



**THERMAL
WINDOWS, INC.**

Residential Products



At Thermal Windows,
the Quality Shines Through.



Series 700 double hung windows are a winning combination of classic design, superior materials and energy-saving technology – from a proven industry leader.

We truly believe our Series 700 double hung is America's finest window. Compare features for yourself, and we think you'll agree.

High efficiency meets high style.



At the heart of every Series 700 double hung window is our polymer **Thermal Barrier** (above). This special barrier separates the interior and exterior of the window throughout the entire frame and sash – dramatically reducing heat loss in the winter and heat gain in the summer.

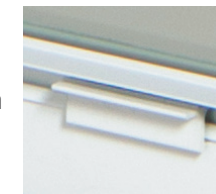
“They have not only greatly improved the look of my home and condo, but they lowered the utility bills considerably.”

Fritz K. – Bartlesville, OK



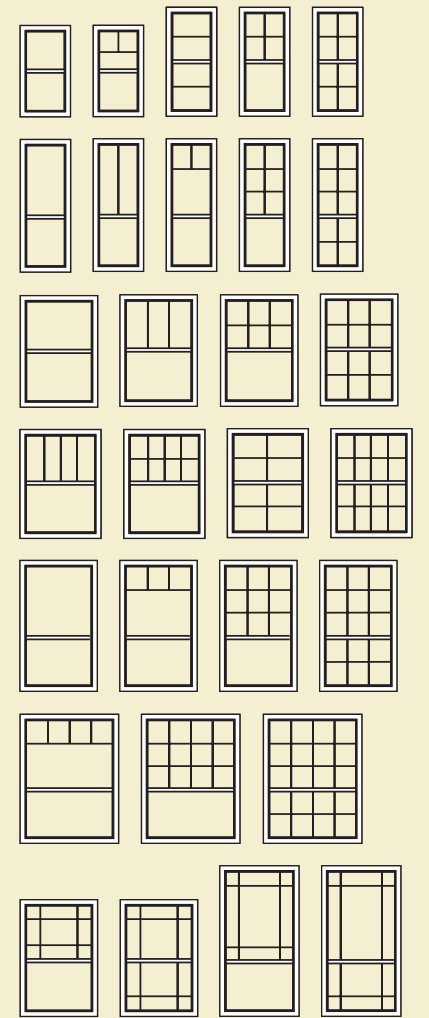
Series 700 standard features:

- Sealed 3/8" insulated glass for optimum thermal efficiency
- Each sash easily and conveniently tilts inward for cleaning
- Center cam lock plus a hidden metal security lock on each sash
- Carbon steel spiral sash balances
- Deep continuous interlocks
- Full length extruded aluminum screens
- Double high-density pile weatherstripping with mylar fins to seal out wind and water



Hidden lock

Series 700 Double Hung windows feature pleasing sightlines with tilt-to-clean convenience.



Series 700 divided lites are available in the patterns shown above. Don't see what you want? Just ask your Thermal Windows representative.

Divided lite muntins are available in four different styles.

See pg. 19 for muntin options.

Colors: Standard colors are white, almond, sandstone and bronze. We offer designer colors and anodized finishes for an additional cost.

See pg. 18 for color options.

Glass: Many types of glass are available.

See pg. 21 for glass options.





Series 500 single hung windows are a great choice for traditional styling and high performance in a lower-priced window. They include most of the features found in our popular double hung windows, and the fixed upper lite can be curved to form elegant archtops.

Performance. Versatility. Value.



Series 500 single hung windows are versatile.

They can be connected (“mulled”) horizontally and vertically with other windows to form twins, triples, bays, bows and stacks. The configurations are virtually unlimited!

Series 500 standard features:

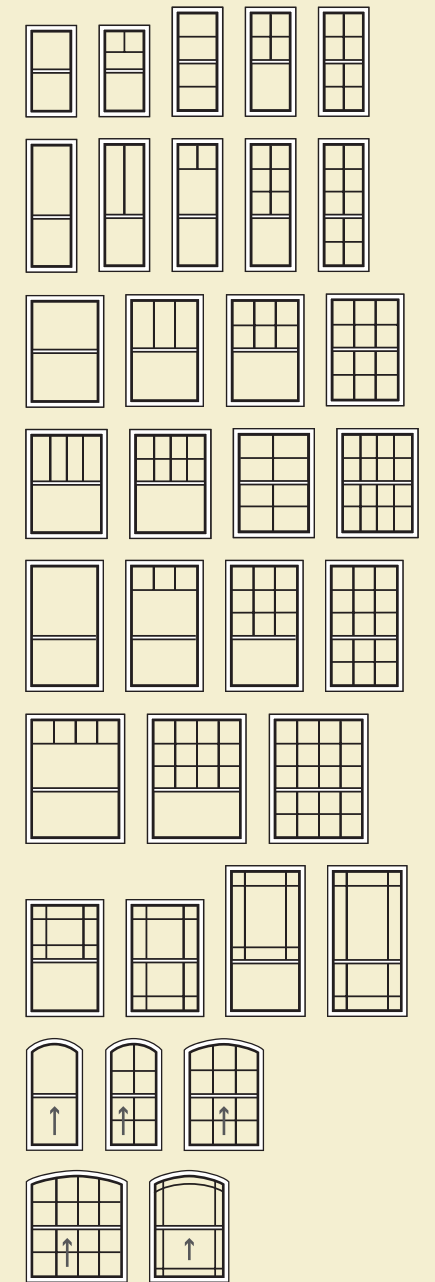
- Sealed 7/8" insulated glass for optimum thermal efficiency
- Lower sash easily and conveniently tilts inward for cleaning
- Center cam lock plus a hidden metal security lock on lower sash
- Carbon steel spiral sash balances
- Deep continuous interlocks
- Half-length extruded aluminum screens
- Double high-density pile weatherstripping with mylar fins to seal out wind and water



A half-length aluminum screen is a standard feature on all Series 500 windows (above).



The fixed upper lite of our Series 500 Single Hung windows can be curved to form an arch as pictured here (above), and in this second story window (below).



Series 500 divided lites are available in the patterns shown above. Don't see what you want? Just ask your Thermal Windows representative for more options.

Divided lite muntins are available in four different styles.

See pg. 19 for muntin options.

See pg. 18 for color options.

Glass: Many types of glass are available.

See pg. 21 for glass options.





Series 525 and 725 Horizontal Rolling Windows provide ventilation at your fingertips. Elegant verticals maximize the viewing area.

These incredibly versatile windows can be configured with single or double sash in two or three sections with operating vents placed where you need them.

Our horizontal rolling windows are custom manufactured in sizes ranging from small bathroom windows to full patio enclosures.

Ventilation with a view.



Horizontal Rolling Window standard features:

- Sealed 7/8" insulated glass for optimum thermal efficiency
- Operating sash easily and conveniently lift out for cleaning
- Center cam lock plus a hidden metal security lock on each operating sash
- Durable, corrosion-resistant metal rollers
- Deep continuous interlocks
- Extruded aluminum screens
- Double high-density pile weatherstripping with mylar fins to seal out wind and water

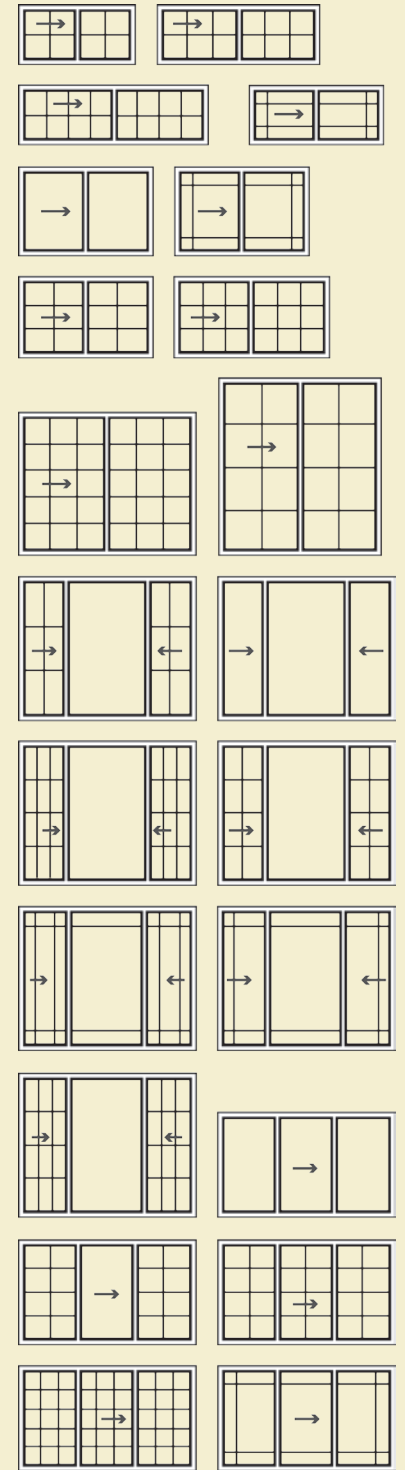


Series 530 XO window

Series 525 and 725 Horizontal Rolling Windows are available in single (XO/OX), double (XX) or triple sash (OXO/XOX).



Series 525 XO window



Series 525 and 725 divided lites are available in the patterns shown above. Don't see what you want? Just ask your Thermal Windows representative.

Divided lite muntins are available in four different styles.

See pg. 19 for muntin options.

See pg. 18 for color options.

Glass: Many types of glass are available.

See pg. 21 for glass options.





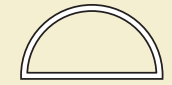
Series 550 and 750 picture windows are highly energy-efficient and custom manufactured in a wide range of shapes and sizes. They're the perfect way to frame a great view while brightening your home's interior with natural light.

Picture perfect.



Series 550 and 750 Picture Window standard features:

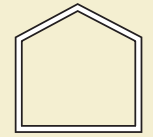
- Sealed 1" insulated glass for optimum thermal efficiency
- Certified air, water and structural performance



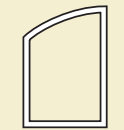
Circletop



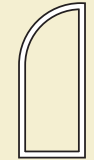
Continuous Circletop



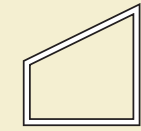
Custom Rakehead



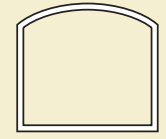
Custom Eyebrow



Continuous Quarter Circle



Rakehead



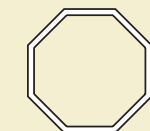
Eyebrow



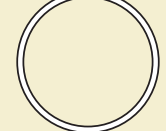
Quarter Circle



Triangle



Octagon



Full Circle

Shape options

We manufacture picture windows in several special shapes, all in custom sizes. The only limitation is your imagination.

Series 550 and 750 divided lites are available in many patterns. Just ask your Thermal Windows representative for more information.

Divided lite muntins are available in four different styles.

See pg. 19 for muntin options.

See pg. 18 for color options.

Glass: Many types of glass are available.

See pg. 21 for glass options.





Series 900 Casement Windows & Series 925 Awning Windows

combine the views of a picture window with the ventilation and ease of cleaning found in operating windows. Low-profile hardware and narrow sightlines give them a timeless elegance.

Classy casements.



These beautiful windows are made from strong, durable, maintenance free aluminum, featuring our special polymer Thermal Barrier.

Separating the interior and exterior surfaces, the barrier dramatically reduces heat loss in the winter and heat gain in the summer.

We make our attractive and durable casement windows in rotary crank configurations as well as push-out awning and tilt-in hopper styles. They can be made to fit nearly any opening.



Standard features:

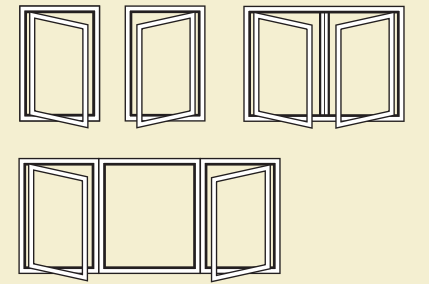
- Sealed 3/8" insulated glass for optimum thermal efficiency
- Stainless steel commercial strength hinges
- Unique hinge system allows easy cleaning from the inside
- Low profile fold-away handles minimize interference with curtains and blinds
- Attractive flush mount extruded aluminum screens
- Integral rubber gasket system seals out wind and water



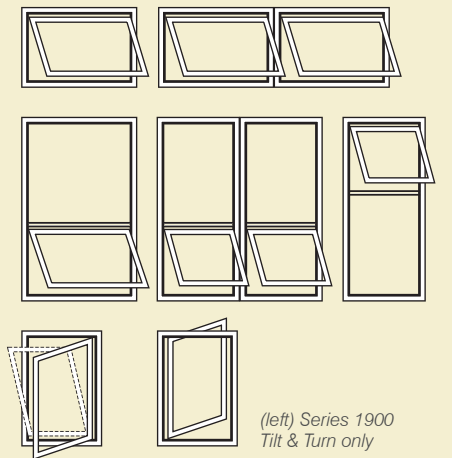
Series 925 Awning Window



Series 910 Dual Casement Window with Series 750 Eyebrow window stacked above



Series 900 Casement Windows (above) and Series 925 Awning Windows (below) are available in many different configurations.



(left) Series 1900 Tilt & Turn only

Divided lite muntins are available in four different styles.

See pg. 19 for muntin options.

Colors: Standard colors are white, almond, sandstone and bronze. We offer designer colors and anodized finishes for an additional cost.

See pg. 18 for color options.

Glass: Many types of glass are available.

See pg. 21 for glass options.

“The quality is the BEST we have ever found... and the installation crew was very good.”

Z. Y. – Bethany, OK





Series 6600 and 6800 TrustGard fully welded vinyl windows

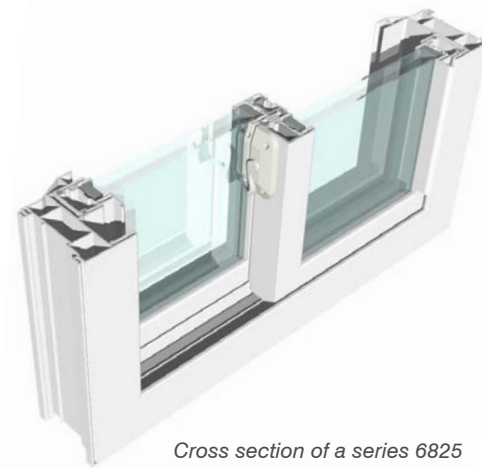
evoke beauty and style. From the smooth, uncomplicated interior to the attractive beveled exterior, TrustGard provides classic good looks to enhance the appearance of your home.

But TrustGard is about more than looks. Our features and options ensure that your new windows will provide comfort, convenience and energy-efficiency for years to come.

Value with vinyl.



Cross section of a series 6800 Double Hung window



Cross section of a series 6825 Horizontal Rolling window

The fully welded sash and frame provide stability, energy efficiency and protection from the outside elements.



Picture windows (left) add the finishing design touch to give your home that custom look. Circletops, arches, quarter-circles, triangles, octagons... The shapes and combinations are virtually unlimited.

Horizontal rolling windows (right) really open up a room to the great outdoors. Available in 2-lite or 3-lite configurations, they provide a great view and ventilation. Operating sashes are easily removable from the inside for cleaning.



Standard Features

Single & Double Hung Windows

- Fusion welded vinyl sash and frame
- 3/8" insulated glass with warm-edge Superspacer
- Sash tilts in for easy cleaning
- Recessed tilt latches
- Sloped sill for natural drainage
- Attractive beveled exterior
- Full length weatherstripping in meeting rails
- Deep and wide interlocks
- "Night" latches
- Full length screens with your choice of wire or fiber mesh (Double Hung)
- Half length screens (Single Hung)

Horizontal Rolling Windows

- Fusion welded vinyl sash & frame
- 3/8" insulated glass
- Attractive beveled exterior
- Full length weatherstripping in meeting rails
- Deep and wide interlocks
- Full width screens with your choice of wire or fiber mesh (XX configuration)
- Half length screen (XO or OX configuration)

Picture Windows

- Fusion welded vinyl frame
- 3/8" insulated glass

Available options

- Double Silver Low-E Glass
- Triple Silver Low-E Glass
- Argon gas fill
- STC Sound Control Glass
- Tempered glass
- ThermalSafe™ laminated safety glass
- Tinted, frosted, obscure or rain glass
- White or Almond color





Series 9900 sliding glass doors are a stylish and energy-efficient addition to any patio, deck or sun room. Their silky-smooth operation makes them as easy to use as they are easy on the eye.

Smooth operator.

Standard features:

- Sealed 7/8" insulated glass for optimum thermal efficiency
- Choose from OX, XO, OXO or OXXO and other configurations
- Secure handle with optional keyed lock at no additional charge
- Interlocking meeting rails
- High-density pile weatherstripping with mylar fin to seal out wind and water
- Sloped anodized sill to promote water runoff
- Durable extruded aluminum rolling screen



Standard hardware is painted in white or black. Optional keyed entry lock also available (far right).



Solid brass, antique brass and brushed chrome handle sets are available options.

Our optional keyed entry lock is available for any handle set.



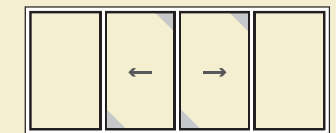
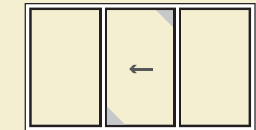
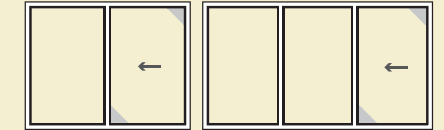
Fasco® sliding glass door handles are also available, in standard white or black and optional crystal ice finishes. An optional keyed entry lock (shown in black) is available for all three colors.



For a more contemporary look, choose the N1500 handle, available in white, black, satin nickel and faux oil rubbed bronze.

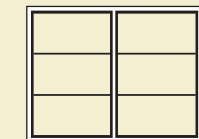
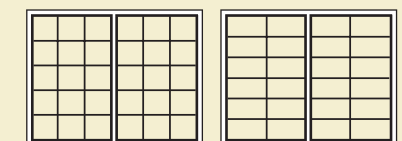
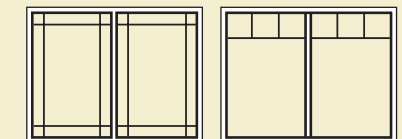
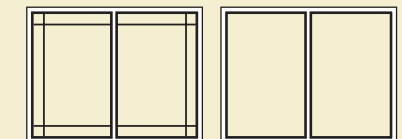


Our optional patio door security bar is available in brushed nickel (shown) or bronze finish.



Series 9900 sliding glass doors are available in many different configurations, including OX, OOX, OXO and OXXO (above, L-R, top to bottom). XOO, OOOX, OOXO and XOOX configurations are also available.

Series 4151 Transom Windows can be stacked or mullied side by side with the doors.



Available options:

- Nailing fin/flush fin
- Custom sizes
- Divided lites
- Clear and dark bronze anodized finishes
- Dark bronze anodized threshold
- Low-E glass, tint, panels, spandrels, aluminum screen mesh
- ThermalSafe® laminated glass
- Solid brass, antique brass or brushed chrome handle set, with or without key lock

Series 9900 Sliding Glass Door grid patterns include those shown above, as well as many others. Don't see what you want? Just ask your sales rep.

Divided lite muntins are available in four different styles.

See pg. 19 for muntin options.

See pg. 18 for color options.

Glass: Many types of glass are available.

See pg. 21 for glass options.





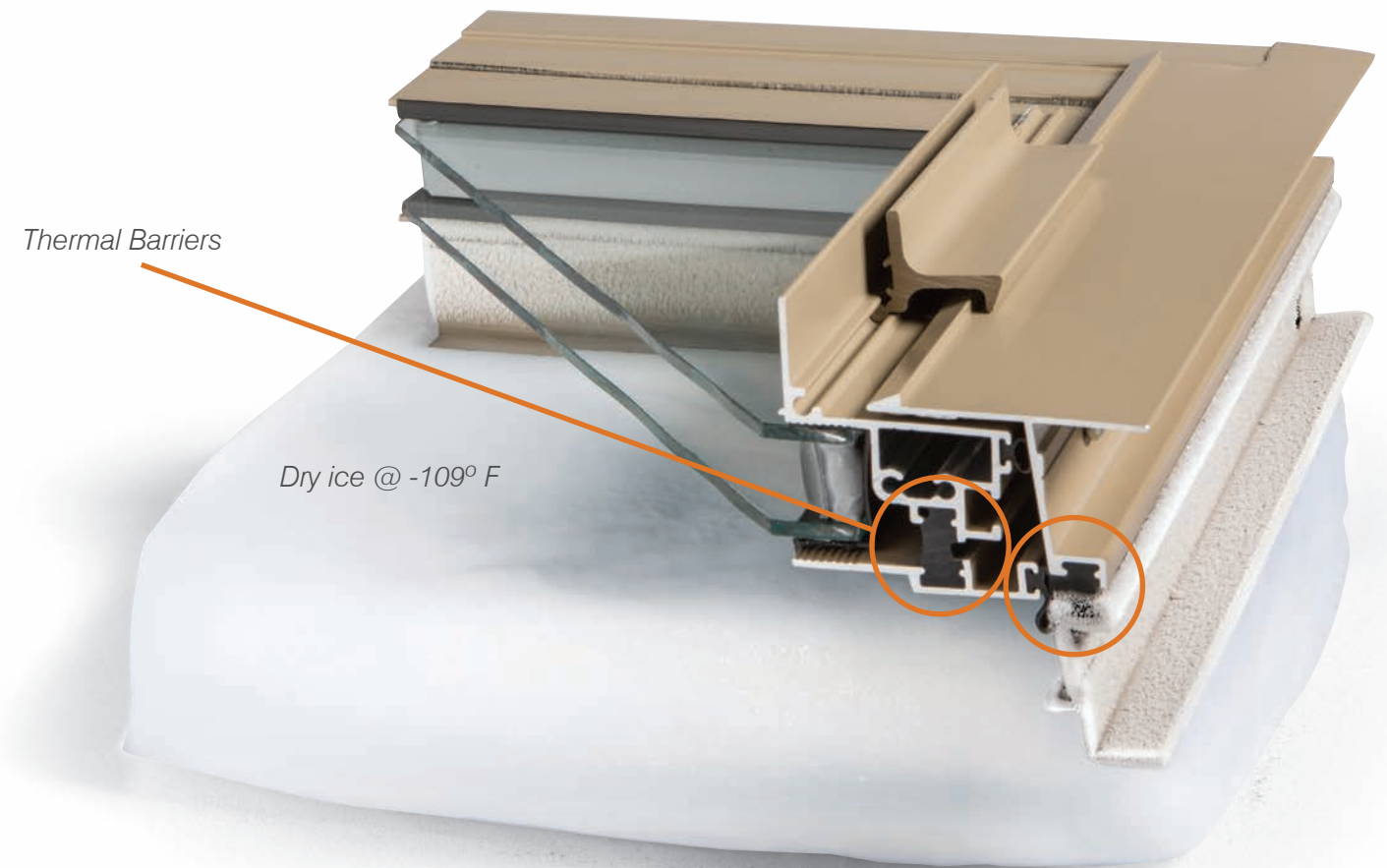
Thermal Windows, Inc. designs and manufactures products with the focus on Value, Integrity and Performance. This VIP ethic is the reason our standard features go well beyond the basics.

Packed with standard features.



Our Thermal Barrier uses a special polymer compound to separate the interior and exterior window frame and sash. This greatly reduces the amount of heat or cold conduction, thus saving energy.

A barrier against energy loss.



What is a Thermal Barrier?

Our proprietary extrusions contain carefully engineered pockets that we fill with a rigid polymer, then “debridge” to separate the interior and exterior of the frame and sash. The extremely low conductance of the polymer greatly inhibits the transfer of heat and cold.

How does a Thermal Barrier window perform?

Manufactured from close-tolerance aluminum extrusions, our Thermal Barrier windows have lower air leakage and greater structural strength than most wood or vinyl windows.

Thermal Barrier aluminum windows are lab-tested to strict industry specifications. Air leakage with a 25 MPH wind cannot exceed

0.30 cubic feet per minute (CFM) for each foot of weatherstripped window perimeter. Our Series 500 Single Hung window reduces air infiltration to just 0.08 CFM. Old windows often leak air at rates as high as 1.50 CFM, more than 18 times as much as our Thermal Barrier aluminum windows!





Thermal Windows are custom-manufactured. Our wide selection of window types, shapes, colors, glass and divided lite patterns allows you to specify windows to suit your personal style.

Options. Plenty of options.

Color options

Our Thermal Barrier aluminum windows feature a durable, maintenance-free powder coat finish in your choice of four Standard colors (left).

Custom colors and anodized finishes (right) are available for an additional charge*.

White

Sandstone

Almond

Bronze

Black

Dark Gray

Creme

Dauphin Gray

Bone White

Brick Red

Medium Bronze

Clear Anodized
(Silver Metallic)

Dark Green

Glass options

Glass is such an important part of window selection that we have devoted an entire page to it (page 21).

Muntin Options

Often called *grids* or *divided lites*, muntins were used in the past to hold individual panes of glass. Today they are used as optional accents to enhance the style of windows and doors.

The styles we offer are shown here. Some styles may not be available in every product, color or pattern.



Internal standard



Face-applied standard



Internal contoured



Face-applied contoured

Vinyl or aluminum?

Which is a better choice for your home?

Vinyl is Unplasticized Polyvinyl Chloride, also known as uPVC. It is a common window frame material due to its natural insulating value and low cost. It also has a relatively low melting point, which is useful for “welding” vinyl extrusions together to make window frames.

Aluminum has been used as a window frame material for decades. Today, high-end aluminum windows include a polymer thermal barrier (also known as a “thermal break”) to enhance insulation performance while maintaining structural strength.

How do the two materials compare?

	Vinyl	Thermal Barrier Aluminum
Insulating value	Very Good	Very Good
Durability	Good	Excellent
Maintenance	Minimal	Minimal
Cost	Low	Low
Recyclability	Low or Zero	Very High
Color selection	Usually White or Almond; Dark colors not recommended	Factory finish available in many colors
Structural strength	Medium; often requires internal reinforcement	High
Viewable glass area	High	Very High
Air infiltration	Very Low	Very Low
Security	Manual single or dual cam locks	Manual single or dual cam locks; Automatic safety locks

Which does Thermal Windows recommend?

We manufacture both vinyl and thermal barrier aluminum windows. While our vinyl products are very energy-efficient, attractive and economical, we believe the advantages of our aluminum windows make them the best choice for both new construction and replacement windows for the long run.

Questions?

We're here to help! Just ask your representative for more information.

Standard Colors

Custom Colors

*Colors shown are for general information only. It cannot be assured that actual finishes will match these examples.



Most of a window is glass. When it comes to window performance...

It's all about the glass.

A major development

Ever since the invention of insulated glass (popularly known as "double-paned" glass), window technology has continued to evolve. The most significant improvement has been the development of glass with Low-E coatings.

Low-E = Low Emissivity

Emissivity is a term that describes how an object radiates or reflects the heat it absorbs. The lower the emissivity, the less heat it radiates, and the more heat it reflects.

What is Low-E glass?

Low-E glass has an ultra-thin coating permanently bonded to its surface. This coating is made of microscopic particles that utilize the reflective properties of titanium or silver to reflect heat back towards its source while allowing most visible light to pass through.

Low-E glass means lower bills

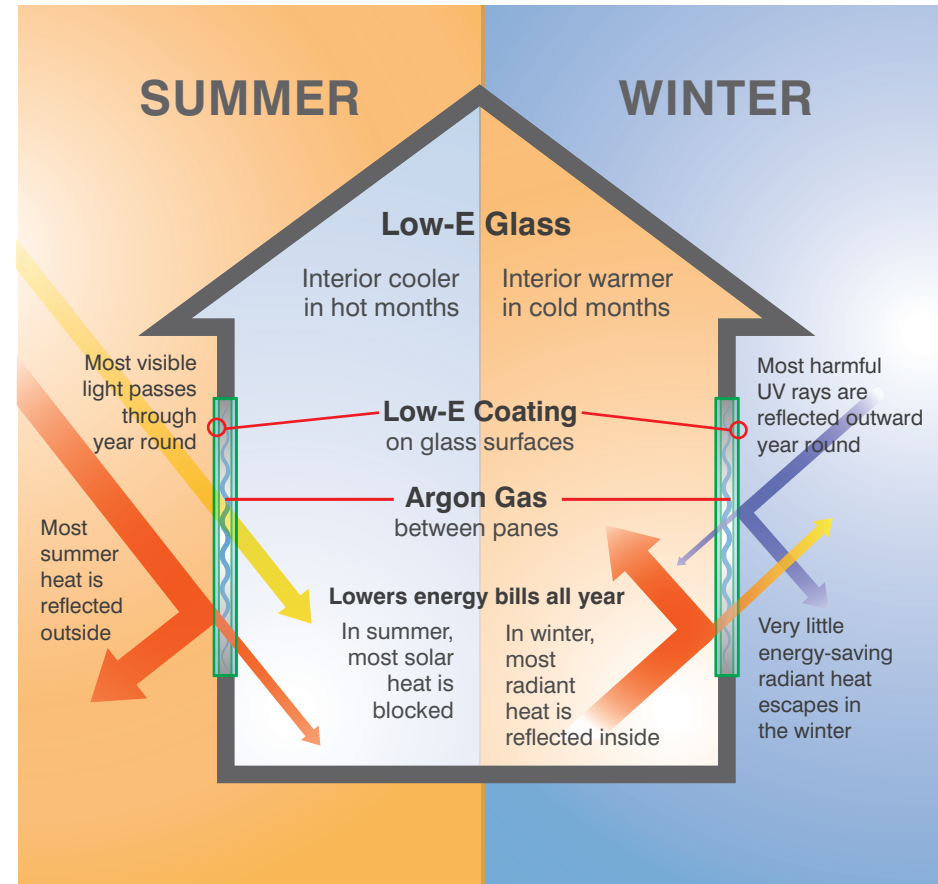
Since Low-E glass reflects most heat back to its source, it works to keep your home's interior cooler in the summer and warmer in the winter.

Other benefits of Low-E glass

Since it blocks 75% or more of ultraviolet light, Low-E glass can reduce the fading of carpets, draperies and furnishings caused by UV rays, yet it causes no harm to plants. Plants require visible light for photosynthesis, with no scientific evidence that they require UV. In fact, Low-E glass blocks UV radiation that is generally harmful to seedlings or younger indoor plants.

Making a good thing even better

Insulated glass uses a "spacer" to create a sealed airspace between



the interior and exterior panes of glass. In recent years, the window industry has developed "warm-edge" spacers that further reduce the transfer of energy through insulated glass. Our residential windows include SuperSpacer®, one of the best-performing warm-edge spacers available.

Benefits of Argon

Argon gas is safe, invisible, and resists convection (currents caused by temperature differences). Insulated glass units filled with an Argon/air blend experience less energy transfer from the interior to the exterior.

A worthwhile investment

Thermal windows with Low-E glass, SuperSpacer® and Argon

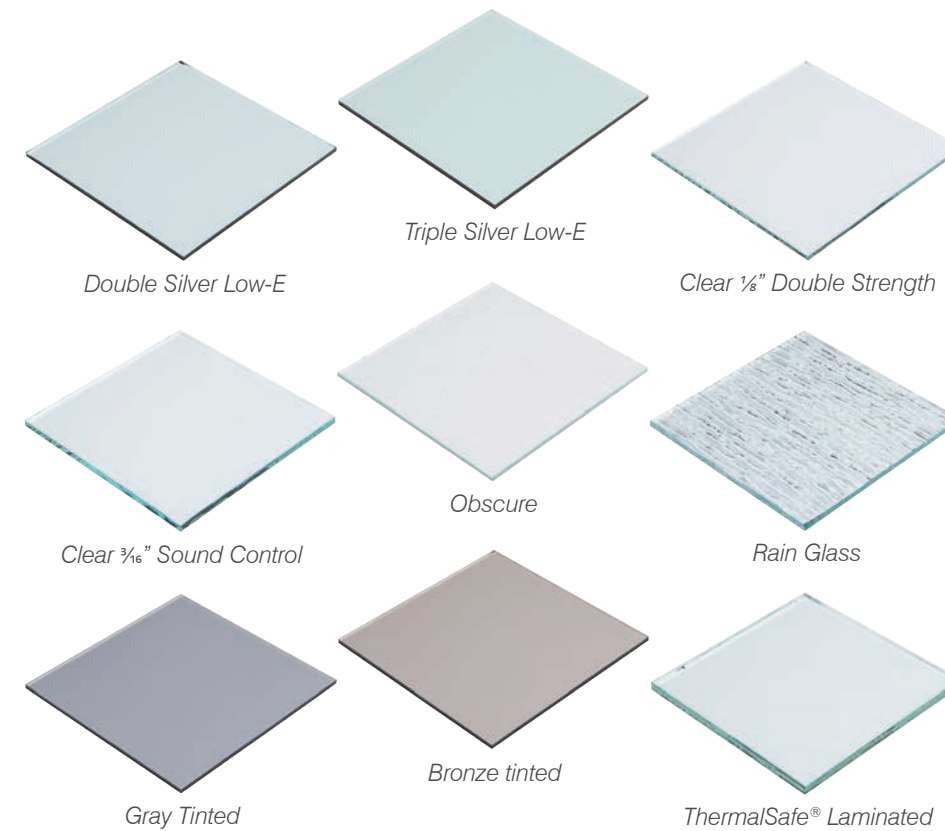
gas provide significantly better energy performance than basic windows. The slightly higher initial investment will pay off in the long run through lower utility bills month after month, year after year.



A 36" x 60" double hung window is 27% frame, 73% glass

A 36" x 60" Picture window is 19% frame, 81% glass

Glass options for every situation.



Triple Silver

With three layers of microscopic particles that use the reflective properties of silver, Triple Silver is our top-performing Low-E glass. Unlike tints or films, Triple Silver is highly transparent, while reflecting most heat and UV back to its source. The bottom line is, Triple Silver provides year-round energy efficiency.

Double Silver

With its advanced low-emissivity coating, Double Silver glass significantly reduces heat gain/loss and blocks most UV rays. And it does all this while maintaining exceptional visual clarity. Double Silver is slightly more transparent than Triple Silver, allowing 66% visible light transmission vs. 62% for Triple Silver.

Sound Control glass

Thermal Windows include double-strength 1/8" glass as a standard feature. This provides a high degree of sound reduction. Sound can be reduced even

further by substituting 3/16" Sound Control glass for one of the 1/8" panes. This does not harm the product's energy efficiency

Obscure and Rain glass

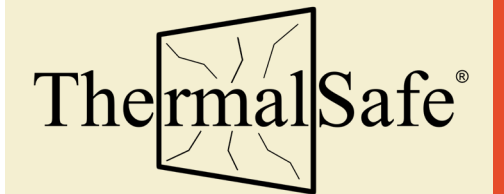
When additional privacy is desired, Obscure or Rain patterned glass can be combined with Low-E glass to greatly reduce visibility. Obscure glass has a uniform pattern, while Rain glass simulates the appearance of rain on glass.

Tinted glass

No longer the most efficient way to block heat, Bronze or Gray tinted glass are available as options to reduce visible light and the heat it carries. We recommend discussing tinted glass with your representative.

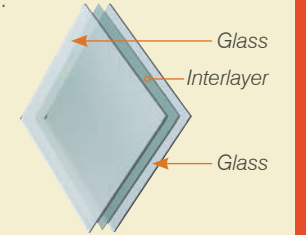
Tempered safety glass

Tempered glass provides an additional degree of security and safety, due to its hardness and the way it produces less harmful pieces when broken. It is required to meet building codes in certain situations.



ThermalSafe® glass

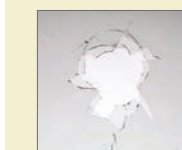
For our highest level of safety and security, consider ThermalSafe® laminated glass. It consists of two layers of annealed glass with a layer of polyvinyl butyral (PVB) sandwiched in between.



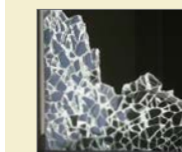
When ThermalSafe® is combined with Double or Triple Silver Low-E glass, the result is energy-efficiency and protection from flying debris, accidental breakage and intrusion.

ThermalSafe® advantages

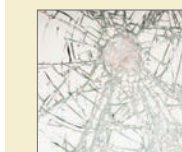
- The inside lite of glass is laminated so that if broken, the glass stays in place and there are no sharp edges or glass shards on the floor to injure people.
- ThermalSafe® significantly reduces the penetration of UV rays that fade carpets and draperies.
- Greater sound reduction than regular insulating glass.
- If a potential intruder strikes the glass, the outside pane will break into jagged pieces, leaving the laminated pane intact. The extra time and effort required to break and penetrate the laminated pane makes it likely that he will give up his attempt to break into the home.



Standard annealed glass breaks easily, producing long, sharp splinters.



Tempered glass shatters completely under higher levels of impact energy, and few pieces remain in the frame.



Laminated glass may crack under pressure, but tends to remain integral, adhering to the plastic vinyl interlayer.



Oklahoma owned and operated.



Bob G. Pool, Founder

In 1955, Bob G. Pool and his father Cal began selling awnings, storm windows and storm doors out of a Tulsa storefront as Aluminum Window Products. Attuned to the market, Bob saw the growing need for high quality replacement windows with insulated glass. In 1979, he founded Thermal Windows, Inc. and began designing and manufacturing energy efficient windows.

Today, we are an industry leader known for value, integrity and performance. Our quality products and personalized service lead to an exceptional level of customer satisfaction.

Our corporate headquarters, showroom and manufacturing plant are located in Tulsa, Oklahoma, where we custom-manufacture over 70,000 windows and doors every year. With a branch office in Oklahoma City and a network of dealers across the United States, our annual sales exceed \$35 million.



Why Thermal Windows?

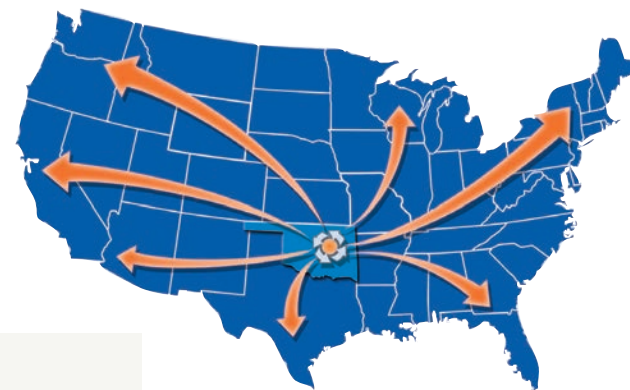
Locally owned, nationally known

Window & Door magazine names us a "Top 100 Window Manufacturer" year after year.



We compete with window and door companies throughout the United States.

Since we manufacture our products in Tulsa, when you do business with us, your money stays in Oklahoma.



Thermal Windows products are manufactured in Oklahoma and distributed nationwide.

Impeccable reputation

Our quality and service is second to none. Many of our new customers are referred to us by other satisfied customers. We have top ratings with Angie's List and the Better Business Bureau.



Series 9900 sliding glass door

Value and performance

Our products provide efficiency, performance and security equal to or better than higher-priced brands. With us, you deal direct with the manufacturer, bypassing the middleman. You'll always receive premium quality products and service at factory-direct prices.

Stress-free buying experience

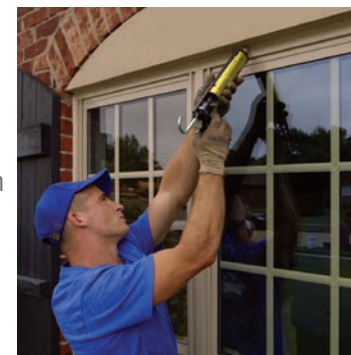
We don't use high-pressure sales tactics. Our representatives are window experts, trained to help you choose products, features and options that meet your design goals and budget.

Custom manufactured for you

None of our windows are mass-produced. Our professional technicians take careful measurements of your home, then we manufacture each window for the best fit.

Exceptional installation

Quality installation is the key to long-term performance. Our installers are skilled craftsmen, trained to work with courtesy,



cleanliness, and attention to detail. Every installation is inspected afterwards to ensure your satisfaction.

Lifetime Limited Warranty

One of the benefits of buying direct from the manufacturer is that Thermal Windows, Inc. takes responsibility for warranty coverage. There is no need to go through a dealer or contact a factory in a distant city. A quick call to (918) 663-7580 is all you need.

Since installation is a crucial part of window and door performance, our Lifetime Limited Warranty applies only to products installed by Thermal Windows, Inc.

This Lifetime Limited Warranty is transferable to new homeowners for a small registration fee.



Download samples of our warranties at www.thermalwindows.com/warranty.

Our optional Lifetime Limited Glass Breakage Warranty is available at a nominal per-item cost.

Contact us for information on warranty coverage for products installed by you or a contractor.

Fast, friendly service

Thermal Windows' service technicians are prompt, courteous and highly skilled. Rest assured that if you ever need it, you'll receive quick and capable service.

"Get up early and stay late. Take care of the customer first."

Bob G. Pool



Our original location on 15th Street in Tulsa is shown in this 1962 photo.



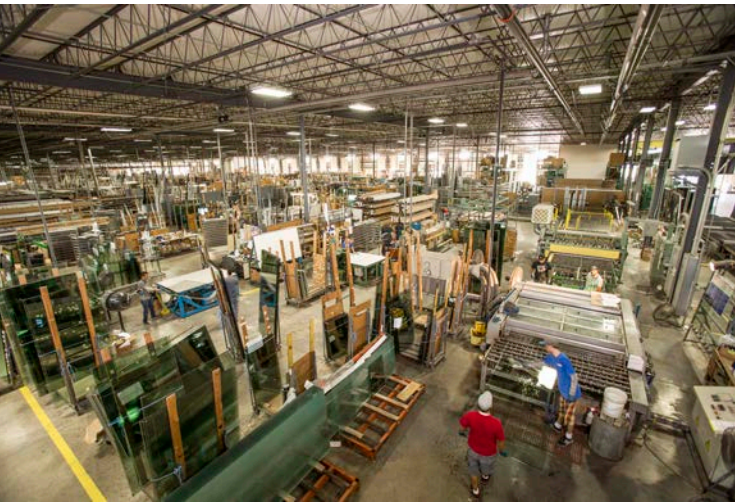
Well into our fourth decade,

Thermal Windows, Inc. manufactures energy-efficient residential and commercial windows, sliding glass doors and terrace doors at our modern 235,000 sq.ft. plant in Tulsa, Oklahoma.



Corporate headquarters, manufacturing plant and showroom in Tulsa, Oklahoma

The Thermal Windows difference.

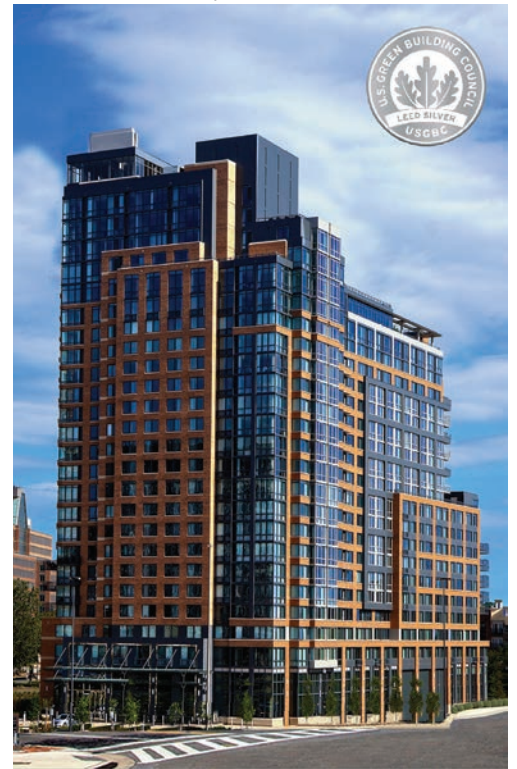


In addition to our reputation throughout Oklahoma for quality residential products, we are a nationally recognized source for high-performance commercial windows and doors. Thermal Windows, Inc. products can be found in new construction and retrofit projects such as high-

rise apartments and condominiums, hotels, schools and universities from coast to coast. Our in-house R&D team and AAMA certified test lab provide exceptional quality assurance. We continuously monitor our powder coat, debridging and insulating glass processes to maintain the utmost control over these critical areas of production.

At Thermal Windows, Inc., we constantly test and improve our products and systems. We are dedicated to the design and manufacture of products that will continue to meet and exceed the needs of the residential and commercial markets for decades to come.

Parc Meridian Apartments, Alexandria, VA



Thermal Windows, Inc. provides windows and doors for commercial projects nationwide.



100% Financing Available

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