



origin
DOORS AND WINDOWS

Window Specification File





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Specification Overview

Thermally Broken Aluminum Window



External flush
casement



Internal flush
casement

Flush casement

The Origin window features a sash that sits neatly inside the window frame, creating an internal and external flush casement.

A 1/8 inch shadow line exists between the sash and the frame on the outside and a 5/32 inch shadow line on the inside.

The clean finish of the Origin Window therefore lends itself perfectly to traditional town houses, newly built condos and projects under strict zoning regulations in historic buildings.

The frame is 2 inches in height on the inside and 7/8 inch in height on the outside.

Profile Specification

Outer Frame Depth	3 1/8"
Sash Depth	3 1/8"
Frame and Sash Sightline	3 5/8"
Mullion and Sash Sightline	5 7/8"

Features

- ▶ 10 year warranty
- ▶ Internal and external flush casement. The sash closes into the frame, sitting in line with both the inside and outside of the window.
- ▶ Chamfered bead
- ▶ Mechanically double crimped corners
- ▶ Easi-clean mechanism on side hung configurations*
*between 15 3/4" – 27 1/2"
- ▶ Yale Encloser locking mechanism
- ▶ Stainless steel friction stay hinges

Options and extras

- ▶ Casement, awning, transom, fixed and dummy sash configurations available
- ▶ Open out or fixed
- ▶ 6" and 9" sill
- ▶ Available in over 150 different RAL colors, woodgrain effects or in AAMA 2605 (Kynar 500® or Hylar®)
- ▶ Fixing straps
- ▶ 5/8" or 1 3/8" frame extensions
- ▶ Restrictor hooks
- ▶ Egress hardware
- ▶ Aerogel insulation option available
- ▶ Black, white and color-coded gaskets available
- ▶ Door to window and window to window couplers available
- ▶ Color matched handle options

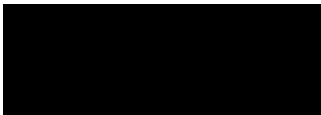


*Max weight refers to the maximum glazed sash weight.

Color choices



Bronze Anodized (MX5)



Jet Black (9005M)



Natural Oak



Golden Oak



Slate Gray (7015M)



Clear Anodized (AA25)



Mahogany



Walnut



Patio White (YA103E)



Southern Bronze (YL222E)



The Origin Window can be manufactured in over 150 different RAL shades, authentic woodgrain finishes as well as a split color option.

Additionally, Origin products are also available in AAMA 2605 (Kynar 500®) finishes.

Above demonstrates our most popular finishes. For the full range, visit originbifolds.com

White Glove Delivery Service



One of our priorities is the safe delivery of our products to you. With this in mind, we introduced our White Glove Delivery Service. This is designed to operate as follows:

This service is designed to operate as follows:

- The delivery driver will unload freight from their trailer via lift gate (pending it fits onto the gate)
- Delivery driver will take freight inside a residence or business, place it where it belongs, and unwrap it if specified by the customer
- This service usually comes with a guaranteed transit if that is necessary
- We can generally get a rate to have the driver handle a forklift if there is one on site. Some LTL carriers will comply with driving a forklift, but almost all truckload carriers will drive a forklift at the site(s)
- Freight is always loaded and unloaded with extra care so as to not break or get damaged while in transit. Extra attention is spent on loading and unloading with Origin's White Glove Delivery Service
- All door and window glass panels are individually packaged so as to keep it protected during transit and while at the jobsite or stored in the warehouse

Security

The Origin Window has passed Forced Entry Test (AAMA 1302.5).

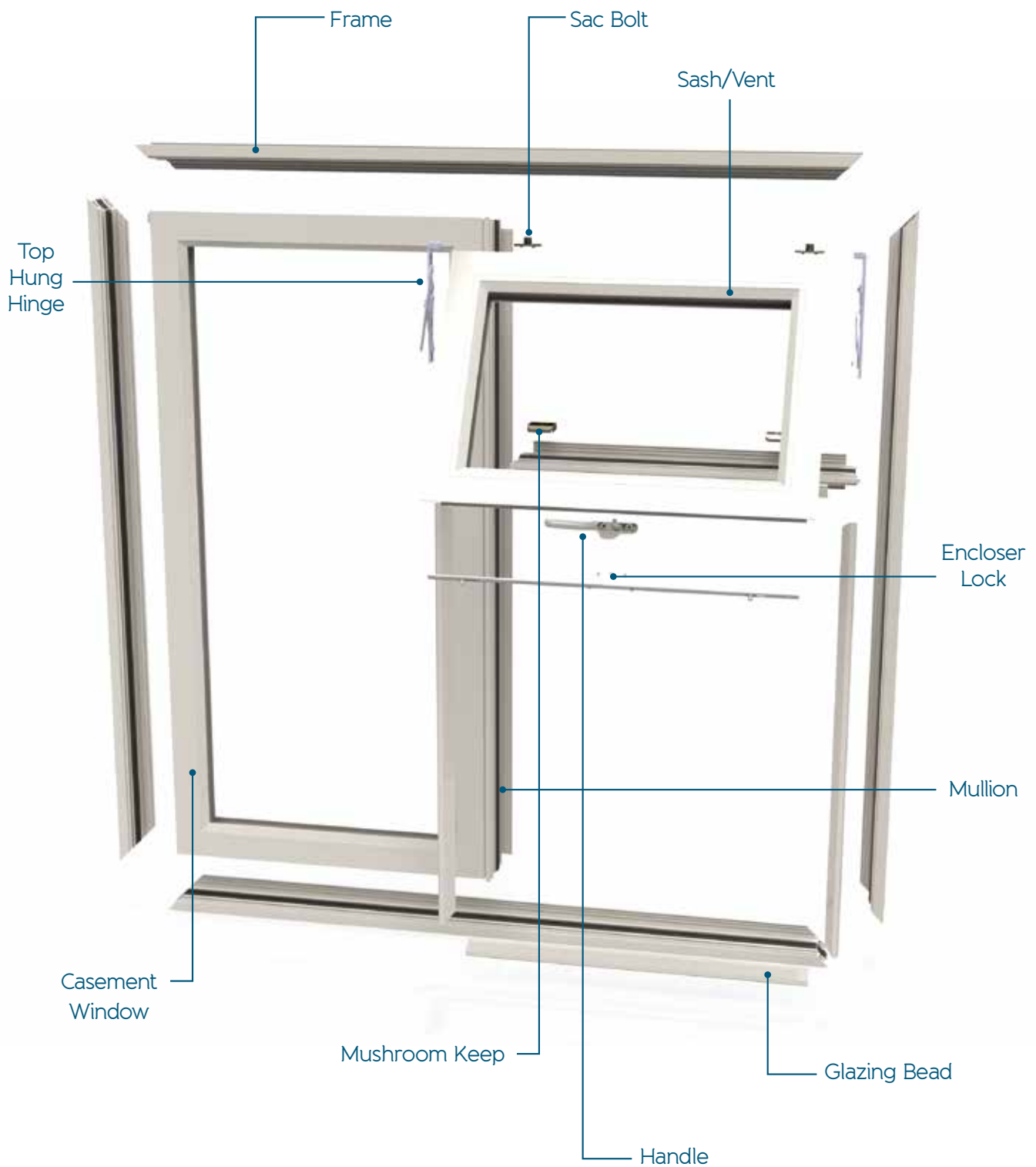


Origin hinges are made of stainless steel for enhanced corrosion resistance. The hinges are tested to 50,000 open and close operations and feature a friction adjustment without metal to metal contact, ensuring minimum wear.

Hinge guards featuring patented anti-slip & lock technology are fitted as standard along the hinged side of the window.

The Yale Encloser lock is fitted to accurately align with the keeps. The cams are adjustable in length to allow for smooth operation over the lifetime of the window. The lock also features a ventilation position, allowing passage of air through the gap.

Window Make-Up



Thermal Performance

Thermal efficiency

Awning

Legend
Double Glazed
Lami

Manufacturer Product Code	U-Factor	SHGC	VT
Clr / air / clr (4.7mm/4.7mm) – 26.9mm IG	0.47	0.46	0.49
E366 / arg90 / clr (4.7mm/4.7mm) – 26.9mm IG	0.34	0.18	0.38
E366 / arg90 / i89 (4.7mm/4.7mm) – 26.9mm IG	0.30	0.17	0.37
E366 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.32	0.17	0.37
E270 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.23	0.40
E240 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.16	0.22
E272 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.25	0.41
E180 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.38	0.45
Clr / air / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.46	0.43	0.47

Casement

Legend
Double Glazed
Lami

Manufacturer Product Code	U-Factor	SHGC	VT
Clr / air / clr (4.7mm/4.7mm) – 26.9mm IG	0.47	0.46	0.49
E366 / arg90 / clr (4.7mm/4.7mm) – 26.9mm IG	0.34	0.18	0.38
E366 / arg90 / i89 (4.7mm/4.7mm) – 26.9mm IG	0.30	0.17	0.37
E366 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.32	0.17	0.37
E270 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.23	0.40
E240 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.16	0.22
E272 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.25	0.41
E180 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.38	0.45
Clr / air / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.46	0.43	0.47

Fixed

Legend
Double Glazed
Lami

Manufacturer Product Code	U-Factor	SHGC	VT
Clr / air / clr (4.7mm/4.7mm) – 26.9mm IG	0.49	0.63	0.68
E366 / arg90 / clr (4.7mm/4.7mm) – 26.9mm IG	0.30	0.23	0.54
E366 / arg90 / i89 (4.7mm/4.7mm) – 26.9mm IG	0.26	0.23	0.52
E366 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.28	0.23	0.51
E270 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.29	0.30	0.55
E240 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.30	0.21	0.31
E272 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.29	0.34	0.57
E180 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.30	0.51	0.63
Clr / air / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.47	0.59	0.65

Don't see what you are looking for? Additional glass options are available, so speak to a customer service representative today.

origin

Introduction to Aerogel

What is Aerogel?

Aerogel is a synthetic solid material, consisting of tiny pores, made from a silica dioxide gel in which the liquid has been replaced with air. The gel is critically heated and the liquid evaporated out, leaving a bonded, cross-linked macromolecule framework.

The name Aerogel may be misleading at first, as Aerogels are dry, rigid or elastic foam-like materials, but the name originates from the fact that Aerogels are usually derived from wet gels, physically similar to edible jelly.

A brief history of Aerogel

Aerogel is believed to have been discovered in 1931 as a result of a bet between two chemists, Samuel Kistler and Charles Learned, over who could replace the liquid in jelly with gas without causing the remaining solid to shrink. It was Kistler that first succeeded.

Since then, Aerogels have been used in a wide range of applications from space exploration (Stardust launch and Mars exploration rovers) to commercial manufacture of building insulation, clothing, tennis rackets, supercapacitors and thickening agents in cosmetics.

Due to the expensive processes involved in producing Aerogel, commercial manufacture of Aerogel has only become viable since the dawn of the 21st century.

Why is Aerogel such a good insulator?

Aerogel can withstand very high temperatures, delivering 39 times more insulation than fiberglass. Aerogels are fantastic insulators because they limit two of the three methods of heat transfer (convection, conduction and radiation). Firstly, they are excellent conductive insulators because they are composed of 99.8% gas (air) and gases are very poor at conducting heat. The remaining 0.02% of the Aerogel is made of silica, which is incidentally also a poor conductor of heat. Secondly, the lattice structure of the solid is highly effective at minimizing convection because air cannot circulate through it. While Aerogels are poor radiative insulators within a window frame (infrared radiation transfers heat), the aluminum blocks any infrared radiation.





Other unique properties of Aerogel

Due to its lattice structure and remarkably low density, Aerogel is capable of supporting up to 4000 times its own weight. Particles travelling six times faster than a rifle bullet can be stopped by a block of Aerogel, making it a popular material for use in space travel.

What does Aerogel look like?

There are different types of Aerogel. Most widely recognized, transparent monolithic Aerogel takes on a blue hue and has been cited as the “holy grail” of future glazing technology, with the potential of achieving incredibly low U-factors.

Due to the brittle nature of monolithic Aerogel, it can also be combined with reinforcing fibers to deliver a more practical solution in the form of an insulating blanket (as used in the Origin Window). The blankets are made by producing Aerogel within a fibrous batting (a porous, flexible fiber mat), allowing it to flex while retaining its shape.

Aerogel blankets feel like a soft scouring pad and a little crunchy to bend. While blankets will release some dust, testing has proven that only 2% of mass is lost over 250,000 flexes.

Optional Extras

Restrictor hooks

Variable restrictor hooks limit the sash opening to 2¾”. The hooks can be fitted both sides of the frame in order to minimize the ease of unhooking them. The hooks can be unlatched to open the window fully.



The Origin Window and its applications

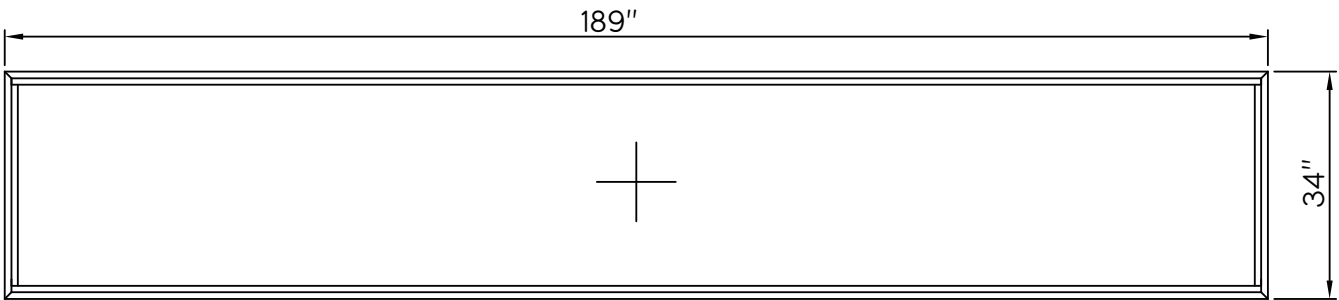
Fixed Window

Origin Fixed Windows are a direct set frame that is ideal for store fronts, homes, and commercial openings that serve the purpose of allowing daylight rather than ventilation into the building. The frame is slimline with only 2" from outer edge to glass.

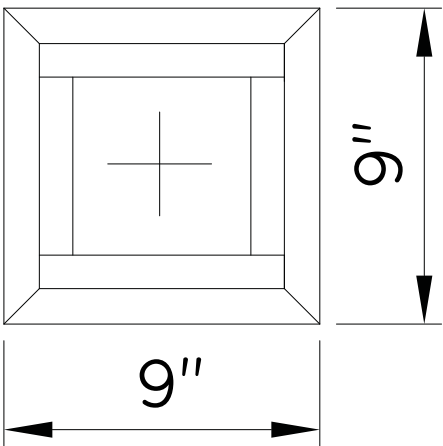
The Origin Fixed Window is impact rated: DP +55,-55

Maximum Specification

Maximum width and height	189"
Maximum area	40 ft ²

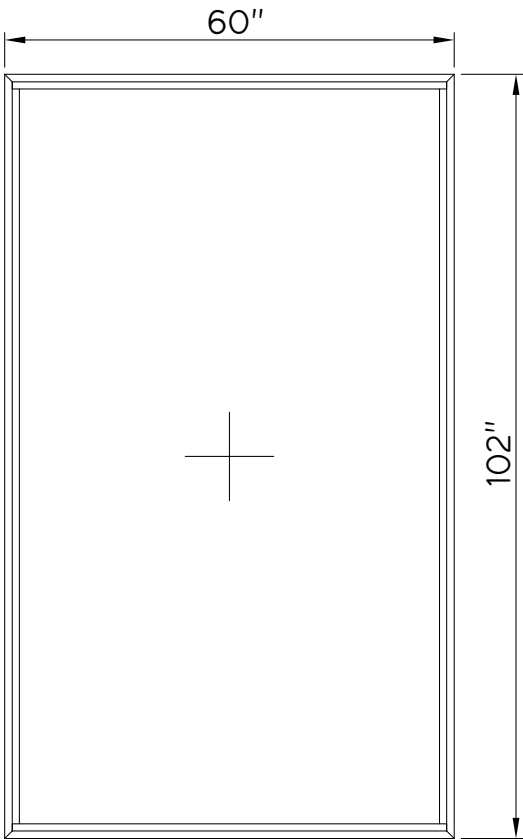


Example 1

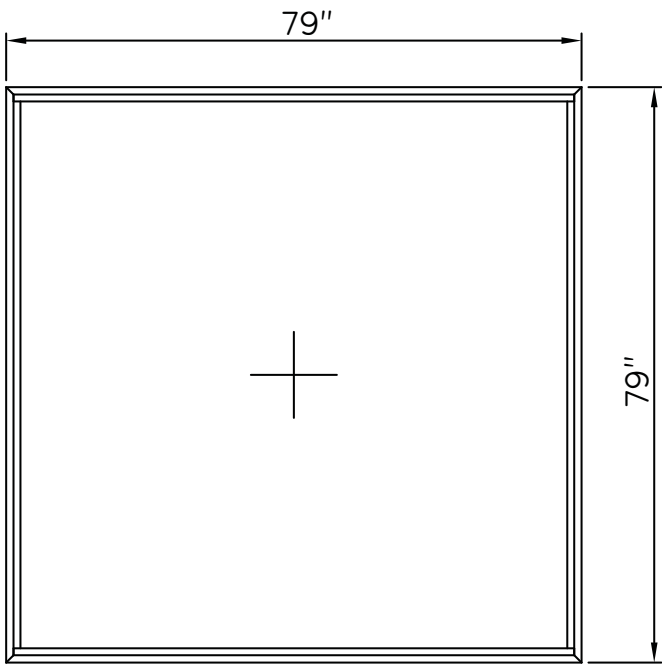


Minimum Specification (Direct Set)

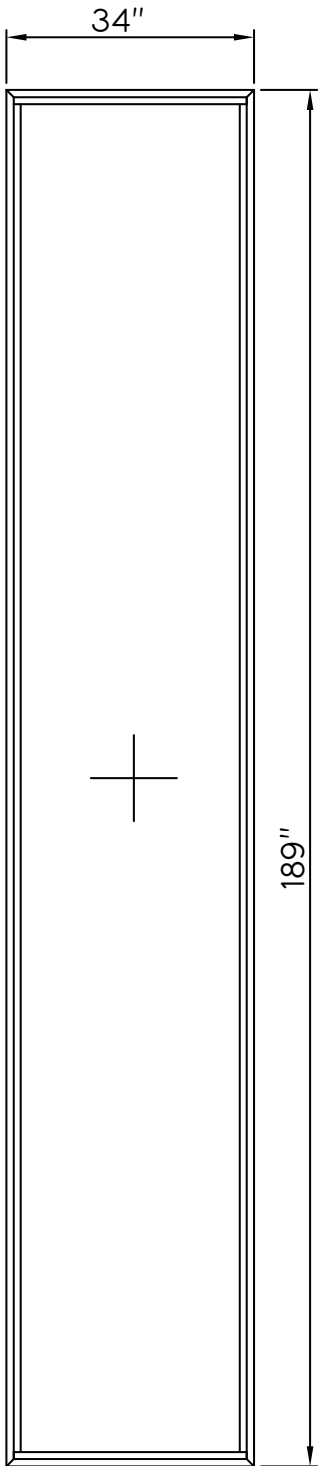
Minimum width and height	9"
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Example 2



Example 3



Example 4

Transom

Origin manufactures transoms with integral mulls up to a window height of 42 inches. Can be anchored to 2'x6' horizontal mulls above Origin Doors or used independently.

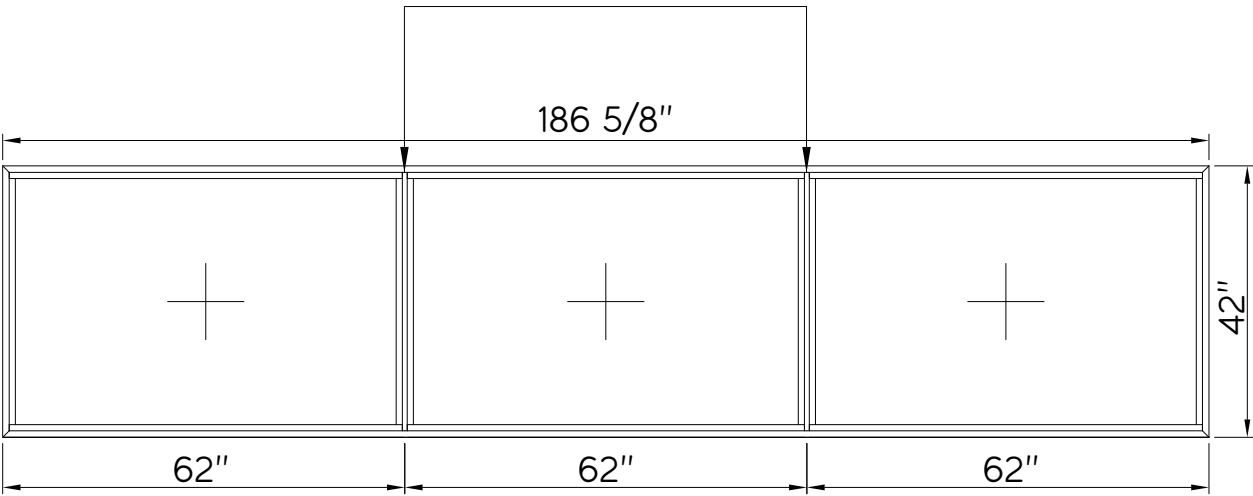
The Origin Transom is impact rated: DP +50/-55

Maximum Specification

Maximum height of transom with integral mull	42"
Maximum overall width of transom	186 5/8"
Maximum width of a lite next to a mullion	62"

Maximum number of integral mulls per opening:

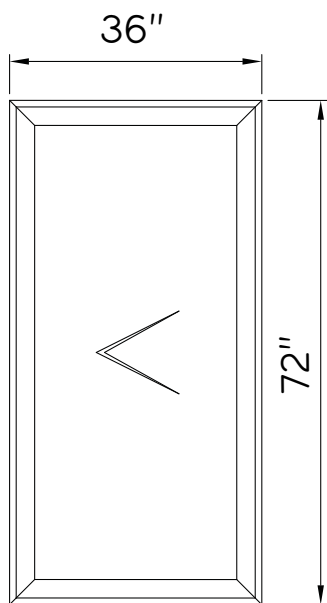
Infinite, but will depend on the size of the overall window and how small we can cut the bead to fit between them



Multiple Fixed Frame with Integral Mull

Casement

The Origin Casement is an outward opening window that pivots up to 90°.



Single Casement

The Origin Casement is impact rated: DP +50/-55

Maximum Specification

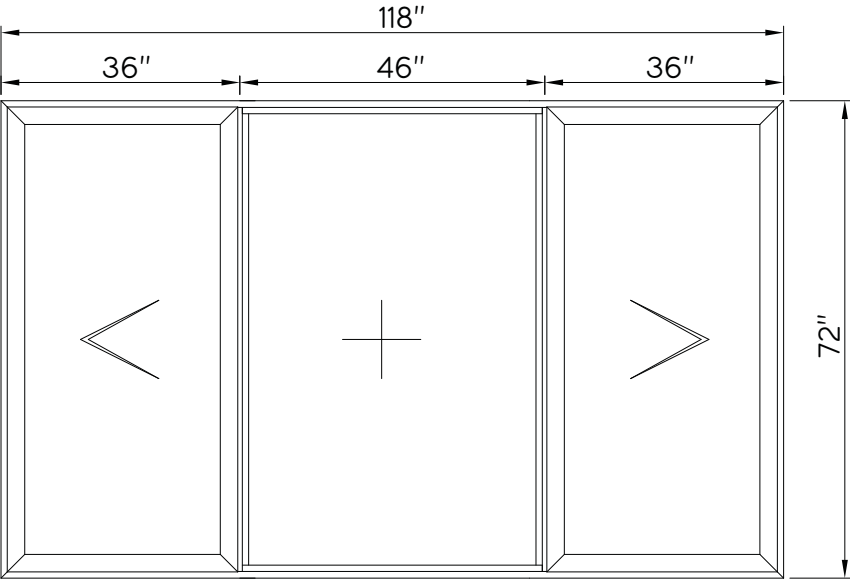
Maximum width	36"
Maximum height	72"

Only suitable for egress where minimum dimensions are at least 32" wide and 46" high.

Minimum Specification

Minimum width and height	16"
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Casement



Casement Fixed Casement

Specifications

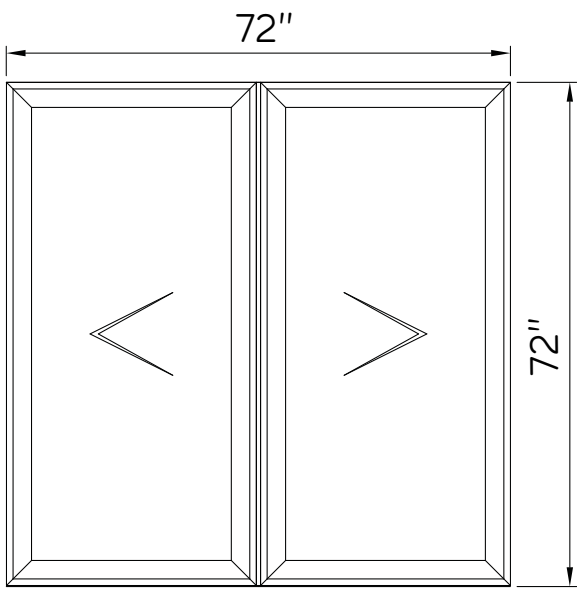
Maximum width: 189"

Maximum height: 189"

Minimum width: 9"

Minimum height: 9"

Maximum area: 6426"²

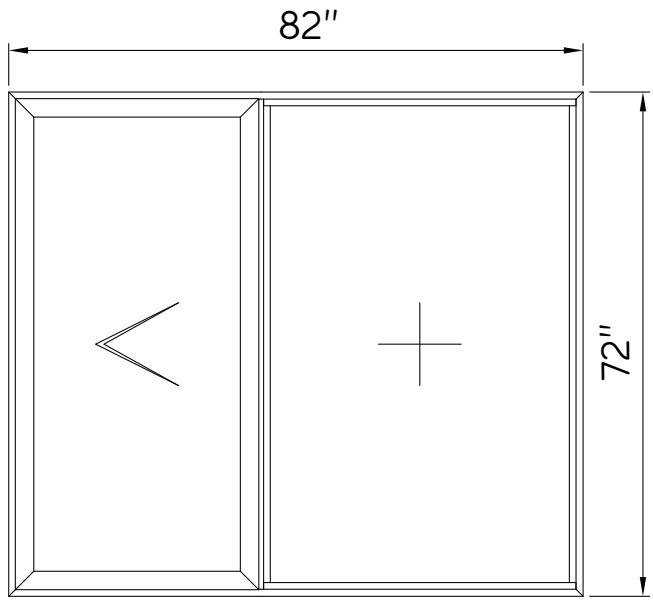


Twin Casement

Specifications

Max' width: 72" Max' height: 72"

Min' width: 32" Min' height: 16"



Casement Fixed

Specifications

Max' width: 82" Max' height: 72"

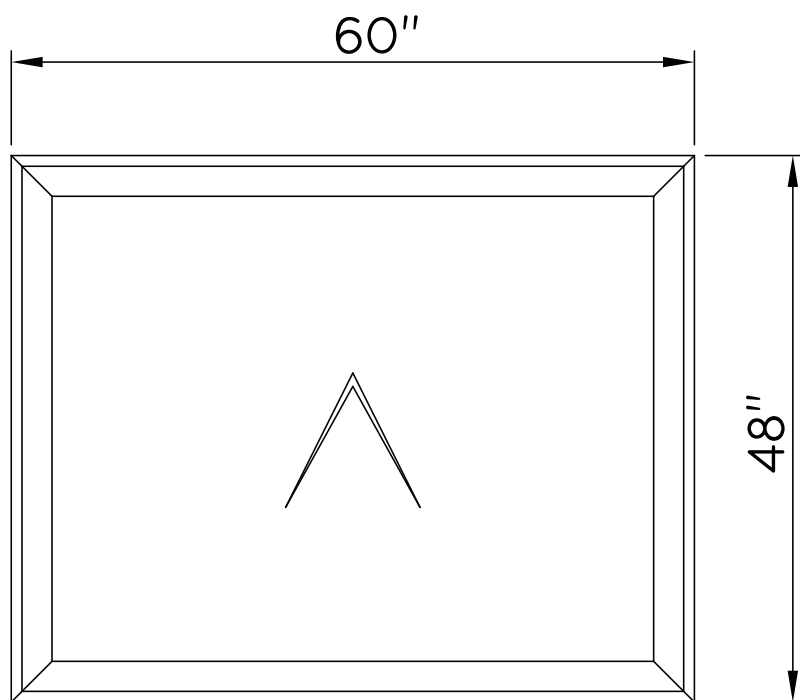
Min' width: 25" Min' height: 16"

Awning

The Origin Awning is an outward opening window that pivots out on friction stay hinges.

Minimum Specification

Minimum width and height 16"



The Origin Awning and Double Awning window are impact rated: DP +50/-55

Maximum Specification (Single Awning)

Maximum width 60"

Maximum height 48"

Single Awning Window

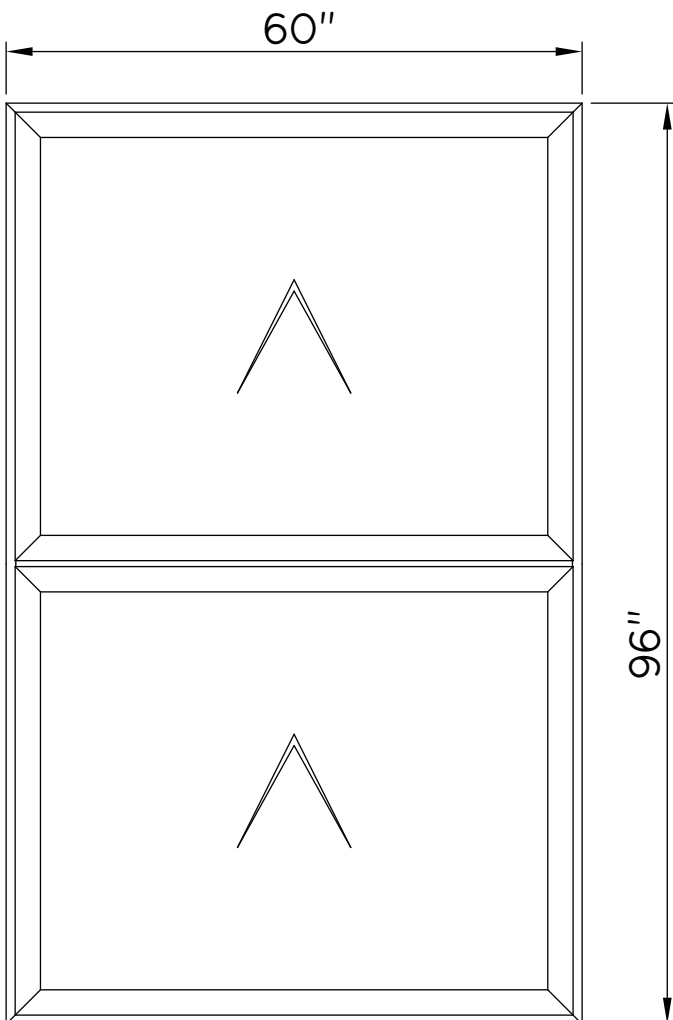
Double Awning

Specifications

(Double Awning)

Max' width: 60" Max' height: 96"

Min' width: 16" Min' height: 16"



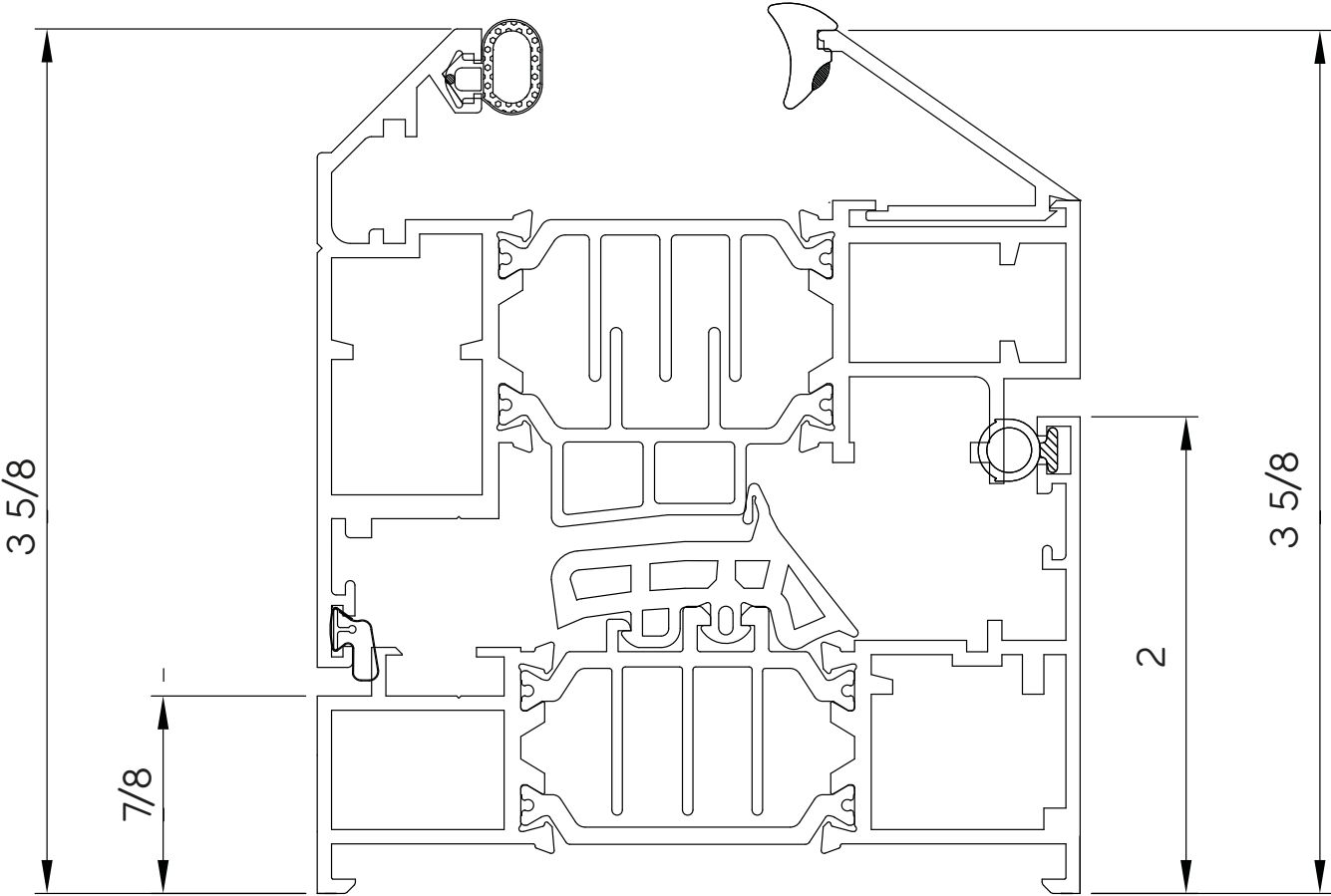
Double Awning

Technical drawings

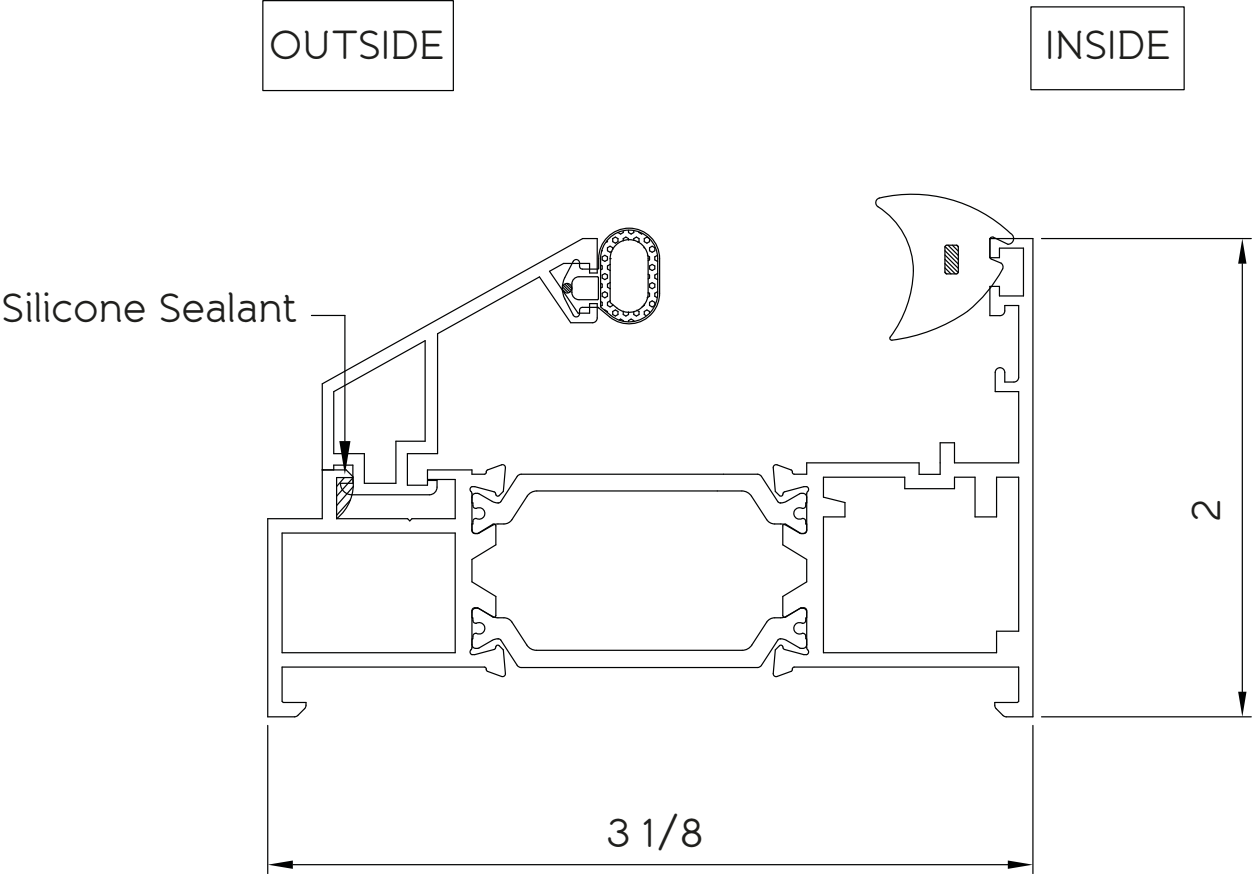
Sill, frame and sash

OUTSIDE

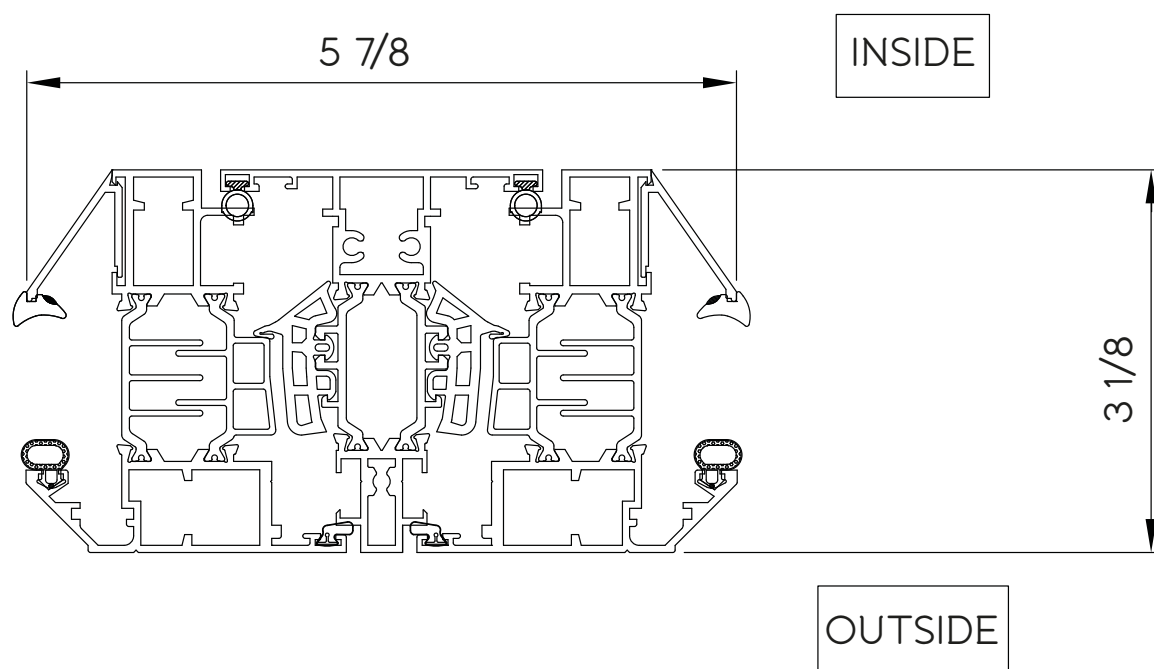
INSIDE



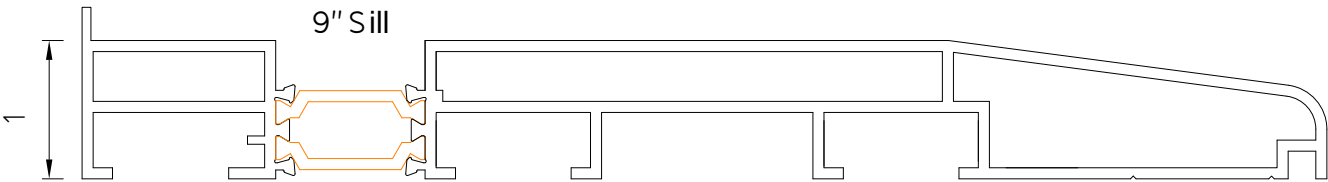
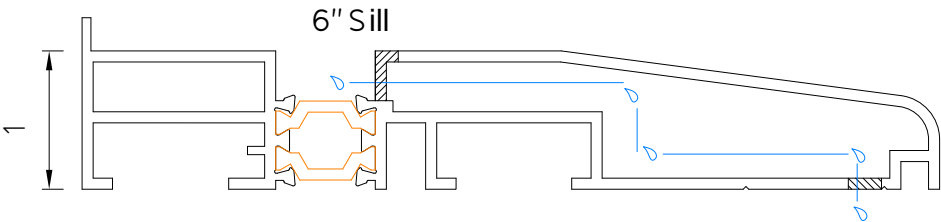
Fixed frame



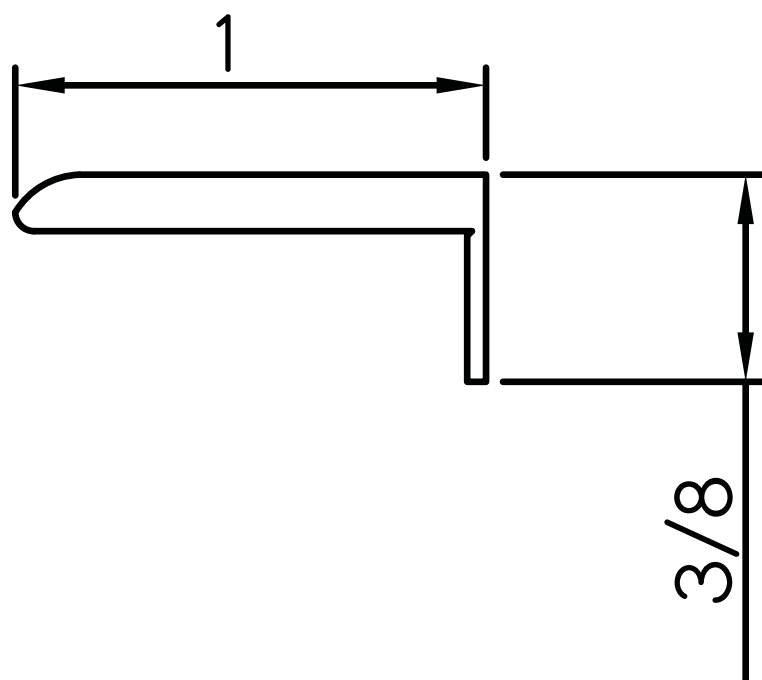
Mullion and sash sightlines



Standard Sill (optional extra)



















































































Trim (Optional Extra)



Standard Window Sizes

Awning - standard sizes

Window Width	1' 7½" (495)	1' 11½" (597)	2' 3½" (699)	2' 5½" (749)	2' 7½" (800)	2' 9½" (851)	2' 11½" (902)	3' 1½" (953)	
Rough Opening	1' 8" (508)	2' 0" (610)	2' 4" (711)	2' 6" (762)	2' 8" (813)	2' 10" (864)	3' 0" (914)	3' 2" (965)	
Window Height	1' 4½" (419)	 A1815	 A2015	 A2415	 A2615	 A2815	 A21015	 A3015	 A3215
	1' 7½" (495)	 A1818	 A2018	 A2418	 A2618	 A2818	 A21018	 A3018	 A3218
	1' 9½" (546)	 A18110	 A20110	 A24110	 A26110	 A28110	 A210110	 A30110	 A32110
	1' 11½" (597)	 A1820	 A2020	 A2420	 A2620	 A2820	 A21020	 A3020	 A3220
	2' 3½" (699)	 A1824	 A2024	 A2424	 A2624	 A2824	 A21024	 A3024	 A3224
	2' 7½" (800)	 A1828	 A2028	 A2428	 A2628	 A2828	 A21028	 A3028	 A3228
	2' 11½" (902)	 A1830	 A2030	 A2430	 A2630	 A2830	 A21030	 A3030	 A3230
	3' 3½" (1003)	 A1834	 A2034	 A2434	 A2634	 A2834	 A21034	 A3034	 A3234
	3' 7½" (1105)	 A1838	 A2038	 A2438	 A2638	 A2838	 A21038	 A3038	 A3238
	3' 11½" (1207)	 A1840	 A2040	 A2440	 A2640	 A2840	 A21040	 A3040	 A3240
	4' 0" (1219)								

3' 3½"	3' 7½"	3' 11½"	4' 3½"	4' 7½"	4' 11½"
(1003)	(1105)	(1207)	(1308)	(1410)	(1511)
3' 4"	3' 8"	4' 0"	4' 4"	4' 8"	5' 0"
(1016)	(1118)	(1219)	(1321)	(1422)	(1524)



A3415



A3815



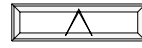
A4015



A4415



A4815



A5015



A3418



A3818



A4018



A4418



A4818



A5018



A34110



A38110



A40110



A44110



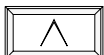
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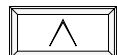
A50110



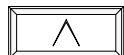
A3420



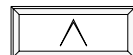
A3820



A4020



A4420



A4820



A5020



A3424



A3824



A4024



A4424



A4824



A5024



A3428



A3828



A4028



A4428



A4828



A5028



A3430



A3830



A4030



A4430



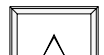
A4830



A5030



A3434



A3834



A4034



A4434



A4834



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A4838



A5038



A3440



A3840



A4040



A4440



































































A4840



A5040

Standard Window Sizes

Double Awning - standard sizes

Window Width		1' 7½"	1' 11½"	2' 3½"	2' 5½"	2' 7½"	2' 9½"	2' 11½"	3' 1½"	
		(495)	(597)	(699)	(749)	(800)	(851)	(902)	(953)	
Rough Opening		1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	2' 10"	3' 0"	3' 2"	
		(508)	(610)	(711)	(762)	(813)	(864)	(914)	(965)	
Window Height	Rough Opening	2' 11½"								
		3' 3½"								
		3' 7½"								
		3' 11½"								
		4' 3½"								
		4' 7½"								
		4' 11½"								
		5' 3½"								
		5' 4"	(1626)	(1626)	(1626)	(1626)	(1626)	(1626)	(1626)	

- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code.
- The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20".
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.

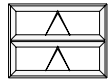
3' 3½" (1003)	3' 7½" (1105)	3' 11½" (1207)	4' 3½" (1308)	4' 7½" (1410)	4' 11½" (1511)
3' 4" (1016)	3' 8" (1118)	4' 0" (1219)	4' 4" (1321)	4' 8" (1422)	5' 0" (1524)



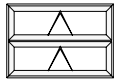
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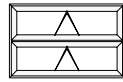
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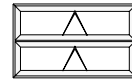
AA4030



AA4430



AA4830



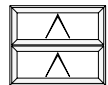
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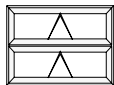
AA3434



AA3834



AA4034



AA4434



AA4834



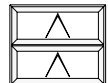
AA5034



AA3438



AA3838



AA4038



AA4438



AA4838



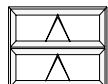
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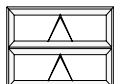
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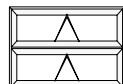
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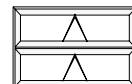
AA4040



AA4440



AA4840



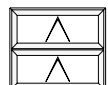
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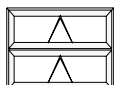
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AA3844



AA4044



AA4444



AA4844



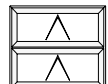
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AA3448



AA3848



AA4048



AA4448



AA4848



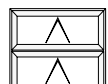
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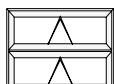
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AA3850



AA4050



AA4450



AA4850



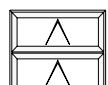
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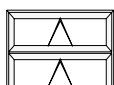
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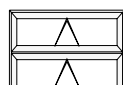
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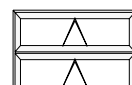
AA4054



AA4454



AA4854



AA5054

Standard Window Sizes

Double Awning - standard sizes

Window Width		1' 7½"	1' 11½"	2' 3½"	2' 5½"	2' 7½"	2' 9½"	2' 11½"	3' 1½"
		(495)	(597)	(699)	(749)	(800)	(851)	(902)	(953)
Rough Opening		1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	2' 10"	3' 0"	3' 2"
		(508)	(610)	(711)	(762)	(813)	(864)	(914)	(965)
Window Height	Rough Opening	5' 7½"							
		(1715)							
		5' 11½"							
		(1816)							
		6' 3½"							
		(1105)							
		6' 7½"							
		(2019)							
		5' 8"							
		(914)							
		6' 0"							
		(1829)							
		6' 4"							
		(1930)							
		6' 8"							
		(1219)							
		7' 0"							
		(2134)							
		7' 4"							
		(2235)							
		7' 8"							
		(2337)							
		8' 0"							
		(2438z)							

- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code.
- The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20".
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.

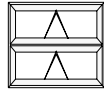
3' 3½"	3' 7½"	3' 11½"	4' 3½"	4' 7½"	4' 11½"
(1003)	(1105)	(1207)	(1308)	(1410)	(1511)
3' 4"	3' 8"	4' 0"	4' 4"	4' 8"	5' 0"
(1016)	(1118)	(1219)	(1321)	(1422)	(1524)



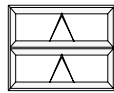
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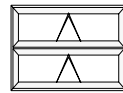
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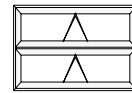
AA4058



AA4458



AA4858



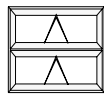
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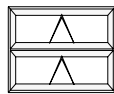
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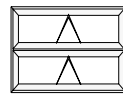
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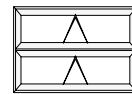
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AA4460



AA4860



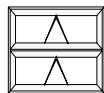
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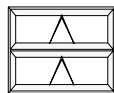
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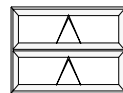
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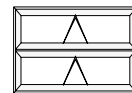
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AA4464



AA4864



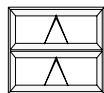
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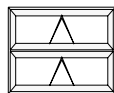
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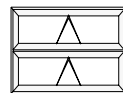
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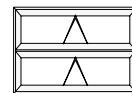
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AA4468



AA4868



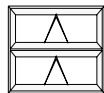
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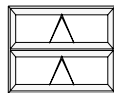
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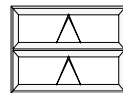
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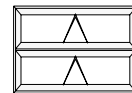
AA4070



AA4470



AA4870



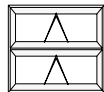
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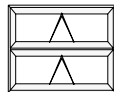
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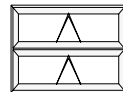
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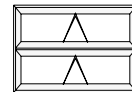
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AA4474



AA4874



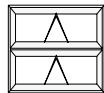
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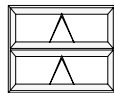
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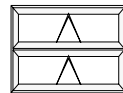
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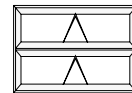
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AA4478



AA4878



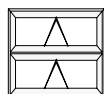
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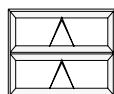
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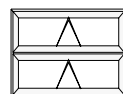
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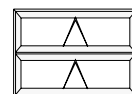
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AA4480





































































AA4880



AA5080

Standard Window Sizes

Fixed Windows - standard sizes








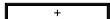



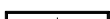






























Window Width	11½"	1' 5½"	1' 11½"	2' 5½"	2' 11½"	3' 5½"
	(292)	(445)	(597)	(749)	(902)	(1054)
Rough Opening	1' 0"	1' 6"	2' 0"	2' 6"	3' 0"	3' 6"
	(305)	(457)	(610)	(762)	(914)	(1067)
11½"	 F1010	 F1610	 F2010	 F2610	 F3010	 F3610
1' 5½"	 F1016	 F1616	 F2016	 F2616	 F3016	 F3616
1' 11½"	 F1020	 F1620	 F2020	 F2620	 F3020	 F3620
2' 5½"	 F1026	 F1626	 F2026	 F2626	 F3026	 F3626
2' 11½"	 F1030	 F1630	 F2030	 F2630	 F3030	 F3630
3' 5½"	 F1036	 F1636	 F2036	 F2636	 F3036	 F3636
3' 11½"	 F1040	 F1640	 F2040	 F2640	 F3040	 F3640
4' 5½"	 F1046	 F1646	 F2046	 F2646	 F3046	 F3646
4' 11½"	 F1050	 F1650	 F2050	 F2650	 F3050	 F3650
5' 5½"	 F1056	 F1656	 F2056	 F2656	 F3056	 F3656
5' 11½"	 F1060	 F1660	 F2060	 F2660	 F3060	 F3660

- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code.
- The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24" The minimum net clear opening width shall be 20"
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.

3' 11½" (1207)	4' 5½" (1359)	4' 11½" (1511)	5' 5½" (1664)	5' 11½" (1816)
4' 0" (1219)	4' 6" (1372)	5' 0" (1524)	5' 6" (1676)	6' 0" (1829)
F4010	F4610	F5010	F5610	F6010
F4016	F4616	F5016	F5616	F6016
F4020	F4620	F5020	F5620	F6020
F4026	F4626	F5026	F5626	F6026
F4030	F4630	F5030	F5630	F6030
F4036	F4636	F5036	F5636	F6036
F4040	F4640	F5040	F5640	F6040
F4046	F4646	F5046	F5646	F6046
F4050	F4650	F5050	F5650	F6050
F4056	F4656	F5056	F5656	F6056
F4060	F4660	F5060	F5660	F6060

Standard Window Sizes

Fixed Windows - standard sizes

















































Window Width	6' 5½"	6' 11½"	7' 5½"	7' 11½"
	(1969)	(2121)	(2273)	(2426)
Rough Opening	6' 6"	7' 0"	7' 6"	8' 0"
	(1981)	(2134)	(2286)	(2438)
5' 11½"				
5' 11½" (1816)	F6610	F7010	F7610	F8010
5' 5½"				
5' 5½" (1664)	F6616	F7016	F7616	F8016
5' 11½"				
5' 11½" (1511)	F6620	F7020	F7620	F8020
5' 5½"				
5' 5½" (1664)	F6626	F7026	F7626	F8026
6' 0"				
6' 0" (457)	F6630	F7030	F7630	F8030
6' 6"				
6' 6" (1676)	F6636	F7036	F7636	F8036
7' 0"				
7' 0" (1676)	F6640	F7040	F7640	F8040
7' 6"				
7' 6" (1676)	F6646	F7046	F7646	F8046
8' 0"				
8' 0" (1524)	F6650	F7050	F7650	F8050
8' 6"				
8' 6" (1676)	F6656	F7056	F7656	
9' 0"				
9' 0" (457)	F6660	F7060	F7660	

- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code. The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20".
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.

8' 5½" (2578)	8' 11½" (2731)	9' 5½" (2883)	9' 11½" (3035)
8' 6" (2591)	9' 0" (2743)	9' 6" (1372)	10' 0" (3048)
<div>+</div> F8610	<div>+</div> F9010	<div>+</div> F9610	<div>+</div> F10010
<div>+</div> F8616	<div>+</div> F9016	<div>+</div> F9616	<div>+</div> F10016
<div>+</div> F8620	<div>+</div> F9020	<div>+</div> F9620	<div>+</div> F10020
<div>+</div> F8626	<div>+</div> F9026	<div>+</div> F9626	<div>+</div> F10026
<div>+</div> F8630	<div>+</div> F9030	<div>+</div> F9630	<div>+</div> F10030
<div>+</div> F8636	<div>+</div> F9036	<div>+</div> F9636	<div>+</div> F10036
<div>+</div> F8640	<div>+</div> F9040	<div>+</div> F9640	<div>+</div> F10040
<div>+</div> F8646			

Standard Window Sizes

Fixed Windows - standard sizes

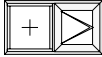
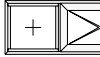
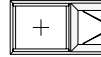
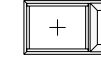

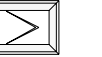
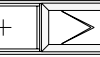
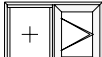
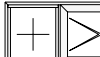

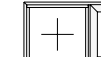













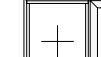






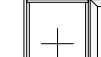






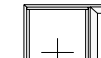



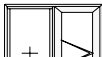
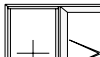

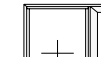


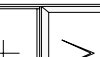
Window Width	11½"	1' 5½"	1' 11½"	2' 5½"	2' 11½"	3' 5½"
	(292)	(445)	(597)	(749)	(902)	(1054)
Rough Opening	1' 0"	1' 6"	2' 0"	2' 6"	3' 0"	3' 6"
	(305)	(457)	(610)	(762)	(914)	(1067)
6' 5½"						
6' 11½"						
7' 5½"						
7' 11½"						
8' 5½"						
8' 11½"						
9' 5½"						
9' 11½"						
10' 0"						
Window Height	6' 5½"	6' 11½"	7' 5½"	7' 11½"	8' 5½"	8' 11½"
	(1969)	(2121)	(2273)	(2426)	(2578)	(2731)
Rough Opening	6' 6"	7' 0"	7' 6"	8' 0"	8' 6"	9' 0"
	(1981)	(2134)	(2286)	(2438)	(2591)	(2743)
F1066						
F1070						
F1076						
F1080						
F1086						
F1090						
F1096						
F10100						
F1666						
F1670						
F1676						
F1680						
F1686						
F1690						
F1696						
F16100						
F2066						
F2070						
F2076						
F2080						
F2086						
F2090						
F2096						
F20100						
F2666						
F2670						
F2676						
F2680						
F2686						
F2690						
F2696						
F26100						
F3066						
F3070						
F3076						
F3080						
F3086						
F3090						
F3096						
F30100						
F3666						
F3670						
F3676						
F3680						
F3686						
F3690						
F3696						
F36100						

- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code.
- The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24" The minimum net clear opening width shall be 20"
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.

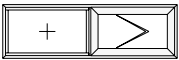
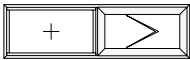
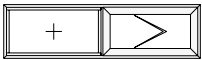
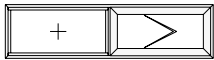

















3' 11½" (1207)	4' 5½" (1359)	4' 11½" (1511)	5' 5½" (1664)	5' 11½" (1816)
4' 0" (1219)	4' 6" (1372)	5' 0" (1524)	5' 6" (1676)	6' 0" (1829)
<div>+</div> <div>F4066</div>	<div>+</div> <div>F4666</div>	<div>+</div> <div>F5066</div>	<div>+</div> <div>F5666</div>	<div>+</div> <div>F6066</div>
<div>+</div> <div>F4070</div>	<div>+</div> <div>F4670</div>	<div>+</div> <div>F5070</div>	<div>+</div> <div>F5670</div>	
<div>+</div> <div>F4076</div>	<div>+</div> <div>F4676</div>	<div>+</div> <div>F5076</div>		
<div>+</div> <div>F4080</div>	<div>+</div> <div>F4680</div>	<div>+</div> <div>F5080</div>		
<div>+</div> <div>F4086</div>	<div>+</div> <div>F4686</div>			
<div>+</div> <div>F4090</div>				
<div>+</div> <div>F4096</div>				
<div>+</div> <div>F40100</div>				

Standard Window Sizes

Fixed Casement - standard sizes

Window Width		2' 11½"	3' 1½"	3' 7½"	3' 11½"	4' 3½"	4' 7½"	4' 11½"
		(902)	(953)	(1105)	(1207)	(1308)	(1410)	(1511)
Rough Opening		3' 0"	3' 2"	3' 8"	4' 0"	4' 4"	4' 8"	5' 0"
		(914)	(965)	(1118)	(1219)	(1321)	(1422)	(1524)
Window Height	1' 7½"	 XO3018	 XO3418	 XO3818	 XO4018	 XO4418	 XO4818	 XO5018
	1' 11½"	 XO3020	 XO3420	 XO3820	 XO4020	 XO4420	 XO4820	 XO5020
	2' 3½"	 XO3024	 XO3424	 XO3824	 XO4024	 XO4424	 XO4824	 XO5024
	2' 7½"	 XO3028	 XO3428	 XO3828	 XO4028	 XO4428	 XO4828	 XO5028
	2' 11½"	 XO3030	 XO3430	 XO3830	 XO4030	 XO4430	 XO4830	 XO5030
	3' 3½"	 XO3034	 XO3434	 XO3834	 XO4034	 XO4434	 XO4834	 XO5034
	3' 7½"	 XO3038	 XO3438	 XO3838	 XO4038	 XO4438	 XO4838	 XO5038
Rough Opening								
<ul style="list-style-type: none">• Windows depicted as egress have been taken from the ICC Building Code.• Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code.• The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24" The minimum net clear opening width shall be 20"• "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.								

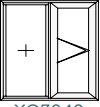
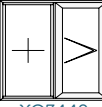
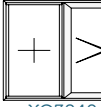
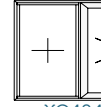
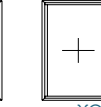
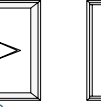
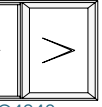
5' 3½"	5' 7½"	5' 11"	6' 3½"
(1613)	(1715)	(1816)	(1918)
5' 4"	5' 8"	6' 0"	6' 4"
(1626)	(1727)	(1829)	(1930)

			
XO5418	XO5818	XO6018	XO6418
			
XO5420	XO5820	XO6020	XO6420
			
XO5424	XO5824	XO6024	XO6424
			
XO5428	XO5828	XO6028	XO6428
			
XO5430	XO5830	XO6030	XO6430
			
XO5434	XO5834	XO6034	XO6434
			
XO5438	XO5838	XO6038	XO6438

Standard Window Sizes

Fixed Casement - standard sizes

Window Width	2' 11½"	3' 1½"	3' 7½"	3' 11½"	4' 3½"	4' 7½"	4' 11½"
	(902)	(953)	(1105)	(1207)	(1308)	(1410)	(1511)
Rough Opening	3' 0"	3' 2"	3' 8"	4' 0"	4' 4"	4' 8"	5' 0"
	(914)	(965)	(1118)	(1219)	(1321)	(1422)	(1524)
Window Height	3' 11½"						
	(1207)						
	4' 3½"						
	(1308)						
	4' 7½"						
	(1410)						
Rough Opening	4' 0"						
	(1219)						
	4' 4"						
	(1321)						
	4' 8"						
	(1422)						
Window Height	4' 11½"						
	(1511)						
	5' 3½"						
	(1613)						
	5' 7½"						
	(1715)						
Rough Opening	5' 0"						
	(1524)						
	5' 4"						
	(1626)						
	5' 8"						
	(1727)						
Window Height	5' 11½"						
	(1816)						
	6' 0"						
	(1829)						

XO3040

XO3440

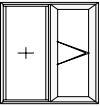
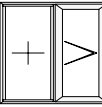
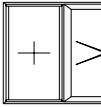
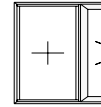
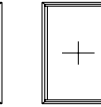
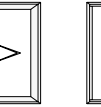
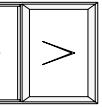
XO3840

XO4040

XO4440

XO4840

XO5040

XO3044

XO3444

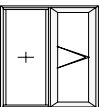
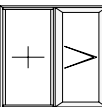
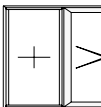
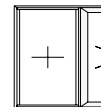
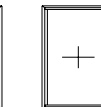
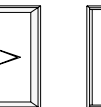
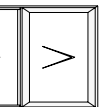
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XO3048

XO3448

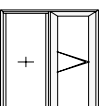
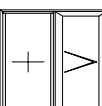
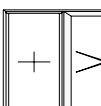
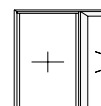
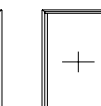
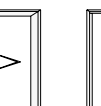
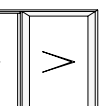
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XO4048

XO4448

XO4848

XO5048

XO3050

XO3450

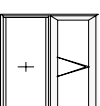
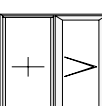
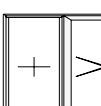
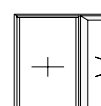

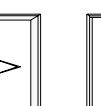
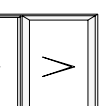
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XO5050

XO3054

XO3454

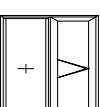
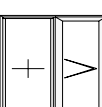
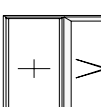
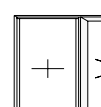
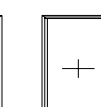
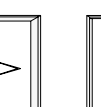
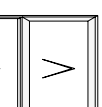
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XO4454

XO4854

XO5054

XO3058

XO3458

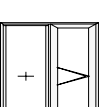
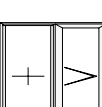
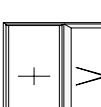
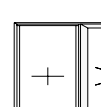
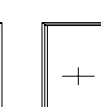
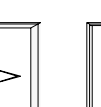
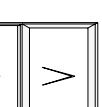
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XO4058

XO4458

XO4858

XO5058

XO3060

XO3460

XO3860

XO4060

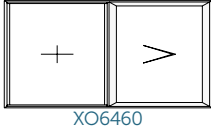
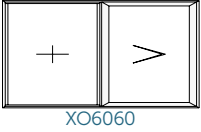
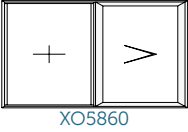
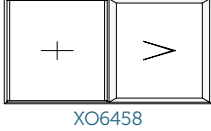
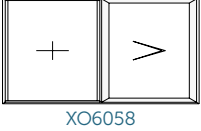
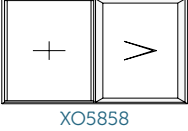
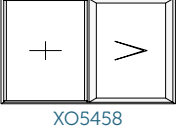
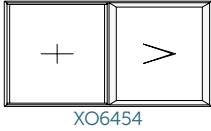
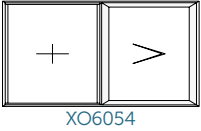
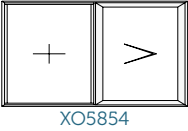
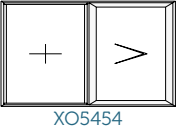
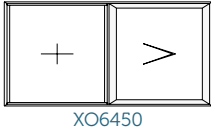
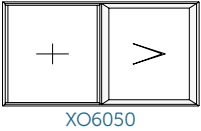
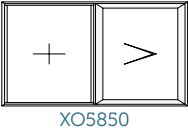
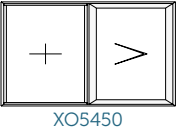
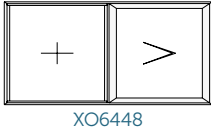
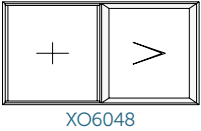
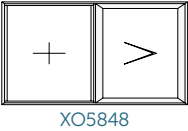
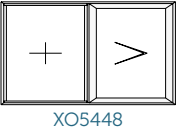
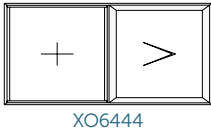
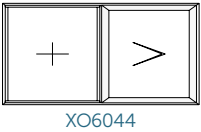
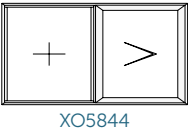
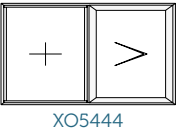
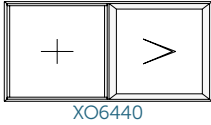
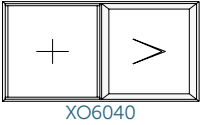
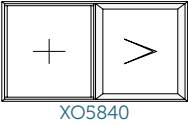
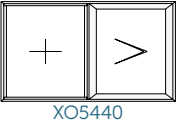
XO4460

XO4860










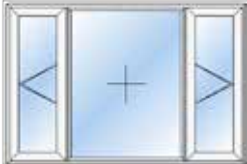


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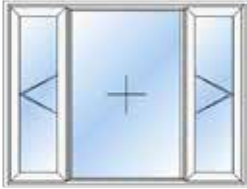
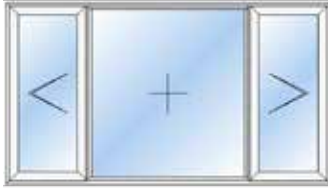
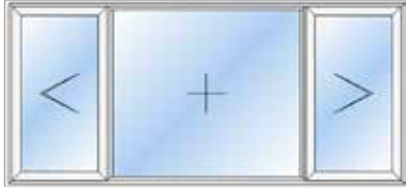
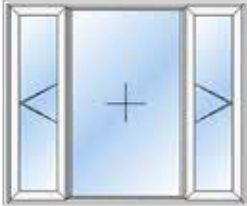
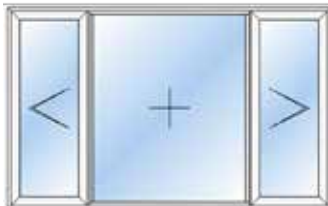

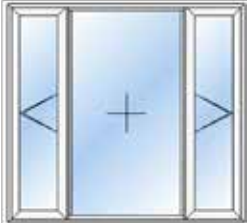
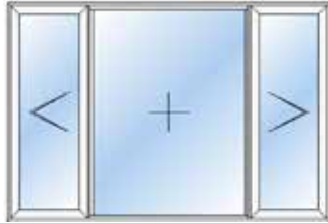

- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code.
- The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20".
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.

5' 3½"	5' 7½"	5' 11"	6' 3½"
(1613)	(1715)	(1816)	(1918)
5' 4"	5' 8"	6' 0"	6' 4"
(1626)	(1727)	(1829)	(1930)



Casement Fixed Casement - standard sizes



















































Window Width		5' 11½"	7' 11½"	9' 11½"
		(1816)	(2426)	(3035)
Rough Opening		6' 0"	8' 0"	10' 0"
		(1829)	(2438)	(3048)
Window Height	1' 11½"	 CFC 16-3020-16	 CFC 20-4020-20	 CFC 26-5020-26
	2' 5½"	 CFC 16-3026-16	 CFC 20-4026-20	 CFC 26-5026-26
	2' 11½"	 CFC 16-3030-16	 CFC 20-4030-20	 CFC 26-5030-26
	3' 5½"	 CFC 16-3036-16	 CFC 20-4036-20	 CFC 26-5036-26
	3' 11½"	 CFC 16-3040-16	 CFC 20-4040-20	 CFC 26-5040-26

Window Width		5' 11½"	7' 11½"	9' 11½"
		(1816)	(2426)	(3035)
Rough Opening		6' 0"	8' 0"	10' 0"
		(1829)	(2438)	(3048)
Window Height	4' 5½"	 <p>CFC 16-3046-16</p>	 <p>CFC 20-4046-20</p>	 <p>CFC 26-5046-26</p>
	4' 11½"			
	5' 5½"			
Rough Opening	4' 6"	 <p>CFC 16-3050-16</p>	 <p>CFC 20-4050-20</p>	 <p>CFC 26-5050-26</p>
	5' 0"			
	5' 6"			
Rough Opening	4' 6"	 <p>CFC 16-3056-16</p>	 <p>CFC 20-4056-20</p>	 <p>CFC 26-5056-26</p>
	5' 0"			
	5' 6"			

- Hurricane impact standard sizes may vary.
- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code. The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24" The minimum net clear opening width shall be 20"
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.



















































Standard Window Sizes

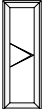

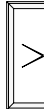

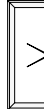


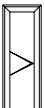

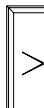

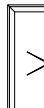
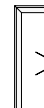







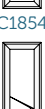











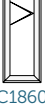






Casement - standard sizes


Window Width	1' 7½"	1' 11½"	2' 3½"	2' 5½"	2' 7½"	2' 9½"	2' 11½"
	(495)	(597)	(699)	(749)	(800)	(851)	(902)
Rough Opening	1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	2' 10"	3' 0"
	(508)	(610)	(711)	(762)	(813)	(864)	(914)
1' 11½"	 C1820	 C2020	 C2420				
2' 3½"	 C1824	 C2024	 C2424	 C2624	 C2824		
2' 7½"	 C1828	 C2028	 C2428	 C2628	 C2828	 C21028	 C3028
2' 11½"	 C1830	 C2030	 C2430	 C2630	 C2830	 C21030	 C3030
3' 3½"	 C1834	 C2034	 C2434	 C2634	 C2834	 C21034	 C3034
3' 7½"	 C1838	 C2038	 C2438	 C2638	 C2838	 C21038	 C3038
3' 11½"	 C1840	 C2040	 C2440	 C2640	 C2840	 C21040	 C3040
4' 3½"	 C1844	 C2044	 C2444	 C2644	 C2844	 C21044	 C3044
4' 4"							

Standard Window Sizes

Casement - standard sizes

Window Width	1' 7½"	1' 11½"	2' 3½"	2' 5½"	2' 7½"	2' 9½"	2' 11½"
	(495)	(597)	(699)	(749)	(800)	(851)	(902)
Rough Opening	1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	2' 10"	3' 0"
	(508)	(610)	(711)	(762)	(813)	(864)	(914)
1' 11½"	 C1820	 C2020	 C2420				
2' 3½"	 C1824	 C2024	 C2424	 C2624	 C2824		
2' 7½"	 C1828	 C2028	 C2428	 C2628	 C2828	 C21028	 C3028
2' 11½"	 C1830	 C2030	 C2430	 C2630	 C2830	 C21030	 C3030
3' 3½"	 C1834	 C2034	 C2434	 C2634	 C2834	 C21034	 C3034
3' 7½"	 C1838	 C2038	 C2438	 C2638	 C2838	 C21038	 C3038
3' 11½"	 C1840	 C2040	 C2440	 C2640	 C2840	 C21040	 C3040
4' 3½"	 C1844	 C2044	 C2444	 C2644	 C2844	 C21044	 C3044




































Window Width		1' 7½"	1' 11½"	2' 3½"	2' 5½"	2' 7½"	2' 9½"	2' 11½"
		(495)	(597)	(699)	(749)	(800)	(851)	(902)
Rough Opening		1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	2' 10"	3' 0"
		(508)	(610)	(711)	(762)	(813)	(864)	(914)
Window Height	4' 7½"	 C1848	 C2048	 C2448	 C2648	 C2848	 C21048	 C3048
	4' 11½"	 C1850	 C2050	 C2450	 C2650	 C2850	 C21050	 C3050
	5' 3½"	 C1854	 C2054	 C2454	 C2654	 C2854	 C21054	 C3054
	5' 7½"	 C1858	 C2058	 C2458	 C2658	 C2858	 C21058	 C3058
	5' 11½"	 C1860	 C2060	 C2460	 C2660	 C2860	 C21060	 C3060
	6' 0"	 C1860	 C2060	 C2460	 C2660	 C2860	 C21060	 C3060
Rough Opening		1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	2' 10"	3' 0"
		(508)	(610)	(711)	(762)	(813)	(864)	(914)

 Denotes: Double glazed and triple glazed – Meets ground floor egress
 Denotes: Double glazed, triple glazed, and laminated – Meets ground floor egress

- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code.
The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20".
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.

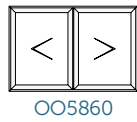
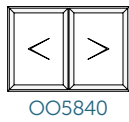
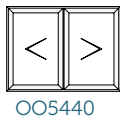
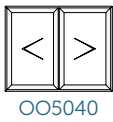
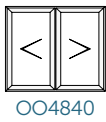
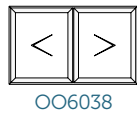
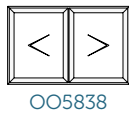
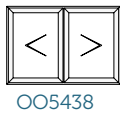
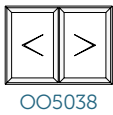
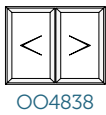
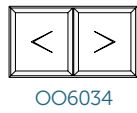
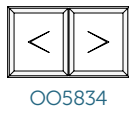
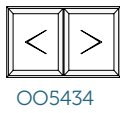
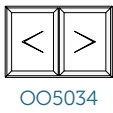
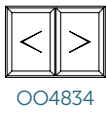
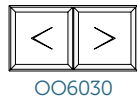
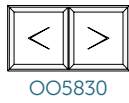
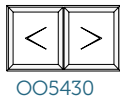
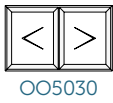
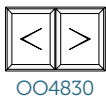
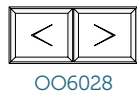
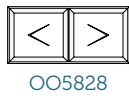
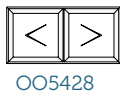
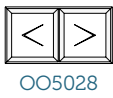
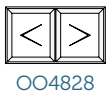
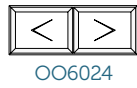
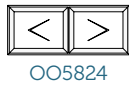
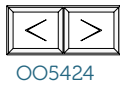
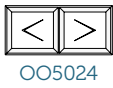
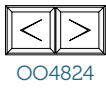
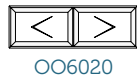
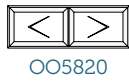
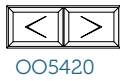
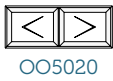
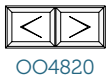
Standard Window Sizes

Twin Casement - standard sizes

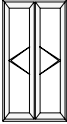
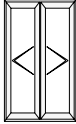
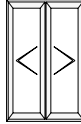
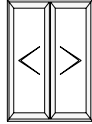
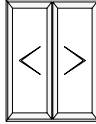
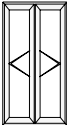
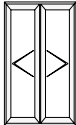
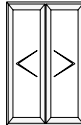
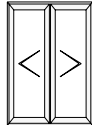
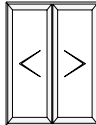
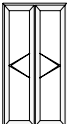
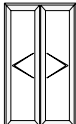
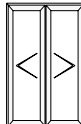
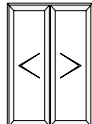
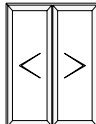
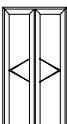
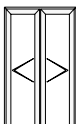
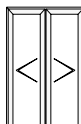
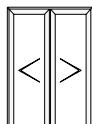
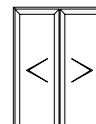
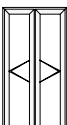
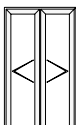
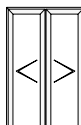
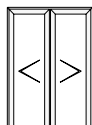
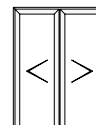
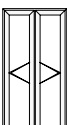
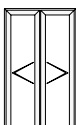
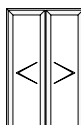
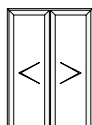
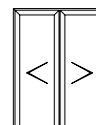
Window Width	2' 11½"	3' 1½"	3' 7½"	3' 11½"	4' 3½"
	(902)	(953)	(1105)	(1207)	(1308)
Rough Opening	3' 0"	3' 4"	3' 8"	4' 0"	4' 4"
	(914)	(965)	(1118)	(1219)	(1321)
Window Height	1' 11½"	2' 3½"	2' 7½"	2' 11½"	3' 3½"
	(597)	(699)	(800)	(902)	(1003)
Rough Opening	2' 0"	2' 4"	2' 8"	3' 0"	3' 4"
	(610)	(711)	(813)	(914)	(1016)
	 OO3020	 OO3420	 OO3820	 OO4020	 OO4420
	 OO3024	 OO3424	 OO3824	 OO4024	 OO4424
	 OO3028	 OO3428	 OO3828	 OO4028	 OO4428
	 OO3030	 OO3430	 OO3830	 OO4030	 OO4430
	 OO3034	 OO3434	 OO3834	 OO4034	 OO4434
	 OO3038	 OO3438	 OO3838	 OO4038	 OO4438
	 OO3040	 OO3440	 OO3840	 OO4040	 OO4440

- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code. The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20".
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.

4' 7½"	4' 11½"	5' 3½"	5' 7½"	5' 11"
(1410)	(1511)	(1613)	(1715)	(1816)
4' 8"	5' 0"	5' 4"	5' 8"	6' 0"
(1422)	(1524)	(1626)	(1727)	(1829)

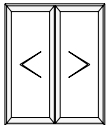


Twin Casement Pricing - standard sizes

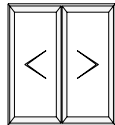
Window Width		2' 11½"	3' 1½"	3' 7½"	3' 11½"	4' 3½"
		(902)	(953)	(1105)	(1207)	(1308)
Rough Opening		3' 0"	3' 4"	3' 8"	4' 0"	4' 4"
		(914)	(965)	(1118)	(1219)	(1321)
Window Height	Rough Opening	4' 3½"				
		(1308)				
		4' 4"				
		(1321)				
Window Height	Rough Opening	4' 7½"				
		(1410)				
		4' 8"				
		(1422)				
Window Height	Rough Opening	4' 11½"				
		(1511)				
		5' 0"				
		(1524)				
Window Height	Rough Opening	5' 3½"				
		(1613)				
		5' 4"				
		(1626)				
Window Height	Rough Opening	5' 7½"				
		(1715)				
		5' 8"				
		(1727)				
Window Height	Rough Opening	5' 11½"				
		(1816)				
		6' 0"				
		(1829)				
						
		OO3044	OO3444	OO3844	OO4044	OO4444
						
		OO3048	OO3448	OO3848	OO4048	OO4448
						
		OO3050	OO3450	OO3850	OO4050	OO4450
						
		OO3054	OO3454	OO3854	OO4054	OO4454
						
		OO3058	OO3458	OO3858	OO4058	OO4458
						
		OO3060	OO3460	OO3860	OO4060	OO4460

- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code. The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20".
- "Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners, or other items.
- Dimensions in parentheses are in millimeters.

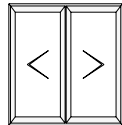
4' 7½" (1410)	4' 11½" (1511)	5' 3½" (1613)	5' 7½" (1715)	5' 11" (1816)
4' 8" (1422)	5' 0" (1524)	5' 4" (1626)	5' 8" (1727)	6' 0" (1829)



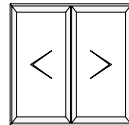
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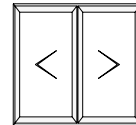
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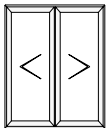
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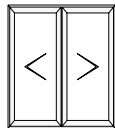
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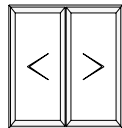
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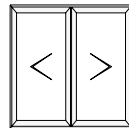
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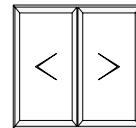
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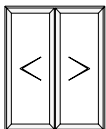
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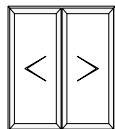
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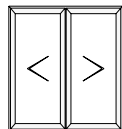
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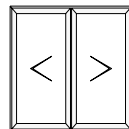
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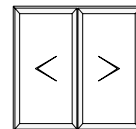
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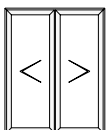
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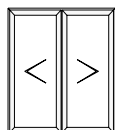
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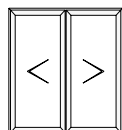
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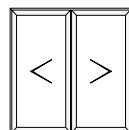
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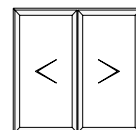
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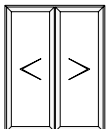
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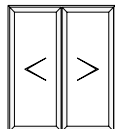
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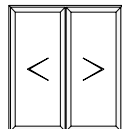
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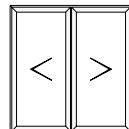
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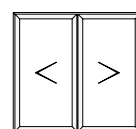
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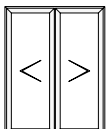
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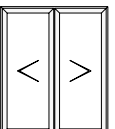
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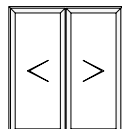
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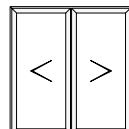
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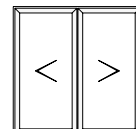
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OO6044

Warranty

ORIGIN FRAMES LIMITED 10 YEAR WARRANTY FOR ORIGIN WINDOWS

Product Warranty Consumer

1.

Origin has a 10-year limited warranty on non-glass portions of Origin windows and doors (including non-electric operators, locks, lifts, balance systems, hinges, handles, insect screens, weather stripping, exterior trim, sash and frame members) are warranted to be free from defects in manufacturing, materials and workmanship from the date of purchase. This limited warranty does not apply to Origin electric window operators, retractable insect screens or finishes on bright brass and satin nickel door hardware. In the event a component other than glass fails as a result of a defect in manufacturing, materials or workmanship within the limited warranty period, Origin, at its option, will (a) provide replacement parts to the Origin retailer/dealer you specify -labor not included; (b) provide a factory-authorized repair to the existing component at no cost to the Customer; or (c) refund the original purchase price or Origin retailer/dealer's price at the time of the original purchase, whichever is less. Such replacement parts or repairs are warranted for the remainder of the original limited warranty period.

2.

Corrosion-resistant hardware (includes lock mechanisms for inswing and outswing patio doors and outswing patio door corrosion-resistant hinges) is warranted to be free from mechanical failure due to corrosion cause by an electrolytic chemical reaction involving atmospheric salts, such as what may occur in coastal applications for a period of ten (10) years from the date of purchase from Origin.

What is not covered by this corrosion-resistant hardware warranty: any and all aesthetic discoloration or pitting that may occur due to environmental conditions. Minimum maintenance such as cleaning with a mild detergent on a regular basis may be necessary to maintain the original hardware appearance.

3.

The finish on corrosion-resistant outswing patio door hinges is warranted to be free from defects in manufacturing, materials and workmanship and warranted not to tarnish, peel, pit, flake, discolor, or corrode for a period of ten (10) years from the date of purchase from Origin.

In the event there is a mechanical failure of the lock mechanism for inswing or outswing patio doors or the exterior hinges of an outswing hinged patio door or there is a defect in the finish on corrosion-resistant hinges or the finish on corrosion-resistant hardware within the limited warranty period, Origin, at its option, will: (a) provide replacement parts to the Origin retailer/dealer you specify -labor not included; or (b) refund the original purchase price or Origin retailer/dealer's price at the time of the original purchase, whichever is less. Such replacement parts or repairs are warranted for the remainder of the original limited warranty period.

4.

The Customer acknowledges that while every attempt is made to match paint colors on the Goods, slight variations may occur and during the Warranty Period such paint finishes may dull due to weathering. Origin shall not be responsible or liable for any such dulling to the paint finishes.

5.

The Customer acknowledges that the installation instructions are provided with delivery of the Goods and show the correct installation method and usage. An operational guide is also supplied with the Goods which must be passed to the End-User of the Goods. It is the responsibility of the Customer to ensure receipt of these documents by the End-User and that the operational manual is passed to the End-User

6.

The Customer agrees to maintain the entire door system (glass, tracks, jambs, seals and frames) with regular cleaning, careful handling etc. Failure to do so will cause the warranty to void. Use of low concentration of soapy water followed by a rinse of fresh water is permitted, as is periodic usage of glass cleaners. Use of any other common cleaners or chemicals will void the warranty.

7.

Exclusion of Implied Warranty of Merchantability and Implied Warranty of Fitness for a Particular Purpose. There are no warranties which extend beyond the description on the face of the attached warranty. Origin specifically disclaims any warranties implied under Florida law or the Uniform Commercial Code, and specifically disclaims any implied warranty of merchantability or implied warranty of fitness for a particular purpose.

8.

The following shall NOT be covered by this limited warranty:

- ▶ Glass shall not be included as part of the Goods and Origin shall not have liability to the Customer in respect of any glass fitted or installed in the Goods.
- ▶ Origin makes no warranty or representation regarding the installation of the Goods.
- ▶ Origin makes no warranty or representation that condensation will not occur or will be eliminated by the Goods and Origin shall not be liable for any condensation.
- ▶ Adjustments or corrections due to improper installation of the Goods.
- ▶ Failures due to product modifications or glass shading devices (e.g., glass tinting, security systems, improper painting or staining, insulated coverings, etc.).
- ▶ Units improperly assembled or improperly mulled by others.
- ▶ Failure due to the application of non-Origin hardware (e.g. locksets, trim sets, hinges, panic hardware, closers, etc.).
- ▶ Failure to properly install Origin hardware and/or exterior trim. Products not manufactured by Origin.
- ▶ Slight glass curvature, minor scratches or other imperfections in the glass that do not impair structural integrity or significantly obscure normal vision.
- ▶ Rattling of grille bars within an air space.
- ▶ Tarnish or corrosion to hardware finishes, except on outswing patio door corrosion-resistant hinges.
- ▶ Service trips to provide instruction on product use.

9.

Any ten-year warranty offered by Origin is limited to a 5-year warranty for coastal areas. "Coastal areas" is defined as property located within two (2) miles of salt water.

10.

Any warranty offered on wood grain finishes is limited to a three-year warranty.

11.

As a material term and condition of this purchase contract and the attached warranty, Customer must inspect the Origin product upon delivery and report any damage within five (5) days of receipt of the product. The failure to do so will void the attached warranty for all defects whatsoever.

12.

The attached warranty does not apply to any defects in work performed by any persons hired by Origin or by Customer to perform installation of any Origin product, nor does it apply to any damage caused by such installers. All installers are independent contractors and are not employees, agents, or representatives of Origin.

Product Warranty Commercial

1.

Origin has a 1-year limited warranty on non-glass portions of Origin windows and doors (including non electric operators, locks, lifts, balance systems, hinges, handles, insect screens, weather stripping, exterior trim, sash and frame members) are warranted to be free from defects in manufacturing, materials and workmanship from the date of purchase. This limited warranty does not apply to Origin electric window operators, retractable insect screens or finishes on bright brass and satin nickel door hardware. In the event a component other than glass fails as a result of a defect in manufacturing, materials or workmanship within the limited warranty period, Origin, at its option, will (a) provide replacement parts to the Origin retailer/dealer you specify -labor not included; (b) provide a factory-authorized repair to the existing component at no cost to the Customer; or (c) refund the original purchase price or Origin retailer/dealer's price at the time of the original purchase, whichever is less. Such replacement parts or repairs are warranted for the remainder of the original limited warranty period.

2.

Corrosion-resistant hardware (includes lock mechanisms for inswing and outswing patio doors and outswing patio door corrosion-resistant hinges) is warranted to be free from mechanical failure due to corrosion cause by an electrolytic chemical reaction involving atmospheric salts, such as what may occur in coastal applications for a period of one (1) year from the date of purchase from Origin.

What is not covered by this corrosion-resistant hardware warranty: any and all aesthetic discoloration or pitting that may occur due to environmental conditions. Minimum maintenance such as cleaning with a mild detergent on a regular basis may be necessary to maintain the original hardware appearance.

3.

The finish on corrosion-resistant outswing patio door hinges is warranted to be free from defects in manufacturing, materials and workmanship and warranted not to tarnish, peel, pit, flake, discolor, or corrode for a period of one (1) year from the date of purchase from Origin.

In the event there is a mechanical failure of the lock mechanism for inswing or outswing patio doors or the exterior hinges of an outswing hinged patio door or there is a defect in the finish on corrosion-resistant hinges or the finish on corrosion-resistant hardware within the limited warranty period, Origin, at its option, will: (a) provide replacement parts to the Origin retailer/dealer you specify -labor not included; or (b) refund the original purchase price or Origin retailer/dealer's price at the time of the original purchase, whichever is less. Such replacement parts or repairs are warranted for the remainder of the original limited warranty period.

4.

The Customer acknowledges that while every attempt is made to match paint colors on the Goods, slight variations may occur and during the Warranty Period such paint finishes may dull due to weathering. Origin shall not be responsible or liable for any such dulling to the paint finishes.

5.

The Customer acknowledges that the installation instructions are provided with delivery of the Goods and show the correct installation method and usage. An operational guide is also supplied with the Goods which must be passed to the End-User of the Goods. It is the responsibility of the Customer to ensure receipt of these documents by the End-User and that the operational manual is passed to the End-User.

6.

The Customer agrees to maintain the entire door system (glass, tracks, jambs, seals and frames) with regular cleaning, careful handling etc. Failure to do so will cause the warranty to void. Use of low concentration of soapy water followed by a rinse of fresh water is permitted, as is periodic usage of glass cleaners. Use of any other common cleaners or chemicals will void the warranty.

7.

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8.

The following shall NOT be covered by this limited warranty:

- ▶ Glass shall not be included as part of the Goods and Origin shall not have liability to the Customer in respect of any glass fitted or installed in the Goods.
- ▶ Origin makes no warranty or representation regarding the installation of the Goods.
- ▶ Origin makes no warranty or representation that condensation will not occur or will be eliminated by the Goods and Origin shall not be liable for any condensation.
- ▶ Adjustments or corrections due to improper installation of the Goods.

- ▶ Failures due to product modifications or glass shading devices (e.g., glass tinting, security systems, improper painting or staining, insulated coverings, etc.).
- ▶ Units improperly assembled or improperly mulled by others.
- ▶ Failure due to the application of non-Origin hardware (e.g. locksets, trim sets, hinges, panic hardware, closers, etc.).
- ▶ Failure to properly install Origin hardware and/or exterior trim.
- ▶ Products not manufactured by Origin.
- ▶ Slight glass curvature, minor scratches or other imperfections in the glass that do not impair structural integrity or significantly obscure normal vision.
- ▶ Rattling of grille bars within an air space.
- ▶ Tarnish or corrosion to hardware finishes, except on outswing patio door corrosion-resistant hinges.
- ▶ Service trips to provide instruction on product use.

9.

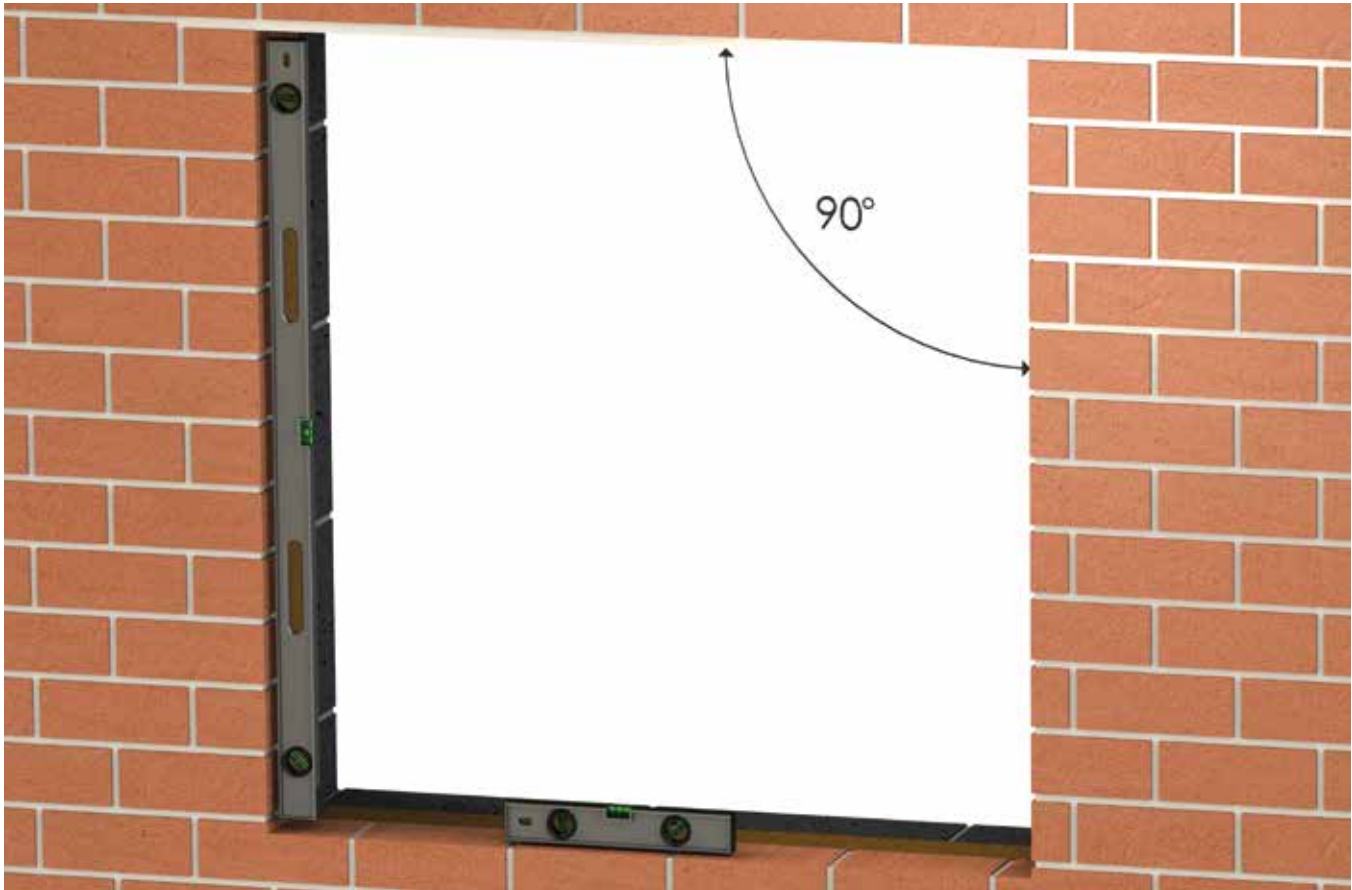
As a material term and condition of this purchase contract and the attached warranty, Customer must inspect the Origin product upon delivery and report any damage within five (5) days of receipt of the product. The failure to do so will void the attached warranty for all defects whatsoever.

10.

The attached warranty does not apply to any defects or negligence in work performed by any persons hired by Origin or by Customer to perform installation of any Origin product, nor does it apply to any damage caused by such installers. All installers are independent contractors and are not employees, agents, or representatives of Origin.

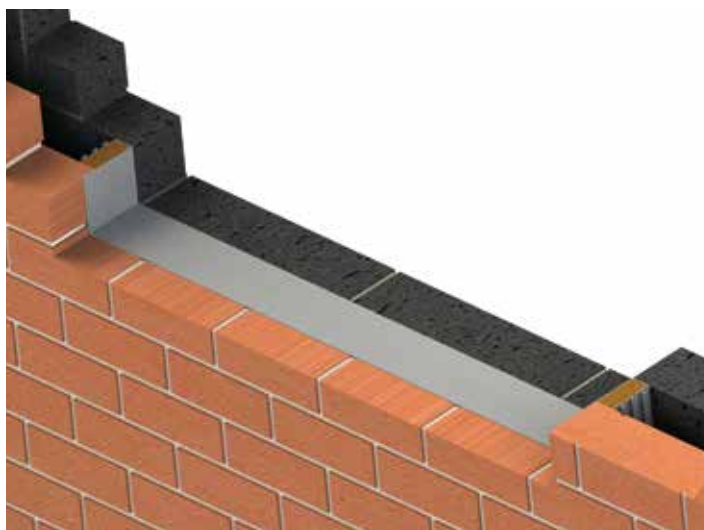
Installation guide

Openings



Windows should be installed in the opening without twisting, racking or distorting.

Open cavities discovered between the inner and outer skins of brick or block work should be closed in accordance with the local building authority regulations.



1. Frame Fixing



FIG 1

Measure the opening, checking it fits with all measurements on your Origin paperwork.

- ▶ **1.1.** Place the correct frame shims along the bottom of the opening to create a level, well supported platform for the window to sit. (Fig.1). Each shim should be placed in line with the pre-drilled fixing hole in the window frame.

1. Frame Fixing (continued)



FIG 2

- ▶ **1.2.** Place the window on the pre prepared frame shims and re-check for level. Adjust if necessary. Once complete, remove window from the opening once more. (Fig.2)
- ▶ **1.3.** Run a bead of sealant across and in between shims for window to sit in.

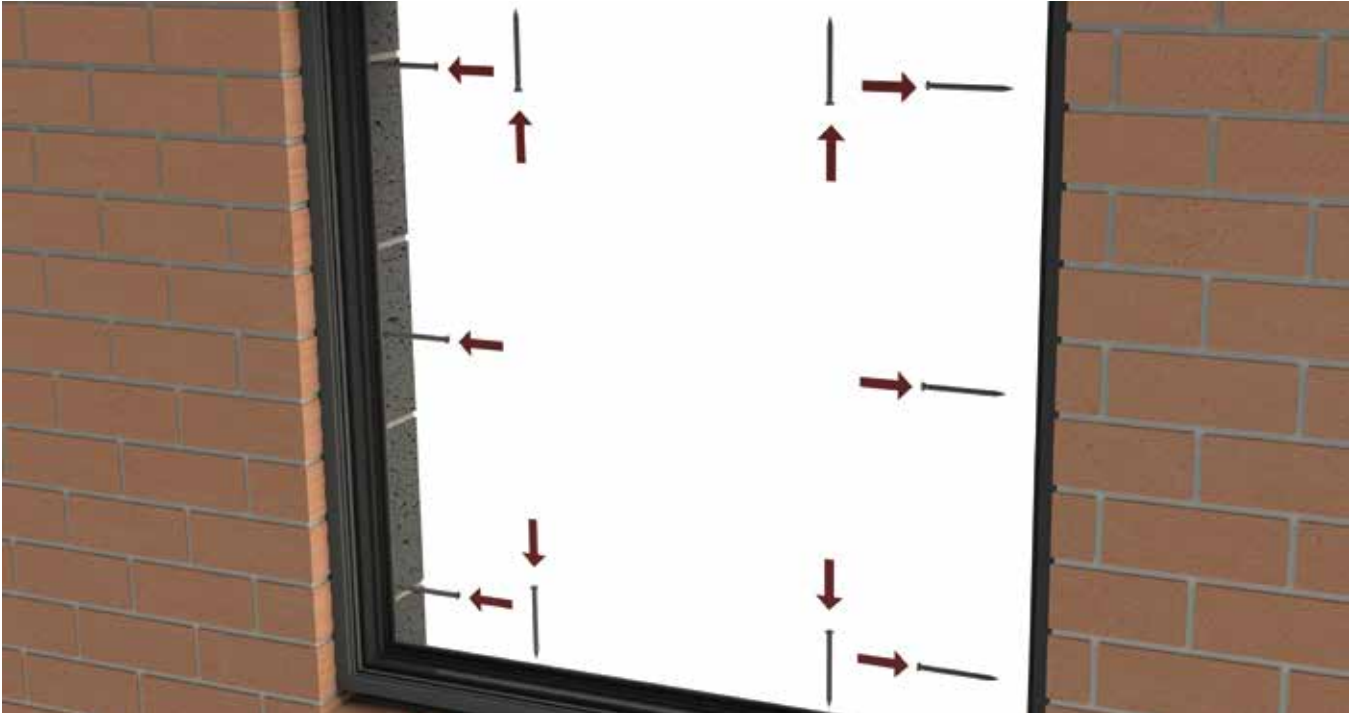


FIG 3

- **1.4.** Place the window in the opening and secure all four sides of the frame as follows:
- Frame anchors to be installed at pre-drilled locations (please refer to the back of this guide for installation anchorage details for different substrates etc).
- 1.4.1.** Insert suitable frame shims at the top and sides of the frame, in line with each pre-drilled set of anchor holes. Care should be taken not to twist or bow the frame as the anchor is tightened.
- 1.4.2.** Install one pair of frame anchors in the bottom of the frame, close to the centre.
- 1.4.3.** Making sure the frame is sitting plumb in the opening, install the opposite pair of anchors in the top of the frame
- 1.4.4.** Repeat this process until all frame anchors have been installed into all four sides of the frame. It is wise to check the frame for level and square after each pair of anchors has been installed.
- 1.4.5.** Once all anchors are in place, work the sealant around each of the anchor heads to prevent water from leaking into the frame.

2. Glazing



FIG 4

- ▶ **2.1.** All insulated glass units should be examined for damages and defects before installation.
- ▶ **2.2.** Close the window and fully engage the lock.
- ▶ **2.3.** Remove the 4 glazing beads.
- ▶ **2.4.** Place glazing shims in the bottom of the glazing chamber spaced approximately 2" in from each corner and no more than 18" centres. (Fig.4)
- ▶ **2.5.** Install the glass on the shims.
- ▶ **2.6.** Place the required shims between the glass and frame on the remaining 3 sides, spaced as in step 2.4. being careful not to bow or twist the sash.
- ▶ **2.7.** Apply a small amount of sealant to the bottom of each shim on the vertical sides to stop the shim from slipping down over time.

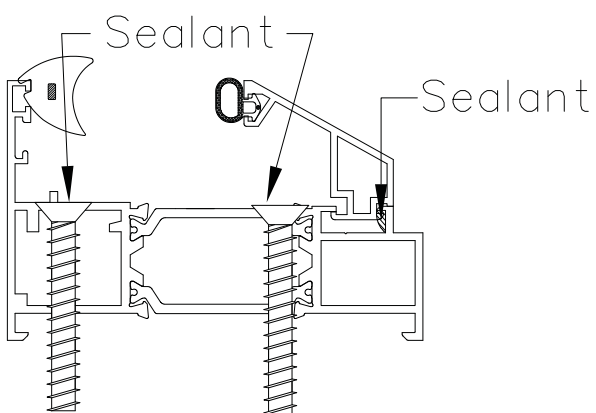


FIG 5

▶ **2.8.** Re-install the four glazing beads. For safety, always ensure the top bead is installed first, followed by the bottom and then the side beads. (Fig.5) For fixed/picture windows, apply sealant inside the channel from where the bead was removed prior to re-installing the bead.

▶ **2.9.** Insert the glazing wedge gasket between the glass unit and the glazing bead and cut to length.

▶ **3.0.** For fixed/picture windows, apply sealant along each mitered corner where glazing beads meet.



3. Finishing

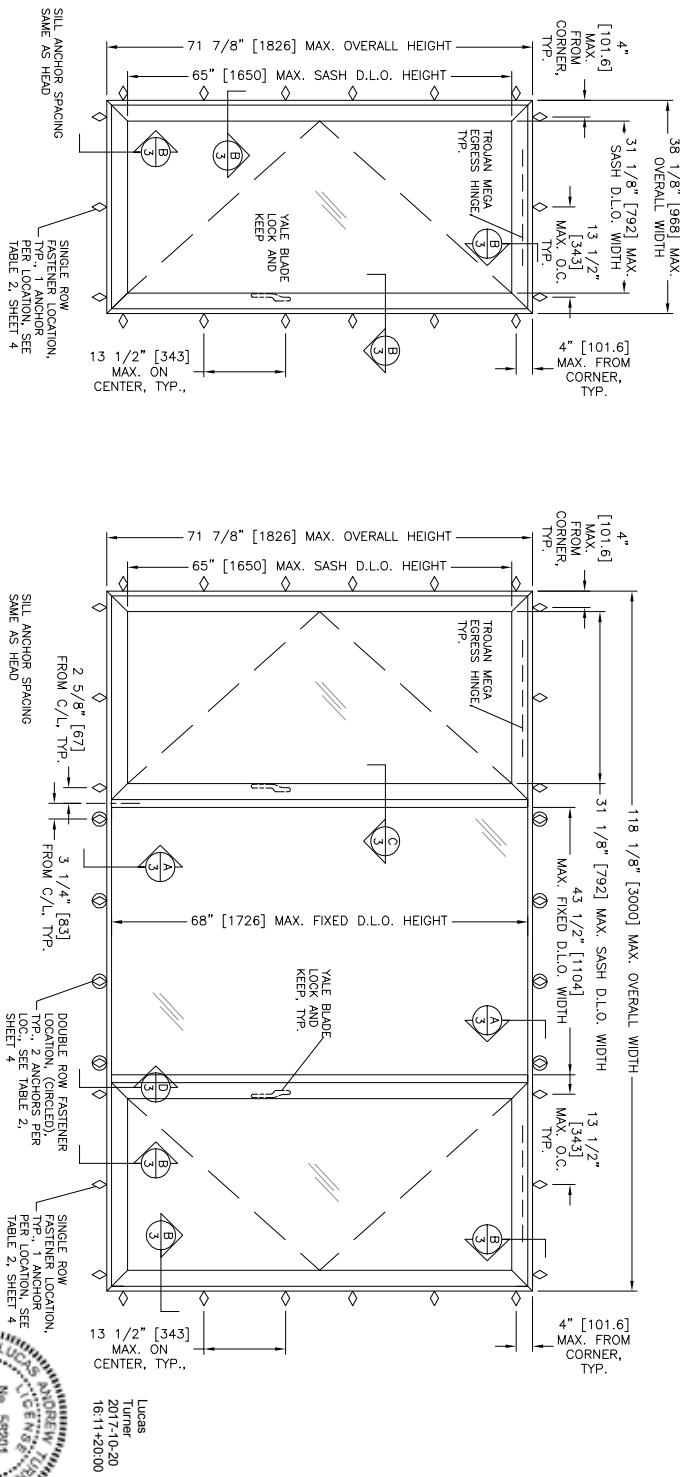


FIG 6

- ▶ **3.1.** Wherever practical, the perimeter of the window should be foam filled between the window and the substrate.
- ▶ **3.2.** Sealant must be applied around the outside perimeter of the window frame and opening /mull bar (if used). (Fig.6)

ORIGIN CASEMENT AND CASEMENT/FIXED WINDOWS – IMPACT RESISTANT

TABLE OF CONTENTS	
SHEET	DESCRIPTION, GEN. NOTES
1	ELEVATION, GEN. NOTES
2	SECTION DETAILS
3	ANCHORAGE DETAILS, NOTES
4	ISOM, ANCHORS, FAST DRAWINGS



GENERAL NOTES

1. THIS PRODUCT IS MANUFACTURED AND ANCHORED AS DETAIL IN THIS DRAWING. IS LARGE UNITSLE IMPACT (WIND ZONE 3 FOR X, XOX, OX, OR OX CONFIGURATIONS, WIND ZONE 4 FOR XX CONFIGURATION) RATED AND PROTECTIVE GLASS IS REQUIRED. SEE SECTION 050500 FOR PROTECTIVE GLASS REQUIREMENTS.
2. THIS PRODUCT HAS BEEN TESTED TO AIAA/WMA/CSA 101/152/444-08/11, ASTM E 1886-05, AND ASTM E 1966-12, AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, CURRENT EDITION, NOT INCLUDING THE HIGH VELOCITY HURRICANE ZONE.
3. ALLOWABLE CONFIGURATIONS: X (SINGLE VENT), XX (DOUBLE VENT), XO OR OX (VENT-FIXED OR FIXED-VENT).
4. THE DESIGN PRESSURE RATINGS IN THIS DRAWING ARE AS LIMITED BY ASTM E-1300 GLASS TABLES, AND TESTED WATER, STRUCTURAL, AND CYCLIC PRESSURES.
5. THE DESIGN PRESSURE RATING FACTOR (SHORT-TERM RATING) HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF ANCHORAGE INTO WOOD SUBSTRATE.
6. INSTALLATION OF 1X OR 2X WOOD BUCKS TO THE SUBSTRATE TO BE ENGINEERED BY OTHERS OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (A.H.J.). BUCKING, OPENINGS, & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED IN ACCORDANCE WITH THE FBC TO TRANSFER SUPERIMPOSED LOADS TO THE STRUCTURE. ADEQUACY OF THE STRUCTURE TO RECEIVE THESE LOADS SHALL BE DETERMINED BY OTHERS OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (A.H.J.).
7. GLASS SHALL BE TREATED BY AN ANTI-REFLECTIVE COATING. GLASS SHALL BE COATED OR OTHERWISE PROTECTED PER FBC TO PREVENT GALVANIC REACTIONS. WOOD BUCKS, IF USED, SHALL BE PRESSURE TREATED WITH EITHER A TREATMENT OR COATING COMPATIBLE WITH 6063-T5. ALL ANCHORS USED SHALL BE OF A MATERIAL OR HAVE A COATING COMPATIBLE WITH THE PRESSURE TREATED WOOD BUCKS AND ALL OTHER WINDOW MATERIALS.
8. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, OR AS APPROVED, SIGNED, AND SEALED BY A FLORIDA-REGISTERED PROFESSIONAL ENGINEER ON A SITE-SPECIFIC BASIS.
9. SEALING AND FLASHING STRATEGIES FOR OVERALL WATER INFILTRATION RESISTANCE OF THE INSTALLED PRODUCT SHALL BE THE RESPONSIBILITY OF OTHERS AND IS NOT ADDRESSED BY THIS DOCUMENT.

10/20/2017
LUCAS A. TURNER, P.E.
FL PE # 58201
TURNER ENGINEERING &
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(COA # 29779)
1239 JABARA AVE.
NORTH PORT, FL 34288
PH. 941-380-1574

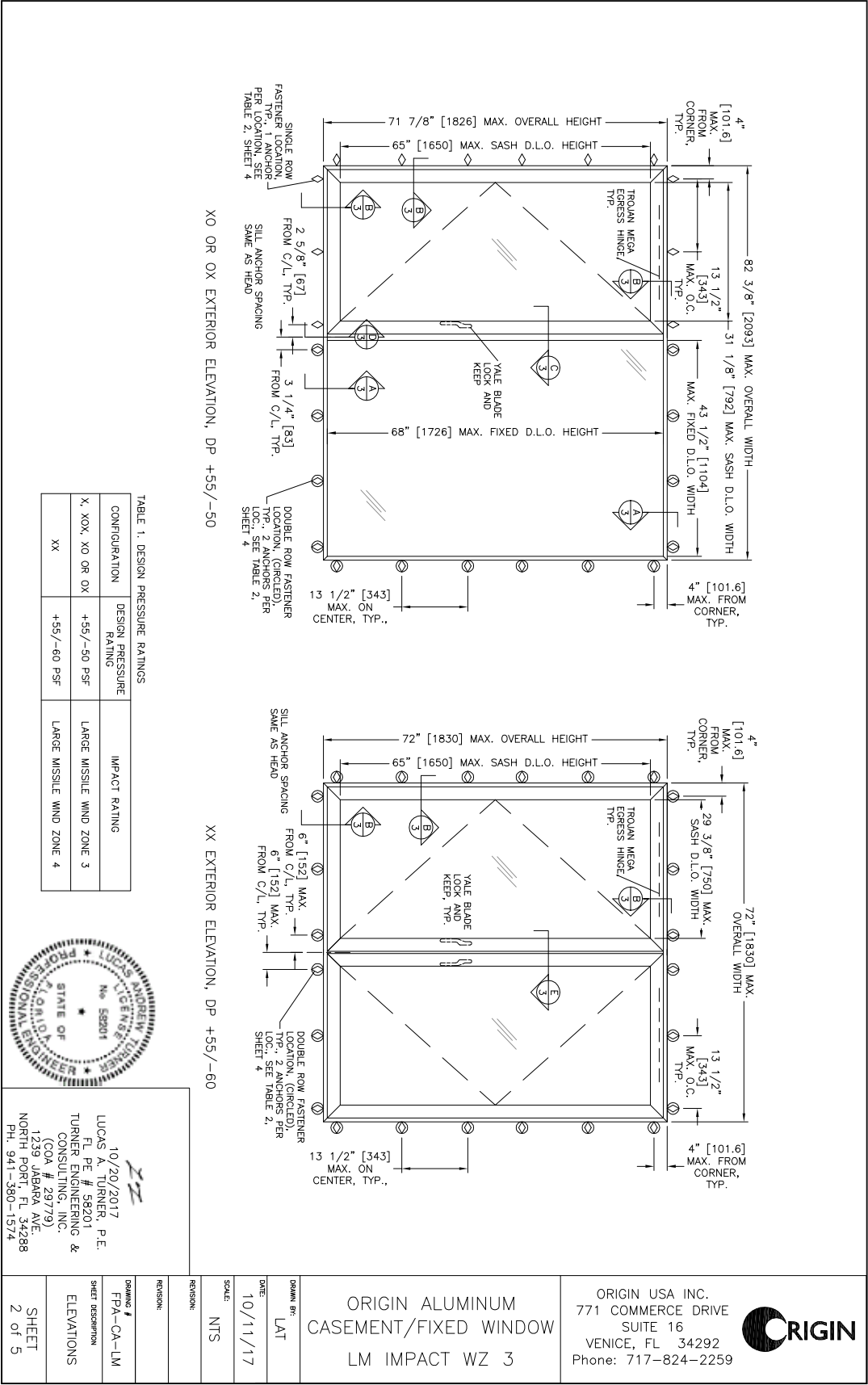
STATE OF FLORIDA
PROFESSIONAL ENGINEER
LUCAS A. TURNER
No. 58201
EXPIRATION DATE 10/20/2020

DRAWING #	FPA-CA-LM
SHEET DESCRIPTION	NOTES, ELEVATION
SHEET	1 of 5

ORIGIN ALUMINUM
CASEMENT/FIXED WINDOW
LM IMPACT WZ 3

ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259



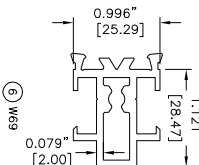
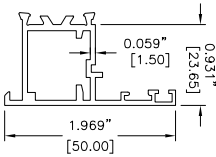
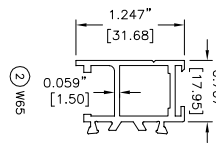
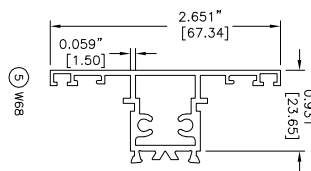
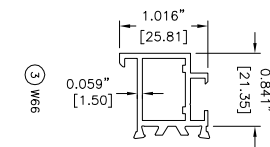
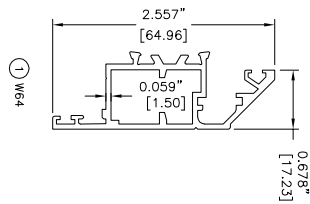
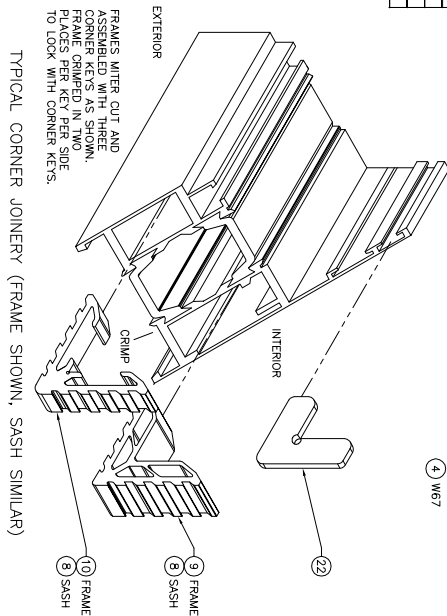
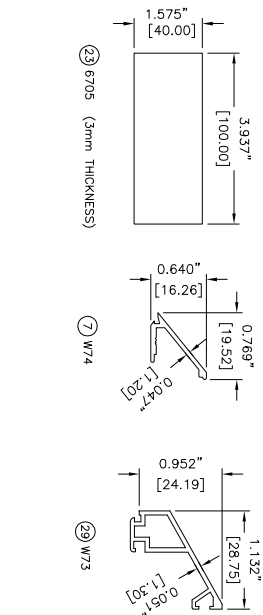


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Awning Window FPA Installation Instructions

BILL OF MATERIALS

Detail Number:	Part Number:	Supplier:	Part Identification:	Material:
1	W64	CORTIZO	SASH OUTER PROFILE	ALUMINIUM 6063 T5
2	W65	CORTIZO	SASH INNER PROFILE	ALUMINIUM 6063 T5
3	W66	CORTIZO	FRAME OUTER PROFILE	ALUMINIUM 6063 T5
4	W67	CORTIZO	FRAME INNER PROFILE	ALUMINIUM 6063 T5
5	W68	CORTIZO	MULLION INNER PROFILE	ALUMINIUM 6063 T5
6	W69	CORTIZO	MULLION OUTER PROFILE	ALUMINIUM 6063 T5
7	W74	CORTIZO	SASH BEAD	ALUMINIUM 6063 T5
8	W75-144	CORTIZO	CLEAR 144	ALUMINIUM 6063 T5
9	W75-178	CORTIZO	CLEAR 178	ALUMINIUM 6063 T5
10	W76	CORTIZO	CLEAR 9.5	ALUMINIUM 6063 T5
11	W/HGSR103	EPA SECURITY	SAC BOLT	MILD ZINC AND CLEAR
12	W/HGSR201	EPA SECURITY	SAC BOLT KEEP	ALUMINIUM
13	B20D1	YALE	BLADE LOCK	ALUMINIUM
14	BK3460-01	YALE	BLADE LOCK KEEP	ALUMINIUM
15	O115-2013-E-435	TREOLAN	MEGA EGRESS HINGE	430 STAINLESS STEEL
16	4028	STAC	FRAME GASKET	EPDM
17	M-00793-M01	STAC	LOCKING CAVITY GASKET	EPDM
18	Q14636	SCHUEGL	SASH GASKET	OILON
19	RPO1164	STAC	CAVITY GASKET	EPDM
20	W488	PLASTTECH	INTERNAL WEDGE GASKET	EPDM
21	E3494	PLASTTECH	FRAME D GLAZING REBATE	EPDM
22	99018	CORTIZO	CHEVRON FS	STAINLESS STEEL
23	6705	TP EXTRUSIONS	GLAZING PACKER	PVC
24	418500	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
25	418600	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
26	418800	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
27	418700	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
28	W473	PLASTTECH	FRAME D WEDGE GASKET	EPDM
29	W73	CORTIZO	FRAME BEAD	ALUM 6063-T5
30			M10 THREADED ROD/NUT	STEEL
31			#8 x 1 1/2" SELF-DRAPPING SCREW	STEEL



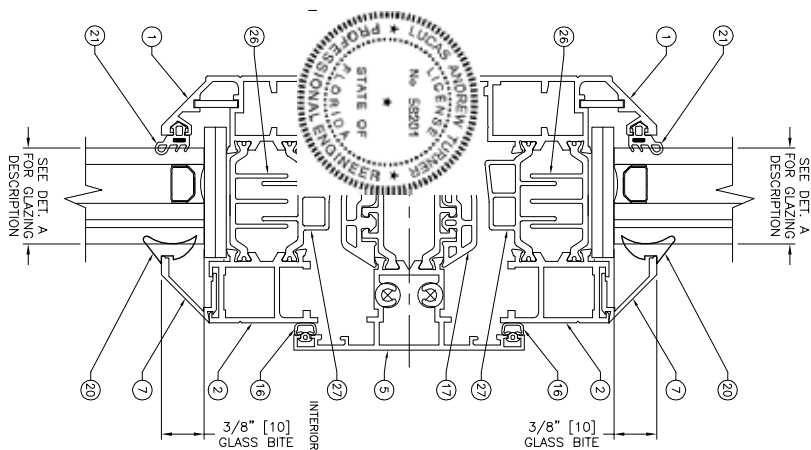
10/20/2017
LUCAS A. TURNER, P.E.
FL PE # 58201
TURNER ENGINEERING &
CONSULTING, INC.
(COA # 29779)
1239 JABARA AVE.
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ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259



ORIGIN ALUMINUM
CASEMENT/FIXED WINDOW
LM IMPACT WZ 3

DRAWN BY:	LAT
DATE:	10/11/17
SCALE:	NTS
REVISION:	
REGION:	
DRAWING #:	FPA-CA-LM
SHEET DESCRIPTION:	BOM, PART
DWG. PART:	DWGS, CORNER
SHEET:	5 of 5



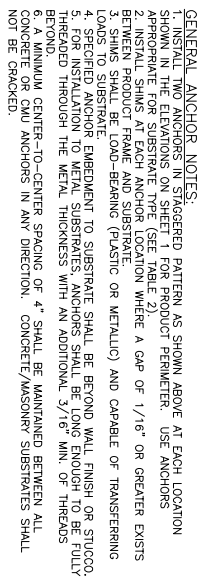
DETAIL B. TYPICAL SECTION INTEGRAL MULLION

SECTION
DETAILS

ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259



SUBSTRATE TYPE	ANCHOR TYPE	MIN. EMBED	MIN. EDGE DIST.
CONCRETE (2.0 KSI MIN)	1/4" T1W TAPCON	1"	1-1/2"
HOLLOW OR GROUT-FILLED CMU (117 PSI MIN.)	1/4" T1W TAPCON	1-1/4"	2-1/2"
CONCRETE (2.85 KSI MIN.)	1/4" ELCO ULTRACON	1-3/8"	1"
HOLLOW OR GROUT-FILLED CMU (ASTM C90)	1/4" ELCO ULTRACON	1-1/4"	2-1/2"
2X MIN. SPRUCE-PIKE-FIR WOOD (G=0.42)	1/4" T1W TAPCON OR 1/4" ELCO ULTRACON	1-3/8"	1"
2X MIN. SPRUCE-PIKE-FIR WOOD (G=0.42)	#12 WOOD SCREW	1-3/8"	1"
16 GAUGE (0.060") MN. STEEL STUD 33X5 YIELD MN.	#12-24 T1W TERS SELF-DRILLING SCREW	SEE ANCHOR NOTE 5	1/2"
1/8" ALUM. 6063-T5 MN. OR 1/8" STEEL 36 KSI MN.	#12 DRILLING SCREW	SEE ANCHOR NOTE 5	1/2"



3/8/2017 LUCAS A. TURNER, P.E. FL PE # 58201 TURNER ENGINEERING & CONSULTING, INC. (COA # 29779) 1239 JABARA AVE. NORTH PORT, FL 34288	DRAWING # FPA-AW-LM SHEET DESCRIPTION ANCHOR DETAILS, NOTES
SHEET	

ORIGIN ALUMINUM
AWNING WINDOW
LM IMPACT HVHZ

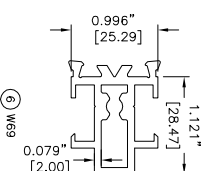
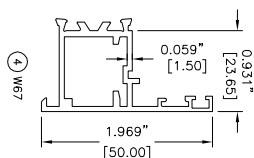
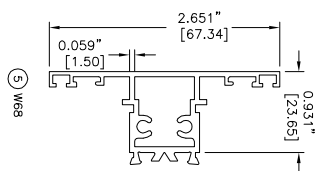
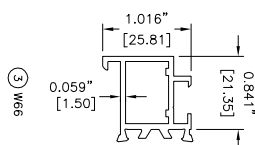
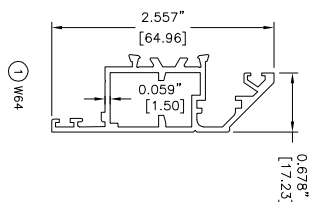
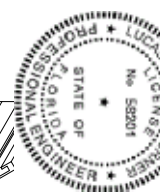
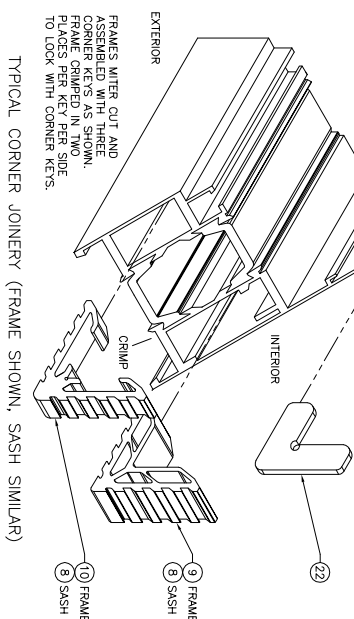
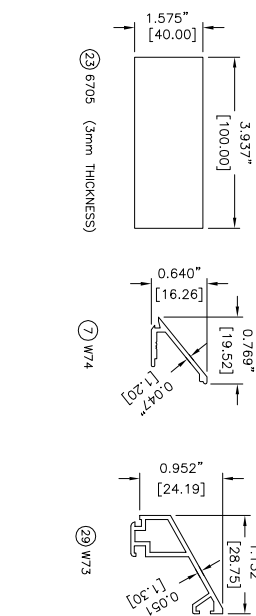
ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259



REVISION:	
REVISION:	
DRAWING #	FPA-AW-LM
SHEET DESCRIPTION	ANCHOR
DETAILS, NOTES	
SHEET	
3 of 4	

BILL OF MATERIALS

Detail Number:	Part Number:	Supplier:	Part Identification:	Material:
1	W64	CORTIZO	SASH OUTER PROFILE	ALUMINIUM 6063 T5
2	W65	CORTIZO	SASH INNER PROFILE	ALUMINIUM 6063 T5
3	W66	CORTIZO	FRAME OUTER PROFILE	ALUMINIUM 6063 T5
4	W67	CORTIZO	FRAME INNER PROFILE	ALUMINIUM 6063 T5
5	W68	CORTIZO	MULTILION INNER PROFILE	ALUMINIUM 6063 T5
6	W69	CORTIZO	SASH BEAD	ALUMINIUM 6063 T5
7	W74	CORTIZO	GLEAT 14.4	ALUMINIUM 6063 T5
8	W75-14.8	CORTIZO	GLEAT 17.8	ALUMINIUM 6063 T5
9	W76	CORTIZO	GLEAT 9.5	ALUMINIUM 6063 T5
10	W76	CORTIZO	GLEAT 9.5	ALUMINIUM 6063 T5
11	W76SK103	ERA SECURITY	SAC BOLT	MILD ZINC AND CLEAR
12	W76SK201	ERA SECURITY	SAC BOLT KEEP	MILD ZINC AND CLEAR
13	B20DL	YALE	BLADE LOCK	ALUMINIUM
14	BK3460-01	YALE	HINGE	430 STAINLESS STEEL
15	ED16	YALE	HINGE	430 STAINLESS STEEL
16	4028	STAC	FRAME GASKET	EPDM
17	M-00793-M01	STAC	LOCKING CAVITY GASKET	EPDM
18	OL4636	SCHIEGEL	SASH GASKET	O-LION
19	RPO1164	STAC	CAVITY GASKET	EPDM
20	W488	PLASTECH	INTERNAL WEDGE GASKET	EPDM
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26	418800	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
27	418700	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
28				
29				
30				
31				



3/8/2017
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1239 JABARA AVE.
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PH. 941-380-1574

ORIGIN ALUMINUM
AWNING WINDOW
LM IMPACT HVHZ

ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259

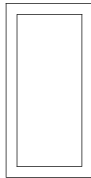


ORIGIN MULLIONS

GENERAL NOTES

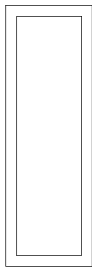
1. THIS APPROVAL APPLIES TO ORIGIN 6063-T6 ALUMINUM MULLIONS AS SHOWN IN THESE DRAWINGS. THESE MULLIONS, FABRICATED AND ANCHORED AS DETAILED IN THIS DRAWING, MAY BE USED IN ASSEMBLIES OF ORIGIN AW 6, CA 6, OR PW 6 WINDOWS OR EASIFOLD 3000 DOORS. MULLIONS AS INDICATED IN CHARTS 1 THROUGH 5 MAY BE USED WITH LARGE MISSILE OR SMALL MISSILE IMPACT RESISTANT OR NON-IMPACT ORIGIN PRODUCTS, AND IMPACT PROTECTIVE DEVICES (SHUTTERS) ARE NOT REQUIRED IN WINDBORNE DEBRIS REGIONS. MULLIONS AS INDICATED IN CHART 6 MAY BE USED WITH NON-IMPACT ORIGIN PRODUCTS ONLY AND REQUIRE THE USE OF IMPACT PROTECTIVE DEVICES (SHUTTERS) IN WINDBORNE DEBRIS REGIONS.
2. THIS PRODUCT HAS BEEN TESTED TO ASTM E 1886/1996, AAMA 450, AND TAS 201/202/203, AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, 5TH EDITION (2014), INCLUDING THE HIGH VELOCITY HURRICANE ZONE (SHADED REGION OF CHARTS 4 AND 5 AND ALL VALUES IN CHART 6 MAY ONLY BE USED OUTSIDE THE HVHZ).
3. ALLOWABLE CONFIGURATIONS ARE AS SHOWN IN THESE DRAWINGS. ALL MULLIONS MAY BE USED VERTICALLY OR HORIZONTALLY.
4. DESIGN PRESSURES SHOWN IN THE CHARTS IN THESE DRAWINGS APPLY TO THE MULLION ONLY. GLAZED ORIGIN PRODUCTS SHALL BE SEPARATELY APPROVED. SEE SEPARATE APPROVALS FOR APPLICABLE DESIGN PRESSURES FOR GLAZED PRODUCTS.
5. THE LEAST DESIGN PRESSURE OF THE MULLION OR THE INDIVIDUAL GLAZED PRODUCTS SHALL BE THE APPLICABLE DESIGN PRESSURE OF THE ENTIRE MULLED ASSEMBLY.
6. THE 4/3 ALLOWABLE STRESS INCREASE FACTOR (SHORT-TERM INCREASE FACTOR) HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 CD FACTOR WAS USED IN THE ANALYSIS OF ANCHORAGE INTO WOOD SUBSTRATE.
7. INSTALLATION OF 2X WOOD BUCKS TO THE SUBSTRATE TO BE ENGINEERED BY OTHERS OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (A.H.J.). BUCKING, OPENINGS, & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED BY OTHERS IN ACCORDANCE WITH THE FBC TO TRANSFER SUPERIMPOSED LOADS TO THE STRUCTURE. ADEQUACY OF THE STRUCTURE TO RECEIVE THESE LOADS SHALL BE VERIFIED BY THE CONTRACTOR OR A.H.J.
8. DISSIMILAR MATERIALS THAT COME INTO CONTACT SHALL BE COATED OR OTHERWISE PROTECTED PER FBC CHAPTER 20 TO PREVENT GALVANIC REACTIONS. WOOD BUCKS, IF USED, SHALL BE PRESSURE TREATED, WITH EITHER A TREATMENT OR COATING COMPATIBLE WITH ALUMINUM. ALL ANCHORS USED SHALL BE OF A MATERIAL OR HAVE A COATING COMPATIBLE WITH THE PRESSURE TREATED WOOD BUCKS AND ALL OTHER WINDOW MATERIALS.
9. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, OR AS APPROVED, AND SEALED BY A SITE-SPECIFIC BASIS. FLORIDA REGISTERED PROFESSIONAL ENGINEER ON A SITE-SPECIFIC BASIS.
10. SEALING AND FLASHING STRATEGIES FOR WEATER WATER INFILTRATION RESISTANCE OF THE INSTALLED PRODUCT SHALL BE THE RESPONSIBILITY OF OTHERS AND IS NOT ADDRESSED BY THIS DOCUMENT.

2" X 4" X 1/4"
TUBE MULLION



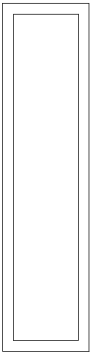
SEE CHART 1
ON SHEET 2

2" X 6" X 1/4"
TUBE MULLION



SEE CHART 2
ON SHEET 3

2" X 8" X 1/4"
TUBE MULLION



SEE CHART 3
ON SHEET 4

1" X 4"
FLAT
MULLION



SEE CHART 4
ON SHEET 5

3/8" X
2-13/16"
FLAT
MULLION



SEE CHARTS 5 AND 6
ON SHEET 6

Lucas Turner
2017-02-16
09:54+19:00



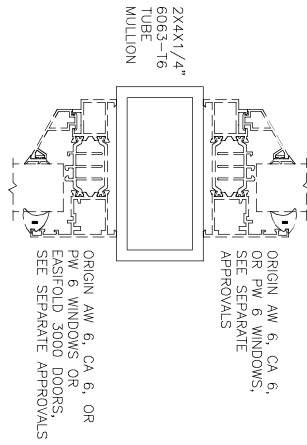
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1239 JABARA AVE
NORTH PORT, FL 34288
PH. 941-380-1574

ALUMINUM MULLIONS
FOR ORIGIN WINDOWS
AND DOORS

ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259



DRAWN BY:	LAT
DATE:	1/26/17
SCALE:	NTS
REVISION:	
REVISION:	
DRAWING #	FPA-MULLS
SHEET DESCRIPTION	NOTES, ELEVATION
SHEET	1 of 8



NOTE: FOR MULLION ANCHORAGE SEE SHEETS 7 AND 8. INSTALLER TO SEAL ALL CONTACT POINTS BETWEEN GLAZED PRODUCTS AND MULLIONS. FOR ANCHORAGE OF GLAZED PRODUCTS TO MULLION, SEE SEPARATE APPROVALS AND FOLLOW INSTRUCTIONS FOR ATTACHMENT TO ALUMINUM.

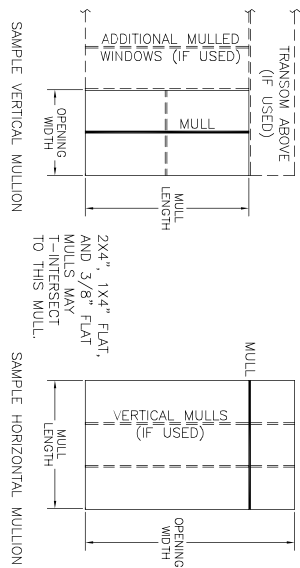


CHART 1. 2x4x1/4" ALUM. MULL, 6063-T6 MIN., ALLOWABLE PRESSURES (PSF) WITH END CLIP ANCHORAGE AS SHOWN IN THIS DRAWING

		OPENING WIDTH, IN.															
		36	48	60	72	84	96	108	120	132	144	156	168	MULL LENGTH, IN.			
96	55	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
102	55	55	55	55	55	55	55	55	55	55	53	51	49	36	48	60	72
108	55	55	55	55	55	55	55	54	49	46	44	42	40	36	48	60	72
114	55	55	55	55	55	55	50	45	42	39	36	35	33	36	48	60	72
120	55	55	55	55	48	41	36	33	30	28	26	25	24	36	48	60	72
126	55	55	55	55	47	41	36	33	30	28	26	25	24	36	48	60	72
132	55	55	55	49	41	36	31	28	26	24	22	21	20	36	48	60	72
138	55	55	55	43	36	31	27	25	23	21	19	18	17	36	48	60	72
144	55	55	46	37	31	27	24	22	20	18	17	16	15	36	48	60	72
150	54	41	33	28	24	21	19	17	15	14	13	12	11	36	48	60	72
156	48	36	29	25	21	19	17	15	14	13	12	11	10	36	48	60	72
162	43	33	26	22	19	17	15	14	13	12	11	10	9	36	48	60	72
168	39	29	23	20	17	15	14	13	12	11	10	9	8	36	48	60	72
174	35	26	21	18	15	14	13	12	11	10	9	8	7	36	48	60	72
180	31	24	19	16	14	13	12	11	10	9	8	7	6	36	48	60	72
186	29	21	17	14	12	11	10	9	8	7	6	5	4	36	48	60	72
192	26	19	16	13	11	10	9	8	7	6	5	4	3	36	48	60	72
198	24	18	14	11	9	8	7	6	5	4	3	2	1	36	48	60	72
204	22	16	12	9	7	6	5	4	3	2	1	1	0	36	48	60	72
210	20	14	10	7	5	4	3	2	1	1	0	0	0	36	48	60	72

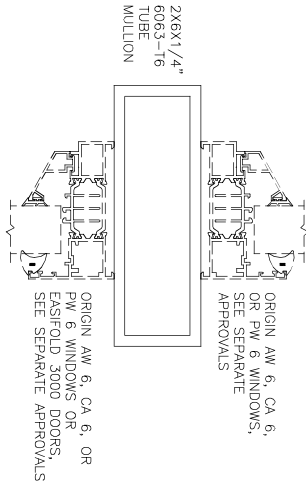


1/26/2017
LUCAS A. TURNER, P.E.
FL PE # 58201
TURNER ENGINEERING &
CONSULTING, INC.
(COA # 29779)
1239 JABARA AVE.
NORTH PORT, FL 34288
PH. 941-380-1574

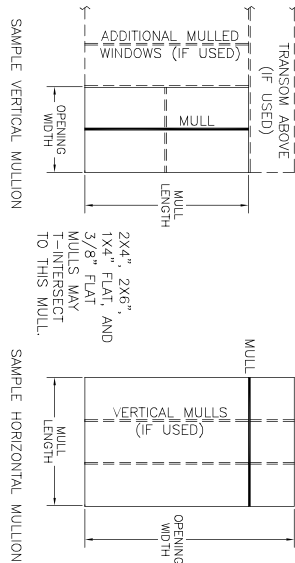
ALUMINUM MULLIONS
FOR ORIGIN WINDOWS
AND DOORS

ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259





NOTE: FOR MULLION ANCHORAGE SEE SHEETS 7 AND 8. INSTALLER TO SEAL ALL CONTACT POINTS BETWEEN GLAZED PRODUCTS AND MULLIONS. FOR ANCHORAGE OF GLAZED PRODUCTS TO MULLION, SEE SEPARATE APPROVALS AND FOLLOW INSTRUCTIONS FOR ATTACHMENT TO ALUMINUM.



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771 COMMERCE DRIVE
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Phone: 717-824-2259



CHART 2. 2x6x1/4" ALUM. MULL. 6063-T6 MIN. ALLOWABLE PRESSURES (PSF) WITH END CLIP ANCHORAGE AS SHOWN IN THIS DRAWING

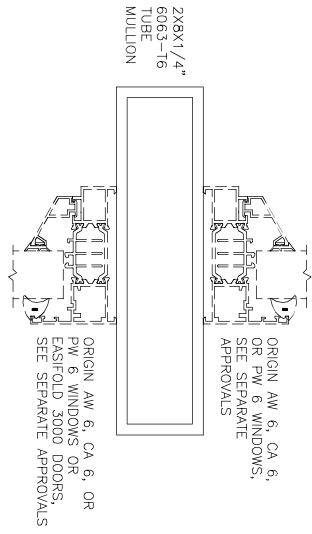
	MULL LENGTH, IN.															
	36	48	60	72	84	96	108	120	132	144	156	168	OPENING WIDTH, IN.			
96	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
102	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
108	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
114	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
120	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
126	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
132	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
138	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
144	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
150	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
156	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
162	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
168	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
174	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
180	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
186	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
192	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
198	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
204	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
210	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55



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NORTH PORT, FL 34288
PH. 941-380-1574

ALUMINUM MULLIONS
FOR ORIGIN WINDOWS
AND DOORS

DRAWN BY:	LAT
DATE:	1/26/17
SCALE:	NTS
REVISION:	
REVISION:	
DRAWING #	FPA-MULLS
SHEET DESCRIPTION	2 X 6 MULL
SHEET	3 of 8



NOTE: FOR MULLION ANCHORAGE, SEE SHEETS 7 AND 8. INSTALLER TO SEAL ALL CONTACT POINTS BETWEEN GLAZED PRODUCTS AND MULLIONS. FOR ANCHORAGE OF GLAZED PRODUCTS TO MULLION, SEE SEPARATE APPROVALS AND FOLLOW INSTRUCTIONS FOR ATTACHMENT TO ALUMINUM.

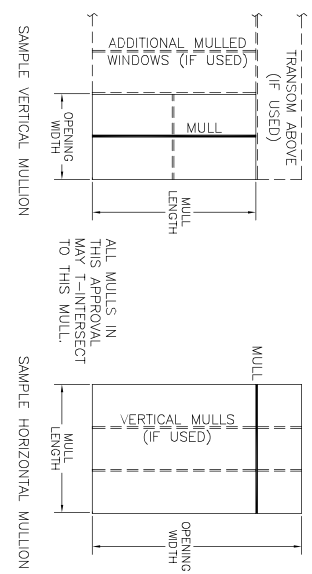


CHART 3. 2x8x1/4" ALUM. MULL, 6063-T6 MIN., ALLOWABLE PRESSURES (PSF) WITH END CLIP ANCHORAGE AS SHOWN IN THIS DRAWING.

MULL LENGTH, IN.	OPENING WIDTH, IN.															
	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	210
96	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
102	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
108	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
114	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
120	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
126	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
132	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
138	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
144	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
150	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
156	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
162	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
168	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
174	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
180	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
186	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
192	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
198	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
204	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
210	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55

1/26/2017

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LUCAS A. TURNER, P.E.

FL PE # 58201

TURNER ENGINEERING & CONSULTING, INC.

(COA # 29779)

1239 JABARA AVE.

NORTH PORT, FL 34288

PH. 941-380-1574

PROFESSIONAL ENGINEER

STATE OF FLORIDA

LUCAS A. TURNER

FL LICENSE No 58201

DATE: 1/26/17

SCALE: NTS

REVISION:

REVISION:

DRAWING # FPA-MULLS

SHEET DESCRIPTION 2 X 8 MULL

SHEET 4 OF 8

ALUMINUM MULLIONS FOR ORIGIN WINDOWS AND DOORS

ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259

origin

Windows

75

1x4" FLAT MULLION

CHART 4. 1"x4" ALUM. FLAT MULL, 6063-T6, ALLOWABLE PRESSURES (PSF) WITH ONE EXTRA ANCHOR LOCATION AT CORNER OF EACH MULLIED PRODUCT AT EACH MULL END *

		OPENING WIDTH, IN.																	
		30	36	42	48	54	60	66	72	78	84	90	96	108	120.625	132	144	156	168
MULL LENGTH, IN.	70.625	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	72	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	76	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	78	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	82.375	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	84	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	89.875	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	93	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	96	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	98.375	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	102	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	108	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	114	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	120	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	126	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	132	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	138	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	144	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	150	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	156	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	162	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	168	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	174	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
	180	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55

NOTE: SHADED AREAS IN CHART 4 ONLY APPLICABLE OUTSIDE THE HVHZ

NOTE: INSTALLER TO SEAL ALL CONTACT POINTS BETWEEN GLAZED PRODUCTS AND MULLIONS. FOR ANCHORAGE OF GLAZED PRODUCTS TO MULLION, SEE SEPARATE APPROVALS AND FOLLOW INSTRUCTIONS FOR ATTACHMENT TO ALUMINUM.

* ATTACHMENT OF MULLION TO ADDITIONAL INSTALLATION ANCHOR AT THE CORNER OF EACH MULLED WINDOW PRODUCT AT EACH MULL END. THIS APPLIES TO ORIGIN WINDOW PRODUCTS ANCHORED WITH 1/4" MASONRY FASTENERS OR #12 WOOD OR METAL SCREWS. ENSURE THAT ANCHOR LOCATIONS, MINIMUM SPACING, AND EDGE AND EMBEDMENT DISTANCES ARE AS REQUIRED IN SEPARATE WINDOW APPROVALS, E.G. "F" WINDOW APPROVAL CALLS FOR ANCHORS AT 4" FROM CORNERS AND 4" MIN. ON-CENTER BETWEEN ANCHOR LOCATIONS. PLACE ADDITIONAL ANCHORS THROUGH WINDOW FRAMING AT 8" FROM CORNER OF EACH MULLED WINDOW.

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1/26/2017
LUCAS A. TURNER, P.E.
FL PE # 58201
TURNER ENGINEERING & CONSULTING, INC.
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1239 JABARA AVE.
NORTH PORT, FL 34288
PH. 941-380-1574

ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259

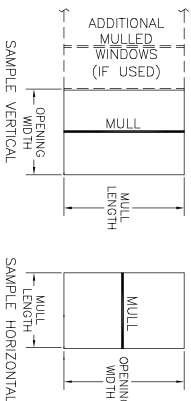
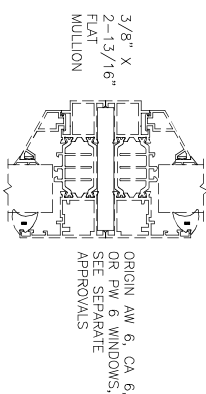
DRAWN BY: LAT
DATE: 1/26/17
SCALE: NTS
REVISION:
REVISION:
DRAWN BY: FPA-MULLS
SHEET DESCRIPTION: 1 X 4 FLAT MULL
SHEET: 5 OF 8

CHART 5. 3/8"X2-13/16" ALUM. FLAT MULL, 6063-T6, ALLOWABLE PRESSURES (PSF) WITH ONE EXTRA ANCHOR LOCATION AT CORNER OF EACH MULLIED PRODUCT AT EACH MULL END *

MULL LENGTH, IN.		OPENING WIDTH, IN.																					
		30	36	42	48	54	60	66	72	78	84	90	96	104	108	114	120	126	132	138	144		
56	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
60	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
64	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
68	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
72	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
76	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
81	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
84	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
88	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
92	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
96	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
102	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
108	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
114	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
120	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
126	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
132	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		

CHART 6. 3/8"X2-13/16" ALUM. FLAT MULL, 6063-T6, NON-IMPACT NON-HVHZ ALLOWABLE PRESSURES (PSF) WITH ONE EXTRA ANCHOR LOCATION AT CORNER OF EACH MULLIED PRODUCT AT EACH MULL END *

MULL LENGTH, IN.		OPENING WIDTH, IN.																					
		30	36	42	48	54	60	66	72	78	84	90	96	104	108	114	120	126	132	138	144		
56	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
60	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
64	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
68	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
72	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
76	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
81	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
84	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
88	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
92	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
96	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
102	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
108	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
114	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
120	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
126	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
132	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		



NOTE: SHADED AREAS IN CHART 5, AND ALL OF CHART 6, ONLY APPLICABLE OUTSIDE THE HVHZ

NOTE: INSTALLER TO SEAL ALL CONTACT POINTS BETWEEN GLAZED PRODUCTS TO MULLION. FOR ANCHORAGE OF GLAZED PRODUCTS TO MULLION, SEE SEPARATE APPROVALS AND FOLLOW INSTRUCTIONS FOR ATTACHMENT TO ALUMINUM.

* ATTACHMENT OF MULLION TO OPENING SUBSTRATE IS VIA AN ADDITIONAL INSTALLATION ANCHOR AT THE CORNER OF EACH MULLIED WINDOW PRODUCT AT EACH MULL END. THIS APPLIES TO ORIGIN WINDOW PRODUCTS ANCHORED WITH 1/4" MASONRY FASTENERS OR #12 WOOD OR METAL SCREWS. ENSURE THAT ANCHOR LOCATIONS, MINIMUM SPACING, AND EDGE AND EMBEDMENT DISTANCES ARE AS REQUIRED IN SEPARATE WINDOW APPROVALS, E.G. IF WINDOW APPROVAL CALLS FOR ANCHORS AT 4" FROM CORNERS AND 4" MIN. ON-CENTER BETWEEN ANCHOR LOCATIONS, PLACE ADDITIONAL ANCHORS THROUGH WINDOW FRAMING AT 8" FROM CORNER OF EACH MULLIED WINDOW.



1/26/2017
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NORTH PORT, FL 34288
PH. 941-380-1574

ORIGIN USA INC.
771 COMMERCE DRIVE
SUITE 16
VENICE, FL 34292
Phone: 717-824-2259



ALUMINUM MULLIONS
FOR ORIGIN WINDOWS
AND DOORS

DRAWN BY:
LAT

DATE:
1/26/17

SCALE:
NTS

REVISION:

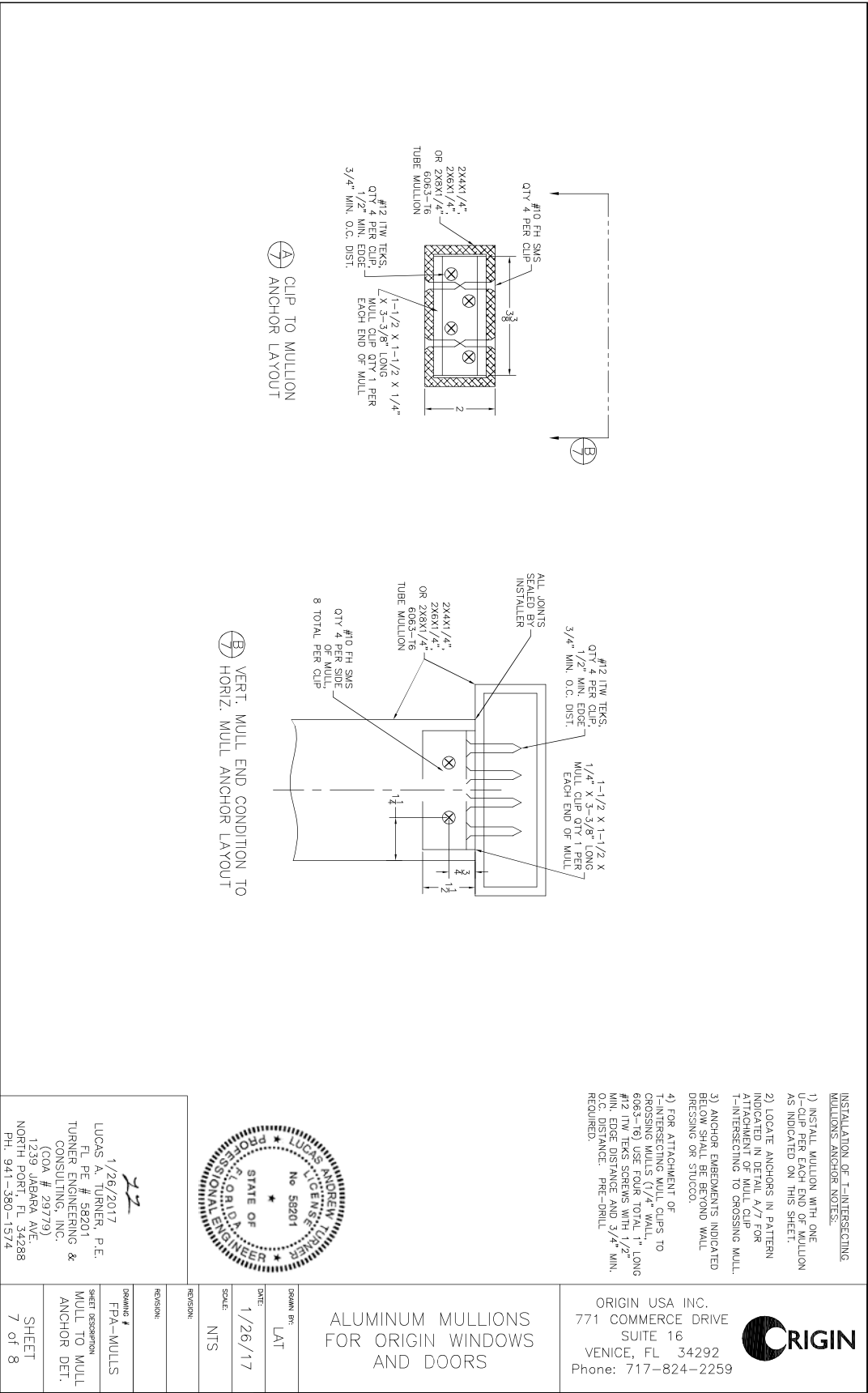
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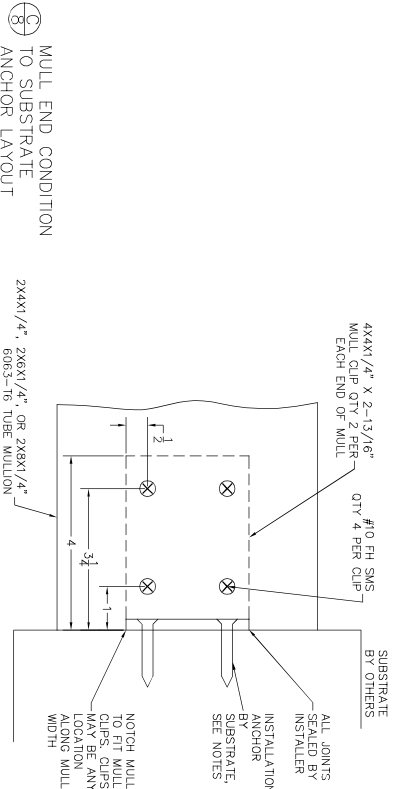
DRAWING #
FPA-MULLS

SHEET DESCRIPTION
3/8" FLAT

MULL

SHEET
6 of 8





5) FOR ATTACHMENT TO SOLID CONCRETE (3KSI MIN.) OR REINFORCED GROUT-FILLED CMU (ASTM C90) USE FOUR TOTAL (2 PER CLIP) 1/4" ELCO AGGRE-GATOR 300 SERIES WITH 2" MIN. PENETRATION INTO CONCRETE/CMU AND 2" MIN. EDGE DISTANCE. MAINTAIN 3" MIN. CENTER-TO-CENTER DISTANCE BETWEEN ALL AGGRE-GATORS.



1239 JABARA AVE.
NORTH PORT, FL 34288
PH. 941-380-1574

SHEET
8 of 8



Origin USA Inc.,
700 Commerce Drive, Suite 16,
Venice, Florida, 34292

t 941-484-4861
e info@originbifolds.com
w www.originbifolds.com