

GLASS OPTIONS



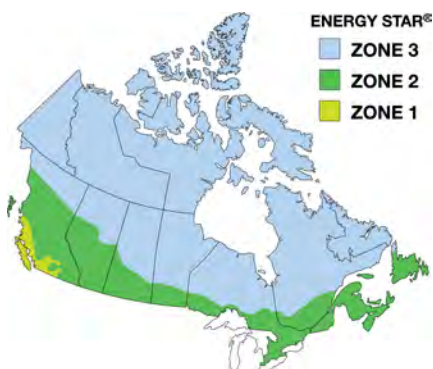
ENERGY STAR®

Most of our high performance glass options meet or exceed specifications laid out by the ENERGY STAR® Initiative in Canada. To ensure your home is efficient year round, look for the ENERGY STAR® symbol on our products.

Inefficient windows are a major source of heat loss in today's homes.



1 (800) 387-2000 energystar.nrcan.gc.ca*



Zone	Minimum Energy Rating (ER)	or	Maximum U-Factor / Minimum ER
1	25	or	≤ 0.28 / 16
2	29	or	≤ 0.25 / 20
3	34	or	≤ 0.21 / 24

Conserving energy is a priority for you, and for us. We provide a wide variety of high performance glass options that will help increase your home's energy efficiency.

Low-E Argon - *Saves on energy*

Increased thermal performance by combining a Low-E coating, argon gas and a warm edge spacer. The Low-E coating helps to reflect your home's heat back inside and the argon gas is a great insulator.

Energlass® - *The standard in glass performance*

Our most popular glazing option dramatically reduces heat loss and infiltration of harmful UV rays. It uses a high performance warm edge spacer, one pane of Low-E coated glass and one cavity filled with argon gas.

Energlass Plus® - *The ultimate in high performance & energy efficiency*

Technology at its best. It is an ultra high performance energy efficient triple glazed system using warm edge Super Spacer, two panes of Low-E coated glass, and two cavities filled with argon or krypton gas.

High Solar Gain (HSG) Glass comes standard with all three options to allow the sun's warmth in your home year round.

If the outside temperature is $-15^{\circ}\text{C}/5^{\circ}\text{F}$ & the inside temperature is $20^{\circ}\text{C}/68^{\circ}\text{F}$ the temperature at the center of the glass (inside) will be:

Glass Option	Celsius	Fahrenheit
Clear Glass	7°C	45°F
Energlass®	13°C	55°F
Energlass Plus®	17°C	63°F

	Winter Warmth	Heat Gain	Cool in the Summer	UV Protection	Appearance / Clarity	Overall
Clear Glass	Good	Best	Good	Good	Best	Good
Energlass® (HSG)	Better	Better	Better	Better	Better	Better
Energlass® (LSG)	Best	Good	Best	Best	Good	Best

*For a complete list of ENERGY STAR qualified windows, check our website at PeterKohler.com or Kohltech.com

HSG = High Solar Gain

LSG = Low Solar Gain

GLASS OPTIONS

GLASS, GRILL, & TINT OPTIONS



Other Glass Options*

Tempered - Tempered glass is a type of safety glass, it undergoes heat treatment to increase its strength. If it does break it shatters into small pieces that are less likely to cause harm.

Sound Reducing Laminated - Sound Reducing Laminated glass is another type of safety glass that reduces outdoor noise by up to 50%. The glass is held together by an interlayer to improve its safety

Architectural Glass - We offer a wide variety of glass options to fit projects of any size and makeup. Unique offerings include specialty privacy glass, float glass, solar control glass, and safety glass.

Grill Options- Beauty without sacrifice.

Our Exclusive Energrill™ allows you to enhance the look of your window with a decorative grill without increasing heat loss.

Grill Patterns Choose from our popular grill patterns or customize your own



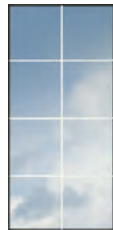
Ladder



Craftsman



Vertical



Rectangular



Prairie



Double Prairie

Grill Style and Color Choices



*White

3/4"

Grooved Georgian Grill

Available in tan, white/tan reverse, brushed aluminum and any color in our full brochure.



*White

1"

Grooved Georgian Grill

Available in white and any color in our full brochure.



*Brushed Aluminum

5/8"

Flat Colonial Grill

Available in white, tan, gold, brushed aluminum and any color in our full brochure .



*Black

5/16"

Slimline Grill

Available in white, tan, gold, chrome, dark pewter, black and any color in our full brochure.



*Tan

7/8"

Scalloped SDL

Available on non-venting kits only. Available in white, tan, (wood clear, primed or perma finished on interior only) and any color in our full brochure.



*White

1 1/8"

Scalloped SDL

Available on non-venting kits only. Available in white, tan, (clear wood, primed or perma finished on interior only) and any color in our full brochure.

*For more glass and grill options, please contact a Customer Service Representative

Tint Options

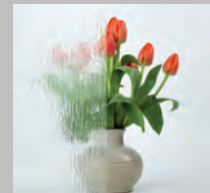


Grey

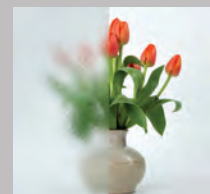


Bronze

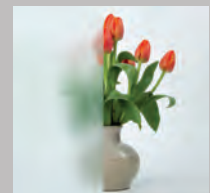
Obscure Glass Options



Rain



Pinhead



Satin Deco

GLASS OPTIONS

SOLAR HEAT GAIN & INSULATION



Low Solar Gain (LSG) Glass

Climate control for hot summers and cold winters.

If you get a lot of sun in the summer, you may want to consider using Low Solar Gain (LSG) glass. LSG significantly reduces heat transfer, preventing overheating in the summer and providing insulation in the winter to provide year round comfort.

High Solar Gain (HSG) Glass

Heating homes in colder climates.

High Solar Gain glass has High Solar Heat Gain, great ER numbers and a great R-Value. HSG glass excels at allowing heat from the sun in, helping heat homes in colder climates.

High R-Value

Maintain your home's warmth.

A high R-Value shows that a product is effective at preventing heat loss, and will help to maintain the temperature of your home in winter months. Energlass Plus® and Energlass Plus® LSG are your best options to keep your home comfortable and energy efficient.

Kohltech Energy Ratings								
Option	Grills	Energy Rating	R-Value Center of Glass	R-Value of Entire Window	U-Value		SHGC	CR
					Metric	Imperial		
Energlass Plus® LSG	No	30	8.3	5.9	1.0	0.17	0.20	78
	Yes	29	8.3	5.9	1.0	0.17	0.19	78
Energlass Plus® HSG	No	40	7.1	5.6	1.0	0.18	0.39	77
	Yes	38	7.1	5.6	1.0	0.18	0.36	77
Triple Low E Argon x 1 LSG	No	27	5.3	4.8	1.2	0.21	0.23	71
	Yes	26	5.3	4.8	1.2	0.21	0.21	71
Energlass® LSG	No	22	4.1	3.8	1.5	0.26	0.25	61
	Yes	20	4.1	3.8	1.5	0.26	0.23	61
Energlass® HSG	No	32	3.7	3.7	1.5	0.27	0.45	59
	Yes	30	3.7	3.7	1.5	0.27	0.41	59
Low-E Argon LSG	No	21	4.1	3.7	1.5	0.27	0.25	58
	Yes	19	4.1	3.7	1.5	0.27	0.23	58
Low-E Argon HSG	No	31	3.7	3.6	1.6	0.28	0.45	57
	Yes	28	3.7	3.6	1.6	0.28	0.41	57
Triple Clear	No	30	3.2	3.4	1.6	0.29	0.46	62
	Yes	27	3.2	3.4	1.6	0.29	0.41	62
Clear	No	18	2.1	2.4	2.3	0.41	0.51	47
	Yes	15	2.1	2.4	2.3	0.41	0.46	47

Note: All data is for Supreme Casement except for Center of Glass R-value which applies specifically to the glass option.

GLASS PERFORMANCE RATINGS & ENERGY FEATURES



Glass Performance Ratings

Energy Rating (ER) - *The higher the better*

A measure of energy efficiency for a window or door. This number is calculated by combining heat loss and air leakage loss with gains from solar heat. The higher the number the better.

U-Factor - *The lower the better*

Indicates the rate of heat loss through a window or door. The lower the U-Factor, the slower heat transfers from a warm area to a cold area, and the better the unit insulates. U-Factor is the inverse of the R value.

R-Value - *The higher the better*

Indicates the thermal resistance of a window or door and is the inverse of U-Factor. There are two R-Values referenced in the industry; Center of Glass R-Value and whole Window R-Value.

Solar Heat Gain Coefficient (SHGC)

A measure of the amount of solar radiation that enters a building through a window as heat gain. It is important to remember that an LSG unit will block unwanted sun (in summer months), but it will also block wanted sun (in winter months).

Condensation Resistance

Measure of how well a product resists the formation of interior condensation. The higher the number the more effective the product is at preventing condensation.

Energy Features

Insulated Glazed Unit (IGU)

Made up of two or three glass panes separated by chambers of air or an inert gas. This results in decreased heat transfer compared to single pane units.

Glazing

A pane of glass set or made to be set in frames (Triple glazed is three panes of glass to improve energy rating).

Low Emissivity (Low-E) Coating

A thin, virtually invisible metallic layer that reflects heat back to the same side of the glass it originated from. This increases a structure's ability to retain heat.

Warm Edge Spacer System

Raises the temperature of the glass near the frame, decreasing heat loss. Also functions to remove any moisture between the panes of glass. We offer three types of spaces: **Intercept®**, **Ultra®**, and **SuperSpacer®**

Insulated Glazed Unit (IGU)

