

**3M** Science.  
Applied to Life.™

# We've got you covered.

3M™ Speedglas™ Multi Protection  
Welding Helmets 9100 MP and 9100 MP-Lite

 **Speedglas**™



# Five levels of protection

## Eye Protection

3M™ Speedglas™ Auto-darkening Filter Series 9100 meets EN 379 by providing constant UV/IR protection. Optional passive welding filters (EN 169).

## Head Protection

The 3M™ Speedglas™ Welding Helmet 9100 MP offers a safety helmet approved to EN 397 440 Vac, LD.



As a lighter alternative we now introduce the 3M™ Speedglas™ Welding Helmet 9100 MP-Lite, incorporating a bump cap approved according to EN 812.

## Hearing Protection (optional)

The 3M™ PELTOR™ Earmuffs X-Series allows you to select noise attenuation from SRN 27dB to SNR 36dB while maintaining a sleek, low profile.

## Face Protection

Applicable to EN 166:B. Classification B indicates resistance to high speed particles at medium energy impact (120 m/s).

## Respiratory Protection\*

With the 3M™ Adflo™ Powered Air Respirator, these systems offers a nominal protection factor (NPF) of 500, according to EN 12941 (TH3)\*\*.

**Traditionally, welders have had limited options for multi-protection.**

That's why we've built 3M™ Speedglas™ Systems 9100 MP (multi-protection) just for welders. You can work in a highly integrated, comfortable, protective envelope, with big, wide views – for weld prep, welding and grinding.

\* As a supplied air alternative there is the 3M™ Versaflo™ Regulator V-500E (14594/3B), NPF 200.

\*\* When used with breathing tubes 83 40 16 and 83 40 17.



Head protection

# Safety helmet or bump cap?

3M™ Speedglas™  
Welding Helmet 9100 MP

**Impact protection** **Safety helmet**  
**EN 397**

**For environments with falling hazards:**  
3M™ Speedglas™ Welding Helmet 9100 MP features an EN 397 approved safety helmet. Helping to protect your head from falling objects and overhead hazards.

**NEW** 3M™ Speedglas™  
Welding Helmet 9100 MP-Lite

**≈20% lighter\*** **Bump cap**  
**EN 812**

**For environments with stationary hazards:**  
3M™ Speedglas™ Welding Helmet 9100 MP-Lite features an EN 812 approved bump cap. Helping to protect your head from bumps, scraps and cuts from low ceilings, pointed corners and overhanging static objects.

\* Compared to the 3M™ Speedglas™ Welding Helmet 9100 MP



Respiratory protection

# Powered or supplied air?

## Powered air respirator

With a slim profile, light weight, and ergonomic design, the 3M™ Adflo™ Powered Air Respirator was especially designed for you, the highly mobile welder. To help keep you protected, the Adflo Powered Air Respirator is designed to maintain a constant flow rate regardless of the battery's charge or the particle loading of the filter, providing a Nominal Protection Factor (NPF)\* of 500.

For hot, humid jobs, you can increase the airflow to approximately 200 l/min by simply pushing the ON button a second time. And for added protection, you can simply add a gas filter onto the particle filter. You can selectively replace either filter as needed.



## Supplied air regulator

Set your own airflow level – from approximately 170 l/min to 305 l/min. Even when you connect pneumatic tools to your belt-mounted 3M™ Versaflo™ V-500E Supplied Air Regulator, your helmet's airflow is designed to stay constant to the level you set.

An integrated silencer helps reduce the sound level of the airstream.

Envision: Respiratory protection to NPF 200. And the ability to comfortably increase your airflow.



\* The Nominal Protection Factor (NPF) is based on laboratory-measured performance data according to European Standards. NPF 500 = A maximum inward leakage of 0,2% which means that the air inside the head top is 500 times cleaner than outside the head top (The Assigned Protection Factor (APF) is assigned by local authorities in each European country and can therefore be different in each country).



Hearing protection

# 3M™ PELTOR™ Earmuffs



3M offers many different earmuff models that are compatible with our multi protection welding helmets, including the 3M™ PELTOR™ Earmuffs X-Series, featuring:

- Improved ear cushion foam technology
- Streamlined cups without compromising noise attenuation
- Lightweight dual mould cups to help minimise heat and moisture build-up
- Integrated design for more robustness
- Colour-coded for ease of selection



3M™ PELTOR™ Earmuffs X1  
SNR: 27dB\*



3M™ PELTOR™ Earmuffs X2  
SNR: 31dB\*



3M™ PELTOR™ Earmuffs X3  
SNR: 33dB\*



3M™ PELTOR™ Earmuffs X4  
SNR: 33dB\*



3M™ PELTOR™ Earmuffs X5  
SNR: 36dB\*

\* For additional earmuff models and further attenuation information please visit [www.3M.eu/PPESafety](http://www.3M.eu/PPESafety)

## Featured accessories



Heat-reflecting, silver-coated helmet cover helps shed dust and particles so they are less likely to fall onto you when you raise your welding filter.

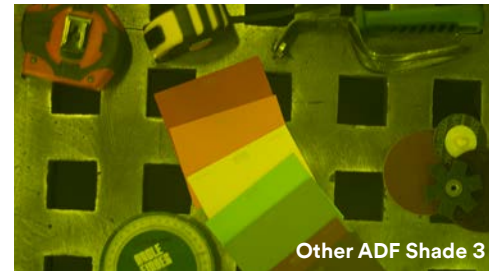


All-new shroud covers front and back of neck and shoulders, as well as upper chest and back. Durable fabric resists sparks, flames and heat.

Eye protection

# 3M™ Speedglas™ Filter 9100XXi

The new welding filter 9100XXi is your window to a new world of more realistic colour and detail – to help you focus on your welding set-up, welding technique and inspection of just-completed welds. When combined with our multi protection systems, the new welding filter will bring the following benefits to aid you in your daily work:



Other ADF Shade 3



9100XXi ADF Shade 3

See the difference!



Improved optics deliver more natural color and contrast, which may allow:

- Better control of the weld puddle with a view that appears lighter, brighter and more realistic
- Greater precision with set-up and finishing operations
- Simplified workflow with a clearer view of welding machine controls
- Grab and Go feature automatically turns the welding filter on to your last welding setting whenever you pick up the helmet. Automatically shuts down after a period of inactivity.

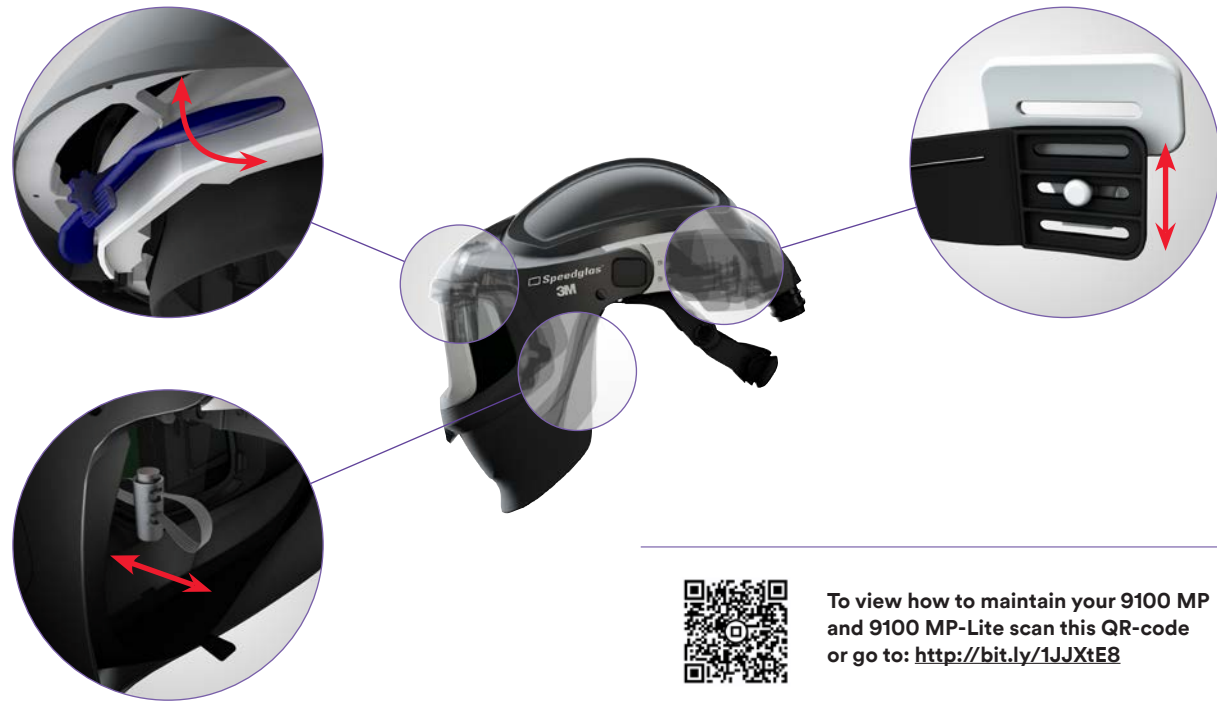
For more information, please see: [www.3M.eu/9100XXi](http://www.3M.eu/9100XXi)





# Precise adjustment & smooth operation

We offer you precise adjustment settings for the headband and face seal. After you've tailored them to precisely profile your head and face, don the headgear and note its balance. Feel the smooth motion as you raise and lower the welding filter. Experience the comfortable fit and remind yourself you're wearing up to five levels of protection



To view how to maintain your 9100 MP and 9100 MP-Lite scan this QR-code or go to: <http://bit.ly/1JJXtE8>



The clear protective visor is large (17×10 cm), curved, and with an excellent field of view. It's perfect for prepping, inspecting welds and grinding...and just walking around your facility with full-time, TH3-class respiratory protection.





Respiratory protection

# Build the system most appropriate for your needs



\* Included as standard when you order a complete respiratory system with welding helmet and air delivery unit; must always be used.  
 \*\* For welders working at higher altitudes there is a special respirator version to adjust for changes in air density: 3M™ Adflo™ High Altitude Turbo.  
 \*\*\* Gas filter must always be used together with a particle filter and we recommend to use a heavy-duty battery (sold separately: 83 76 31). In some configurations it is also required to use a breathing tube with silencer (non-QRS: 83 40 08), always verify approved combinations with your Safety Engineer or contact a certified Industrial Hygienist for advice.

# Headtops and systems\*

Part No	Description	Part No	Description
57 28 00	Speedglas welding helmet 9100 MP without welding filter.	59 28 00	Speedglas welding helmet 9100 MP-Lite without welding filter.
57 77 00	Speedglas welding helmet 9100 MP without welding filter, with Adflo powered air respirator.	59 77 00	Speedglas welding helmet 9100 MP-Lite without welding filter, with Adflo powered air respirator.
57 88 00	Speedglas welding helmet 9100 MP without welding filter, with Versaflo supplied air regulator V-500E.	59 88 00	Speedglas welding helmet 9100 MP-Lite without welding filter, with Versaflo supplied air regulator V-500E.

\*Please choose your welding filter below.

## Part numbers

Welding helmet		Powered Air Respirator		Supplied Air Regulator	
Part No	Description	Part No	Description	Part No	Description
16 90 15	Shroud	53 35 05	Adapter for non-QRS breathing tubes.	08-00-30P	Standard duty air supply tube, 10 m.
16 90 14	Safety helmet cover	83 40 08	Breathing tube with silencer, non QRS.	308-00-31P	Standard duty air supply tube, 30 m.
50 00 05	Speedglas welding filter 9100V.	83 40 16	Breathing tube, self adjusting (52,5 to 85 cm), with QRS connection.	308-00-40P	Coiled air supply tube, 7.5 m.
50 00 15	Speedglas welding filter 9100X.	83 40 17	Breathing tube, heavy-duty rubber (80 cm).	308-00-72P	Standard duty, anti-static, high temperature air supply tube, 10 m.
50 00 25	Speedglas welding filter 9100XX.	83 40 18	Flame resistant breathing tube cover.	312-03-00P3	3-way manifold.
50 00 26	Speedglas welding filter 9100XXi.	83 40 20	Adflo braces.	312-03-01P3	2-way manifold.
M-958	Chin strap.	83 50 20	Adflo braces.	530-12-53P3	Belt unit coupling plug – CEJN.
X1P3	3M™ PELTOR™ Earmuffs X1 (26 dB).*	83 71 10	Odour filter.	530-12-81P3	Socket and plug – CEJN.
X2P3	3M™ PELTOR™ Earmuffs X2 (30 dB).*	83 73 01	Gas filter kit: A1B1E1 filter and Li-ion Heavy-Duty battery.	ACU-03	3M™ Aircare™ Filtration System (wall mounted).
X3P3	3M™ PELTOR™ Earmuffs X3 (32 dB).*	83 75 42	Gas filter A2.	ACU-04	3M™ Aircare™ Filtration System (stand alone).
X4P3	3M™ PELTOR™ Earmuffs X4 (33 dB).*	83 76 31	Li-ion Battery Heavy-Duty.		
X5P3	3M™ PELTOR™ Earmuffs X5 (36 dB).*				
Z3AF/2	Helmet assembly parts for PELTOR X-series earmuffs, left and right.				
80 60 20	Backpack				

\* When ordering earmuffs for 9100MP/9100 MP-Lite welding helmets, also order the assembly parts Z3AF/2.

# Technical Specification

● Best\* ● Good\*

3M™ Speedglas™ Welding Helmet 9100 MP					3M™ Speedglas™ Welding Helmet 9100 MP-Lite			
3M™ Speedglas™ Welding Filter	9100XXi	9100XX	9100X	9100V	9100XXi	9100XX	9100X	9100V
MMAW (Electrode)	●	●	●	●	●	●	●	●
MIG/MAG	●	●	●	●	●	●	●	●
TIG (>20A)	●	●	●	●	●	●	●	●
TIG (1A-20A)	●	●	●	●	●	●	●	●
Plasma (welding and cutting)	●	●	●	●	●	●	●	●
Risk for hidden arc	●	●	●	●	●	●	●	●
Tack welding	●	●	●	●	●	●	●	●
Grinding (welding filter)	●	●	●	●	●	●	●	●
Grinding (clear visor)	●	●	●	●	●	●	●	●
Viewing area (welding filter)	73x107 mm		54x107 mm	45x93 mm	73x107 mm		54x107 mm	45x93 mm
Battery lifetime	1 800 hours	2 000 hours	2 500 hours	2 800 hours	1 800 hours	2 000 hours	2 500 hours	2 800 hours
Solar cell	No		Yes		No		Yes	
Number of sensors (arc detection)	3				3			
Classification	1 / 1 / 1 / 2				1 / 1 / 1 / 2			
Dark state	Shade 5, 8, 9–13				Shade 5, 8, 9–13			
Light state	Shade 3				Shade 3			
UV/IR Protection	Shade 13 (permanent)				Shade 13 (permanent)			
Auto ON	Yes	No			Yes	No		
Switching time, light–dark	0,1 ms (+23° C)				0,1 ms (+23° C)			
Memory mode	Yes	No			Yes	No		
Delay (switching time, dark–light)	40–800 ms	40–1 300 ms			40–800 ms	40–1 300 ms		
SideWindows option	Yes				Yes			
Approvals Eye and Face protection Welding helmet Welding filter Protection plates Visor plate	EN175:B, EN 166 B EN 379 EN166:BT** EN166:BT**				EN175:B, EN 166 B EN 379 EN166:BT** EN166:BT**			
Approval Head protection Safety helmet Bump cap	EN 397 440 Vac, LD -				- EN 812			
Approval Respiratory Protection / NPF*** Adflo Powered Air Respirator Versaflo V-500 Supplied Air Regulator	EN12941(TH3) /NPF 500 EN14594 (3B)/ NPF 200				EN12941(TH3) /NPF 500 EN14594 (3B)/ NPF 200			

\* The ratings (good - best) above refer to the products listed in this chart and should be seen as general recommendations based on differences in product comfort features and configuration options when using these selected Speedglas welding helmet series.

\*\* According to the European Standards the mechanical strength (for this product) is classified as B; resistance to high speed particles at medium energy impact (120 m/s). The letter T indicates that the test for resistance to high speed particle was conducted at extremes of temperatures (-5° to +55°C).

\*\*\* The Nominal Protection Factor (NPF) is based on laboratory-measured performance data according to European Standards. NPF 500 = A maximum inward leakage of 0,2% which means that the air inside the head top is 500 times cleaner than outside the head top (The Assigned Protection Factor APF is assigned by local authorities in each European country and can therefore be different in each country).



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