



3M™ Speedglas™ Welding Helmet 9100 FX and 9100 FX-Air

Description

- Easy to operate and maintain.
- Side windows for enhanced peripheral vision.
- Exhaust vent to help reduce heat, humidity, and fogging (non Air version).
- 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).
- Large clear visor.
- Flip-up assembly for grinding and prep work.
- Suitable for grinding.
- Auto-Darkening Filter not included.
 - Compatible with all 3M™ Speedglas™ Filters 9100 (V, X, XX).



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 FX-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 FX-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 (excl headband and welding filter) | 430 g (15.17 oz.) |
| Welding shield with airduct, with SideWindows (excl headband and welding filter) | 640 g (22.57 oz.) |
| Headband | 135 g (4.23 oz.) |
| 3M™ Speedglas™ 9100V Welding Filter | 150 g (5.29 oz.) |
| 3M™ Speedglas™ 9100X Welding Filter | 160 g (5.64 oz.) |
| 3M™ Speedglas™ 9100XX Welding Filter | 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: | PPA |
| Silver front frame: | PA |
| SideWindows: | PC |
| Headband: | PA, PP, TPE, PE |
| Face Seal: | 50% Polyester, 50% Cotton |

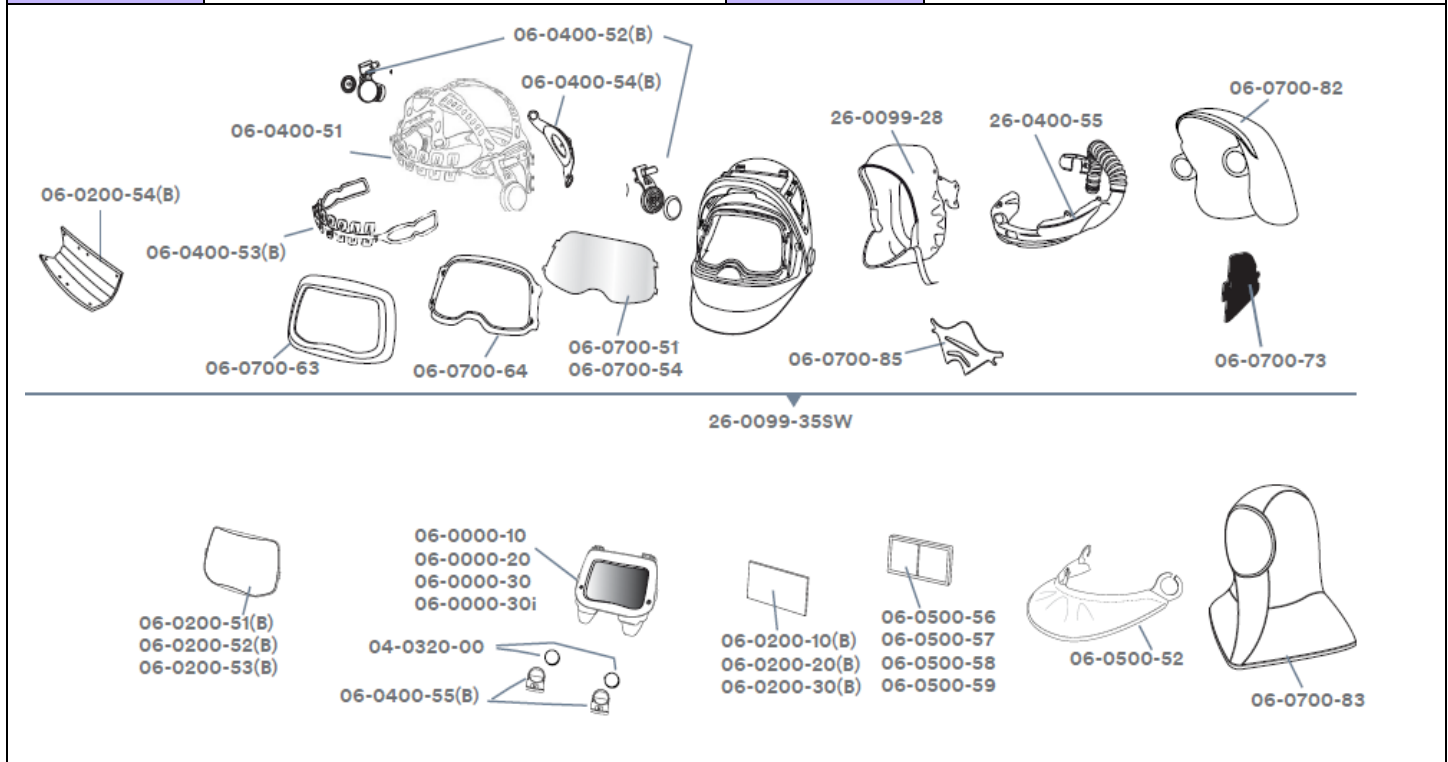
Spare Parts and Accessories - 9100 FX

| Part Number | Description | Part Number | Description |
|--------------------|---|----------------|--|
| Spare Parts | | | |
| 06-0600-10SW | Speedglas welding helmet 9100 FX with welding filter 9100V | 06-0600-10HHSW | Speedglas welding helmet 9100 FX with hard hat and welding filter 9100V |
| 06-0600-20SW | Speedglas welding helmet 9100 FX with welding filter 9100X | 06-0600-20HHSW | Speedglas welding helmet 9100 FX with hard hat and welding filter 9100X |
| 06-0600-30SW | Speedglas welding helmet 9100 FX with welding filter 9100XX | 06-0600-30HHSW | Speedglas welding helmet 9100 FX with hard hat and welding filter 9100XX |

| Part Number | Description | Part Number | Description |
|------------------------------------|--|--------------|---|
| | | | |
| Accessories and Consumables | | | |
| 04-0023-02 | Hard hat H-701, white | 06-0400-51 | Headband incl assembled parts |
| 04-0320-00 | Batteries, 2/case | 06-0400-51-B | Part no 06-0400-51, 5/case |
| 06-0000-10 | Speedglas welding filter 9100V | 06-0400-52 | Pivot mechanism headband, left and right |
| 06-0000-20 | Speedglas welding filter 9100X | 06-0400-52-B | Part no 06-0400-52, 5/case |
| 06-0000-30 | Speedglas welding filter 9100XX | 06-0400-53 | Headband front part |
| 06-0000-30i | Speedglas welding filter 9100XXi | 06-0400-53-B | Part no 06-0400-53, 5/case |
| 06-0014-00NR | 9100 hardhat adapter for with assembly parts, without hard hat | 06-0400-54 | Headband back part |
| 06-0200-10 | Inside protection plate 9100V, 5/case | 06-0400-54-B | Part no 06-0400-54, 5/case |
| 06-0200-10-B | Part no 06-0200-10, 25/case | 06-0400-55 | Battery holder 9100, 2/case |
| 06-0200-20 | Inside protection plate 9100X, 5/case | 06-0400-55-B | Part no 06-0400-55, 10/case |
| 06-0200-20-B | Part no 06-0200-20, 25/case | 06-0500-52 | Extended coverage, ear and neck |
| 06-0200-30 | Inside protection plate 9100XX, 5/case | 06-0500-56 | Magnification plate 15x |
| 06-0200-30-B | Part no 06-0200-30, 25/case | 06-0500-57 | Magnification plate 20x |
| 06-0200-51 | Outside protection plate standard, 10/case | 06-0500-58 | Magnification plate 25x |
| 06-0200-51-B | Part no 06-0200-51, 50/case | 06-0500-59 | Magnification plate 30x |
| 06-0200-52 | Outside protection plate scratch resistant, 10/case | 06-0600-00SW | Speedglas helmet 9100FX with side windows, without welding filter, with headband |
| 06-0200-52-B | Part no 06-0200-52, 50/case | 06-0700-54 | Wide-view clear grinding visor, anti-fog, 5/case |
| 06-0200-53 | Outside protection plate high temperature, 10/case | 06-0700-63 | Front panel, chrome |
| 06-0200-53-B | Part no 06-0200-53, 50/case | 06-0700-64 | Wide-view clear grinding visor frame, black |
| 06-0200-54 | Comfort sweatband, 3/case | 06-0700-72SW | Welding helmet 9100FX with side windows, without headband, without welding filter |
| 06-0400-55-B | Part no 06-0400-55, 10/case | 06-0700-73 | SideWindow cover plates, 2/case |
| 06-0500-51 | Extended coverage, Crown | 06-0700-81 | Standard headcover, crown, black |
| 06-0500-52 | Extended coverage, Ear & Neck | 06-0700-82 | Extended headcover, head and neck |
| 06-0200-54-B | Comfort sweatband, 12/case | 06-0700-83 | Full Hood, black/grey |

Spare Parts and Accessories - 9100 FX-Air

| Part Number | Description | Part Number | Description |
|--------------------|---|--------------|---|
| Spare Parts | | | |
| 36-1101-00SW | Welding helmet 9100 FX-Air without welding filter with Adflo PAPR and HE filter | 36-3301-00SW | Welding helmet 9100 FX-Air, without welding filter, with Adflo PAPR, HE filter and OV/AG cartridge |
| 36-1101-10SW | Welding helmet 9100 FX-Air with welding filter 9100V and Adflo PAPR with HE filter | 36-3301-10SW | Welding helmet 9100 FX-Air with welding filter 9100V and Adflo PAPR with HE filter and OV/AG cartridge |
| 36-1101-20SW | Welding helmet 9100 FX-Air with welding filter 9100X and Adflo PAPR with HE filter | 36-3301-20SW | Welding helmet 9100 FX-Air with welding filter 9100X and Adflo PAPR with HE filter and OV/AG cartridge |
| 36-1101-30SW | Welding helmet 9100 FX-Air with welding filter 9100XX and Adflo PAPR with HE filter | 36-3301-30SW | Welding helmet 9100 FX-Air with welding filter 9100XX and Adflo PAPR with HE filter and OV/AG cartridge |



| Accessories and Consumables | | | |
|------------------------------------|--|--------------|---|
| 04-0320-00 | Batteries, 2/case | 06-0200-51-B | Part no 06-0200-51, 50/case |
| 06-0000-10 | Speedglas welding filter 9100V | 06-0200-52 | Outside protection plate scratch resistant, 10/case |
| 06-0000-20 | Speedglas welding filter 9100X | 06-0200-52-B | Part no 06-0200-52, 50/case |
| 06-0000-30 | Speedglas welding filter 9100XX | 06-0200-53 | Outside protection plate high temperature, 10/case |
| 06-0000-30i | Speedglas welding filter 9100XXi | 06-0200-53-B | Part no 06-0200-53, 50/case |
| 06-0200-10 | Inside protection plate 9100V, 5/case | 06-0200-54 | Comfort sweatband, 3/case |
| 06-0200-10-B | Part no 06-0200-10, 25/case | 06-0200-54-B | Comfort sweatband, 12/case |
| 06-0200-20 | Inside protection plate 9100X, 5/case | 06-0400-51 | Headband incl assembled parts |
| 06-0200-20-B | Part no 06-0200-20, 25/case | 06-0400-51-B | Part no 06-0400-51, 5/case |
| 06-0200-30 | Inside protection plate 9100XX, 5/case | 06-0400-52 | Pivot mechanism headband, left and right |
| 06-0200-30-B | Part no 06-0200-30, 25/case | 06-0400-52-B | Part no 06-0400-52, 5/case |
| 06-0200-51 | Outside protection plate standard, 10/case | 06-0400-53 | Headband front part |

| Part Number | Description | Part Number | Description |
|--------------|-------------------------------|--------------|--|
| 06-0400-53-B | Part no 06-0400-53, 5/case | 06-0700-51 | Wide-view clear grinding visor, standard, 5/case |
| 06-0400-54 | Headband back part | 06-0700-54 | Wide-view clear grinding visor, anti-fog, 5/case |
| 06-0400-54-B | Part no 06-0400-54, 5/case | 06-0700-63 | Front panel, chrome |
| 06-0400-55 | Battery holder 9100, 2/case | 06-0700-64 | Wide-view clear grinding visor frame, black |
| 06-0400-55-B | Part no 06-0400-55, 10/case | 06-0700-73 | SideWindow cover plates, 2/case |
| 06-0500-52 | Extended coverage, Ear & Neck | 06-0700-82 | Extended head cover, head and neck |
| 06-0500-56 | Magnification plate 15x | 06-0700-83 | Full Hood, black/grey |
| 06-0500-57 | Magnification plate 20x | 25-0099-28 | Face seal |
| 06-0500-58 | Magnification plate 25x | 25-0099-35SW | Welding helmet 9100 FX-Air without welding filter, with headband |
| 06-0500-59 | Magnification plate 30x | 25-0400-55 | Duct assembly |

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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