

Architectural Manual

Standard

ALUMINUM SERIES

Windows & Patio Doors



Clearly the best.®



Instructions on how to use this manual:

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

- Any item print in **red**, will click through to the corresponding item.
- Click to any item in the Table of Contents on **page 3**. Click on the Milgard logo at the top of any page to return to the Table of Contents - FULL MANUAL ONLY.
- From each section's Quick Links page, click to any Drawing listed.
- From any Drawing page, click the "Go Back to Quick Links" box on the bottom right of the page to return to the list of drawings.
- Click on the links on the bottom of the page to go to Revit, SketchUp . PDF and .DWG files. Please note that you must have internet access for these links and you will be re-directed to the Milgard site.
- This document can also be navigated from Adobe Acrobat Bookmarks.

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

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About Standard Aluminum Series



A Standard Aluminum window is made of extruded aluminum. No enhancements are made to reduce thermal transfer.

Features and benefits of Standard Aluminum windows include:

- Sealed, mechanically-joined corners stay square and true over years of use, helping to keep homes dry.
- Clean, narrow sight lines for contemporary designs and maximum view area.
- Milgard SunCoat® Low-E glass for excellent energy savings and protection against fabric fading.
- Industry-leading Full Lifetime Warranty.
- Anodized coating or painted finish helps to prevent against rusting, pitting and corroding.

Not all locations manufacture or sell Standard aluminum. Check with your Milgard Representative.

Energy Packages

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

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

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

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

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

milgard.com/energy-calculator

Test Standards

Contact your Milgard Representative for specific test data.

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 Full Lifetime Warranty. The use of wax-based release agents is recommended.

Expanding foam for insulation purposes should not be used. Non-expanding foam or loose packed batt insulation is recommended.

Standard Aluminum Options

Hardware



Casement and Awning Roto Handle



Spring action lock for Single Hung and Horizontal Slider

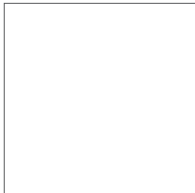


Casement and Awning Friction Handle



Sliding Door Handle - Interior

Colors



White



Clear Anodized



Bronze Anodized

Grids



5/8" Flat Grid



1-1/16" Sculpted

Full Lifetime Warranty

At Milgard, we build our windows and doors to last. With the dedication to quality that we put into building the best windows in the business, it wouldn't make sense to back them with anything but the best warranty in the business. That's why we back every properly installed window and door for as long as the homeowner owns their home—including parts and labor. It's why you can be sure you won't find any windows better than Milgard.

For complete warranty details, visit milgard.com.



Why Milgard?

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

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

Awards give you added assurances and Milgard has been named "Best Quality in the Nation" eight times and the nation's "Most Used Vinyl Window" four times by Builder magazine. Both Professional Remodeler and Professional Builder magazines have named us "Most Preferred Vinyl Window" three times.

Sliding Door

Please also see:

Standard Aluminum Options

Full Lifetime Warranty

Overview

The 450 Series is designed as an inside slider (the sliding panel or “vent” slides inside the stationary panel). For the vent to open completely, there must be at least an equal size adjacent stationary panel. The track system provides for one panel in a two-panel or three-panel door to move, and two panels in a four-panel door to move.

Components

FRAME

Frame components are made from 6063-T5 aluminum alloy with a structural wall thickness of .062”, and non-structural wall thickness of .050”. The frame is available in clear and bronze anodized finishes with a standard .4” mil coating thickness, and white baked enamel finish.

The sliding glass door is constructed from fixed and moving panels mounted in a perimeter frame specifically engineered for insulating glass. Both panels are removable for repair and can be reversed in the field.

A butt-jointed corner is used on the perimeter frame and panel members. Wide screw spacing

on the mechanically joined corners ensures a rigid connection with a consistent dimension. With the insertion of the non-moving panel into the perimeter frame, the door squares itself to ensure a rigid connection with an even sight line. It is still necessary to square the frame for installation. The glass in the fixed and sliding panel is equally exposed.

The jamb, sill and all corners are caulked with exterior grade sealant before the fixed panel is installed to maximize weather tight integrity. Standard frame widths is 4 1/2” which will allow for adaptation to most wall conditions.

NAIL-ON FIN

An integral nailing fin extends 1” around the perimeter head and jambs to attach door in opening. The fin is setback 1” from the exterior edge of the frame.

SLIDING PATIO DOOR WEEP SYSTEM

The rectangular weep holes on the interior of the sill section are offset approximately 6” from the holes on the frame exterior to provide a baffling system minimizing “blow back”. A hinged weep door to the exterior reduces air infiltration and provides an attractive, uncluttered sill appearance.

GLAZING MATERIAL

Sliding and fixed panels employ a wraparound “U-shaped” vinyl channel designed to effectively seal 1” overall insulating glass units and cushion the glass from the surrounding frame.

GLASS

Glass options are available in 1" overall insulating units, clear, tinted, reflective, obscure and low-emissivity glass. Special safety glass options are available upon request.

SLIDING PANEL

Designed specifically for insulating glass the sliding panel is engineered with the glass unit's weight centered over the roller assembly, which rides on a raised monorail track. This track helps keep the sliding operation free from interference by foreign particles that may collect in the sill. An "L-shaped" lip fully interlocks with the fixed panel, adding security and preventing weather penetration. The panel can be easily removed in the open position by lifting up and pulling the bottom inward. Nylon compression strip is used to ensure an even, weather tight seal. A rubberized stop is attached to the perimeter jamb to cushion the panel in a fully open position.

FIXED PANEL

The fixed panel is fastened to the perimeter frame and tightly sealed for maximum performance. The fixed panel has an "L-shaped" lip, that fully interlocks with the sliding panel for added security and a weather tight seal.

WEATHERSTRIPPING

Silicone treated, water repellent polypropylene fin seal weather-stripping provides a durable, weather tight seal. This weather-stripping is installed in an integral, continuous keyway around the exterior edge of the closing stile and on the interlock.

ROLLER ASSEMBLY

A cadmium-coated steel roller assembly with sealed ball bearings rides on a raised monorail track and can be easily adjusted. Two tandem rollers are used on each panel.

LOCKING ASSEMBLY

The primary locking assembly is a component of the handle set. The door may be locked or unlocked easily from the inside by the flip-latch mechanism. An anti-lift device is installed in the handle to prevent sliding panel removal when the door is closed.

SCREEN

Screen frames are engineered for rigid strength, finished with three coats of color matched baked polyester for long term durability. Four nylon rollers contained in fully adjustable plated steel housings ride on a raised monorail track for easy operation.

Options

KEY LOCK

A cylinder lock for keyed exterior is available.

GRIDS

Available in 5/8" standard or 1-1/16" sculptured aluminum pro-files sealed between panes.

GLASS

Refer to Glass Section

TEST STANDARDS

Contact your Milgard Representative for specific test data.

INSTALLATION

All 450 Series Doors are factory sized to fit into a framed opening, whether new or created by removing an existing door. Doors will be 1/2" smaller than the framed (rough) opening to allow 1/2" clearance on header and 1/4" clearance on jambs. Built to rough opening size with 1/2" deductions automatically made, no complex calculations are required for ordering. Opening panels must be closed and locked during installation. Doors must be installed level, plumb and square with 1/4" clearance on the sides with weep holes at the bottom.

HEADERS MUST NOT BE NAILED

Nail through fin into framing along sides. At the head, casing nails may be placed 1/2" above fin and bent down over fin, to allow for header deflection.
Wood Sill: Caulk entire sill length before setting door.

CONCRETE/MORTAR

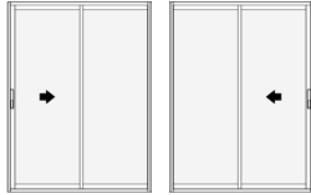
Install as with wood sill, except use heavy building paper or redwood barrier between door frame and concrete to prevent corrosion. Caulk both sides of barrier for weather tight performance.

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 Full Lifetime Warranty. The use of wax based release agents is recommended. Expanding foam for insulation purposes should not be used. Non-expanding foam or loose packed batt insulation is recommended.

Sliding Door

Configurations

2 PANEL

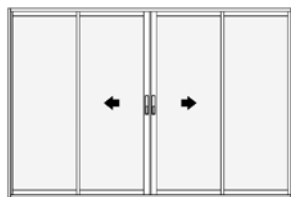


3 PANEL



4 PANEL

Passive/Active or Active/Passive



Minimum/Maximum Sizes

2-PANEL

- Min 5'6"
- Max 6'8"

3-PANEL

- Min 9'6"
- Max 12'8"

4-PANEL

- Min 10'6"
- Max 16'8"

Available Frame Styles

- 1" Setback
- 1-3/8" Setback
- Standard Z-bar
- No Fin (Block Frame)
- H-Bar (Slope Sill)

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

Sliding Door

- 17—1" Nailfin Setback
- 18—1-3/8" NailFin Setback
- 19—Block Frame
- 20—Block Frame with Z-bar
- 21—1" Nailfin Setback - OXO
- 22—1" Nailfin Setback - XOO
- 23—1-3/8" Nailfin Setback - OXO
- 24—Block Frame - XOO
- 25—1-3/8" Nailfin Setback - OXXO

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Standard Aluminum Sliding Door

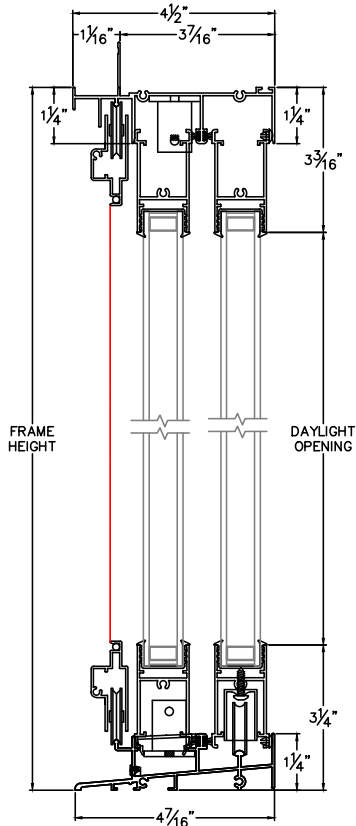
1" Nailfin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Aluminum_450_SGD_AP_1in	Inch

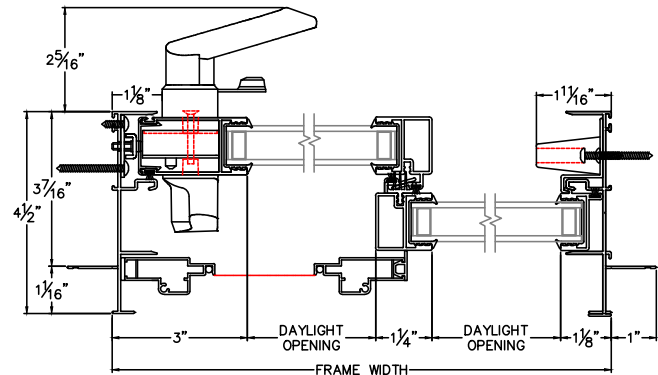
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SLIDING DOOR SERIES 450

AP CONFIGURATION SHOWN,
PA CONFIGURATION ALSO AVAILABLE.



HEAD & SILL



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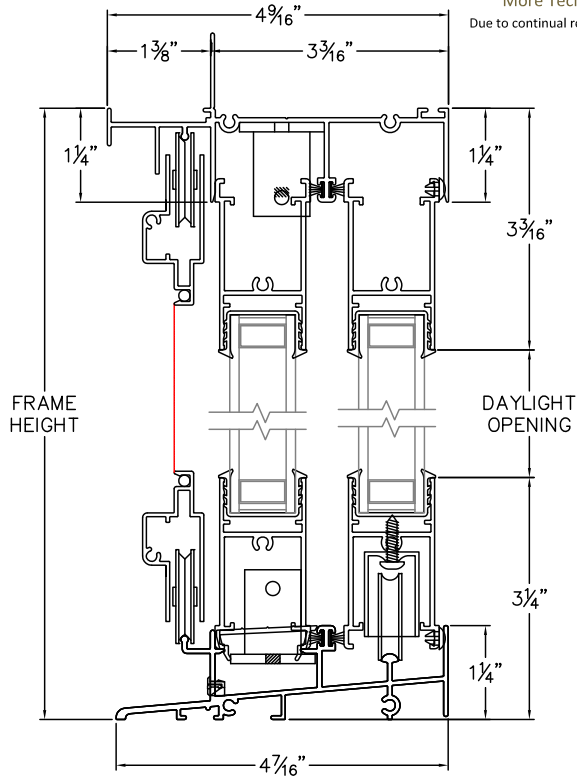
1-3/8" NailFin Setback

CAD File Scale	View	File Name	Units
NTS	Horizontal & Vertical	Aluminum 450S SGD AP 1.375in	Inch

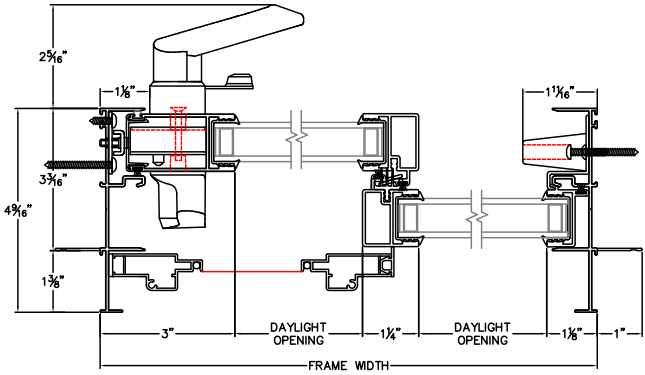
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Standard Aluminum Sliding Door

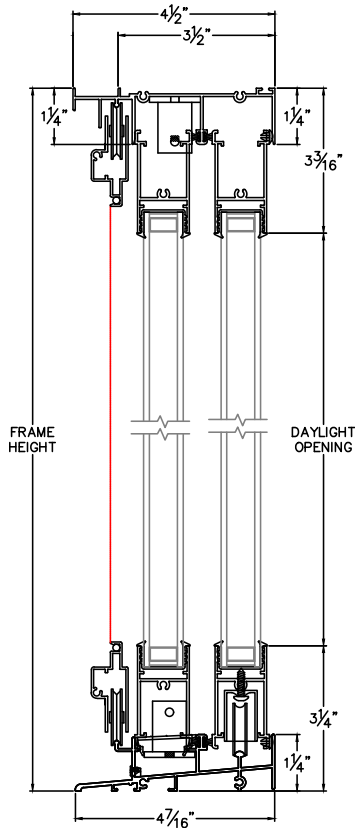
Block Frame

CAD File Scale	View	File Name	Units
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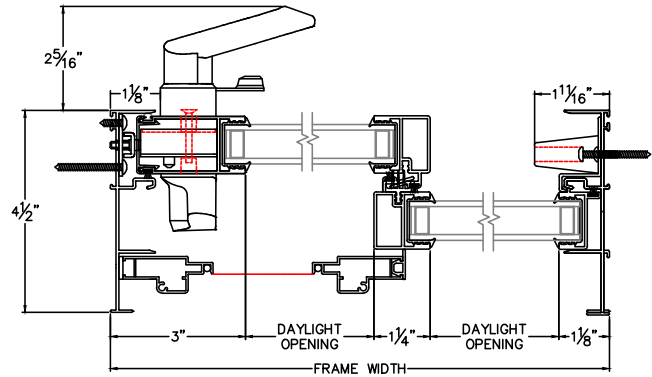
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Standard Aluminum Sliding Door

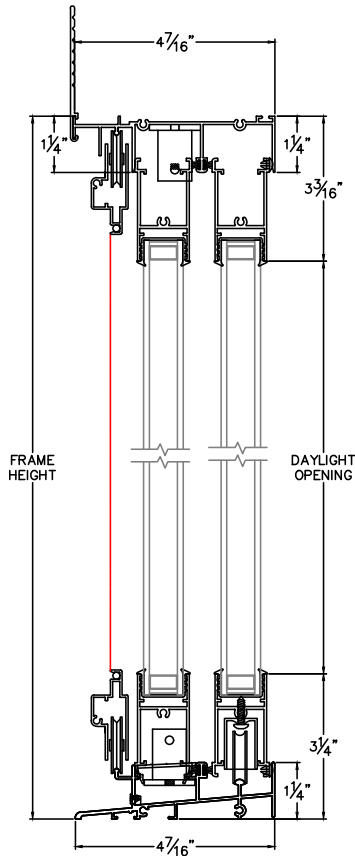
Block Frame with Z-bar

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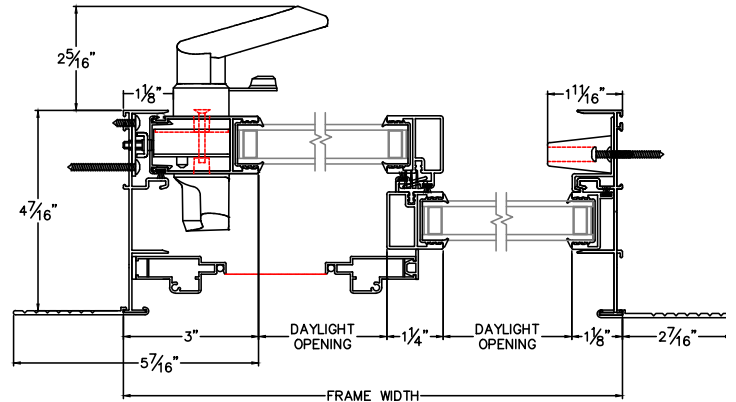
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SLIDING DOOR SERIES 450

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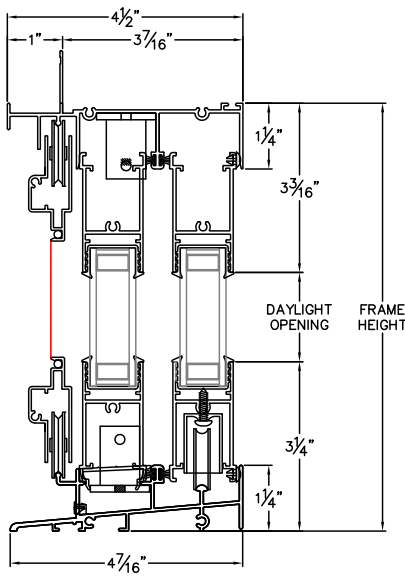
Standard Aluminum Sliding Door

1" Nailfin Setback - OXO

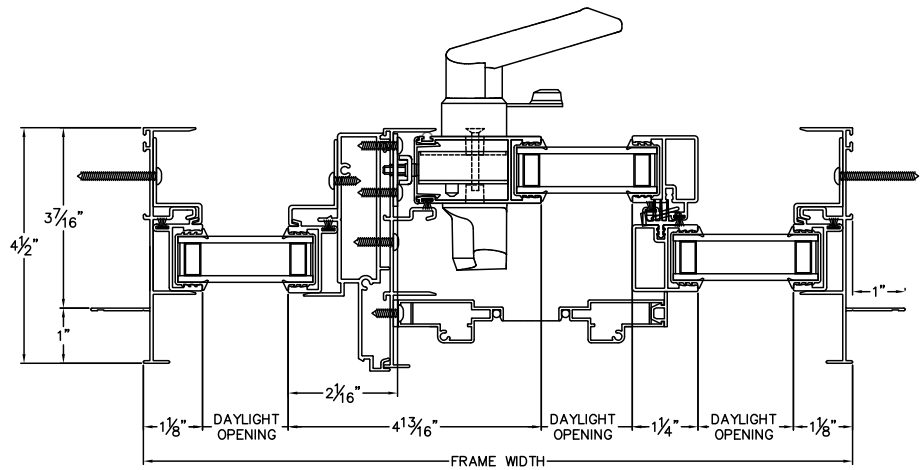
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NTS	Horizontal & Vertical	Aluminum_450_SGD_OXO_1in	Inch	7/2015

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SLIDING DOOR SERIES 450



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Standard Aluminum Sliding Door

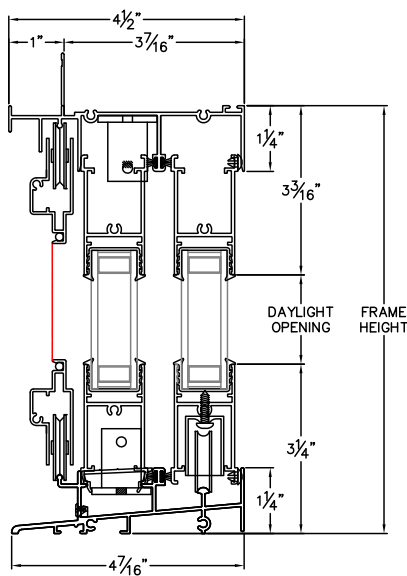
1" Nailfin Setback - XOO

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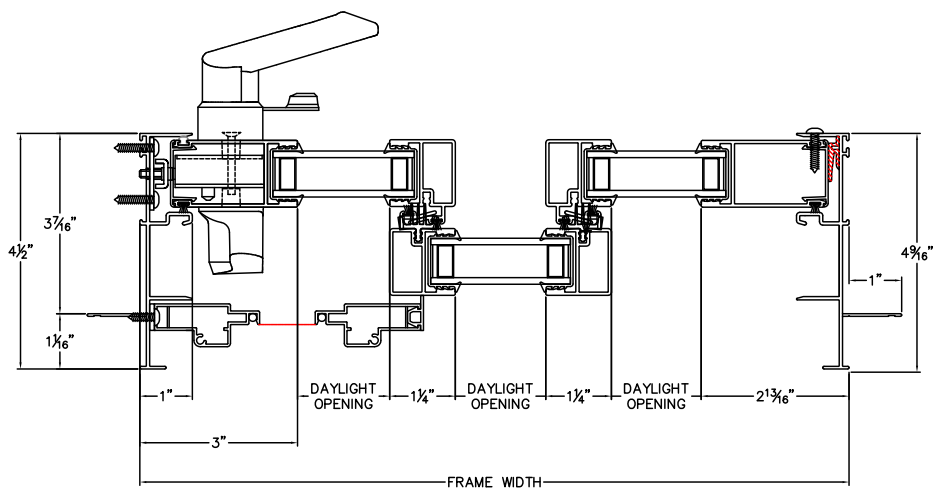
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SLIDING DOOR SERIES 450

XOO CONFIGURATION SHOWN
ALSO AVAILABLE AS OOX CONFIGURATION



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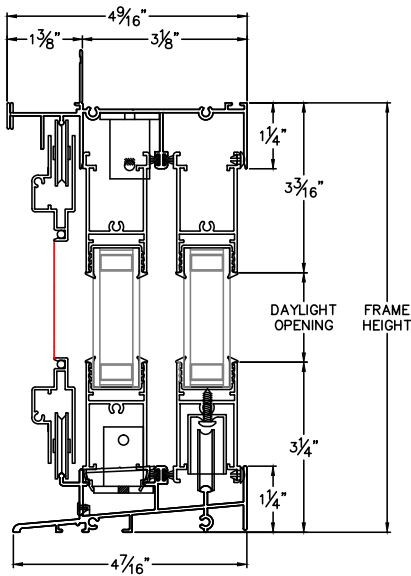
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Standard Aluminum
Sliding Door
1-3/8" Nailfin Setback - OXO

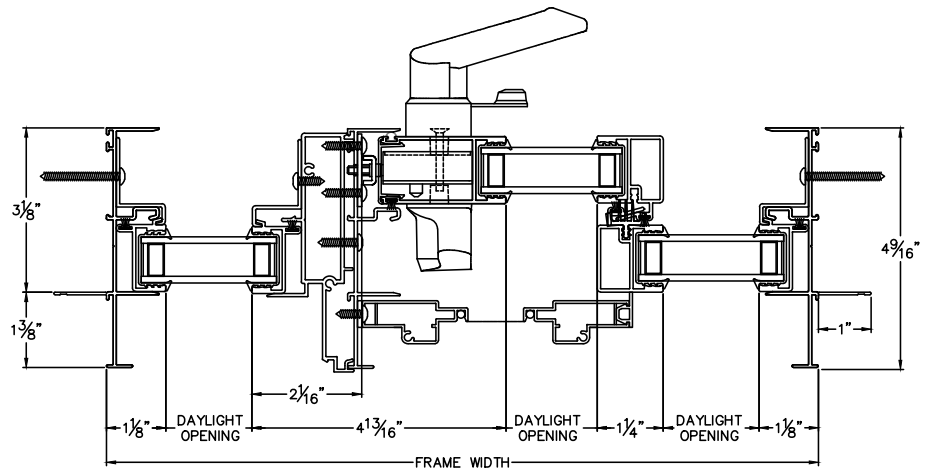
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NTS	Horizontal & Vertical	Aluminum_450S_SGD_OXO_1.375in	Inch

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**SLIDING DOOR
SERIES 450S**



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Standard Aluminum Sliding Door

Block Frame - XOO

CAD FILE SCALE
NTS

VIEW
HORIZONTAL & VERTICAL

FILE NAME
Aluminum_450C_SGD_XOO_Block

UNITS
INCH

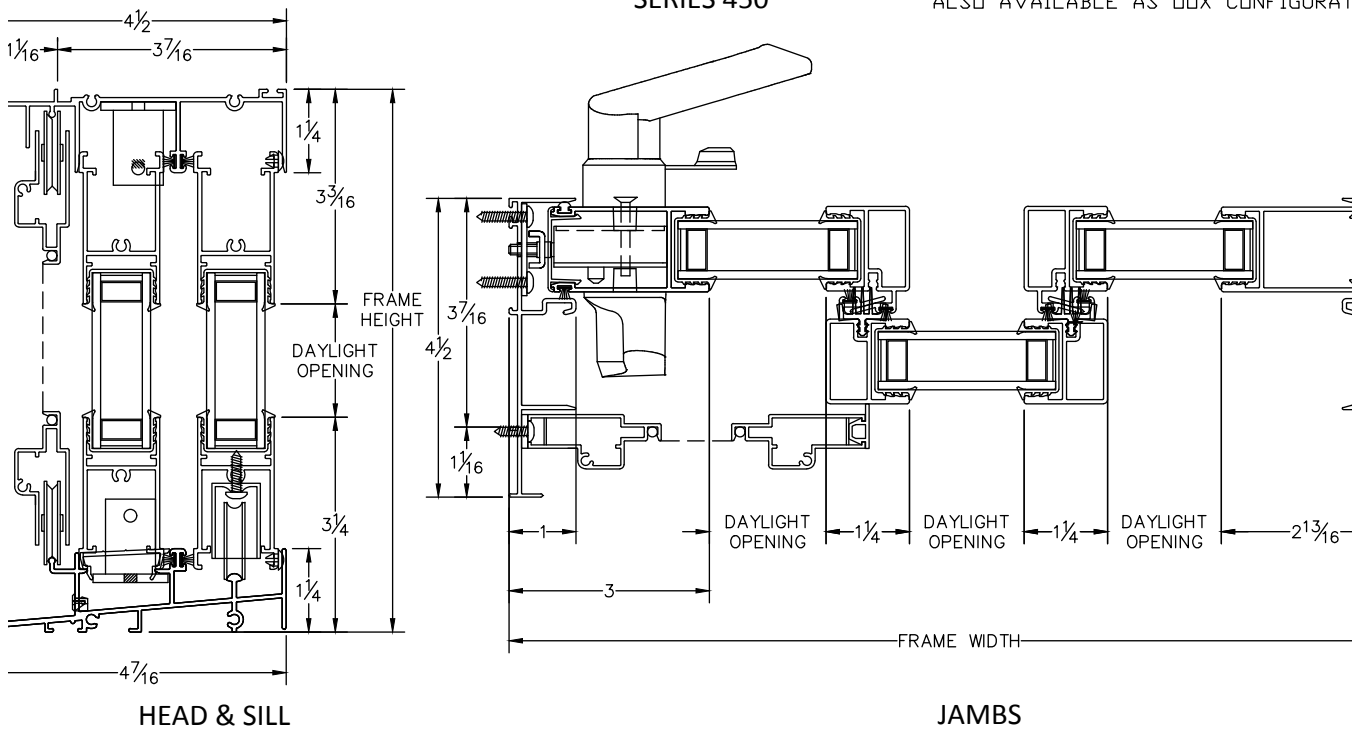
REVISION
10/2016

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SLIDING FOOT SERIES 450

XOO CONFIGURATION SHOWN
ALSO AVAILABLE AS OOX CONFIGURAT



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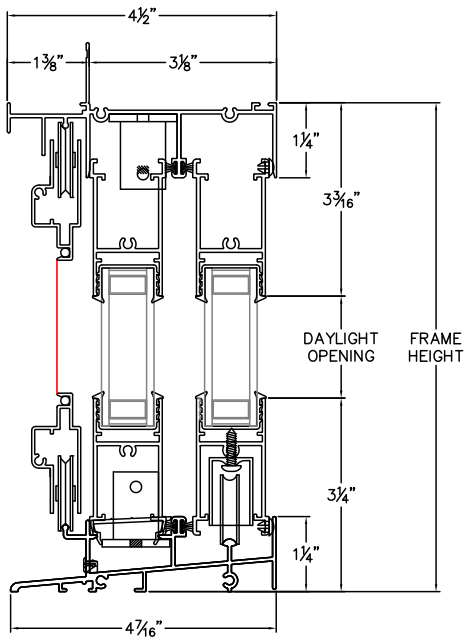
Standard Aluminum Sliding Door

1-3/8" Nailfin Setback - OXXO

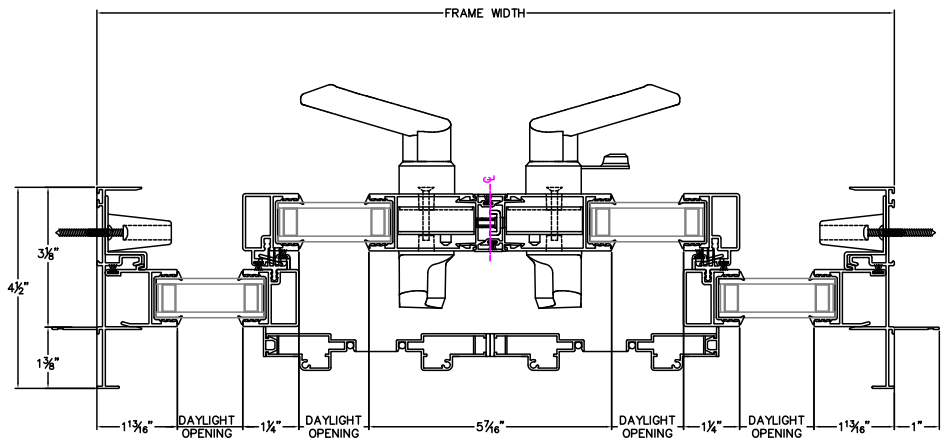
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NTS	Horizontal & Vertical	Aluminum 450S SGD OAPO 1.375in	Inch

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SLIDING DOOR SERIES 450S



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