

Patio Doors

Grand Openings
from Thermo-Tech®

Choose French Style or Slim Line Style patio doors made with strong, premium grade materials that help keep the weather outside and comfort inside.



*Your satisfaction is reflected
in everything we do.*

ttwindows.com • 877-565-0159

 **Thermo-Tech**
Premium Windows and Doors

Reliability and Flexibility

Thermo-Tech® Patio Doors are designed to fit your home and you. Our Slim Line Style or French Style sliding doors are available in custom or standard sizes. Plus, with five exterior color options and maintenance-free wood laminate options on the interior, Thermo-Tech Patio Doors accommodate your design preferences, your project, your budget and your lifestyle.



Slim Line Style



French Style

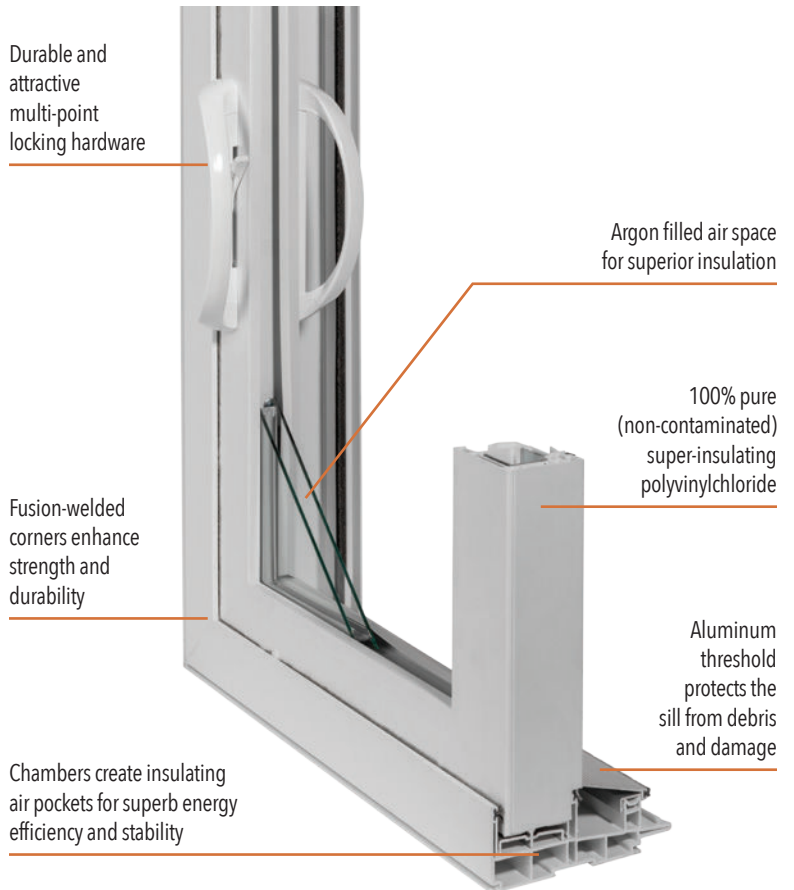
SlimLineStyle

Slim Line Patio Doors by Thermo-Tech are engineered for superior performance, durability and energy efficiency. High-performance insulated glass provides comfort and energy savings. Dual ball bearing adjustable rollers make operation a breeze. The sleek lines and slim stiles and rails offer a contemporary look with a maximum viewing area.

STANDARD FEATURES

- Available in standard or custom sizes
- Six high-performance insulated glass options (see page 7)
- Decorative inner grids available
- Dual point locking mechanism for security
- Fusion-welded frame and sashes
- Two panes of 1/8" double-strength glass
- Multi-chambered for insulation and strength
- Dual weather-stripping
- Heavy-duty plated steel adjustable tandem rollers face adjust on a raised stainless steel monorail track system for smooth and easy operation
- Aluminum threshold protects the sill from debris and damage
- Sliding adjustable aluminum screen with BetterVue® fiberglass mesh

Quality construction for durability and superior energy savings:



Custom Sizes Available



SLIM LINE PATIO DOORS - STANDARD SIZES				
UNIT DIMENSIONS		4'-11 1/2"	5'-11 1/2"	7'-11 1/2"
		WIDTH		
ROUGH OPENINGS		5'-0 1/4"	6'-0 1/4"	8'-0 1/4"
		HEIGHT		
6'-7 1/2"	6'-8 1/4"			
		HSD5068	HSD6068	HSD8068
6'-9 1/2"	6'-10 1/4"			
		HSD50610	HSD60610	HSD80610

SLIM LINE PATIO DOORS TRANSOMS - STANDARD SIZES				
WINDOW DIMENSIONS		4'-11 1/2"	5'-11 1/2"	7'-11 1/2"
		WIDTH		
ROUGH OPENINGS		5'-0 1/4"	6'-0 1/4"	8'-0 1/4"
		HEIGHT		
11 1/2"	1'-0 1/4"			
		HSDT5012	HSDT6012	HSDT8012
1'-5 1/2"	1'-6 1/4"			
		HSDT5018	HSDT6018	HSDT8018
1'-11 1/2"	2'-0 1/4"			
		HSDT5024	HSDT6024	HSDT8024
11 1/2"	1'-0 1/4"			
		HSDT5012-2	HSDT6012-2	HSDT8012-2
1'-5 1/2"	1'-6 1/4"			
		HSDT5018-2	HSDT6018-2	HSDT8018-2
1'-11 1/2"	2'-0 1/4"			
		HSDT5024-2	HSDT6024-2	HSDT8024-2

Door Colors

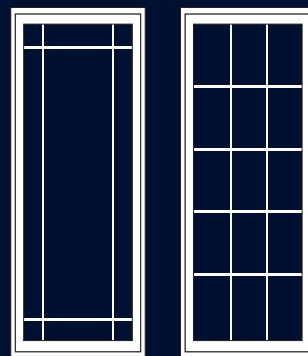
Available in popular colors to fit any home decor.

White <i>Interior/Exterior</i>	Tan <i>Interior/Exterior</i>	Sandlewood <i>Interior/Exterior</i>
White Bronze <i>Interior/Exterior</i>	White Black <i>Interior/Exterior</i>	
Sandlewood Bronze <i>Interior/Exterior</i>	Sandlewood Black <i>Interior/Exterior</i>	

Distinctive Grid Styles

The 5/8" flat or 3/4" contoured aluminum inner grids are matched to the door color and installed in the insulated air space between the panes of glass.

GRID PATTERNS



CONTOURED PROFILE



FLAT PROFILE

Prairie Grids

Colonial Grids

* Contoured grids not available in Bronze ** Grids not available on painted product

Handle Options

STANDARD HARDWARE

Available in all exterior colors.



CUSTOM HARDWARE

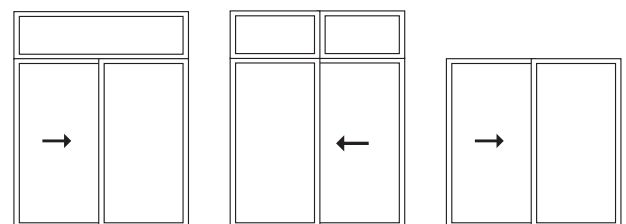
Available in two designer finishes.



Antique Brass

Brushed Nickel

Configurations



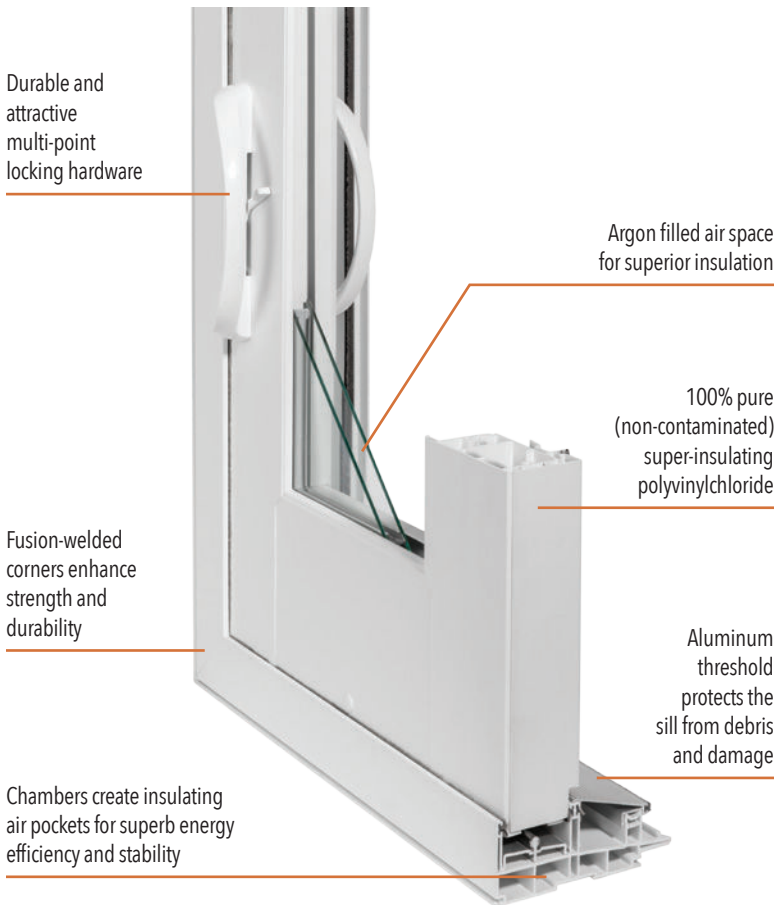
FrenchStyle

Thermo-Tech French Style Sliding Patio Doors are engineered for superior performance and energy efficiency. Operation is superb via dual ball bearing adjustable rollers. French style doors have wider stiles and rails for a more traditional look to enhance the appearance and value of your home.

STANDARD FEATURES

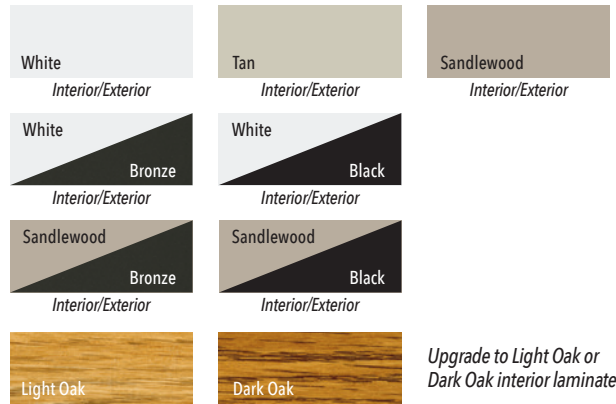
- Available in standard and custom sizes
- Six high-performance insulated glass options (see page 7)
- Decorative inner grids available
- Dual-point locking mechanism for security
- Color matched handle to the exterior door or two additional custom finishes available
- Two panes of 1/8" double-strength glass
- Heavy-duty plated steel adjustable tandem rollers face adjust on raised stainless steel monorail track system for smooth and easy operation
- Fusion welded master frame with structurally fastened sashes
- Optional keyed locking system
- Aluminum threshold protects the sill from debris and damage
- Sliding adjustable aluminum screens with BetterVue® fiberglass mesh

Quality construction for durability and superior energy savings:



Door Colors

Available in popular colors to fit any home decor.



* Interior laminates available with White and Sandlewood exteriors only

Handle Options

STANDARD HARDWARE
Available in all exterior colors.



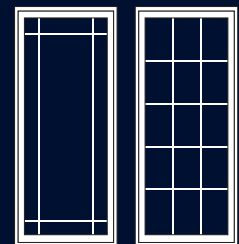
CUSTOM HARDWARE
Available in two designer finishes.



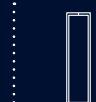
Distinctive Grid Styles

The 5/8" flat or 3/4" contoured aluminum inner grids are matched to the door color and installed in the insulated air space between the panes of glass.

GRID PATTERNS



CONTOURED PROFILE



FLAT PROFILE

Prairie Grids

Colonial Grids

* Contoured grids not available in Bronze ** Grids not available on painted product

FRENCH STYLE PATIO DOORS - 2-PANEL, 3-PANEL & 4-PANEL STANDARD SIZES

UNIT DIMENSIONS		4'-11 1/2"	5'-11 1/2"	7'-11 1/2"	9'-0 1/16"	11'-8 1/2"
		WIDTH				
		ROUGH OPENINGS				
		5'-0 1/4"	6'-0 1/4"	8'-0 1/4"	9'-0 13/16"	11'-9 1/4"
HEIGHT	6'-7 1/2"					
	6'-9 1/2"					
		HFD5068	HFD6068	HFD8068	HFD9068	HFD11968
		HFD50610	HFD60610	HFD80610	HFD90610	HFD119610

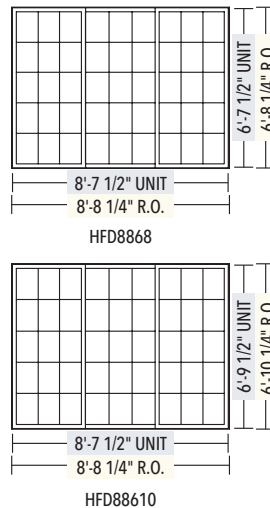
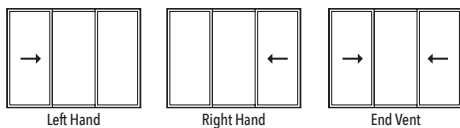
FRENCH STYLE TRANSOMS - STANDARD SIZES

UNIT DIMENSIONS		4'-11 1/2"	5'-11 1/2"	7'-11 1/2"	9'-0 1/16"	11'-8 1/2"
		WIDTH				
		ROUGH OPENINGS				
		5'-0 1/4"	6'-0 1/4"	8'-0 1/4"	9'-0 13/16"	11'-9 1/4"
HEIGHT	11 1/2"					
	1'-5 1/2"					
		HFDT5012	HFDT6012	HFDT8012	HFDT9012-3	HFDT11912-2
		HFDT5018	HFDT6018	HFDT8018	HFDT9018-3	HFDT11918-2
		HFDT5024	HFDT6024	HFDT8024	HFDT9024-3	HFDT11924-2
		HFDT5012-2	HFDT6012-2	HFDT8012-2		HFDT11912-4
		HFDT5018-2	HFDT6018-2	HFDT8018-2		HFDT11918-4
		HFDT5024-2	HFDT6024-2	HFDT8024-2		HFDT11924-4

3-PANEL FRENCH DOOR STYLES



Configurations



TRANSOMS

UNIT DIMENSIONS		8'-7 1/2"
		WIDTH
		ROUGH OPENINGS
		8'-8 1/4"
HEIGHT	11 1/2"	
	1'-5 1/2"	
		HFDT8812
		HFDT8818
		HFDT8824



Patio Doors by Thermo-Tech[®]

Premium Windows and Doors

Craftsmanship Infused With Technology

Thermo-Tech[®] Patio Doors blend masterful craftsmanship with superior vinyl and insulated-glass technology. Homeowners gain energy savings, curb appeal and low-maintenance comfort. All from a trusted and recognized company.

Standard Features

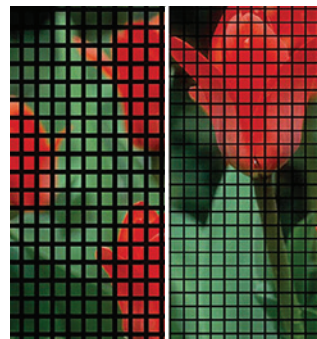
At Thermo-Tech we believe the surest way to deliver products homeowners are proud to use everyday is to offer products that come with only the features we would want in our own homes. Why would anyone offer less?



MULTI-POINT LOCK

Your home's first line of defense for performance and safety.

- Ensures sash is securely locked in place and all weather strip engaged
- Forced Entry Grade 20 - Extremely difficult to breach by force
- Eliminates ability for sash to be raised up and removed from exterior side



STANDARD FIBERGLASS

BetterVue[®]

BETTERVUE[®] SCREEN WITH WATER SHED TECHNOLOGY[™]

Not your average, ordinary insect screen.

- Better airflow
- Lets in more natural light
- Improved optical clarity
- Sheds water and debris during rainstorms or when spray cleaning

HEAVY-DUTY PLATED STEEL ADJUSTABLE ROLLER ASSEMBLY

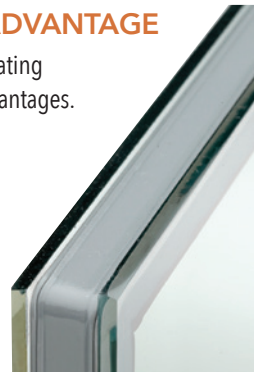
Roller assemblies for Thermo-Tech patio door models can be accessed on either side of the interior face of the operating panel behind a small plug on the surface which can be removed and replaced. Use a #3 Phillips screwdriver to access the adjustment screw. For downward adjustment turn clockwise. For upward adjustment turn counter-clockwise.



THERMO-TECH[®] WARM-EDGE ADVANTAGE

For added insulating value no other type of insulating (thermal) design brings you these combined advantages.

- Best Argon retention keeps insulating gas in windows
- Recessed below the sightline so all you ever see are beautiful windows
- Energy Star Performance

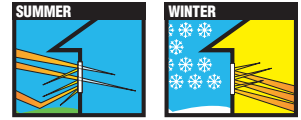


Triple Glass Upgrade

Upgrade to three panes of double-strength glass for superior energy efficiency to greatly increase the comfort of your home.

- Up to 40% better thermal performance than dual-pane
- Exceeds the highest standards of EnergyStar
- Available in Slim Line or French Style





Glass Options



HIGH PERFORMANCE LoE² 272/Argon

Double-insulated glass with a dual coating of LoE on one glass surface

Thermo-Tech windows come standard with double-pane insulated LoE² 272 glass featuring two panes of double-strength glass with an argon gas filled airspace for superior insulation. This option improves heating efficiency by nearly doubling the insulating power over ordinary clear glass, and blocks enough solar heat that cooling loads can be cut by 25% or more. Fading of furniture, floors, and drapes is reduced by filtering out 84% of the Sun's harmful ultraviolet rays.



PREMIUM HIGH PERFORMANCE LoE³ 366/Argon

Double-insulated glass with a triple coating of LoE on one glass surface

Our double-pane insulated LoE³ 366 heat-reflecting glass adds even more insulating power for premium thermal performance. Double-strength heat-reflecting glass with an argon filled airspace delivers a balance of solar control, thermal performance, and high visibility to optimize home energy savings and comfort. Plus, this option provides additional fade protection by blocking 95% of the Sun's harmful ultraviolet rays.



ULTIMATE HIGH PERFORMANCE LoE³ 366/Argon/i89

Double insulated glass with a triple coating of LoE on one glass surface, and one coating of i89 on the interior surface

Thermo-Tech's Ultimate High-Performance glass delivers a "twin punch". It offers all the benefits of our Premium High-Performance glass while maximizing thermal and visibility benefits, compared to other double-pane options, by adding a LoE i89 coating on the interior glass surface. Together this combination ensures the greatest thermal performance in all dual-pane applications. Blocks more than 95% of the Sun's harmful ultraviolet rays.



Energy Guard Triple Insulated Glass (Energy Star Most Efficient)

Triple insulated glass with a triple coating of LoE on two glass surfaces

Get the maximum energy savings, comfort, ultraviolet protection, and the superior sound proofing of Thermo-Tech's Energy Guard glass. Energy Guard doors incorporate three layers of double-strength glass with LoE³ 366 on two glass surfaces, and two half-inch argon gas filled insulated air spaces. Designed for environments with high exposure to the Sun.



Energy Guard PLUS Triple Insulated Glass (Energy Star Most Efficient)

Triple insulated glass with a double coating of high-performance LoE on two glass surfaces

Energy Guard PLUS triple-pane glass is specifically designed for tough Northern climates. Get maximum energy savings, comfort, ultraviolet protection, and sound proofing PLUS the added solar heat-gain necessary to optimize home heating during frigid Northern winter months. Energy Guard PLUS utilizes three layers of double-strength glass with LoE² 272 on two glass surfaces, and two half-inch argon gas filled insulated air spaces.



Super Guard Triple Insulated Glass (Energy Star Most Efficient)

Triple insulated glass with one coating of high-performance LoE on two glass surfaces, and one coating of i89 on the interior surface

Super Guard triple-pane glass harnesses the Sun to help with heating your home. Ideal for climates with more heating days than cooling days, especially in homes utilizing a passive solar design. Super Guard optimizes desirable radiant energy needed for solar heating applications, yet reflects radiant wavelengths when cooling the home during warm Summer months. Super Guard is composed of three layers of double-strength glass with LoE 180 on two glass surfaces, two half-inch argon gas filled insulated air spaces, and one coating of LoE i89 on the interior glass surface.

ENERGY STAR'S MOST EFFICIENT RECOGNITION

Thermo-Tech patio doors with triple-pane insulated LoE glass have been selected by ENERGY STAR for its most efficient designation. Only products that demonstrate performance that is "exceptional, inspirational, or leading edge" receive this recognition. Visit www.energystar.gov for more information about this unique distinction.



Energy and Structural Performance Data

Thermo-Tech® Windows and Doors are thoroughly tested for structural and thermal performance to the most widely recognized national standards. This will ensure that our products will provide a lifetime of reliable, energy saving performance.

When shopping, make sure to compare structural and thermal performance ratings to ensure that you are purchasing reliable, energy-efficient windows. Our products are structurally tested to the American Architectural

Manufacturers Association (AAMA) window specifications. When comparing structural performance of windows look for the performance grade (PG). Performance grade is a window's resistance to wind and rain. The higher the PG rating, the better.

Compare the U-Factor and the Solar Heat Gain Coefficient (SHGC) of the window. U-Factor is a measure of how well a window keeps heat inside a home or building in the winter. The lower the

U-Factor, the greater the insulating value of the window. SHGC measures how well a window blocks heat caused by sunlight. The lower the window's SHGC, the less solar heat is allowed into the home by the window. Thermo-Tech's Doors are Energy Star® rated in all four climate zones.



Doors meet ENERGY STAR Performance at a .30 U-factor or less. SHGC may vary by zone.

The lower the U-Value and the higher the R-Value, the better the window is at reducing heat loss.

HIGH-PERFORMANCE LoE™ 272/Argon Double insulated glass with LoE™ 272/Argon on one glass surface

DOOR STYLE	GLASS TYPE	U-VALUE	R-VALUE	SOLAR HEAT GAIN NO/GRIDS	SOLAR HEAT GAIN W/GRIDS	VISIBLE LIGHT NO/GRIDS	VISIBLE LIGHT W/GRIDS	CONDENSATION RESISTANCE	U.S. ENERGY STAR ZONES NO/GRIDS	U.S. ENERGY STAR ZONES W/GRIDS
SLIM LINE STYLE PATIO DOOR	LoE™ 272/Argon	.28	3.57	.32	.28	.55	.48	54	N, NC	N, NC
FRENCH STYLE PATIO DOOR	LoE™ 272/Argon	.28	3.57	.28	.25	.48	.42	55	N, NC	All

PREMIUM HIGH-PERFORMANCE LoE™ 366/Argon Double insulated glass with LoE™ 366/Argon on one glass surface

DOOR STYLE	GLASS TYPE	U-VALUE	R-VALUE	SOLAR HEAT GAIN NO/GRIDS	SOLAR HEAT GAIN W/GRIDS	VISIBLE LIGHT NO/GRIDS	VISIBLE LIGHT W/GRIDS	CONDENSATION RESISTANCE	U.S. ENERGY STAR ZONES NO/GRIDS	U.S. ENERGY STAR ZONES W/GRIDS
SLIM LINE STYLE PATIO DOOR	LoE™ 366/Argon	.28	3.57	.21	.19	.50	.43	55	All	All
FRENCH STYLE PATIO DOOR	LoE™ 366/Argon	.28	3.57	.19	.17	.43	.38	56	All	All

ULTIMATE HIGH-PERFORMANCE LoE™ 366/Argon/i89™ Double insulated glass with LoE™ 366/Argon on one glass surface and i89™ on interior surface

DOOR STYLE	GLASS TYPE	U-VALUE	R-VALUE	SOLAR HEAT GAIN NO/GRIDS	SOLAR HEAT GAIN W/GRIDS	VISIBLE LIGHT NO/GRIDS	VISIBLE LIGHT W/GRIDS	CONDENSATION RESISTANCE	U.S. ENERGY STAR ZONES NO/GRIDS	U.S. ENERGY STAR ZONES W/GRIDS
SLIM LINE STYLE PATIO DOOR	LoE™ 366/Argon/i89™	.24	4.17	.21	.19	.48	.42	44	All	All
FRENCH STYLE PATIO DOOR	LoE™ 366/Argon/i89™	.24	4.17	.18	.16	.42	.37	45	All	All

Energy Guard PLUS Triple Insulated Glass Triple insulated glass with high-performance LoE™ 272/Argon on two of three glass surfaces

DOOR STYLE	GLASS TYPE	U-VALUE	R-VALUE	SOLAR HEAT GAIN NO/GRIDS	SOLAR HEAT GAIN W/GRIDS	VISIBLE LIGHT NO/GRIDS	VISIBLE LIGHT W/GRIDS	CONDENSATION RESISTANCE	U.S. ENERGY STAR ZONES NO/GRIDS	U.S. ENERGY STAR ZONES W/GRIDS	ENERGY STAR 2020
SLIM LINE STYLE PATIO DOOR	LoE™ 272/Argon	.19	5.26	.27	.24	.44	.38	64	N, NC	All	All
FRENCH STYLE PATIO DOOR	LoE™ 272/Argon	.20	5.00	.24	.21	.38	.33	65	All	All	All

Energy Guard Triple Insulated Glass Triple insulated glass with high-performance LoE™ 366/Argon on two of three glass surfaces

DOOR STYLE	GLASS TYPE	U-VALUE	R-VALUE	SOLAR HEAT GAIN NO/GRIDS	SOLAR HEAT GAIN W/GRIDS	VISIBLE LIGHT NO/GRIDS	VISIBLE LIGHT W/GRIDS	CONDENSATION RESISTANCE	U.S. ENERGY STAR ZONES NO/GRIDS	U.S. ENERGY STAR ZONES W/GRIDS	ENERGY STAR 2020
SLIM LINE STYLE PATIO DOOR	LoE™ 366/Argon	.18	5.56	.18	.16	.36	.31	64	All	All	NC, SC, S
FRENCH STYLE PATIO DOOR	LoE™ 366/Argon	.20	5.00	.16	.14	.31	.27	66	All	All	NC, SC, S

Super Guard Triple Insulated Glass Triple insulated glass with high-performance LoE 180/Argon on two of three glass surfaces and i89™ on interior surface

DOOR STYLE	GLASS TYPE	U-VALUE	R-VALUE	SOLAR HEAT GAIN NO/GRIDS	SOLAR HEAT GAIN W/GRIDS	VISIBLE LIGHT NO/GRIDS	VISIBLE LIGHT W/GRIDS	CONDENSATION RESISTANCE	U.S. ENERGY STAR ZONES NO/GRIDS	U.S. ENERGY STAR ZONES W/GRIDS	ENERGY STAR 2020
SLIM LINE STYLE PATIO DOOR	LoE 180/Argon/i89™	.18	5.56	.41	.36	.52	.46	53	-	N, NC	N
FRENCH STYLE PATIO DOOR	LoE 180/Argon/i89™	.19	5.26	.36	.32	.46	.40	55	N, NC	N, NC	N, NC

All tests conform to NFRC 100, NFRC 200, NFRC 400, NFRC 500 procedures.

STRUCTURAL PERFORMANCE DATA

DOOR STYLE	SIZE TESTED	CLASS/PERFORMANCE GRADE	AIR INFILTRATION	WATER INFILTRATION	FORCED ENTRY
SLIM LINE STYLE PATIO DOOR	87 x 83	LC - 35	.09cfm/ft2	6.06 psf	Grade 20
FRENCH STYLE PATIO DOOR	87 x 83	LC - 35	.09cfm/ft2	6.06 psf	Grade 20

The windows and doors described herein meets or exceeds the AAMA/WDMA/CSA 101/I.S.2/A440.

Thermo-Tech Patio Doors are available in standard-sizes for new construction projects as well as custom-sizes for renovation projects. For samples of our quality American-made products, please visit your local Thermo-Tech dealer or call 1-877-565-0159 to find the dealer nearest you. Your Thermo-Tech dealers are window and door professionals, ready to help you achieve impressive results.

Please visit us at ttwindows.com any time for more information.

1120 38th Avenue Northeast
Sauk Rapids, Minnesota 56379

Phone: 320-529-4012

Toll-Free: 1-877-565-0159

Fax: 320-529-4017

Toll-Free Fax: 1-877-565-0160

E-mail: info@thermo-techwindows.com

ttwindows.com

