



 **Speedglas**[™]
Welding Safety

NEW 3M[™] Speedglas[™] Heavy-Duty Welding Helmet G5-01

Farewell to compromises

3M Science. Applied to life.[™]

Adjust your welding helmet, not yourself

Based on extensive input from welders working at high amperages that need to grind frequently, the 3M™ Speedglas™ Heavy-Duty Welding Helmet G5-01 is created to be adaptable to an individual's needs and situation.





Protection against radiation, sparks and spatter, from a high-coverage welding helmet design that also offers expanded coverage options, [see pages 8–10.](#)

View your work with 3M™ Speedglas™ Natural Colour Technology – now available with variable colour option in the dark state. [See pages 4–5.](#)

Effective respiratory protection, offering the highest safety class for powered air (TH3) systems. [See page 7.](#)

No compromises on comfort! Individualize your helmet comfort with different accessory configurations, while you use the new helmet controls to adjust the respiratory airflow to your preferences, [see page 6.](#)



Light state 3

A more natural light state

There are two options of 3M™ Speedglas™ Auto-Darkening Filter Series G5-01 – both offering the popular 3M™ Speedglas™ Natural Colour Technology with great clarity before, during and after welding.

Smoother dark-light filter transition

Both G5-01 filters are also designed to minimize eye strain when switching from dark state to light state, by using an intermediate shade (5 or 7 depending on filter model).

Speedglas welding filter G5-01VC



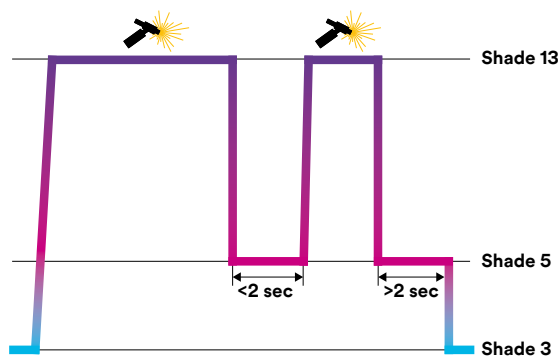
- Adjustable dark shades 5 (cut) and 8 to 14.
- Variable colour technology

Speedglas welding filter G5-01TW



- Adjustable dark shades 5 (cut) and 8 to 13.
- Tack Welding Mode

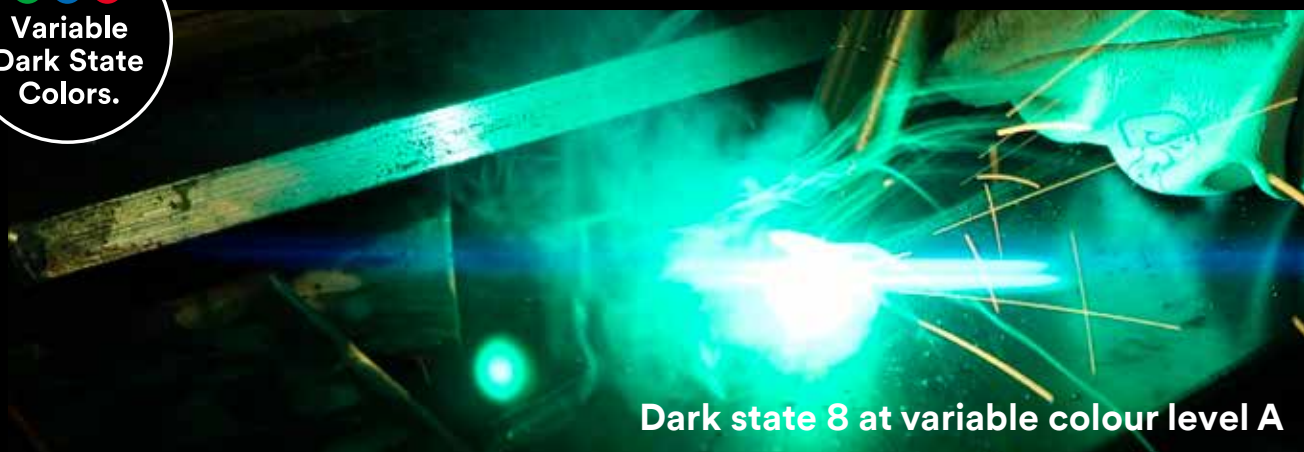
For technical specification see page 16



Watch our instructional
Tack Welding Mode video

When tack welding...

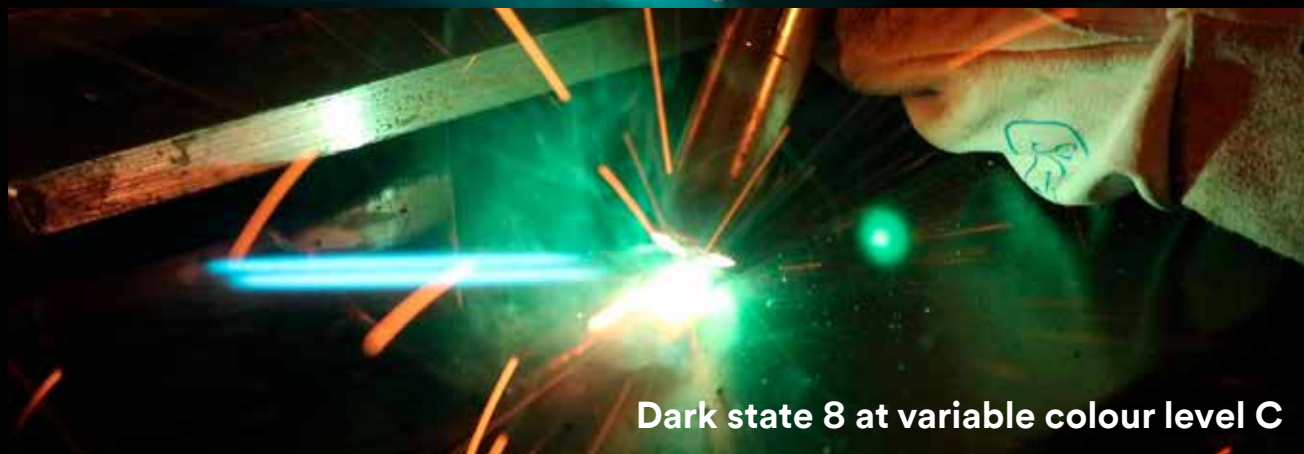
Human eyes aren't designed for handling rapid transitions from dark to light to dark again – which describes tack welding perfectly! The G5-01TW welding filter uses an intermediate shade 5 light state to help minimize eye strain during extended tack welding applications. If an arc is not struck within 2 seconds the welding filter will switch back to its normal light state (shade 3).



Dark state 8 at variable colour level A



Dark state 8 at variable colour level B



Dark state 8 at variable colour level C

3M™ Speedglas™ Welding Filter G5-01VC

Which colour tone works best for you?

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



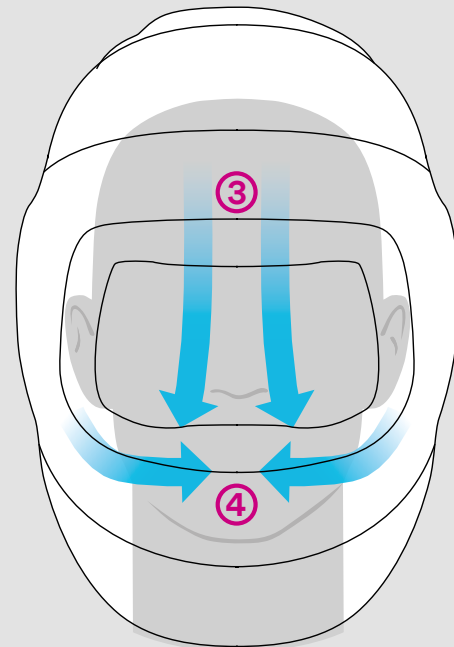
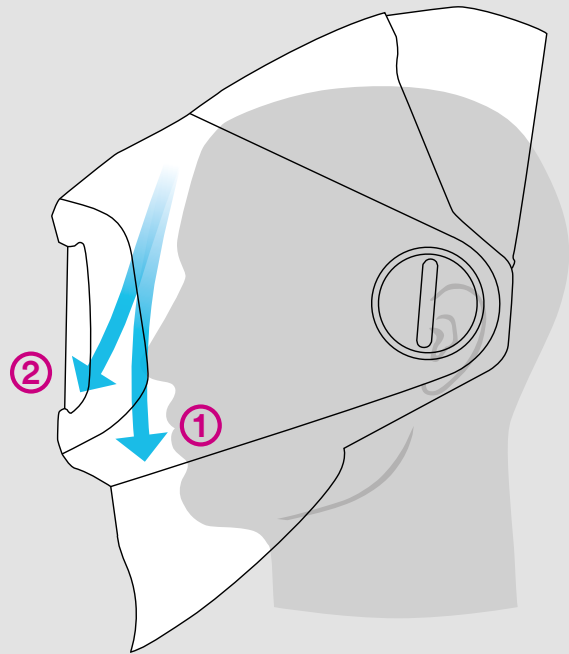
Scan this code to see how it works!

Take control of your flow

For more control over your comfort, the innovative G5-01 helmet duct system lets you direct the airflow to either your face ①, your visor ②, or some combination of both.

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

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



Scan this code to see how it works!



Stay protected

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

A system for many needs

Designed for heavy-duty, high-amperage welding and grinding, the G5-01 welding helmet connects to the 3M™ Adflo™ Powered Air Respirator to provide TH3-rated respiratory protection (NPF 500). The robust Adflo respirator provides all of the features you would expect in a premium system, including easy-to-use functionality.

For conditions where supplied air is required we can offer the 3M™ Versaflo™ Series Regulators.



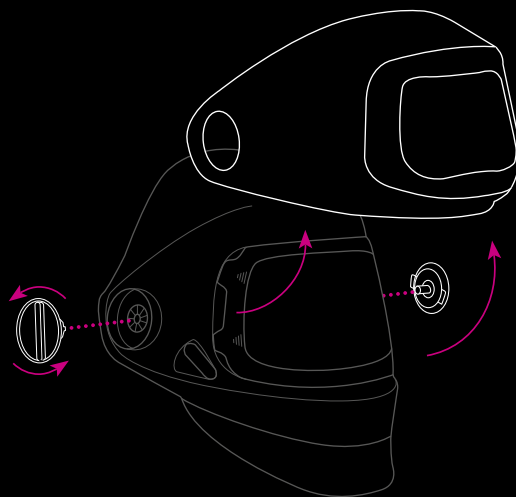
An all-new face seal features a locking toggle designed for fast, secure adjustments. Two new tabs make it easier to lift the seal over your glasses. And installation channels on the helmet speed the removal and replacement of the seal.



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

Designed to be slim,
without compromising
on heavy-duty coverage

**The Speedglas
welding helmet
G5-01 is designed
for rough conditions.**



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



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

Light up your workspace

A new, optional helmet-mounted task light provides hours of powerful lighting and runs off the Adflo battery pack, enabling welders to enter and work in poorly lit spaces.

- Task light specifically designed for welding
- Light weight – powered by the Adflo battery
- Positioned to cast a wide light of the workpiece
- Designed for even light distribution at normal welding distance
- Configurable light intensity



Tailor to fit your preferences

① New headband design

Improved, self-adjusting comfort paddles along your forehead. Also features a rotation stopper, designed to simplify donning of the helmet.

② Adjustment options

Control the distance and angle from your eyes to the clear visor and welding filter

③ Extra-large back pad

Delivered with an optional, extra-large, back head pad for enhanced comfort



Highly configurable coverage options

With a welding helmet that not only provides the right level of protection, but also increases the comfort of users in heavy-duty environments, we provide a number configurable options, so the user can optimize the helmet to individual needs and preferences.





Helmet in standard configuration with rigid neck protection and the smaller, fabric head protection.



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



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



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



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



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

Technical Specification



3M™ Speedglas™ Auto-darkening Welding Filter Series G5-01		
	G5-01TW	G5-01VC
MMAW (Electrode)	✓	
MIG/MAG	✓	
TIG (>20A)	✓	
TIG (1A-20A)	✓	
Plasma (welding and cutting)	✓	
Risk for hidden arc	✓	
Tack welding	✓	
Grinding	✓	
Viewing area (welding filter)	73 × 109 mm	
Viewing area (grinding visor)	170 × 104 mm	
3M™ Speedglas™ Natural Colour Technology	Yes	
Variable colour modes (A-B-C)	No	Yes
Bluetooth enabled	Yes	
Battery lifetime	1500 hours	
Classification	1/1/1/1	1/1/1/2
Dark state	Shade 8-13	Shade 8-14
CUT mode	Yes shade 5	
Tack welding mode	Yes	No
Light state	Shade 3	
UV/IR Protection	Shade 13 (permanent)	Shade 14 (permanent)
Auto ON	Yes	
Switching time, light -dark	0.1 ms (+23° C)	
Memory mode	Yes, via mobile device app	
Delay (switching time, dark-light)	50 – 1300 ms	
Two step recovery	Yes (shade 5)	Yes (shade 7)
Number of sensors (arc detection)	4	
Approvals Eye and Face protection		
Welding helmet	EN175:B	
Welding filter	EN379	
Protection plates	EN166:B	
Visor plate	EN166:B	
Approval Respiratory Protection / NPF*		
3M™ Adflo™ Powered Air Respirator	EN12941 (TH3) / NPF 500	
3M™ Versaflo™ Supplied Air Regulators V-100E, V-200E, V-500E	EN14594 (3B) / NPF 200	

* NPF = The nominal protection factor based on laboratory-measured performance data according to European standards.

A new system or an upgrade?

The 3M™ Speedglas™ Welding Helmet G5-01 fits both your 3M™ Adflo™ Powered air Respirator as well as the 3M™ Versaflo™ Supplied Air Regulators¹⁾.



	Speedglas welding filter G5-01TW	Speedglas welding filter G5-01VC
Complete powered air system	Helmet G5-01 with welding filter G5-01TW and Adflo high altitude respirator. Part No 61 78 20	Helmet G5-01 with welding filter G5-01VC and Adflo high altitude respirator. Part No 61 78 30
Incl consumable starter kit	Helmet G5-01 with welding filter G5-01TW, consumable kit (79 20 00) and Adflo high altitude respirator. Part No 61 78 29	Helmet G5-01 with welding filter G5-01VC, consumable kit (79 20 00) and Adflo high altitude respirator. Part No 61 78 39
Upgrade your old system	Helmet G5-01 with welding filter G5-01TW. Part No 61 11 20	Helmet G5-01 with welding filter G5-01VC. Part No 61 11 30

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



Scan this code to see how to unbox your new system



¹⁾ The following Adflo systems are our high altitude models with a heavy-duty Li-ion battery which extends operating time to 10–12 hours, at sea level with a fully charged battery and new clean filter. Actual system duration are dependent on configuration and environment.

Increase your comfort

We offer numerous accessories so you can configure your 3M™ Speedglas™ Welding Helmet G5-01 to meet your individual preferences and application needs.



Part No	Description	Part No	Description
16 90 20	Head protection in fabric	83 40 18	Flame resistant breathing tube cover (recommended when using the task light).
16 90 21	Head protection in fluorescent yellow	83 50 20	Braces for respirator
16 90 22	Head protection in leather	83 71 10	Adflo odour filter
16 90 23	Head protection in fabric (large)	83 71 20	Odour filter pad
16 90 24	Scrape guard (not shown)	83 72 42	Adflo gas filter A1B1E1
16 90 30	Shroud	83 75 42	Adflo gas filter A2
16 90 35	Extended cover kit (shroud and large head cover in fabric)	BPK-01	Back pack for respirator
16 90 41	Neck protection in fabric (small)		
16 90 42	Neck protection in fabric (large)		
16 90 43	Neck protection in leather		
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 11	Pouch with Adflo battery, for task light when using supplied air regulator (not shown)		

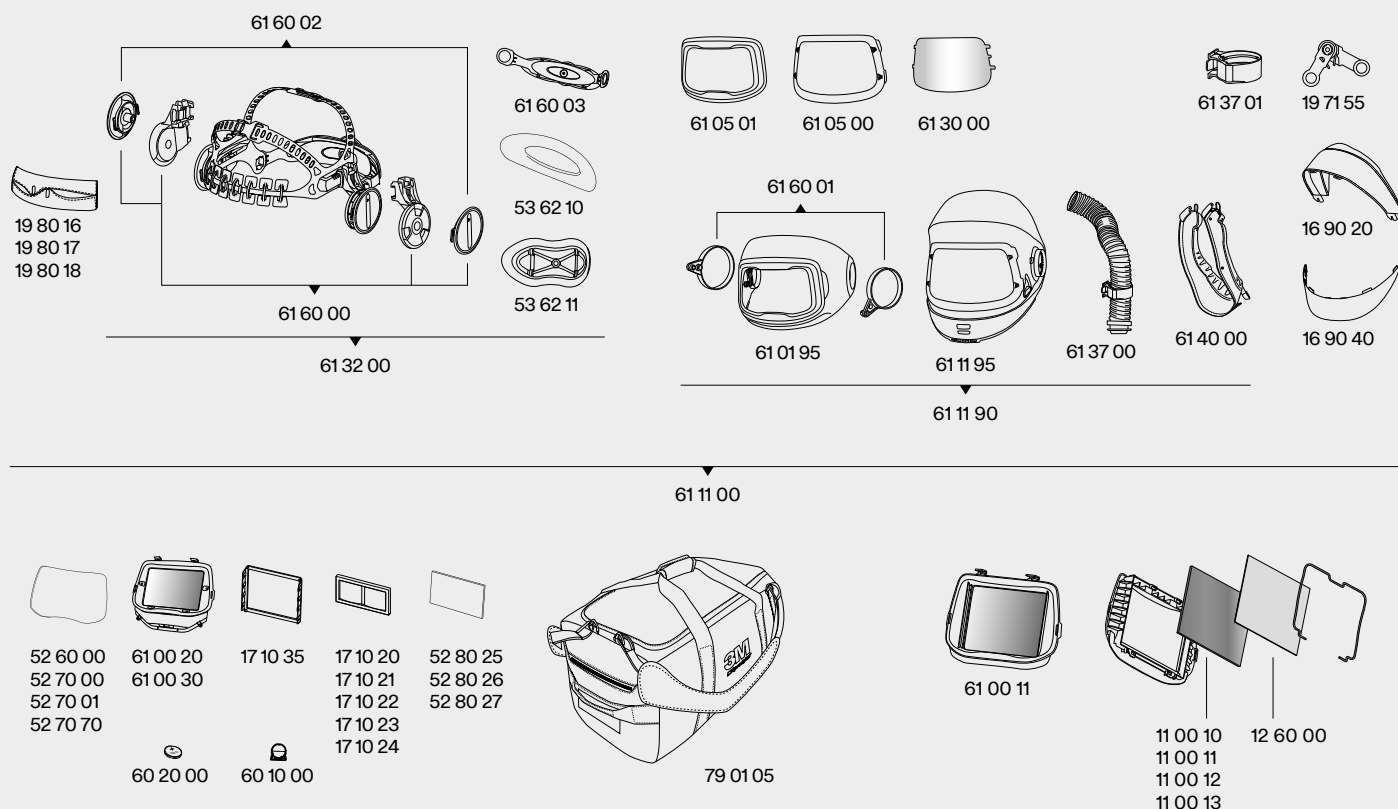
3M™ Versaflo™ Supplied Air Regulators



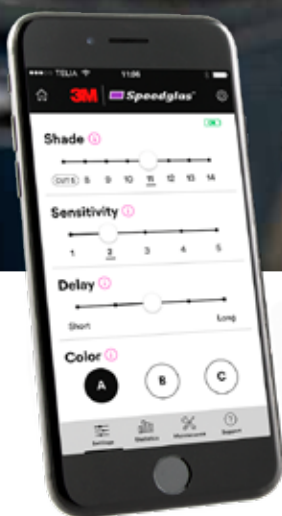
V-100E	Air cooling regulator
V-200E	Air heating regulator
V-500E	Flow controlled regulator

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

Spare parts and consumables



Part No	Description	Part No	Description	Part No	Description
11 00 10	Passive welding filter lens shade 10 (90×110)	52 70 01	Outer protection plate (scratch +), pkg of 10	61 30 00	Visor plate, anti-fog and hardcoated, pkg. of 5
11 00 11	Passive welding filter lens shade 11 (90×110)	52 70 70	Outer protection plate (heat), pkg of 10	61 32 00	Headband with assembly parts
11 00 12	Passive welding filter lens shade 12 (90×110)	52 80 25	Inner cover plate, pkg of 5	61 37 00	Airduct breathing tube (short) incl. holder
11 00 13	Passive welding filter lens shade 13 (90×110)	53 62 10	Cushion part for headband G5-01	61 37 01	Holder for breathing tube
12 60 00	Inner cover plate for passive filter	53 62 11	Large head rest	61 40 00	Face seal
16 90 20	Head protection in fabric (small)	60 10 00	Battery holder	61 60 00	Pivot and sliding mechanism, including pivot knobs
16 90 40	Neck protection rigid	60 20 00	Battery CR2450	61 60 01	Pivot rings for outer shield
17 10 20	Magnifying lens 1.0X	61 00 11	Speedglas passive welding filter kit G5-01 (shade 11)	61 60 02	Pivot knobs
17 10 21	Magnifying lens 1.5X	61 00 20	Speedglas welding filter G5-01TW	61 60 03	Headband back part
17 10 22	Magnifying lens 2.0X	61 00 30	Speedglas welding filter G5-01VC	61 78 00	Helmet G5-01, without welding filter, with 3M™ Adflo™ Powered Air Repirator
17 10 23	Magnifying lens 2.5X	61 01 95	Outer shield	61 78 09	Helmet G5-01, without welding filter, with 3M™ Adflo™ Powered Air Repirator and consumable starter kit
17 10 24	Magnifying lens 3.0X	61 05 00	Front cover for inner visor	79 01 05	Carry Bag
17 10 35	Magnifying lens holder	61 05 01	Front cover for flip-up	79 20 00	Consumable starter kit G5-01, includes 3 different sweatbands, face seal, visor plate, inner and outer cover plates.
19 71 55	Hinge mechanism, 1 pair	61 11 00	Welding helmet G5-01, without welding filter		
19 80 16	Sweatband (towelling), pkg of 3	61 11 90	Welding helmet G5-01, without welding filter, without neck or head protection		
19 80 17	Sweatband (fleecy cotton), pkg of 3	61 11 95	Inner shield with airduct and airflow controls (including visor frame)		
19 80 18	Sweatband (leather)				
52 60 00	Outer protection plate (standard), pkg of 10				
52 70 00	Outer protection plate (scratch), pkg of 10				



3M Connected Equipment App

- Opt-in by securely pairing your smartphone to your G5-01 welding filter using the 3M Connected Equipment App
- Program up to ten memory modes (settings for dark shades, sensitivity, delay etc) with your phone
- Easily record your welding helmet maintenance log to the App
- Instantly know statistics, including: when your ADF was first activated; hours on; hours in the dark state; hours in the light state; and the number of on/off cycles
- Have instant access to User Manuals and Parts List



Learn more about the G5-01
Scan this QR-code or go to youtube.com/3MSpeedglas



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