PRODUCT DESCRIPTION

Optimum’s 45 Minute Fire-Rated Cold-Rolled Steel Projected windows are used in non-temperature rise applications and through various glazing options, can be modified to address most fire-rated applications. Its narrow profiles provide open vision areas that allow natural daylight without compromising life-safety and design flexibility. The entire Fire-Rated line has been through rigorous testing. Initially, a “heat test” is performed where the window is exposed to temperatures up to 1600 degrees Fahrenheit. They will then endure the “Hose Stream Test”, wherein which the glass holds fast even during this extreme change in temperature. Where other units of different material will react poorly when placed under these extreme conditions, Optimum’s Fire-Rated Steel windows will hold and maintain its integrity.

AUTHORIZED DIMENSIONS

<table>
<thead>
<tr>
<th></th>
<th>45 MIN</th>
<th>60 MIN</th>
<th>90 MIN</th>
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<tbody>
<tr>
<td>Min. Operable Dimension</td>
<td>20” x 21”</td>
<td>n/a</td>
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<tr>
<td>Max. Operable Dimension</td>
<td>54” x 48”</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>Max. Frame Dimension</td>
<td>60” x 120”</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>Wire Glass Max. Exposed Area</td>
<td>1,296 in²</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>Ceramic Glass Max. Exposed Area</td>
<td>3,325 in²</td>
<td>n/a</td>
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FEATURES

- Cold-Rolled sections formed from GALVANIZED STEEL
- EPDM and Silicone Pile Weather-Stripping
- Mitered frame; Corner keyed frame & sash joinery
- Can accommodate glazing ranging from 3/16” to 1” in O.A. thickness
- Factory glazed with mechanically fastened steel glazing beads
- Zinc Enrich Epoxy Primer and Powder Coated finish
- One Cam Lock at center of sash up to 34” (two cam locks thereafter)
- Available in Project-In or Project-Out
- Double Projected configuration available
- Self-Closing mechanism w/ Fusible links

NOTE: This product is intended for use in locations requiring fire-protective rated openings.
LISTINGS/STANDARDS

Classified and labeled by Underwriters Laboratories Inc.® and Underwriters Laboratories of Canada®. File numbers R12349. Tests performed in accordance with:

<table>
<thead>
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<th>Standard</th>
<th>Code</th>
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<tr>
<td>UL 9</td>
<td>NFPA 80</td>
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<td>UL10C</td>
<td>NFPA 257</td>
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DETAILS: For complete set, visit:  www.OptimumWindow.com

NOTE: This product is intended for use in locations requiring fire-protective rated openings.

AVAILABLE OPTIONS:
- Non-Metallic Custom Color match
- Wire or Ceramic Glass
- Insulated Glass Units available
- Low-E Coated IGU
- Safety Impact Glass available
- Surface Applied Grids (spacers between glass n/a)
- Insect Screens
- Limit Stops
- Installation Straps
- Break Metal for trim
- Two-Tone finish