



3M™ Speedglas™
and Adflo™ Systems



THE COMPLETE CATALOG



 **Speedglas™**

 **Adflo™**

3M Welding

3M

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⚠ WARNING

These welding safety products must be used only by qualified persons trained in their use and maintenance and only in strict accordance with and adherence to the detailed instructions and precautionary statements provided in the instruction manual which accompanies each product. **Failure to comply with these instructions could result in sickness, serious bodily injury or loss of life.**

For proper use of these products read user instructions and warnings on the package. Any questions concerning proper use should be directed to your supervisor, on-site training specialist, industrial hygienist or 3M Occupational Health and Environmental Safety Division (OH&ESD) Technical Service in the U.S.A. at 1-800-243-4630. In Canada, call 1-800-267-4414.

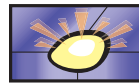
**3M™ Speedglas™
 Filters 9002**



Speedglas™

**The Auto-Darkening Filters
 that are as Versatile as You!**

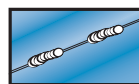
The new Speedglas™ Filters 9002 are the most versatile auto-darkening filters ever. Choose from 61 control combinations for the most efficient, most comfortable welding experience available.



Versatile: You create a very bright weld pool doing high amp welding on stainless. To avoid seeing the brilliant glow when repositioning, you use the new *Delay* feature to add time before the filter switches from dark to light.



Versatile: You are using a new TIG inverter set at 1 amp with virtually flat frequency. You use the filter's enhanced *Sensitivity* setting to sense the arc.



Versatile: You are making a series of tack welds. You want to quickly check each weld before moving on, so you reduce the *Delay* to speed up dark-to-light switching.

3M™ Speedglas™ with Adflo™ System



The ergonomically designed Powered Air-Purifying Respirator (PAPR) for welders.



New "stackable" configuration allows welders to quickly add a vapor cartridge to the high efficiency particle filter. See page 26.

Now Available:



3M™ ClearVisor
with
Adflo™ System

3M™ Speedglas™ FlexView with Adflo™ System



The 3M™ Speedglas™ FlexView System has a big 4.75" x 3.6" (120 x 90mm) clear polycarbonate faceshield that's ideal for precision preparation work under regular lighting conditions. The user simply lifts up the spring-mounted Speedglas filter assembly for weld prep. The clear faceshield meets ANSI Z87.1-2003 standards.

The faceshield allows for precision grinding and cleaning, and the inspection of newly-completed welds...all with constant eye and face protection, even under low light conditions. See page 30.



 **Speedglas™**

Introduction to Auto-Darkening Welding Filters (ADF's)



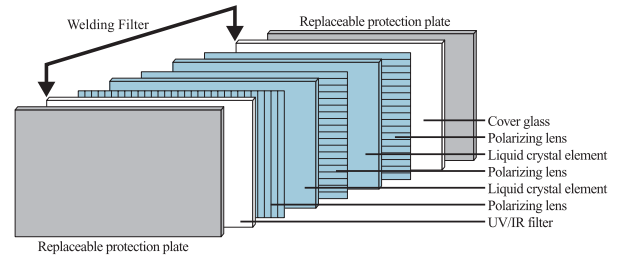
Independent arc-detectors instantly sense the welding arc, immediately triggering the Speedglas filter to change from the light state to the dark state.

Safety Products That Help Increase Your Performance

Now welders can see their work, at comfortable light levels, with constant eye and face protection. Speedglas filters turn dark the moment an arc is struck and transparent again when welding stops—all the time with full UV/IR protection.

Auto-darkening eliminates the neck-strain of “helmet nodding” while helping increase the accuracy of electrode placement.

This, in turn, reduces the need for grinding and rework. In addition, welders can get into tight, cramped spaces with full protection and have a clear view, making extremely awkward welds a lot easier.



How It Works

Each Speedglas filter is a laminate of seven different layers: a UV/IR filter, three polarizers, two liquid crystal elements and a cover glass. The UV/IR filter continually blocks harmful radiation, whether the filter is ON, OFF, light or dark. Aided by surface-mounted electronics, the proprietary liquid crystal elements act as shutters that detect and react to the welding arc by instantly shading the filter.



Constant UV/IR Protection:

This filter provides the same UV/IR filtration protection as a traditional, non-auto-darkening welding filter (as regulated by USA and Canadian welding safety standards).

Fail-Safe Darkening

When you pick up an unenergized Speedglas filter, it is in an intermediate dark shade; you must turn it ON to make it go into the light state. If anything catastrophic happens to the filter, it simply defaults back to the darker intermediate OFF shade. As mentioned above, UV/IR protection is always present.

Meets ANSI Z78.1-2003

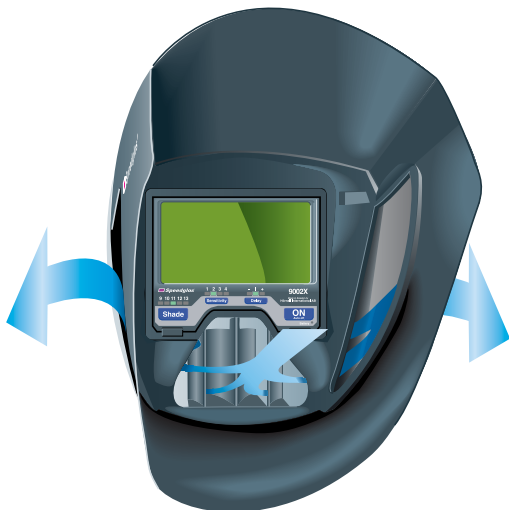
American National Standard Institute for eye and face protection.

A Welding Helmet that Breathes!



The revolutionary 3M™ Speedglas™ Helmet 9000 features patented aerodynamic exhaust vents that help to remove exhaled air.

Welders experience lower humidity, less heat, and reduced “stuffiness.” The welder’s natural breathing action directs the exhaust airflow; no moving parts are involved. Fresh, incoming air is not drawn through the special vents; instead, it chooses the path of least resistance—the area around the welder’s neck, which is typically further away from the smoke plume.



Exhaled air is directed through the four aerodynamic vents. It then exhausts through two thin openings created between the double-shell construction of the heat-reflecting silver front panel and the black helmet.

Increased Ease-Of-Use

We’ve eliminated those time-consuming filter fastener screws! Now you simply snap-off the helmet’s front panel and squeeze two locking tabs together to quickly remove the filter cassette. Changing the inner and outer protective filter plates has never been easier or faster!



Speedglas helmet 9000 construction: Note the aerodynamic exhaust vents that are located directly behind the front silver panel. The patented helmet is extremely comfortable, weighing only 17.4 ounces (including filter) and has excellent balance. Its narrow width is ideal for welding in tight spots. The polyamide nylon construction is heat and chemical resistant and extremely durable.



3M™ Speedglas™ Helmet 9000 Specifications

Helmet Material: polyamide nylon

Helmet Weight (without filter): 10.8oz (306g)

Headband: fully-adjustable, ratcheted design

SideWindows option: see pages 10 and 11

Replacement Parts: see pages 40 and 41

Peripheral Vision for Welders



Speedglas™

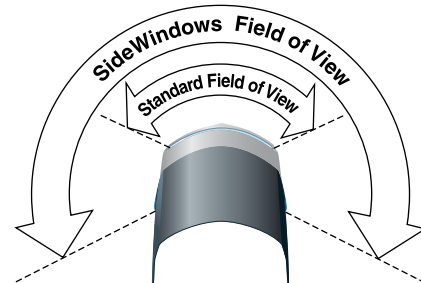
3M™ SideWindows Helmets Improve Visibility, Safety and Comfort

3M™ Speedglas™ SideWindows Helmets allow for peripheral vision. The two shade 5 side filters increase the peripheral viewing area by over 100%.

SideWindows filters allow welders to see potentially-hazardous peripheral objects, such as protruding beams, vehicles, and other welders, with the helmet down.

SideWindows also permit welders to easily move around their work area with constant protection from UV/IR radiation.

The two side filters are designed solely for peripheral vision; the welder continues to view his own arc through the center (auto-darkening) filter.



Eliminate “tunnel vision”...try a Speedglas SideWindows helmet and see what you’re missing!



3M™ SideWindows Specifications

Filter Materials: Impact resistant polycarbonate

Filter Shade: 5

Ordering Information

Part Numbers: for complete helmet with SideWindows option, simply add “SW” after helmet part number.

Note: Very strong sunlight and light from very close, side-by-side welding may interfere with the welder’s view of the workpiece; when practical, use welding partitions to separate welders. The SideWindows option is available on the Speedglas 9000 Series, FlexView, and ProTop helmets.

An Entry-Level Auto-Darkening Filter and Helmet: Utility



Speedglas™

3M™ Speedglas™ Utility Filter and Helmet

Our most affordable auto-darkening filter! The Speedglas Utility is especially designed for MIG (GMAW) and stick (SMAW) welding only.

The Speedglas Utility is perfect for the serious part-time welder, as well as for maintenance welding on farm equipment, automobiles, and any other MIG or stick project. Two filter models: dark shade 10 or 11.

It's the affordable auto-darkening filter and helmet.



Auto Off—Turns off filter 30 minutes after last arc.

Immediate Off—Simply hold ON/AUTO OFF button down for two seconds.

- UV/IR protection is constant even when filter is OFF or in the shade 3 light state.
- Super durable, extremely lightweight, chemical and heat resistant nylon helmet.
- Outstanding optical clarity.
- Extremely dependable performance.

3M™ Speedglas™ Utility Filter and Helmet Specifications

Light Shade: 3

Dark Shade: factory-set at 10 or 11

Off (Fail-Safe) Shade: nominal 5

Viewing Area: 3.57" x 1.68" (91mm x 43mm)

Weight, Helmet with Filter: 17.1oz (486g)

Battery Life (Average): 2000 hours

Operating Temperature: 23° to 131°F (-5° to 55°C)

Ordering Information

Part Numbers for complete package—helmet, headband and auto-darkening filter:

Shade 10: 04-0014-10U

Shade 11: 04-0014-11U

Replacement Parts: see pages 40 and 41.

Note: The complete Speedglas Utility filter and helmet package is not sold with the (vented) Speedglas helmet 9000, SideWindows or hard hat options.

A Filter for Multiple Arc Welding Processes: 9000F



Speedglas™

3M™ Speedglas™ Filter 9000F and Helmet

Do stick, MIG, and most TIG welding processes with one filter!

The 9000F (“F” for “Fixed” dark shade) provides improved performance, greater ease-of-use, and remarkable optical clarity. Available in three factory-set dark shades: 10, 11 or 12.

Plus, all Speedglas helmets 9000 have four exhaust vents for reduced stuffiness (see page 8).



Auto Off–Turns off filter 30 minutes after last arc.

Immediate Off–Simply hold ON/AUTO OFF button down for two seconds.

- Works with all arc welding processes.
- Shade 3 light state.
- The world’s finest auto-darkening electronics and optical quality.
- Rugged: able to withstand harsh treatment.

3M™ Speedglas™ Filter 9000F Specifications

Light Shade: 3

Dark Shade: factory-set at 10, 11 or 12

Off (Fail-Safe) Shade: nominal 5

Viewing Area: 3.57" x 1.68" (91mm x 43mm)

Weight, Helmet with Filter: 17.1oz (486g)

Battery Life (Average): 2000 hours

Operating Temperature: 23° to 131°F (-5° to 55°C)

Ordering Information

Part Numbers for complete package–helmet 9000, headband and auto-darkening filter:

Shade 10: 04-0012-10

Shade 11: 04-0012-11

Shade 12: 04-0012-12

This filter can also be ordered with the FlexView helmet (pages 22 and 23) and ProTop helmet (pages 24 and 25).

Add “H” for hard hat and/or “SW” for SideWindows option.

Replacement Parts: see pages 40 and 41.

An X-tra Large Filter: 9000XF



 **Speedglas™**

3M™ Speedglas Filter 9000XF and Helmet

For welders that want a really big view...
the 9000XF (“X-tra Large, Fixed Dark Shade”).

It’s larger than most auto-darkening filters, with
outstanding optical clarity and very low angle
dependency.

The 9000XF can also be used on all stick and
MIG and most TIG processes. Available in three
factory-set dark shades: 10, 11 or 12.



Auto Off—Turns off filter 30 minutes after last arc.

Immediate Off—Simply hold ON/AUTO OFF button down for two seconds.

Sensitivity Adjustment—Provides additional adaptability, under a variety
of lighting conditions, when in the manual sensitivity mode.

Shade 3 Light State—For outstanding visibility.

3M™ Speedglas™ Filter 9000XF Specifications

Light Shade: 3

Dark Shade: factory-set at 10, 11 or 12

Off (Fail-Safe) Shade: nominal 5

Viewing Area: 4.09" x 2.13" (104mm x 54mm)

Weight, Helmet with Filter: 17.4oz (493g)

Battery Life (Average): 1750 hours

Operating Temperature: 23° to 131°F
(-5° to 55°C)

Ordering Information

**Part Numbers for complete package—helmet 9000,
headband and auto-darkening filter:**

Shade 10: 04-0012-10X

Shade 11: 04-0012-11X

Shade 12: 04-0012-12X

This filter can also be ordered with the FlexView helmet
(pages 22 and 23) and ProTop helmet (pages 24 and 25).

Add “**H**” for hard hat and/or “**SW**” for SideWindows
option.

Replacement Parts: see pages 40 and 41.

“V” for Variable Dark Shades: 9002V



3M™ Speedglas™ Filter 9002V
and Helmet

For welders handling a variety of amperages and different arc welding processes, we introduce the 9002V . . . the most versatile auto-darkening filter ever! Choose from 61 control combinations to achieve the most efficiency and comfort, no matter what you are welding.

Greater sensitivity! The 9002's newly-developed detectors increase sensitivity to provide reliable switching for a wide range of welding methods, even extremely stable arcs like those from TIG inverters at low amp settings.

Greater comfort! The 9002 introduces a new Delay function that lets you decide how quickly the filter changes from dark-to-light.

Adjust with gloves on! The 9002's new membrane-covered control buttons let you change settings or turn on/off with your gloves on. The buttons are faster than analog knobs, and the membrane seals the filter from dirt.



Auto Off—Turns off filter 60 minutes after last arc.

Immediate Off—Simply hold the ON/OFF button down for two seconds.

Shade 3 Light State—For outstanding visibility.

Five Shade Settings

Three Delay Settings—User-selectable settings to match how quickly the filter changes from dark-to-light to the job.

Filter Shade	"-" Setting*	Normal Setting*	"+" Setting*
9	60	100	150
10	60	150	200
11	100	200	300
12	100	250	400
13	100	300	500

* All speeds in milliseconds.

Four Sensitivity Settings—To match the filter's sensitivity to the job.

Situation	Sensitivity Setting
Another welder(s), working nearby	1
MIG/MAG welding	2
Low amp TIG welding	3
Hidden arc TIG tube welding	4

3M™ Speedglas™ Filter 9002V Specifications

Light Shade: 3

Dark Shades: user-selectable to 9, 10, 11, 12 and 13

Off (Fail-Safe) Shade: nominal 5

Viewing Area: 3.57" x 1.68" (91mm x 43mm)

Weight, Helmet with Filter: 17.4oz (493g)

Battery Life (Average): 1500 hours

Operating Temperature: 23° to 131°F (-5° to 55°C)

Ordering Information

**Part Numbers for complete package—helmet 9000,
headband and auto-darkening filter:**

04-0012-31

This filter can also be ordered with the FlexView helmet (pages 22 and 23) and ProTop helmet (pages 24 and 25).

Add “H” for hard hat and/or “SW” for SideWindows option.

Replacement Parts: see pages 40 and 41.

The Top-Of-The-Line 3M™ Speedglas™ Filter 9002X



3M™ Speedglas™ Filter 9002X
and Helmet

An X-tra large viewing area is combined with advanced electronics to deliver the most versatile auto-darkening filter ever!

For welders handling a variety of amperages and different arc welding processes, this is the best!

The 9002X has a big 4.09" x 2.13" viewing area, with clear, sharp optics and consistent shading across the entire viewing area.

A solar panel on the front of the filter cassette helps to power the unit, extending battery life to approximately 3000 hours.

Greater sensitivity! The 9002's newly-developed detectors increase sensitivity to provide reliable switching for a wide range of welding methods, even extremely stable arcs like those from TIG inverters at low amp settings.

Greater comfort! The 9002 introduces a new Delay function that lets you decide how quickly the filter changes from dark-to-light.

Adjust with gloves on! The 9002's new membrane-covered control buttons let you change settings or turn on/off with your gloves on. The buttons are faster than analog knobs, and the membrane seals the filter from dirt.



Auto Off—Turns off filter 60 minutes after last arc.

Immediate Off—Simply hold the ON/OFF button down for two seconds.

Shade 3 Light State—For outstanding visibility.

Solar Panel—Maximizes battery life.

Three Delay Settings—User-selectable settings to match how quickly the filter changes from dark-to-light to the job.

Filter Shade	"-" Setting*	Normal Setting*	"+" Setting*
9	60	100	150
10	60	150	200
11	100	200	300
12	100	250	400
13	100	300	500

* All speeds in milliseconds.

Four Sensitivity Settings—To match the filter's sensitivity to the job.

Situation	Sensitivity Setting
Another welder(s), working nearby	1
MIG/MAG welding	2
Low amp TIG welding	3
Hidden arc TIG tube welding	4

3M™ Speedglas™ Filter 9002X Specifications

Light Shade: 3

Dark Shades: user-selectable to 9, 10, 11, 12 and 13

Off (Fail-Safe) Shade: nominal 5

Viewing Area: 4.09" x 2.13" (104mm x 54mm)

Weight, Helmet with Filter: 17.4oz (493g)

Battery Life (Average): 3000 hours

Operating Temperature: 23° to 131°F
(-5° to 55°C)

Ordering Information

Part Numbers for complete package—helmet, headband and auto-darkening filter:

04-0012-21

This filter can also be ordered with the FlexView helmet (pages 22 and 23) and ProTop helmet (pages 24 and 25).

Add **"H"** for hard hat and/or **"SW"** for SideWindows option.

Replacement Parts: see pages 40 and 41.

Ideal for Weld Preparation/Grinding: FlexView



Speedglas™

3M™ Speedglas™ FlexView System

The new FlexView has a big, 4.75" x 3.6" (120mm x 90 mm) clear polycarbonate faceshield that's ideal for precision weld preparation under a variety of light conditions.

The user simply lifts up the spring-mounted filter assembly for weld prep. The spring holds the auto-darkening filter securely on top of the helmet, giving the welder a big, clear view behind the FlexView faceshield.

The faceshield allows for precision grinding and cleaning, the careful alignment of electrodes and the inspection of newly-completed welds...all with constant eye and face protection, even in the darkest workshop.

The faceshield meets the ANSI Z87.1-2003 industrial eye and face protection standard, which does not recommend "...filter or tinted filters that restrict light transmittance..." when chipping or grinding (American National Standard Institute Z87.1 Selection Chart, Impact Protectors).*

*Impact resistant, primary eye protection, spectacles or goggles that meet current ANSI specifications, must be worn at all times when using any welding helmet.

3M™ Speedglas™ FlexView System in a "Breathable" Helmet

The FlexView system is the only product to offer users a clear visor combined with a "breathable" helmet: the Speedglas 9000.

The helmet's four aerodynamically designed exhaust vents help to reduce heat and humidity. (For a FlexView system with Adflo™ Respirator, see page 30.)

And with the exclusive SideWindows model, the helmet's viewing area is increased via two shade 5 peripheral filters.



3M™ Speedglas™ FlexView System Specifications

Safety Standards: ANSI Z87.1-2003
Helmet Material: Polyamide nylon
Weight: 20oz (565g)
Part Number: Speedglas FlexView complete
 04-0016-(filter options)

3M™ Speedglas™ Filter Options

Fixed Shade

10, 11 or 12: Speedglas filter 9000F
 Shade 10, 11 or 12
 Viewing area
 3.58" x 1.68" (91mm x 43mm)
10X, 11X or 12X: Speedglas filter 9000XF
 Shade 10, 11 or 12
 Viewing area
 4.09" x 2.13" (104mm x 54mm)

Variable Shade

31: Speedglas filter 9002V
 Viewing area
 3.58" x 1.68" (91mm x 43mm)
21: Speedglas filter 9002X
 Viewing area
 4.09" x 2.13" (104mm x 54mm)

Add "SW" for SideWindows option.

Replacement Parts: see page 42.

A Balanced Hard Hat Designed for Welders: ProTop

 **Speedglas™**



3M™ Speedglas™ ProTop System

The new ProTop combination hard hat, welding helmet, and auto-darkening filter system is especially designed for welders working in areas with overhead hazards.

The key to the Speedglas ProTop system is the exclusive pivot mechanism that connects the welding helmet to the hard hat. Traditional welding hard hats create a very high center-of-gravity when the welding helmet is raised; as a result, the user feels off-balance, and the leveraged weight may put additional strain on neck muscles. On the other hand, the ProTop pivot mechanism has two sets of axes: one to lift the welding helmet away from the welder's face, and another axis to "nest" the welding helmet down low over the hard hat, in a balanced, secure position.

In addition to having a much more comfortable (lower) center-of-gravity, the nested welding helmet is much less likely to bump into obstacles as the welder moves around the work area.

Low-Profile Hard Hat Goes Into Tight Spaces

The special acrylonitrile butadiene styrene (ABS) hard hat has a low-profile that is excellent for entering space-restricted areas. Its short brim design means the welding helmet and filter are closer to the welder's face, which is ideal for precision welding. The hard hat has a ratcheting headband for fast, secure, top-of-the-head sizing. Its sweatband is made from terry cloth and soft foam and its six-point webbing system provides excellent shock absorption and comfort.

3M™ Speedglas™ ProTop System Specifications

Safety Standards: ANSI Z87.1-2003 (eye and face)
ANSI Z89.1-2003 (head protection)

Hard Hat Material: White ABS plastic

Headband Adjustments:

19.5" to 25" (50mm to 64mm)

Weight: Hard hat only

13.7oz (390 g)

Weight: Hard hat with Speedglas filter 9000V

31.2oz (890 g)

Part Number: Speedglas ProTop welding helmet with pivot mechanism, hard hat and strap

04-0015-(filter options)

3M™ Speedglas™ Filter Options

Fixed Shade

10, 11 or 12: Speedglas filter 9000F
Shade 10, 11 or 12
Viewing area
3.58" x 1.68" (91mm x 43mm)

10X, 11X or 12X: Speedglas filter 9000XF
Shade 10, 11 or 12
Viewing area
4.09" x 2.13" (104mm x 54mm)

Variable Shade

31: Speedglas filter 9002V
Viewing area
3.58" x 1.68" (91mm x 43mm)

21: Speedglas filter 9002X
Viewing area
4.09" x 2.13" (104mm x 54mm)

Add "SW" for SideWindows option.

Replacement Parts: see page 43.

3M™ Adflo™ System: A Highly Advanced Powered Air Purifying Respirator (PAPR)



Exclusive “stackable” configuration adapts to changing welding applications.



Environmentally-friendly NiMH battery charges in less than 3 hours with a smart charger that won't ever overcharge.



System Intelligence: Constant airflow rate, regardless of battery charge and filter loading. Audible and visual alarms signal low airflow and low battery charge.



The unique belt design has a solid leather front, cut narrow to allow the welder to bend forward easily. Along the welder's sides, the leather becomes wider, with large ventilation holes for maximum breathability. The turbo unit securely attaches to, and is nestled between, the two plastic arms of the belt so the turbo's weight is evenly distributed across the entire lower back and upper hips. The plastic arms are vertically rigid but with pleats so the welder can move and turn with freedom.



Exclusive airflow pattern means perfectly-distributed air throughout the entire breathing zone of the helmet.



Two Respirators In One!



3M™ Speedglas™ Helmet 9000 HWR with Adflo™ System Auto-Darkening Filters (ADF's) with Respiratory Protection

We've reinvented the powered air-purifying respirator (PAPR) for welders. The result is 3M™ Speedglas™ with Adflo™ System: a lightweight, compact, all-in-one system. Its exclusive "stackable" configuration means that the Adflo cartridge can be "stacked" onto the high efficiency (HE) particle filter for additional protection against organic, sulfur dioxide, chlorine, and hydrogen chloride vapors.

In effect, it's two systems in one, allowing increased user flexibility to adapt to changing welding applications. And you can selectively replace either the particle filter or the Adflo OV/SD/CL/HC cartridge as needed: you don't have to change both filters at the same time!

The Adflo system has no external batteries, no battery cables, and no sharp corners. Its slim profile is designed to go into tight spaces. And it's designed to be ergonomically compatible for welders.



3M™ Adflo™ System Specifications

Assigned Protection Factor: 25

Airflow (nominal): 6+ cfm (170+ lpm) minimum

Battery, NiMH:

HE: up to 12 - 13 hrs/charge

HE + OV/SD/CL/HC: up to 5.5 - 6 hrs/charge

Battery Charging Time: 3 hours

System Weights

Helmet assembly with filter 9002X:

1.8 lbs (0.81 kg)

Adflo turbo w/ battery, breathing tube and belt:

4.48 lbs (2.03 kg)

OV/SD/CL/HC cartridge: 1.5 lbs (0.70 kg)

Operating Temperatures:

23° to 131°F (-5° to 55°C)

Respirator Approval: NIOSH 42 CFR 84*

Complete Systems, Includes
Helmet 9000 HWR

Standard (HE): 15-1101-(filter options)

HE + OV/SD/CL/HC Cartridge:

15-3301-(filter options)

Filter Options:

Fixed Shade

10, 11 or 12: Speedglas filter 9000F

shade 10, 11 or 12

10X, 11X or 12X: Speedglas filter 9000XF

shade 10, 11 or 12

Variable Shade

31: Speedglas filter 9002V

21: Speedglas filter 9002X

*Approved for: HE

HE + OV/SD/CL/HC

Add "SW" for SideWindows option.

Replacement Parts: see pages 44 and 45.

Eye, Face and Respiratory Protection for Weld Prep/Grinding



3M™ Speedglas™ FlexView with Adflo™ System

The new FlexView system combines full eye and face protection (for both welding and low light weld preparation) with a slim, lightweight, powered air purifying respirator. For chipping, grinding, or preparation, the user simply lifts up the spring-mounted Speedglas filter assembly. The spring holds the auto-darkening filter securely on top of the helmet, giving the welder a big clear view through the clear polycarbonate faceshield.

The faceshield allows for precision grinding and cleaning, the careful alignment of electrodes and the inspection of newly-completed welds...all with constant eye and face protection, even in dark conditions.

The faceshield meets the ANSI Z87.1-2003 industrial eye and face protection standard, which does not recommend "...filter or tinted filters that restrict light transmittance..." when chipping or grinding (American National Standard Z87.1-2003).*

***Important Note:** Impact resistant, primary eye protection, spectacles or goggles that meet current ANSI specifications, must be worn at all times when using any welding helmet.



3M™ Speedglas™ FlexView with Adflo™ System Specifications

Safety Standards:

Eye and Face Protection:	ANSI Z87.1-2003
Helmet Weight:	20 oz./565g
Helmet Material:	Polyamide nylon

Part Numbers

FlexView with Adflo HE

particle filter system: 16-1101-(filter option)

FlexView with Adflo HE filter

+ OV/SD/CL/HC cartridge

System: 16-3301-(filter option)

3M™ Adflo™ System Specifications

Assigned Protection Factor: 25

Airflow (nominal): 6+ cfm (170+ lpm) minimum

Battery, NiMH:

HE: up to 12 - 13 hrs/charge

HE + OV/SD/CL/HC: up to 5.5 - 6 hrs/charge

Battery Charging Time: 3 hours

Weight, Adflo turbo w/ battery,

Breathing tube and belt: 4.48 lbs (2.03 kg)

OV/SD/CL/HC Cartridge: 1.5 lbs (0.70 kg)

Operating Temperatures: 23° to 131°F (-5° to 55°C)

Respirator Approval: NIOSH 42 CFR 84*

3M™ Speedglas™ Filter Options

Fixed Shade

10, 11 or 12: Speedglas filter 9000F shade 10, 11 or 12

10X, 11X or 12X: Speedglas filter 9000XF shade 10, 11 or 12

Variable Shade

31: Speedglas filter 9002V

21: Speedglas filter 9002X

*Approved for: HE

HE + OV/SD/CL/HC

Replacement Parts: see page 42.

Eye, Face and Respiratory Protection



3M™ ClearVisor with Adflo™ System
The new ClearVisor with Adflo system combines eye and face protection (ANSI Z87.1-2003) with a



slim, lightweight, powered air-purifying respirator (PAPR).

The polycarbonate ClearVisor faceshield has exceptional clarity and a wide viewing area. The ClearVisor meets the high impact test requirements of ANSI Z87.1-2003.



The system can be used in a variety of industrial settings, including woodworking, metal grinding, injection molding, petrochemical, pharmaceutical, pulp and paper processing, sanding and refinishing, foundries, grain and flour processing, and other dusty environments.



Continuous application of the optional clear window strip-off shielding film extends the useful service life of the polycarbonate faceshield.

3M™ ClearVisor System Specifications

Safety Standards:

ClearVisor faceshield: ANSI Z87.1-2003

Weight, Face Shield Assembly: 1.3 lbs. (0.6 kg)

Clear Window Material: Polycarbonate

Brow Guard Material: Polycarbonate

3M™ Adflo™ System Specifications

Assigned Protection Factor: 25

Airflow (nominal): 6+ cfm (170+ lpm) minimum

Battery, NiMH:

HE: up to 12 - 13 hrs/charge

HE + OV/SD/CL/HC: up to 5.5 - 6 hrs/charge

Battery Charging Time: 3 hours

Weight, Adflo turbo w/ battery,

breathing tube and belt: 4.48 lbs (2.03 kg)

OV/SD/CL/HC Cartridge: 1.5 lbs (0.70 kg)

Operating Temperatures: 23° to 131°F (-5° to 55°C)

Respirator Approval: NIOSH 42 CFR 84*

Part Numbers

Complete Systems

ClearVisor with Adflo HE

particle filter system: 16-1101-40

ClearVisor with Adflo HE filter

+ OV/SD/CL/HC cartridge

system: 16-3301-40

*Approved for: HE,

HE + OV/SD/CL/HC

Replacement Parts: see pages

46 and 47.



Supplied Air Protection



3M™ Fresh-air II Supplied Air System with 3M™ Speedglas™ Helmet 9000 HWR

The NIOSH-approved supplied air (SA) 9000 system provides respiratory protection from airborne particulates and gases. The lightweight, belt-mounted valves permit the welder to adjust the temperature of the air entering the headpiece $\pm 45^\circ$, making it ideal for very hot or strenuous jobs.



NOTE: Final determination of respirator applicability and filter selection must be made by an on-site safety specialist or industrial hygienist.

• Cool-air valve permits welder to lower the temperature of the supplied air by up to 45°F (25°C).

• Temp-air valve allows either cooling or warming of the supplied air $\pm 45^\circ\text{F}$ from the supplied air temperature.



Valve Model	CFM Required	CFM Delivered	Pressure Range (psig)	Max. # of Hoses/Length*
Cool-air	12-25	6-15	70-105	4 hoses/100'
Temp-air	12-25	6-15	85-110	4 hoses/100'**

*Indicates maximum number of hoses and maximum total length.

**Temp-air valve is approved for use with breather hose only.

3M™ Fresh-air II Supplied Air System Specifications

Assigned Protection Factor (APF): 25

Airflow: 6+ cubic feet per minute (170+ lpm)

System Weights

Helmet assembly with filter 9002X:
1.79 lbs (0.81 kg)

Cool-air valve with breathing tube, and belt:
2.11 lbs (0.96 kg)

Temp-air valve with breathing tube, and belt:
2.37 lbs (1.07 kg)

Operating Temperatures: 23° to 131°F (-5° to 55°C)

Respirator Approval: NIOSH 42 CFR 84*

Complete Systems

Cool-air: 14-5701-(filter options)

Temp-air: 14-5801-(filter options)

Filter Options:

Fixed Shade

10, 11 or 12: Speedglas filter 9000F shade 10, 11 or 12

10X, 11X or 12X: Speedglas filter 9000XF shade 10, 11 or 12

Variable Shade

31: Speedglas filter 9002V

21: Speedglas filter 9002X

Fresh-air II Supplied Air Systems 9000 can be ordered with a hard hat by purchasing the following components:

- 14-0099-35H hardhat assembly without SideWindows or 14-0099-35HSW hardhat assembly with SideWindows
- 18-0099-63 breathing tube
- Appropriate air control valve:
 - 18-0099-47 cool air valve
 - 18-0099-48 temp air valve
- Appropriate 9000 or 9002 filter

* Approved for: HE

HE + OV/SD/CL/HC

Add "H" for hard hat and/or "SW" for SideWindows option.

Replacement Parts: see page 45 and 48.

3M™ Portable Compressed Air Filter and Regulator Panel 256-02-00



The 3M™ Portable Compressed Air Filter and Regulator Panel 256-02-00 can filter and regulate air delivered to your supplied air respirator. This system can help to remove limited amounts of carbon monoxide (CO) from the incoming air as well.

This system offers a number of unique benefits to you.

- Compatible with 3M's full line of supplied air respirators
- Four-stage filtration
- Can monitor for carbon monoxide in incoming air
- Patented "low-temperature catalyst" converts dangerous CO to CO₂
- Portability
 - Comes in a durable carrying case
 - This unit can be easily moved to different areas of the plant
 - It can be permanently mounted to the wall if desired
- Intrinsically safe system¹

¹The carbon monoxide monitor in the 3M portable compressed air filter and regulator panels is CSA Certified Intrinsically Safe for Class 1, Div. 1, Groups A, B, C and D Hazardous Locations when utilizing the two 9 volt batteries to power the monitor. If the monitor is powered by the optional 120 VAC adapter, the Intrinsically Safe Certification is voided. The Intrinsically Safe Certification is also voided when the remote alarm is used.

3M™ Portable Compressed Air Filter and Regulator Panel 256-02-01 with Carbon Monoxide Monitor



Intended Use

The 3M™ Portable Compressed Air Filter and Regulator Panel 256-02-01, with Carbon Monoxide (CO) Monitor is intended to filter and regulate compressed air to be used with supplied air respiratory protection systems. This panel will not remove carbon monoxide.

OSHA Regulations

The Occupational Safety and Health Administration (OSHA) state in 29 CFR 1910.134 (i) that air quality for breathing air shall meet at least the requirements of the specification for Grade D breathing air as described in Compressed Gas Association Commodity Specification ANSI/CGAG-7.1 1989, in the United States. In Canada, consult Table 1 of the CSA standard CAN3-Z180.1-00.

Grade D breathing air consists of:

Oxygen19.5 to 23.5%

Hydrocarbons<5mg/m³

(oil condensed)

Carbon Monoxide<10ppm

Odorno noticeable odor

Carbon Dioxide<1000ppm

The 3M Compressed Air Filter and Regulator Panels can aid in providing Grade D breathing air. Air samples should be tested regularly to determine that Grade D air is being supplied.

⚠ WARNING

3M's Compressed Air Filter and Regulator Panels will not increase the oxygen content of an air supply and should not be used when air entering system is oxygen deficient. OSHA regulations require Grade D breathing air.

3M™ Compressed Air Filter and Regulator Panel W-2806



This panel is designed to filter and regulate air being delivered to the supplied air respirator. It has a maximum capacity of 50 cfm at 105 psig. This is an economical system that provides single step filtration. It is designed to be permanently mounted to the wall. It provides a maximum of 50 cfm to 3-5 outlets.

NOTE: This unit will NOT remove carbon monoxide (CO) from compressed air source.

3M™ Carbon Monoxide Monitor and Retrofit Carbon Monoxide Monitor Kit W-2808 for use with the 3M™ Compressed Air Filter and Regulator Panel W-2806



For use with the 3M™ Compressed Air Filter and Regulator Panel W-2806. The 3M™ Carbon Monoxide (CO) Monitor and the 3M™ Retrofit Carbon Monoxide (CO) Monitor Kit are designed to provide continuous, direct read CO monitoring for compressed air used with supplied air respirators.

The retrofit kit includes the CO monitor and accessories to attach the CO monitor to a 3/8-inch port on a filter and regulator panel that does not currently have CO monitoring capability, such as the 3M™ Compressed Air Filter and Regulator Panel W-2806/07006.

The carbon monoxide monitor is designed to provide continuous, direct read CO monitoring for compressed air used with supplied air respirators. An internal microprocessor controls the indication and alarm functions in response to the signals of an electrochemical CO sensor. It continuously monitors a compressed air sample introduced to its sensor at an approximate rate of 1.0 standard cubic foot per hour (scfh) and gives an alarm when the CO in the sample reaches a preset level (10 ppm in USA; 5 ppm in Canada).

The CO monitor is a battery powered unit utilizing two 9 volt alkaline batteries. It is designed to be intrinsically safe when used on battery power. The CO monitor is CSA certified intrinsically safe for Class I, Div. I, Groups A, B, C, and D Hazardous Locations when utilizing two 9 volt alkaline batteries to power the monitor.

Replacement Parts for 3M™ Speedglas™ Helmets and Filters Utility and 9000 Series

Complete Helmets and Filters

04-0012-(shade 10, 11 or 12)	Complete Speedglas filter and helmet 9000F
04-0012-(shade 10, 11 or 12)X	Complete Speedglas filter and helmet 9000XF
04-0012-31	Complete Speedglas filter and helmet 9002V
04-0012-21	Complete Speedglas filter and helmet 9002X

For any of the above part numbers, add “H” for hard hat and/or “SW” for SideWindows option

04-0014-(shade 10 or 11)U	Complete Speedglas Utility filter and helmet
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Filters

04-0000-(shade 10, 11 or 12)	Speedglas filter only 9000F
04-0000-(shade 10, 11 or 12)X	Speedglas filter only 9000XF
04-0000-31	Speedglas filter only 9002V
04-0000-21	Speedglas filter only 9002X

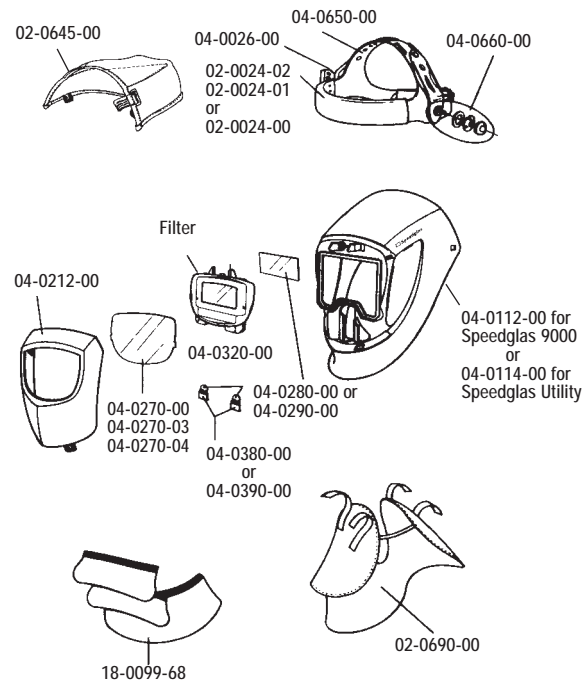
Filter Replacement Parts

04-0270-00	Outside protection plate standard-package of 10
04-0270-10X100	Outside protection plate standard-package of 100
04-0290-00	Speedglas 9000 Series F and V inside protection plate (5 Pack)
04-0280-00	Speedglas 9000 Series XF and X inside protection plate (5 Pack)
04-0480-00	9000XF and 9002X accessory kit (10 outside, 5 inside plates and 2 batteries)
04-0490-00	Utility, 9000F and 9002V accessory kit (10 outside, 5 inside plates and 2 batteries)
04-0320-00	Battery-package of 2
04-0380-00	Battery holders (blue)-package of 2
04-0390-00	Battery holders (black)-package of 2

Filter Accessories

04-0290-01	Inside protection plate, passive filter #1, for Utility and 9000F models-package of 5*
04-0290-02	Inside protection plate, passive filter #2, for Utility and 9000F models-package of 5*
04-0280-01	Inside protection plate, passive filter #1, for 9000XF-package of 5*
04-0280-02	Inside protection plate, passive filter #2, for 9000XF-package of 5*
04-0270-03	Outside protection plate HD (heavy duty)-package of 5
04-0270-04	Outside protection plate high heat-package of 5

***Total shade level must not exceed shade #13. Do not use shaded inside protection plates for either 9002V or 9002X filters.**



Helmet Replacement Parts

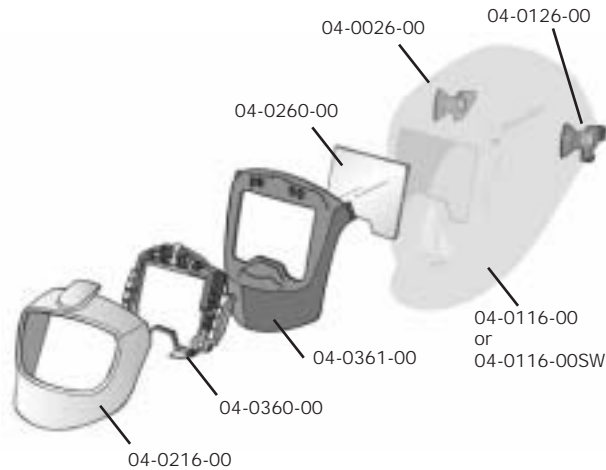
04-0012-00	Speedglas welding helmet 9000 with headband
04-0112-00	Speedglas inner welding helmet 9000 only
For any of the above part numbers, add “H” for hard hat and/or “SW” for SideWindows option.	
04-0014-00	Speedglas Utility welding helmet with headband
04-0114-00	Speedglas Utility inner welding helmet only
04-0212-00	Silver front panel
04-0650-00	Headband; complete with mounting hardware*
04-0660-00	Mounting hardware*
04-0026-00	9000 and Utility helmet/headband “S” stop-package of 10
02-0024-02	Sweatband in cloth
02-0024-01	Sweatband in leather
02-0024-00	Sweatband in plastic

Helmet Accessories

02-0645-00	Head protector (FR cotton)
18-0099-68	Throat and side protector, leather (3 parts)
02-0690-00	Throat protector (FR cotton)
02-0014-00NR	Hard hat adapter
02-0023-00	Hard hat with mounting hardware

*When purchasing for FlexView Systems, also purchase 04-0126-00 “S” stop.

Replacement Parts for 3M™ Speedglas™ FlexView System*



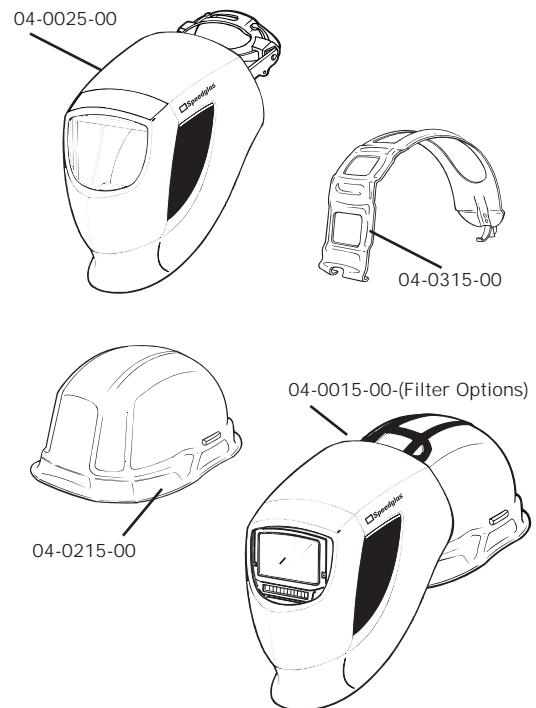
04-0016-(filter options) Complete Speedglas FlexView system
 04-0016-00 Complete Speedglas FlexView system with no filter

Add "SW" for SideWindows option.

04-0116-00 Speedglas FlexView shell only
 04-0116-00SW Speedglas FlexView shell only with SideWindows option
 04-0126-00 Speedglas FlexView helmet/headband "S" stop left-package of 10
 04-0216-00 Speedglas FlexView silver front panel only
 04-0360-00 Speedglas FlexView welding filter holder
 04-0361-00 Speedglas FlexView middle helmet panel
 04-0260-00 Speedglas FlexView faceshield-package of 10

*Parts on this page are unique to the FlexView system. See page 40 for additional standard parts which are also used in the FlexView system.

Replacement Parts for 3M™ Speedglas™ ProTop System



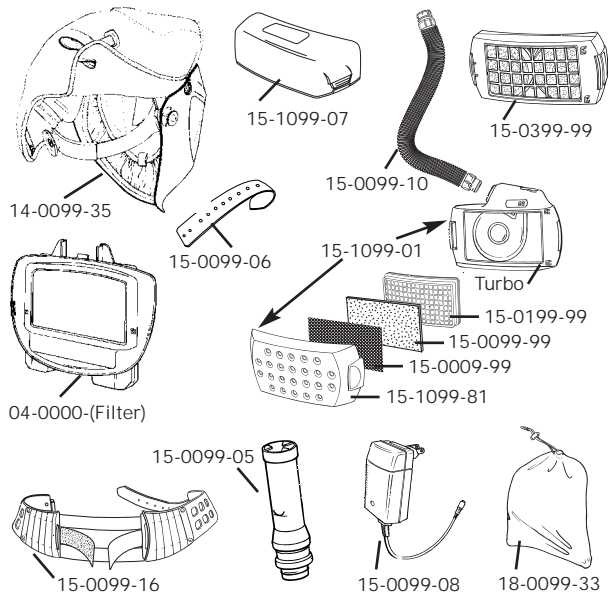
04-0015-(filter options) Complete Speedglas ProTop system
 04-0025-00 Speedglas ProTop welding helmet with pivot mechanism

Add "SW" for SideWindows option.

04-0215-00 Speedglas ProTop hard hat with headgear
 04-0315-00 Speedglas ProTop strap
 04-0024-02 Speedglas ProTop replacement sweatband- package of 2

REPLACEMENT PARTS

Replacement Parts For 3M™ Speedglas™ Helmet 9000 HWR with Adflo™ System



Replacement Filters and Cartridges

- 15-0099-99X06 6-pack Adflo prefilter
- 15-0099-99X12 12-pack Adflo prefilter
- 15-0199-99X02 2-pack Adflo HE particle filter
- 15-0199-99X06 6-pack Adflo HE particle filter
- 15-0199-99X36 36-pack Adflo HE particle filter
- 15-0399-99X02 2-pack Adflo OV/SD/CL/HC cartridge
- 15-0399-99X06 6-pack Adflo OV/SD/CL/HC cartridge
- 15-0009-99X02 2-pack Adflo spark arrestor

3M™ Adflo™ Turbo System Replacement Parts

- 15-1099-01 Adflo turbo assembly and filter cover without filter or cartridge or battery
- 15-1099-81 Adflo turbo filter cover
- 15-5401-01 Adflo turbo, complete with breathing tube assembly, flow indicator, belt, spark arrestor, Adflo turbo filter cover, prefilter, HE particle filter, battery and smart charger.

Miscellaneous Replacement Parts and Accessories

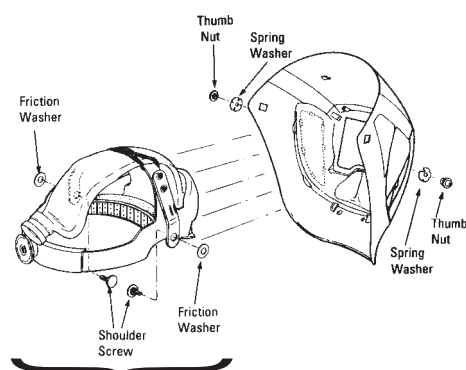
- 15-0099-05 Flow indicator
- 15-1099-07 Adflo battery pack
- 15-0099-08 Adflo battery smart charger
- 15-0099-10 Adflo breathing tube assembly (rubber)
- 15-0099-16 Adflo leather belt
- 15-0099-06 Adflo leather belt front piece replacement
- 18-0099-33 Carry bag

Head Cover
18-0099-30



HWR/FA II Helmet 9000 assembly with Resp. Protect. Velcro® and Foam: 14-0099-32 (Hardware: 14-0099-70 and Face Seal: 14-0099-28 sold separately)

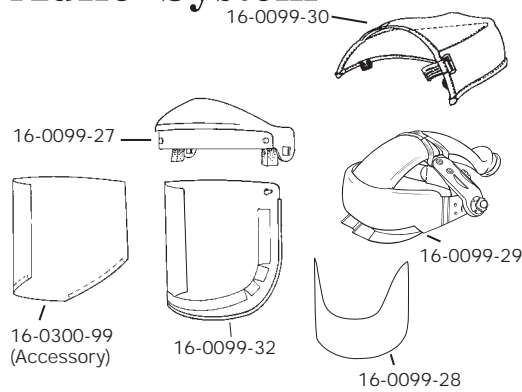
Face Seal
14-0099-28



HWR/FA II 9000 Headband Assembly with Air Duct: 14-0099-29 (Hardware sold separately: 14-0099-70)

- 18-0099-27 Elastic duct retainer (pair)
- 14-0099-28 HWR/FA II 9000 face seal
- 14-0099-29 HWR/FA II 9000 headband assembly with air duct
- 18-0099-30 Head cover, cloth
- 14-0099-35 HWR/FA II 9000 helmet assembly complete
- 14-0099-32 HWR/FA II 9000 helmet (with Velcro® and foam only)
- 14-009932SW HWR/FA II 9000 SideWindows helmet (with Velcro and foam only)
- 14-0099-70 HWR/FA II 9000 helmet assembly hardware kit
- 04-0212-00 Silver front panel
- 04-0000-10 Speedglas filter 9000F only, shade 10
- 04-0000-11 Speedglas filter 9000F only, shade 11
- 04-0000-12 Speedglas filter 9000F only, shade 12
- 04-0000-10X Speedglas filter 9000XF only, shade 10
- 04-0000-11X Speedglas filter 9000XF only, shade 11
- 04-0000-12X Speedglas filter 9000XF only, shade 12
- 04-0000-31 Speedglas filter 9002V only
- 04-0000-21 Speedglas filter 9002X only
- 15-1699-35 HWR 9000 FV series helmet assembly complete, no filter
- 15-1699-35SW HWR 9000 FV series helmet assembly complete with SideWindows, no filter

Replacement Parts for 3M™ ClearVisor with Adflo™ System



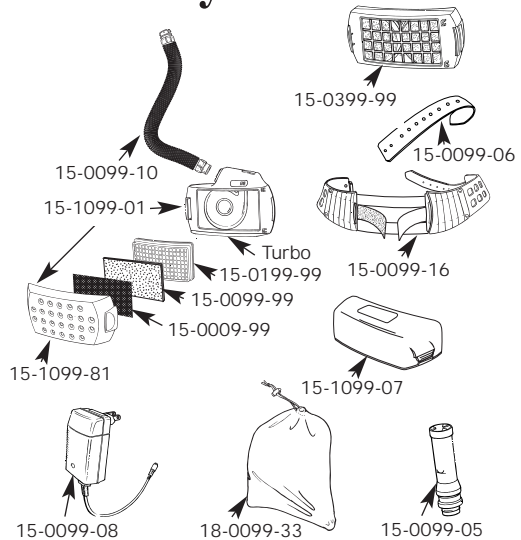
Complete Systems

16-1101-40	ClearVisor with Adflo HE particle filter system
16-3301-40	ClearVisor with Adflo HE filter + OV/SD/CL/HC cartridge system

Replacement Parts

16-0099-30	Head cover
16-0099-35	ClearVisor faceshield headband assembly complete
16-0099-29	ClearVisor faceshield headband assembly with air duct
16-0099-28	ClearVisor face seal
16-0099-27	Brow guard
16-0099-32	Clear window with Velcro®
16-0300-99X05	Clear window strip off shielding film (5 pack)
02-0660-00	Mounting hardware (APC, ClearVisor)

Replacement Parts for 3M™ ClearVisor with Adflo™ System



Replacement Filters and Cartridges

15-0099-99X02	2-pack Adflo spark arrestor
15-0099-99X06	6-pack Adflo prefilter
15-0099-99X12	12-pack Adflo prefilter
15-0199-99X02	2-pack Adflo HE particle filter
15-0199-99X06	6-pack Adflo HE particle filter
15-0199-99X36	36-pack Adflo HE particle filter
15-0399-99X02	2-pack Adflo OV/HE/SD/CL/HC cartridge
15-0399-99X06	6-pack Adflo OV/HE/SD/CL/HC cartridge

3M™ Adflo™ Turbo System

Replacement Parts

15-1099-01	Adflo turbo assembly and cover without filter/cartridge or battery
15-1099-81	Adflo turbo filter cover (no prefilter, no spark arrestor)
15-5401-01	Adflo turbo complete with breathing tube assembly, flow indicator, belt, spark arrestor, Adflo turbo filter cover, prefilter, HE particle filter, battery and smart charger

Miscellaneous Replacement Parts and Accessories

15-0099-05	Flow indicator
15-1099-07	Adflo battery
15-0099-08	Adflo battery smart charger
15-0099-08N6	Adflo multiple battery smart charger (6)
15-0099-10	Adflo breathing tube assembly (rubber)
15-0099-16	Adflo leather belt
15-0099-06	Adflo leather belt front piece replacement
17-0099-54	Carry bag

Starter Kits

15-1101-99	Adflo HE starter kit - (2- HE filters, 6- prefilters, 2- spark arrestors)
15-3301-99	Adflo HE + OV/SD/CL/HC starter kit - (2- OV/SD/CL/HC cartridge, 2- HE filters, 6- prefilters, 2- spark arrestors)

Replacement Parts for 3M™ Fresh-air II Supplied Air (SA) Systems 9000

Complete Fresh-air II SA Systems 9000

Cool-air: 14-5701-(filter options)

Temp-air: 14-5801-(filter options)

Filter Options:

10, 11 or 12 = Speedglas filter 9000F shade 10, 11 or 12

10X, 11X or 12X = Speedglas filter 9000XF shade 10, 11 or 12

31 = Speedglas filter 9002V

21 = Speedglas filter 9002X

Add “SW” for SideWindows option. For hardhat version order separate components (see page 35).

Replacement Valves and Valve Parts

18-0099-47 Cool-air valve assembly

18-0099-48 Temp-air valve assembly

18-0099-55 Valve shield

18-0099-63 Breathing tube (supplied air) hard hat

Air Supply Hoses

18-0099-40 25 feet breather hose, with couplings

18-0099-41 50 feet breather hose, with couplings

18-0099-42 100 feet breather hose, with couplings

18-0099-43 25 feet Nycoil™ hose, with couplings

18-0099-44 50 feet Nycoil™ hose, with couplings

18-0099-45 100 feet Nycoil™ hose, with couplings

Miscellaneous Replacement Parts and Accessories

18-0099-16 Comfort belt

18-0099-33 Carry bag

For 9000 Helmet Assembly with Respiratory Protection (HWR) Replacement Parts and Accessories, see page 45.

Featured Accessories

Accessory kits: 10 outside and 5 inside protection plates, plus 2 filter batteries. See page 40.



Outside protection plates: standard, scratch-resistant and High Heat. See page 40.



Throat protector: “Bib” made from flame-resistant cloth. See page 41.



Leather protectors: one throat and two side protectors made from leather. See page 41.



Head protector: made from flame-resistant cloth. See page 41.



Customer Support

If you have any questions about your Speedglas products, contact Customer Care at: 800-328-1667 or Fax: 800-311-4069. (Canada: 800-267-4414 or Fax: 613-345-0826.)

Speedglas™ Filter Warranty

3M warrants all Speedglas filters for 24 months from the date of purchase against all manufacturing defects resulting from materials or workmanship.

Adflo™ System Warranty

3M warrants all Adflo products obtained hereunder to be free from defects in material and workmanship in normal service and under normal conditions for 12 months from the date of delivery.

Speedglas™ Fresh-air II Supplied Air (SA) 9000 Warranty

3M warrants all Fresh-air products obtained hereunder to be free from defects in material and workmanship in normal service and under normal conditions for 180 days from the date of delivery.

Portable Compressed Air Filter Warranty

3M warrants its Portable Compressed Air Filter and Regulator Panel with Carbon Monoxide Filtration and Monitor for a period of one (1) year and its Carbon Monoxide Sensor for a period of two (2) years from the original shipping date, to be free from defects in material and workmanship in normal service and under normal conditions.

These warranties are void in the case of operator misuse, abuse, or neglect. Read your instruction manual to avoid certain situations which could void this warranty (for example, cracked filters and filters covered with weld spatter are not covered under the warranty policy).

The foregoing warranties shall not apply, and 3M shall be held harmless and relieved of any obligation or liability to the buyer or user, if the equipment has been repaired or altered in a manner not authorized by 3M, including the use of replacement components not approved by 3M, or if the equipment has been subject to abuse, negligence or accidental mishandling.

The foregoing warranties are in lieu of all other warranties expressed, implied, or statutory, including warranty of merchantability or fitness for a particular purpose.

Warranty Return Procedure

- 1) Make a photocopy of your proof-of-purchase: include the serial number of the product being returned. Write the Return Authorization number on the copy of the proof-of-purchase and include it with the product.
- 2) Call the 3M Warranty Department toll-free at 800-328-1667 #3, Canada: 800-267-4414 to obtain a Return Authorization number.
- 3) Write the Return Authorization number clearly on the outside of the package. Upon receipt of the product it will be evaluated and in most cases a replacement will be shipped the next business day.

Out-Of-Warranty Repairs and Service

For repair pricing and procedures, call the Warranty & Repair Department toll-free: 800-328-1667 #3 or Fax: 402-359-4126. Canada: 800-267-4414 or Fax: 888-211-0733.

WARNING

These welding safety products must be used only by qualified persons trained in their use and maintenance and only in strict accordance with and adherence to the detailed instructions and precautionary statements provided in the instruction manual which accompanies each product. **Failure to comply with these instructions could result in sickness, serious bodily injury or loss of life.**

For proper use of these products read user instructions and warnings on the package. Any questions concerning proper use should be directed to your supervisor, on-site training specialist, industrial hygienist or 3M Occupational Health and Environmental Safety Division (OH&ESD) Technical Service in the U.S.A. at 1-800-243-4630. In Canada, call 1-800-267-4414.



Team Torch Exclusive Welder for NHRA Events

Since 1987, Paul Le Sage, aka Team Torch, has been the exclusive welder for all National Hot Rod Association (NHRA) events. Currently equipped with a heavily-modified, low-riding Chevy S-10 Xtreme truck and a 9000kVA generator/welder, Torch can quickly buzz in and out of crowded pit areas.

“I’m doing some very extreme repairs on 300 mph race cars in the course of my day at a NHRA National event,” says Le Sage. “With a 75-minute turnaround between making another race down the drag strip, time is not on my side. The 3M™ Speedglas™ Auto-Darkening Helmet is a must in my world.”



For the last 13 years, Torch has exclusively used Speedglas auto-darkening helmets. “I can always clearly see my set-up with the Speedglas auto-darkening filter. Plus, the pits are usually boiling hot during the day, so the breathable 9000 helmet is a major bonus.”

Unusual in the racing world, NHRA events typically allow race goers the opportunity to walk between the pit areas and watch the teams work on the dragsters. As the premier auto-darkening filter on the drag racing circuit, Speedglas helmets from 3M can be seen in numerous pit areas, as well as being part of Team Torch’s mobile welding rig.

*“The 3M™
Speedglas™
Auto-Darkening
Helmet is a must
in my world.”*

3M™ SPEEDGLAS™ SELECTOR TABLE



Speedglas™ Products	Utility	9000F	9000XF	9002V	9002X
FILTER TYPE	Fixed	Fixed	Fixed	Variable	Variable
SHADE	10 11	10 11 12	10 11 12	9-13	9-13
VIEWING AREA	3.58" x 1.68"	3.58" x 1.68"	4.09" x 2.12"	3.58" x 1.68"	4.09" x 2.12"
SOLAR ASSIST	No	No	No	No	Yes
WELDING FILTER BATTERY LIFE	2000 hrs	2000 hrs	1750 hrs	1500 hrs	3000 hrs
MIG & STICK APPLICATIONS	Yes	Yes	Yes	Yes	Yes
ADJUSTABLE SENSITIVITY	No	No	Yes	Yes	Yes
TIG APPLICATIONS	No	Yes*	Yes	Yes	Yes
EXHALATION VENTING	No	Yes	Yes	Yes	Yes
FILTER ONLY	No, only available with Helmet 9000	SH-04-0000-10 SH-04-0000-11 SH-04-0000-12	SH-04-0000-10X SH-04-0000-11X SH-04-0000-12X	04-0000-31	04-0000-21
HELMET 9000 WITH FILTER	SH-04-0014-10U SH-04-0014-11U	SH-04-0012-10 SH-04-0012-11 SH-04-0012-12	SH-04-0012-10X SH-04-0012-11X SH-04-0012-12X	04-0012-31	04-0012-21
HELMET 9000 WITH FILTER AND SIDEWINDOWS	No	SH 10: 04-0012-10SW SH 11: 04-0012-11SW SH 12: 04-0012-12SW	SH 10: 04-0012-10XSW SH 11: 04-0012-11XSW SH 12: 04-0012-12XSW	04-0012-31SW	04-0012-21SW
FLEXVIEW HELMET WITH FILTER	No	SH 10: 04-0016-10 SH 11: 04-0016-11 SH 12: 04-0016-12	SH 10: 04-0016-10X SH 11: 04-0016-11X SH 12: 04-0016-12X	04-0016-31	04-0016-21
FLEXVIEW HELMET WITH FILTER AND SIDEWINDOWS	No	SH 10: 04-0016-10SW SH 11: 04-0016-11SW SH 12: 04-0016-12SW	SH 10: 04-0016-10XSW SH 11: 04-0016-11XSW SH 12: 04-0016-12XSW	04-0016-31SW	04-0016-21SW
PROTOP WITH FILTER	No	SH 10: 04-0015-10 SH 10: 04-0015-11 SH 10: 04-0015-12	SH 10: 04-0015-10X SH 10: 04-0015-11X SH 10: 04-0015-12X	04-0015-31	04-0015-21
PROTOP WITH FILTER AND SIDEWINDOWS	No	SH 10: 04-0015-10SW SH 10: 04-0015-11SW SH 10: 04-0015-12SW	SH 10: 04-0015-10XSW SH 10: 04-0015-11XSW SH 10: 04-0015-12XSW	04-0015-31SW	04-0015-21SW

*Will function in TIG applications of over 50 Amps.

3M™ SPEEDGLAS™ WITH ADFLO™ SELECTOR TABLE (RESPIRATORY)



Speedglas™ with Adflo™ Product	HE (Particulate)				HE + OV/SD/CL/HC			
	HE with 9000F ADF*	HE with 9000XF ADF	HE with 9002V ADF	HE with 9002X ADF	HE + OV/SD/CL/HC with 9000F ADF	HE + OV/SD/CL/HC HE with 900XF ADF	HE + OV/SD/CL/HC with 9002V ADF	HE + OV/SD/CL/HC with 9002X ADF
FILTER TYPE	Fixed	Fixed	Variable	Variable	Fixed	Fixed	Variable	Variable
SHADE	10 11 12	10 11 12	9-13	9-13	10 11 12	10 11 12	9-13	9-13
VIEWING AREA	3.58" x 1.68"	4.09" x 2.12"	3.58" x 1.68"	4.09" x 2.12"	3.58" x 1.68"	4.09" x 2.12"	3.58" x 1.68"	4.09" x 2.12"
SOLAR ASSIST	No	No	No	Yes	No	No	No	Yes
WELDING FILTER BATTERY LIFE	2000 hrs	1750 hrs	1500 hrs	3000 hrs	2000 hrs	1750 hrs	1500 hrs	3000 hrs
ADFLO BATTERY LIFE	up to 10 hrs/ charge	up to 10 hrs/ charge	up to 10 hrs/ charge	up to 10 hrs/ charge	up to 6 hrs/ charge	up to 6 hrs/ charge	up to 6 hrs/ charge	up to 6 hrs/ charge
MIG & STICK APPLICATIONS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ADJUSTABLE SENSITIVITY	No	Yes	Yes	Yes	No	Yes	Yes	Yes
TIG APPLICATIONS	Yes**	Yes	Yes	Yes	Yes**	Yes	Yes	Yes
HELMET 9000 HWR WITH FILTER	SH 10: 15-1101-10 SH 11: 15-1101-11 SH 12: 15-1101-12	SH 10: 15-1101-10X SH 11: 15-1101-11X SH 12: 15-1101-12X	15-1101-31	15-1101-21	SH 10: 15-3301-10 SH 11: 15-3301-11 SH 12: 15-3301-12	SH 10: 15-3301-10X SH 11: 15-3301-11X SH 12: 15-3301-12X	15-3301-31	15-3301-21
HELMET 9000 HWR WITH FILTER AND SIDEWINDOWS	SH 10: 15-1101-10SW SH 11: 15-1101-11SW SH 12: 15-1101-12SW	SH 10: 15-1101-10XSW SH 11: 15-1101-11XSW SH 12: 15-1101-12XSW	15-1101-31SW	15-1101-21SW	SH 10: 15-3301-10SW SH 11: 15-3301-11SW SH 12: 15-3301-12SW	SH 10: 15-3301-10XSW SH 11: 15-3301-11XSW SH 12: 15-3301-12XSW	15-3301-31SW	15-3301-21SW
FLEXVIEW HELMET 9000 HWR WITH FILTER	SH 10: 16-1101-10 SH 11: 16-1101-11 SH 12: 16-1101-12	SH 10: 16-1101-10X SH 11: 16-1101-11X SH 12: 16-1101-12X	16-1101-31	16-1101-21	SH 10: 16-3301-10 SH 11: 16-3301-11 SH 12: 16-3301-12	SH 10: 16-3301-10X SH 11: 16-3301-11X SH 12: 16-3301-12X	16-3301-31	16-3301-21
FLEXVIEW HELMET 9000 HWR WITH FILTER AND SIDEWINDOWS	SH 10: 16-1101-10SW SH 11: 16-1101-11SW SH 12: 16-1101-12SW	SH 10: 16-1101-10XSW SH 11: 16-1101-11XSW SH 12: 16-1101-12XSW	16-1101-31SW	16-1101-21SW	SH 10: 16-3301-10SW SH 11: 16-3301-11SW SH 12: 16-3301-12SW	SH 10: 16-3301-10XSW SH 11: 16-3301-11XSW SH 12: 16-3301-12XSW	16-3301-31SW	16-3301-21SW

Helmet 9000 HWR with Adflo HE cartridge (no filter) 15-1101-00

* Auto-Darkening Filter (ADF)

**Will function in TIG applications of over 50 Amps.

Helmet 9000 HWR with Adflo HE + OV/SD/CL/HC cartridge (no filter) 15-3301-00



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For More Information

In U.S.

Technical Assistance 1-800-243-4630
Customer Care Center 1-800-328-1667

In Canada

Technical Assistance 1-800-267-4414
Customer Care Center 1-800-364-3577

Internet www.Speedglas.com www.3M.com/Occsafety

3M

General Offices

3M Center
St. Paul, MN 55144-1000

3M Canada Company OH&ES

P.O. Box 5757
London, Ontario N6A 4T1
Canada