



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 colors, woodgrain effects or in AAMA 2605 (Kynar 500® or Hylar®)
- ▶ 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

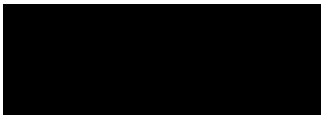


*Max weight refers to the maximum glazed sash weight.

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 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).

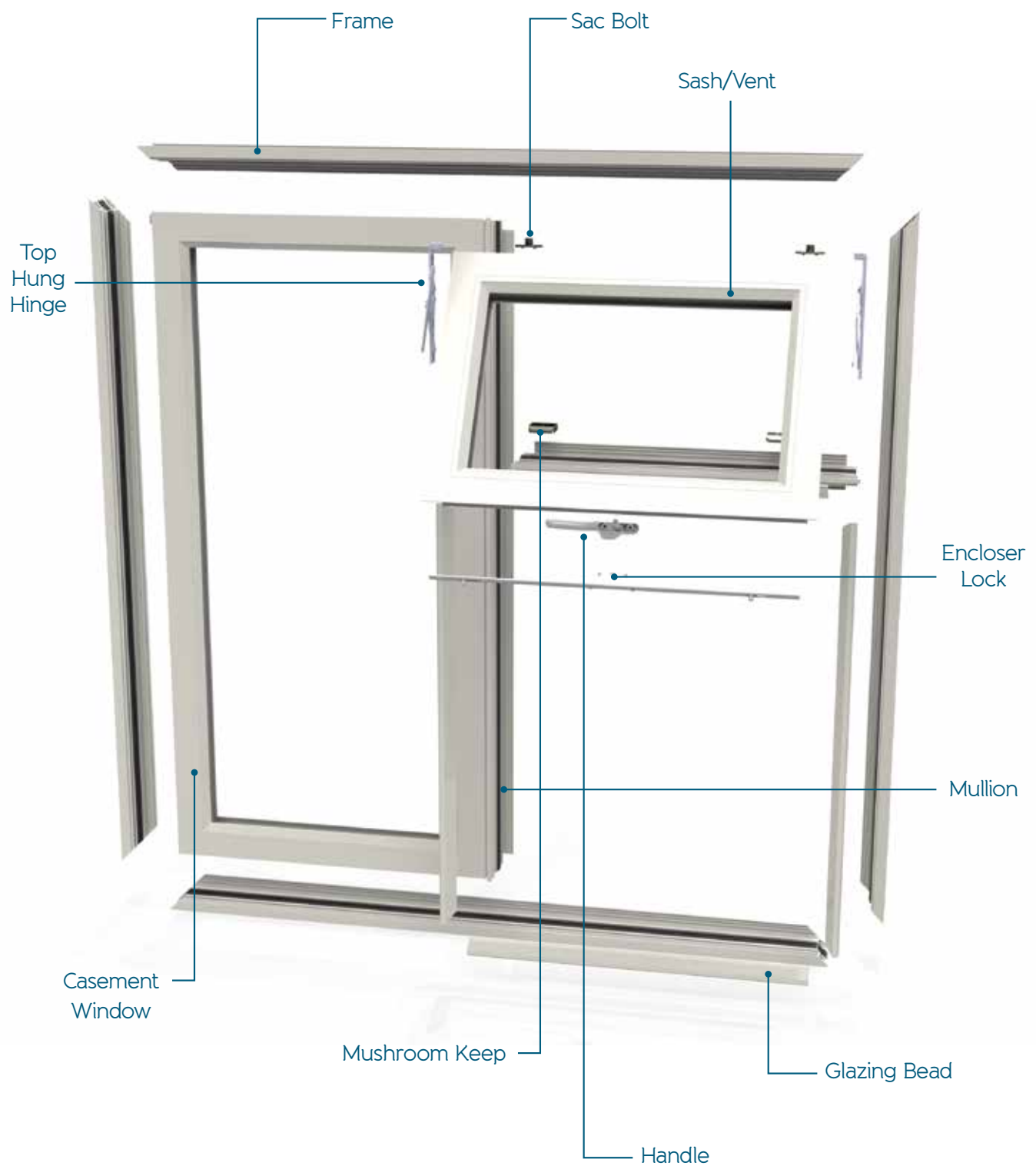


Origin hinges are made of stainless steel for enhanced corrosion resistance. The hinges are tested to 50,000 open and close operations and feature a friction adjustment without metal to metal contact, ensuring minimum wear.

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
E240 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.16	0.22
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
E240 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.33	0.16	0.22
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
E240 / arg90 / lami (4.7mm/4.7mm 090SGP 4.7mm) – 28mm IG	0.30	0.21	0.31
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

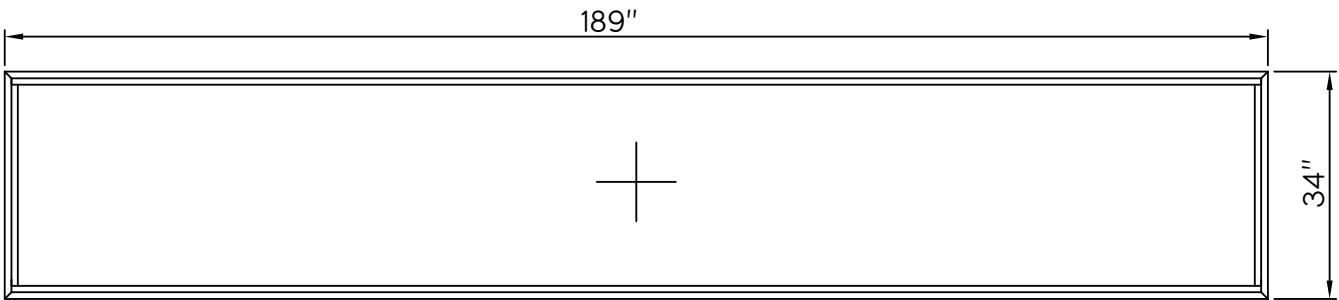
Fixed Window

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.

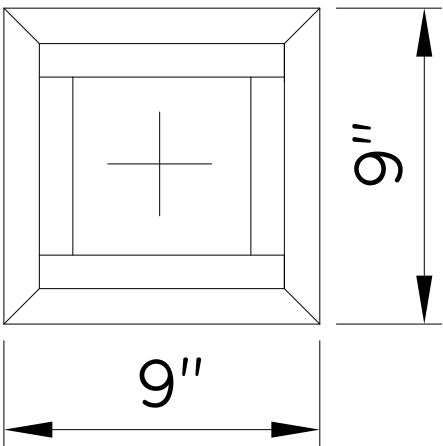
The Origin Fixed Window is impact rated: DP +55,-55

Maximum Specification

Maximum width and height	189"
Maximum area	40 ft ²

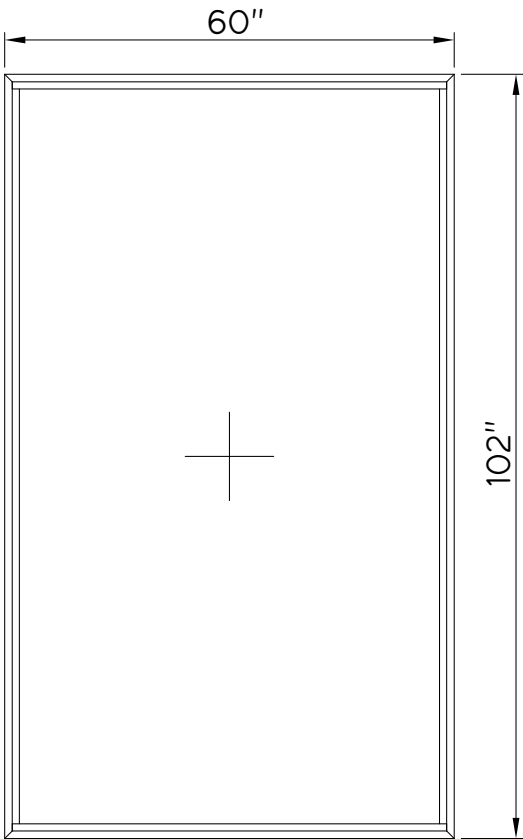


Example 1

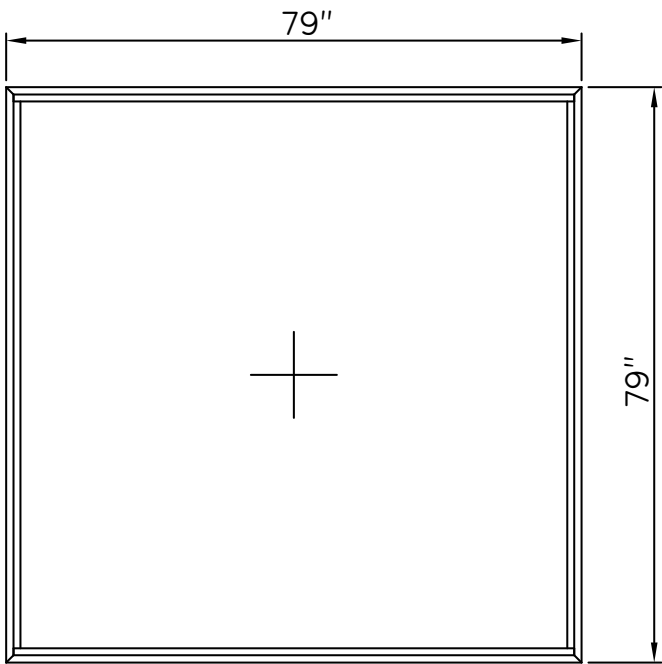


Minimum Specification (Direct Set)

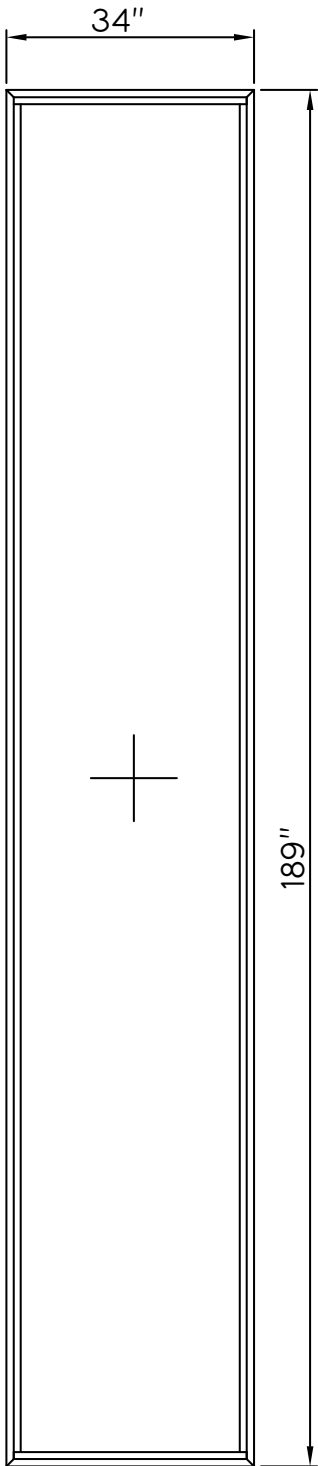
Minimum width and height	9"
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Example 2



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.

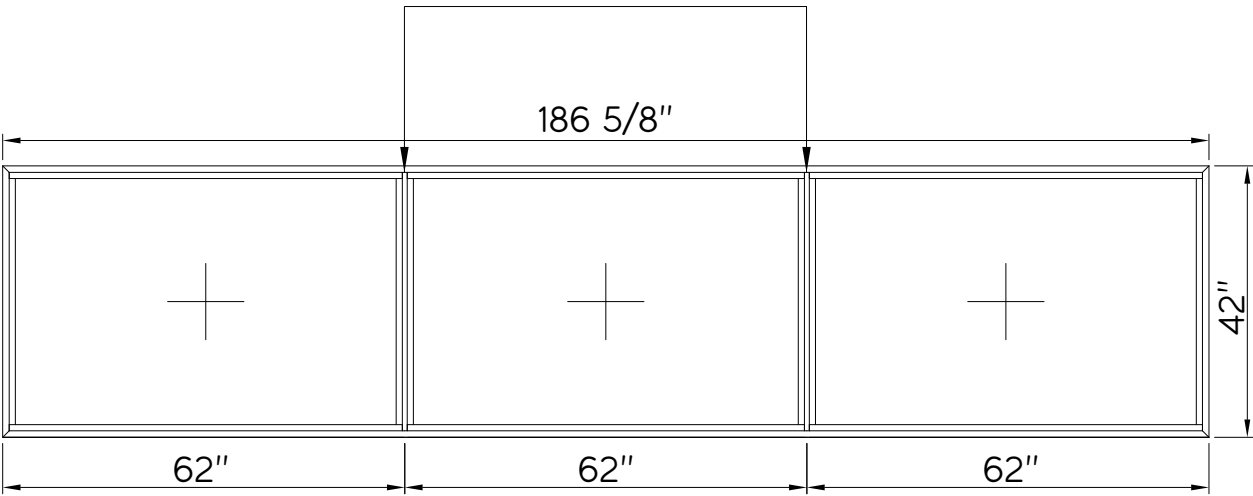
The Origin Transom is impact rated: DP +50/-55

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:

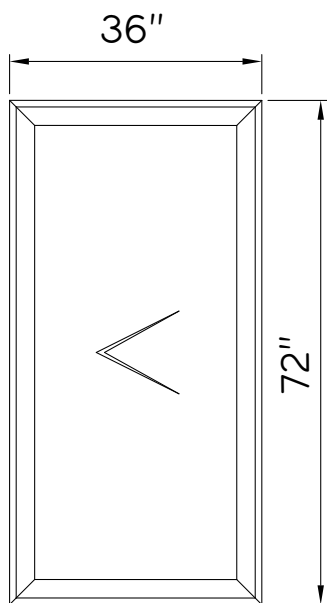
Infinite, but will depend on the size of the overall window and how small we can cut the bead to fit between them



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

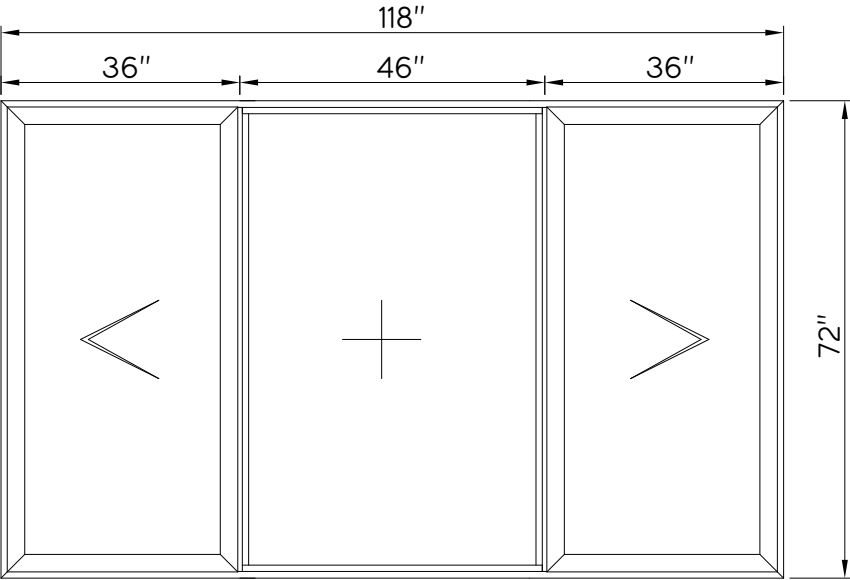
Maximum width	36"
Maximum height	72"

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

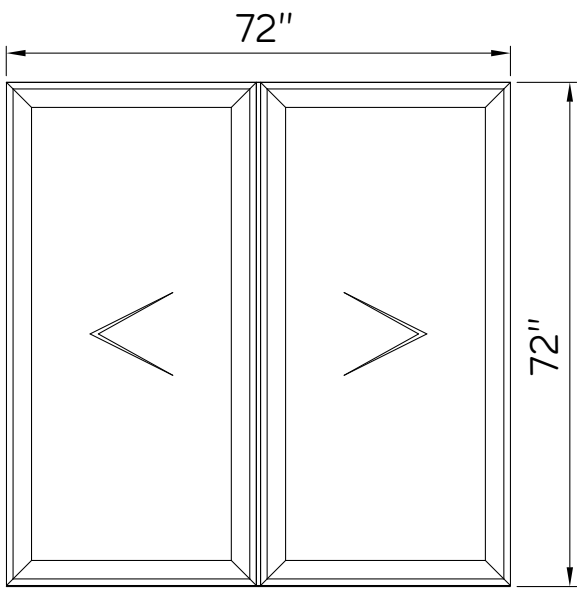
Specifications

Maximum width: 118"

Maximum height: 72"

Minimum width: 9"

Minimum height: 9"



Twin Casement

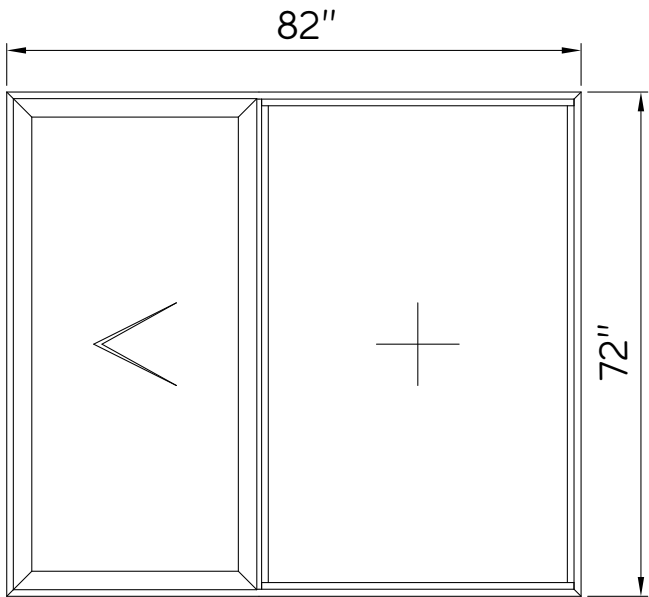
Specifications

Max' width: 72"

Max' height: 72"

Min' width: 32"

Min' height: 16"



Casement Fixed

Specifications

Max' width: 82"

Max' height: 72"

Min' width: 25"

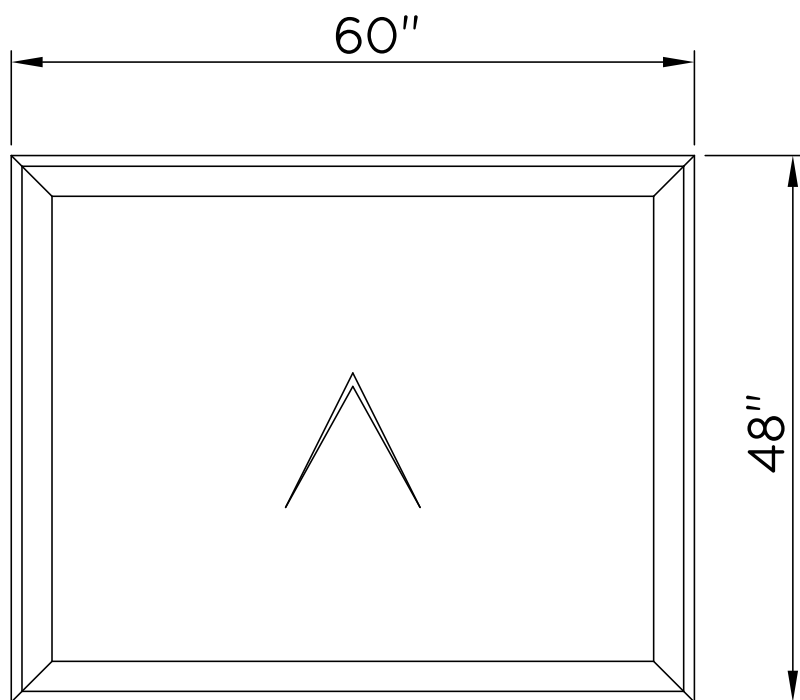
Min' height: 16"

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"

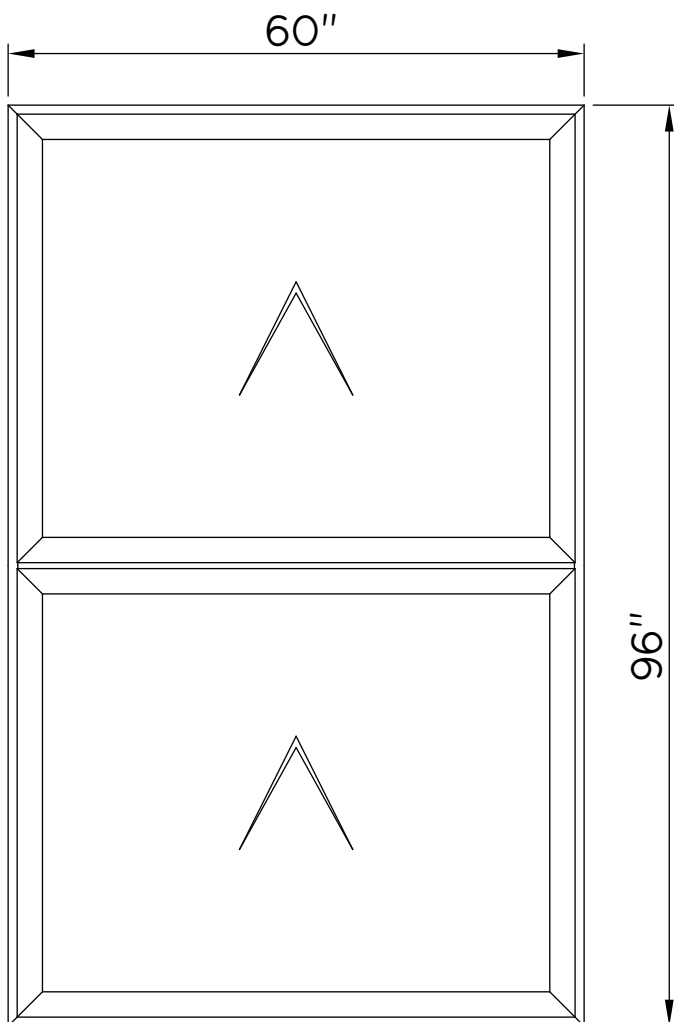
Single Awning Window

Double Awning

Specifications (Double Awning)

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

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



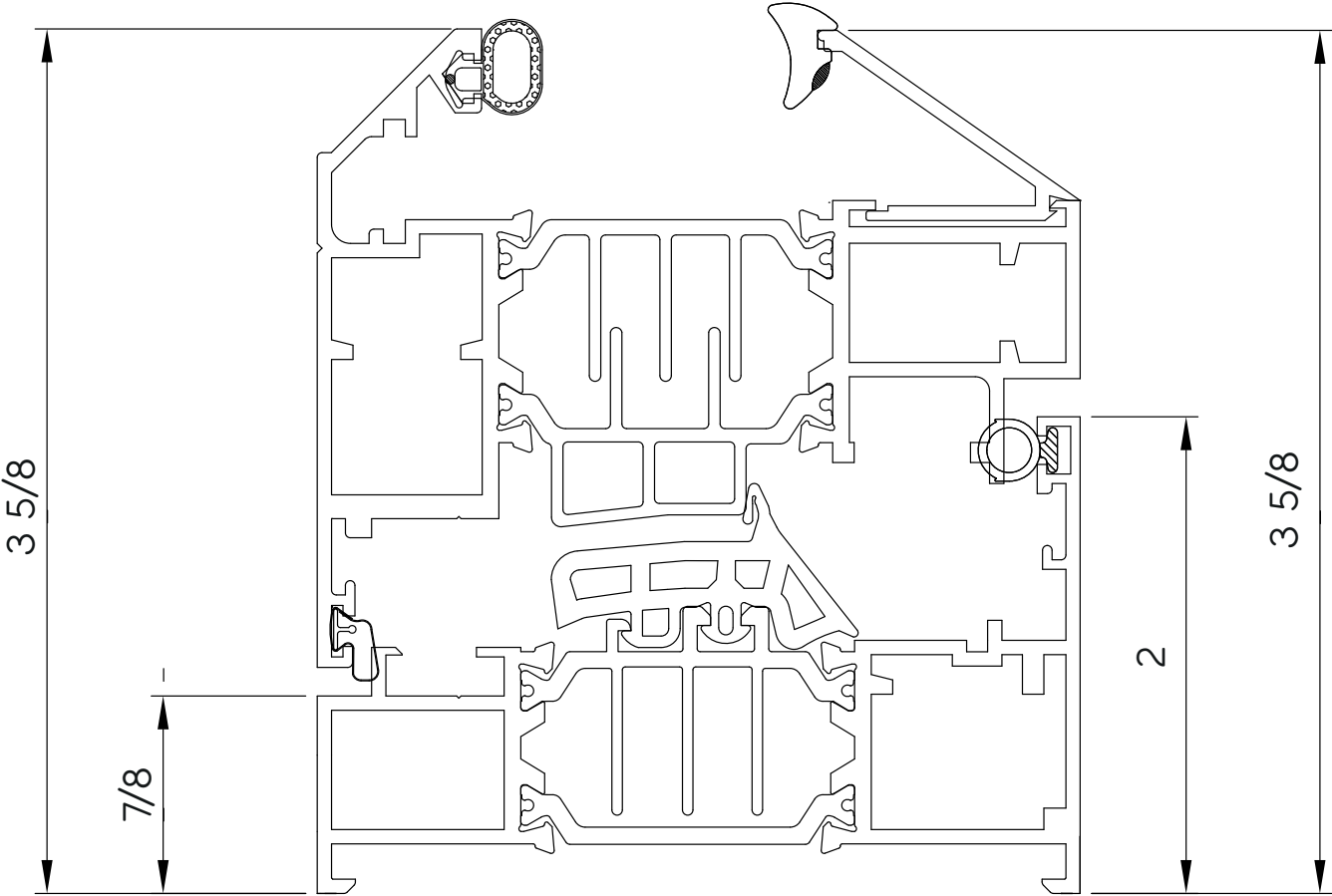
Double Awning

Technical drawings

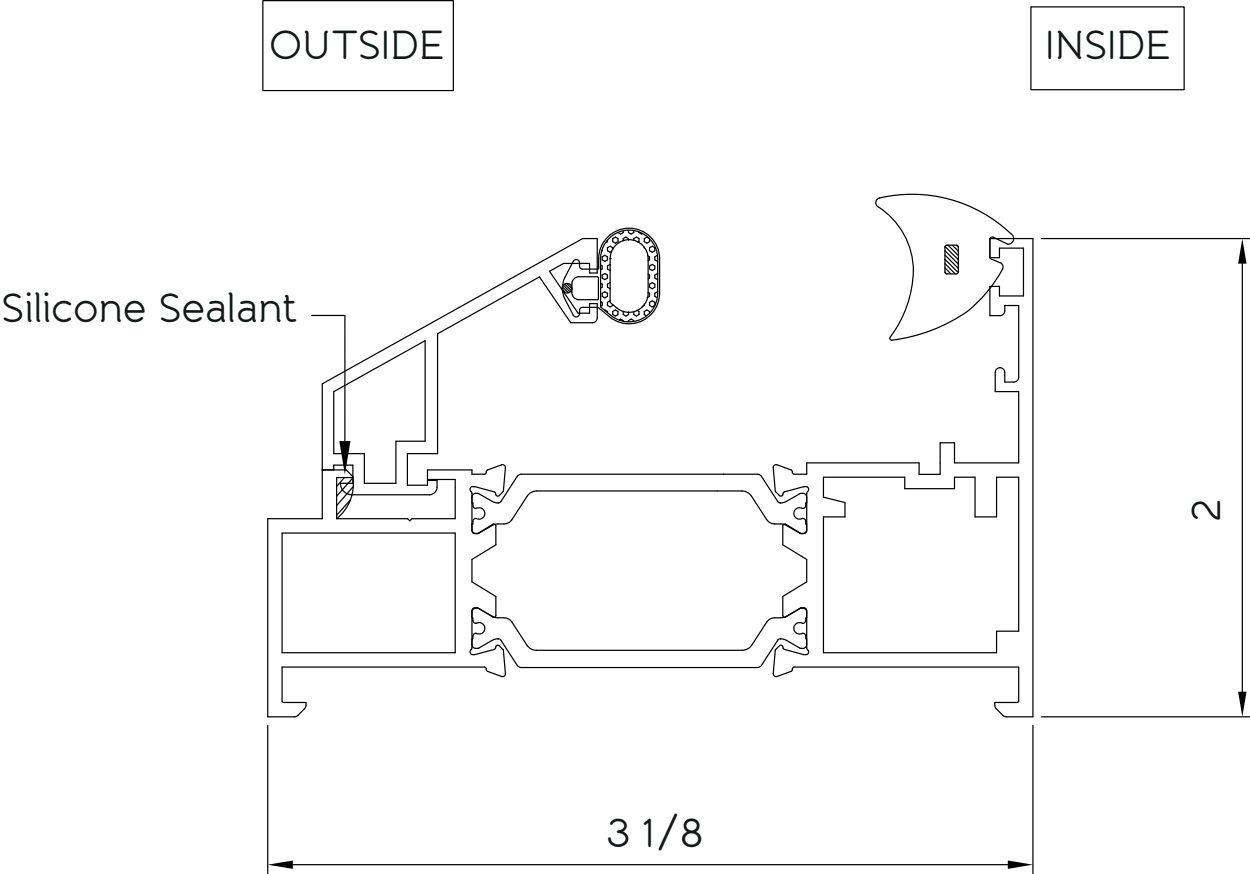
Sill, frame and sash

OUTSIDE

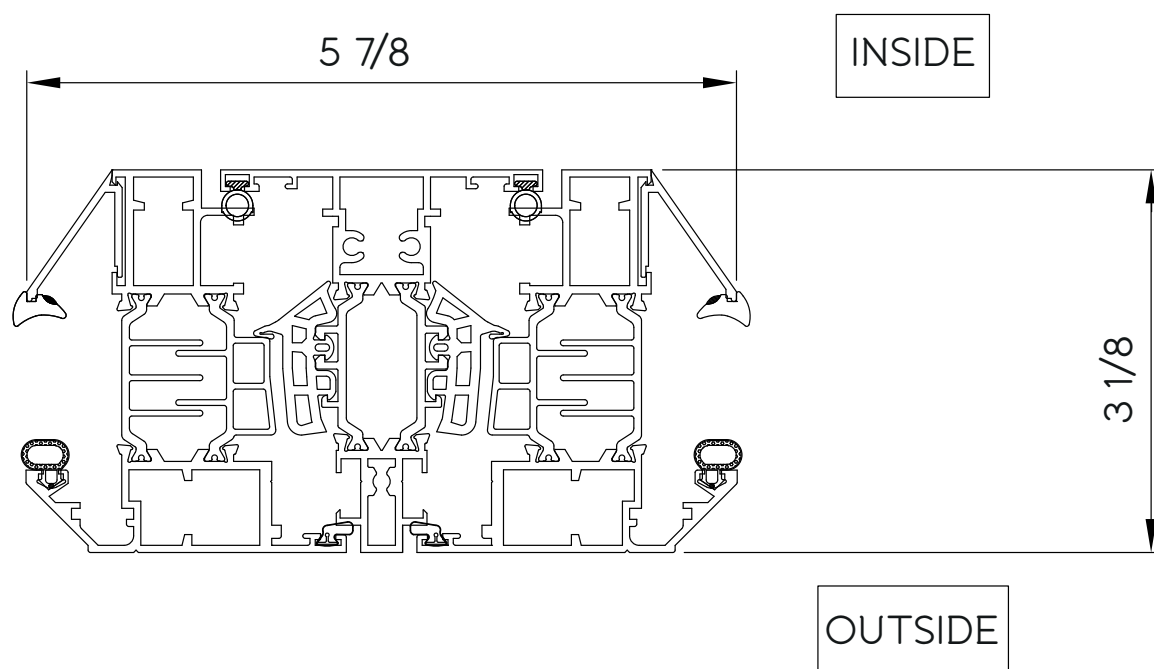
INSIDE



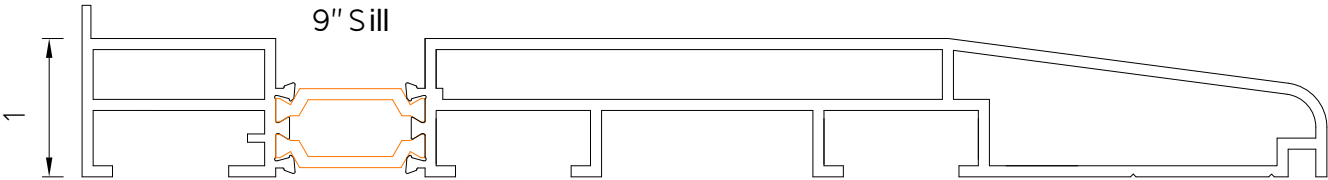
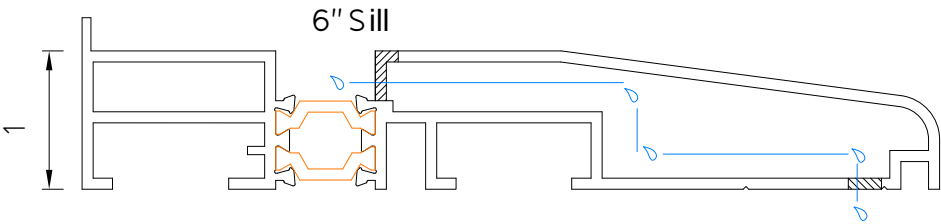
Fixed frame



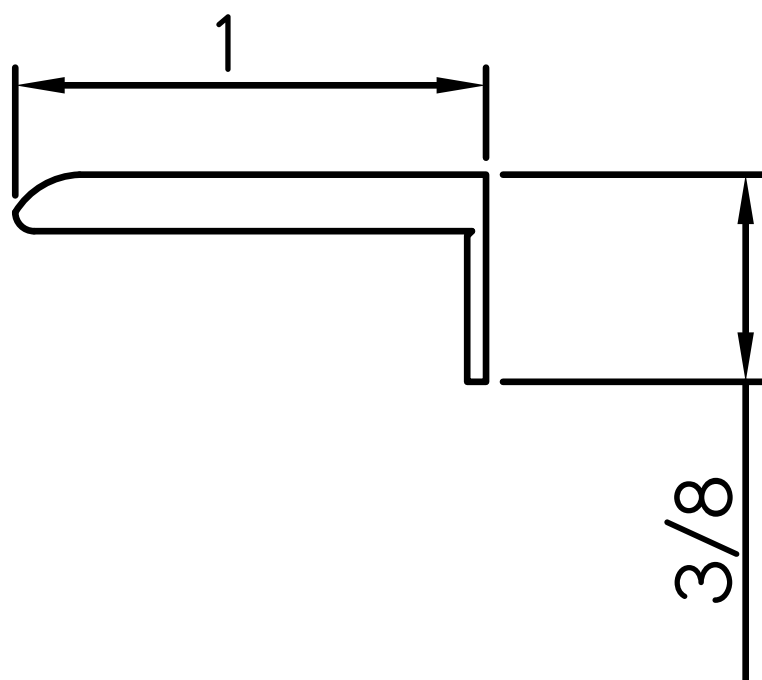
Mullion and sash sightlines



Standard Sill (optional extra)



Trim (Optional Extra)



Standard Window Sizes

Awning - standard sizes

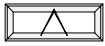
Window Width	1' 7½"	1' 11½"	2' 3½"	2' 5½"	2' 7½"	2' 9½"	2' 11½"	3' 1½"
	(495)	(597)	(699)	(749)	(800)	(851)	(902)	(953)
Rough Opening	1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	2' 10"	3' 0"	3' 2"
	(508)	(610)	(711)	(762)	(813)	(864)	(914)	(965)
Window Height	1' 4½"							
	(419)							
	1' 7½"							
	(495)					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

- 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.

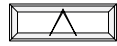
3' 3½"	3' 7½"	3' 11½"	4' 3½"	4' 7½"	4' 11½"
(1003)	(1105)	(1207)	(1308)	(1410)	(1511)
3' 4"	3' 8"	4' 0"	4' 4"	4' 8"	5' 0"
(1016)	(1118)	(1219)	(1321)	(1422)	(1524)



A3415



A3815



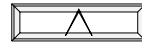
A4015



A4415



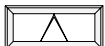
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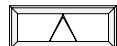
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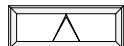
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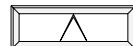
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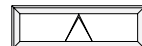
A4018



A4418



A4818



A5018



A34110



A38110



A40110



A44110



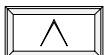
A48110



A50110



A3420



A3820



A4020



A4420



A4820



A5020



A3424



A3824



A4024



A4424



A4824



A5024



A3428



A3828



A4028



A4428



A4828



A5028



A3430



A3830



A4030



A4430



A4830



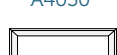
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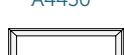
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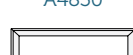
A3834



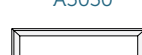
A4034



A4434



A4834



A5034



A3438



A3838



A4038



A4438



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.
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- Dimensions in parentheses are in millimeters.

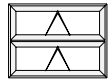
3' 3½" (1003)	3' 7½" (1105)	3' 11½" (1207)	4' 3½" (1308)	4' 7½" (1410)	4' 11½" (1511)
3' 4" (1016)	3' 8" (1118)	4' 0" (1219)	4' 4" (1321)	4' 8" (1422)	5' 0" (1524)



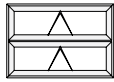
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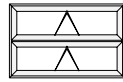
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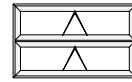
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AA4430



AA4830



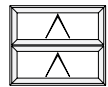
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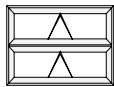
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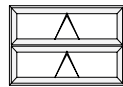
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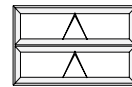
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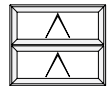
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AA4438



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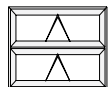
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AA4040



AA4440



AA4840



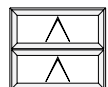
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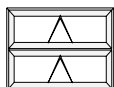
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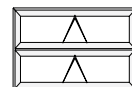
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AA4444



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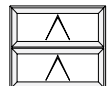
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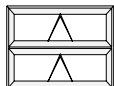
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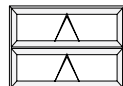
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AA4448



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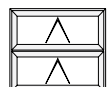
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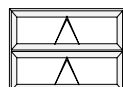
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AA4450



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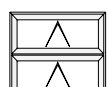
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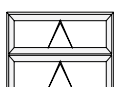
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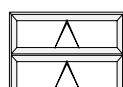
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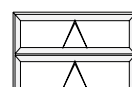
AA4054



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' 8"							
		(914)							
		5' 11½"							
		(1816)							
		6' 0"							
		(1829)							
Rough Opening	Window Height	6' 3½"							
		(1105)							
		6' 4"							
		(1930)							
		6' 7½"							
		(2019)							
		6' 8"							
		(1219)							
Rough Opening	Window Height	6' 11½"							
		(2121)							
		7' 0"							
		(2134)							
		7' 3½"							
		(2223)							
		7' 4"							
		(2235)							
Rough Opening	Window Height	7' 7½"							
		(2324)							
		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.

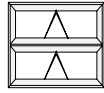
3' 3½"	3' 7½"	3' 11½"	4' 3½"	4' 7½"	4' 11½"
(1003)	(1105)	(1207)	(1308)	(1410)	(1511)
3' 4"	3' 8"	4' 0"	4' 4"	4' 8"	5' 0"
(1016)	(1118)	(1219)	(1321)	(1422)	(1524)



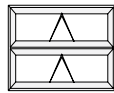
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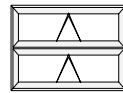
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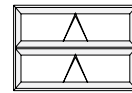
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AA4458



AA4858



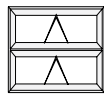
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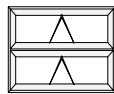
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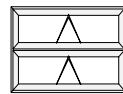
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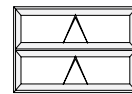
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AA4460



AA4860



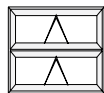
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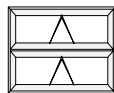
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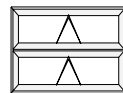
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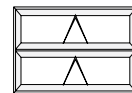
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AA4464



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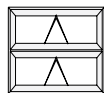
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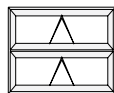
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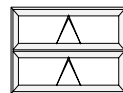
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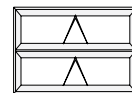
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AA4468



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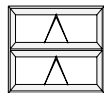
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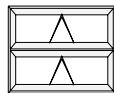
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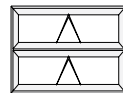
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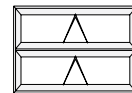
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AA4470



AA4870



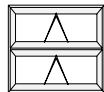
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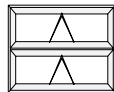
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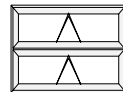
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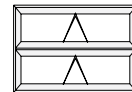
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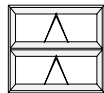
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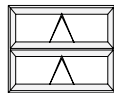
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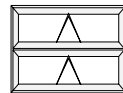
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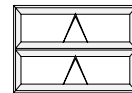
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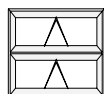
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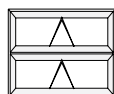
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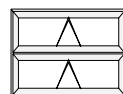
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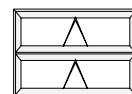
AA4080



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
6' 11½"				
6' 11½" (1511)	F6640	F7040	F7640	F8040
7' 0"				
7' 0" (1524)	F6646	F7046	F7646	F8046
7' 6"				
7' 6" (1676)	F6650	F7050	F7650	F8050
7' 11½"				
7' 11½" (1816)	F6656	F7056	F7656	
8' 0"				
8' 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)
+ F8610	+ F9010	+ F9610	+ F10010
+ F8616	+ F9016	+ F9616	+ F10016
+ F8620	+ F9020	+ F9620	+ F10020
+ F8626	+ F9026	+ F9626	+ F10026
+ F8630	+ F9030	+ F9630	+ F10030
+ F8636	+ F9036	+ F9636	+ F10036
+ F8640	+ F9040	+ F9640	+ F10040
+ F8646			

Standard Window Sizes

Fixed Windows - standard sizes

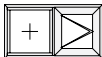
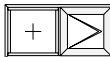
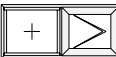
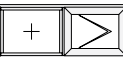
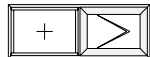
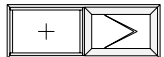
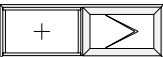
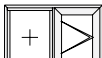
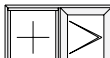
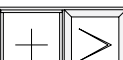
Window Width	11½"	1' 5½"	1' 11½"	2' 5½"	2' 11½"	3' 5½"
	(292)	(445)	(597)	(749)	(902)	(1054)
Rough Opening	1' 0"	1' 6"	2' 0"	2' 6"	3' 0"	3' 6"
	(305)	(457)	(610)	(762)	(914)	(1067)
6' 5½"						
6' 11½"						
7' 5½"						
7' 11½"						
8' 5½"						
8' 11½"						
9' 5½"						
9' 11½"						
10' 0"						
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.

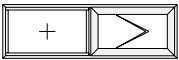
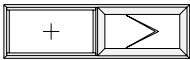
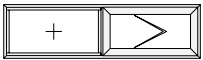
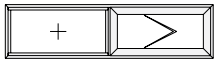
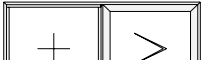
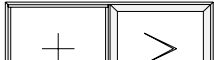
3' 11½" (1207)	4' 5½" (1359)	4' 11½" (1511)	5' 5½" (1664)	5' 11½" (1816)
4' 0" (1219)	4' 6" (1372)	5' 0" (1524)	5' 6" (1676)	6' 0" (1829)
+ F4066	+ F4666	+ F5066	+ F5666	+ F6066
+ F4070	+ F4670	+ F5070	+ F5670	
+ F4076	+ F4676	+ F5076		
+ F4080	+ F4680	+ F5080		
+ F4086	+ F4686			
+ F4090				
+ F4096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

Standard Window Sizes

Fixed Casement - standard sizes

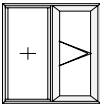
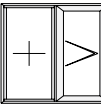
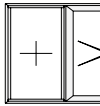
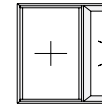
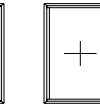
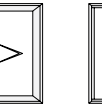
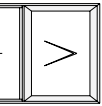
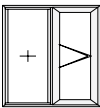
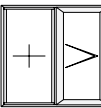
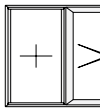
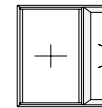
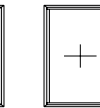
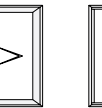
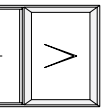
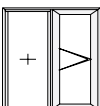
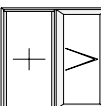
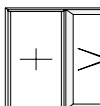
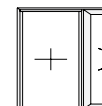
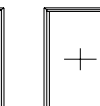
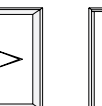
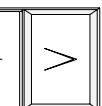
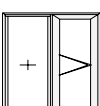
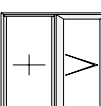
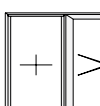
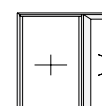
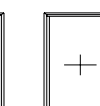
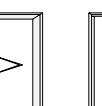
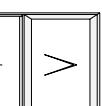
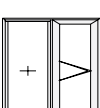
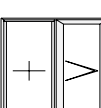
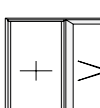
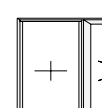
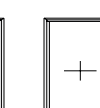
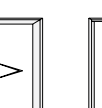
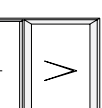
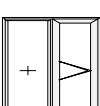
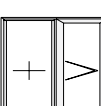
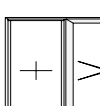
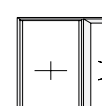
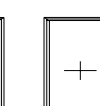
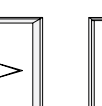
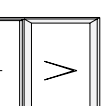
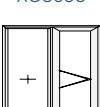
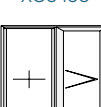
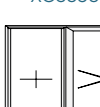
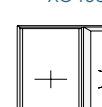
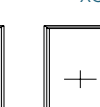
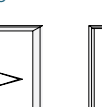
Window Width		2' 11½" (902)	3' 1½" (953)	3' 7½" (1105)	3' 11½" (1207)	4' 3½" (1308)	4' 7½" (1410)	4' 11½" (1511)
Rough Opening		3' 0" (914)	3' 2" (965)	3' 8" (1118)	4' 0" (1219)	4' 4" (1321)	4' 8" (1422)	5' 0" (1524)
Window Height	1' 7½" (495)	 XO3018	 XO3418	 XO3818	 XO4018	 XO4418	 XO4818	 XO5018
	1' 11½" (597)	 XO3020	 XO3420	 XO3820	 XO4020	 XO4420	 XO4820	 XO5020
	2' 3½" (699)	 XO3024	 XO3424	 XO3824	 XO4024	 XO4424	 XO4824	 XO5024
	2' 7½" (800)	 XO3028	 XO3428	 XO3828	 XO4028	 XO4428	 XO4828	 XO5028
	2' 11½" (902)	 XO3030	 XO3430	 XO3830	 XO4030	 XO4430	 XO4830	 XO5030
	3' 3½" (1003)	 XO3034	 XO3434	 XO3834	 XO4034	 XO4434	 XO4834	 XO5034
	3' 7½" (1105)	 XO3038	 XO3438	 XO3838	 XO4038	 XO4438	 XO4838	 XO5038
Rough Opening								
• 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

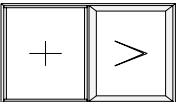
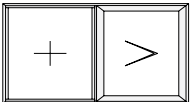
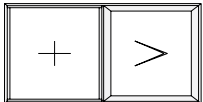
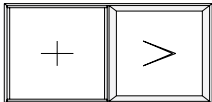
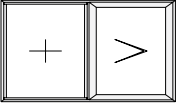
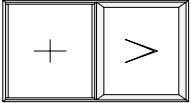
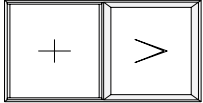
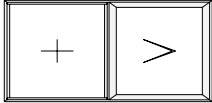
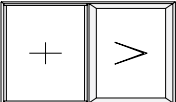
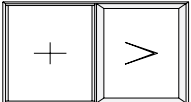
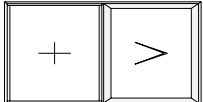
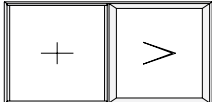
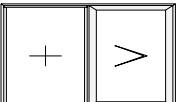
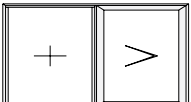
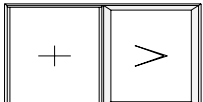
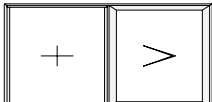
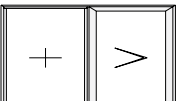
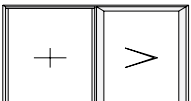
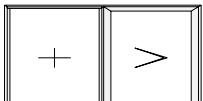
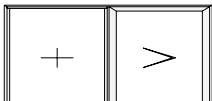
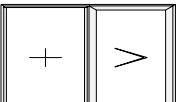
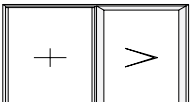
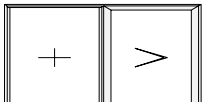
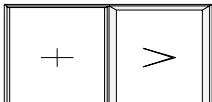
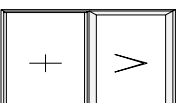
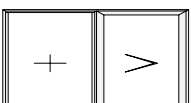
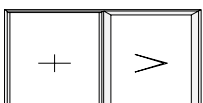
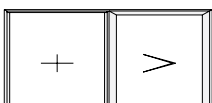
Standard Window Sizes

Fixed Casement - standard sizes

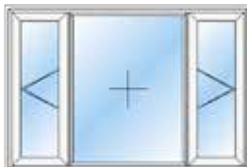
Window Width		2' 11½"	3' 1½"	3' 7½"	3' 11½"	4' 3½"	4' 7½"	4' 11½"	
		(902)	(953)	(1105)	(1207)	(1308)	(1410)	(1511)	
Rough Opening		3' 0"	3' 2"	3' 8"	4' 0"	4' 4"	4' 8"	5' 0"	
		(914)	(965)	(1118)	(1219)	(1321)	(1422)	(1524)	
Window Height	Rough Opening	3' 11½" (1207) 4' 0" (1219)	 XO3040	 XO3440	 XO3840	 XO4040	 XO4440	 XO4840	 XO5040
		4' 3½" (1308) 4' 4" (1321)	 XO3044	 XO3444	 XO3844	 XO4044	 XO4444	 XO4844	 XO5044
		4' 7½" (1410) 4' 8" (1422)	 XO3048	 XO3448	 XO3848	 XO4048	 XO4448	 XO4848	 XO5048
		4' 11½" (1511) 5' 0" (1524)	 XO3050	 XO3450	 XO3850	 XO4050	 XO4450	 XO4850	 XO5050
		5' 3½" (1613) 5' 4" (1626)	 XO3054	 XO3454	 XO3854	 XO4054	 XO4454	 XO4854	 XO5054
		5' 7½" (1715) 5' 8" (1727)	 XO3058	 XO3458	 XO3858	 XO4058	 XO4458	 XO4858	 XO5058
		5' 11½" (1816) 6' 0" (1829)	 XO3060	 XO3460	 XO3860	 XO4060	 XO4460	 XO4860	 XO5060

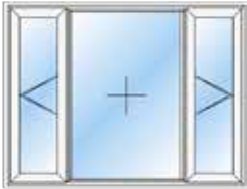
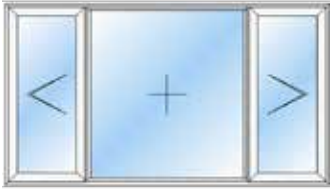
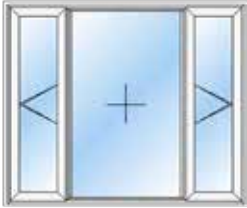
- Windows depicted as egress have been taken from the ICC Building Code.
- Note: Check your local building code for egress standards in your area in case they differ from the ICC Building Code.
- The minimum net clear opening area shall be 5.7 square feet. The minimum net clear opening height shall be 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)

			
XO5440	XO5840	XO6040	XO6440
			
XO5444	XO5844	XO6044	XO6444
			
XO5448	XO5848	XO6048	XO6448
			
XO5450	XO5850	XO6050	XO6450
			
XO5454	XO5854	XO6054	XO6454
			
XO5458	XO5858	XO6058	XO6458
			
XO5460	XO5860	XO6060	XO6460

Casement Fixed Casement - standard sizes

Window Width		5' 11½"	7' 11½"	9' 11½"		
Width		(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		
		2' 0"	2' 6"	3' 0"	3' 6"	4' 0"
		(610)	(762)	(914)	(1067)	(1219)

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"	 CFC 16-3046-16	 CFC 20-4046-20	 CFC 26-5046-26
	4' 11½"			
	5' 5½"			
Rough Opening	4' 6"	 CFC 16-3050-16	 CFC 20-4050-20	 CFC 26-5050-26
	5' 0"			
	5' 6"			
		CFC 16-3056-16	CFC 20-4056-20	CFC 26-5056-26

- 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

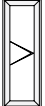
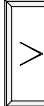
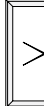
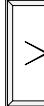
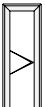
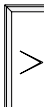
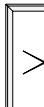
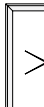
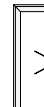
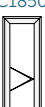
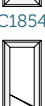
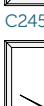
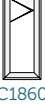
Window Width	1' 7½"	1' 11½"	2' 3½"	2' 5½"	2' 7½"	2' 9½"	2' 11½"
	(495)	(597)	(699)	(749)	(800)	(851)	(902)
Rough Opening	1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	2' 10"	3' 0"
	(508)	(610)	(711)	(762)	(813)	(864)	(914)
1' 11½"	 C1820	 C2020	 C2420				
2' 3½"	 C1824	 C2024	 C2424	 C2624	 C2824		
2' 7½"	 C1828	 C2028	 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"							

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- 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

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.
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- "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.

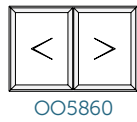
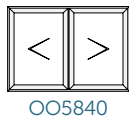
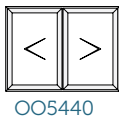
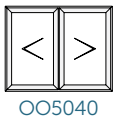
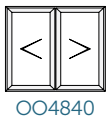
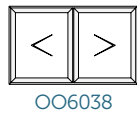
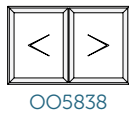
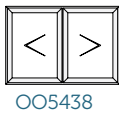
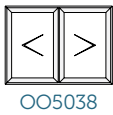
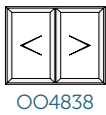
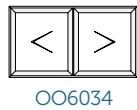
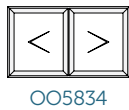
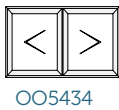
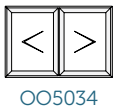
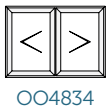
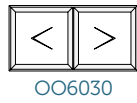
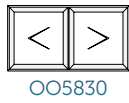
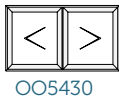
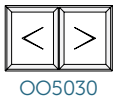
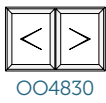
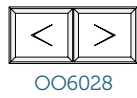
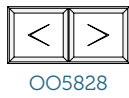
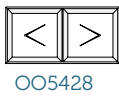
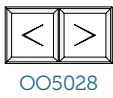
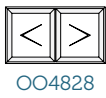
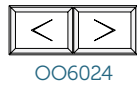
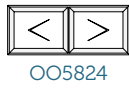
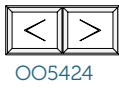
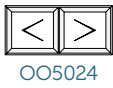
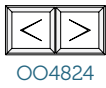
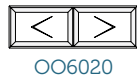
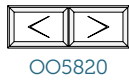
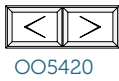
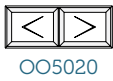
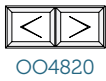
Standard Window Sizes

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.

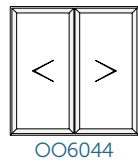
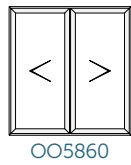
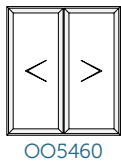
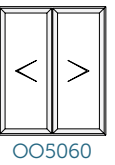
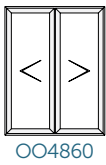
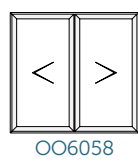
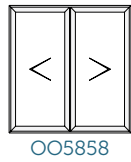
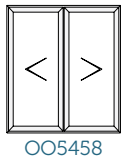
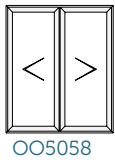
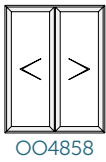
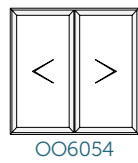
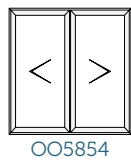
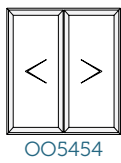
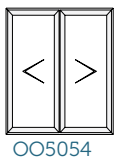
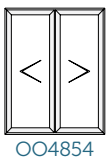
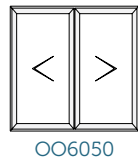
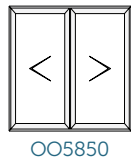
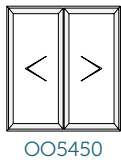
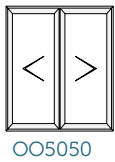
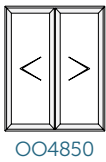
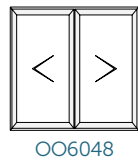
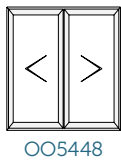
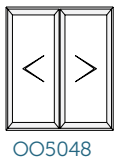
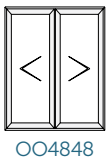
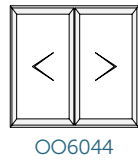
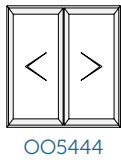
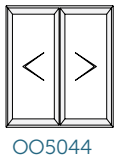
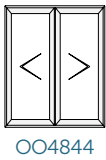
4' 7½"	4' 11½"	5' 3½"	5' 7½"	5' 11"
(1410)	(1511)	(1613)	(1715)	(1816)
4' 8"	5' 0"	5' 4"	5' 8"	6' 0"
(1422)	(1524)	(1626)	(1727)	(1829)



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	4' 3½"				
	(1308)				
	4' 4"				
	(1321)				
Rough Opening	4' 7½"				
	(1410)				
	4' 8"				
	(1422)				
Window Height	4' 11½"				
	(1511)				
	5' 0"				
	(1524)				
Rough Opening	5' 3½"				
	(1613)				
	5' 4"				
	(1626)				
Window Height	5' 7½"				
	(1715)				
	5' 8"				
	(1727)				
Rough Opening	5' 11½"				
	(1816)				
	6' 0"				
	(1829)				
• 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)



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.

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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.
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- ▶ 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.

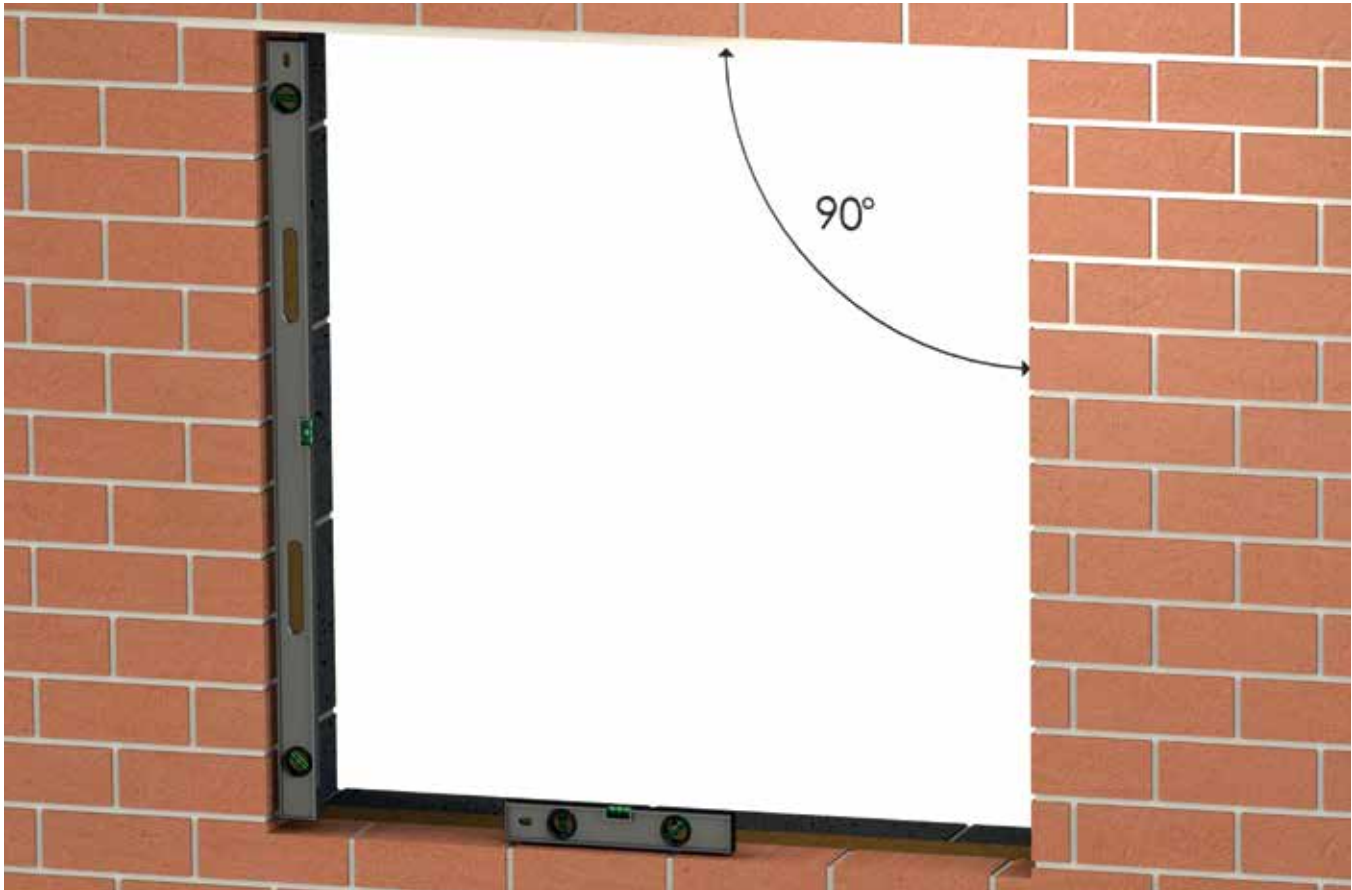
As a material term and condition of this purchase contract and the attached warranty, Customer must inspect the Origin product upon delivery and report any damage within five (5) days of receipt of the product. The failure to do so will void the attached warranty for all defects whatsoever.

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.

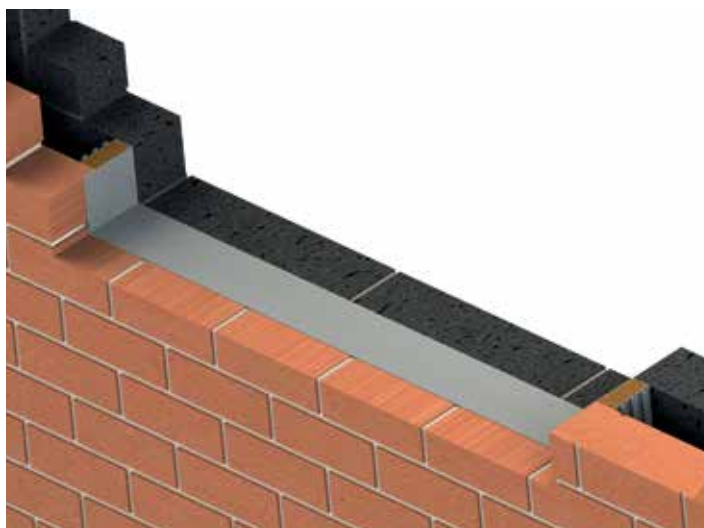
Installation guide

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.

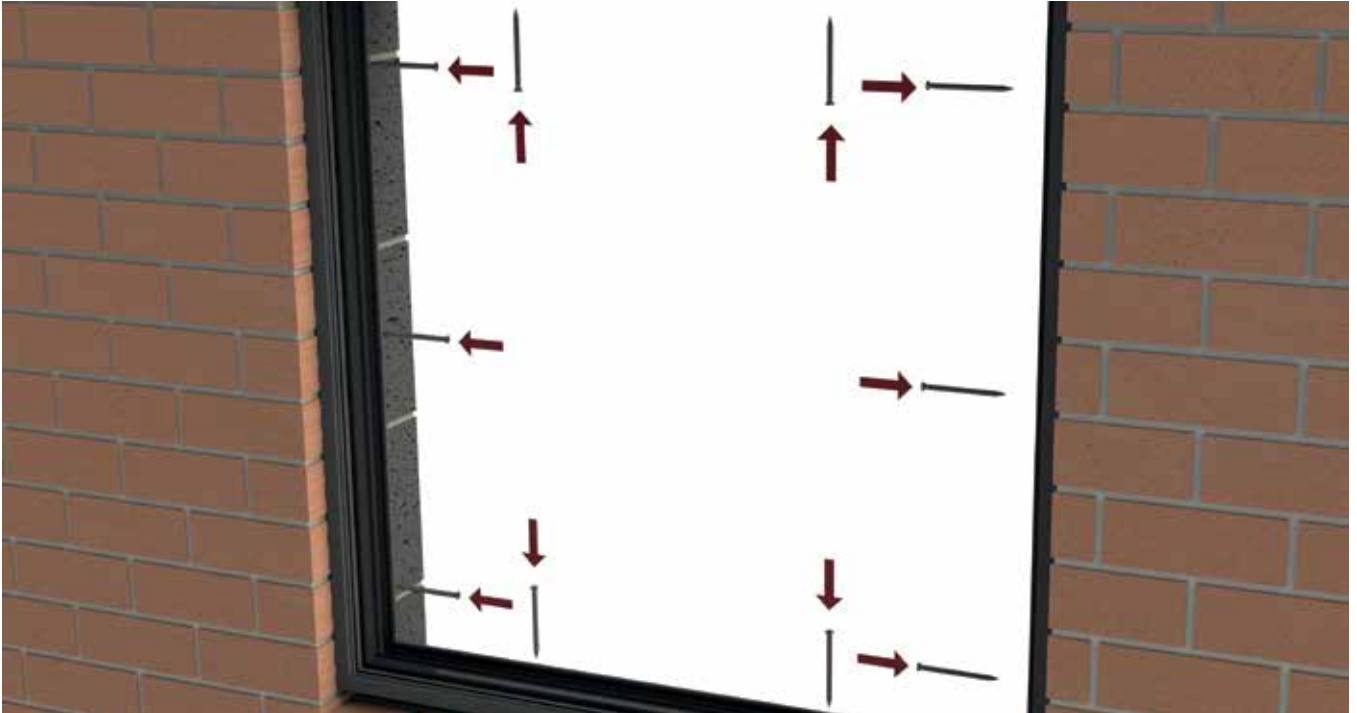


FIG 3

- **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



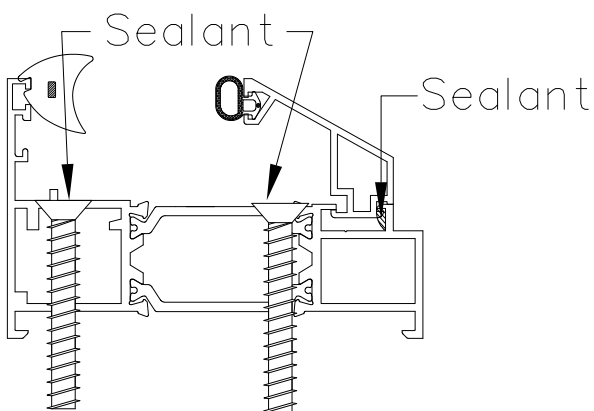
FIG 4

- ▶ **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



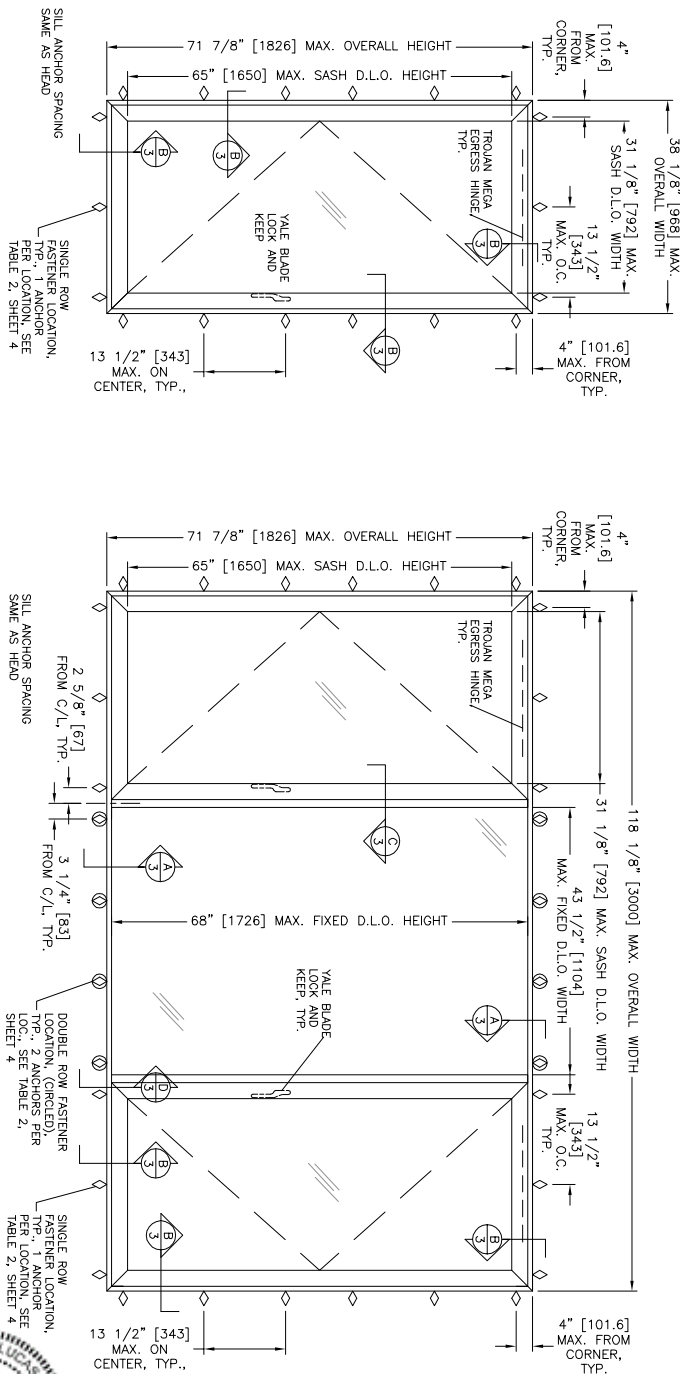
FIG 6

- ▶ **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)

Casement Window FPA Installation Instructions

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

- THIS PRODUCT IS MANUFACTURED AND ANCHORED AS DETAIL IN THIS DRAWING. IS LARGE UNLESS INDICATED (WIND ZONE 3 FOR X, XOX, OX, OR OX CONFIGURATIONS, WIND ZONE 4 FOR XX CONFIGURATION) RATED AND PROTECTED AGAINST IMPACT AND PENETRATION OF PROJECTILES IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, CURRENT EDITION, AND THE REQUIREMENTS OF THE AIAA/WMA/CSA 101/152/A440-08/11, 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.
- THIS PRODUCT HAS BEEN TESTED TO AIAA/WMA/CSA 101/152/A440-08/11, 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.
- ALLOWABLE CONFIGURATIONS: X (SINGLE VENT), XX (DOUBLE VENT), XO OR OX (VENT-FIXED OR FIXED-VENT).
- THE DESIGN PRESSURE RATINGS IN THIS DRAWING ARE AS LIMITED BY ASTM E-1300 CLASS TABLES, AND TESTED WATER, STRUCTURAL, AND CYCLIC PRESSURES.
- THE DESIGN PRESSURE RATING FACTOR (SHORT-TERM RATING) HAS NOT BEEN USED IN THE ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF ANCHORAGE INTO WOOD SUBSTRATE.
- 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.).
- WOOD SHALL BE TREATED BY OTHERS OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (A.H.J.) TO PREVENT GALVANIC REACTIONS. WOOD BUCKS, IF USED, SHALL BE PRESSURE TREATED WITH EITHER A TREATMENT OR COATING COMPATIBLE WITH 6063-T5. ALL ANCHORS OR HAVE A COATING COMPATIBLE WITH THE PRESSURE TREATED WOOD BUCKS AND ALL OTHER WINDOW MATERIALS.
- 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.
- 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 & CONSULTING, INC.
(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

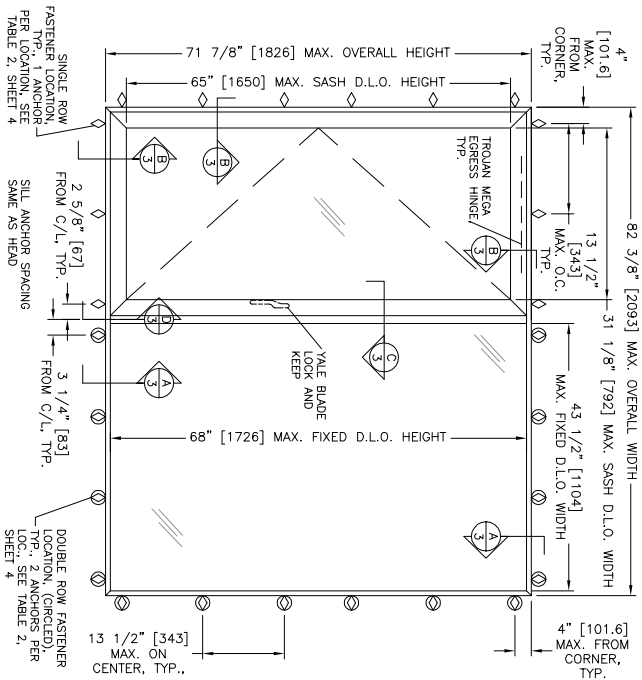
DRAWING #
FPA-CA-LM

SHEET DESCRIPTION
NOTES,
ELEVATION

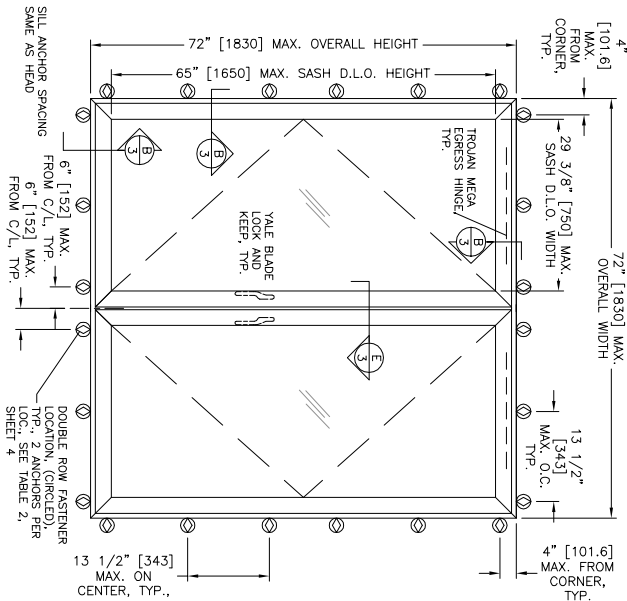
SHEET
1 of 5

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





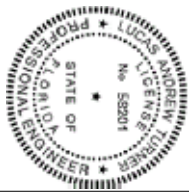
XO OR OX EXTERIOR ELEVATION, DP +55/-50



XX EXTERIOR ELEVATION, DP +55/-60

TABLE 1. DESIGN PRESSURE RATINGS

CONFIGURATION	DESIGN PRESSURE RATING	IMPACT RATING
X, XX, XO OR OX	+55/-50 PSF	LARGE MISSILE WIND ZONE 3
XX	+55/-60 PSF	LARGE MISSILE WIND ZONE 4



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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

ORIGIN ALUMINUM
CASEMENT/FIXED WINDOW
LM IMPACT WZ 3

DRAWING BY:
LAT

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10/11/17

SCALE:
NTS

REVISION:

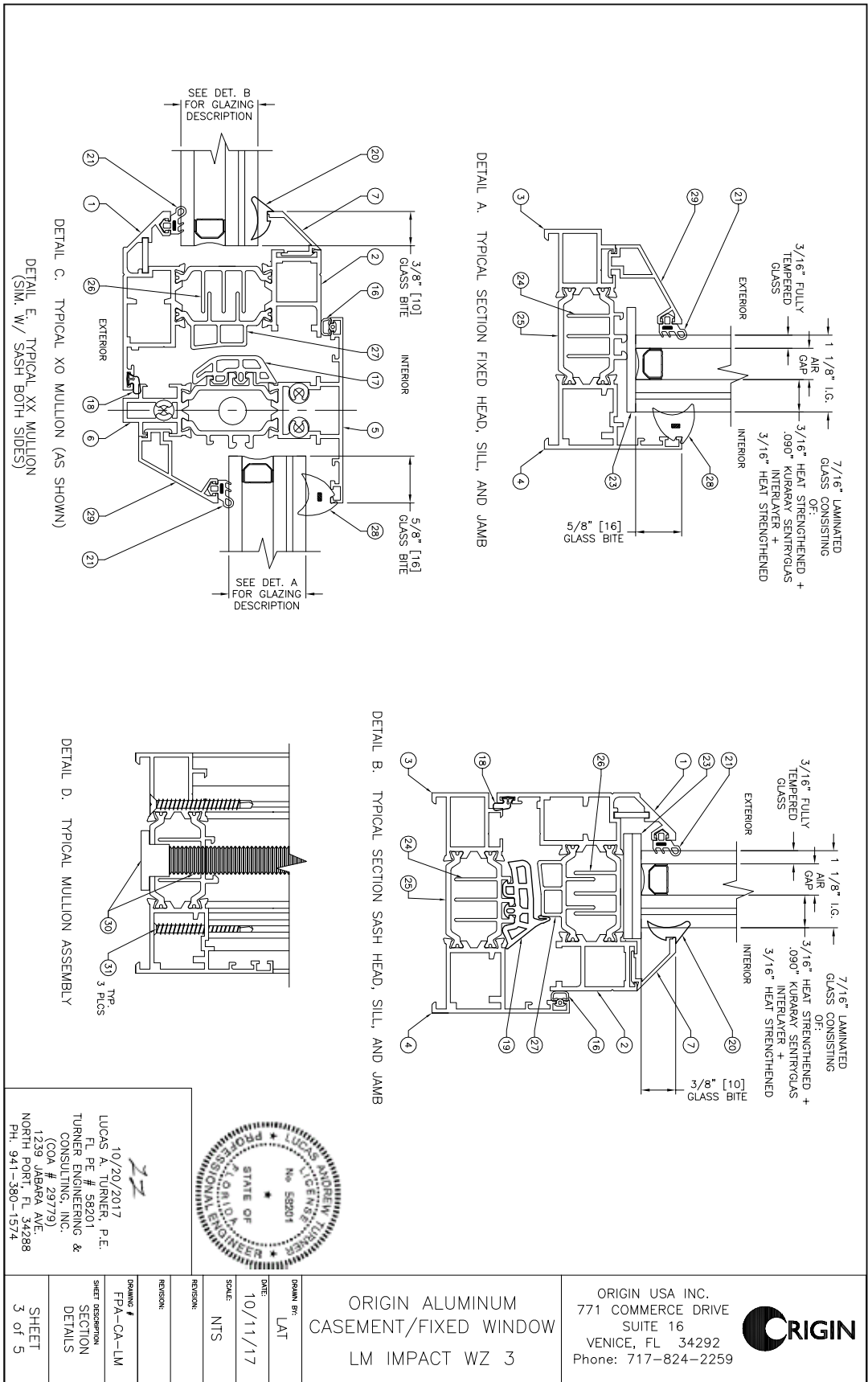
REVISION:

DRAWING #
FPA-CA-LM

SHEET DESCRIPTION
ELEVATIONS

SHEET
2 OF 5

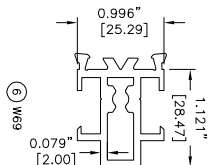
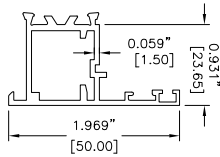
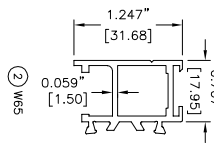
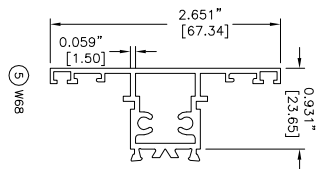
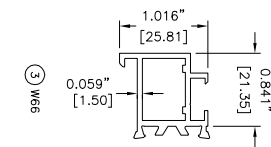
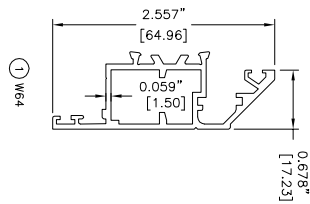
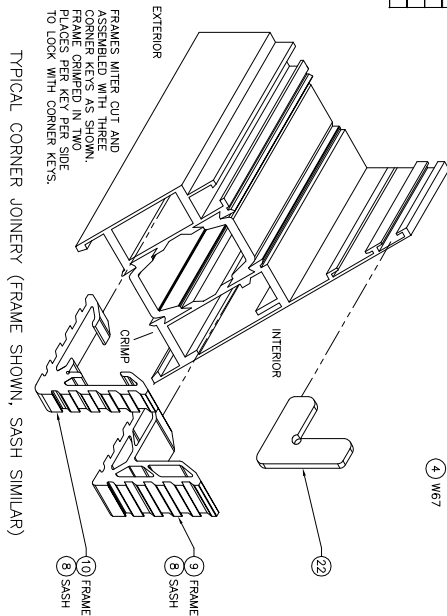
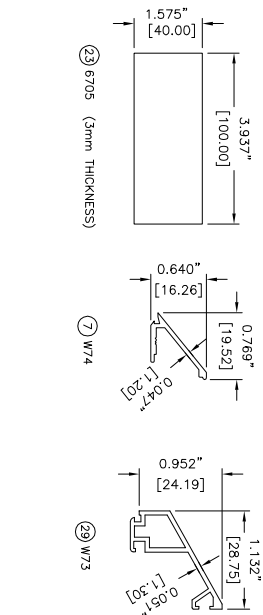
Fixed Window FPA Installation Instructions



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	TRELOAN	MEGA EGRESS HINGE	430 STAINLESS STEEL
15	0115-2013-E-435	STAC	FRAME GASKET	EPDM
16	4028	STAC	LOCKING CAVITY GASKET	EPDM
17	M-00793-M01	SCHIEGEL	SASH GASKET	EPDM
18	014636	STAC	INTERNAL WEDGE GASKET	EPDM
19	RPO1164	PLASTTECH	FRAME D GLAZING REBATE	STAINLESS STEEL
20	W488	PLASTTECH	GLAZING PACKER	PVC
21	E3494	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
22	99018	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
23	6705	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
24	418500	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
25	418600	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
26	418800	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
27	418700	CORTIZO	FRAME D WEDGE GASKET	EPDM
28	W473	CORTIZO	FRAME BEAD	ALUM 6063-T5
29	W73	CORTIZO	M40 THREADED ROD/NUT	STEEL
30			#8 x 1 1/2" SELF-DRAPPING SCREW	STEEL
31				



10/20/2017
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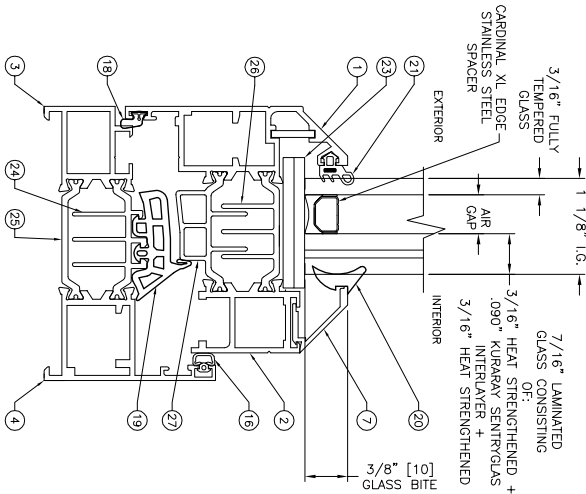
ORIGIN ALUMINUM
CASEMENT/FIXED WINDOW
LM IMPACT WZ 3

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

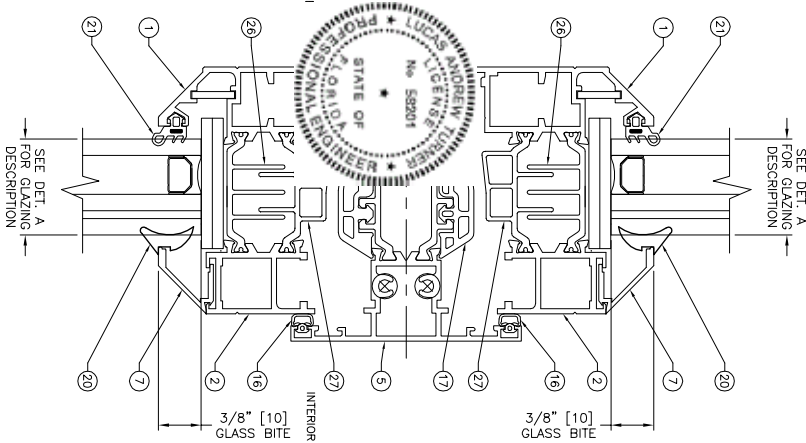


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DATE:	10/11/17
SCALE:	NTS
REVISION:	
REGION:	
DRAWING #	FPA-CA-LM
SHEET DESCRIPTION	BOM - PART
DWG. CORNER	
SHEET	5 of 5

DETAIL A. TYPICAL SECTION SASH HEAD, SILL, AND JAMB



DETAIL B. TYPICAL SECTION INTEGRAL MULLION

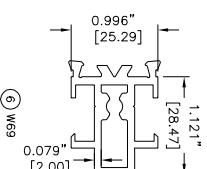
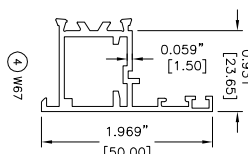
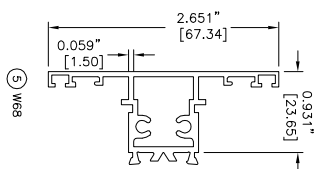
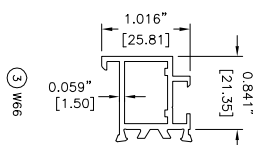
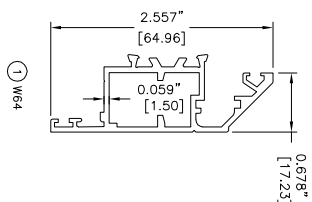
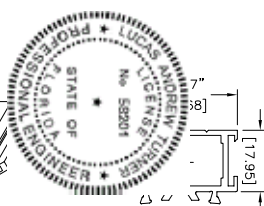
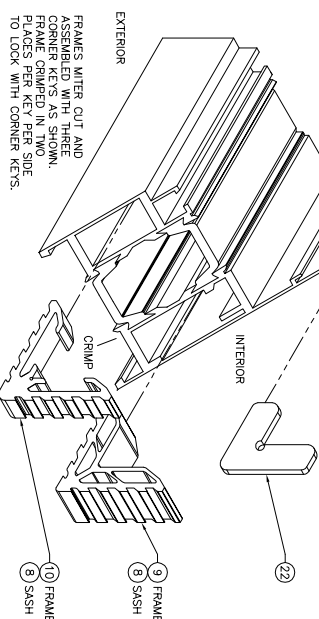
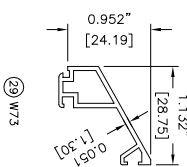
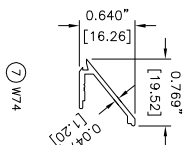
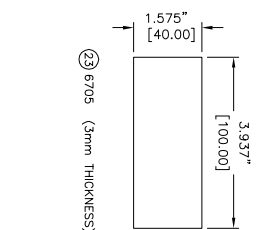


3/8/2017 LUCAS A. TURNER, P.E. FL PE # 58201 TURNER ENGINEERING & CONSULTING, INC. (COA # 29779) 1239 JABARA AVE. NORTH PORT, FL 34288 PH. 941-380-1574 3/8/2017 LUCAS A. TURNER, P.E. FL PE # 58201 TURNER ENGINEERING & CONSULTING, INC. (COA # 29779) 1239 JABARA AVE. NORTH PORT, FL 34288 PH. 941-380-1574				ORIGIN ALUMINUM AWNING WINDOW LM IMPACT HVHZ		ORIGIN USA INC. 771 COMMERCE DRIVE SUITE 16 VENICE, FL 34292 Phone: 717-824-2259			
DRAWN BY: LAT		DATE: 6/14/16		SCALE: NTS		REVISION:		REVISION:	
DRAWING # FPA-AW-LM		SHEET RESOURCES SECTION DETAILS		SHEET 2 OF 4					

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 PCF 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-PINE-FIR WOOD (G=0.42)	1/4" T1W TAPCON OR 1/4" ELCO ULTRACON	1-3/8"	1"
2X MIN. SPRUCE-PINE-FIR WOOD (G=0.42)	#12 WOOD SCREW	1-3/8"	1"
16 GAUGE (0.060") MIN. STEEL STUD (33ksi YIELD MIN. OR 1/8" ALUM. 6063-T5 MIN. OR 1/8" STEEL 36 KSI MIN.)	#12-24 T1W TENS SELF-DRILLING SCREW OR #12 GRADE 5 SELF-TAPPING/DRILLING SCREW	SEE ANCHOR NOTE 5	1/2"

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	W70	CORTIZO	GLEAT 14.4	ALUMINIUM 6063 T5
8	W71	CORTIZO	GLEAT 12.8	ALUMINIUM 6063 T5
9	W72	CORTIZO	GLEAT 9.5	ALUMINIUM 6063 T5
10	W73	CORTIZO	SAC BOLT	MILD ZINC AND CLEAR
11	W74	CORTIZO	SAC BOLT	MILD ZINC AND CLEAR
12	W75	CORTIZO	BLADE LOCK	ALUMINIUM
13	W76	CORTIZO	HINGE	430 STAINLESS STEEL
14	W77	CORTIZO	FRAME GASKET	EPDM
15	W78	CORTIZO	LOCKING CAVITY GASKET	EPDM
16	W79	CORTIZO	SASH GASKET	EPDM
17	W80	CORTIZO	CAVITY GASKET	EPDM
18	W81	CORTIZO	INTERNAL WEDGE GASKET	EPDM
19	W82	CORTIZO	FRAME D GLAZING REBATE	EPDM
20	W83	CORTIZO	GLAZING PACKER	PVC
21	W84	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
22	W85	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
23	W86	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
24	W87	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
25	W88	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
26	W89	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
27	W90	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
28	W91	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
29	W92	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE
30	W93	CORTIZO	TECHNOFORM STRIP UNDER	POLYAMIDE
31	W94	CORTIZO	TECHNOFORM STRIP OVER	POLYAMIDE



ORIGIN ALUMINUM
AWNING WINDOW
LM IMPACT HVHZ

ORIGIN USA INC.
771 COMMERCE DRIVE
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3/8/2017
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FL PE # 58201
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(COA # 29779)
1239 JABARA AVE.
NORTH PORT, FL 34288
PH. 941-380-1574

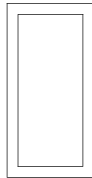
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SCALE: NTS
REVISION:
REVISION:
REVISION:
DRAWING # FPA-AW-LM
SHEET RESUMPTION BOM PART
DWGS. CORNER
SHEET 4 OF 4

ORIGIN MULLIONS

GENERAL NOTES

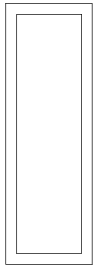
1. THIS APPROVAL APPLIES TO ORIGIN 6063-T6 ALUMINUM MULLIONS AS SHOWN IN THESE DRAWINGS. THESE MULLIONS, FABRICATED AND ANCHORED AS DETAILED IN THIS DRAWING, MAY BE USED IN ASSEMBLIES OF ORIGIN AW 6, CA 6, OR PW 6 WINDOWS OR EASIFOLD 3000 DOORS. MULLIONS AS INDICATED IN CHARTS 1 THROUGH 5 MAY BE USED 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 HVH2).
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



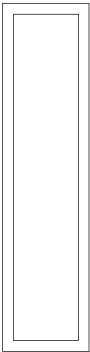
SEE CHART 1
ON SHEET 2

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



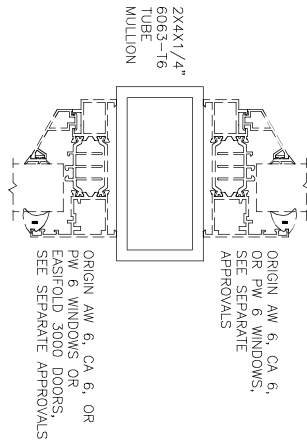
1/26/2017
LUCAS A. TURNER, P.E.
FL PE # 58201
TURNER ENGINEERING &
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1239 JABARA AVE
NORTH PORT, FL 34288
PH. 941-380-1574

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.

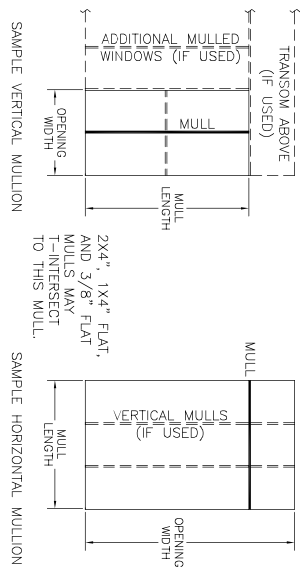


CHART 1. 2x4x1/4" ALUM. MULL, 6063-T6 MIN., ALLOWABLE PRESSURES (PSF) WITH END CLIP ANCHORAGE AS SHOWN IN THIS DRAWING

	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	36	48	60	72
102	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
108	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
114	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
120	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
126	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
132	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
138	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
144	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
150	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
156	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
162	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
168	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
174	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
180	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
186	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
192	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
198	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
204	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72
210	55	55	55	55	55	55	55	55	55	55	55	55	36	48	60	72

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ALUMINUM MULLIONS
FOR ORIGIN WINDOWS
AND DOORS



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

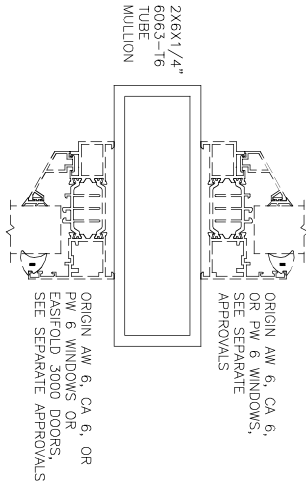
DRAWING #

FPA-MULLS

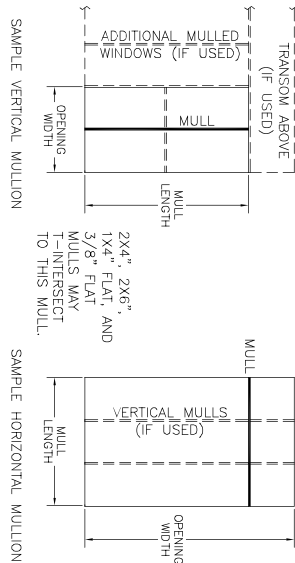
SHEET DESCRIPTION

2 X 4 MULL

SHEET
2 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.



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

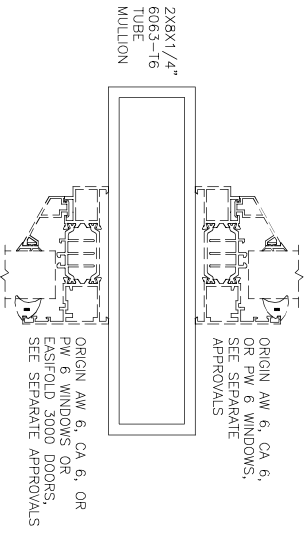
	OPENING WIDTH, IN.															
	36	48	60	72	84	96	108	120	132	144	156	168	MULL LENGTH, IN.			
96	55	55	55	55	55	55	55	55	55	55	55	55	96	55	48	36
102	55	55	55	55	55	55	55	55	55	55	55	55	102	55	55	55
108	55	55	55	55	55	55	55	55	55	55	55	55	108	55	55	55
114	55	55	55	55	55	55	55	55	55	55	55	55	114	55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



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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.

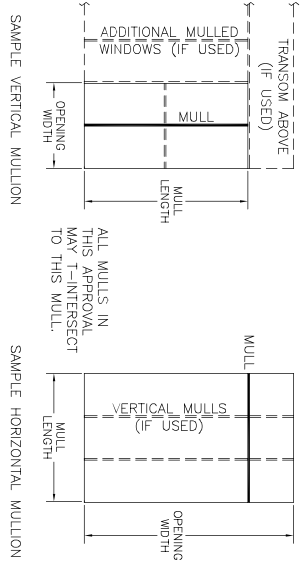


CHART 3. 2x8x1/4" ALUM. MULL, 6063-T6 MIN., ALLOWABLE PRESSURES (PSF) WITH END CLIP ANCHORAGE AS SHOWN IN THIS DRAWING

	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	96	55	102	108
102	55	55	55	55	55	55	55	55	55	55	55	55	102	55	108	114
108	55	55	55	55	55	55	55	55	55	55	55	55	108	55	114	120
114	55	55	55	55	55	55	55	55	55	55	55	55	114	55	120	126
120	55	55	55	55	55	55	55	55	55	55	55	55	120	55	126	132
126	55	55	55	55	55	55	55	55	55	55	55	55	126	55	132	138
132	55	55	55	55	55	55	55	55	55	55	55	55	132	55	138	144
138	55	55	55	55	55	55	55	55	55	55	55	55	138	55	144	150
144	55	55	55	55	55	55	55	55	55	55	55	55	144	55	150	156
150	55	55	55	55	55	55	55	55	55	55	55	55	150	55	156	162
156	55	55	55	55	55	55	55	55	55	55	55	55	156	55	162	168
162	55	55	55	55	55	55	55	55	55	55	55	55	162	55	168	174
168	55	55	55	55	55	55	55	55	55	55	55	55	168	55	174	180
174	55	55	55	55	55	55	55	55	55	55	55	55	174	55	180	186
180	55	55	55	55	55	55	55	55	55	55	55	55	180	55	186	192
186	55	55	55	55	55	55	55	55	55	55	55	55	186	55	192	198
192	55	55	55	55	55	55	55	55	55	55	55	55	192	55	198	204
198	55	55	55	55	55	55	55	55	55	55	55	55	198	55	204	210
204	55	55	55	55	55	55	55	55	55	55	55	55	204	55	210	
210	55	55	55	55	55	55	55	55	55	55	55	55	210	55		



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PH. 941-380-1574

DRAWN BY: LAT
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.
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SUITE 16
VENICE, FL 34292
Phone: 717-824-2259



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 *

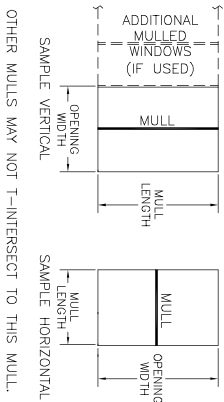
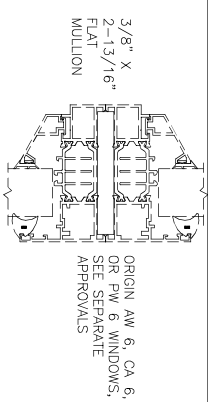
		MULL LENGTH, IN.																	

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



1/26/2017
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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:

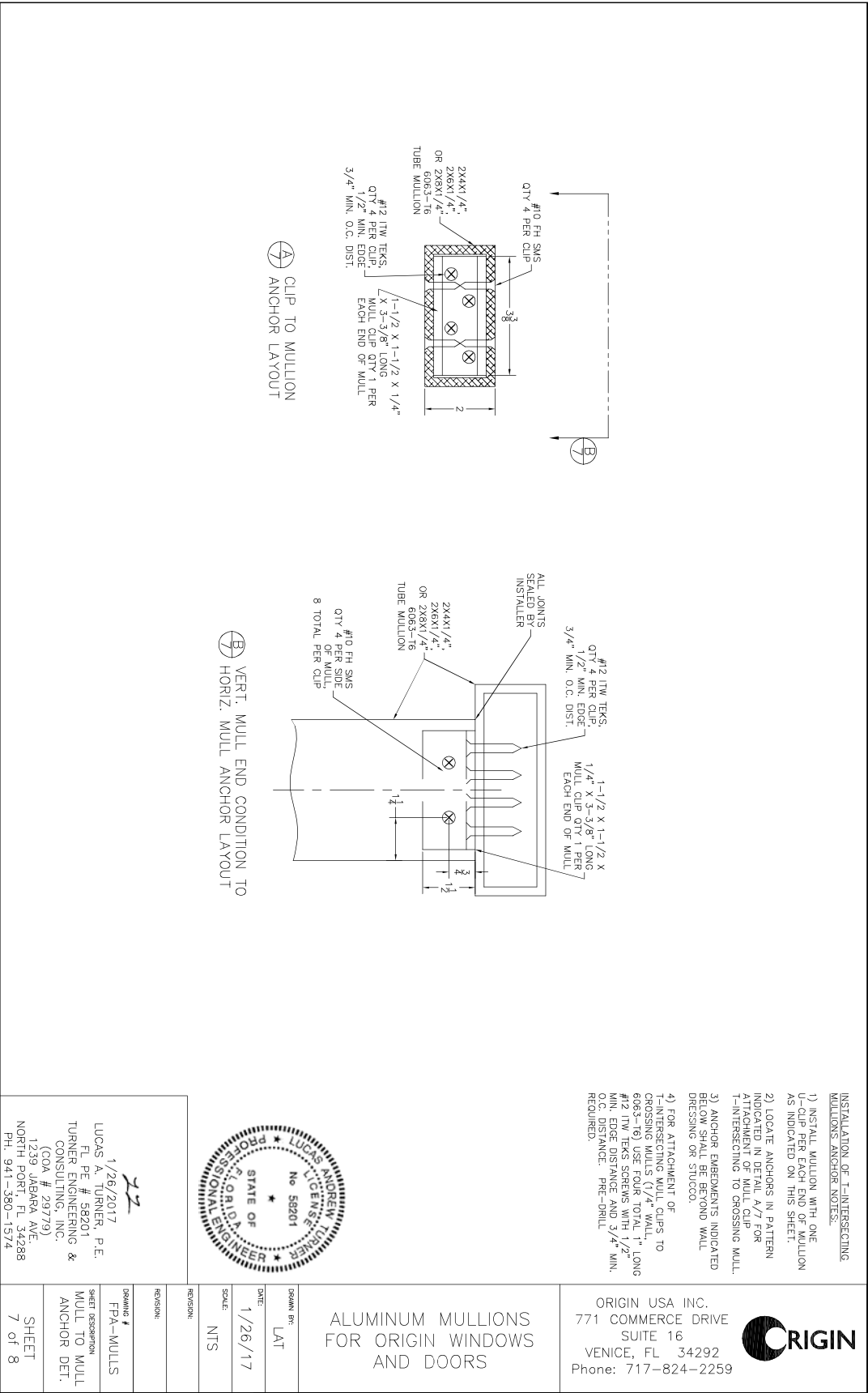
REVISION:

REVISION:

DRAWING #
FPA-MULLS

SHEET DESCRIPTION
3/8" FLAT MULL

SHEET
6 of 8





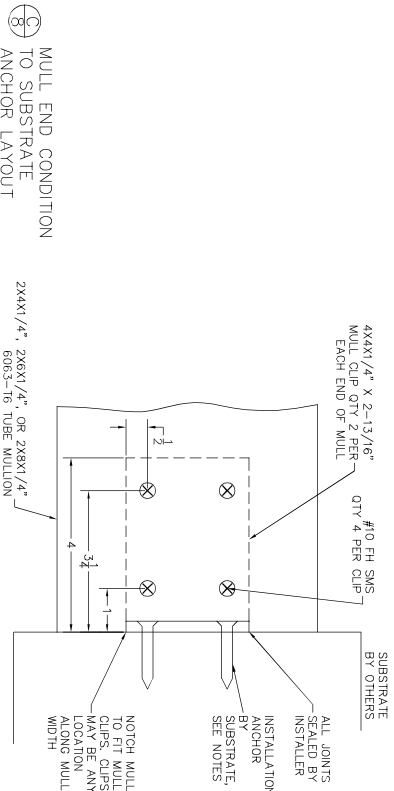
DATE:	1/26/17
SCALE:	NTS

DRAWING #	FPA-MULLS
SHEET DESCRIPTION	

1/26/2017
LUCAS A. TURNER, P.E.
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PH. 941-380-1574

ANCHOR NOTES:

- 1) INSTALL MULLION WITH TWO CLIPS PER EACH END OF MULLION AS INDICATED ON THIS SHEET.
- 2) LOCATE ANCHORS IN PATTERN INDICATED IN DETAIL A/8 FOR SOLID CONCRETE, DETAIL A/9 FOR SOLID SCHEDULED CONCRETE-FILLED OR SCHEDULED CONCRETE-FILLED OR SOLID SYSTEMS WITH THE SPECIFIED NUMBER OF INSTALL SCREWS, AND A SHEET METAL SCREWS IN MULLION PER EACH END OF MULLION.
- 3) ANCHOR ELEMENTS INDICATED BELOW SHALL BE SET IN WALL DRESSING OR STUCCO.
- 4) FOR ATTACHMENT TO WOOD SUBSTRATES (SPURCE-PINE-FIR WITH G=0.42 IN.) USE EIGHT TOTAL (FOUR PER CLIP) #12 FLAT-HEAD WOOD SCREWS WITH 1-1/2" MIN. PENETRATION INTO WOOD AND 1" MIN. EDGE DISTANCE.
- 5) FOR ATTACHMENT TO SOLID NONCONCRETE (KSI) 1" OR GREATER REINFORCED GROUT-FILLED CMU (ASTM C90) USE FOUR TOTAL (2 PER CLIP) 1/4" ELCO AGGREGATE-COLA PENETRATION INTO CONCRETE/CMU AND 2" MIN. EDGE DISTANCE.
- 6) 2" MIN. EDGE DISTANCE.
- 7) MAINTAIN 3" MIN. CENTER-TO-CENTER DISTANCE BETWEEN ALL AGGREGATE-COLAS.



CLIP TO CMU
OR CONCRETE
SUBSTRATE
ANCHOR
LAYOUT

MULL END CONDITION
TO SUBSTRATE
ANCHOR LAYOUT



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