



3M™ Speedglas™ Welding Helmet 9100 and 9100 Air

Description

- Easy to operate and maintain.
- Light state shade 3, dark state shades 5, 8-13.
- Side windows for enhanced peripheral vision.
- Exhaust vent to help reduce heat, humidity, and fogging (non Air version).
- Is suitable for most welding applications up to Shade 13 in the dark state.
- Has permanent protection (Shade 13 equivalent) against harmful UV- and IR- radiation, regardless of whether the filter is in the light or dark state or whether the auto-darkening function is operational.
- Has seven user selectable levels of detector sensitivity to ensure a reliable arc detection.
- Can be locked in a constant dark or light state.
- Solar panel power assistance (except with 3M™ Speedglas™ Welding Filter 9100XX and 9100 XXi).
- Multiple adjustments for highest comfort on helmet and headband.
- Can be used in conjunction with many reusable and maintenance-free respirators for welding (non Air version).
- Auto-Darkening Filter not included.
 - Compatible with all 3M™ Speedglas™ Filters 9100 (V, X, XX and XXi).



Common Applications

When used with recommended filters, are designed for most welding processes such as:

- MMA
- MIG/MAG
- TIG
- Plasma welding
- Oxyacetylene welding/cutting
- Grinding applications

i IMPORTANT NOTE

Always wear ANSI approved safety spectacles as primary eye protection. Welding helmets are considered secondary eye protection.

i IMPORTANT NOTE

9100 Air Welding Shield is designed to be used with 3M Air Delivery Units. See appropriate reference leaflet for approved combinations.

Approvals/Standards

- ANSI Z87.1
- ANSI Z89.1 (when used with a hard hat)
- CSA 94.3

Equipment Markings

Additional Markings



Shall be disposed of as electrical and electronic waste



Read the instructions before use

Limitations of Use

- Only use with original 3M branded spare parts and accessories listed in the user instructions and within the usage conditions given in the technical specifications.
- The use of substitute components, decals, paint or other modifications not specified in these user instructions might seriously impair protection and may invalidate claims under the warranty or cause the product to be non-compliant with protection classifications and approvals.
- Eye protectors worn over standard ophthalmic spectacles may transmit impacts thus creating a hazard to the wearer.
- Use of this product in applications outside its intended use, such as laser welding/cutting, may result in permanent eye injury and vision loss.
- Severe burn injuries may result if these welding helmets are used for heavy-duty overhead welding applications where there is a potential for falling molten metal.
- Should the product fail to switch to the dark state in response to an arc, stop welding immediately and inspect the welding filter as described in the instructions. Continued use of a welding filter that fails to switch to the dark state may cause temporary vision loss. If the problem cannot be identified and corrected, do not use the welding filter, contact your supervisor, distributor or 3M for assistance.
- Materials which may come into contact with the wearer's skin are not known to cause allergic reactions to the majority of individuals. These products do not contain components made from natural rubber latex.
- Flashing light sources (i.e. flash tube strobe lights, safety warning lights, etc.) can trigger the welding filter causing it to flash even when no welding is occurring. This is inherent with all auto-darkening filter technology. This interference can occur from long distances and/or from reflected light.
- Welding areas must be shielded from such interference, or replace lights with an LED strobe light.

3M™ Speedglas™ 9100 Air Welding Shield

- Do not use for respiratory protection against unknown atmospheric contaminants or when concentrations of contaminants are unknown or immediately dangerous to life or health (IDLH).
- Do not use in atmospheres containing less than 19.5% oxygen (3M definition. Individual countries may apply their own limits on oxygen deficiency. Seek advice if in doubt).
- Do not use these products in oxygen or oxygen-enriched atmospheres.
- Leave the contaminated area immediately if: Any part of the system becomes damaged, airflow into the head top decreases or stops, breathing becomes difficult, dizziness or other distress occurs, you smell or taste contaminants or irritation occurs.
- High winds above 2m/s (4.5mph), or very high work rates (where the pressure within the head top can become negative) can reduce protection. Adjust equipment as appropriate or consider an alternative form of respiratory protective device.
- Users must be clean-shaven where the respirator's face seal comes into contact with the face.

Technical Specifications

Description	Value
Approximate Weight Welding shield with SideWindows (incl silverfront) Welding shield w/o SideWindows (incl silverfront) Headband 3M™ Speedglas™ 9100V Welding Filter 3M™ Speedglas™ 9100X Welding Filter 3M™ Speedglas™ 9100XX Welding Filter	265 g (9.35 oz.) 240 g (8.47 oz.) 120 g (4.23 oz.) 150 g (5.29 oz.) 160 g (5.64 oz.) 185 g (6.53 oz.)
Viewing Area	3M™ Speedglas™ 9100V Welding Filter: 1.77 x 3.66 in (45 x 93 mm) 3M™ Speedglas™ 9100X Welding Filter: 2.13 x 4.21 in (54 x 107 mm) 3M™ Speedglas™ 9100XX Welding Filter: 2.87 x 4.21 in (73 x 107 mm) 3M™ Speedglas™ 9100XXi Welding Filter: 2.87 x 4.21 in (73 x 107 mm)
Switching Time (light-dark)	0.1 ms (+23° C)
UV/IR Protection	Shade 13 (permanent)
Light State	Shade 3
Dark State	Shade 5, 8–13
Fail/Safe State	Shade 5
Battery Type	Lithium 3V Type CR2032 (2)
Battery Lifetime	3M™ Speedglas™ 9100V Welding Filter: 2800 hours 3M™ Speedglas™ 9100X Welding Filter: 2500 hours 3M™ Speedglas™ 9100XX Welding Filter: 2000 hours 3M™ Speedglas™ 9100XXi Welding Filter: 1800 hours
Operating Temperature	23°F to 131°F (-5°C to +55°C)
Head Size	50 – 64 cm (6.25 - 8 in)
Material Shield: Silver front frame: SideWindows: Headband: Faceséal:	PPA PA PC PA, PP, TPE, PE 50% Polyester, 50% Cotton

Spare Parts and Accessories - 9100

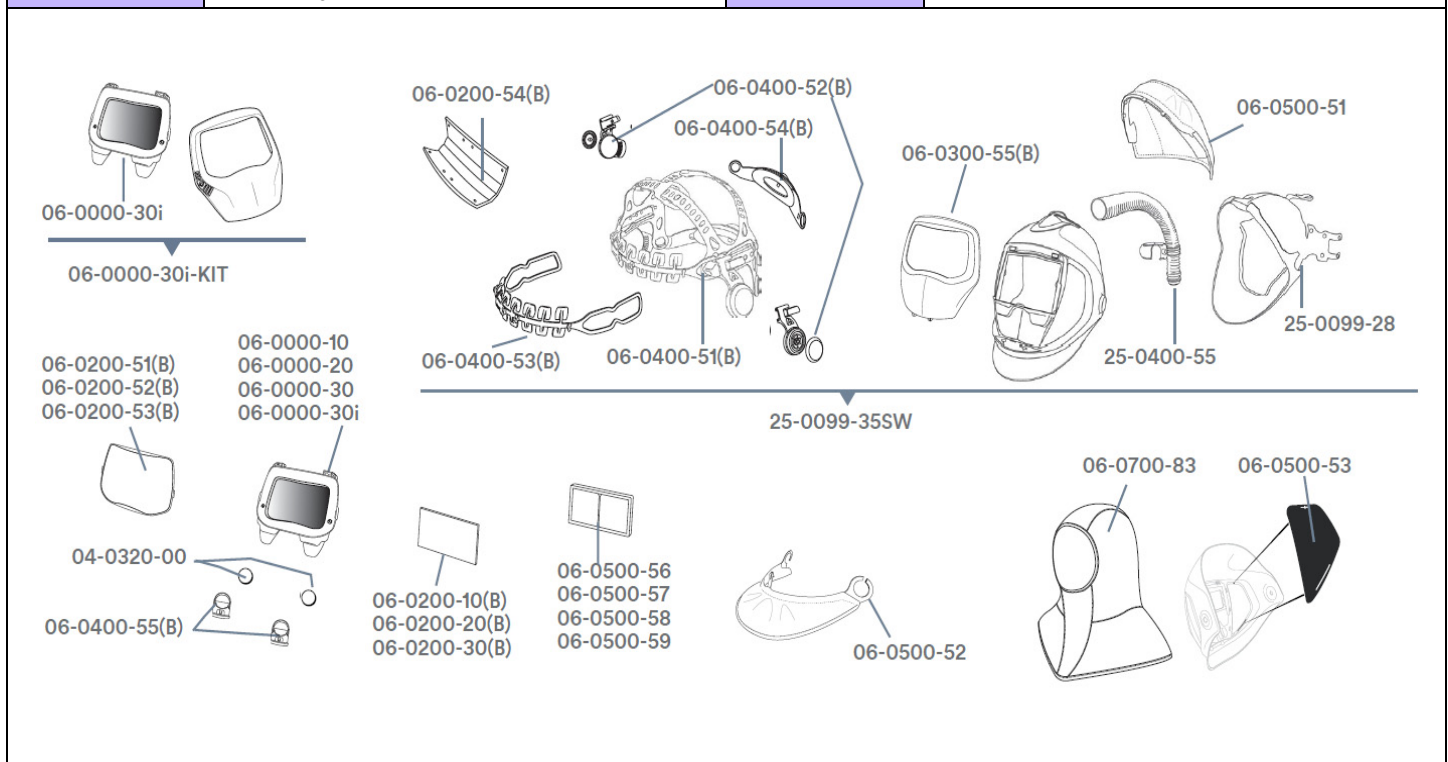
Part Number	Description	Part Number	Description
Spare Parts			
06-0100-10	Speedglas welding helmet 9100 with welding filter 9100V	06-0100-20SW	Speedglas welding helmet 9100 with side windows and welding filter 9100X
06-0100-10HASW	Speedglas welding helmet 9100, with side windows, hard hat adapter and welding filter 9100V, without hard hat	06-0100-30	Speedglas welding helmet 9100 with welding filter 9100XX
06-0100-10HHSW	Speedglas welding helmet 9100 with side windows, hard hat and welding filter 9100V	06-0100-30HASW	Speedglas welding helmet 9100, with side windows, hard hat adapter and welding filter 9100XX, without hard hat
06-0100-10SW	Speedglas welding helmet 9100 with side windows and welding filter 9100V	06-0100-30HHSW	Speedglas welding helmet 9100 with side windows, hard hat and welding filter 9100XX
06-0100-20	Speedglas welding helmet 9100 with welding filter 9100X	06-0100-30SW	Speedglas welding helmet 9100 with side windows and welding filter 9100XX
06-0100-20HASW	Speedglas welding helmet 9100, with side windows, hard hat adapter and welding filter 9100X, without hard hat	06-0100-30iSW	Speedglas welding helmet 9100 with side windows and welding filter kit 9100XXi

Part Number	Description	Part Number	Description
Accessories and Consumables			
04-0023-02	Hard hat H-701, white	06-0200-54	Comfort sweatband, 3/case
04-0320-00	Batteries, 2/case	06-0200-54-B	Comfort sweatband, 12/case
06-0000-10	Speedglas welding filter 9100V	06-0201-10	Starter kit 9100V, incl 5 outside protection plates, 2 inside protection plates and 1 sweatband
06-0000-20	Speedglas welding filter 9100X	06-0201-20	Starter kit 9100X, incl 5 outside protection plates, 2 inside protection plates and 1 sweatband
06-0000-30	Speedglas welding filter 9100XX	06-0201-30	Starter kit 9100XX, incl 5 outside protection plates, 2 inside protection plates and 1 sweatband
06-0000-30i	Speedglas welding filter 9100XXi	06-0300-51	Welding helmet without side windows, with headband and silver front panel
06-000030iKIT	Speedglas welding filter kit 9100XXi, (filter and silver front)	06-0300-51SW	Welding helmet with side windows, headband and silver front panel
06-0014-00NR	9100 hardhat adapter for with assembly parts, without hard hat	06-0300-52	Welding helmet without side windows, without headband
06-0200-10	Inside protection plate 9100V, 5/case	06-030052SW*	Welding helmet with side windows, without headband
06-0200-10-B	Part no 06-0200-10, 25/case	06-0300-55	Silver front panel 9100
06-0200-20	Inside protection plate 9100X, 5/case	06-0300-55-B	Part no 06-0300-55, 5/case
06-0200-20-B	Part no 06-0200-20, 25/case	06-0400-51	Headband incl assembled parts
06-0200-30	Inside protection plate 9100XX, 5/case	06-0400-51-B	Part no 06-0400-51, 5/case
06-0200-30-B	Part no 06-0200-30, 25/case	06-0400-52	Pivot mechanism headband, left and right
06-0200-51	Outside protection plate standard, 10/case	06-0400-52-B	Part no 06-0400-52, 5/case
06-0200-51-B	Part no 06-0200-51, 50/case	06-0400-53	Headband front part
06-0200-52	Outside protection plate scratch resistant, 10/case	06-0400-53-B	Part no 06-0400-53, 5/case
06-0200-52-B	Part no 06-0200-52, 50/case	06-0400-54	Headband back part
06-0200-53	Outside protection plate high temperature, 10/case	06-0400-54-B	Part no 06-0400-54, 5/case
06-0200-53-B	Part no 06-0200-53, 50/case	06-0400-55	Battery holder 9100, 2/case

Part Number	Description	Part Number	Description
06-0400-55-B	Part no 06-0400-55, 10/case	06-0500-57	Magnification plate 20x
06-0500-51	Extended coverage, Crown	06-0500-58	Magnification plate 25x
06-0500-52	Extended coverage, Ear & Neck	06-0500-59	Magnification plate 30x
06-0500-53	SideWindow cover plates, 2/case	06-0700-83	Full Hood, black/grey
06-0500-56	Magnification plate 15x		

Spare Parts and Accessories - 9100 Air

Part Number	Description	Part Number	Description
Spare Parts			
35-1101-00SW	Speedglas welding helmet 9100-Air without welding filter with Adflo PAPR and HE filter	35-3301-30SW	Speedglas welding helmet 9100-Air with welding filter 9100XX and Adflo PAPR with HE filter and OV/AG cartridge
35-1101-10SW	Speedglas welding helmet 9100-Air with welding filter 9100V and Adflo PAPR with HE filter	25-5702-10SW	Speedglas welding helmet 9100-Air with welding filter 9100V and Fresh-air III SAR, V-100 valve
35-1101-20SW	Speedglas welding helmet 9100-Air with welding filter 9100X and Adflo PAPR with HE filter	25-5702-20SW	Speedglas welding helmet 9100-Air with welding filter 9100X and Fresh-air III SAR, V-100 valve
35-1101-30SW	Speedglas welding helmet 9100-Air with welding filter 9100XX and Adflo PAPR with HE filter	25-5702-30SW	Speedglas welding helmet 9100-Air with welding filter 9100XX and Fresh-air III SAR, V-100 valve
35-1101-30iSW	Speedglas welding helmet 9100-Air with welding filter 9100XXi and Adflo PAPR with HE filter	25-5702-30iSW	Speedglas welding helmet 9100-Air with welding filter 9100XXi and Fresh-air III SAR, V-100 valve
35-3301-00SW	Speedglas welding helmet 9100-Air without welding filter, with Adflo PAPR, HE filter and OV/AG cartridge	25-5802-10SW	Speedglas welding helmet 9100-Air with welding filter 9100V and Fresh-air III SAR, V-200 valve
35-3301-10SW	Speedglas welding helmet 9100-Air with welding filter 9100V and Adflo PAPR with HE filter and OV/AG cartridge	25-5802-20SW	Speedglas welding helmet 9100-Air with welding filter 9100X and Freshair III SAR, V-200 valve
35-3301-20SW	Speedglas welding helmet 9100-Air with welding filter 9100X and Adflo PAPR with HE filter and OV/AG cartridge	25-5802-30SW	Speedglas welding helmet 9100-Air with welding filter 9100XX and Fresh-air III SAR, V-200 valve



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Part Number	Description	Part Number	Description
Accessories and Consumables			
04-0320-00	Batteries, 2/case	06-0400-51	Headband incl assembled parts
06-0000-10	Speedglas welding filter 9100V	06-0400-51-B	Part no 06-0400-51, 5/case
06-0000-20	Speedglas welding filter 9100X	06-0400-52	Pivot mechanism headband, left and right
06-0000-30	Speedglas welding filter 9100XX	06-0400-52-B	Part no 06-0400-52, 5/case
06-0000-30i	Speedglas welding filter 9100XXi	06-0400-53	Headband front part
06-000030iKIT	Speedglas welding filter kit 9100XXi, (filter and silver front)	06-0400-53-B	Part no 06-0400-53, 5/case
06-0200-10	Inside protection plate 9100V, 5/case	06-0400-54	Headband back part
06-0200-10-B	Part no 06-0200-10, 25/case	06-0400-54-B	Part no 06-0400-54, 5/case
06-0200-20	Inside protection plate 9100X, 5/case	06-0400-55	Battery holder 9100, 2/case
06-0200-20-B	Part no 06-0200-20, 25/case	06-0400-55-B	Part no 06-0400-55, 10/case
06-0200-30	Inside protection plate 9100XX, 5/case	06-0500-51	Extended coverage, Crown
06-0200-30-B	Part no 06-0200-30, 25/case	06-0500-52	Extended coverage, Ear & Neck
06-0200-51	Outside protection plate standard, 10/case	06-0500-53	SideWindow cover plates, 2/case
06-0200-51-B	Part no 06-0200-51, 50/case	06-0500-56	Magnification plate 15x
06-0200-52	Outside protection plate scratch resistant, 10/case	06-0500-57	Magnification plate 20x
06-0200-52-B	Part no 06-0200-52, 50/case	06-0500-58	Magnification plate 25x
06-0200-53	Outside protection plate high temperature, 10/case	06-0500-59	Magnification plate 30x
06-0200-53-B	Part no 06-0200-53, 50/case	06-0700-83	Full Hood, black/grey
06-0200-54	Comfort sweatband, 3/case	25-0099-28	Face seal
06-0200-54-B	Comfort sweatband, 12/case	25-0099-35SW	Welding helmet 9100-Air, without welding filter
06-0300-55	Silver front panel	25-0400-55	Air duct tube
06-0300-55-B	Part no 06-0300-55, 5/case		

IMPORTANT NOTE

Before use, the wearer must read and understand the *User Instructions* provided as part of the product packaging.

WARNING



Filtering facepiece particulate respirators are intended to help reduce breathing in airborne particles such as dust. If you do not follow all instructions and limitations on the use of the respirator and/or do not wear the respirator during all times of exposure to the airborne particles the respirator may not be as effective. The respirator cannot stop the breathing in of all particles in the air and does not eliminate the risk of symptoms or sickness. **Misuse may result in sickness or death.** For correct use of a respirator, consult the supervisor and *User Instructions*, or call 3M in the U.S.A. at 1-800-247-3941.

Personal Safety Division

3M Center, Building 235-2W-70
St. Paul, MN 55144-1000

3M PSD products are
occupational use only.

In United States of America

Technical Service: 1-800-243-4630
Customer Service: 1-800-328-1667
3M.com/workersafety

In Canada

Technical Service: 1-800-267-4414
Customer Service: 1-800-364-3577
3M.ca/Safety

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