



 **Speedglas**[™]
Welding Safety

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

Versatility to upgrade your performance

3M Science. Applied to life.[™]

Farwell to compromises

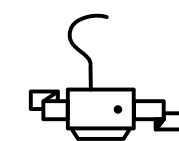
Are you a professional welder who performs a variety of welding and grinding tasks?

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.



...two versatile helmets.





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.

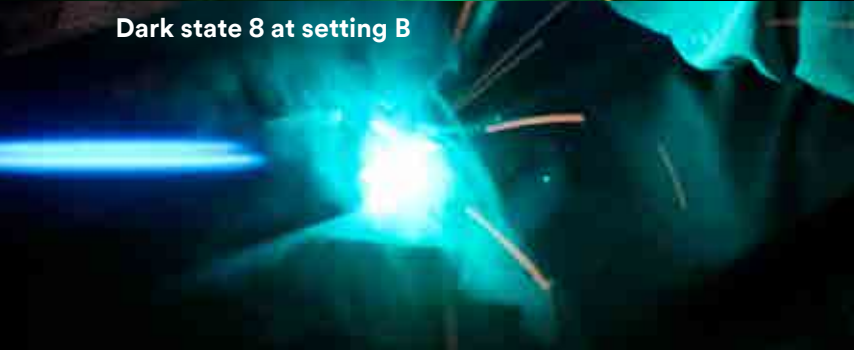
Quality

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

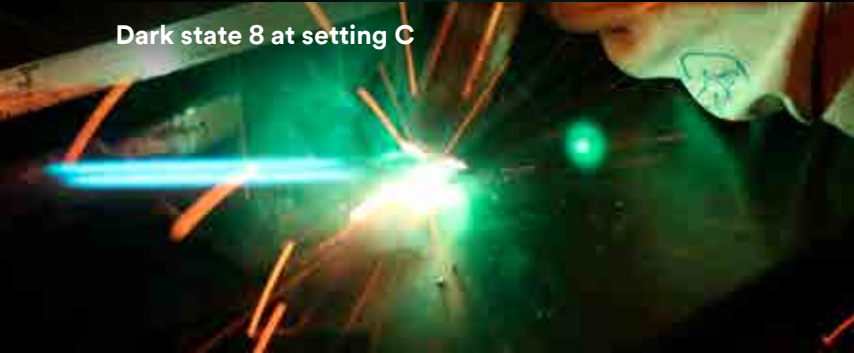
Dark state 8 at setting A



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

Four arc-detection sensors

Bluetooth connection



G5-01/03TW (tack welding)

Light state 2.5

TAP function

Four 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



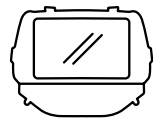
G5-01/03-Passive

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

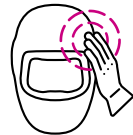
* Launch date may vary between model and area

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



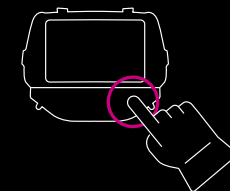
Tap on the side of the welding helmet, with or without a glove, to easily switch between grind (or cut) mode and weld mode.

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.



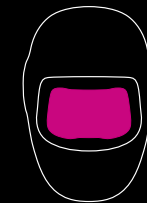
1

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.



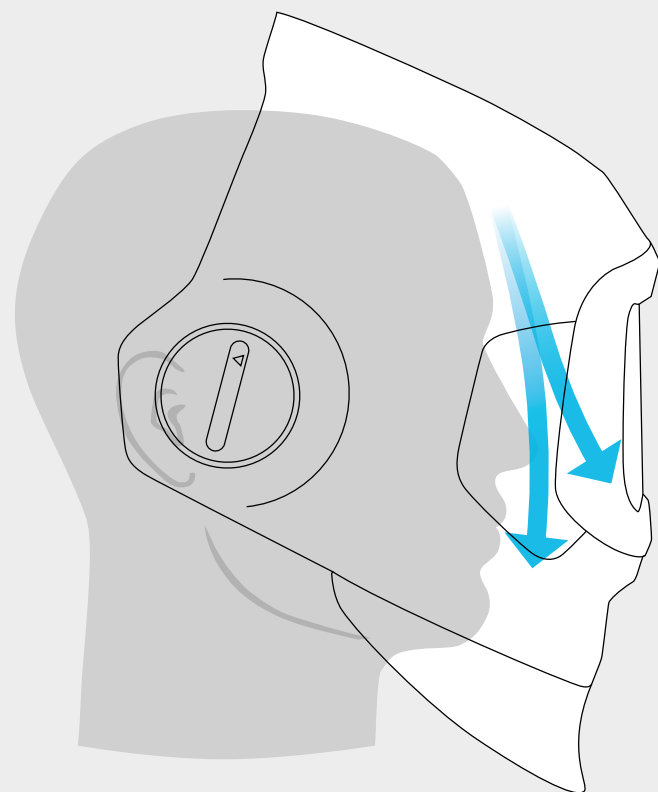
4

Tap again and the filter switches back to welding mode.

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

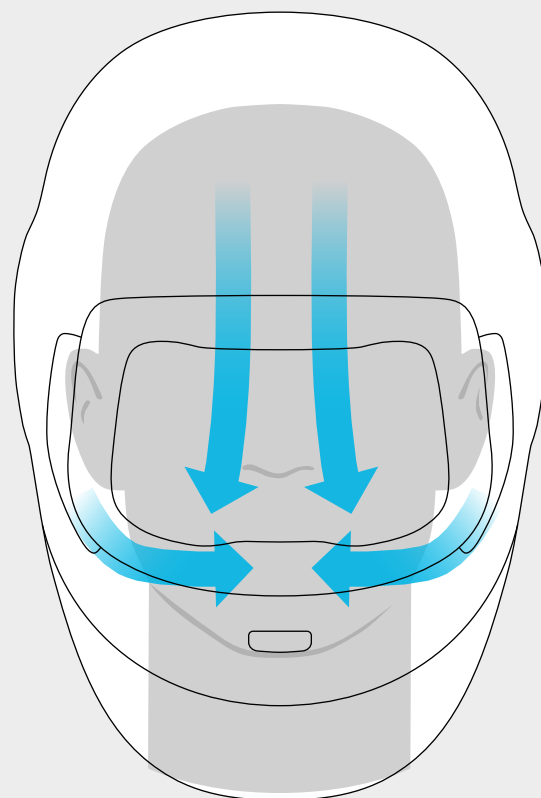
Adjustable air distribution and air flow control

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.

Your choice of powered or supplied air

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

> Learn more about
powered and supplied
air choices on page 18



3M™ Speedglas™ Welding Helmet G5-03 Pro

We have you covered

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



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

> Learn more about
safety helmet
choices on page 18

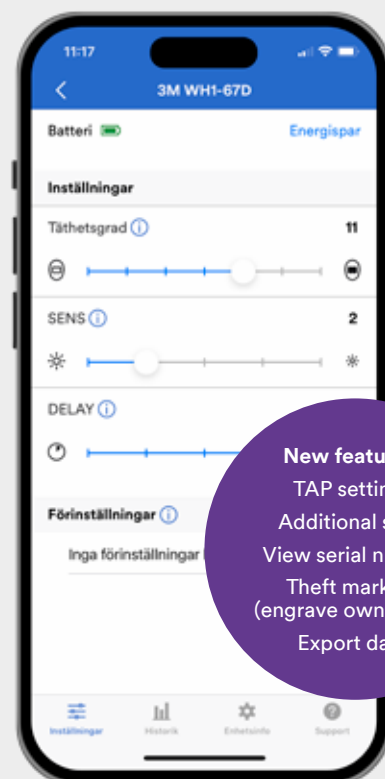


3M™ Speedglas™ Heavy Duty Backpack

Helping to improve performance and life for welders

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

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



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

3M™ Connected Equipment App

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

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



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

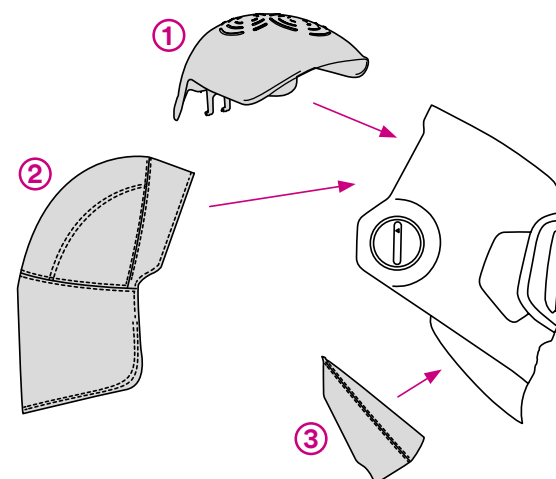
3M™ Speedglas™ Welding Helmet G5-03 Pro Air is certified TH3 (CE) and APF1000 (NIOSH). This level of protection significantly reduces exposure to welding respiratory hazards when the helmet is used full time.

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 H700.

Feel the safety of a certified protection system!

Extend Your Protection

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



① Scrape guard*

Helps to protect the welder against head scrapes.

② Head cover

Increase coverage of your head by adding a fabric head cover

③ Neck Protection

Interchangeable lower part of the welding helmet (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 17


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



Technical Specification

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

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



Common parts between G5-01 and G5-03

For ease of flexibility onsite, many G5-01 spare parts are also compatible with G5-03. This allows you to hold less spare inventory, whilst 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

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



3M™ Speedglas™ Welding Helmet G5-03 Pro

- G5-03 Pro helmet with no welding filter
Part No 63 18 00
- G5-03 Pro helmet with welding filter G5-01/03TW
Part No 63 18 20
- G5-03 Pro helmet with welding filter G5-01/03VC
Part No 63 18 30



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

- G5-03 Pro Air helmet with no welding filter
Part No 63 28 00
- G5-03 Pro Air helmet with no welding filter, 3M™ Adflo™ Powered air Respirator and carry bag
Part No 63 77 00
- G5-03 Pro Air helmet with welding filter G5-01/03TW, 3M™ Adflo™ Powered air Respirator and carry bag
Part No 63 77 20
- G5-03 Pro Air helmet with welding filter G5-01/03VC, 3M™ Adflo™ Powered air Respirator and carry bag
Part No 63 77 30

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



16 90 22 ●

16 90 43 ●

16 90 20 ●

16 90 41 ●

16 90 42 ●

16 90 24 ●

16 90 23 ●

16 90 21 ●

16 90 35 ●




16 90 30 ●

16 91 00 ●

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

Technical Specification

			
3M™ Speedglas™ Auto-darkening Welding Filter Series G5-01/03	G5-01/03VC	G5-01/03TW	G5-01/03NC ¹⁾
MMAW (Electrode)	✓	✓	✓
MIG/MAG	✓	✓	✓
TIG (>20A)	✓	✓	✓
TIG (1A-20A)	✓	✓	✓
Plasma (welding and cutting)	✓	✓	✓
Risk for hidden arc	✓	✓	✓
Tack welding		✓	
Grinding	✓	✓	✓
Viewing area (welding filter)	2.9 × 4.3 in.	2.9 × 4.3 in.	???? in.
3M™ Speedglas™ Natural Color Technology	✓	✓	✓
Variable color modes (A-B-C)	✓		
TAP function	✓	✓	
Bluetooth enabled	✓	✓	
Battery lifetime	1500–2000 hours	1500–2000 hours	2000 hours
Classification (ISO)	V2	V2	V2
Dark state	Shade 8–14	Shade 8–13	Shade 8–12
CUT mode	Yes shade 5	Yes shade 5	Yes shade 5
Tack welding mode		✓	
Light state	Shade 3	Shade 2.5	Shade 3
UV/IR Protection	Shade 14 (permanent)	Shade 13 (permanent)	Shade 12 (permanent)
Auto ON	✓	✓	
Switching time, light -dark	0.1 ms (+73° F)	0.1 ms (+73° F)	0.1 ms (+73° F)
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	??? x ??? in.
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, whilst 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: 46-0099-87 ● Shroud

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



3M™ Speedglas™ Welding Helmet G5-03 Pro

G5-03 Pro helmet with no welding filter
Part No 10-0300-52

G5-03 Pro helmet with welding filter G5-01/03TW
Part No 10-0100-30TW

G5-03 Pro helmet with welding filter G5-01/03VC
Part No 10-0100-30VC



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

G5-03 Pro Air helmet with no welding filter
Part No 45-0099-35

G5-03 Pro Air helmet with no welding filter, 3M™ Adflo™ Powered air Respirator and carry bag
Part No 45-1101-00

G5-03 Pro Air helmet with welding filter G5-01/03TW, 3M™ Adflo™ Powered air Respirator and carry bag
Part No 45-1101-30TW

G5-03 Pro Air helmet with welding filter G5-01/03VC, 3M™ Adflo™ Powered air Respirator and carry bag
Part No 45-1101-30VC

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



46-0700-84 ●



46-0700-67 ●



46-0700-80 ●



46-0700-66 ●



46-0700-82 ●



46-0700-81 ●



46-0700-83 ●



46-1000-00 ●



46-0099-87 ●

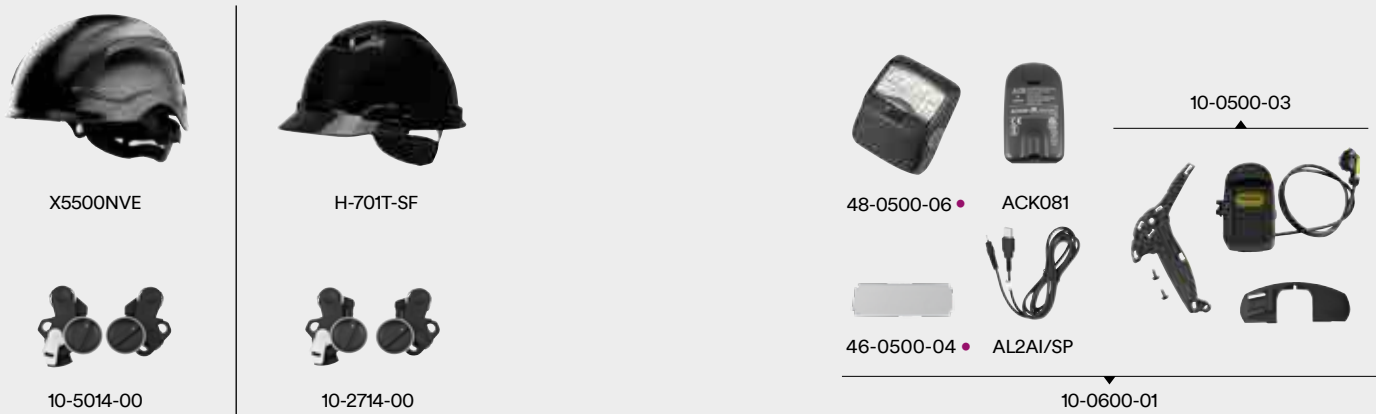


06-0700-83 ●

Part No	Description	Part No	Description	Part No	Description
46-0700-80 ●	Head protection in fabric	46-0700-66 ●	Head protection in fabric	46-0700-81 ●	Large fabric head cover
46-0700-83 ●	Head protection fluorescent yellow	46-0700-82 ●	Scrape guard G5-01/03	46-0700-67 ●	Neck protection in leather
46-0700-84 ●	Head protection in leather	46-0099-87 ●	Shroud	06-0700-83 ●	Protective hood black/grey
		46-1000-00 ●	Extended cover kit (shroud) and large head cover in fabric)		

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

Accessories
G5-03 Pro only



Accessories
G5-03 Pro Air only



**3M™ Speedglas™ Fresh-air
III Supplied Air Regulators**

V-100 Vortex cooling assembly, includes valve V-150, belt W-2963 and holder.

V-200 Vortemp heating assembly, includes valve V-250, belt W-2963 and holder.

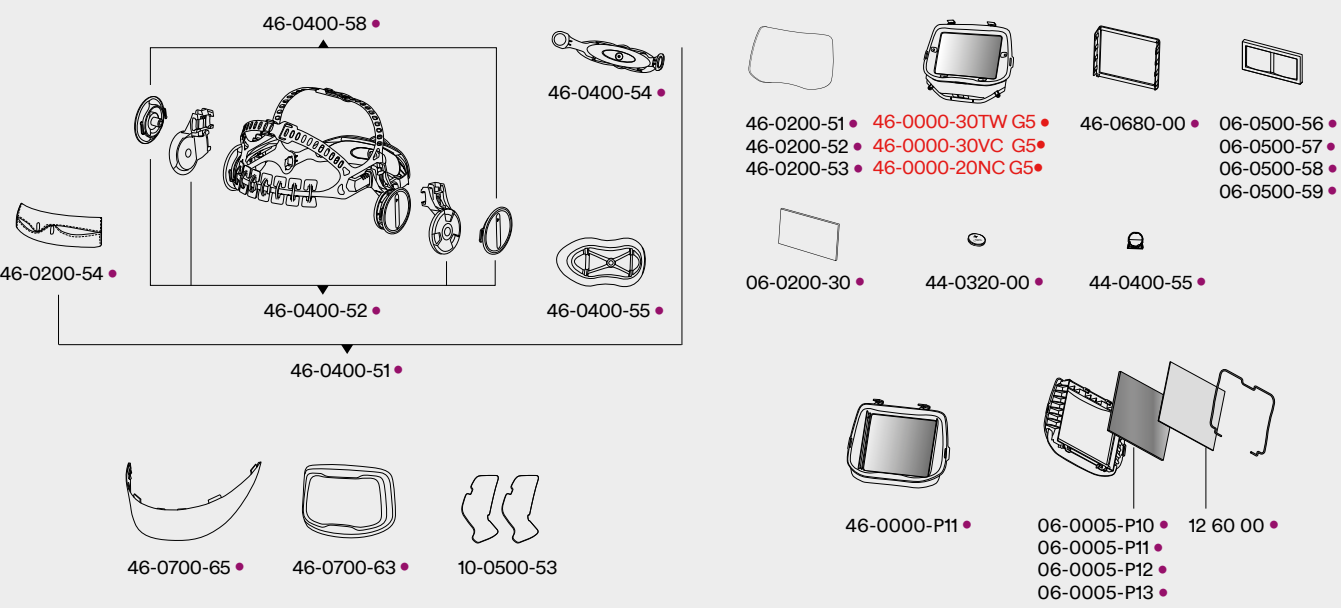
V-300 Air Regulating Valve Assembly

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

Part No	Description	Part No	Description	Part No	Description
46-0500-01	Task light, incl mounting parts and cables	48-0500-06	Task light	36-0699-99-06	Adflo odour filter
46-0500-04	Protection plate for task light, pkg. of 5	16 92 23	Pouch for Adflo battery, for task light when using supplied air regulator (not shown)	35-0799-99-01	Nuisance odor filter pad
46-0500-02	Long power cable for task light			35-0799-99-10	Nuisance odor filter pad, pkg. of 10
46-0800-03	Short power cable for task light	10-5014-00	Hard Hat Adaptor G5-03 Pro (X5)	15-0499-99-02	Adflo gas filter A1B1E1
10-0500-03	Task light kit (light, cable, holder with cable & battery)	10-2714-00	Hard Hat Adaptor G5-03 Pro (H7/G3)	15-0499-99-06	Adflo gas filter A2
10-0800-01	Welding Helmet Tasklight holder for battery with attachment parts	SQ-15	Flame resistant breathing tube cover (recommended when using the task light).	ACK081	Rechargeable Battery
		15-0099-17	Braces for respirator	AL2AI/SP	Battery Charging Cable for ACK081
				BPK-01	Back pack for respirator
				H-701T-SF	3M™ Safety Helmet H-701R (non-vented)
				X5500NVE	3M™ Safety Helmet X5500NVE (non-vented)

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

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



Spare parts and consumables
G5-03 Pro Air only



Spare parts and consumables
G5-03 Pro only



Part No	Description	Part No	Description	Part No	Description
06-0005-P10	Passive welding filter lens shade 10 (90×110)	46-0200-51	Outer protection plate (standard), pkg of 10	46-0700-63	Front frame G5-01/03
06-0005-P11	Passive welding filter lens shade 11 (90×110)	46-0200-52	Outer protection plate (scratch), pkg of 10	46-0400-51	Headband with assembly parts
06-0005-P12	Passive welding filter lens shade 12 (90×110)	46-0200-53	Outer protection plate (scratch +), pkg of 10	46-0400-57	Air duct breathing tube (short) incl. holder
06-0005-P13	Passive welding filter lens shade 13 (90×110)	06-0200-30	Inner protection plate anti fog	46-099-28	Face seal
12 60 00	Inner cover plate for passive filter	46-0400-55	Large head rest	46-0400-52	Pivot and sliding mechanism, including pivot knobs
46-0700-65	Neck protection rigid	44-0400-55	Battery holder	46-0400-58	Pivot knobs
06-0500-56	Magnifying lens 1.0X	44-0320-00	Battery CR2450	46-0400-54	Headband back part
06-0500-57	Magnifying lens 1.5X	46-0000-P11	Speedglas passive welding filter kit G5-01/03 (shade 11)	10-0300-52	Helmet shell G5-03 Pro, no headband
06-0500-58	Magnifying lens 2.0X	46-0000-30TW	Speedglas welding filter G5-01/03TW	10-0500-53	Sidewindow cover plates
06-0500-59	Magnifying lens 2.5X	46-0000-30VC	Speedglas welding filter G5-01/03VC	45-0099-33	Helmet shell G5-03 Pro Air, no headband
46-0680-00	Magnifying lens holder	46-0000-20NC	Speedglas welding filter G5-01/03NC	SG-95	Carry Bag
48-0200-54	Sweatband (towelling), pkg of 3				

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

The Speedglas generation 5 welding helmets

The right equipment for each job



3M™ Speedglas™
Welding Helmet G5-01

Heavy duty welding and grinding

3M™ Speedglas™
Welding Helmet G5-02

Tig welding

3M™ Speedglas™
Welding Helmet G5-03

Welding and grinding



Learn more about the G5-03 helmet

Scan this QR-code or go to youtube.com/3MSpeedglas

⚠ WARNING

Product standards determine what type and level of protection is provided. Check the technical information and product markings to determine the product standard. This information should be considered but not in isolation when consulting your risk assessment. Always consider local regulation and requirements. The result of the risk assessment should determine if the PPE is an appropriate control. For more information see the user instructions or contact 3M for technical support.

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