KHPP WINDOWS AND DOORS

THE MERIDIAN

EXCLUSIVE DESIGNS AND TECHNOLOGY

KHPP
WINDOWS AND DOORS

At KHPP Windows and Doors we believe that home improvement projects should do more than enhance your curb appeal. This investment should upgrade energy efficiency resulting in lower utility usage while being constructed from the finest materials designed to minimize environmental impact.

A COMMITMENT TO OUR CLIENTS

# KHPP DEALER PARTNER PLEDGE

Our hand-selected network of representatives will provide:

## RESPECT TO YOUR HOME

## A FAIR PRICE

## QUALITY CRAFTSMANSHIP

## OUTSTANDING CUSTOMER SERVICE FOR AS LONG AS YOU OWN THE HOME

# DESIGN

Each step of the design process was questioned in order to achieve the ideal replacement window and door. A finished product that the industry would be measured by for its balance of appearance, security and performance.

## SUNSHIELD PVC

Rather than settle with using a “pure” vinyl extrusion in our frames and sashes, for strength and longevity of your investment, we take it a step further. Our formula is enhanced with Titanium Dioxide to shelter your home from damaging Ultraviolet rays that would otherwise destroy an exterior building material.

## BREATHE EASY

Our extrusions ensure the health and wellbeing of your home. SunShield PVC was engineered to be phthalate free, meaning your KHPP Windows and Doors will never emit toxic off-gasses.

## ECOCLEAN FOAM

EcoClean Foam is the first polyurethane window foam that has achieved certification as a BioPreferred® product from the United States Department of Agriculture (USDA) for its renewable content. This injection foam filling process provides your home with better thermal performance, greater energy efficiency and reduced condensation.

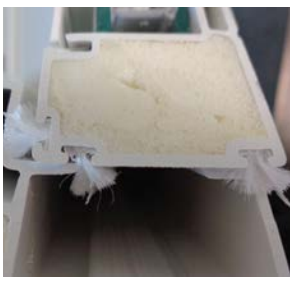
## FUSION LINKED WELDS

A lifetime-backed product needs the assurance of an unbreakable design. Each corner undergoes four-point computerized welding to seal the unit. This heated process bonds the joints permanently together; a manufacturing capability unavailable from any wood, composite, aluminum or fiberglass product.

A

B

C



D

# SECURITY AND SAFETY

A **FRONTLINE STS INTERLOCK:** Successfully integrating moving to non-moving components of a window determines if it will stand the test of time. Our unique Frontline STS Interlock securely connects the bottom sash to the frame to ensure wind, moisture and intruders stay where they belong: outside

B **SENTRY CAMLOCK:** Recessed into the design, the Sentry Camlock provides sleek aesthetics without compromising security. A smooth and secure 180° activating camlock clasps the sashes together to break the spirit of any would be invader.

C **INTEGRATED LIFT RAIL:** The Meridian's integrated lift rail serves two purposes: the ergonomic design eases operation of the window unit while overlapping the frame when closed. The added design creates another channel to prevent air infiltration.

D **ANTI-MICROBIAL TRIPLE WEATHER-STRIPPING:** Block your home from dust and allergens with the added protection of weather-stripping that prevent the growth of mold and mildew.

**FORTRESS MR INTERLOCK:** The center point of a window can be its most vulnerable element. Inadequate designs allow for air movement or worse, burglars, to easily penetrate the heart of the window. The Fortress MR Interlock joins the moving sashes together with deep interconnecting pockets that block the wind and prevent exterior access to the locking mechanism.

**DP 55 RATING:** Your home's strength is determined by the quality of the materials you build it from. Thankfully, replacement windows have a measurement to determine that level of strength. Design Pressure (DP) is the amount of forced air or water a window can withstand before failing; the greater the capacity, the stronger the unit.

| | Min. Performance Allowed* | KHPP Meridian |
|---|---|---|
| **Design Pressure (psf)** | 15 | 55 |
| **Structural Test (psf)** | 22.5 | 82.5 |
| **Water Resistance (psf)** | 2.9 | 8.25 |
| **Wind Speed (mph)** | 77 | 148 |

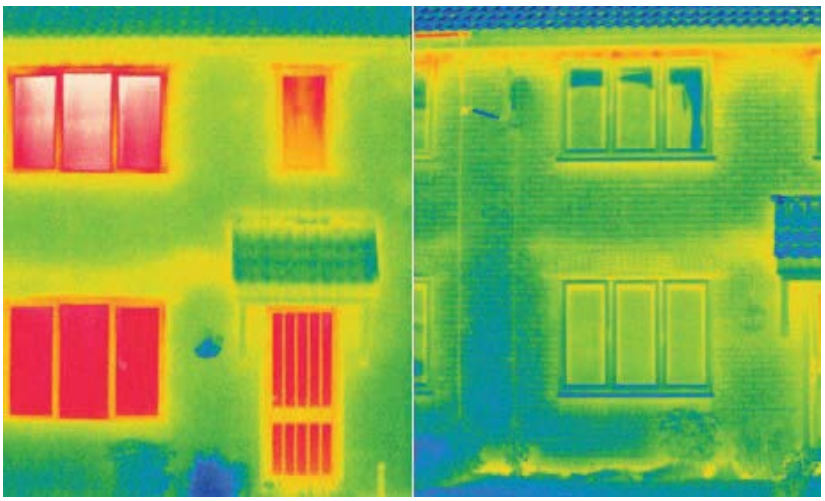
*According to the American Architectural Manufacturers Association (AAMA)

# CREATE A BARRIER BETWEEN YOUR HOME AND THE ELEMENTS

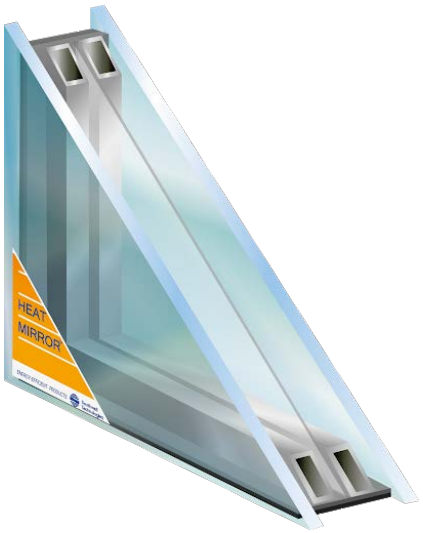
In 1865, Thomas Stetson patented the insulated glass unit. Today, we commonly refer to it as double pane windows. Stetson was praised for the insulating capabilities they produced compared to a single pane of glass. Advancing on that same idea, Stetson's next patent was for triple pane insulated glass units that further improved insulation. Surprisingly, more than 150 years later, all other window manufacturers believe innovation stopped there.

**At KHPP Windows and Doors** we have lofty goals for the energy efficiency of your home. In the scorching days of summer, we want the interior of your windows to be cooler than the walls supporting them. Conversely, in the middle of winter, we want your interior glass to be as warm as your walls. What others cannot offer, we call Heat Mirror Technology.

As housing designs have changed to incorporate the use of more windows, our desire to use less energy to heat and cool the home has increased as well. In 1974, the Massachusetts Institute of Technology (MIT) began development of a new glass system that would reduce energy consumption and associated carbon emissions as part of a research program funded by the U.S. Department of Energy. Ultimately, the group of engineers utilized a suspension system that eliminated the need for heavy, outdated triple pane glass systems or overly dark window tints. The invention became known as Heat Mirror Technology and quickly became the standard of high-performance glass systems around the world.



**FLIR THERMAL IMAGING**
BEFORE AND AFTER
WINDOW REPLACEMENT




**HEAT MIRROR TECHNOLOGY SUSPENDS A LIGHTWEIGHT POLYETHYLENE TEREPHTHALATE (PET) FILM INSIDE THE AIRSPACE OF A DUAL PANE INSULATING GLASS UNIT TO CREATE MULTIPLE SUPER-INSULATING CAVITIES.**

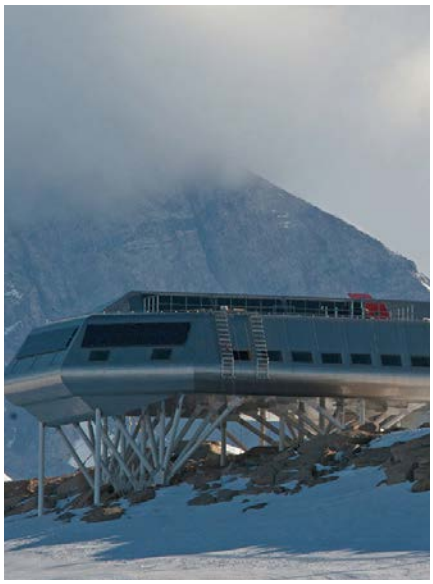
This film uses nanoscale coatings of metal to reflect heat back to its source. By creating these independent cavities, Heat Mirror Technology improves the insulating performance of dual pane glass by up to 500 percent. Better yet, since the energy required to produce Heat Mirror film is 16 times less than that of glass, a Heat Mirror Insulating Glass unit has a 30 percent lower environmental footprint than a comparably sized triple-pane glass unit.


POPULAR SCIENCE LISTED **HEAT MIRROR TECHNOLOGY** AS ONE OF THE TOP 100 INVENTIONS OF THE MILLENNIUM

# THE INDUSTRY'S FIRST "SUPER GLASS"

### A MONUMENT TO SAVINGS: THE EMPIRE STATE BUILDING

This American iconic building in New York City had an energy usage problem. In 1991 they attempted to remedy the situation by replacing the original 1931 windows with new double pane units. The result was an improvement of a R1 rated window to R2. Dissatisfied with the first attempt, they turned to Heat Mirror Technology. The results were beyond impressive. Upon replacement of the 6,514 double pane windows, Heat Mirror Technology reduced emissions of the skyscraper by 38% with the R8 rated system. The calculated annual energy savings is $339,000 with a return on investment of just under four years.



### EXTREME CONDITIONS, EXTREME PERFORMANCE: PRINCESS ELISABETH RESEARCH STATION

When building in Antarctica you leave nothing to chance. With the most extreme meteorological conditions known to man, air temperatures of -58°F to 23°F, and maximum wind speeds of 155 mph, the International Polar Foundation faced monumental challenges in choosing appropriate materials for construction. Naturally when it came to the windows for the facility, Heat Mirror Technology was the only option to meet the demands. Upon completion in 2009, the Princess Elisabeth became the world's first zero emission research station to run entirely on renewable energies.

## LEED PLATINUM, NET ZERO BUILDING: DAVID AND LUCILE PACKARD FOUNDATION HEADQUARTERS

As the Packard Foundation laid out plans for their new headquarters in Los Altos, California, they wished to construct a building that embodied the work of their foundation. They desired that the design minimize the use of natural resources for heating and cooling while not sacrificing the comfort of their employee's workspace. Their independent study found that the use of Heat Mirror Technology allowed the final design at 343 Second Street to have more windows than typical office spaces but performed so well that the building could forego the normal need for supplementary perimeter heating. Upon completion, the Packard Foundation Headquarters is the largest Net Zero energy certified building in the world.

## PRESERVING HISTORY: THE MUSEUM OF FLIGHT

America has a rich history of pushing the limits of science and technology. Our pursuit of flying encompasses this unwavering spirit and The Museum of Flight in Seattle, WA is tasked with preserving 175 different aircraft that document its evolution. When designing a building that will protect the likes of the B-17, B-29, B-52, M-21, the inaugural Air Force One, the Concorde, F-14 and F/A-18, you need an expansive space that protects items from the sun's damaging ultraviolet (UV) rays. Architects of the largest air and space museum in the world chose Heat Mirror Technology for its unbeatable resilience to UV, providing 99.7% protection from the damaging light.

## PUSHING THE LIMITS OF DESIGN: SOBEK GLASS HOUSE

In 2000, Architect Werner Sobek completed a four-story housing structure in Stuttgart, Germany. While the structure was built of completely recyclable materials producing zero emissions and is self-sufficient in terms of heating energy requirements, the most astonishing fact is that all the exterior walls were made of glass. Sobek's design tested the long-touted claim of Heat Mirror Technology that windows could insulate as well as walls. While this house may not offer the privacy you want, it boasts energy efficiency that any homeowner would enjoy.

# PERFORMANCE OPTIONS

Every Meridian window and door includes a lifetime, transferable warranty and lifetime, no-fault glass breakage.

**NORTH** – for cold climates, a ¾" dual glazed insulated glass unit utilizes a double coating of metallic particles along with a high-density argon gas fill. This combination exceeds the Energy Star requirements for the Northern and North Central Climate Zones.
**U-Factor 0.27 • SHGC 0.36**

**NORTH BARRIER FORMULA A** — a 1" dual glazed insulated glass unit with Heat Mirror Technology utilizes a double coating of metallic particles along with a high-density argon gas fill.
**U-Factor 0.21 • SHGC 0.26**

**NORTH BARRIER FORMULA B** — a 1" dual glazed insulated glass unit with Heat Mirror Technology utilizes a double coating of metallic particles along with a high-density argon/krypton gas fill combination.
**U-Factor 0.20 • SHGC 0.26**

**NORTH BARRIER PLUS** — a 1" dual glazed insulated glass unit with Heat Mirror Technology utilizes a double coating of metallic particles along with a high-density krypton gas fill.
**U-Factor 0.18 • SHGC 0.26**

**NORTH BARRIER MAX** — a 1" dual glazed insulated glass unit with Heat Mirror Technology utilizes a double coating of metallic particles on two surfaces along with a high-density krypton gas fill.
**U-Factor 0.17 • SHGC 0.25**

**SOUTH** – for warm climates, a ¾" dual glazed insulated glass unit utilizes a triple coating of metallic particles along with a high-density argon gas fill. This combination exceeds the Energy Star requirements for the Southern and South Central Climate Zones.
**U-Factor 0.27 • SHGC 0.21**

**SOUTH BARRIER FORMULA A** — a 1" dual glazed insulated glass unit with Heat Mirror Technology utilizes a triple coating of metallic particles along with a high-density argon gas fill.
**U-Factor 0.20 • SHGC 0.18**

**SOUTH BARRIER FORMULA B** — a 1" dual glazed insulated glass unit with Heat Mirror Technology utilizes a triple coating of metallic particles along with a high-density argon/krypton gas fill combination.
**U-Factor 0.19 • SHGC 0.19**

**SOUTH BARRIER PLUS** — a 1" dual glazed insulated glass unit with Heat Mirror Technology utilizes a triple coating of metallic particles along with a high-density krypton gas fill.
**U-Factor 0.18 • SHGC 0.18**

**SOUTH BARRIER MAX** — a 1" dual glazed insulated glass unit with Heat Mirror Technology utilizes a triple coating of metallic particles on two surfaces along with a high-density krypton gas fill.
**U-Factor 0.17 • SHGC 0.17**

# MAKE A STATEMENT WITH A MERIDIAN BAY, BOW OR GARDEN WINDOW UNIT

If you currently have a focal point window in your home that is either a bay, bow or garden window unit, you already know that these units can become very cold or very warm if they are not properly constructed. While the industry relies on a ¾″ plywood seat board for insulation, we go far beyond that.

**STANDARD R9 INSULATED SEAT:**
building upon the industry standard of the ¾″ plywood, the Meridian Bay or Bow window unit adds 1″ of high-density foam along with a 1 ¼″ hardwood veneer top cap.

**DELUXE R21 INSULATED SEAT:**
for ultimate performance, our Deluxe offering adds two more inches of high-density foam for a total seat depth of 5″.

## INCREASE YOUR CURB APPEAL, NOT YOUR CONCERNS

Our Bay and Bow design feature a unique overlap mullion design that improves water drainage versus a flat horizontal surface that collects moisture. Cozy onto the window seat as the Turnbuckle Chain Hanging System is engineered to carry 800 lbs. per support. The PVC Panning System prevents water infiltration around the window frame from the day of installation through the life of your home.

**MULTIPLE DESIGNS TO SELECT YOUR STYLE**

- 15°, 30° or 45° Three, Four and Five Lite Bays
- Three, Four, Five and Six Lite Bows
- Standard and Bump-Out Boxes
- Garden Window
- Interior Casing and Decorative Trim

# SLIDING AND SWING DOORS

Whether it's accessing your back patio or the side yard, a Meridian sliding or swing door operates smoothly without sacrificing efficiency or security.

## TWO, THREE AND FOUR PANEL SLIDING DOORS

Typical Sliding Doors tend to sag over time from poor designs that improperly distribute the door's weight. The Meridian door glides on a raised monorail system with high-quality, solid steel tandem rollers. This pairing results in the ability to open or close with the push of a finger.

Security comes from superior engineering. Structurally reinforced panels aligned with a continuous interlock create a forced entry prevention exceeding 3,000 pounds. With a turn of the lock, three adjustable securing points with opposing directions engage into the jamb preventing the door from being lifted.

## SINGLE AND DOUBLE IN-SWING AND OUT-SWING DOORS

Traditional swing doors are susceptible to sticking in the frame as the seasons change or a home moves on its foundation. Meridian doors utilize a full-length piano hinge for an airtight fit while allowing for adjustment as the home ages. The multi-point locking system anchors the door at three separate contact points for maximum security.

## OPTIONAL HANDLES

Polished Brass

Antique Brass

Satin Nickel

Faux Bronze

Black

# DESIGN YOUR MERIDIAN

## EXTRUDED COLORS

White Tan Clay

## WOODGRAIN INTERIOR OPTIONS

Light Oak Pecan Cherry

## EXTERIOR AND INTERIOR COATING OPTIONS

Black Bronze Brown Green Clay Custom

## OPERATION

Hung

Picture

Specialty

Slider

Casement

Awning

## GRID STYLES

Flat

Contoured

SDL

## GRID CONFIGURATION

Colonial

Prairie

Queen Anne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