



Legendary Quality Proven Durability

3M™ Speedglas™ Selection Guide

Select the Speedglas™ Welding Helmet and Auto Darkening Filter (ADF) combination that's right for you.

Entry	Mid-Range	Premium	Premium with Air
<p>100S (single shade ADF) 100V (variable shade ADF)</p> <p>100V with Graphics</p> <p>Ideal for occasional welders and students</p>	<p>Super Light (SL)</p> <p>Designed for specialty (TIG) and quick welding tasks</p>	<p>9100 9100 FX</p> <p>Designed with the professional welder in mind</p>	<p>9100-Air 9100 FX-Air</p> <p>Readily connect to the 3M™ Adflo™ PAPR or the 3M™ Fresh-air III Supplied Air Regulators</p> <p>Optimal respiratory protection and comfort for increased productivity and demanding environments.</p>
<p>All Premium helmets are compatible with any of the three Speedglas ADFs of differing sizes: 9100V, 9100X, 9100XX</p>			

Superior optics

Known for their outstanding optical quality and performance, 3M™ Speedglas™ Auto Darkening Filters assure uniform shading and minimal distortion across the entire filter viewing area. Our wide selection of filters offers options for nearly all welding processes and unique welding needs.

Speedglas™ ADF Application Guide

	100F	100V	SL	9100
MMAW	Optimized	Optimized	Optimized	Optimized
MIG/Mag	Optimized	Optimized	Optimized	Optimized
TIG (>10A)	Optimized	Optimized	Optimized	Optimized
TIG (1A – 10A)	Optimized	Optimized	Suitable	Optimized
Plasma (Welding and Cutting)	Optimized	Optimized	Suitable	Optimized
Risk for Hidden Arc	Optimized	Optimized	Suitable	Optimized
Tack Welding	Suitable	Suitable	Suitable	Optimized
Grinding	Suitable	Suitable	Suitable	Optimized

■ Optimized
 ■ Suitable
 ■ Not Recommended

Speedglas™ 100 Series ADF



The 100 Series welding helmets are available with either a variable shade ADF (100V) or a single shade ADF (100S).

Welders can choose

from the 100S-10 with a dark shade of 10 or the 100S-11 with a dark shade of 11.

	100V	100F with 100S-10 Filter	100F with 100S-11 Filter
Part number	07-0000-31	07-0000-10	07-0000-11
Dark state	Shade 8-12	Shade 10	Shade 11
Light state	Shade 3	Shade 3	Shade 3
TIG Rating	> 10	Limited TIG	
Switching speed	0.1 ms		
UV/IR Protection	Shade 12 (permanent)		
Viewing area (approx.)	1.73 x 3.66 in (44 x 93 mm)		
Number of Sensors	2		
Battery life (approx.)	1500 hours		
Warranty	2 years		
Weight (complete assembly in ounces)	Black - 15, with graphics - 16 (same for all three filters)		

Speedglas™ Super Light (SL) ADF



The Speedglas™ SL filter offers automatic on/off switching designed specifically for quick welding tasks. Its superb arc detection is ideal for specialty welding such as TIG.

	Super Light (SL)
Part number	05-0000-41
TIG Rating	> 1 Amp
Weight (complete assembly)	13 ounces
Dark state	Shade 8-12
Light state	Shade 3
Switching speed	< 0.15 ms
UV/IR Protection	Shade 12 (permanent)
Viewing area (approx.)	1.68 x 3.57 in (91 x 43 mm)
Number of Sensors	2
Battery life (approx.)	1500 hours
Warranty	2 years

Speedglas™ 9100 Series ADF



The Speedglas™ 9100 series filters come in three different sizes (9100V, 9100X, 9100XX). The 9100XX is 30% larger than any other Speedglas welding filter. All three feature a built-in mag plate

holder, and seven user selectable dark shades, with the option to lock-in your shade for torch and plasma cutting. A tack welding comfort mode can help reduce eye fatigue during tacking applications.

	9100V	9100X	9100XX
Part number	06-0000-10	06-0000-20	06-0000-30
Viewing area (approx.)	1.8 x 3.7 inch (44 X 93 mm)	2.1 x 4.2 inch (54 x 107 cm)	2.8 x 4.2 inch (73 x 107 mm)
Battery life (approx.)	2,800 hrs	2,500 hrs	2,000 hrs
Dark state	Shades 5, 8, 9 – 13		
Light state	Shade 3		
Switching speed	0.1 ms		
TIG Rating	> 1 Amp		
Number of Sensors	3		
Cheater Adapter	Built in		
Warranty	2 years		
Weight (complete assembly in ounces)	18.0 (18.9 with SideWindows)	18.3 (19.2 with SideWindows)	19.2 (20.1 with SideWindows)

Speedglas™ 100 Series Welding Helmets

Perfect for hobby welders, farmers, and do-it-yourselfers, as well as maintenance and construction workers, these helmets provide state-of-the-art eye and face protection while allowing wearers to express their personality with several unique graphic designs. All 100 Series graphic helmet assemblies come with a variable shade ADF (100V, Shades 8-12). The black helmet is available with the 100V ADF, or with two different single shade ADF options (100S - shade 10 or 11).



Boneyard



Ice Hot



Razor Dragon



Xterminator



Raging Skull



Trojan Warrior



Aces High



Blazed



American Pride



Black

Black (Shade 8-12)	07-0012-31BL
Black (Shade 10)	07-0012-10BL
Black (Shade 11)	07-0012-11BL
Boneyard	07-0012-31BY
Ice Hot	07-0012-31IH
Razor Dragon	07-0012-31RD

Xterminator	07-0012-31XT
Raging Skull	07-0012-31RS
Trojan Warrior	07-0012-31TW
Aces High	07-0012-31AH
Blazed	07-0012-31BZ
American Pride	07-0012-31AP



Available with Hard Hat

Black with Hard Hat	07-0012-31BL-HH
Black with Hard Hat Adapter (Hard Hat not included)	07-0012-10BL-HA
Hard Hat Adapter only	07-0014-00NR

Speedglas™ Women's Collection

Created with direct inspiration from women welders and intended to meet the challenges women welders face in comfort, safety and style. These helmets feature an ergonomic headband that accommodates smaller head sizes.



Wild-N-Pink



Skull Jewels



Steel Rose



Steel Eyes



Wild-N-Pink	07-0012-31WP
Skull Jewels*	07-0012-31SJ
Steel Rose*	07-0012-31SR
Steel Eyes*	07-0012-31SE

*A design collaboration between ERGONOMIDESIGN® and 3M.



Speedglas™ Super Light (SL)

At a mere 13 ounces, including the filter, the SL is lighter than any other Speedglas helmet. It is also the narrowest helmet, making it ideal for welding in very tight spaces. Grab & go—a motion sensor automatically turns ON the welding filter when you pick up the helmet, making this helmet ideal for quick welding tasks.

SL with ADF	05-0013-41
SL helmet only (no ADF)	05-0013-00

Speedglas™ 9100 Series Welding Helmets

The 9100 is designed for optimal comfort and protection. The radical technology behind the highly adjustable 9100 head suspension fundamentally changes not only how you wear the helmet, but also how you experience fit, stability and balance. The 9100 helmets have a smooth up-and-down pivot action that gently locks in the 'up' position, and the suspension keeps the helmet closer to user's head – making the helmet feel lighter, more stable and balanced at all times. The 9100 helmet is also available with Shade 5 SideWindows, to allow you to see others working around you.



9100V ADF



9100X ADF



9100XX ADF



Available with Side Windows



Available with Hard Hat

	9100V ADF	9100X ADF	9100XX ADF
9100 with ADF	06-0100-10	06-0100-20	06-0100-30
9100 with ADF and SideWindows	06-0100-10SW	06-0100-20SW	06-0100-30SW
9100 with ADF, SideWindows and Hard Hat	06-0100-10HHSW	06-0100-20HHSW	06-0100-30HHSW
9100 with ADF, SideWindows and Hard Hat Adapter (Hard Hat not included)	06-0100-10HASW	06-0100-20HASW	06-0100-30HASW
9100 Hard Hat Adapter only		06-0014-00NR	

Speedglas™ 9100 Series Head Suspension

The innovative 9100 head suspension conforms to your head to help increase stability, improve weight distribution and significantly reduce pressure on the most vulnerable areas. Less pressure on your head means optimal comfort that lasts all day long.

Back of headband is self-adjusting and swivels to fit different head shapes



Unique 2-strap crown adjustment for increased stability and reduced pressure on the top of the head

Smooth ratchet mechanism lets you manually tighten the helmet to your personal preference

Four settings let you determine the distance between your face and the helmet for optimum viewing



Speedglas™ Welding Helmet 9100 FX

The 9100 FX includes an innovative wide-view grinding visor to give welders an all-in-one solution for more flexibility and precision. The exceptionally clear and large (8" x 4.25") visor offers a greater field of view in all directions, while a smooth flip-up pivot mechanism assures effortless transition from welding to grinding modes. The 9100 FX comes standard with Shade 5 SideWindows and a top-of-head head spark and spatter cover.

9100 FX with 9100V ADF	06-0600-10SW
9100 FX with 9100X ADF	06-0600-20SW
9100 FX with 9100XX ADF	06-0600-30SW
9100 FX helmet only (no ADF)	06-0100-00SW

Speedglas™ Welding Helmet 9100-Air and 9100 FX-Air

The 9100-Air and 9100 FX-Air combine the features of standalone helmets, 9100 and 9100 FX, with added respiratory protection. Each helmet readily connects to the 3M™ Adflo™ Powered Air Purifying Respirator (PAPR) or the 3M™ Fresh-air III Supplied Air Regulators to help provide optimal respiratory protection and comfort for increased productivity and demanding environments.



9100-Air



9100 FX-Air

To upgrade an existing Adflo™ PAPR system to one of these new helmets, please select a breathing tube on the next page, and a 9100-Series ADF of your choice (V,X, or XX).

Helmet Only	
9100-Air (no ADF)	25-0099-35SW
9100 FX-Air (no ADF)	26-0099-35SW

9100-Air and FX-Air with Adflo™ PAPR



	9100V	9100X	9100XX	No ADF
9100-Air with Adflo™	25-1101-10SW	25-1101-20SW	25-1101-30SW	25-1101-00SW
9100-Air with Adflo™ Organic Vapor/Acid Gas	25-3301-10SW	25-3301-20SW	25-3301-30SW	25-3301-00SW
9100 FX-Air with Adflo™	26-1101-10SW	26-1101-20SW	26-1101-30SW	26-1101-00SW
9100 FX-Air with Adflo™ Organic Vapor/Acid Gas	26-3301-10SW	26-3301-20SW	26-3301-30SW	26-3301-00SW

9100-Air and FX-Air with V-100 Vortex Air-Cooling valve or V-200 Vortemp™ Air-Heating valve



	9100V	9100X	9100XX
9100-Air with V-100 Vortex Air-Cooling valve	25-5702-10SW	25-5702-20SW	25-5702-30SW
9100-Air with V-200 Vortemp™ Air-Heating valve	25-5802-10SW	25-5802-20SW	25-5802-30SW
9100 FX-Air with V-100 Vortex Air-Cooling valve	26-5702-10SW	26-5702-20SW	26-5702-30SW
9100 FX-Air with V-200 Vortemp™ Air-Heating valve	26-5802-10SW	26-5802-20SW	26-5802-30SW

3M™ Air Sources for Speedglas™ Helmets



3M™ Adflo PAPER

With its smart, compact design, the award-winning 3M™ Adflo™ Powered Air Purifying Respirator has been created to meet your welding needs. This unit is designed to offer continuous filtered air that can help increase productivity by keeping you more comfortable. This system can be used with Speedglas™ 9100-Air and 9100 FX-Air helmets, and is a solution where powered air respiratory protection is desired.



V-100



V-200

3M™ Fresh-Air III Supplied Air Systems

Two supplied air systems that allow welders to regulate the airflow and are ideal for most demanding and extreme temperature working environments. The Speedglas™ **Vortex V-100 Air-Cooling Valve** allows the user to cool the air entering the helmet by as much as 50°F (23°C), and the Speedglas™ **V-200 Vortemp™ Air-Heating Valve** allows the user to heat it by as much as 50°F (23°C). Also available are V-300 High Pressure and V-400 Low Pressure Valves. These valves do not have heating or cooling capabilities.

New Breathing Tubes

All Speedglas™ Breathing Tubes feature the innovative 3M™ Quick Release Swivel (QRS) Connection, to allow for a quick connection and minimize loops and kinks.



Self-Adjusting Breathing Tube SG-30W



Heavy-Duty Breathing Tube SG-40W



Sound-Dampening Breathing Tube SG-50W

Accessories for expanded comfort and protection

Neck and Ear Protection

Optional flame-resistant neck and ear protection accessory helps protect from molten metal, sparks, flames and UV/IR radiation. Neck protection accessory can be purchased separately and is compatible with all Speedglas™ 9100 helmets (9100, 9100FX, 9100-Air and FX-Air). **06-0500-52**



Head Protection

Extended flame-resistant head coverage can be fastened to the helmet to help protect your head from sparks, spatter and UV/IR radiation. The extended head coverage comes standard with the Speedglas™ 9100-Air helmet, and can be purchased separately for the Speedglas™ 9100 helmet. **06-0500-51**



A shorter, Standard Headcover Accessory is also included with the Speedglas™ 9100 FX helmet. **06-0700-81**



An Extended Headcover Accessory comes standard with the Speedglas™ 9100 FX-Air helmet, and can be purchased separately for the 9100 FX helmet. **06-0700-82**



When used instead of a belt, the BPK-01 backpack allows the Adflo™ PAPER to be worn on the back of the user for comfort and flexibility. **BPK-01**

Welding Safety Education

We are committed to welding safety through creating top quality protective equipment as well as providing you with resources for welding safety education. A specially created online portal contains a collection of welding safety education and training materials. This site was created with welding instructors and students in mind, and gives you access to customized training materials, complete with videos and ready-to-use presentations on:

- Eye and Face protection
- Hearing protection
- Respiratory protection
- Proper use of PPE
- Welding Hazards
- Auto Darkening Filters
- Welding Productivity Tips

3M.com/WeldingSafety



Parts and Accessories

Product Number	Description	SKU
Speedglas™ 100-Series Helmets		
07-0200-51	Outside Protection Plate, Standard, 10/cs	70071533825
07-0200-52	Outside Protection Plate, Scratch Resistant, 10/cs	70071533833
07-0200-53	Outside Protection Plate, High Temperature, 10/cs	70071533841
07-0212-01BL	Front Frame, Black, 1/cs	70071533866
07-0212-03BM	Front Frame, Black Matte, 1/cs	70071534377
07-0212-02CH	Front Frame, Chrome, 1/cs	70071533874
07-0212-00SV	Front Frame, Silver, 1/cs	70071533858
07-0680-00	Magnifying Lens Holder, 2/cs	70071534096
06-0700-83	Full Hood, Black, 1/cs	70071606381
07-0014-00NR	Hard Hat Adapter only, 1/cs	70071564655
Speedglas™ SL Helmet		
05-0250-00	Outside Protection Plate, Standard, 5/cs	70071401668
05-0250-01	Outside Protection Plate, Scratch-Resistant, 5/cs	70071401676
05-0680-00	Magnifying Lens Holder, 1/cs	70071534278
05-0695-00	Splatter Protector, 1/cs	70071534302
05-0370-00	Battery Holder, 1/cs	70071401718
Speedglas™ 9100-Series Helmets		
06-0200-10	Inside Protection Plate 9100V, 5/cs	70071510096
06-0200-20	Inside Protection Plate 9100X, 5/cs	70071510161
06-0200-30	Inside Protection Plate 9100XX, 5 /cs	70071510179
06-0200-51	Outside Protection Plate, Standard, 10/cs	70071510187
06-0200-52	Outside Protection Plate, Scratch Resistant, 10/cs	70071510195
06-0200-53	Outside Protection Plate, High Temperature, 10/cs	70071510203
06-0500-53	SideWindows Coverplates for 9100, 2/cs	70071510369
06-0700-73	SideWindow Covers for 9100 FX/FX-Air, Black, 2/cs	70071606373
06-0300-53	Front Panel, Silver, 1/cs	70071510286
06-0700-63	Front Panel, Chrome, 1/cs	70071606357
06-0400-51	Headband, 1/cs	70071510294
06-0014-00NR	Hard Hat Adapter only, 1/cs	70071564564
06-0400-55	Battery Holder, 2/cs	70071510336
06-0200-54	Sweatband, 3/cs	70071510872
06-0700-54	Wide-View Clear Grinding Visor 9100 FX/FX-Air, Anti-Fog treated, 5/cs	70071606340
06-0700-64	Wide-View Clear Grinding Visor Frame 9100 FX/FX-Air, Black, 1/cs	70071606365

Product Number	Description	SKU
Adflo™ PAPR		
15-1099-01	PAPR Assembly and Cover, 1/cs	70071268570
15-0299-99X02	High Efficiency Particulate Filter, 2/cs	70071544616
15-0499-99X02	Organic Vapor-Acid Gas Cartridge, 2/cs	70071608171
15-0099-99X06	Prefilter, 6/cs	70071268489
15-1099-81	Filter Cover, 1/cs	70071268588
15-0009-99X02	Spark Arrestor, Welding Safety /37142(AAD) 2 /cs	70071268471
15-0099-05	Flow Indicator, 1/cs	70071268406
15-1099-07	Battery, 1/cs	70071268463
15-0099-08	Battery Smart Charger, 1/cs	70071268422
15-0099-08N6	Multiple Battery Smart Charger, 1/cs	70071268430
15-0099-16	Leather Belt, 1/cs	70071268455
18-0099-16	Comfort Belt, 1/cs	70071271236
15-0099-11	Rubber Breathing Tube Foam Gasket, 1/cs	70071275013
15-0099-12	Rubber Breathing Tube Rubber O-Ring, 1/cs	70071275021
BPK-01	Backpack for Adflo™ PAPR	70071563533
17-0099-54	Breathing Tube Cover	70071271467
All Speedglas™ products		
06-0500-56	Magnification Plate 1.5X, 1/cs	70071510393
06-0500-57	Magnification Plate 2.0X, 1/cs	70071510401
06-0500-58	Magnification Plate 2.5X, 1/cs	70071510419
06-0500-59	Magnification Plate 3.0X, 1/cs	70071510427
02-0024-00	Sweatband, Plastic, 1/cs	70071272697
02-0024-01	Sweatband, Leather 1/cs	70071272705
07-0024-02	Sweatband, Fleece, Black, 2/cs	70071534104
06-0500-60	Protective Bag, 1/cs	70071510435

3M™ Speedglas™ Quality: An Inside Look*

Speedglas Circuit Board

Filter elements are bonded with optical adhesive for minimum distortion and maximum strength.

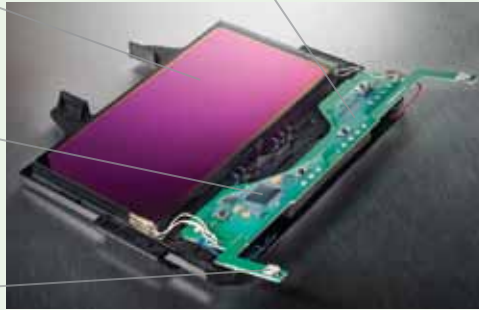
Silicone coating protects critical components.

Replaceable batteries in all models.

Sealed button membrane protects digital controls and reduces sweat and liquid infiltration.

Custom, multi-function programmed logic chip minimizes components and increases reliability.

Sensors mounted on circuit board minimize electro-magnetic noise interference from LC, increasing low amp arc detection capability.



Other Circuit Boards

Analog controls are fragile and prone to moisture and particle infiltration.

Basic electronics may have difficulty detecting certain arc welding processes.

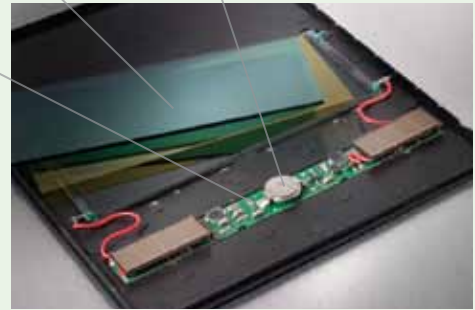
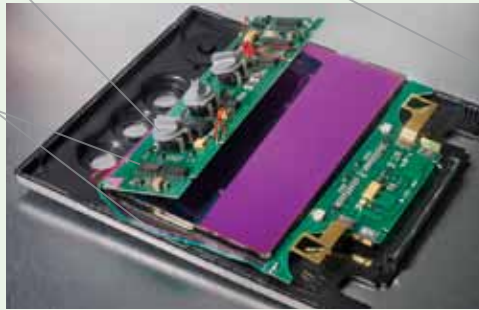
Un-bonded filter elements reduce optical clarity and are less durable.

Non-replaceable batteries eventually go dead and the lens becomes non-functional.

Excessive wiring and circuitry components increase the potential for signal interference and connection failure.

Spray coated or unprotected circuit board components are vulnerable to contamination.

Standard 4.5" x 5.25" format leaves little room on sides to protect glass filter from impact or twisting.



Other U.S. Brand Circuit Board

Asian Brand Circuit Board

*Based on 3M Occupational Health & Environmental Safety Technical Service data and observation of certain brands' current ADF products.

For a complete listing of related products, spare parts and accessories, contact your 3M Sales Representative, Distributor, or Technical Service.

 /Speedglas

3M

Personal Safety Division

3M Center, Building 235-2W-70
St. Paul, MN 55144-1000
www.3M.com/PPESafety
Technical Assistance: 1-800-243-4630
Customer Service: 1-800-328-1667

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⚠WARNING

These respirators help protect against certain airborne contaminants. Before use, the wearer must read and understand the User Instructions provided as a part of the product packaging. A written respiratory protection program must be implemented meeting all the requirements of OSHA 1910.134 including training, fit testing and medical evaluation. In Canada, CSA standards Z94.4 requirements must be met and/or requirements of the applicable jurisdiction, as appropriate. Misuse may result in sickness or death. For proper use, see packaging instructions, supervisor, or call 3M OH&ESD Technical Service in USA at 1-800-243-4630 and in Canada at 1-800-267-4414.

⚠WARNING

This product is designed to help protect the wearer's eyes and face from harmful radiation including visible light, ultra-violet radiation (UV), infra-red radiation (IR), sparks and spatter resulting from welding processes. These products must be used only by qualified persons who are properly trained in their use and maintenance. Misuse may result in permanent eye injury and vision loss. Always wear ANSI Z87.1 compliant safety spectacles in addition to any welding helmet. For proper use, see supervisor, or User Instructions or call 3M in U.S.A. 1-800-243-4630. In Canada, call Technical Service at 1-800-267-4414.