### Technical Data 3M™ Speedglas™ Welding Helmets and Welding Filters

<table>
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<tr>
<th>3M™ Speedglas™ Welding Filter Options</th>
<th>3M™ Speedglas™ Welding Helmet 9100 MP</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MMAW (Electrode)</td>
<td>9100XXi Filter</td>
<td>9100XXi Filter</td>
</tr>
<tr>
<td></td>
<td>9100XX Filter</td>
<td>9100XX Filter</td>
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<tr>
<td></td>
<td>9100X Filter</td>
<td>9100X Filter</td>
</tr>
<tr>
<td></td>
<td>9100V Filter</td>
<td>9100V Filter</td>
</tr>
<tr>
<td>MiG/MAG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIG (&gt;20A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIG (1A-20A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plasma (welding and cutting)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk for hidden arc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tack welding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grinding (welding filter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grinding (clear visor)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Viewing area (welding filter)
- 2.8 x 4.2 in. (72 x 107 mm)  
- 2.8 x 4.2 in. (72 x 107 mm)  
- 2.1 x 4.2 in. (54 x 107 mm)  
- 2.8 x 4.2 in. (72 x 107 mm)  
- 2.1 x 4.2 in. (54 x 107 mm)  
- 1.8 x 3.7 in. (45 x 93 mm)  
- 2.8 x 4.2 in. (72 x 107 mm)  
- 2.1 x 4.2 in. (54 x 107 mm)  
- 1.8 x 3.7 in. (45 x 93 mm)  
- 2.8 x 4.2 in. (72 x 107 mm)  
- 2.1 x 4.2 in. (54 x 107 mm)  
- 1.8 x 3.7 in. (45 x 93 mm)  

#### Battery lifetime
- 1800 hours  
- 2000 hours  
- 2500 hours  
- 2800 hours  

#### Solar cell
- No  
- Yes  
- No  
- Yes (non-air version)  

#### Hard hat options
- Yes  
- Yes (non-air version)  

#### Classification (per EN 379)*
- 1 / 1 / 1 / 2  
- 1 / 1 / 1 / 2  

#### Dark state
- Shade 5, 8, 9–13  
- Shade 5, 8, 9–13  

#### Light state
- Shade 3  
- Shade 3  

#### UV/IR Protection
- Shade 13 (permanent)  
- Shade 13 (permanent)  

#### Auto ON
- Yes  
- No  
- Yes  
- No  

#### Switching time, light-dark
- 0.1 ms (+23° C)  
- 0.1 ms (+23° C)  

#### Delay (switching time, dark-light)
- 40–1 300 ms  
- 40–1 300 ms  

#### Side windows option
- Yes  
- Yes  

#### Exhaust vents
- N/A  
- Yes (non-air version)  

#### Number of sensors (arc detection)
- 3  
- 3  

#### Approvals Head, Eye and Face protection
- Welding helmet and filter, protection plates  
- ANSI Z87.1 - 2010  
- ANSI Z89.1 - 2009 - Type I, Class G  
- ANSI Z87.1 - 2010  
- N/A  

#### Approval Respiratory Protection
- Adflo powered air purifying respirator  
- APF 25  
- APF 25  
- APF 25  

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* Auto-darkening welding filters have a four-part classification: optical class / diffusion of light / variation on luminous transmittance / angle dependence. Classifications range from 1 to 3, with 1 being the best.

** The ratings (good - better - best) above refer to the products listed in this chart and should be seen as general recommendations based on differences in product comfort features, and configuration options when using these selected Speedglas welding helmet series.
### Technical Data

#### 3M™ Speedglas™ Welding Helmets and Welding Filters

- **3M™ Speedglas™ Welding Helmet 9100 MP**
- **3M™ Speedglas™ Welding Helmets 9100, 9100-Air and 9100-QR**
- **3M™ Headgear L-705SG and L-905SG**
- **3M™ Speedglas™ Welding Helmet SL**
- **3M™ Speedglas™ 100 Series**

#### 3M™ Speedglas™ Welding Filter Options

- 9100XXi Filter
- 9100XX Filter
- 9100X Filter
- 9100V Filter

#### Applications

- MMAW (Electrode)
- MIG/MAG
- TIG (>20A)
- TIG (1A-20A)
- Plasma (welding and cutting)
- Risk for hidden arc
- Tack welding
- Grinding (welding filter)
- Grinding (clear visor)

#### Viewing Area

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>Viewing Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>9100XXi</td>
<td>2.8 x 4.2 in. (72 x 107 mm)</td>
</tr>
<tr>
<td>9100XX</td>
<td>2.8 x 4.2 in. (72 x 107 mm)</td>
</tr>
<tr>
<td>9100X</td>
<td>2.1 x 4.2 in. (54 x 107 mm)</td>
</tr>
<tr>
<td>9100V</td>
<td>1.8 x 3.7 in. (45 x 93 mm)</td>
</tr>
</tbody>
</table>

#### Battery Lifetime

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>Battery Lifetime</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL Filter</td>
<td>1800 hours</td>
</tr>
<tr>
<td>100V Filter</td>
<td>2000 hours</td>
</tr>
<tr>
<td>100S Filters</td>
<td>2500 hours</td>
</tr>
</tbody>
</table>

#### Solar Cell

- No / Yes

#### Hard Hat Options

- Yes / No

#### Classification (per EN 379)*

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL Filter</td>
<td>1 / 1 / 1 / 2</td>
</tr>
<tr>
<td>100V Filter</td>
<td>1 / 1 / 1 / 2</td>
</tr>
</tbody>
</table>

#### Dark State

- Shade 5, 8, 9–13
- Shade 5, 8, 9–13
- Shade 8–12
- Shade 8–12
- Shade 10 or 11

#### Light State

- Shade 3
- Shade 3

#### UV/IR Protection

- Shade 13 (permanent)
- Shade 13 (permanent)

#### Auto ON

- Yes / No

#### Switching Time, Light-Dark

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>Switching Time, Light-Dark</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL Filter</td>
<td>0.1 ms (+23°C)</td>
</tr>
<tr>
<td>100V Filter</td>
<td>0.1 ms (+23°C)</td>
</tr>
</tbody>
</table>

#### Delay (Switching Time, Dark-Light)

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>Delay</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL Filter</td>
<td>40–1300 ms</td>
</tr>
<tr>
<td>100V Filter</td>
<td>60–250 ms</td>
</tr>
</tbody>
</table>

#### Side Windows Option

- Yes / No

#### Exhaust Vents

- N/A / Yes (non-air version)

#### Number of Sensors (Arc Detection)

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>Number of Sensors</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL Filter</td>
<td>3</td>
</tr>
<tr>
<td>100V Filter</td>
<td>2</td>
</tr>
</tbody>
</table>

### Approvals

#### Head, Eye and Face Protection

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>Approvals</th>
</tr>
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<tbody>
<tr>
<td>SL Filter</td>
<td>ANSI Z87.1 - 2010</td>
</tr>
<tr>
<td>100V Filter</td>
<td>ANSI Z87.1 - 2003</td>
</tr>
</tbody>
</table>

#### Respiratory Protection

- Adflo powered air purifying respirator
- Fresh-air III supplied air valve

### Additional Information

- ANSI Z871 - 2010
- ANSI Z871 - 2003
- ANSI Z871 - 2003 Type II - Class G

* Auto-darkening welding filters have a four-part classification: optical class / diffusion of light / variation on luminous transmittance / angle dependence. Classifications range from 1 to 3, with 1 being the best.

**The ratings (good - better - best) above refer to the products listed in this chart and should be seen as general guidelines. It is recommended to consult the leaflet that comes with the product for more information on product comfort features, and configuration options when using these selected Speedglas welding helmet series.