# ULTRA<sup>TM</sup> SERIES C650

Fiberglass Windows & Patio Doors

Architectural Manual







#### 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 or clicking here:

**Technical Resources** 





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# About Ultra™ Series | C650

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 Lifetime Limited Warranty. For complete warranty details, visit milgard.com/warranty.

#### **Components**

**Available Operating Styles** 

Find frame styles for each operating style:

**Awning** 

**Fixed Awning** 

Casement

**Fixed Casement** 

**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.



#### Ultra<sup>™</sup> Series | C650 Fiberglass Windows & Patio Doors **Architectural Manual**

- 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<sup>™</sup> 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 mulled 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, obscures, 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 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, waterrepellent 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.



#### Ultra<sup>™</sup> Series | C650 Fiberglass Windows & Patio Doors **Architectural Manual**

#### **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<sup>®</sup>
- Argon
- 4th Surface

For more details on Milgard Energy Efficient packages, visit <a href="https://www.milgard.com/learn/energy-efficiency/energy-efficient-components">www.milgard.com/learn/energy-efficiency/energy-efficient-components</a>

To check the energy performance of all Milgard windows and doors, use our Energy Calculator at:

#### milgard.com/energy-calculator

#### **Warranty**

With Ultra Series, you're covered for as long as you own your home with our Lifetime Limited Warranty.

For complete warranty details, visit <u>milgard.com/</u> warranty.

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**







Sash lock shown in Brushed Chrome

#### **Window Hardware Finishes**

White Clay Dark Bronze Brushed Chrome Satin Nickel Black (Casement and awning only)



#### **Door Hardware**

#### **Swing Door Handles** (interior & exterior)









#### **Sidelite Handle**

**Door Hardware Finishes** 









#### **Frame Colors**

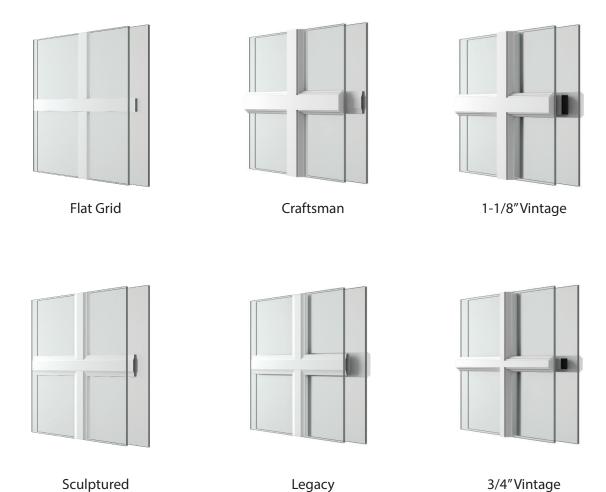
#### Exterior Frame Colors - Choose white or color-matched interiors





#### **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.





#### Warranty

We have a dedication to quality and build our windows and patio doors to last. With Ultra™ Series, you're covered for as long as you own your home with our Lifetime Limited Warranty.

For complete warranty details, visit milgard.com/warranty.

#### Why Milgard?

#### Quality

Milgard offers award-winning windows and patio doors built for long-lasting comfort. For over 50 years, industry experts have consistently recognized Milgard as a trusted brand. By producing our vinyl and fiberglass frame materials in-house, we can more closely monitor for quality control. Milgard windows and patio doors stand up, while standing out.

#### **Experience**

Since 1962, Milgard Windows & Doors has designed and assembled superior, top quality windows and patio doors. Milgard engineers are known for their industry-leading designs using patented technologies. Whatever your project calls for, Milgard has the right product that can beautifully reflect your vision. From new construction to home remodeling, all Milgard windows and doors are custom made to your exact specifications.

#### Service

We serve the Western U.S. and Canada with a dozen full-service facilities and customer care centers. Our belief is that by being close to our customers, we can provide them better service.







Ultra<sup>™</sup> Series horizontal sliding window is designed as an inside slider (the sliding panel, or "vent," slides inside the stationary panel). Horizontal sliding windows can be used alone or in combination units with radius, gable or picture windows for vent below and vent above configurations.

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:

Horizontal Sliding Hardware

Frame Colors

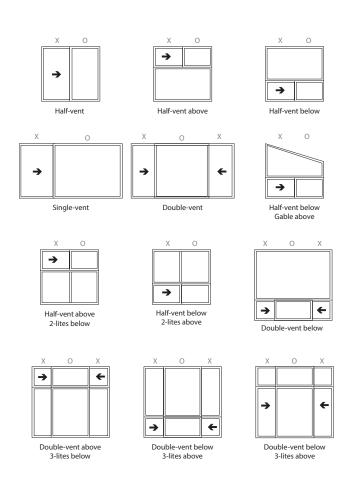
**Lifetime Limited Warranty** 

**Energy Packages** 

Accessories



#### Configurations



# Minimum/Maximum Sizes

#### **HALF-VENT**

Min 2°1<sup>4</sup> Max 6°6°

#### **HALF-VENT ABOVE**

- Min  $2^{\circ}2^{4}$  Max  $6^{\circ}6^{\circ}$ 

#### **HALF-VENT BELOW**

- Min  $2^{\circ}2^{4}$  Max  $6^{\circ}6^{\circ}$ 

#### **DOUBLE-VENT**

- Min 5°1<sup>4</sup> Max 12°6°

#### **DOUBLE-VENT BELOW**

- Min  $4^{\circ}3^{\circ}$  Max  $8^{\circ}6^{\circ}$ 

#### **DOUBLE-VENT ABOVE**

- Min  $4^{\circ}3^{\circ}$  Max  $8^{\circ}6^{\circ}$ 

#### **HALF-VENT BELOW GABLE**

- Min 2°2<sup>4</sup> Max 6°8°

#### **HALF-VENT ABOVE 2-LITES**

- Min  $2^{\circ}2^{4}$  Max  $6^{\circ}6^{\circ}$ 

#### **HALF-VENT BELOW 2-LITES**

- Min  $2^{\circ}2^{4}$  Max  $6^{\circ}6^{\circ}$ 

#### **DOUBLE-VENT BELOW**

Min 5°2<sup>4</sup> Max 8°6°

#### **DOUBLE-VENT ABOVE**

Min 5°2<sup>4</sup> Max 8°6°

#### **DOUBLE-VENT BELOW 3-LITES**

- Min  $5^{\circ}2^{4}$  Max  $8^{\circ}6^{\circ}$ 

#### **DOUBLE-VENT ABOVE 3-LITES**

Min 5°2<sup>4</sup> Max 8°6°

Minimum egress for half-vent is 4°4°

Minimum egress for double-vent is 8°3° with a 24" vent.

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 rep about specialty applications. Windows over 40 square feet shipped open for field glazing. Varies by location.



# Drawings - Quick Links

#### **Horizontal Sliding Window**

17—1-3/8" Fin Setback

18—1" Fin Setback

19—1-3/4" Setback with Contour Z-bar

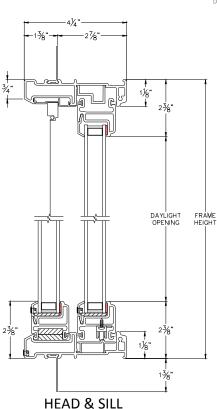
20—2-1/4" Setback with Contour Z-Bar



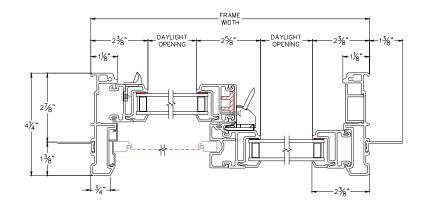
1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3110U-02 HS	Inch

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



#### HORIZONTAL SLIDER SERIES 3110



**JAMBS** 



1" Fin Setback

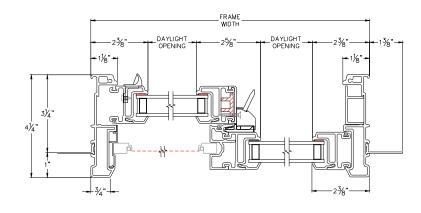
CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3110U-03 HS	Inch

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

# DAYLIGHT FRAME OPENING HEIGHT

**HEAD & SILL** 

#### HORIZONTAL SLIDER SERIES 3110



**JAMBS** 

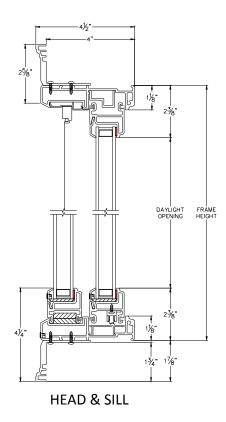


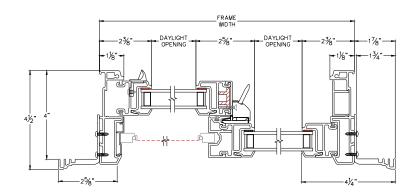
1-3/4" Setback with Contour Z-bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3110U-04 HS	Inch

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

#### HORIZONTAL SLIDER SERIES 3110

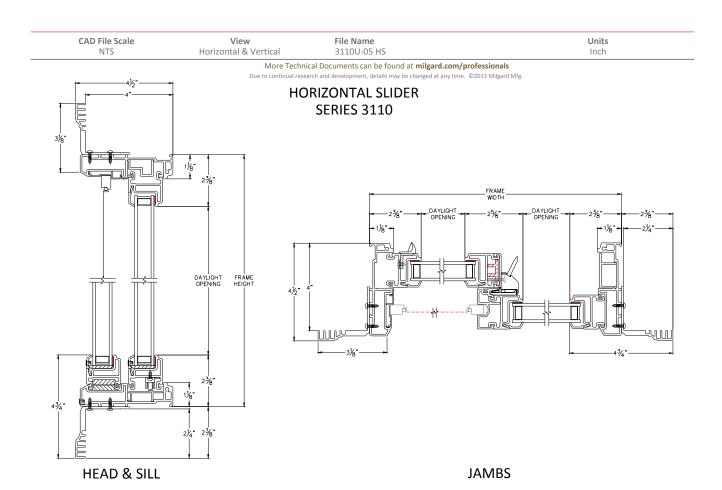




JAMBS



#### 2-1/4" Setback with Contour Z-Bar









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

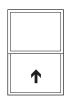
**Lifetime Limited Warranty** 

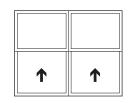
**Energy Packages** 

Accessories



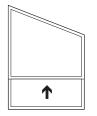
#### Configurations





Single Hung

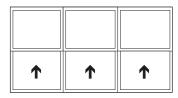
Double Single Hung



Gable Top Single Hung



Double Single Hung/Center Lite



Triple Single Hung

#### Minimum/Maximum Sizes

#### **SINGLE-HUNG**

Min 1<sup>6</sup>2<sup>6</sup>

Max 4<sup>0</sup>7<sup>6</sup>

#### **DOUBLE SINGLE-HUNG**

- Min  $3^{\circ}2^{6}$ 

Max 8<sup>0</sup>7<sup>6</sup>

#### **DOUBLE SINGLE-HUNG with PICTURE**

- Min  $4^{\circ}2^{\circ}$ 

Max 12<sup>0</sup>7<sup>6</sup>

#### **TRIPLE SINGLE-HUNG**

- Min  $4^62^6$ 

Max 9°7°

Minimum egress is  $3^{\circ}5^{\circ}$  with a 30" bar set or  $2^{\circ}6^{\circ}$  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 rep about specialty applications. Windows over 40 square feet shipped open for field glazing. Varies by location.



# 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



1-3/8" Fin Setback

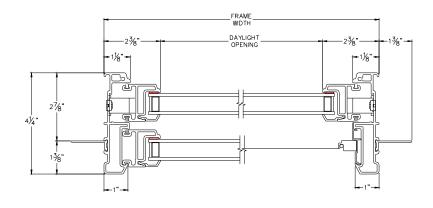
CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3210U-02 SH	Inch

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

Due to continual research and development, details may be changed at any time. ©2013 Milgar

# DAYLIGHT OPENING DAYLIGHT OPENING DAYLIGHT OPENING DAYLIGHT OPENING DAYLIGHT OPENING 1%" 1%" HEAD & SILL

#### SINGLE HUNG SERIES 3210



**JAMBS** 

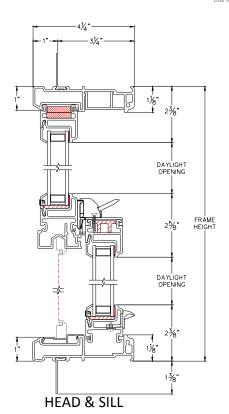


1" Fin Setback

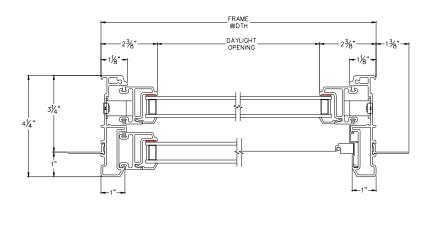
CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3210U-03 SH	Inch

SINGLE HUNG

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



# SERIES 3210



**JAMBS** 



1-3/4" Contour Z-Bar

 CAD File Scale
 View
 File Name
 Units

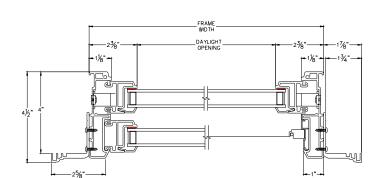
 NTS
 Horizontal & Vertical
 3210U-04 SH
 Inch

SINGLE HUNG SERIES 3210

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

Due to continual research and development, details may be changed at any time. ©2013 Milgan

# DAYLIGHT OPENING DAYLIGHT OPENING DAYLIGHT OPENING DAYLIGHT OPENING 1½" 1½" 1½" 1½"



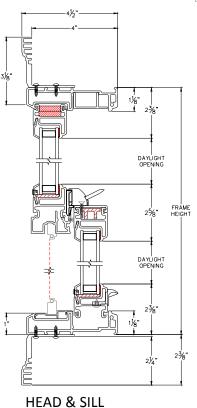
HEAD & SILL JAMBS



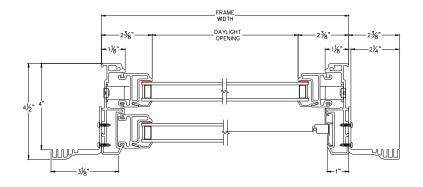
2-1/4" Contour Z-Bar



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



#### SINGLE HUNG SERIES 3210



SILL JAMBS



### Picture and Radius Window



Ultra™ Series picture windows can be used alone or in combination units with operable windows for vent below and vent above configurations. They can be ordered as individual windows or combined with picture windows for additional architectural appeal.

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:



Frame Colors

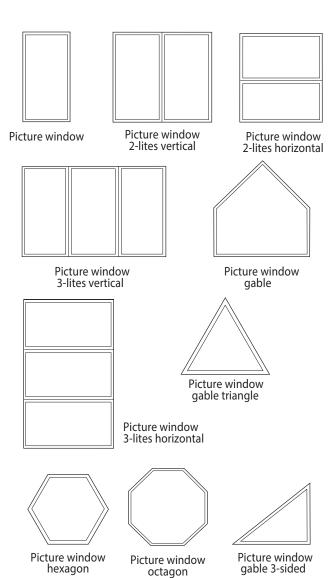
**Lifetime Limited Warranty** 

**Energy Packages** 

Accessories



#### Configurations



#### Minimum/Maximum Sizes

#### **PICTURE WINDOW**

Min 1°1°
 Max 8°6°

#### **2-LITES VERTICAL**

- Min  $2^{\circ}1^{\circ}$  Max  $8^{\circ}6^{\circ}$ 

#### **3-LITES VERTICAL**

Min 3°1°
 Max 8°6°

#### **3-LITES HORIZONTAL**

Min 1°3°
 Max 6°8°

#### **GABLE TRIANGLE**

Min 2°2°
 Max 8°6°

#### **HEXAGON**

- Min  $2^{\circ}2^{\circ}$  Max  $6^{\circ}6^{\circ}$ 

#### **OCTAGON**

- Min  $2^{\circ}2^{\circ}$  Max  $6^{\circ}6^{\circ}$ 

#### **GABLE 3-SIDED**

Min 1°1°
 Max 8°6°

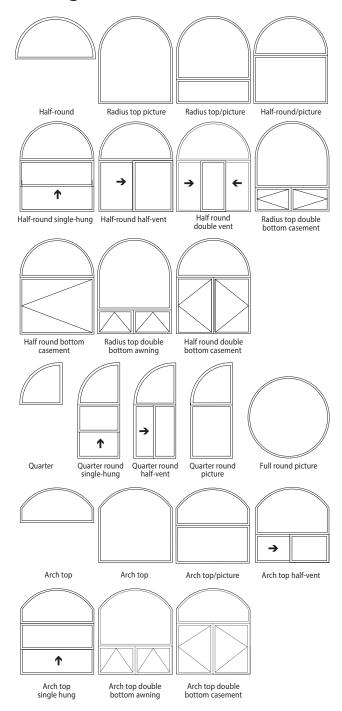
Must specify leg height and center height (minimum 6" leg height)

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 rep about specialty applications. Windows over 40 square feet shipped open for field glazing. Varies by location.



### **Radius Window**

#### Configurations



#### Minimum/Maximum Sizes

#### **RADIUS TOP PICTURE**

Min 3°2° Max 8°5°

#### **HALF ROUND**

Min 2°1° Max 8°4°

#### HALF ROUND/PICTURE

Min 2°2° Max 8°6°

#### HALF ROUND/SINGLE HUNG

Min 2<sup>6</sup>3<sup>6</sup> Max 4<sup>0</sup>9<sup>0</sup>

#### HALF ROUND/HALF VENT

- Min  $2^62^9$  Max  $6^08^0$ 

#### HALF ROUND/DOUBLE VENT

- Min  $5^{\circ}3^{10}$  Max  $6^{\circ}8^{\circ}$ 

#### HALF ROUND/DOUBLE BOTTOM CASEMENT

(refer to casement/awning section for maximum vent size)

- Min  $3^{\circ}3^{6}$  Max  $6^{\circ}8^{\circ}$ 

#### **RADIUS TOP/DOUBLE BOTTOM CASEMENT**

(refer to casement/awning section for maximum vent size)

- Min  $3^{\circ}4^{\circ}$  Max  $6^{\circ}8^{\circ}$ 

#### **RADIUS TOP/BOTTOM AWNING**

(refer to casement/awning section for maximum vent size)

- Min 2°3° Max 5°8°

#### **RADIUS TOP/DOUBLE BOTTOM AWNING**

(refer to casement/awning section for maximum vent size)

- Min  $3^23^7$  Max  $6^08^0$ 

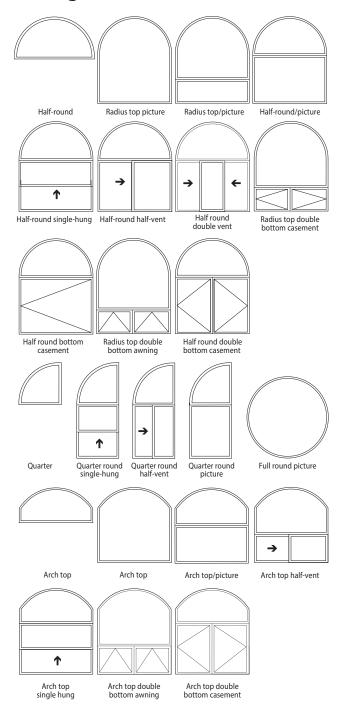
continued on next page

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 rep about specialty applications. Windows over 40 square feet shipped open for field glazing. Varies by location.



### **Radius Window**

#### Configurations



#### Minimum/Maximum Sizes

continued from previous page

#### **QUARTER ROUND**

- Min 1<sup>6</sup>1<sup>6</sup> Max 6<sup>0</sup>6<sup>0</sup>

#### **QUARTER ROUND/SINGLE HUNG**

Min 1<sup>6</sup>4<sup>0</sup> Max 4<sup>0</sup>10<sup>0</sup>

#### **QUARTER ROUND/HALF VENT**

- Min  $2^{\circ}3^{4}$  Max  $6^{\circ}10^{\circ}$ 

#### **QUARTER ROUND/PICTURE**

Min 1<sup>6</sup>2<sup>0</sup> Max 6<sup>0</sup>10<sup>0</sup>

#### **FULL ROUND**

- Min 2°2° Max 6°6°

#### **ARCH TOP**

- Min  $3^{\circ}2^{\circ}$  Max  $8^{\circ}6^{\circ}$ 

#### **ARCH TOP/PICTURE**

Min 3°3°
 Max 8°6°

#### **ARCH TOP/HALF VENT**

- Min  $3^{\circ}3^{4}$  Max  $6^{\circ}10^{\circ}$ 

#### **ARCH TOP/SINGLE HUNG**

Min 3°4<sup>5</sup> Max 4°10°

#### **ARCH TOP/ DOUBLE BOTTOM AWNING**

(refer to casement/awning section for maximum vent size)

- Min  $3^23^7$  Max  $8^06^0$ 

#### ARCH TOP/ DOUBLE BOTTOM CASEMENT

(refer to casement/awning section for maximum vent size)

- Min 3°4° Max 6°10°

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 rep about specialty applications. Windows over 40 square feet shipped open for field glazing. Varies by location.



# Drawings - Quick Links

#### **Picture Window**

37—1-3/8" Fin Setback - Casement Depth

38—1-3/8" Fin Setback - Slider Depth

39—1" Fin Setback - Casement Depth

40—1" Fin Setback - Slider Depth

41—1-3/4" Contour Z-Bar - Casement Depth

42—1-3/4" Contour Z-Bar - Slider Depth

43—2-1/4" Contour Z-Bar - Casement Depth

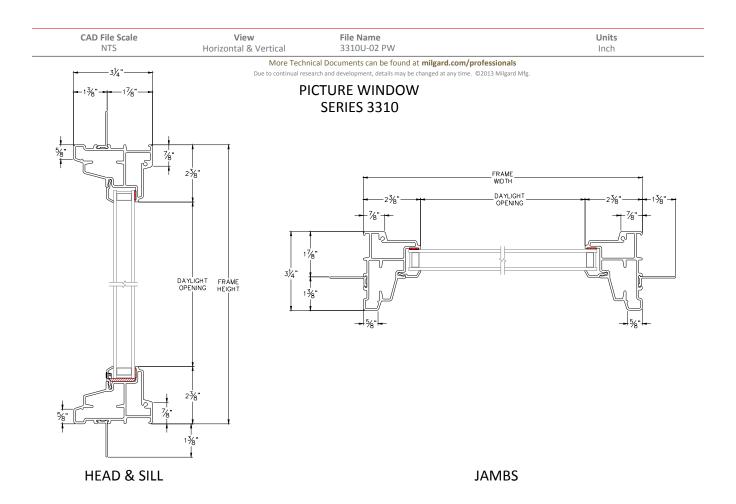
44—2-1/4" Contour Z-Bar - Slider Depth

45—Block Frame - Casement Depth

46—Block Frame - Slider Depth



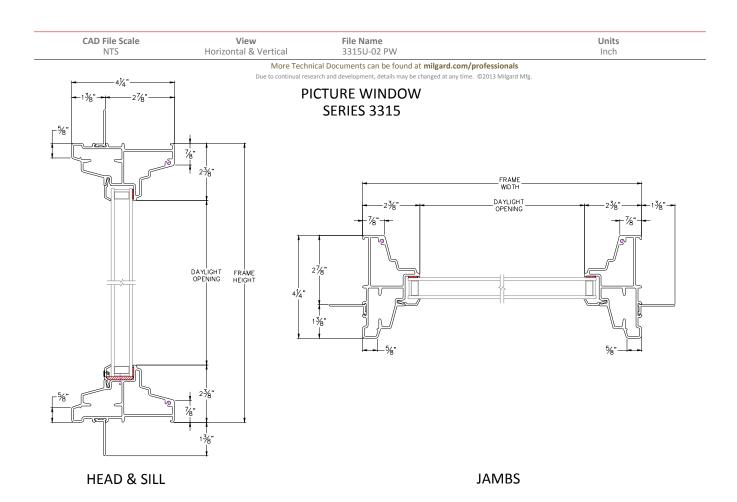
#### 1-3/8" Fin Setback - Casement Depth



Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources



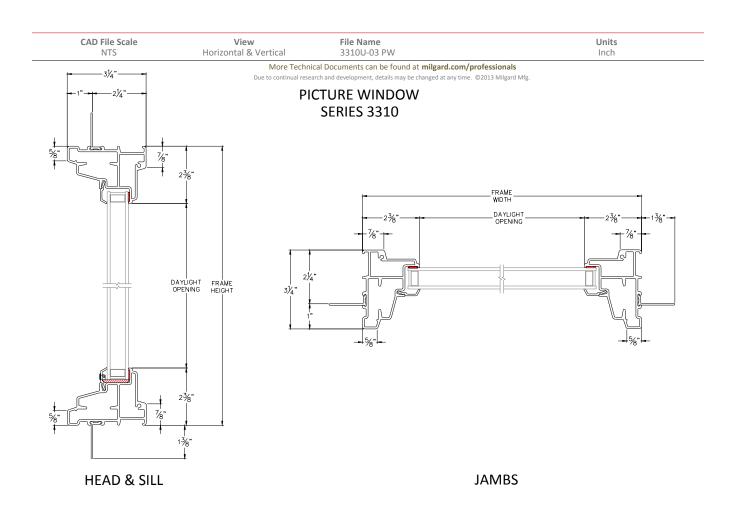
#### 1-3/8" Fin Setback - Slider Depth



Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources



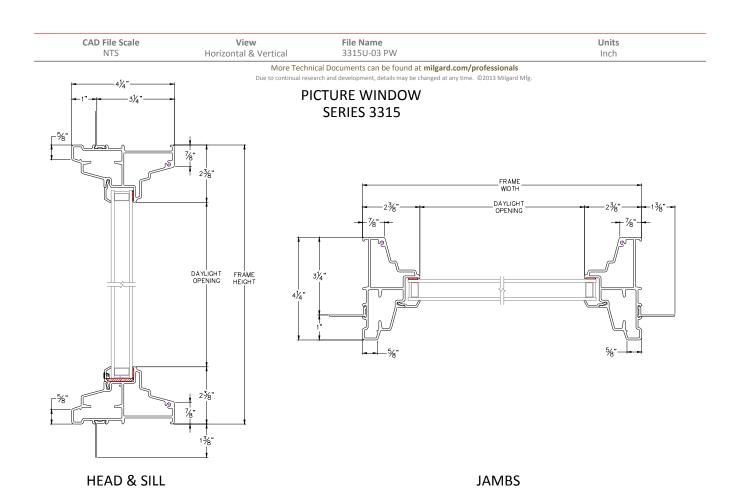
#### 1" Fin Setback - Casement Depth



Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources



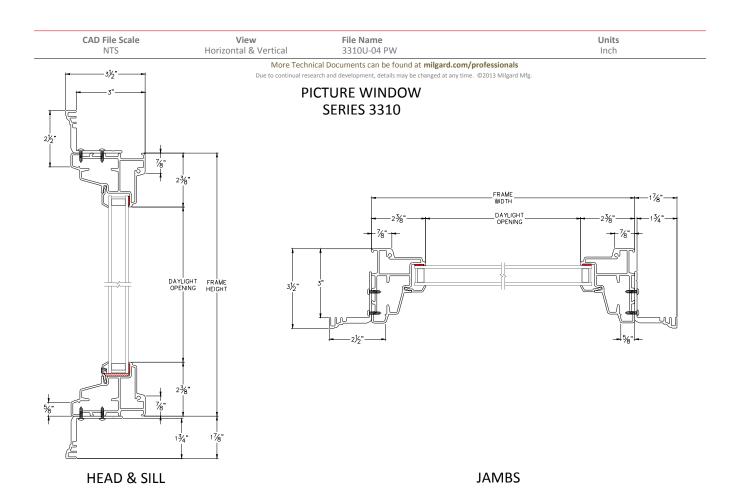
1" Fin Setback - Slider Depth



Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources



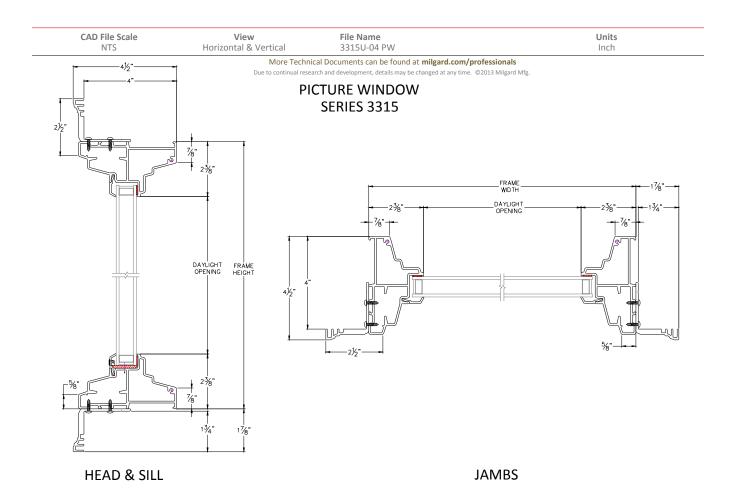
#### 1-3/4" Contour Z-Bar - Casement Depth



Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources



## 1-3/4" Contour Z-Bar - Slider Depth

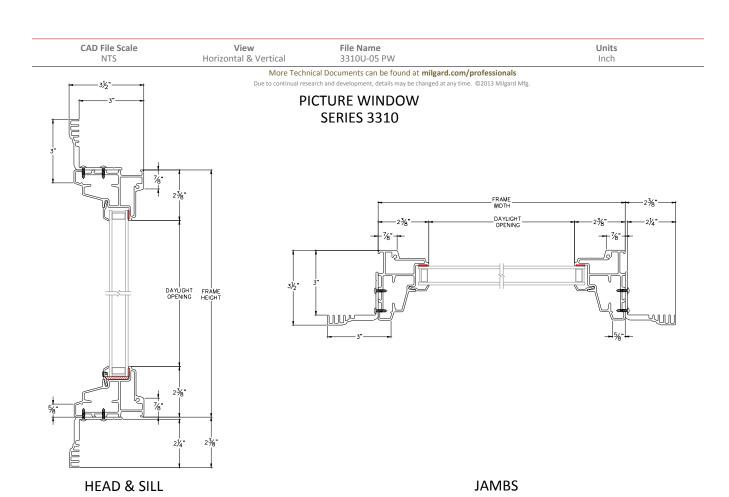


Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

© Milgard Manufacturing, LLC Picture Window — 37

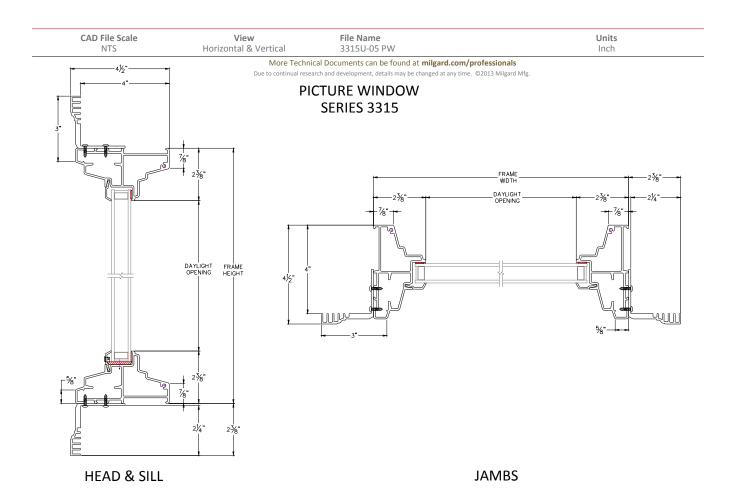


## 2-1/4" Contour Z-Bar - Casement Depth





## 2-1/4" Contour Z-Bar - Slider Depth



Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

© Milgard Manufacturing, LLC Picture Window — 39



## Block Frame - Casement Depth

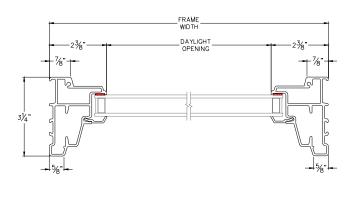
CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3310U-01 PW	Inch

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

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# DAYLIGHT FRAME OPENING HEIGHT

## PICTURE WINDOW SERIES 3310



HEAD & SILL JAMBS

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

Go back to Quick Links

 $^{\circ}$  Milgard Manufacturing, LLC Picture Window — 40

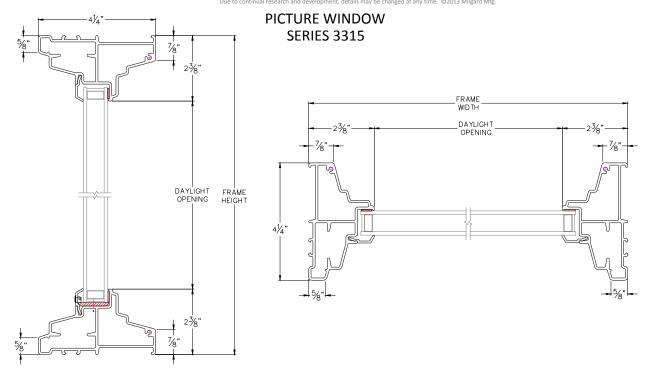


## Block Frame - Slider Depth



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

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HEAD & SILL JAMBS

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

Go back to Quick Links

© Milgard Manufacturing, LLC Picture Window — 41





An awning window is a vent that is hinged on the top and swings outward from the bottom. Awning windows can be used alone or in tandem with other series windows for virtually any design specification.

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:

Awning/Casement Hardware

**Frame Colors** 

**Lifetime Limited Warranty** 

**Energy Packages** 

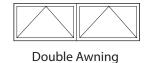
Accessories

 $^{\circ}$  Milgard Manufacturing, LLC Awning Window — 42

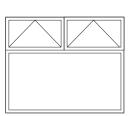


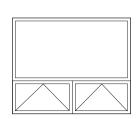
## Configurations





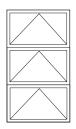
Full Awning

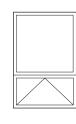


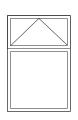


Double-top Awning

Double-bottom Awning







Triple Awning vertical

Botton Awning

Top Awning

## Minimum/Maximum Sizes

**FULL AWNING** 

Min 1<sup>7</sup> 1<sup>6</sup> Max 5<sup>0</sup>3<sup>0</sup>

**DOUBLE AWNING** 

- Min  $3^21^6$  Max  $10^03^0$ 

TRIPLE AWNING VERTICAL

- Min 1<sup>7</sup>4<sup>6</sup> Max 5<sup>0</sup>9<sup>0</sup>

Egress not possible with awning windows

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 rep 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

## **Awning Window**

50—1-3/8" Fin Setback

51—1" Fin Setback

52—1-3/4" Contour Z-Bar

53—2-1/4" Contour Z-Bar

54—Block Frame

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

 $^{\circ}$  Milgard Manufacturing, LLC Awning Window — 44

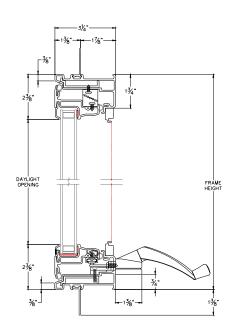


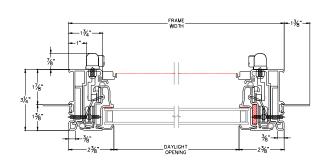
## 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3410U-02 FA	Inch

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

#### AWNING SERIES 3410





HEAD & SILL JAMBS

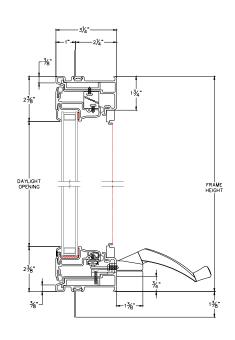


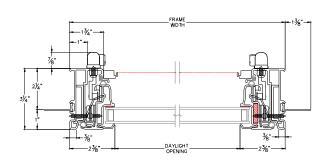
1" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3410U-03 FA	Inch

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

## AWNING SERIES 3410





HEAD & SILL JAMBS

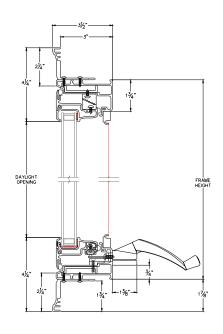


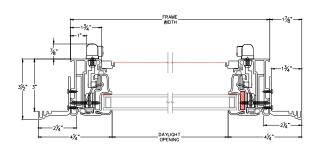
1-3/4" Contour Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3410U-04 FA	Inch

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

## AWNING SERIES 3410





HEAD & SILL JAMBS

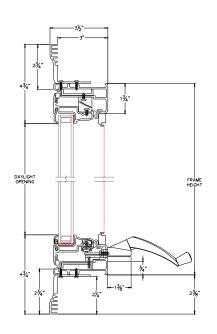


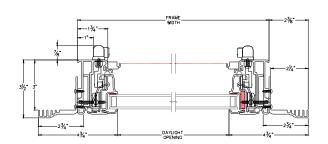
2-1/4" Contour Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3410U-05 FA	Inch

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

#### AWNING SERIES 3410





HEAD & SILL JAMBS

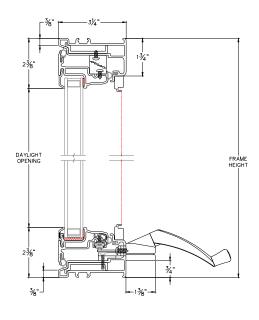


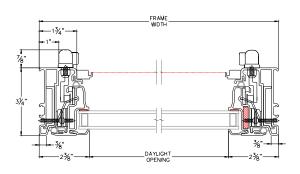
## **Block Frame**

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3410U-01 FA	Inch

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

#### AWNING SERIES 3410





HEAD & SILL JAMBS

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

© Milgard Manufacturing, LLC







A casement window swings outward like a door, hinged on right or left side. Casement windows can be used alone or in tandem with other Ultra Series windows for virtually any design specification.

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:

Awning/Casement Hardware

Frame Colors

**Lifetime Limited Warranty** 

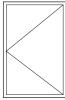
**Energy Packages** 

Accessories

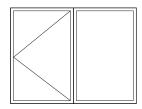
© Milgard Manufacturing, LLC Casement Window — 50



## Configurations



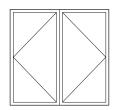




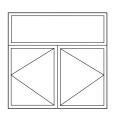
Single Casement



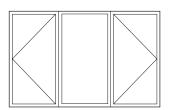
Fixed Casement



**Double Casement** 



Double bottom Casement



Double Casement/Picture

## Minimum/Maximum Sizes

#### **FULL CASEMENT**

Min 1<sup>6</sup>2<sup>0</sup> Max 3<sup>0</sup>5<sup>0</sup> or 2<sup>6</sup>6<sup>0</sup>

#### **DOUBLE CASEMENT**

- Min  $3^{\circ}2^{\circ}$  Max  $6^{\circ}5^{\circ}$  or  $5^{\circ}6^{\circ}$ 

15 square feet maximum vent size

- Min vent width 16 Max vent width 30
- Min vent height 16 Max vent height 60

Minimum egress for casement is 2640 or 3030

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 rep 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

## **Casement Window**

58—1-3/8" Fin Setback

59—1" Fin Setback

60—1-3/4" Contour Z-Bar

61—2-1/4" Contour Z-Bar

62—Block Frame

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

© Milgard Manufacturing, LLC Casement Window — 52



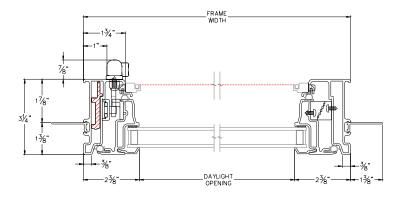
## 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3510U-02 FC	Inch

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.

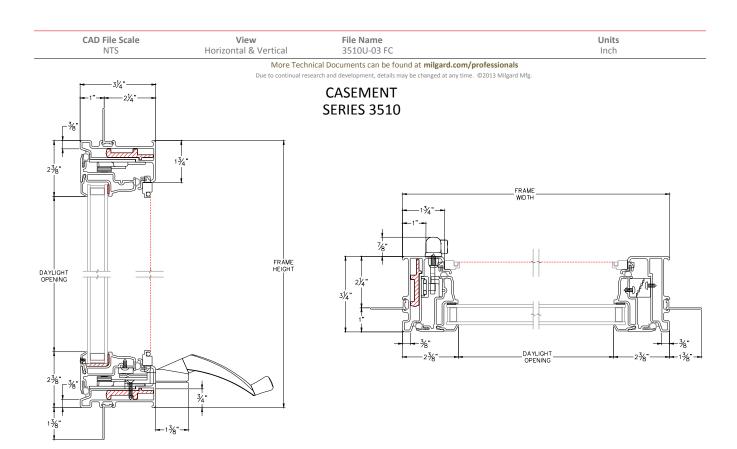
## CASEMENT SERIES 3510



HEAD & SILL JAMBS



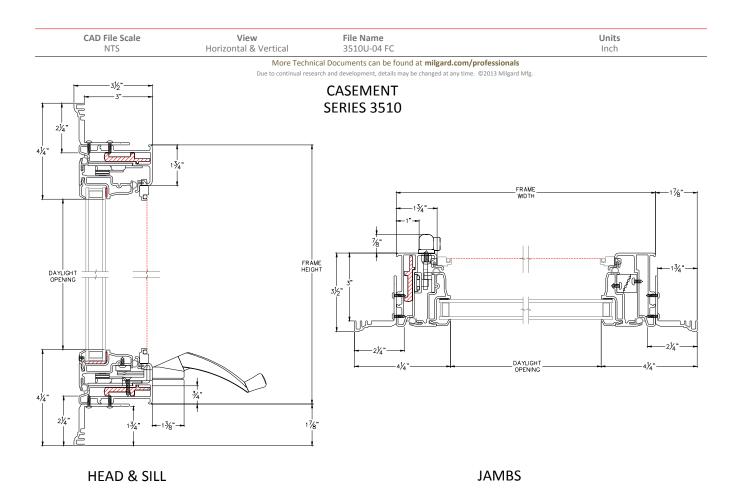
## 1" Fin Setback



HEAD & SILL JAMBS

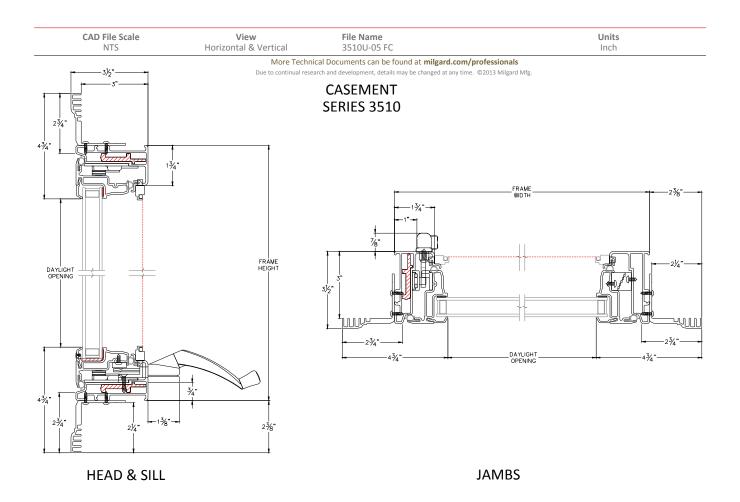


## 1-3/4" Contour Z-Bar





## 2-1/4" Contour Z-Bar



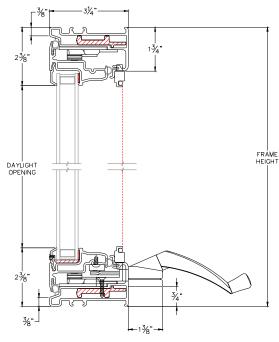


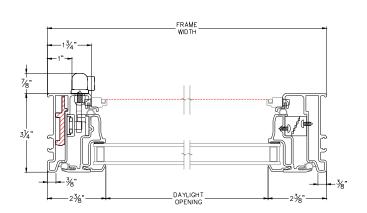
## **Block Frame**

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3510U-01 FC	Inch

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

#### CASEMENT SERIES 3510





HEAD & SILL JAMBS



## **Bay & Bow Window**



Milgard's Bay Windows include 18", 24" or 30" "flankers" or side windows, joined at 45 degrees to a picture window in the center. Flankers are available in picture, single-hung, or casement windows.

Milgard's Bow Windows are standard in 3', 4', or 5' heights joined at 13 degrees in overall size from 5°16 to 10°5°. Flankers are available in picture, single-hung, casement or awning windows.



Milgard Bay/Bow Windows are available in custom sizes to match almost any design, either new or retrofit.

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:

Frame Colors

**Lifetime Limited Warranty** 

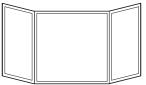
**Energy Packages** 

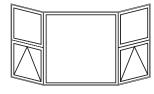
Accessories



# **Bay & Bow Window**

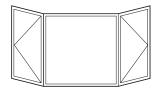
## Configurations



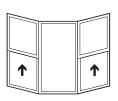




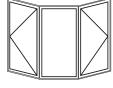
Bay Awning



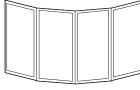
**Bay Casement** 



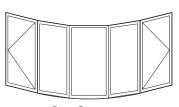




Bow Casement 3-segment







Bow Casement 5-segment

## Minimum/Maximum Sizes

#### **BAY PICTURE**

- Min  $4^{\circ}3^{\circ}$  Max  $8^{\circ}5^{\circ}$ 

#### **BAY CASEMENT**

- Min  $4^{\circ}3^{\circ}$  Max  $8^{\circ}5^{\circ}$ 

#### **BAY AWNING**

- Min  $4^{\circ}3^{\circ}$  Max  $8^{\circ}5^{\circ}$ 

#### **BOW 3-SEGMENT**

_	Picture	Min 4 <sup>6</sup> 3 <sup>0</sup>	Max 6°5°
-	Casement, Awning	Min 4630	Max 6 <sup>0</sup> 5 <sup>0</sup>
_	Single Hung	Min 4630	Max 6º5º

#### **BOW 4-SEGMENT**

_	Picture	Min 6°3°	Max 8°5°
_	Casement, Awning	Min 6°3°	Max 7850
_	Single Hung	Min 6º3º	Max 7 <sup>8</sup> 50

#### **BOW 5-SEGMENT**

- Min 7°3° Max 9°5°

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 rep 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

## **Bay Window Drawings**

66—Bay Window Frame Detail

67—Jamb and Sill Details

68—Assembly Drawing

## **Bow Window Drawings**

69—Frame Details

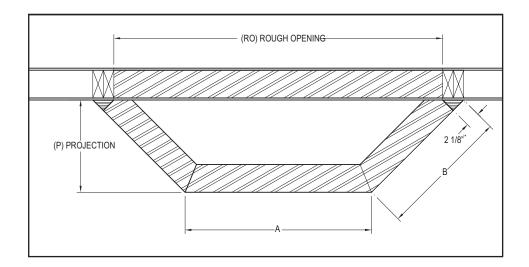
70—Bow Jamb and Sill Details

71—Assembly Drawing



# **Bay Window Drawings**

## Bay Window Frame Detail



#### Installation

All Bay and Bow fiberglass 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 +/- 1/16"). Built to rough opening size, with 1/2" deductions automatically made, no complex calculations are required for ordering.

Windows must be installed level, plumb and square with 1/4" clearance on all sides with weep holes at the bottom.

	Nail Fin Setback				
		1″	1-3/8"		
	А	Deduct 24" from RO	Deduct 23- 3/4" from RO		
18" Flankers	В	21-3/16"	21-1/16"		
	Р	15"	17-1/8"		
Net Width of Center Window		Deduct 26- 5/8" from RO	Deduct 26- 1/8" from RO		
	Α	Deduct 32- 1/2"	Deduct 32- 1/4"		
24" Flankers	В	27-3/16"	27-1/16"		
	Р	19-1/4"	19-1/8"		
Net Width of Center Window		Deduct 35- 1/8" from RO	Deduct 34- 5/8" from RO		

## Support

All Bay and Bow fiberglass windows must have substantial support from below. Full wall framing or 45° angle bracing is recommended.

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

Go back to Quick Links

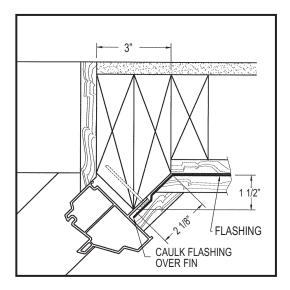
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Bay Window — 61

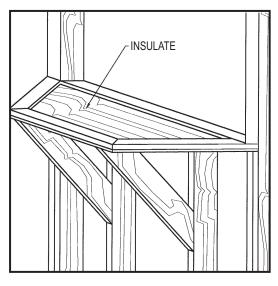


# **Bay Window Drawings**

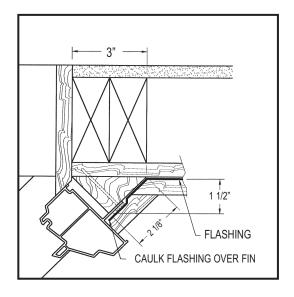
Jamb and Sill Details



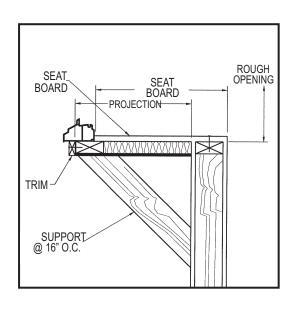
JAMB FIN DETAIL



SILL DETAIL PROJECTION



ALTERNATE JAMB FIN DETAIL



SILL DETAIL (HEAD IS SIMILAR)

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

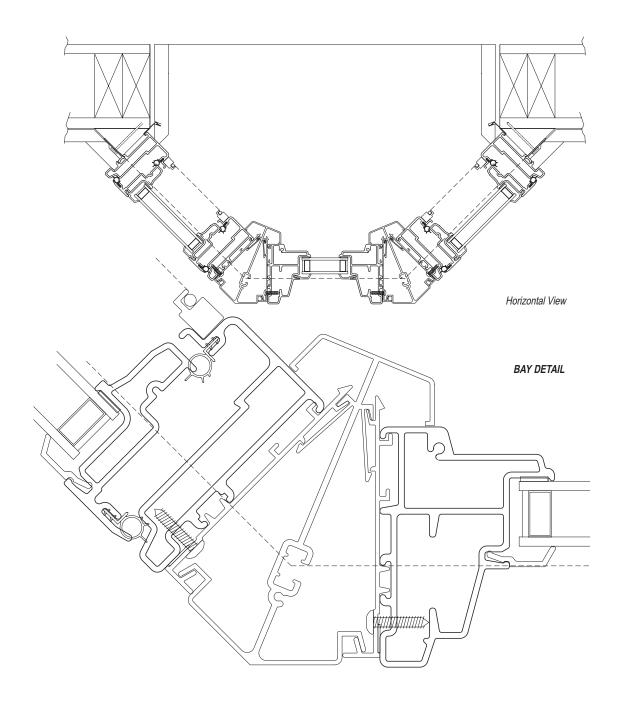
Go back to Quick Links

© Milgard Manufacturing, LLC Bay Window — 62



# **Bay Window Drawings**

**Assembly Drawing** 



Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

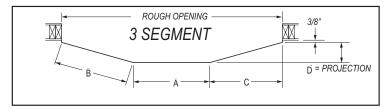
Go back to Quick Links

 $\odot$  Milgard Manufacturing, LLC Bow Window — 63



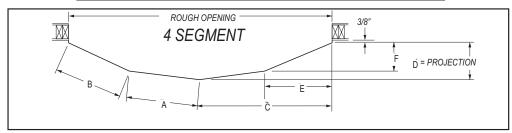
# **Bow Window Drawings**

## Frame Details



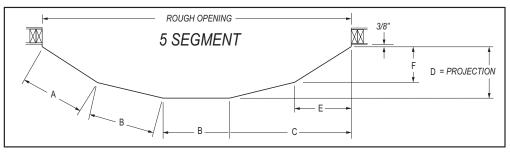
1-3/8" FIN SETBACK - 3 SECTIONS - 4.5625" WALL THICKNESS

RO WIDTH	A	В	С	D	NET WINDOW WIDTH
48	16 <sup>5</sup> /8"	16 <sup>1</sup> / <sub>4</sub> "	15 <sup>11</sup> / <sub>16</sub> "	4 3/16"	15 ³/8"
60	20 11/16"	20 5/16"	19 <sup>11</sup> / <sub>16</sub> "	5 1/4"	19 <sup>7</sup> /16"
72	24 13/16"	24 7/16"	23 5/8"	6 <sup>5</sup> /16"	23 <sup>9</sup> /16"
84	28 7/8"	28 1/2"	27 <sup>9</sup> /16"	7 3/8"	27 %"



1-3/8" FIN SETBACK - 4 SECTIONS - 4.5625" WALL THICKNESS

RO WIDTH	А	В	С	D	E	F	NET WINDOW WIDTH
72	19"	18 <sup>5</sup> /8"	36"	9 5/8"	17 <sup>3</sup> /16"	7 ½"	17 ³/₄"
84	22 1/8"	21 3/4"	42"	11 <sup>3</sup> / <sub>16</sub> "	20 1/16"	8 <sup>5</sup> /6"	20 7/8"
96	25 <sup>1</sup> / <sub>4</sub> "	24 <sup>7</sup> /8"	48"	12 <sup>13</sup> / <sub>16</sub> "	22 15/16"	9 1/2"	24"
108	28 ³/s"	28"	54"	14 7/16"	25 <sup>7</sup> /8"	10 ³/₄"	27 <sup>1</sup> /8"
120	31 ½"	31 <sup>1</sup> / <sub>8</sub> "	60"	16 <sup>1</sup> /16"	28 <sup>3</sup> / <sub>4</sub> "	11 <sup>15</sup> / <sub>16</sub> "	30 <sup>1</sup> / <sub>4</sub> "



1-3/8" FIN SETBACK – 5 SECTIONS – 4.5625" WALL THICKNESS

RO WIDTH	А	В	С	D	E	F	NET WINDOW WIDTH
96	20 3/8"	20 3/4"	37 <sup>5</sup> /8"	15 <sup>9</sup> /16"	17 <sup>5</sup> /8"	10 ³/16"	19 ½"
120	25 ½"	25 <sup>7</sup> /8"	47 1/16"	19 <sup>7</sup> /16"	22 1/16"	12 ³/₄"	24 5/8"

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

Go back to Quick Links

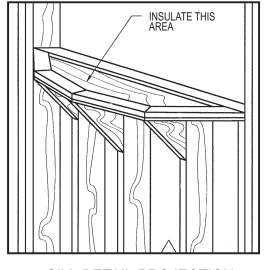
© Milgard Manufacturing, LLC

Bow Window — 64

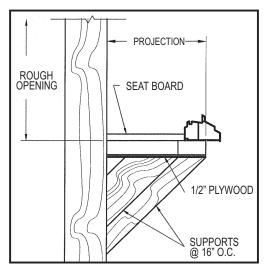


# **Bow Window Drawings**

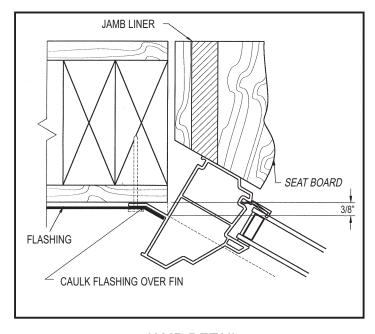
Bow Jamb and Sill Details



SILL DETAIL PROJECTION



SILL DETAIL (HEAD IS SIMILAR)



JAMB DETAIL

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

Go back to Quick Links

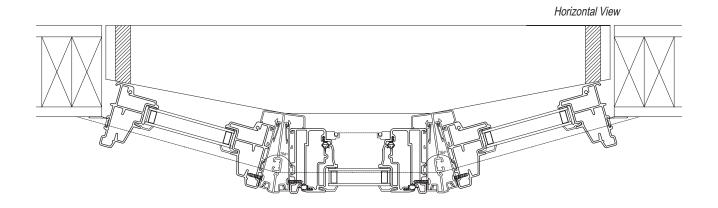
© Milgard Manufacturing, LLC

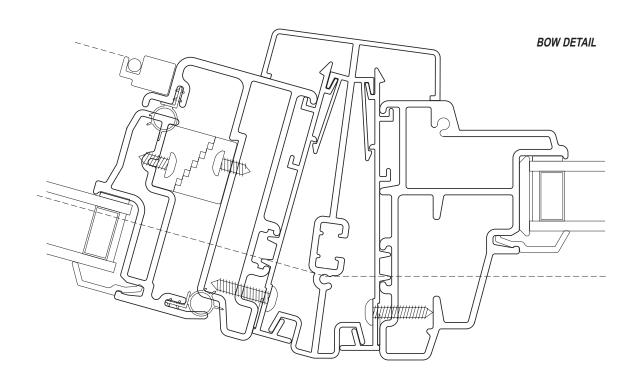
Bow Window — 65



# **Bow Window Drawings**

**Assembly Drawing** 





Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

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Bow Window — 66



# **Sliding Patio Doors**



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 doors will maintain their color and shape and can be constructed to your exact size specifications, subject to engineering review. All Milgard Ultra Series doors are made to order at no additional charge.

## Please also see:

**Door Hardware** 

**Frame Colors** 

**Lifetime Limited Warranty** 

**Energy Packages** 

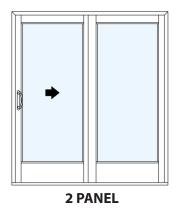
Accessories

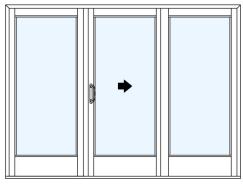
© Milgard Manufacturing, LLC Sliding Patio Door — 67



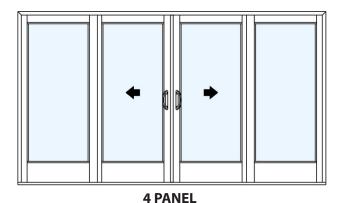
# **Sliding Patio Door**

## Configurations





**3 PANEL** 



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 rep 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.

## Minimum/Maximum Sizes

#### **FRENCH RAIL SLIDING DOOR**

2 Panel Min 5° 68 Max 8° 8°
 3 Panel Min 7° 68 Max 12° 8°
 4 Panel Min 10° 68 Max 14° 8°

## Other

All configurations available with transoms, 1 or 2 sidelites, and arches.



# Drawings - Quick Links

## **French Rail Sliding Patio Door**

75—O - 1-3/8" Fin Setback

76—O - 1" Fin Setback

77—O - 1-3/4" Z-Bar

78—O - 2-1/4" Z-Bar

79—O - Block Frame

80—XO - 1-3/8" Fin Setback

81—XO - 1" Fin Setback

82—XO - 1-3/4" Z-Bar

83-XO - 2-1/4" Z-Bar

84-XO - Block Frame

85—XOO - 1-3/8" Fin Setback

86—XOO - 1" Fin Setback

87-XOO - 1-3/4" Z-Bar

88—XOO - 2-1/4" Z-Bar

89-XOO - Block Frame

90—OXO - 1-3/8" Fin Setback

91—OXO - 1" Fin Setback

92-OXO - 1-3/4" Z-Bar

93—OXO - 2-1/4" Z-Bar

94—OXO - Block Frame

95—OXXO - 1-3/8" Fin Setback

96—OXXO - 1" Fin Setback

97—OXXO - 1-3/4" Z-Bar

98—OXXO - 2-1/4" Z-Bar

99—OXXO - Block Frame

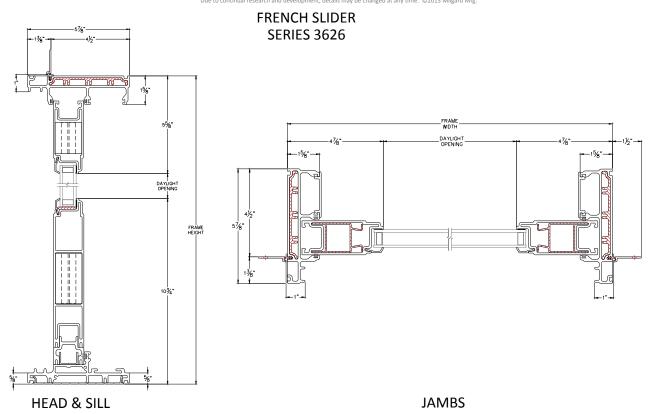


# French Rail Sliding Patio Door

O - 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-02 FS-O	Inch

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



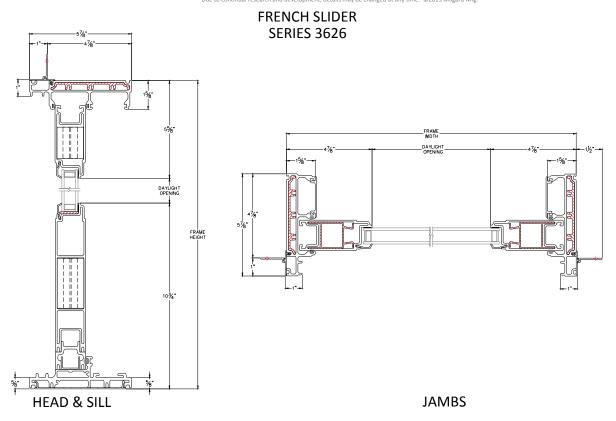


# French Rail Sliding Patio Door

O - 1" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-03 FS-O	Inch

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



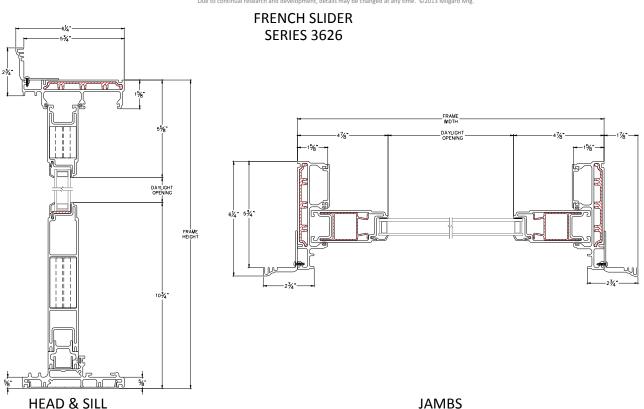


# French Rail Sliding Patio Door

O - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-04 FS-O	Inch

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





O - 2-1/4" Z-Bar

**CAD File Scale** View File Name Units NTS Horizontal & Vertical 3626U-05 FS-O Inch 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. FRENCH SLIDER **SERIES 3626** DAYLIGHT OPENING **HEAD & SILL JAMBS** 

Revit, SketchUp, .PDF and .DWG files can be accessed at milgard.com/professionals/technical-resources

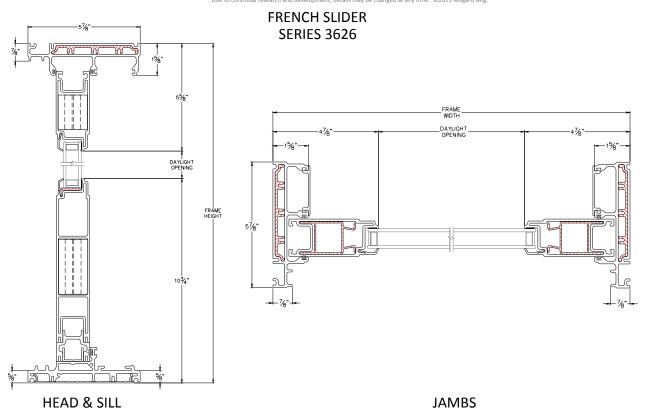
© Milgard Manufacturing, LLC



#### O - Block Frame

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-01 FS-O	Inch

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

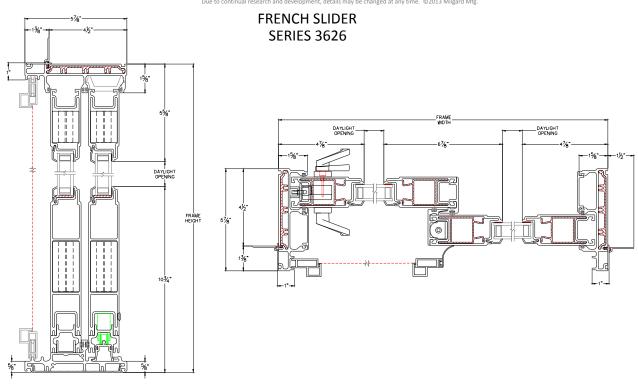




XO - 1-3/8" Fin Setback



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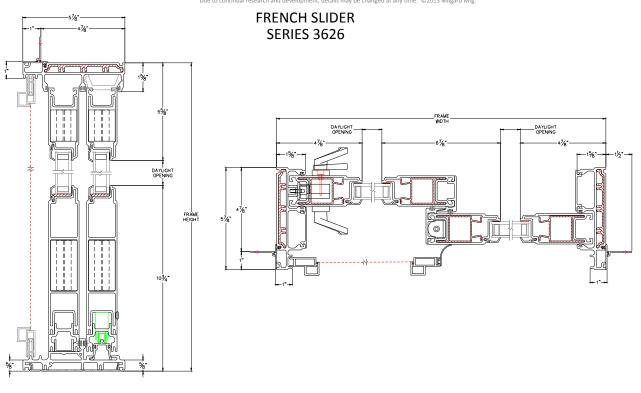
HEAD & SILL JAMBS



XO - 1" Fin Setback



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



**JAMBS** 

**HEAD & SILL** 

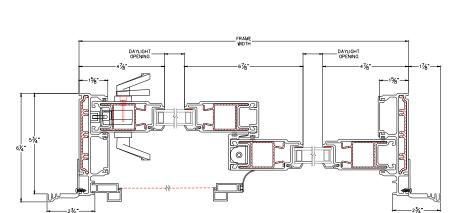


XO - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-04 FS-XO	Inch

FRENCH SLIDER SERIES 3626

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



HEAD & SILL JAMBS



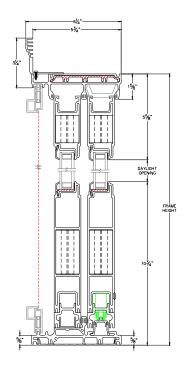
XO - 2-1/4" Z-Bar

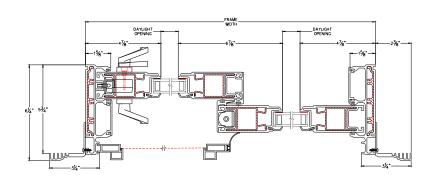
CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-05 FS-XO	Inch

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#### FRENCH SLIDER SERIES 3626





HEAD & SILL JAMBS

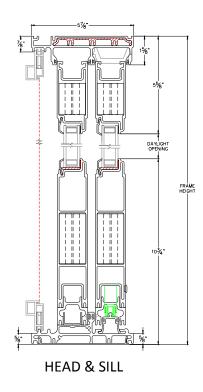


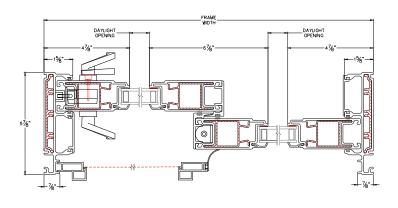
XO - Block Frame

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-01 FS-X0	Inch

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

#### FRENCH SLIDER SERIES 3626





**JAMBS** 



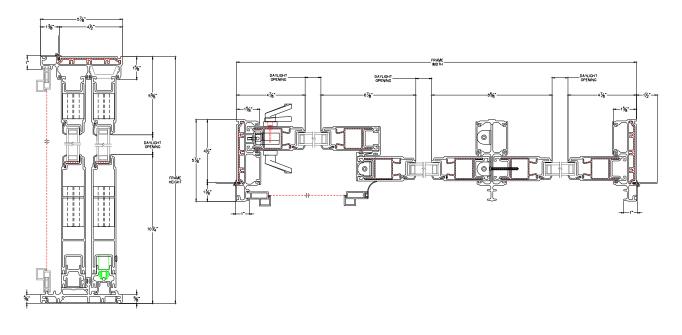
XOO - 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-02 FS-XOO	Inch

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

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#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS

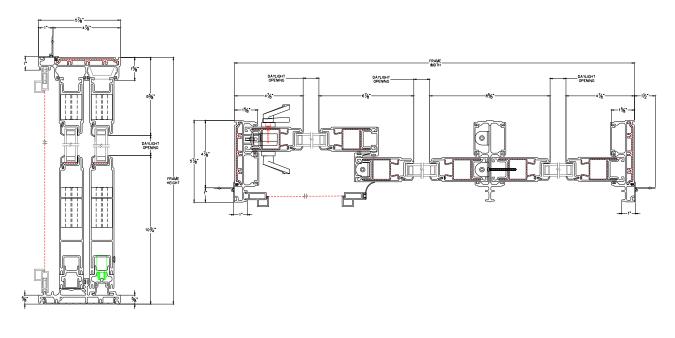


XOO - 1" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-03 FS-XOO	Inch

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

#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS

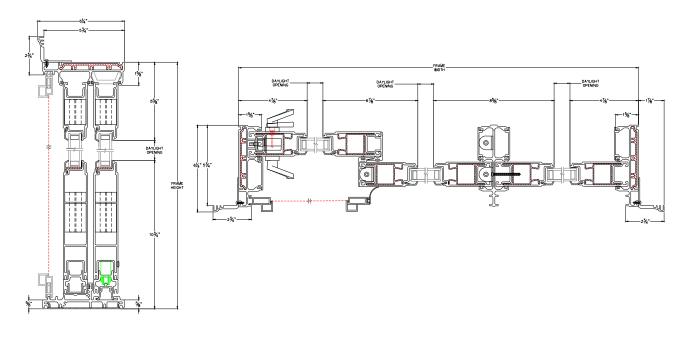


XOO - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-04 FS-XOO	Inch

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

#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS



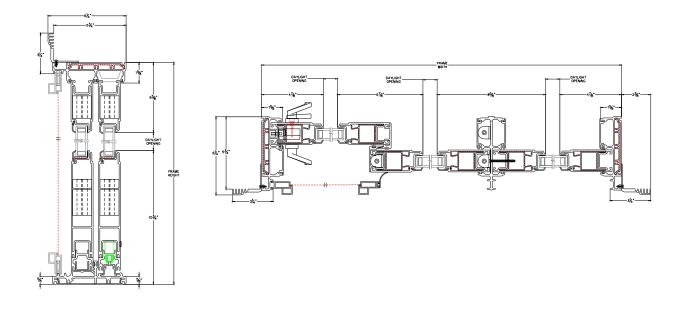
XOO - 2-1/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-05 FS-XOO	Inch

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

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#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS

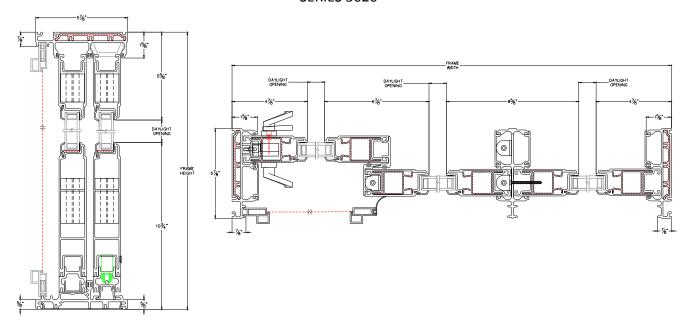


**XOO - Block Frame** 

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-01 FS-XOO	Inch

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

#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS



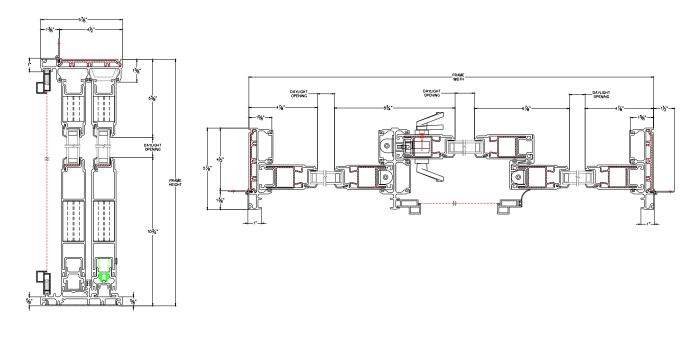
OXO - 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-02 FS-OXO	Inch

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#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS

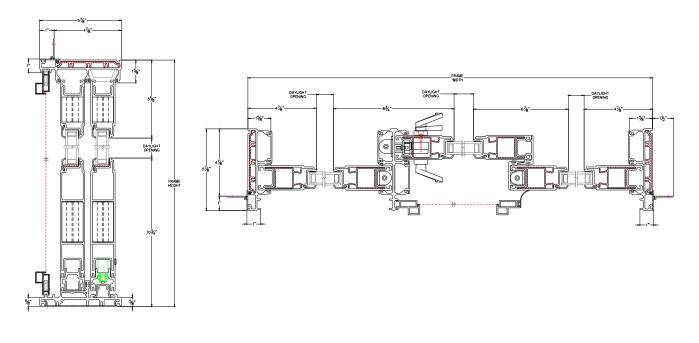


OXO - 1" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-03 FS-OXO	Inch

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

#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS

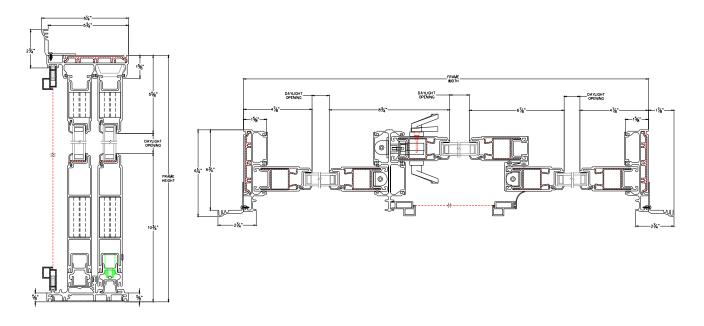


OXO - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-04 FS-OXO	Inch

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

#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS



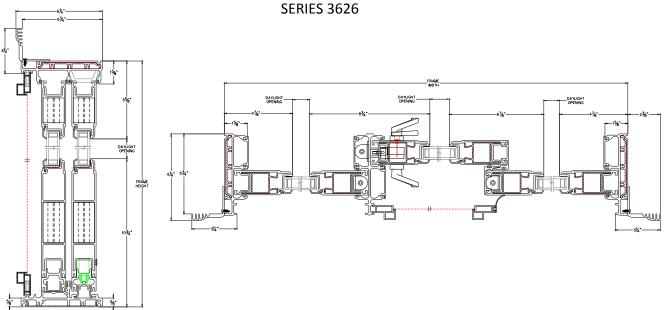
OXO - 2-1/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-05 FS-OXO	Inch

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#### FRENCH SLIDER



HEAD & SILL JAMBS

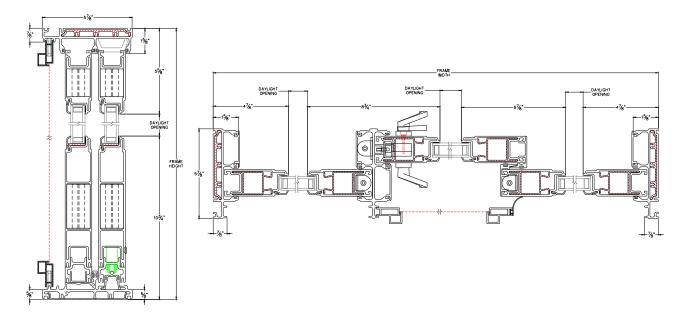


OXO - Block Frame

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-01 FS-OXO	Inch

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

#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS



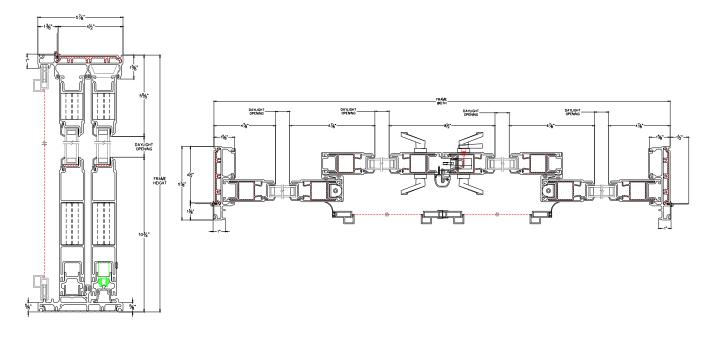
OXXO - 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-02 FS-OXXO	Inch

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

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#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS

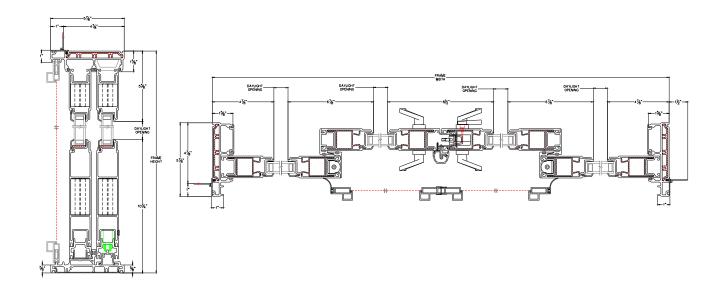


OXXO - 1" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-03 FS-OXXO	Inch

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

#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS

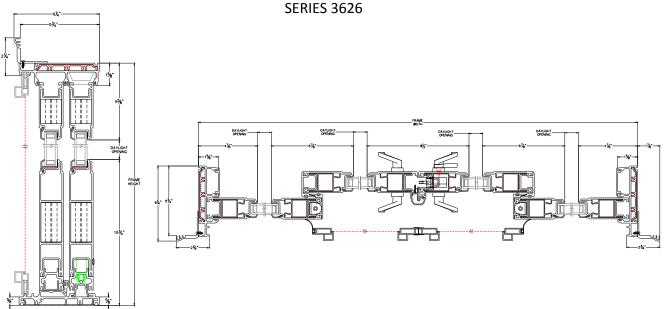


OXXO - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-04 FS-OXXO	Inch

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

#### FRENCH SLIDER



HEAD & SILL JAMBS



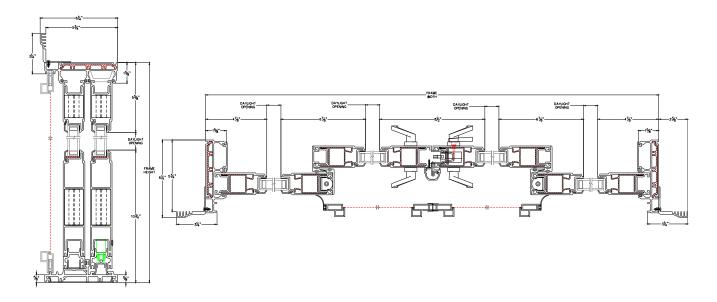
OXXO - 2-1/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-05 FS-OXXO	Inch

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

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#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS

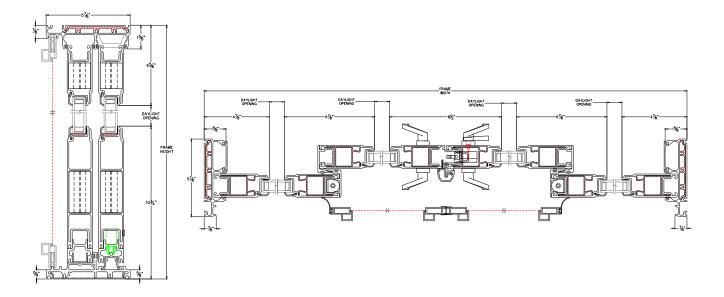


OXXO - Block Frame

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	3626U-01 FS-OXXO	Inch

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

#### FRENCH SLIDER SERIES 3626



HEAD & SILL JAMBS



## **Swing Patio Doors**





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 doors will maintain their color and shape and can be constructed to your exact size specifications, subject to engineering review. All Milgard Ultra Series doors are made to order at no additional charge.

#### Please also see:

**Door Hardware** 

**Frame Colors** 

**Lifetime Limited Warranty** 

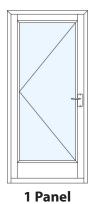
**Energy Packages** 

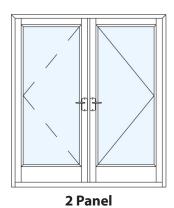
Accessories

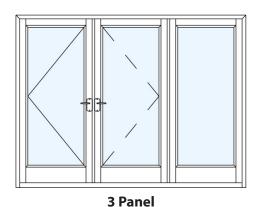
© Milgard Manufacturing, LLC Swing Patio Door — 95

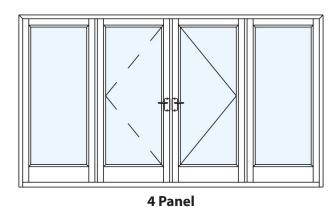


#### Configurations









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 rep 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.

#### Minimum/Maximum Sizes

#### **IN-SWING DOOR**

_	1 Panel	Min 2º 6º	Max 3º 8º
_	2 Panel	Min 5º 6º	Max 6º 8º
_	3 Panel	Min 7 <sup>6</sup> 6 <sup>0</sup>	Max 9º 8º
_	4 Panel	Min 10° 6°	Max 12º 8º

#### **OUT-SWING DOOR**

_	1 Panel	Min 1660	Max 3º 8º
_	2 Panel	Min 5º 6º	Max 6º 8º
_	3 Panel	Min 7 <sup>6</sup> 6 <sup>0</sup>	Max 9º 8º
_	4 Panel	Min 10° 6°	Max 12 <sup>0</sup> 8 <sup>0</sup>

#### Other

- 1, 2, 3, 4 panel
- · Any panels can be active, passive or operable
- Transoms, fixed and operable sidelites available
- Special size doors available\*
- Keyed lock available (Schlage®-compatible)
- Frame depth 4-9/16" or 6-9/16"
- · Overall glass thickness 7/8"
- · Door hand to be determined when ordering
- · Door hand viewed from exterior



## Drawings - Quick Links

#### **In-Swing Patio Door**

103—O - 1-3/8" Fin Setback

104—O - 1" Fin Setback

105—O - 1-3/4" Z-Bar

106—O - 2-1/4" Z-Bar

107—O - Block Frame

108—OX - 1-3/8" Fin Setback

109—OX - 1" Fin Setback

110—OX - 1-3/4" Z-Bar

111—OX - 2-1/4" Z-Bar

112—OX - Block Frame

113—OXO - 1-3/8" Fin Setback

114—OXO - 1" Fin Setback

115—OXO - 1-3/4" Z-Bar

116—OXO - 2-1/4" Z-Bar

117—OXO - Block Frame

118—OXXO - 1-3/8" Fin Setback

119—OXXO - 1" Fin Setback

120—OXXO - 1-3/4" Z-Bar

121—OXXO - 2-1/4" Z-Bar

122—OXXO - Block Frame

#### **Out-Swing Patio Door**

123—O - 1-3/8" Fin Setback

124—O - 1" Fin Setback

125—O - 1-3/4" Z-Bar

126—O - 2-1/4" Z-Bar

127—O - Block Frame

128—OX - 1-3/8" Fin Setback

129—OX - 1" Fin Setback

130—OX - 1-3/4" Z-Bar

131—OX - 2-1/4" Z-Bar

132—OX - Block Frame

133—OXX - 1-3/8" Fin Setback

134—OXX - 1" Fin Setback

135—OXX - 1-3/4" Z-Bar

136—OXX - 2-1/4" Z-Bar

137—OXX - Block Frame

138—OXXO - 1-3/8" Fin Setback

139—OXXO - 1" Fin Setback

140—OXXO - 1-3/4" Z-Bar

141—OXXO - 2-1/4" Z-Bar

142—OXXO - Block Frame



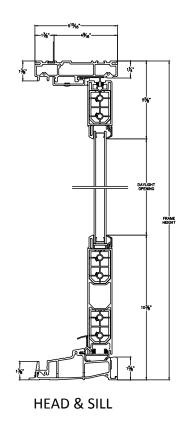
O - 1-3/8" Fin Setback

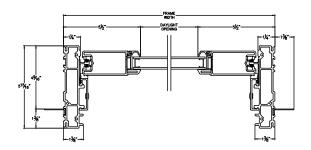
CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3642U_IS_O_1.375in_4.563frame	Inch	06/2016

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#### INSWING FIXED SERIES 3642





**JAMBS** 

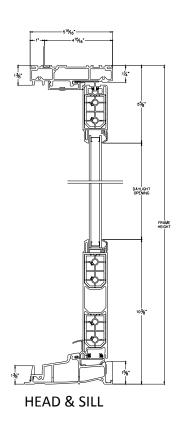


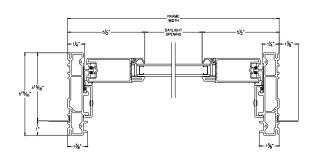
#### O - 1" Fin Setback

CAD File Scale	View	File Name	Units Re	vision
NTS	Horizontal & Vertical	Ultra_3642U_IS_O_1inNFS		5/2016

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#### INSWING SERIES 3642





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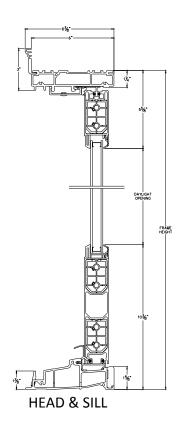


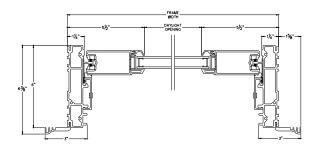
O - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units Revision	on
NTS	Horizontal & Vertical	Ultra_3642U_IS_O_1.75in_z-bar	Inch 06/201	16

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#### INSWING FIXED SERIES 3642





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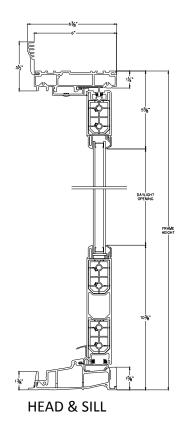


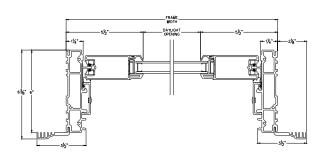
O - 2-1/4" Z-Bar

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3642U_IS_O_2.25in_z-bar	Inch	06/2016

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

### INSWING FIXED SERIES 3642





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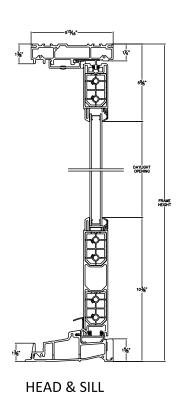
#### O - Block Frame

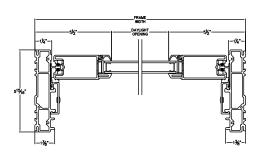
CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3642U_IS_O_block_4.563frame	Inch	12/2015

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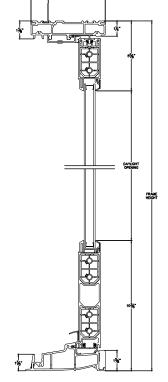
OX - 1-3/8" Fin Setback

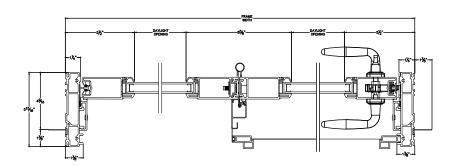
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NTS	Horizontal & Vertical	Ultra_3642U_IS_OL_1.375in_4.563frame	Inch	06/2016

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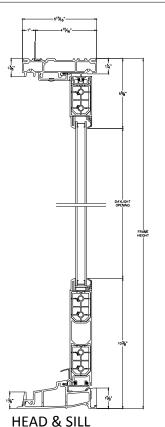
HEAD & SILL JAMBS



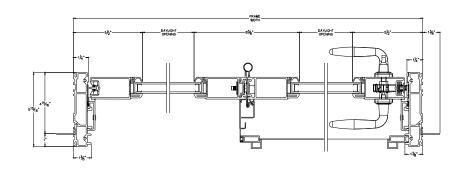
OX - 1" Fin Setback

CAD File Scale	View	File Name	Units Revision	
NTS	Horizontal & Vertical	Ultra_3642U_IS_OL_1inNFS	Inch 06/2016	

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#### INSWING SERIES 3642



**JAMBS** 



OX - 1-3/4" Z-Bar

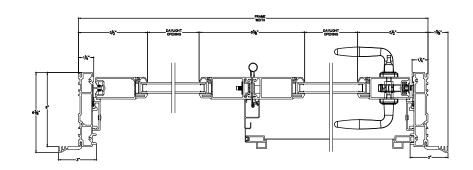
 CAD File Scale
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 Revision

 NTS
 Horizontal & Vertical
 Ultra\_3642U\_IS\_OL\_1.75in\_z-bar
 Inch
 06/2016

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# DALLOWT GREEK RECORT

#### INSWING SERIES 3642



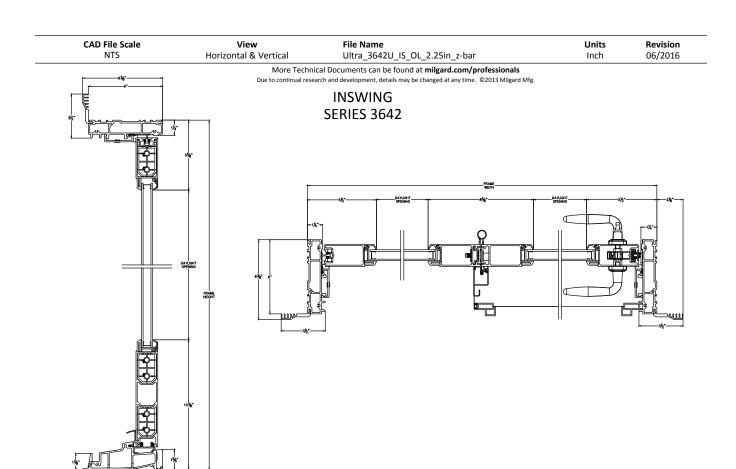
HEAD & SILL JAMBS

**JAMBS** 



# **In-Swing Patio Door**

OX - 2-1/4" Z-Bar



**HEAD & SILL** 

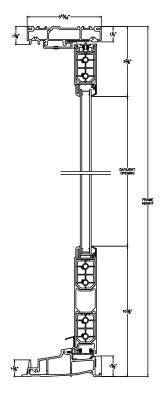


OX - Block Frame

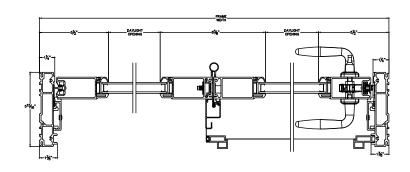
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NTS	Horizontal & Vertical	Ultra_3642U_IS_OL_block_4.563frame	Inch	06/2016

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#### INSWING SERIES 3642



HEAD & SILL JAMBS

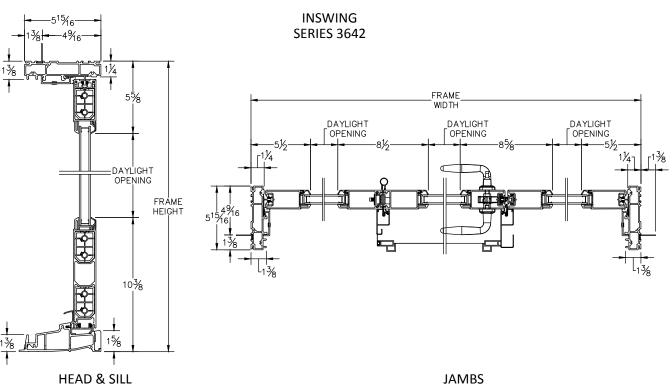


OXO - 1-3/8" Fin Setback

CAD FILE SCALE         CAD FILE SCALE         FILE NAME           NTS         HORIZONTAL & VERTICAL         Ultra_3642U_IS_OLO_1.375in_4.563frame	UNITS INCH	<b>REVISION</b> 07/2016
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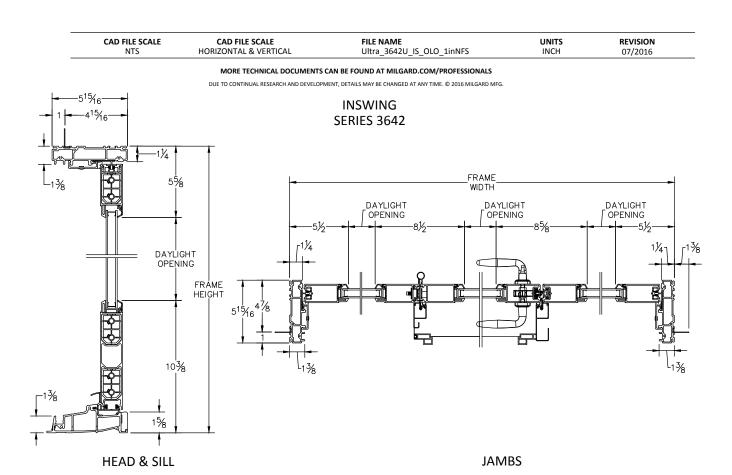
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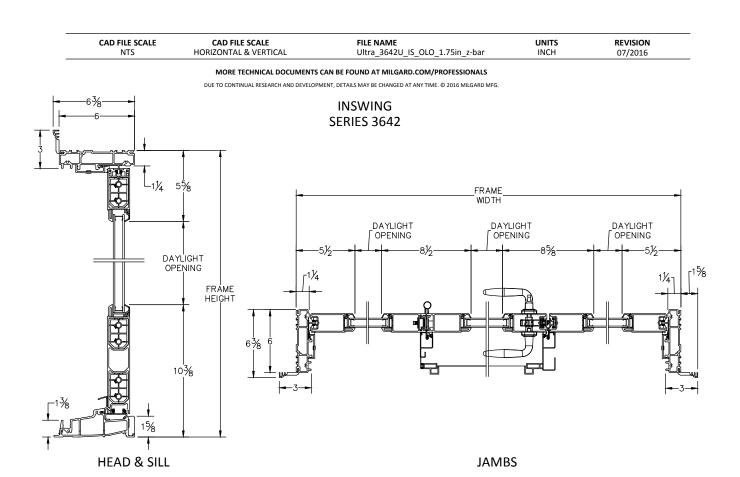


OXO - 1" Fin Setback



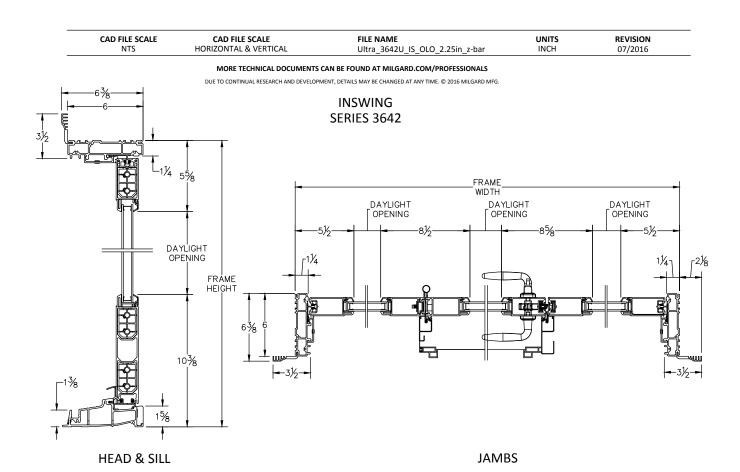


OXO - 1-3/4" Z-Bar





OXO - 2-1/4" Z-Bar



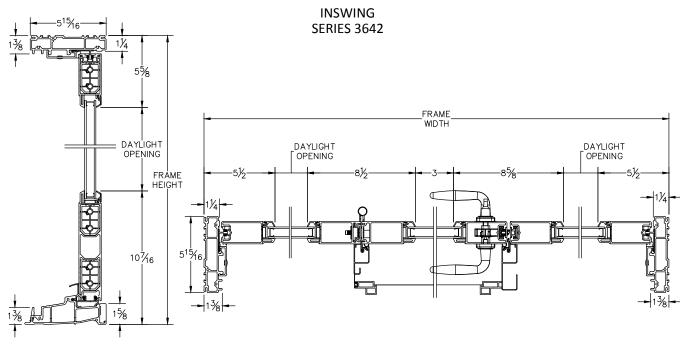


**OXO - Block Frame** 

CAD FILE SCALE	CAD FILE SCALE	FILE NAME	UNITS	REVISION
NTS	HORIZONTAL & VERTICAL	Ultra_3642U_IS_OLO_block_4.563frame	INCH	07/2016

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HEAD & SILL JAMBS



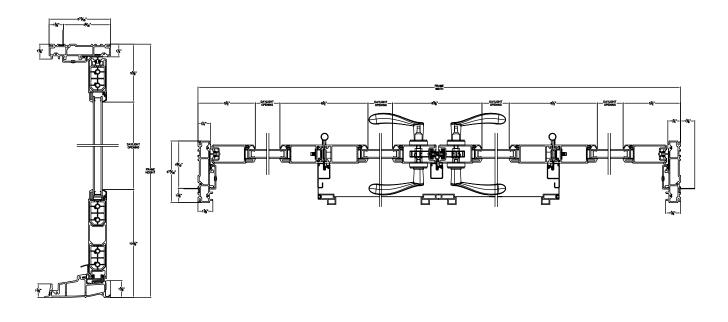
OXXO - 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3642_IS_OPAO_1.375in_4.563frame	Inch	-

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HEAD & SILL JAMBS



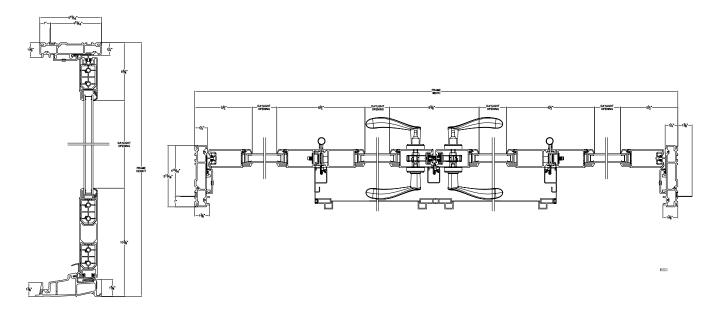
OXXO - 1" Fin Setback

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3642U_IS_OPAO_1inNFS	Inch	-

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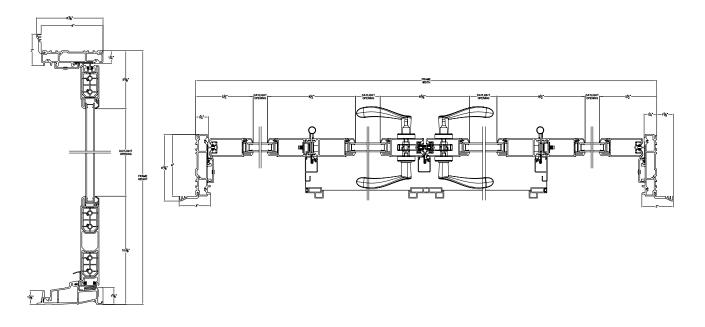
OXXO - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3642U_IS_OPAO_1.75in_z-bar	Inch	-

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#### IN SWING SERIES 3642



HEAD & SILL JAMBS



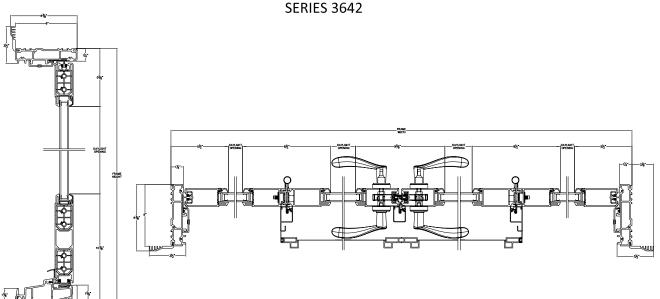
OXXO - 2-1/4" Z-Bar

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3642U_IS_OPAO_2.25in_z-bar	Inch	-

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#### INSWING



HEAD & SILL JAMBS



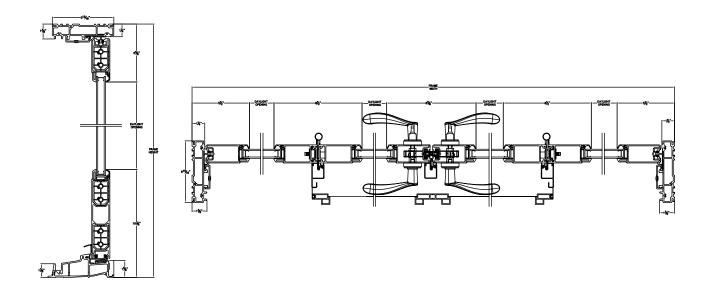
OXXO - Block Frame

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3642U_IS_OAPO_block_4.563frame	Inch	-

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#### IN SWING SERIES 3642



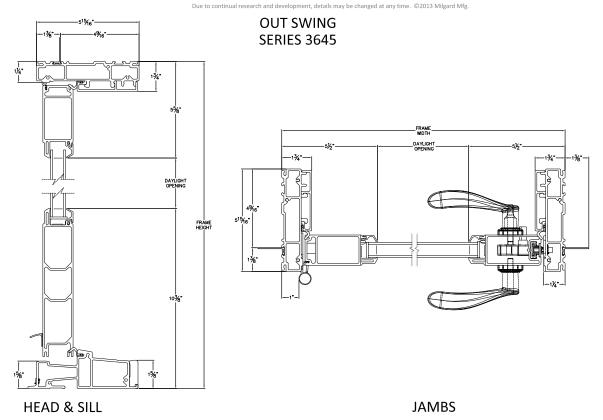
HEAD & SILL JAMBS



O - 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3645_OS_A_1.375in_4.563wall	Inch

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**JAMBS** 



#### **Out-Swing Patio Door**

#### O - 1" Fin Setback

CAD File Scale

NTS

Horizontal & Vertical

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OUT SWING

SERIES 3645

**HEAD & SILL** 

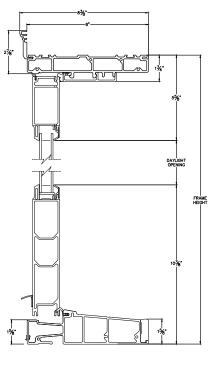


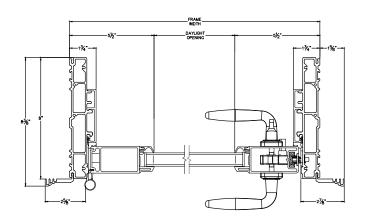
O - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3665_OS_A_1.75in-z-bar	Inch	06/2016

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

#### OUT SWING SERIES 3665





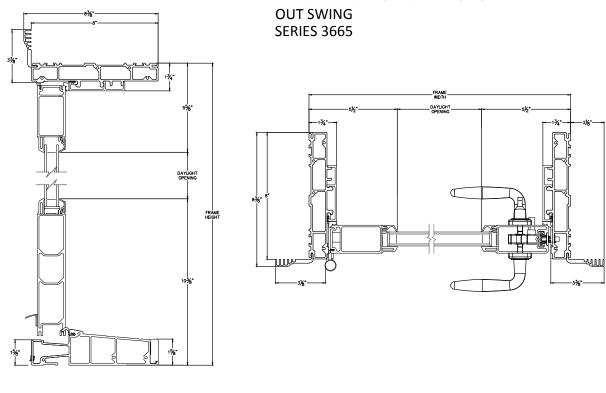
HEAD & SILL JAMBS



O - 2-1/4" Z-Bar

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3665_OS_A_2.25in-z-bar	Inch	06/2016

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



HEAD & SILL JAMBS

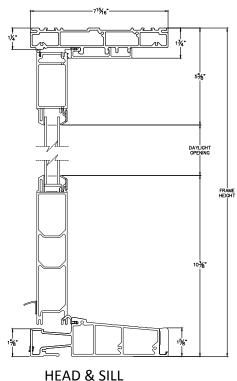


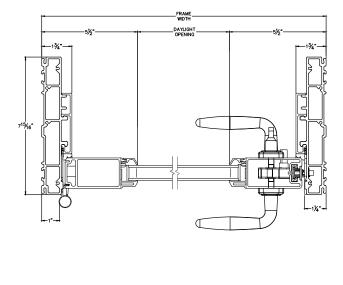
#### O - Block Frame

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3665_OS_A_block	Inch	06/2016

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

#### OUT SWING SERIES 3665

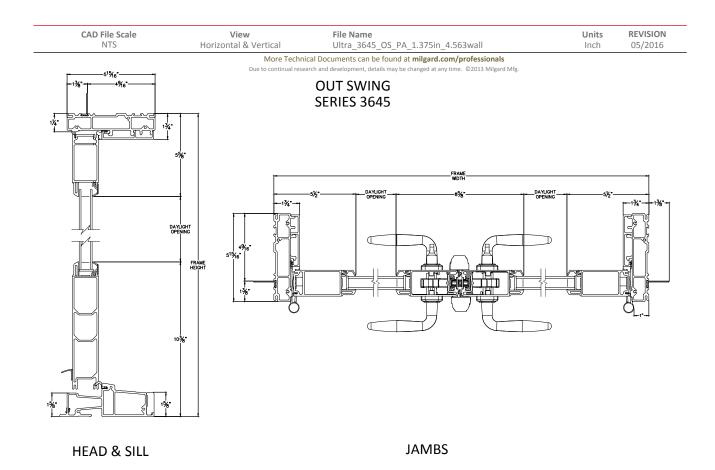




) & SILL JAMBS

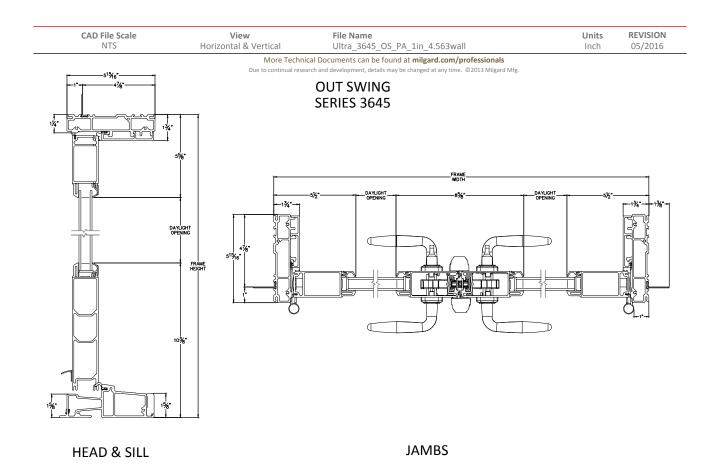


OX - 1-3/8" Fin Setback





OX - 1" Fin Setback





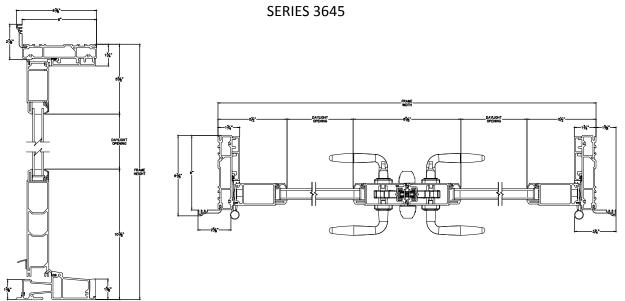
OX - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units	REVISION
NTS	Horizontal & Vertical	Ultra_3645_OS_AP_1.75in-z-bar	Inch	05/2016

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OUT SWING



HEAD & SILL JAMBS

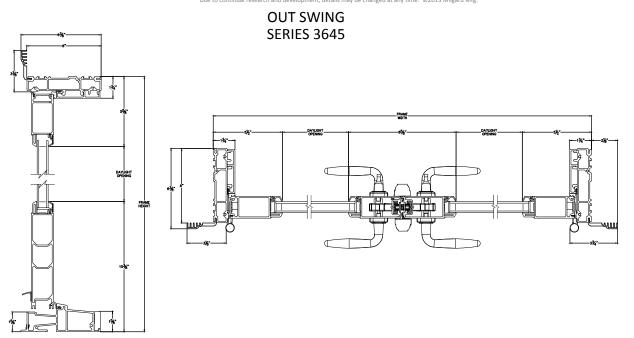


OX - 2-1/4" Z-Bar

CAD File Scale	View	File Name	Units	REVISION
NTS	Horizontal & Vertical	Ultra_3645_OS_AP_2.25in-z-bar	Inch	05/2016

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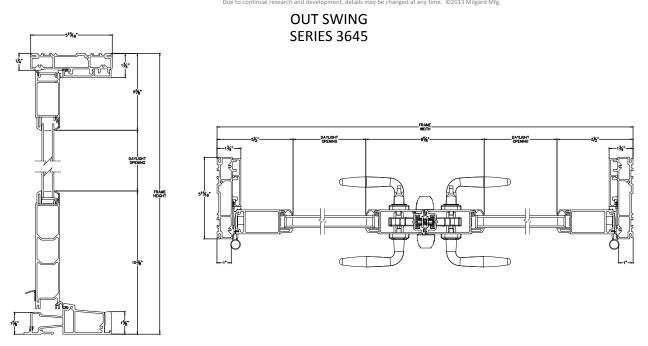
HEAD & SILL JAMBS



OX - Block Frame

CAD File Scale	View	File Name	Units	Revision
NTS	Horizontal & Vertical	Ultra_3645_OS_PA_BLOCK	Inch	05/2016

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HEAD & SILL JAMBS



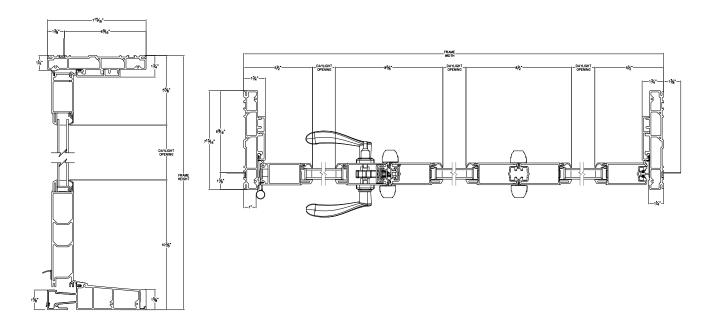
OXX - 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3665_OS_AOO_1.375in_4.563wall	Inch

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#### OUT SWING SERIES 3665



HEAD & SILL JAMBS



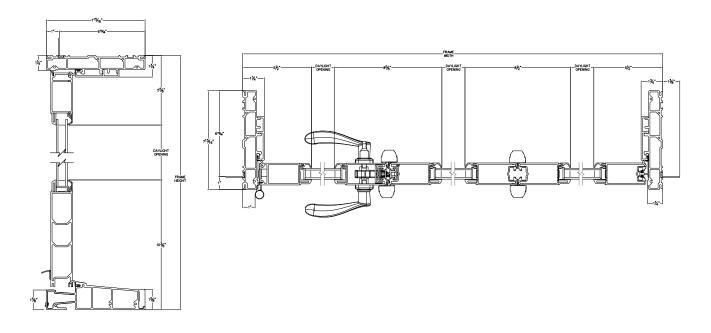
OXX - 1" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3665_OS_AOO_1in_6.938wall	Inch

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#### OUT SWING SERIES 3665



HEAD & SILL JAMBS



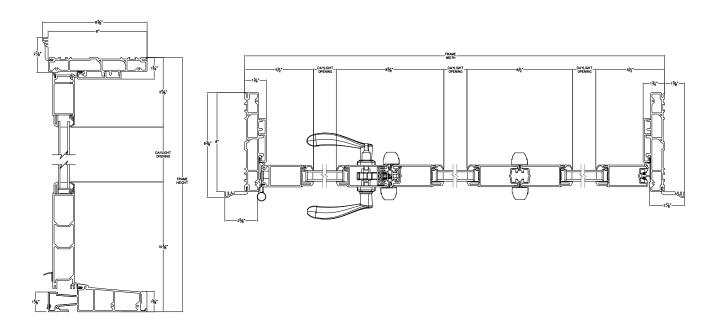
OXX - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3665_OS_AOO_1.75in-z-bar	Inch

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#### OUT SWING SERIES 3665



HEAD & SILL JAMBS



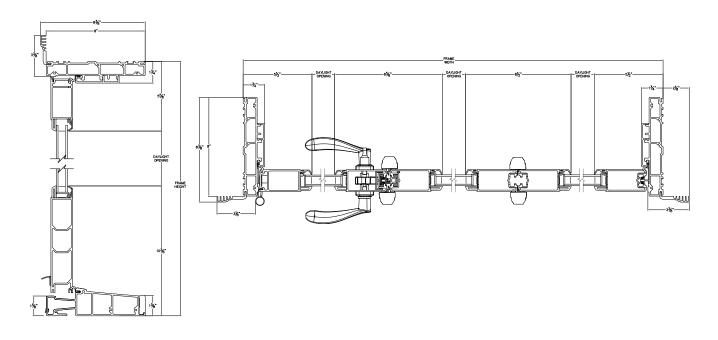
OXX - 2-1/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3665_OS_AOO_2.25in-z-bar	Inch

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#### OUT SWING SERIES 3665



HEAD & SILL JAMBS



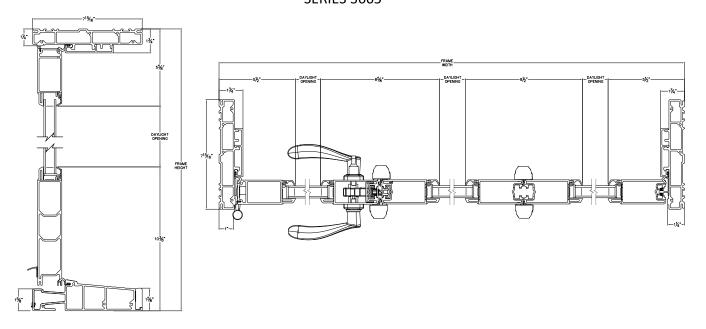
**OXX** - Block Frame

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3665_OS_AOO_block	Inch

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#### OUT SWING SERIES 3665



HEAD & SILL JAMBS



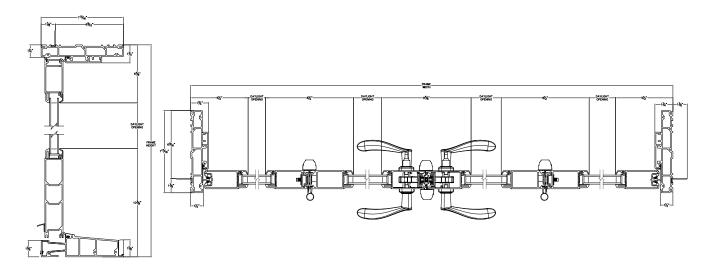
OXXO - 1-3/8" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3665_OS_OPAO_1.375in_4.563wall	Inch

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#### OUT SWING SERIES 3665



HEAD & SILL JAMBS



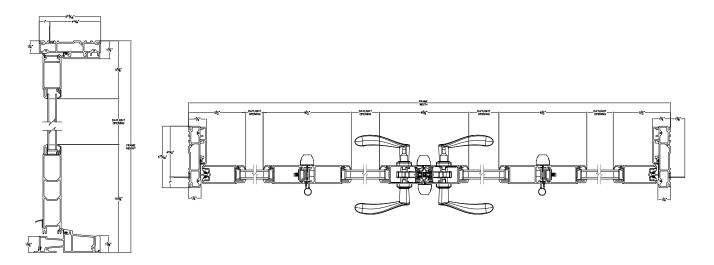
OXXO - 1" Fin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3645_OS_OPAO_1in_4.938wall	Inch

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#### OUT SWING SERIES 3645



HEAD & SILL JAMBS



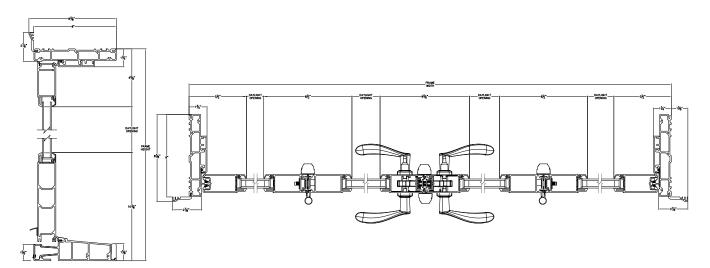
OXXO - 1-3/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3665_OS_OPAO_1.75in-z-bar	Inch

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#### OUT SWING SERIES 3665



HEAD & SILL JAMBS



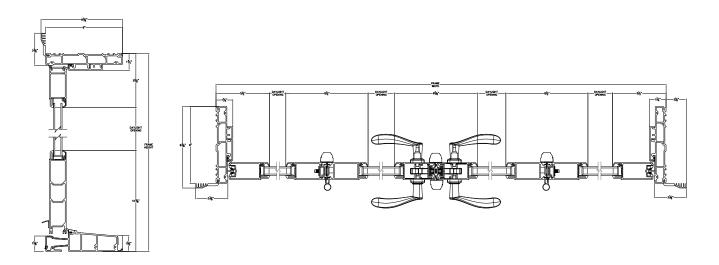
OXXO - 2-1/4" Z-Bar

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3665_OS_OPAO_2.25in-z-bar	Inch

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#### OUT SWING SERIES 3665



HEAD & SILL JAMBS



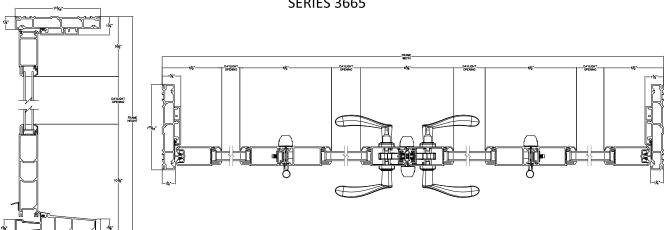
OXXO - Block Frame

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Ultra_3665_OS_OPAO_block	Inch

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#### OUT SWING SERIES 3665



HEAD & SILL JAMBS