Instructions on how to use this manual:

This document has been designed for easy navigation and to quickly click to the section you need. Here's some important tips on using this document:

- Any item print in red, will click through to the corresponding item.

- Click to any item in the Table of Contents on page 3. Click on the Milgard logo at the top of any page to return to the Table of Contents - FULL MANUAL ONLY.

- From each section’s Quick Links page, click to any Drawing listed.

- From any Drawing page, click the “Go Back to Quick Links” box on the bottom right of the page to return to the list of drawings.

- Click on the links on the bottom of the page to go to Revit, SketchUp . PDF and .DWG files. Please note that you must have internet access for these links and you will be re-directed to the Milgard site.

- This document can also be navigated from Adobe Acrobat Bookmarks.

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals or clicking here:

Ultra™ Series Architectural Library
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About Ultra™ Series

Fiberglass itself is nothing new. It’s been floating boats and adding strength to ladders for years. But until recently, the complex profiles required for window and door designs have been impossible to attain with fiberglass.

Milgard’s research and design team faced this challenge and engineered a window and door system that’s impervious to water, cold, heat, insects, salt air and ultraviolet rays. The end result: efficient windows and doors that maintain their beauty in every season, in any climate.

New Construction vs. Retrofit

Ultra Series can be used for new construction or retrofit applications as it offers block frame and Z-bar frames in addition to nail fins.

Screens

Ultra Series comes with standard screens or PureView® premium mesh screens with a pull rail frame as an upgrade option.

Warranty

Ultra Series comes standard with the Full Lifetime Warranty including parts and labor, and with Glass Breakage Coverage.

Components

Available Operating Styles

Find frame styles for each operating style:

Awning
Fixed Awning
Casement
Fixed Casement
Horizontal Sliding (Half Vent)
Double Horizontal Sliding
Single Hung
Picture/Radius
Bay/Bow
Sliding Patio Door
Swing Patio Door

Feature/Benefit Snapshot

Fiberglass: A structural material with superior strength and thermal performance characteristics, ideal for intricate window and door frame profiles. So durable, we use diamond-tipped saw blades to cut our frame stock. Frame stock is produced using a process known as pultrusion. Glass rovings and mats are pulled at tremendous forces through a resin bath and a series of dies. These materials combine and catalyze to provide unparalleled tensile and torsional strength.
• Up to 3 times stronger than wood; up to 8 times stronger than vinyl.

• Minimal thermal expansion/contraction across large temperature extremes – matches movement of glass, relieving virtually all stresses on the glazing unit to protect glazing seals and ensure smooth operation.

• Dark colors do NOT cause adverse frame movement – perfect for projects calling for even black exterior frame color.

• Wet-glazed silicone sealant glazing method for superior, permanent weather seal.

• No swelling, cracking, binding, twisting or rotting like wood.

• Milgard EdgeGardMax™ insulating glass units come standard on all fiberglass windows and doors.

• 7/8” thick glazing unit – ASTM E-774-81 Class A rating – sealed with long-life butyl sealant.

• Every order is custom built – at standard lead times. Perfect for replacement applications, with dimensions accepted down to 1/16” increments.

• Incredible frame strength provides light commercial and commercial structural ratings – making fiberglass windows and doors suitable in many commercial project applications.

• Multiple hardware finishes to choose from in both the window and door line.

• Window and window/door configurations are factory milled for ease of field installation – large sizes ship open for field glazing where weight and safety is a factor.

• Numerous glass options available – including tempered, obscurbs, tints, laminated, etc.

• All operating hardware utilizes top-quality components and fasteners.

• Fiberglass doors use multi-point locking hardware to provide enhanced security.

Ultra Series windows and patio doors face the elements with a sturdy pultruded fiberglass frame that won’t warp, rot, swell, peel or mildew. The frame makes your windows stronger and more resistant to impact and settling. It’s strong like aluminum, energy efficient as wood and low maintenance as vinyl.

**Frame Specifications**

From inside of frame to nail flange is 2-7/8”, and from outside of window frame to include nail fin is 1-3/8”, to give you a 4-1/4” overall frame depth.

Joined frame and liners are available in standard widths of 4-9/16” or 6-9/16” for standard wall construction. Other custom widths are also available, subject to engineering review.

**Wood Jamb Extensions**

Wood jamb extensions are an optional feature with Ultra fiberglass windows and are available in both clear solid wood, wood with a premium veneer applied or preprimed finger jointed wood.

**Nail-On Fin**

A 1-1/4” pre-punched, flexible nail flange extends around the perimeter frame, securing the window in rough openings. The 3110 and 3110U Series is available without nailing fin or with Z-Bar flush fin retrofit trim for use as a replacement window.
Other Components

**Glazing Material**

Wet-glazed silicone sealant adheres glass in place, which seals and cushions the glass. Rigid vinyl setting blocks are used to support the unit above the sill, preventing glass slippage and glass-to-frame contact. Pultruded fiberglass glazing (snap-in) bead is applied around the exterior edge.

**Glass**

Insulating dual glazed panes, 7/8” in overall thickness, are butyl sealed for energy efficiency, with Milgard SunCoat™ Low-E insulating glass standard in all glazing units.

**Weatherstripping**

Foam filled seal and silicone-treated, water-repellent polypropylene fin seal weatherstripping provides a durable, weather-tight seal. This weatherstripping is installed around the entire perimeter of the vent panel.

**Roller Assembly**

Adjustable self-lubricating, wear resistant, dual nylon rollers provide flexible, free-wheeling, smooth and silent operation. Rollers are engineered for reduction of friction and elimination of torque on the ventilator frame.

**Balancer Assembly**

The ventilator operates on concealed block and tackle balancers, allowing the vent to remain open in any position. The balancer is installed in the jamb on each side of the window.

**Locking Assembly**

Cam lock or Positive Action™ Lock mechanism may be specified as an option.

**Weep System**

Primary weep system is located in hollow sill construction. Baffled weep holes drain water from track and help prevent blow-back, or water seeping to the inside caused by a combination of wind and rain. A secondary baffled weep system is located in the pultruded fiberglass glazing bead.

**Vent Panel**

The ventilator has an “L”-shaped lip that fully interlocks with the vertical meeting rail, adding security and preventing weather penetration. Its roller assembly rides on a monorail track for easy operation and durability. This raised track in the frame sill helps keep the ventilator system free from interference by foreign particles that may collect in the sill.

**Screens**

Screen frames are cambered aluminum, reinforced with rigid plastic corner clips. Screen frames are available to match the exterior color. Optional PureView fiberglass screen mesh is low visibility, strong, durable and easy to replace. Two pulls located on the screen allow you to install from inside of house.

**Sizing**

All windows are factory-sized to fit in a framed opening, whether new or created by removing an existing window. Windows will be 1/2” smaller than the framed (rough) opening to allow 1/4” clearance on all sides (tolerance at +/- 1/16”). Built to rough opening size, with 1/2” deductions automatically made, no complex calculations are required for ordering.
Options

Grids

Ultra series windows and doors offer multiple grid configurations from seven different grid options.

Grid patterns placed inside the glazing unit include 5/8” wide flat grids and 1-1/16” wide sculptured pattern grids.

Grid patterns that simulate true divided lites are 1-1/8” Legacy, 1-1/8” Craftsman, 1-1/8” Vintage and 3/4” Vintage. Snap-in wood grids attach to the interior side of the window or door and remove for easy cleaning. (See page 11 for patterns)

Specify requirements for matching grid patterns at the time of order. If match requirements are not specified, the grids may not line up with those in another size or series of window.

Unless otherwise specified, the grids will divide the window equally, with the bars set between 8-3/4” and 12” apart. A 4’0” x 3’0” picture window would be four squares wide by three squares high. A 4’0” x 3’0” single-hung would be four wide x four high because of the intermediate horizontal bar.

Brickmould

A 2” wide x 1-1/2” thick factory-primed wood brickmould trim is an available option for a finished exterior appearance.

Hardware

Hardware is available in both painted and metal finishes. (See pages 8-9)

Energy Packages

Milgard adheres to ENERGY STAR® v6 requirements to meet or exceed U-Factor and Solar Heat Gain Coefficient (SHGC) criteria for all ENERGY STAR® zones.

Milgard also offers high energy performance options for the ultimate in energy efficiency. Energy efficient windows could include one or more of the following features based on your climate.

- SunCoat® or SunCoatMAX®
- EdgeGardMAX®
- Argon or Krypton
- 4th Surface
- Triple Glaze

For more details on Milgard Energy Efficient packages, visit www.milgard.com/learn/energy-efficiency/energy-efficient-components

To check the energy performance of all Milgard windows and doors, use our Energy Calculator at: milgard.com/energy-calculator

Full Lifetime Warranty and Glass Breakage Coverage

Full Lifetime Warranty is available on Ultra Series with Glass Breakage Coverage. For complete warranty details visit milgard.com.

Caution: The use of petroleum based fuels or solvents as release agents in stucco wall installations or glass cleaning will chemically attack materials used in seals and other components, and voids the Milgard Warranty. The use of wax-based release agents is recommended.

Expanding foam for insulation purposes should not be used. Backer rod or loose packed fiberglass bat insulation is recommended.
Window Hardware

Our window hardware is attractive, durable, secure and easy to operate. All hardware is available in these styles and your choice of finishes.

**Single Hung and Horizontal Slider**

Your choice of Positive Action Lock (left) shown in White or Cam Lock (right) shown in Black

**Casement and Awning**

Nesting Operator shown in White  
Sash lock shown in Brushed Chrome

**Window Hardware Finishes**

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<th>White</th>
<th>Clay</th>
<th>Dark Bronze</th>
<th>Brushed Chrome</th>
<th>Black</th>
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</table>

(limited availability)
Door Hardware

Coordination and consistency are important to a well designed home. That’s why we are offering our patio door hardware in these styles with the same finishes available for Ultra and WoodClad windows.

Swing Door Handles (interior & exterior)

Sliding Door Handles (interior & exterior)

Sidelite Handle

Door Hardware Finishes

© Milgard Manufacturing, Inc.
Frame Colors

**Interior Frame Colors**

- White with any exterior color
- Harmony with Harmony exterior only
- Bark with Bark exterior only
- Black Bean with Black Bean exterior only

**Exterior Frame Colors - White interior only**

- Frost
- Sand
- Harmony
- Bark
- Black Bean
- Fern
- Cinnamon

Colors shown are approximate due to printing limitations.
Grids

Express your creativity and dramatically increase curb appeal with our virtually endless grid options. Choose flat or sculptured grids inside our insulated glass units for easy cleaning.

- Flat Grid
- Craftsman
- 1-1/8" Vintage
- Sculptured
- Legacy
- 3/4" Vintage
Full Lifetime Warranty

At Milgard, we build our windows and doors to last. With the dedication to quality that we put into building the best windows in the business, it wouldn’t make sense to back them with anything but the best warranty in the business. That’s why we back every properly installed window and door for as long as the homeowner owns their home—including parts and labor. Ultra Series windows and doors also come standard with Glass Breakage Coverage. We also offer a 10-year limited warranty for commercial projects. It’s why you can be sure you won’t find any windows better than Milgard.

For complete warranty details, visit milgard.com.

Why Milgard?

Milgard is one of the largest and most trusted names in windows and doors. For the last 50 years, we’ve demonstrated our commitment to innovation, quality and service.

While our coverage is extensive, our service is local. Milgard has multiple locations throughout the Western U.S. and Western Canada. Our belief is that by being close to our customers, we can provide them better service. This means faster lead and delivery time, as well as faster response to any warranty situations. We’re there for you long after the job has been completed. Milgard also has a comprehensive network of qualified dealers and offers some of the best training in the industry.
Single Hung Window

Ultra™ Series single hung window, the bottom sash slides upward—the top sash is permanently fixed. They can be ordered as individual windows, in double or triple wide combinations or even with a center fixed lite.

Ultra Series fiberglass windows and doors offer outstanding insulating properties and low maintenance, plus they stand up to weather, insects, and ultraviolet rays, and maintain their beauty through every season. The windows will maintain their color and shape and can be constructed to your exact size specifications, subject to engineering review. All Milgard Ultra Series windows are made to order at no additional charge.

Please also see:

Single Hung Hardware
Frame Colors
Full Lifetime Warranty
Energy Packages
Accessories
Single Hung Window

Configurations

- Single Hung
- Double Single Hung
- Gable Top Single Hung
- Double Single Hung/Center Lite
- Triple Single Hung

Minimum/Maximum Sizes

**SINGLE-HUNG**
- Min 1\(1^2\)  
- Max 4\(7^2\)

**DOUBLE SINGLE-HUNG**
- Min 3\(2^2\)  
- Max 8\(7^2\)

**DOUBLE SINGLE-HUNG with PICTURE**
- Min 4\(2^2\)  
- Max 12\(7^2\)

**TRIPLE SINGLE-HUNG**
- Min 4\(2^2\)  
- Max 9\(7^2\)

Minimum egress is 3\(5^2\) with a 30" bar set or 2\(6^2\) with a 36" bar set.

**NOTE:** For engineering approval contact your Milgard representative for any configuration over 40 square feet. Each Milgard Manufacturing plant reserves the right to alter or change sizes and configurations according to location capabilities. Ask your Milgard representative about specialty applications. Windows over 40 square feet shipped open for field glazing. Varies by location.

Not all frame styles available at all Milgard locations. Contact your Milgard Representative for more information.
Drawings - Quick Links

**Single Hung Window**

- 28—1-3/8” Fin Setback
- 29—1” Fin Setback
- 30—1-3/4” Contour Z-Bar
- 31—2-1/4” Contour Z-Bar

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals or clicking here:

Ultra Series Architectural Library
Single Hung Window

1-3/8” Fin Setback

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**HEAD & SILL**

**JAMBS**

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More Technical Documents can be found at milgard.com/professionals

Due to continual research and development, details may be changed at any time. ©2013 Milgard Mfg.
Single Hung Window
1” Fin Setback

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SINGLE HUNG
SERIES 3210

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Single Hung Window
1-3/4” Contour Z-Bar

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SINGLE HUNG
SERIES 3210

HEAD & SILL

JAMBS

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Single Hung Window
2-1/4” Contour Z-Bar

HEAD & SILL

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