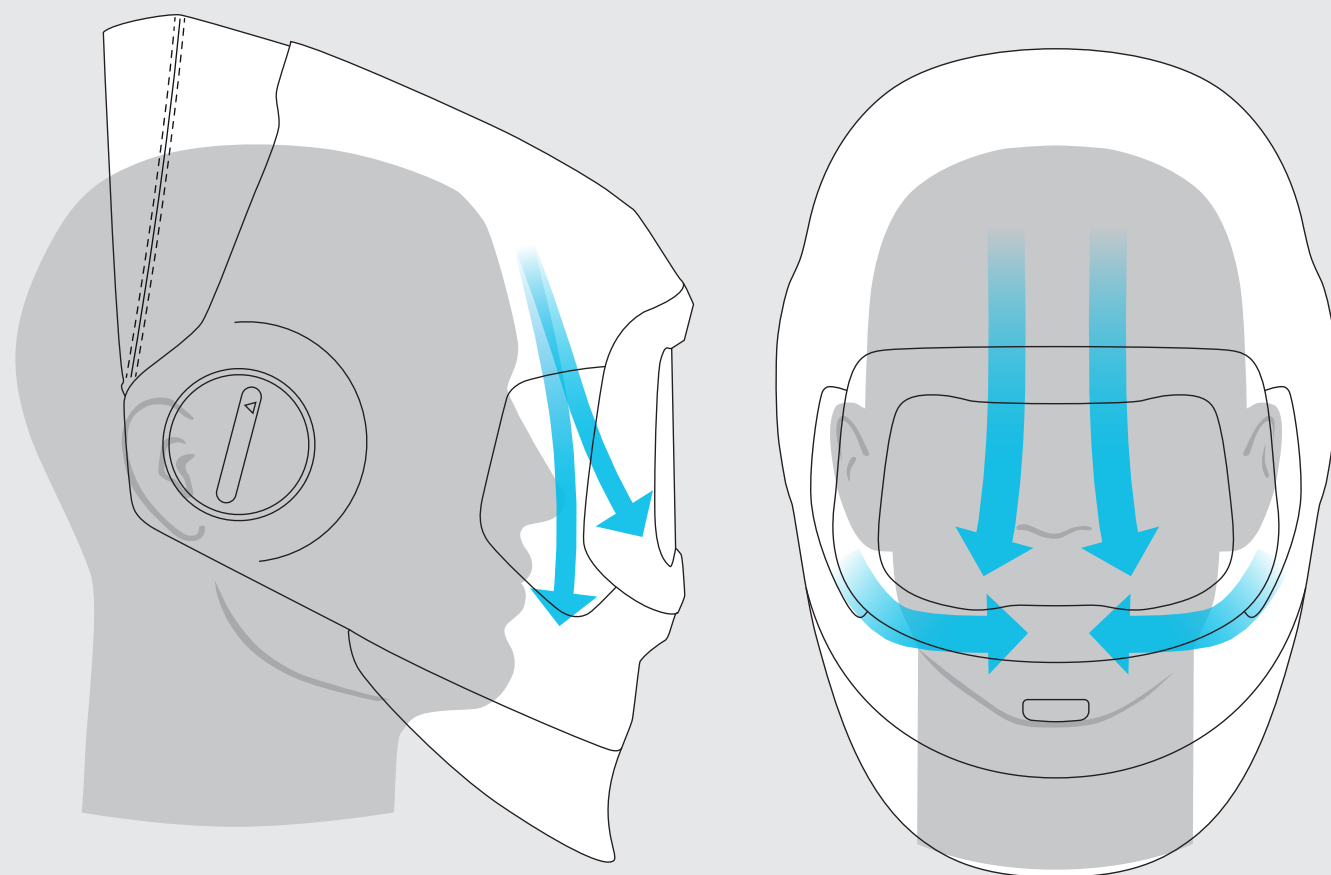
4

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.



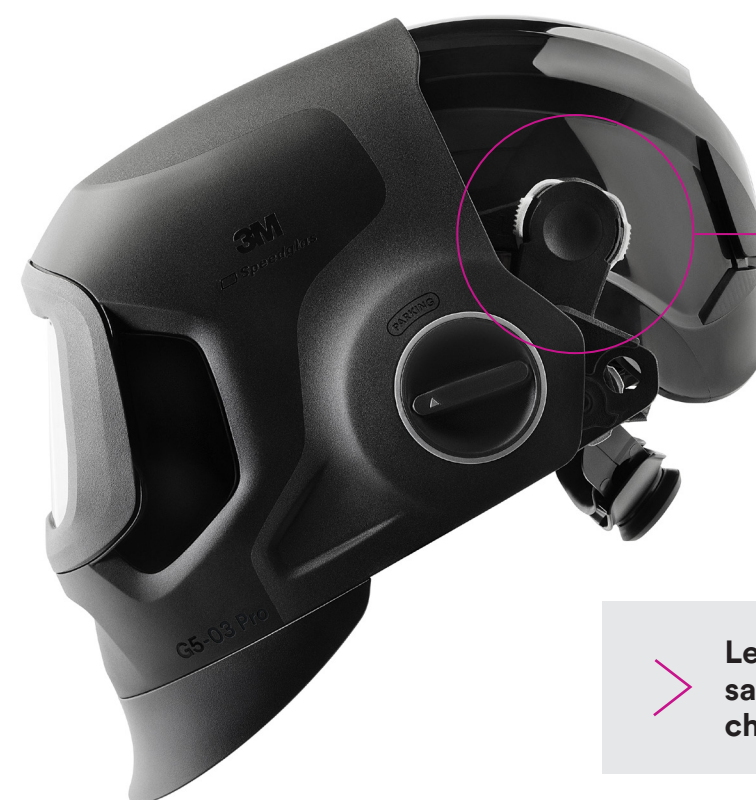
Learn more about powered air kits on page 19



3M™ Speedglas™ Welding Helmet G5-03 Pro

We have you covered

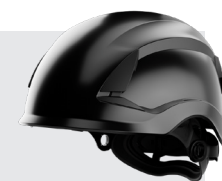
Sometimes you weld in a location that requires you to wear a safety helmet. Using a quick release system, the G5-03 Pro helmet may be utilised with an adaptor to securely and easily attach the welding helmet to various 3M safety helmets.



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



Learn more about safety helmet choices on page 20

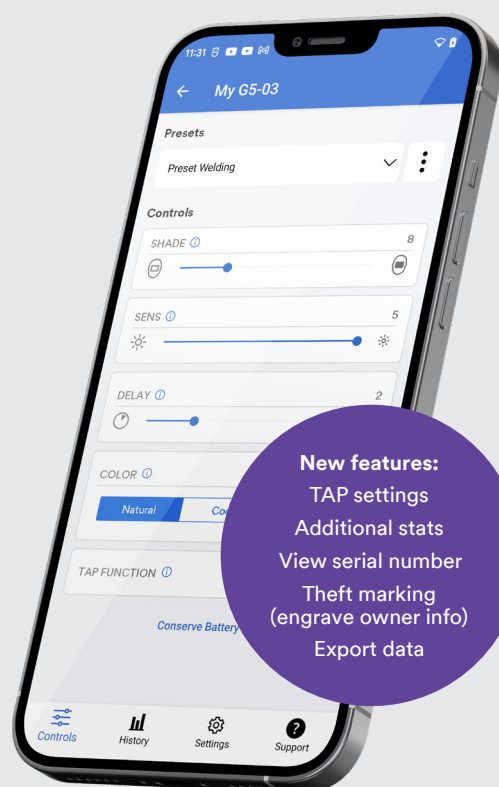


3M™ Speedglas™ Heavy Duty Backpack

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.



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



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.

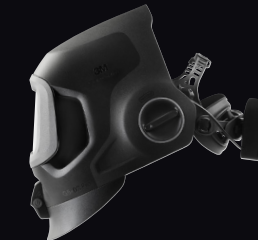
3M™ Speedglas™ Task Light is designed to be low profile and lightweight, helping welders in low light environments.

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.

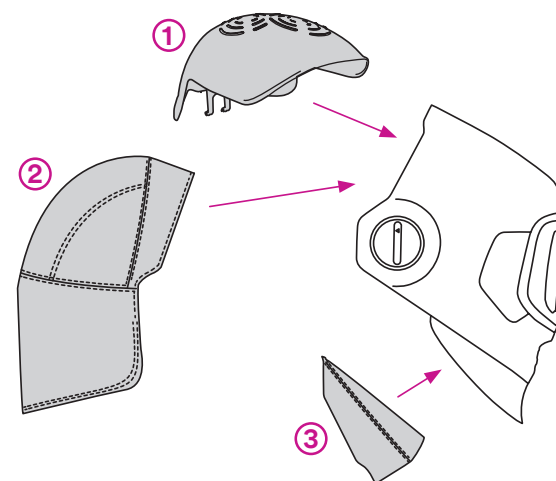
3M Speedglas Welding helmet G5-03 Pro with Safety helmet adapters is designed and tested to be used with selected 3M Safety helmets series X5000, G3000 and G3501.

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

Task light option
Read more on page 13

Slim and smooth sides with no protruding parts

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

* 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



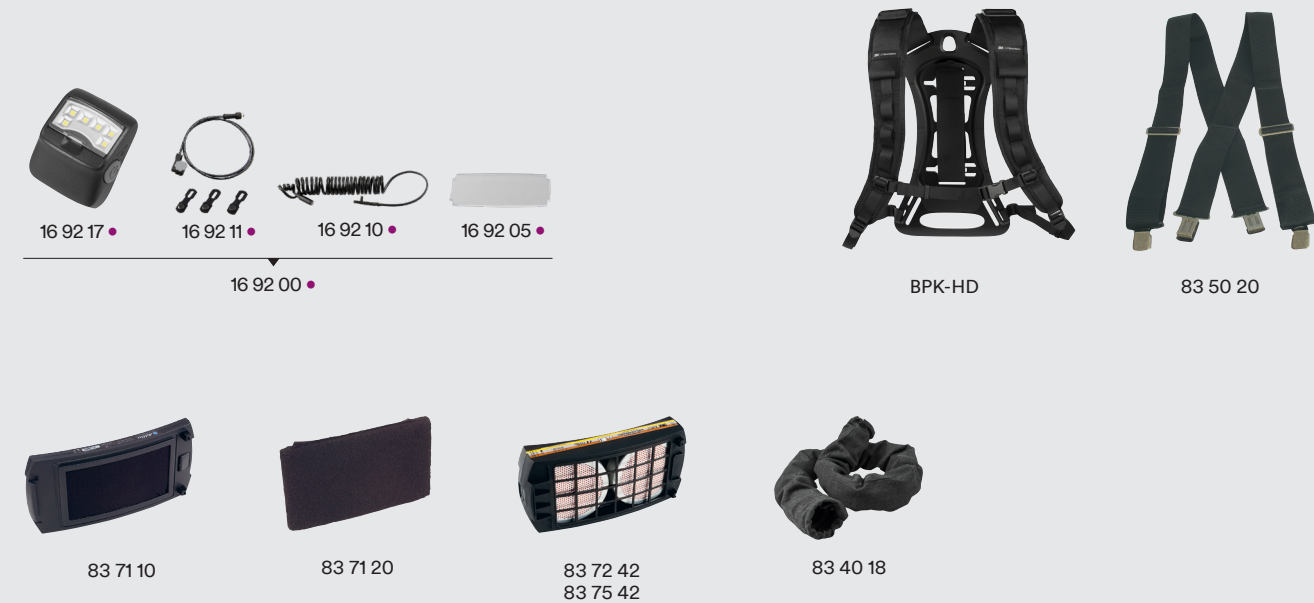
| Part No | Description | Part No | Description | Part No | Description |
|------------|------------------------------------|------------|--|------------|-----------------------------------|
| 16 90 20 ● | Head protection in fabric | 16 90 24 ● | Scrape guard G5-01/03 | 16 90 42 ● | Neck protection in 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



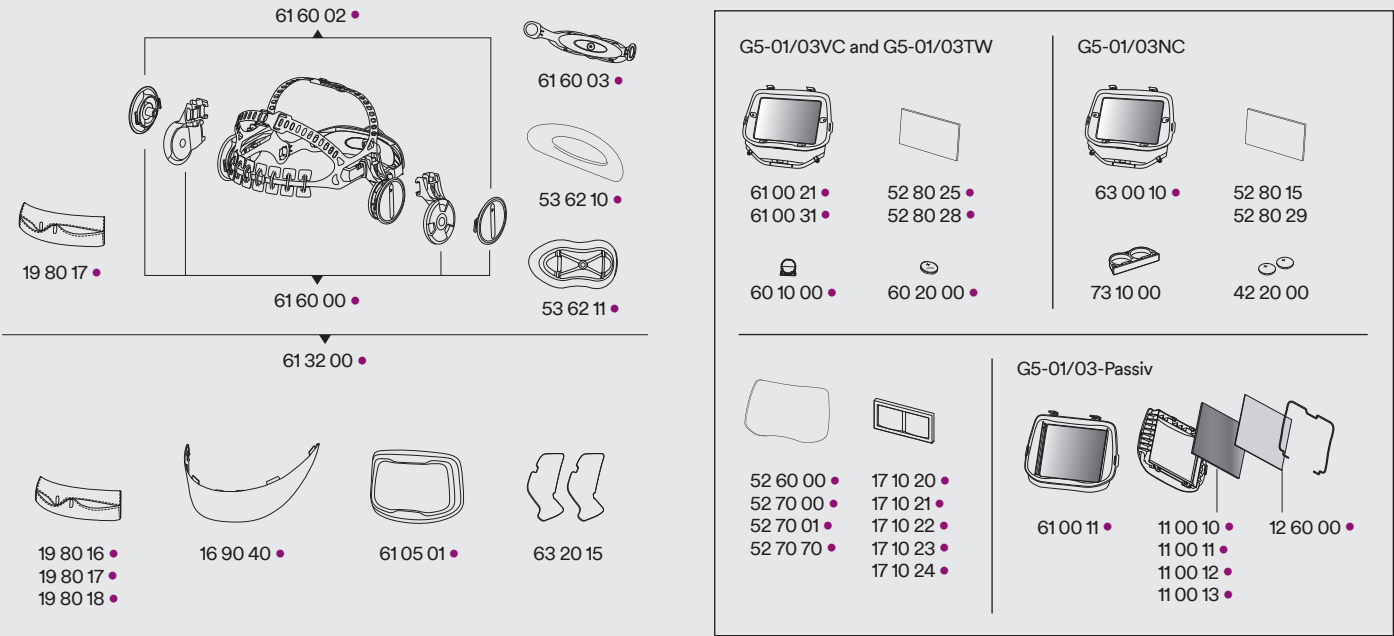
Accessories
G5-03 Pro Air only



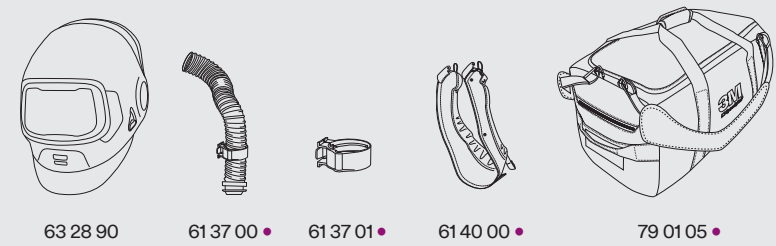
| Part No | Description | Part No | Description | Part No | Description |
|----------|--|----------|---|----------|--|
| 16 92 00 | Task light, incl mounting parts and cables | 16 92 23 | Pouch for Adflo battery, for task light when using supplied air regulator (not shown) | 83 71 20 | Odour filter pad |
| 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 | | | ACK081B | Rechargeable Battery |
| 16 92 15 | Task light kit (light, cable, holder with cable & battery) | | | AL2AI/SP | Battery Charging Cable for ACK081B |
| 16 92 16 | Welding Helmet Task Light holder for battery with attachment parts | 83 40 18 | Flame resistant breathing tube cover (recommended when using the task light). | BPK-HD | Back pack for respirator |
| 16 92 17 | Task light | | | G3001NVE | 3M™ Safety Helmet G3001 (non-vented) |
| | | 83 50 20 | Braces for respirator | G3501 | 3M™ G3501 Series High Heat Safety Helmet |
| | | 83 71 10 | Adflo odour filter | 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 | Airduet 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!

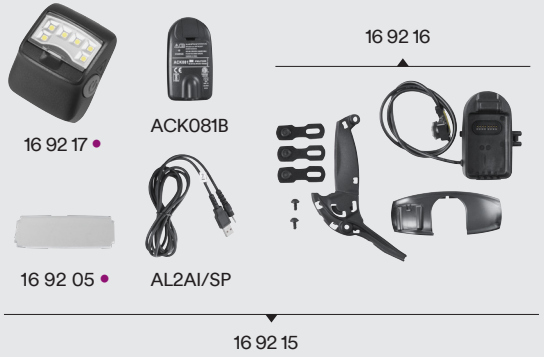
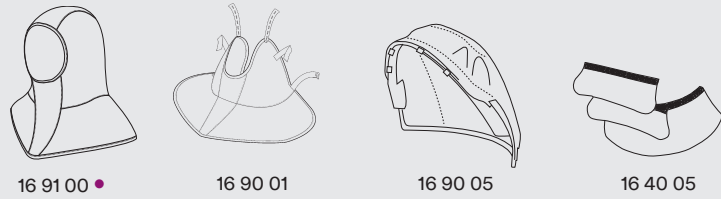
If you can't see the detail you need, try one of our magnifying lenses. They come in x1.0, x1.5, x2.0, x2,5 and x3.0 strengths. For details, see the Accessories and Spare Parts section for each helmet.



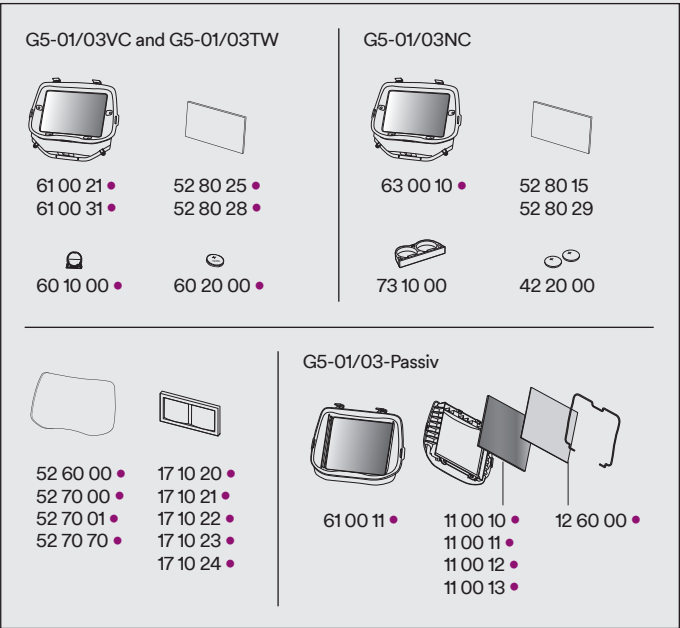
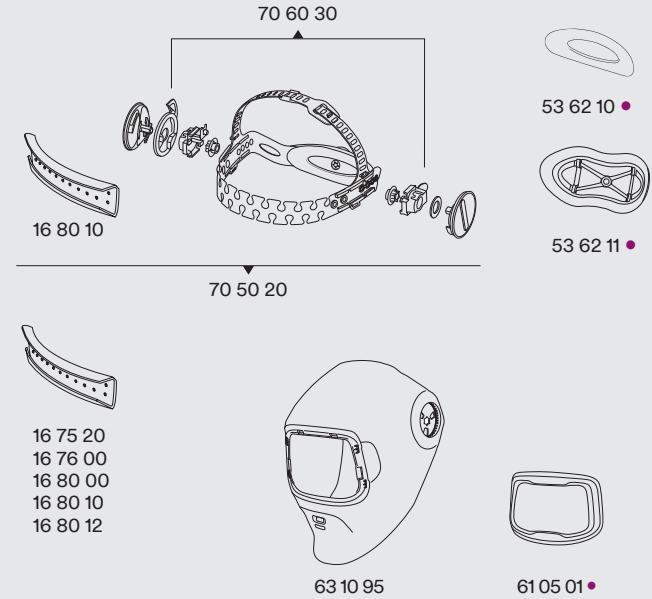
The 3M™ Speedglas™ Welding Helmet G5-03 E uses multiple parts and components from our other welding helmets.



Accessories
G5-03 E



Spare parts and consumables
G5-03 E



| 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 80 10 | Neck protection | | | | |
| 16 90 01 | Head protection in fabric | | | | |
| 16 90 05 | | | | | |

(•) 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.



facebook.com/3MSpeedglas



Instagram.com/3MSpeedglas



youtube.com/3MSpeedglas



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

www.speedglas.com
www.3M.com

Please recycle. Printed in Sweden. © 3M 2024.
All rights reserved. 3M and Speedglas are trademarks
of 3M Company, used under license in Canada.
The Bluetooth name and logo are trademarks of the
Bluetooth Special Interest Group.