

# Windgate™

## Lifetime Warranty

Alliance is not just our name. It also accurately describes our approach to doing business, and it's why we can provide such an exceptional warranty on every window we offer for your consideration. A proud, independent regional fabricator of excellent experience and reputation meticulously crafts each of our windows. By linking these carefully selected and exceptional fabricators into a national network, or alliance, we are able to be so confident of the quality that is designed and built into our windows; we can back our entire product line with an unsurpassed warranty.

Of course, other window companies may also say they offer a warranty, but we urge you to carefully read their fine print. They may, for example, guarantee the vinyl extrusion, but what about all the moving parts or the insulated glass? The Alliance Assurance Plus® Limited Lifetime Warranty covers it all – for life! Even more remarkable, if a factory defect needs repair within the first five years, we will even provide the labor required.

Many windows leave you wide open to unpleasant surprises. Select a window from Alliance Window Systems and you'll know it's backed by a warranty second to none.



More Than A Window.

# Windgate™

New  
Construction  
Vinyl Windows



More Than A Window.



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Look for the ENERGY STAR label on qualified products.



New Construction Vinyl Window Systems

## Introduction

Windgate New Construction windows are specifically designed to meet the discerning needs of architects, builders, homeowners, and the changing needs of the residential building industry. The result is a high-performance series of vinyl windows that feature aesthetically integrated window styles, strength and durability.

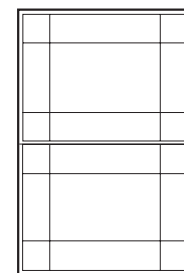
## All Windgate New Construction Windows feature:

- Highest quality vinyl for a lifetime of trouble-free performance
- Full 3 1/4" jamb depth chambered frame for maximum structural integrity
- Fusion-welded frames and sashes for extra strength and durability
- 3/4" insulated glass for superior thermal performance
- Optional InnovativE™ (Low E) coating system with Warm Edge spacer technology, reduces utility costs

## Windgate New Construction Window Systems

- Single-hung, double-hung, glider, and fixed windows come with a double-wall, integral "J" channel designed into the frame, *eliminating the cost of an add-on "J" channel while providing a pleasing "beveled" exterior look.*
- Glider models feature a lift-out sash with heavy-duty brass rollers, *allowing for even large sashes to glide easily without tipping or sticking.*
- Casements feature sashes that open completely, windows can be cleaned easily from inside your home. Multi-Point locking system locks sash at multiple points, for the utmost security.
- Companion awning models available
- Full range of geometric shapes and transoms provide a wide range of architectural choices.
- Available in colonial, prairie and custom grid patterns with flat or contour shaped muntin bars.

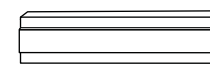
Window Features	Poor Solution	Minimum Solution	Optimum Solution
<b>Interlocking Sash</b>	No weather stripping or interlock at meeting rail	Weather stripping at meeting rail, no interlock	Weather stripped interlocking sashes
<b>Glass Package</b>	Single glazed, possibly with storm windows	1/2" Clear Insulating Glass, inefficient metal spacer	3/4" InnovativE, warm edge non-conductive spacer
<b>Glass Spacer</b>	None	Heat conductive metal	Low-Conductive Butyl
<b>Locks/Keepers</b>	Single "sweep arm" lock, keeper is part of frame	Pop-riveted "sweep arm" lock, keeper attached to rail	Screwed in "Cam-Action" lock, keeper screwed to rail
<b>Double Hung Vent Stop</b>	None	Single "pry out"	Spring Loaded
<b>Frame/Sash Material</b>	Screwed together wood or aluminum	Screwed together vinyl or clad wood	Fusion-Welded Vinyl for maximum strength and integrity
<b>Warranty</b>	None or limited	20 years, but for parts only	Lifetime, with initial coverage for labor



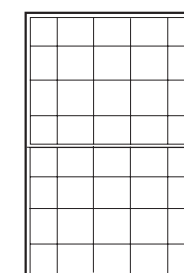
Prairie Style Grid Pattern



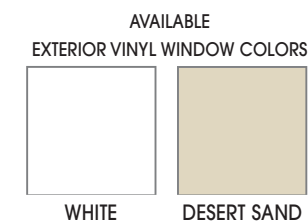
5/8" Flat Muntin Bar



1 1/16" Contour Muntin Bar



Colonial Style Grid Pattern



AVAILABLE EXTERIOR VINYL WINDOW COLORS

WHITE

DESERT SAND



## Lifetime Window Warranty

The ASSURANCE Plus™ Lifetime Warranty applies to any manufacturing defects and/or component failures. As one customer stated, "It's as good as it gets." ASSURANCE plus:

- Covers labor for five years and materials for a lifetime.
- Is transferable to a second owner up to 20 years.
- Features a standard commercial warranty of 20 years.
- Is the best warranty in the business.

Remember, the only reason our warranty can be this good is because of the quality windows it covers.

## The American Window Alliance (AWA)

We are a national network of independent manufacturers responding to regional customer demands, using our strength as high-quality, regional window suppliers.

Using the unique talents of each member, the AWA has created the Alliance Window Systems brand. A line of window and door systems that present customers with the opportunity to obtain the strongest, most attractive products available.

The AWA offers customers the strength of a large national supplier, and the flexibility of a local organization.

## Specify Alliance Window Systems Today

Quality materials and exceptional design set Alliance Windows apart from the competition. The value, appearance, convenience, service, security, and peace of mind, combined with our incredible warranty, make Alliance Windows an exceptional investment. Specify Alliance Windows through your contractor or builder.

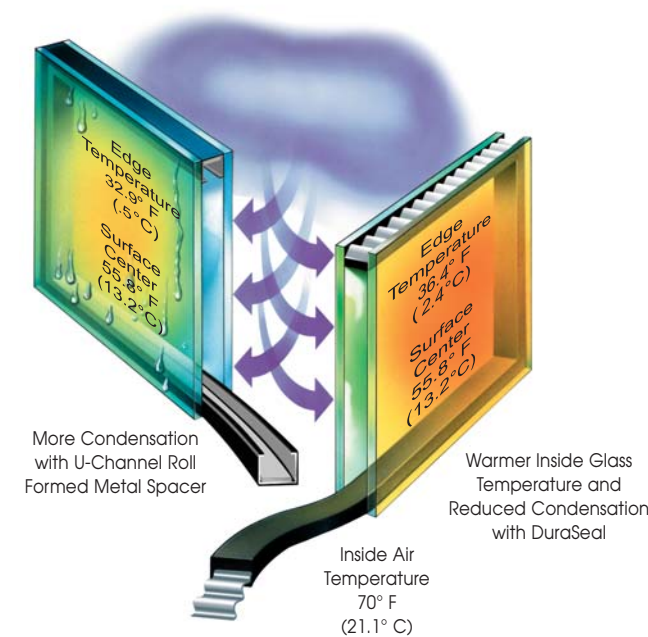


**The American Window Alliance:**  
The power of a national network, the service of a regional supplier, and the support of local people.



New Construction Vinyl Window Systems

**DURASEAL™**  
ABSOLUTE PERFORMANCE



## Innovative™

### Your Invisible Barrier

When you consider energy efficiency, perhaps the most critical part of any window is the insulating glass unit. It only makes sense: the glass has the largest surface.

### Windows Can Help

To understand how windows can help, you must first understand that energy is lost through windows in three major ways: conduction, convection and radiation.

### Conduction

The framing of all Windgate windows is made from vinyl, a natural insulator. To prevent energy loss through conduction, all insulated glass units utilize "warm edge" technology. Using a low-conductance spacer, this method assures maximum resistance to energy flow.

### Convection

Energy can also be lost through natural convection currents that can form within the insulating glass. That's why Windgate glass is 3/4" thick, shown by government testing to be the optimum dimension to prevent these convection currents.

### Radiation

Radiation occurs when long wave heat energy moves toward cold areas.

The most effective barrier to radiation is an optimal special low "E" coating, a standard part of Innovative glass.

This special coating actually reflects the long wave radiation back to its source.

This is important to understand, as radiation affects energy consumption, no matter what part of the country you call home.

**CONDENSATION RESISTANCE**  
No spacer system can eliminate condensation, but DuraSeal reduces conductivity by 50% over other warm edge spacers. Reducing conductivity also reduces condensation.

### Solar Gain vs. Heat Loss

The concerns of home owners in the North are quite different than those in the South.

In the North, where heating is a concern, glass must allow maximum solar gain, while preventing heat loss.

Conversely, Southern home owners are

concerned with unwanted solar heat gain, when long wave radiation raises cooling costs.

When you understand these regional differences, it makes sense that the insulating glass system should be manufactured to address those concerns.

That's why Windgate glass systems are tailored by each regional manufacturer for maximum energy efficiency in the climates each serves.

We produce each of our insulating glass units to be specifically engineered to lower your energy bills, and reduce noise transmission.

### What's your style?

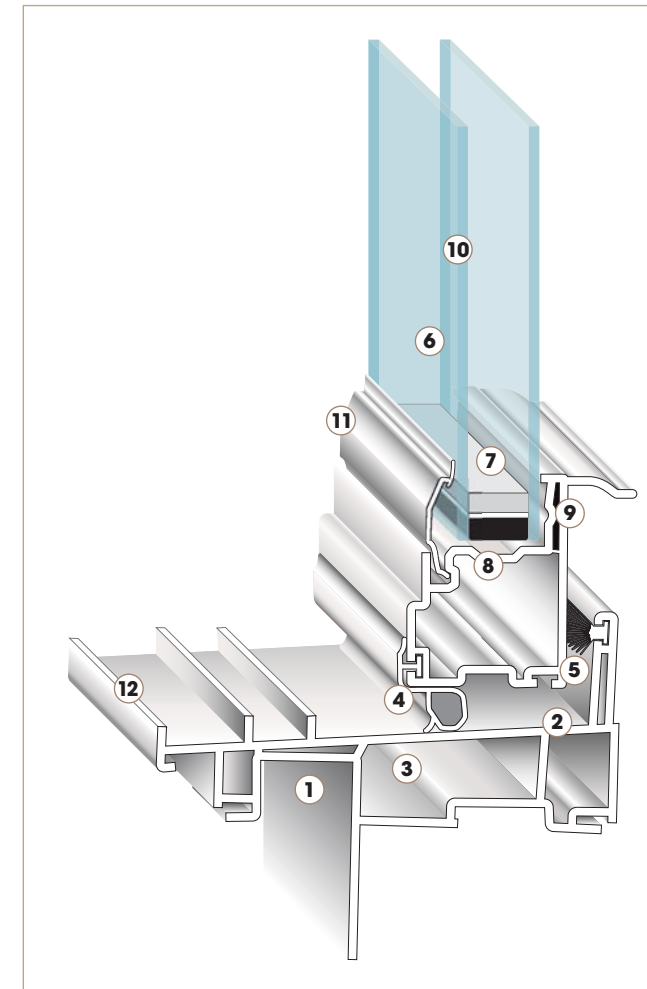
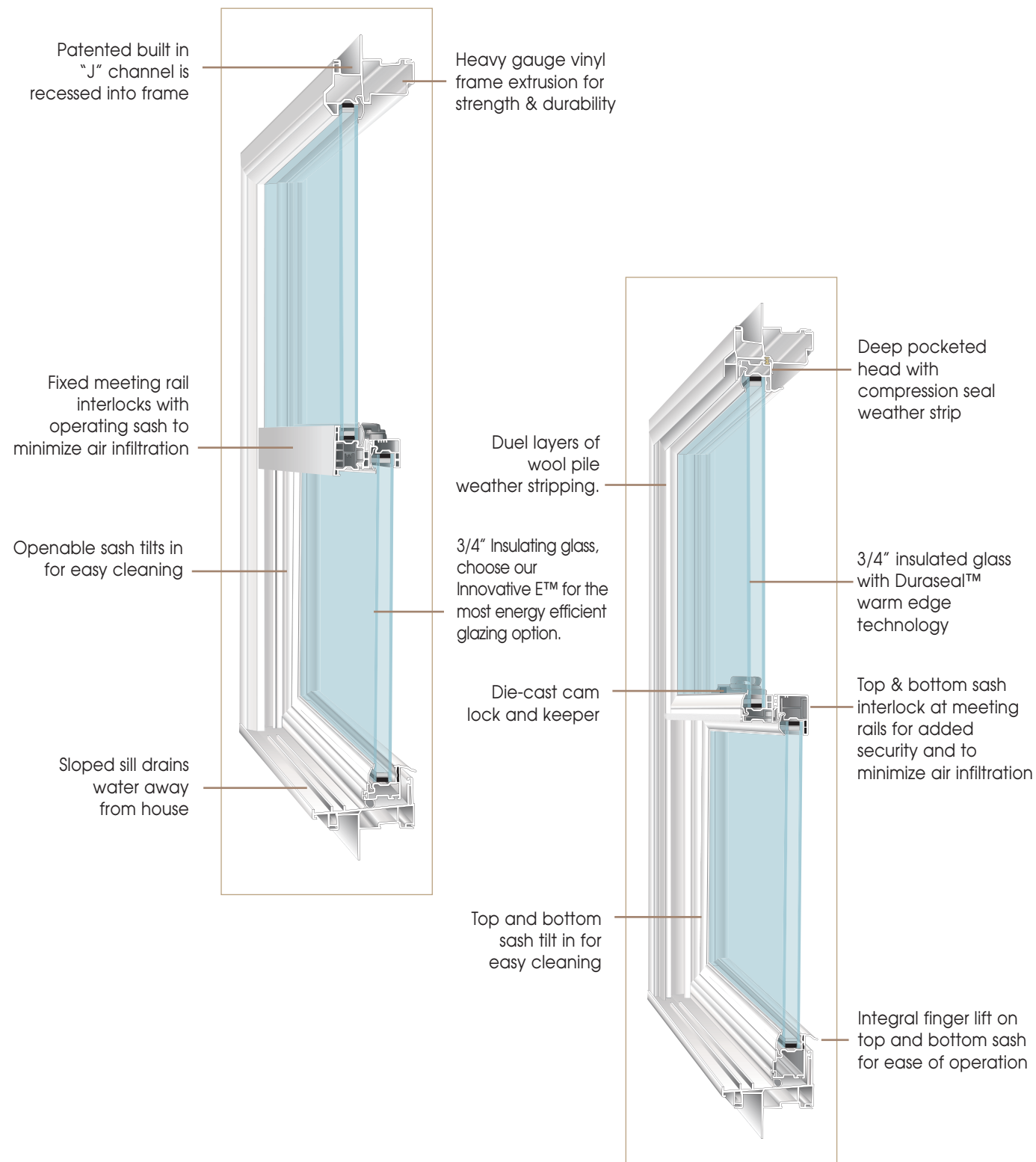
No matter what style home you have, or what style window you want, Windgate can fill your request.

And, since all Windgate windows are made to your specific dimensions, you know you'll get a window that not only fits your style, but fits your home as well.

### Anatomy of Efficiency

Energy efficient Windgate windows provide an effective barrier to any weather condition.

New Construction Vinyl Window Systems



- 1 Double-wall, Integral "J" Channel: Designed into the frame, eliminating the cost of an add-on "J" channel while providing a pleasing "beveled" exterior look.
- 2 Heavy walled PVC framing acts as a natural insulator.
- 3 Dead Air spaces within the frame and sash profiles further resist energy flow.
- 4 Closed cell compression seal at sloped sill resists air and water penetration.
- 5 Fin seal weather stripping at sill further reduces air infiltration.
- 6 3/4" Insulating glass provides optimum energy efficiency.
- 7 "Warm edge" low conductance spacer resists energy flow through the edge of glass.
- 8 Water management grooves channel moisture away from insulated glass sealant.
- 9 Dual hollows at lift rail add strength and insulation.
- 10 Optional Innovative™ High Performance Glass utilizes Low E coating specifically engineered for local requirements.
- 11 Direct set back bedding bonds glass to sash, reducing air and water infiltration potential.
- 12 Rigid screen pocket on sill reduces "screen rattle," even on windy days.

### Casements/Awnings

- Sash opens completely, so windows can be cleaned easily from inside your home\*\*\*
- All components are corrosion resistant, providing years of trouble free performance
- Multi-Point locking system locks sash at multiple points, for utmost security
- Three layers of weather stripping assure effective barrier to air and water penetration
- Optional in some regions, multiple units made with single frame construction\*

### Fixed Units

- Mulling system allows fixed units to be mullied to any other window
- Equal sight lines assure uniform exterior appearance of all units

### Gliders

- Heavy duty brass rollers assure effortless sash travel
- Roller housing transfers weight of glass directly to frame, reducing stress on sash members
- Independent weep chambers on frame assure effective water runoff
- Stylish beveled exterior matches look of double-hung and casement, to provide a uniform exterior appearance

### Bow/Bay

- Bow/Bay windows patented no leak capping system, standard Innovative™ glass, insulated head and seat board\*\*

\* Consult your local AWA fabricator.

\*\* Not available in all regions, consult your local fabricator.

\*\*\* Does not apply to egress hardware.



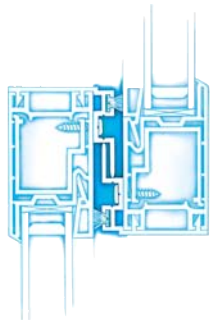
### Beauty Becomes The Home

Home owners all agree that natural light "lights up one's life." The Alliance vinyl sliding patio door does just that, with a statement of beauty and the confidence of security.

The Alliance door was designed with maximum glass area to capture the light, while conquering the elements. Through modern, computer-aided design engineering, the door possesses exceptional strength while minimizing frame area. Fusion welded corners keep the sash panels straight and true.



Doors see much more operational use over their lifetime than windows. The Alliance patio door's "easy touch" operation allows moveable panels to glide smoothly with minimum effort. The panels lock simply and securely with the highest quality hardware.



Alliance patio doors are covered under Assurance Plus Lifetime Warranty.

### Standard Door Features:

- 3/4" insulating glass
- Color matched baked enamel designer handle
- Single point locking hardware
- Low-rise sill designed to minimize tripping and keep water out
- Heavy-duty screen with easy rolling, no-jump action and adjustable rollers for smooth operation



Patio door is available in White and Desert Sand.

### Optional Features:

- Beautiful Brass, Brushed Nickel or Oil Rubbed Bronze keyed or non keyed handle.\*\*\*
- Optional grids, Colonial or Prairie Style, available in matching White or Desert Sand
- Multi-point keyed or non keyed locking system for greater security (highest security rating based on forced entry tests-2000 lbs.)
- Double weather stripped interlocking sashes



- Four maintenance free heavy duty brass rollers\*\*

Rough Opening	60"	72"	96"
Unit Size	59 1/2"	71 1/2"	95 1/2"
Exposed Glass	25 3/4"	31 3/4"	43 3/4"
Clear Opening	24"	30"	42"

\* Additional sizes may be available by region.

\*\* Optional non-corrosive stainless steel rollers available in coastal regions. Check with your local fabricator.

\*\*\* Not available in all regions. Consult your local fabricator.

### Windgate Structural Performance Data

Style	Size	Air Infiltration (cfm/ft²)	Water Resistance (psf)	Structural Test Pressure (psf)	Overall Rating
<b>Single-Hung</b>	44 X 60	0.12	5.25	30.0	R35
	44 X 72	0.09	7.50	75.0	R50
<b>Double-Hung</b>	52 X 84*	0.14	6.00	37.5	LC25
	44 X 72	0.13	8.25	52.5	H35
	40 X 72	0.07	7.50	75.0	R50
<b>2-Lite Single Glider</b>	72 X 48	0.13	5.25	52.5	R35
<b>2-Lite Double Glider</b>	72 X 48	0.20	4.50	37.5	R25
<b>Picture Window</b>	72 X 60	0.01	12.00	60.0	C40
	60 X 60	0.01	12.00	75.0	LC50
	72 X 60	0.01	12.00	75.0	LC50
<b>Casement</b>	XOX 108 X 78	0.06	9.75	30.0	LC20
	XX 72 X 78	0.04	9.75	37.5	LC25
	X 36 X 72	0.01	12.00	82.0	LC55
<b>Awning</b>	48 X 36	0.07	12.00	45.0	LC30
<b>Patio Door</b>	72 X 80	0.12	6.75	52.5	R35

\*Reinforced top and bottom sash.

### Windgate Thermal Performance

Product	Total Unit						
	U-Value		SHGC	VLT	CRF		
<b>Single-Hung</b>	With Argon	Without Argon	0.62	65%	With Argon	Without Argon	
	- Clear	N/A			0.48	N/A	44
	- InnovativE (Northern)	0.30			0.34	58	54
- InnovativE (Southern)	0.30	0.34	0.37	58	55		
<b>Double-Hung</b>	N/A	0.47	0.62	64%	N/A	62	
	- Clear	0.30			0.34	57	54
	- InnovativE (Northern)	0.30			0.34	58	54
- InnovativE (Southern)	0.30	0.34	0.36	53%	58	54	
<b>Glider</b>	N/A	0.47	0.62	64%	N/A	44	
	- Clear	0.30			0.34	59	56
	- InnovativE (Northern)	0.30			0.33	59	56
- InnovativE (Southern)	0.30	0.33	0.36	53%	59	56	
<b>Picture</b>	N/A	0.47	0.64	67%	N/A	45	
	- Clear	0.29			0.33	60	57
	- InnovativE (Northern)	0.29			0.32	60	57
- InnovativE (Southern)	0.29	0.32	0.38	55%	60	57	
<b>Casement/Awning</b>	N/A	0.43	0.58	60%	N/A	43	
	- Clear	0.28			0.30	58	54
	- InnovativE (Northern)	0.28			0.31	58	54
- InnovativE (Southern)	0.28	0.31	0.34	49%	58	55	

### Terminology

**Emissivity** is a measure of a surface's ability to emit long-wave infrared radiation or room temperature radiant heat energy. Emissivity varies from 0 (no emitted infrared) to 1 (100% emitted infrared). The lower the emissivity, the lower the resultant U-value.

**U-Value** is the rate of heat flow through a glazing system; the lower the value, the better the insulating quality. U-value can be compared to R-value by dividing 1 by the U-value. (Thus, a U-value of 0.5 equals an R-value of 2.) Expressed in Btu/hr/ft²/F.

**VLT** is the percentage of visible light transmitted through the window unit. Low "E" coatings tend to reduce visible light transmission. **CRF** is a rating designating a windows overall resistance to condensation. The higher the rating the better.

**Solar Heat Gain Coefficient** is the fraction of incident solar radiation entering a home through the windows. The lower the number, the better the window is at preventing solar gain - critical to reducing summer cooling costs.

Single-Hung (widths 20" to 48")

Rough Opening	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
Unit Size	19 1/2"	21 1/2"	23 1/2"	25 1/2"	27 1/2"	29 1/2"	31 1/2"	33 1/2"	35 1/2"	37 1/2"	39 1/2"	41 1/2"	43 1/2"	45 1/2"	47 1/2"
Exp. Glass Fixed Light	14 1/2"	16 1/2"	18 1/2"	20 1/2"	22 1/2"	24 1/2"	26 1/2"	28 1/2"	30 1/2"	32 1/2"	34 1/2"	36 1/2"	38 1/2"	40 1/2"	42 1/2"
Exposed Glass Sash	14 13/16"	16 13/16"	18 13/16"	20 13/16"	22 13/16"	24 13/16"	26 13/16"	28 13/16"	30 13/16"	32 13/16"	34 13/16"	36 13/16"	38 13/16"	40 13/16"	42 13/16"
Clear Opening	14 1/2"	16 1/2"	18 1/2"	20 1/2"	22 1/2"	24 1/2"	26 1/2"	28 1/2"	30 1/2"	32 1/2"	34 1/2"	36 1/2"	38 1/2"	40 1/2"	42 1/2"

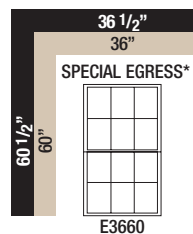
2036	2236	2436	2636	2836	3036	3236	3436	3636	3836	4036	4236	4436	4636	4836
2042	2242	2442	2642	2842	3042	3242	3442	3642	3842	4042	4242	4442	4642	4842
2048	2248	2448	2648	2848	3048	3248	3448	3648	3848	4048	4248	4448	4648	4848
2054	2254	2454	2654	2854	3054	3254	3454	3654	3854	4054	4254	4454	4654	4854
2057	2257	2457	2657	2857	3057	3257	3457	3657	3857	4057	4257	4457	4657	4857
2060	2260	2460	2660	2860	3060	3260	3460	3660	3860	4060†	4260†	4460†	4660†	4860†
2066	2266	2466	2666	2866	3066	3266	3466	3666†	3866†	4066†	4266†	4466†	4666†	4866†
2072	2272	2472	2672	2872	3072	3272	3472†	3672†	3872†	4072†	4272†	4472†	4672†	4872†



Call out sizes are calculated in inches. Check with regional fabricator for rough opening sizes when mulling. Additional egress sizes may be available with modification. Contact your regional fabricator.

† Meets egress (with coil balancers) of:

- Clear openable area 5.7 sq. ft
- Clear openable width 20"
- Clear openable height ≥24"



In some regions, larger sizes may be available. Check with your local Alliance manufacturer.  
 \* Not available in all regions. Consult your local fabricator.

Double-Hung (widths 20" to 48")

Rough Opening	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
Unit Size	19 1/2"	21 1/2"	23 1/2"	25 1/2"	27 1/2"	29 1/2"	31 1/2"	33 1/2"	35 1/2"	37 1/2"	39 1/2"	41 1/2"	43 1/2"	45 1/2"	47 1/2"
Exposed Glass	12 1/2"	14 1/2"	16 1/2"	18 1/2"	20 1/2"	22 1/2"	24 1/2"	26 1/2"	28 1/2"	30 1/2"	32 1/2"	34 1/2"	36 1/2"	38 1/2"	40 1/2"
Clear Opening	14 5/8"	16 5/8"	18 5/8"	20 5/8"	22 5/8"	24 5/8"	26 5/8"	28 5/8"	30 5/8"	32 5/8"	34 5/8"	36 5/8"	38 5/8"	40 5/8"	42 5/8"

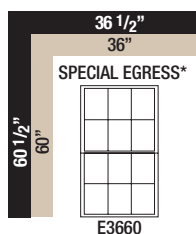
2036	2236	2436	2636	2836	3036	3236	3436	3636	3836	4036	4236	4436	4636	4836
2042	2242	2442	2642	2842	3042	3242	3442	3642	3842	4042	4242	4442	4642	4842
2048	2248	2448	2648	2848	3048	3248	3448	3648	3848	4048	4248	4448	4648	4848
2054	2254	2454	2654	2854	3054	3254	3454	3654	3854	4054	4254	4454	4654	4854
2057	2257	2457	2657	2857	3057	3257	3457	3657	3857	4057	4257	4457	4657	4857
2060	2260	2460	2660	2860	3060	3260	3460	3660	3860	4060†	4260†	4460†	4660†	4860†
2066	2266	2466	2666	2866	3066	3266	3466	3666†	3866†	4066†	4266†	4466†	4666†	4866†
2072	2272	2472	2672	2872	3072	3272	3472	3672†	3872†	4072†	4272†	4472†	4672†	4872†



Call out sizes are calculated in inches. Check with regional fabricator for rough opening sizes when mulling. Additional egress sizes may be available with modification. Contact your regional fabricator.

† Meets egress (with coil balancers) of:

- Clear openable area 5.7 sq. ft
- Clear openable width 20"
- Clear openable height ≥24"



In some regions, larger sizes may be available. Check with your local Alliance manufacturer.  
 \* Not available in all regions. Consult your local fabricator.

Picture Windows

Rough Opening*	12"	18"	20"	24"	28"	30"	32"	36"	40"	42"	44"	48"	60"
Unit Size	11 1/2"	17 1/2"	19 1/2"	23 1/2"	27 1/2"	29 1/2"	31 1/2"	35 1/2"	39 1/2"	41 1/2"	43 1/2"	47 1/2"	59 1/2"
Exposed Glass	6 1/2"	12 1/2"	14 1/2"	18 1/2"	22 1/2"	24 1/2"	26 1/2"	30 1/2"	34 1/2"	36 1/2"	38 1/2"	42 1/2"	54 1/2"
PW1224	PW1824	PW2024	PW2424	PW2824	PW3024	PW3224	PW3624	PW4024	PW4224	PW4424	PW4824	PW6024	
PW1236	PW1836	PW2036	PW2436	PW2836	PW3036	PW3236	PW3636	PW4036	PW4236	PW4436	PW4836	PW6036	
PW1242	PW1842	PW2042	PW2442	PW2842	PW3042	PW3242	PW3642	PW4042	PW4242	PW4442	PW4842	PW6042	
PW1248	PW1848	PW2048	PW2448	PW2848	PW3048	PW3248	PW3648	PW4048	PW4248	PW4448	PW4848	PW6048	
PW1254	PW1854	PW2054	PW2454	PW2854	PW3054	PW3254	PW3654	PW4054	PW4254	PW4454	PW4854	PW6054	
PW1260	PW1860	PW2060	PW2460	PW2860	PW3060	PW3260	PW3660	PW4060	PW4260	PW4460	PW4860	PW6060	
PW1266	PW1866	PW2066	PW2466	PW2866	PW3066	PW3266	PW3666	PW4066	PW4266	PW4466	PW4866	PW6066	
PW1272	PW1872	PW2072	PW2472	PW2872	PW3072	PW3272	PW3672	PW4072	PW4272	PW4472	PW4872	PW6072	

Call out sizes are calculated in inches.

- Grid Patterns for 60" and 66" Picture Windows and Transoms will vary. Casement Picture Windows are 5 lites high. Single Hung and Double Hung picture windows are 4 lites high.

Transom

Rough Opening*	28"	32"	36"	40"	44"	48"	56"	64"	72"
Unit Size	27 1/2"	31 1/2"	35 1/2"	39 1/2"	43 1/2"	47 1/2"	55 1/2"	63 1/2"	71 1/2"
Exposed Glass	22 1/2"	26 1/2"	30 1/2"	34 1/2"	38 1/2"	42 1/2"	50 1/2"	58 1/2"	66 1/2"
TR2812	TR3212	TR3612	TR4012	TR4412	TR4812	TR5612	TR6412	TR7212	
TR2818	TR3218	TR3618	TR4018	TR4418	TR4818	TR5618	TR6418	TR7218	
TR2824	TR3224	TR3624	TR4024	TR4424	TR4824	TR5624	TR6424	TR7224	

Call out sizes are calculated in inches. \* Check with your regional fabricator for rough opening when mulling.



Glider (Single and Double Available)

Rough Opening*	24"	36"	48"	60"	72"	84"	96"
Unit Size	23 1/2"	35 1/2"	47 1/2"	59 1/2"	71 1/2"	83 1/2"	95 1/2"
*Exp. Glass Fixed Light	8 3/4"	14 3/4"	20 3/4"	26 3/4"	32 3/4"	38 3/4"	44 3/4"
*Exposed Glass Sash	8 1/8"	14 1/8"	20 1/8"	26 1/8"	32 1/8"	38 1/8"	44 1/8"
*Clear Opening	8"	14"	20"	26"	32"	38"	44"
G2424	G3624	G4824	G6024	G7224	G8424	G9624	
G2436	G3636	G4836	G6036	G7236†	G8436†	G9636†	
G2442	G3642	G4842	G6042†	G7242†	G8442†	G9642†	
G2448	G3648	G4848†	G6048†	G7248†	G8448†	G9648†	
G2460	G3660	G4860†	G6060†	G7260†	G8460†	G9660†	

\*Applicable only for single operating glider.

Call out sizes are calculated in inches.

† Meets Single Slider egress of:

Clear openable area 5.7 sq. ft.

Clear openable width 20" Clear openable height 24"

See Manufacturer for Double Glider Egress measurements.



3-Lite End-Vent Glider

Rough Opening*	72"	84"	96"	108"	120"
Unit Size	71 1/2"	83 1/2"	95 1/2"	107 1/2"	119 1/2"
Exp. Glass Fixed Light	33 3/8"	39 3/8"	45 3/8"	51 3/8"	57 3/8"
Exposed Glass Sash	14 3/8"	17 3/8"	20 3/8"	23 3/8"	26 3/8"
Clear Opening	15"	18"	21"	24"	27"
TLG7236	TLG8436	TLG9636	TLG10836	TLG12036†	
TLG7248	TLG8448	TLG9648†	TLG10848†	TLG12048†	
TLG7260	TLG8460	TLG9660†	TLG10860†	TLG12060†	

Call out sizes are calculated in inches. Fixed center window constitutes 50% of the unit with operable sashes at 25% each.

\* Check with your regional fabricator for rough opening when mulling.

† Meets egress of: Clear openable area 5.7 sq. ft. Clear openable width 20" Clear openable height 24"



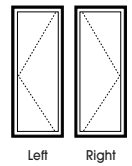
Casement

Rough Opening*	18"	20"	24"	28"	30"	36"
Unit Size	17 1/2"	19 1/2"	23 1/2"	27 1/2"	29 1/2"	35 1/2"
Exposed Glass Sash	12 1/2"	14 1/2"	18 1/2"	22 1/2"	24 1/2"	30 1/2"
Clear Opening	9 7/8"	11 7/8"	15 7/8"	19 7/8"	21 7/8"	27 7/8"

C1824	C2024					
C1836	C2036	C2436	C2836	C3036		
C1842	C2042	C2442	C2842	C3042††	C3642†	
C1848	C2048	C2448	C2848	C3048††	C3648†	
C1854	C2054	C2454	C2854	C3054††	C3654†	
C1860	C2060	C2460	C2860	C3060††	C3660†	
C1866	C2066	C2466	C2866	C3066††	C3666†	
C1872	C2072	C2472	C2872	C3072††	C3672†	

Casement Vent Layout



Specify left-hinge or right-hinge casement as viewed from outside. Call out sizes are calculated in inches.

† Meets egress of: Clear openable area 5.7 sq. ft. Clear openable width 20" Clear openable height 24" †† Requires egress hardware

Twin Casement\*

Rough Opening*	36"	40"	48"	56"	60"	72"
Unit Size	35 1/2"	39 1/2"	47 1/2"	55 1/2"	59 1/2"	71 1/2"
Exposed Glass Sash	13 1/4"	15 1/4"	19 1/4"	23 1/4"	25 1/4"	31 1/4"
Clear Opening	10 1/2"	12 1/2"	16 1/2"	20 1/2"	22 1/2"	28 1/2"

TC3624	TC4024	TC4824	TC5624	TC6024	TC7224	
TC3636	TC4036	TC4836	TC5636	TC6036	TC7236	
TC3642	TC4042	TC4842	TC5642†	TC6042	TC7242†	
TC3648	TC4048	TC4848	TC5648†	TC6048††	TC7248†	
TC3654	TC4054	TC4854	TC5654†	TC6054††	TC7254†	
TC3660	TC4060	TC4860	TC5660†	TC6060††	TC7260†	
TC3666	TC4066	TC4866	TC5666†	TC6066††	TC7266†	

Call out sizes are calculated in inches. † Meets egress of: Clear openable area 5.7 sq. ft. Clear openable width 20" Clear openable height 24" †† Requires egress hardware

\* Common frame multiple units are available in some regions. Check with your local fabricator.

Casement/Fixed/Casement\*

Rough Opening*	54"	60"	72"	84"	90"	108"
Unit Size	53 1/2"	59 1/2"	71 1/2"	83 1/2"	89 1/2"	107 1/2"
Exposed Glass	13 1/2"	15 1/2"	19 1/2"	23 1/2"	25 1/2"	31 1/2"
Clear Opening	10 1/2"	12 1/2"	16 1/2"	20 1/2"	22 1/2"	28 1/2"

CFC5436	CFC6036	CFC7236	CFC8436	CFC9036	CFC10836	
CFC5442	CFC6042	CFC7242	CFC8442	CFC9042	CFC10842	
CFC5448	CFC6048	CFC7248	CFC8448	CFC9048††	CFC10848†	
CFC5460	CFC6060	CFC7260	CFC8460	CFC9060††	CFC10860†	
CFC5466	CFC6066	CFC7266	CFC8466	CFC9066††	CFC10866†	

\* Common frame multiple units are available in some regions. Check with your local fabricator. Call out sizes are calculated in inches. † Meets egress of: Clear openable area ≥ 5.7 sq. ft. Clear openable width ≥ 20". Clear openable height ≥ 24". †† Requires egress hardware

Awning

Rough Opening*	24"	36"	42"	48"	54"	60"
Unit Size	23 1/2"	35 1/2"	41 1/2"	47 1/2"	53 1/2"	59 1/2"
Exposed Glass	18 1/2"	30 1/2"	36 1/2"	42 1/2"	48 1/2"	54 1/2"

A2418	A3618	A4218	A4818	A5418	A6018	
A2420	A3620	A4220	A4820	A5420	A6020	
A2424	A3624	A4224	A4824	A5424	A6024	
A2428	A3628	A4228	A4828	A5428	A6028	
A2436	A3636	A4236	A4836	A5436	A6036	

Call out sizes are calculated in inches.



Casement Window Features

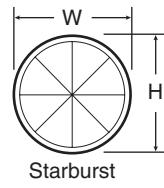


- **Specially Designed Airtight Seal:** Cuts off the maximum amount of air flow while increasing tightness.
- **Heavy Wall/Reinforced Construction:** Allows for slim line look while insuring maximum strength and durability.
- **Multi-Point Lock**
- **Low Profile Curved Lock:** Lies flat out of the way of window treatments
- **Low Torque Operator:** Crank requires 33% less operating force. Fold down handle with nesting cover available.
- **Airtight Operator Cover**

Available with optional add on J-Channel

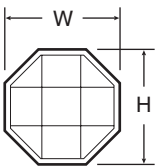


Circle



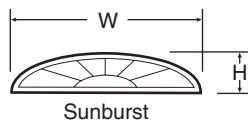
Size	Dimensions
CI2424	23 1/2" x 23 1/2"
CI3030	29 1/2" x 29 1/2"
CI3636	35 1/2" x 35 1/2"

Octagon



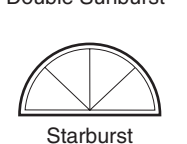
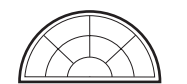
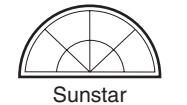
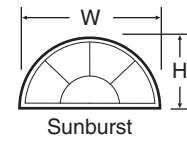
Size	Dimensions
OTG2424	23 1/2" x 23 1/2"
OTG3232	31 1/2" x 31 1/2"
OTG3636	35 1/2" x 35 1/2"

Elliptical



Size	Dimensions
EL6018	59 1/2" x 17 1/2"
EL7220	71 1/2" x 19 1/2"
EL8420	83 1/2" x 19 1/2"
EL9623	95 1/2" x 22 1/2"

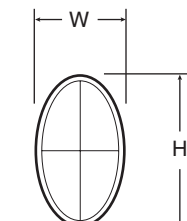
Half-Round



Size	Dimensions
HRD2412	23 1/2" x 11 3/4"
HRD2814	27 1/2" x 13 3/4"
HRD3216	31 1/2" x 15 3/4"
HRD3618	35 1/2" x 17 3/4"
HRD4020	39 1/2" x 19 3/4"
HRD4422	43 1/2" x 21 3/4"
HRD4824	47 1/2" x 23 3/4"
HRD5628	55 1/2" x 27 3/4"
HRD6030	59 1/2" x 29 3/4"
HRD6432	63 1/2" x 31 3/4"
HRD7236	71 1/2" x 35 3/4"

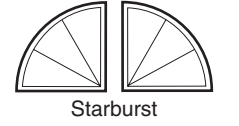
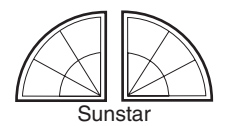
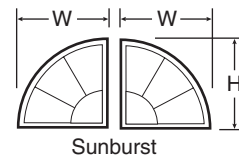
\*This pattern is available in widths larger than 56".

Oval



Colonial Four Lite

Quarter-Round

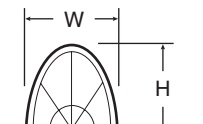


Size	Dimensions
Left	
QRDL2424	23 1/2" x 23 1/2"
QRDL2828	27 1/2" x 27 1/2"
QRDL3030	29 1/2" x 29 1/2"
QRDL3232	31 1/2" x 31 1/2"
QRDL3636	35 1/2" x 35 1/2"

Size	Dimensions
Right	
QRDR2424	23 1/2" x 23 1/2"
QRDR2828	27 1/2" x 27 1/2"
QRDR3030	29 1/2" x 29 1/2"
QRDR3232	31 1/2" x 31 1/2"
QRDR3636	35 1/2" x 35 1/2"

Choose left-hand or right-hand size as viewed from the outside looking in.

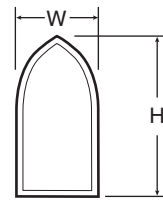
Half-Oval



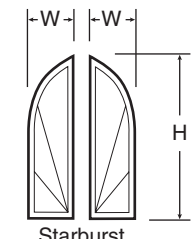
Size	Dimensions
HOV2418	23 1/2" x 17 1/2"
HOV3628	35 1/2" x 27 1/2"

Size	Dimensions
GC1836	17 1/2" x 35 1/2"
GC2040	19 1/2" x 39 1/2"
GC2244	21 1/2" x 43 1/2"
GC2448	23 1/2" x 47 1/2"
GC2856	27 1/2" x 55 1/2"
GC3060	29 1/2" x 59 1/2"
GC3672	35 1/2" x 71 1/2"

Gothic



Half-Gothic



Size	Dimensions
Left	
HGCL1854	17 1/2" x 53 1/2"
HGCL2260	21 1/2" x 59 1/2"
HGCL2666	25 1/2" x 65 1/2"
HGCL2872	27 1/2" x 71 1/2"

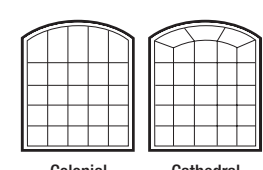
Size	Dimensions
Right	
HGCR1854	17 1/2" x 53 1/2"
HGCR2260	21 1/2" x 59 1/2"
HGCR2666	25 1/2" x 65 1/2"
HGCR2872	27 1/2" x 71 1/2"

Choose left-handed or right-handed size as viewed from the outside looking in.

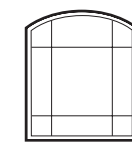
Extended Arch (Fixed) and Eyebrow

Chord Height (Approx.)	4 1/8"	5 1/8"	5 7/8"	6 5/8"	7 7/16"	8 1/4"	9"	11 1/4"	13 1/2"	17 13/16"
Radius	18"	21"	24"	27"	30"	32"	36"	45"	54"	73"
Rough Opening	24"	28"	32"	36"	40"	44"	48"	60"	72"	96"
Unit Width	23 1/2"	27 1/2"	31 1/2"	35 1/2"	39 1/2"	43 1/2"	47 1/2"	59 1/2"	71 1/2"	95 1/2"

Series	EA24A	EA28A	EA32A	EA36A	EA40A	EA44A	EA48A	EA60A	EA72A	EA96A
Series A Shoulder Height – 7 1/8" (Eyebrow) (Fixed Ext. Arch)										
Series B Shoulder Height – 19 1/8" (Fixed Ext. Arch)										
Series C Shoulder Height – 31 1/8" (Fixed Ext. Arch)										
Series D Shoulder Height – 39 1/8" (Fixed Ext. Arch)										
Series E Shoulder Height – 43 1/8" (Fixed Ext. Arch)										
Series F Shoulder Height – 47 1/8" (Fixed Ext. Arch)										
Series G Shoulder Height – 55 1/8" (Fixed Ext. Arch)										
Series H Shoulder Height – 61 1/8" (Fixed Ext. Arch)										
Series J Shoulder Height – 67 1/8" (Fixed Ext. Arch)										
Series K Shoulder Height – 79 1/8" (Fixed Ext. Arch)										
Series L Shoulder Height – 91 1/8" (Fixed Ext. Arch)										



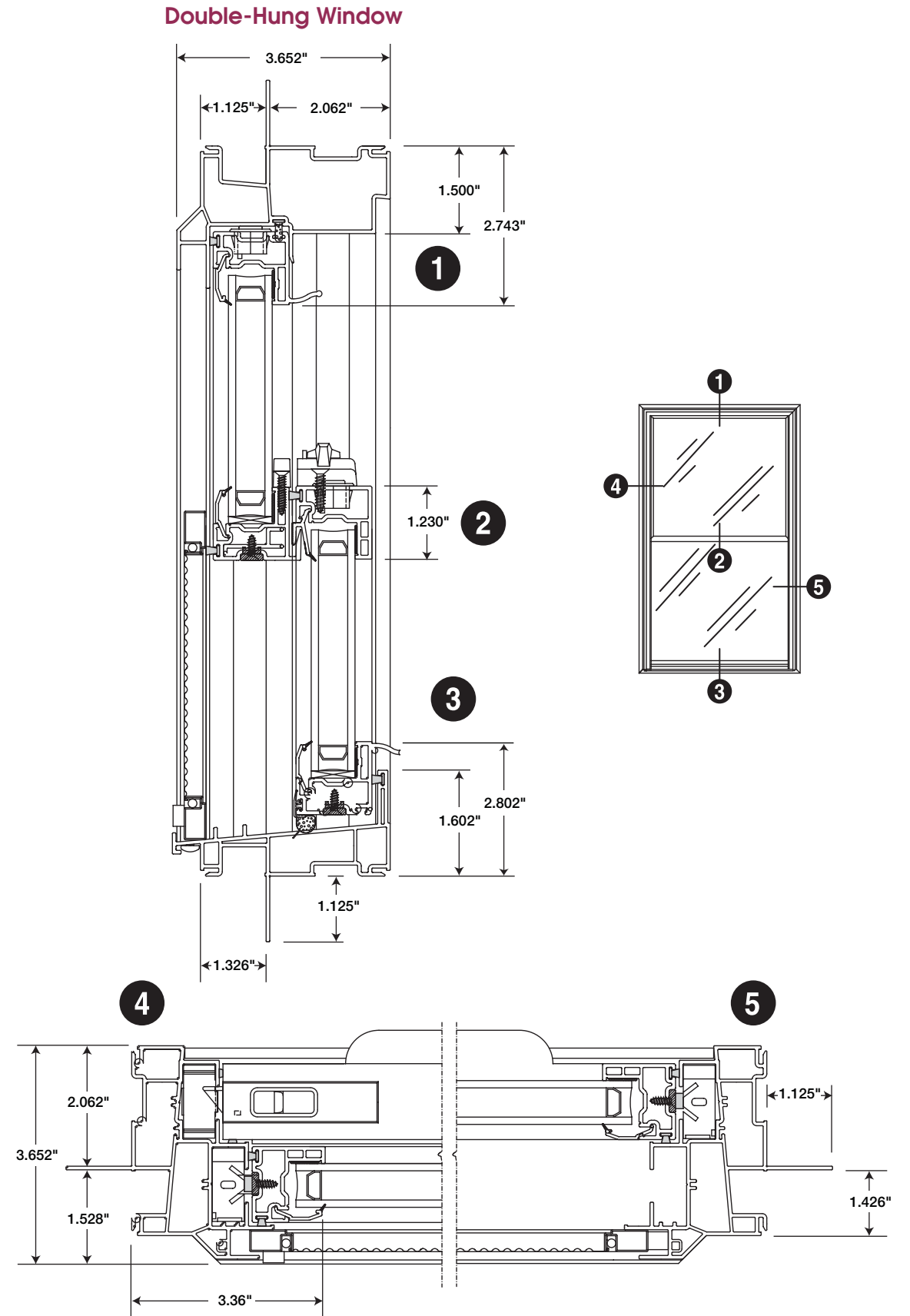
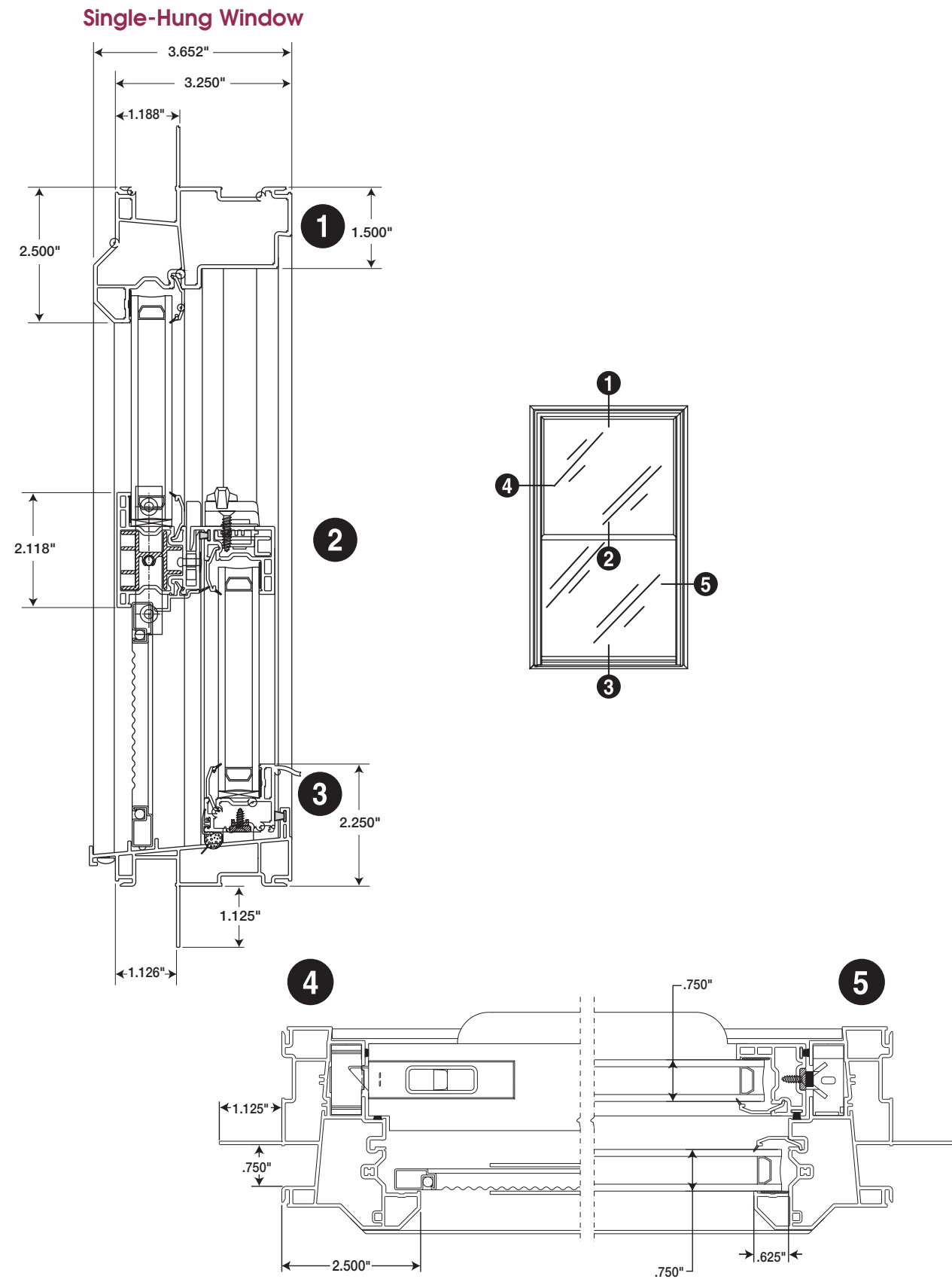
Colonial Cathedral



Prairie

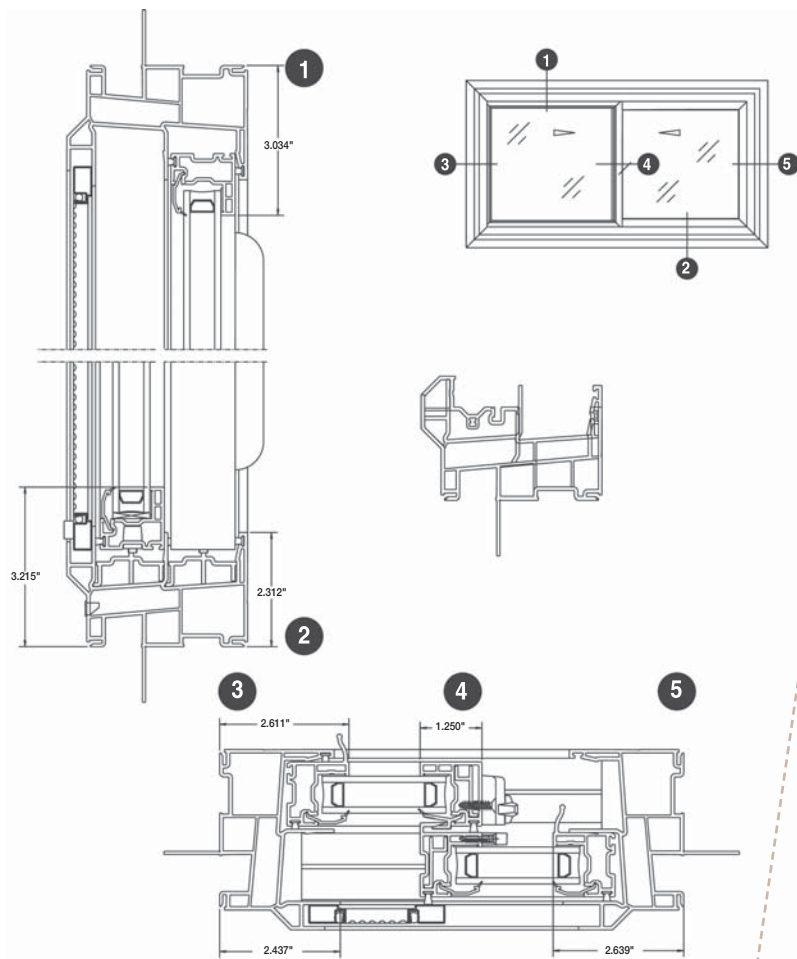
Call out indicates width expressed in inches and shoulder height (series code). Custom sizes available.

Prairie grids are not available in A series.

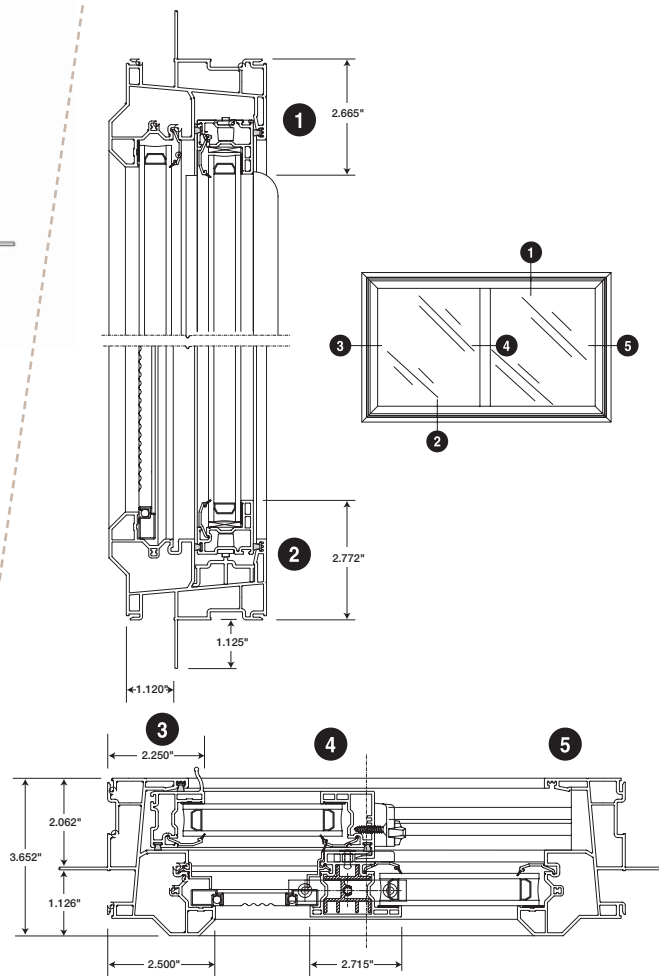




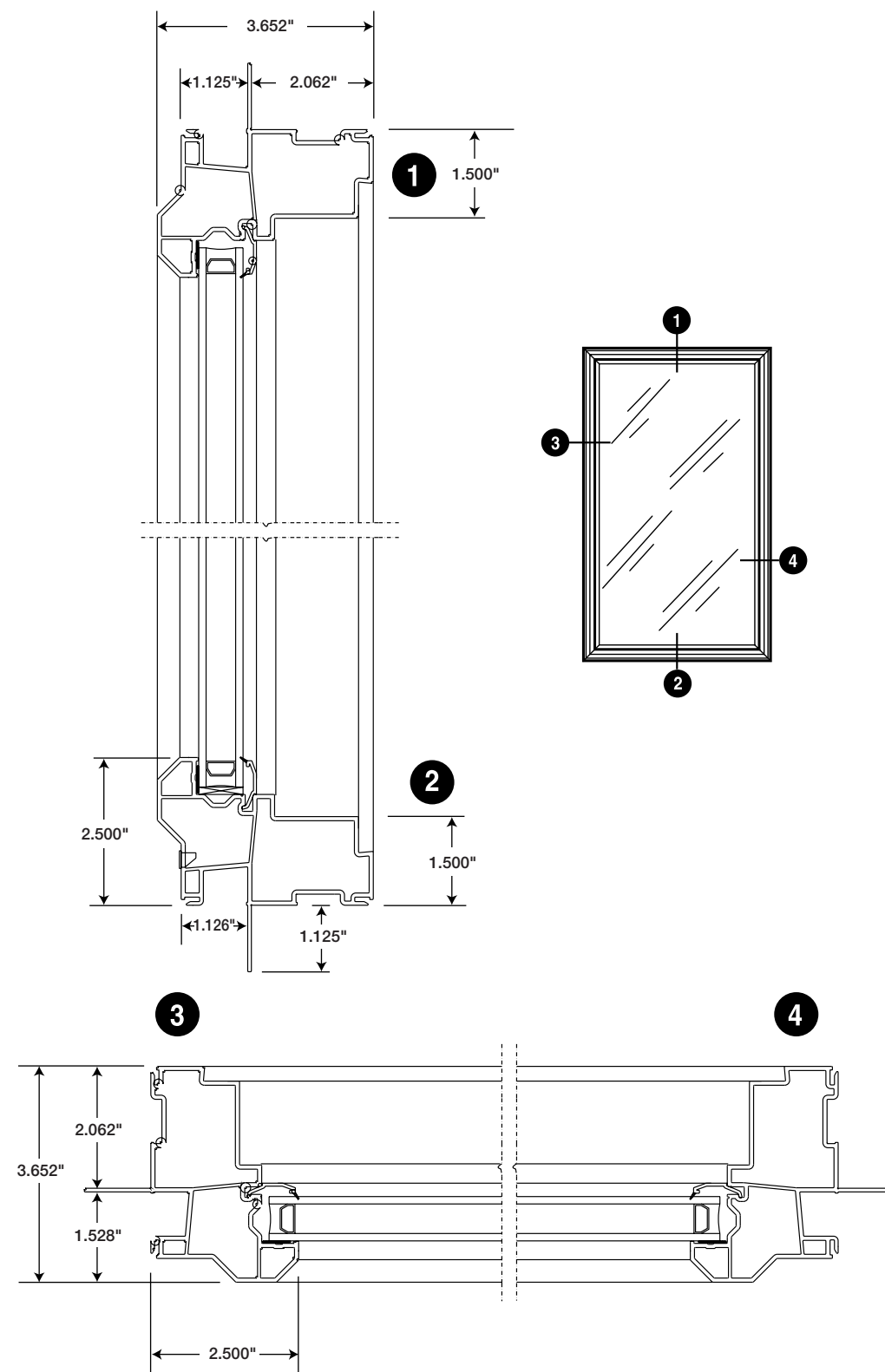
Double Glider

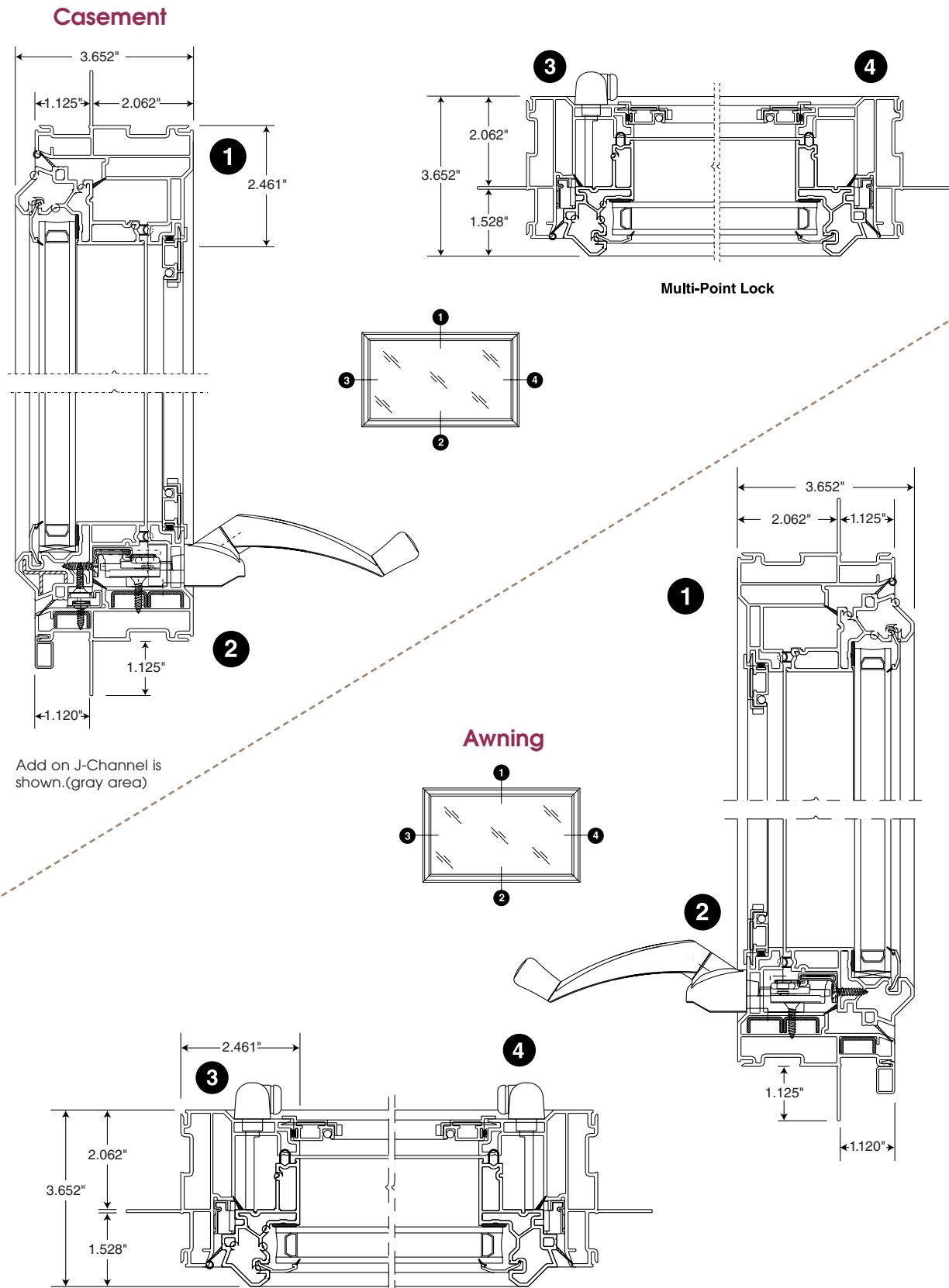


Single Glider

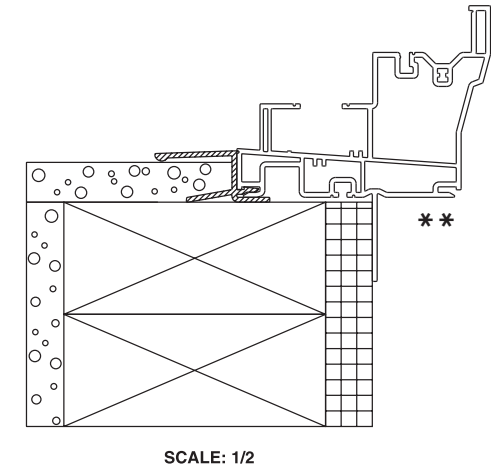
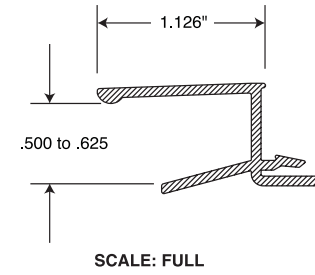


Picture Window/Transom

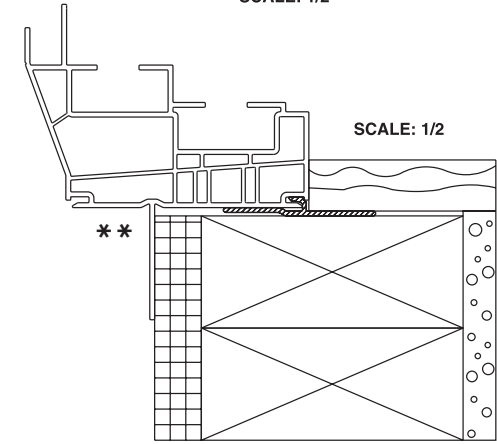
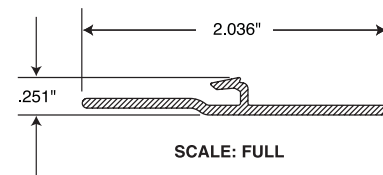




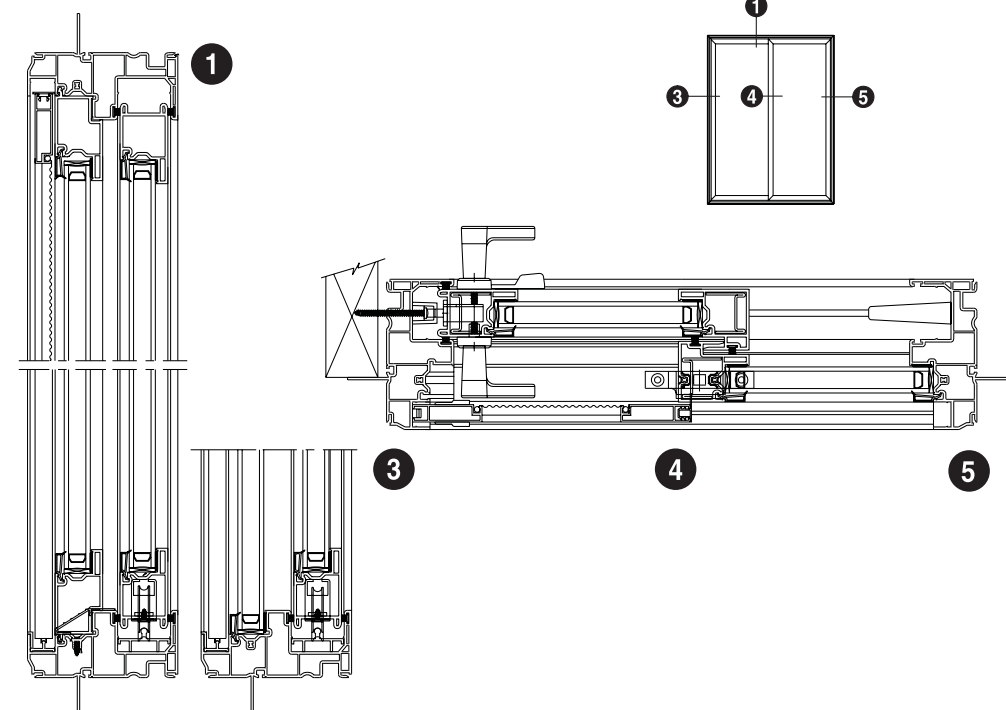
**Dry Wall Receptor\***



**Dry Wall or Jamb Extension Guide\***



**Patio Door\*\*\***



\* Contact your local fabricator for a complete list of accessory items.

\*\* Generic profile for illustration purposes only.

\*\*\* Not available in all regions. Consult your local fabricator.