Description

- Easy to operate and maintain.
- 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

**IMPORTANT NOTE**

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

**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

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

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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>06-0100-10</td>
<td>Speedglas welding helmet 9100 with welding filter 9100V</td>
<td>06-0100-20SW</td>
<td>Speedglas welding helmet 9100 with side windows and welding filter 9100X</td>
</tr>
<tr>
<td>06-0100-10HASW</td>
<td>Speedglas welding helmet 9100, with side windows, hard hat adapter and welding filter 9100V, without hard hat</td>
<td>06-0100-30</td>
<td>Speedglas welding helmet 9100 with welding filter 9100XX</td>
</tr>
<tr>
<td>06-0100-10HHSSW</td>
<td>Speedglas welding helmet 9100 with side windows, hard hat and welding filter 9100V</td>
<td>06-0100-30HASW</td>
<td>Speedglas welding helmet 9100, with side windows, hard hat adapter and welding filter 9100XX, without hard hat</td>
</tr>
<tr>
<td>06-0100-10SW</td>
<td>Speedglas welding helmet 9100 with side windows and welding filter 9100V</td>
<td>06-0100-30HHSSW</td>
<td>Speedglas welding helmet 9100 with side windows, hard hat and welding filter 9100XX</td>
</tr>
<tr>
<td>06-0100-20</td>
<td>Speedglas welding helmet 9100 with welding filter 9100X</td>
<td>06-0100-30SW</td>
<td>Speedglas welding helmet 9100 with side windows and welding filter 9100XX</td>
</tr>
<tr>
<td>06-0100-20HASW</td>
<td>Speedglas welding helmet 9100, with side windows, hard hat adapter and welding filter 9100X, without hard hat</td>
<td>06-0100-30ISW</td>
<td>Speedglas welding helmet 9100 with side windows and welding filter kit 9100XXi</td>
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</tbody>
</table>
## Accessories and Consumables

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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-1101-00SW</td>
<td>Speedglas welding helmet 9100-Air without welding filter with Adflo PAPR and HE filter</td>
<td>35-3301-30SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100XX and Adflo PAPR with HE filter and OV/AG cartridge</td>
</tr>
<tr>
<td>35-1101-10SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100V and Adflo PAPR with HE filter</td>
<td>25-5702-10SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100V and Fresh-air III SAR, V-100 valve</td>
</tr>
<tr>
<td>35-1101-20SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100X and Adflo PAPR with HE filter</td>
<td>25-5702-20SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100X and Fresh-air III SAR, V-100 valve</td>
</tr>
<tr>
<td>35-1101-30SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100XX and Adflo PAPR with HE filter</td>
<td>25-5702-30SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100XX and Fresh-air III SAR, V-100 valve</td>
</tr>
<tr>
<td>35-1101-30iSW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100XXi and Adflo PAPR with HE filter</td>
<td>25-5702-30iSW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100XXi and Fresh-air III SAR, V-100 valve</td>
</tr>
<tr>
<td>35-3301-00SW</td>
<td>Speedglas welding helmet 9100-Air without welding filter, with Adflo PAPR, HE filter and OV/AG cartridge</td>
<td>25-5802-10SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100V and Fresh-air III SAR, V-200 valve</td>
</tr>
<tr>
<td>35-3301-10SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100V and Adflo PAPR with HE filter and OV/AG cartridge</td>
<td>25-5802-20SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100X and Fresh-air III SAR, V-200 valve</td>
</tr>
<tr>
<td>35-3301-20SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100X and Adflo PAPR with HE filter and OV/AG cartridge</td>
<td>25-5802-30SW</td>
<td>Speedglas welding helmet 9100-Air with welding filter 9100XX and Fresh-air III SAR, V-200 valve</td>
</tr>
</tbody>
</table>
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.

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