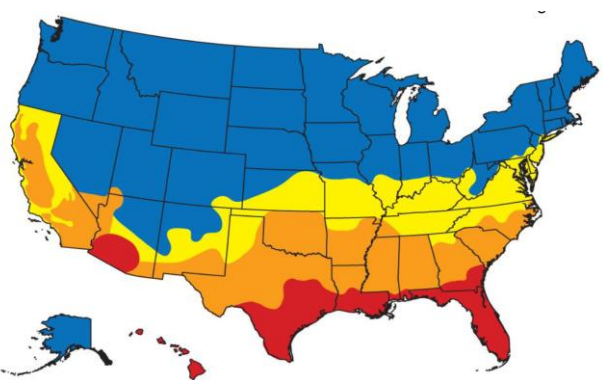


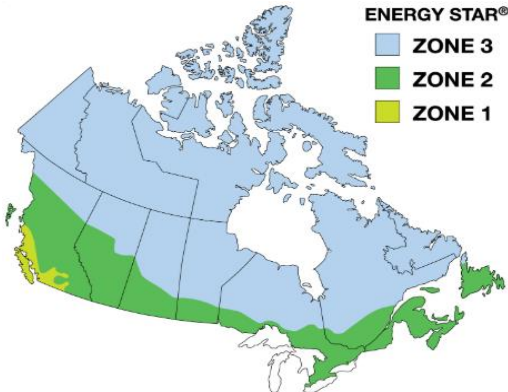
Thermal Performance Data

Signature Double Hung Picture Windows (8123)

WEATHER SHIELD.

WINDOWS & DOORS

US Qualification Criteria	Climate Zone	U-Value	SHGC	
 <p>As of January 2016</p>	Northern	≤ 0.27	Any	Prescriptive
		$= 0.28$	≥ 0.32	Equivalent Energy Performance
		$= 0.29$	≥ 0.37	
		$= 0.30$	≥ 0.42	
	North-Central	≤ 0.30	≤ 0.40	
	South-Central	≤ 0.30	≤ 0.25	
Southern	≤ 0.40	≤ 0.25		

Canadian Qualification Criteria	Climate Zone	U-Value	or	Energy Rating
 <p>As of February 2015</p>	Zone 1	≤ 1.60		≥ 25
	Zone 2	≤ 1.40		≥ 29
	Zone 3	≤ 1.20		≥ 34
	Air Leakage ≤ 0.3 cfm/ft ²			

U-Value

A measurement of how much energy a material conducts. The lower the U-Value, the greater the insulating effect.

Solar Heat Gain Coefficient (SHGC)

Measures how well a window or door prevents heat from passing through it. The lower a window or door's SHGC, the less heat it allows to pass through it.

Visible Light Transmittance

The amount of light in the visible portion of the spectrum that passes through a glazing material.

Condensation Resistance Rating

Measures how well a window resists the formation of condensation on the inside surface. The higher the number the better resistance to condensation.

Energy Rating

A value demonstrating the balance between U-Value, SHGC and air leakage. The higher the number, the more efficient the product.

R-Value

A measurement of how much a material resists heat transfer.

A higher R-Value means a greater insulating effect and a lower rate of heat flow out of the home.

While **R-value** measures resistance to heat transfer, **U-value** measures the rate of heat transfer.

In simple terms, **U-value** is the mathematical reciprocal of **R-value**; that is, **U = 1/R and R = 1/U**.

^a Total Unit calculations are derived from computer simulations that are then verified by 3rd party testing in accordance with NFRC 100, NFRC 200, and NFRC 500.

^b Published values reflect 3mm/3mm glass lite thicknesses.

ENERGY PERFORMANCE DATA								ENERGY STAR		CANADIAN ENERGY PERFORMANCE DATA				ENERGY STAR				
Signature Double Hung Picture Windows (8123)								US ENERGY STAR V 6.0						CANADA ENERGY STAR v 4.1				
Grille Option	Glazing thickness	aNFRC Total Unit Calculations bGlazing Option	CPD #	U-Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US ENERGY STAR V 6.0				U-Value (metric)	Maximum Air Leakage L/s/m2	Air Infiltration/Exfiltration Average	Energy Rating	CANADA ENERGY STAR v 4.1		
								N	NC	SC	S					1	2	3
No GIA or SDL	3/4"	Clear Insul	WEA-N-323-00157-00001	0.46	0.60	0.63	45					2.61	0.6	0.13	17			
	3/4"	Insul Low-E	WEA-N-323-00159-00001	0.32	0.32	0.55	57					1.82	0.6	0.13	18			
	3/4"	Insul Low E w/Argon	WEA-N-323-00160-00001	0.29	0.32	0.55	60		Y			1.65	0.6	0.13	22			
	3/4"	Passive Solar	WEA-N-323-00163-00001	0.33	0.53	0.61	56					1.87	0.6	0.13	29	Y	Y	
	3/4"	Passive Solar w/Argon	WEA-N-323-00164-00001	0.30	0.53	0.61	60	Y				1.70	0.6	0.13	33	Y	Y	
	3/4"	Passive Solar Extreme	WEA-N-323-00171-00001	0.27	0.48	0.59	43	Y				1.53	0.6	0.13	34	Y	Y	
	3/4"	Passive Solar Extreme w/Argon	WEA-N-323-00172-00001	0.25	0.48	0.59	46	Y				1.42	0.6	0.13	36	Y	Y	Y
	3/4"	Zo-e-shield 5	WEA-N-323-00161-00001	0.32	0.22	0.50	57				Y	1.82	0.6	0.13	13			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-323-00162-00001	0.28	0.21	0.50	61		Y	Y	Y	1.59	0.6	0.13	17	Y		
	3/4"	Zo-e-shield 5 Extreme	WEA-N-323-00169-00001	0.27	0.21	0.48	44	Y	Y	Y	Y	1.53	0.6	0.13	18	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-323-00170-00001	0.24	0.21	0.48	48	Y	Y	Y	Y	1.36	0.6	0.13	22	Y	Y	
	3/4"	Zo-e-shield 6	WEA-N-323-00176-00001	0.33	0.22	0.49	55				Y	1.87	0.6	0.13	11			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-323-00177-00001	0.29	0.21	0.49	59		Y	Y	Y	1.65	0.6	0.13	16			
	3/4"	Zo-e SafeGuard Certified	WEA-N-323-00184-00001	0.33	0.21	0.48	49				Y	1.87	0.6	0.13	11			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-323-00185-00001	0.28	0.21	0.48	59		Y	Y	Y	1.59	0.6	0.13	17	Y		
	1"	Zo-e-shield 7	WEA-N-323-00186-00001	0.25	0.20	0.40	64	Y	Y	Y	Y	1.42	0.6	0.13	20	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-323-00187-00001	0.22	0.19	0.40	64	Y	Y	Y	Y	1.25	0.6	0.13	23	Y	Y	
	3/4"	Insul Low-E 240	WEA-N-323-00165-00001	0.33	0.20	0.31	56				Y	1.87	0.6	0.13	10			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-323-00166-00001	0.29	0.20	0.31	60		Y	Y	Y	1.65	0.6	0.13	15			
	3/4"	Insul Low-E 340	WEA-N-323-00167-00001	0.32	0.14	0.30	57				Y	1.82	0.6	0.13	8			
3/4"	Insul Low-E 340 w/Argon	WEA-N-323-00168-00001	0.28	0.14	0.30	61		Y	Y	Y	1.59	0.6	0.13	13				
3/4"	Bronze Low E	WEA-N-323-00159-00011	0.32	0.31	0.41	57					1.82	0.6	0.13	18				
3/4"	Bronze Low E w/Argon	WEA-N-323-00160-00011	0.29	0.31	0.41	60		Y			1.65	0.6	0.13	22				
Less Than 1" GIA or SDL	3/4"	Clear Insul	WEA-N-323-00157-00002	0.46	0.54	0.56	45					2.61	0.6	0.13	14			
	3/4"	Insul Low-E	WEA-N-323-00159-00002	0.32	0.29	0.49	57					1.82	0.6	0.13	17			
	3/4"	Insul Low E w/Argon	WEA-N-323-00160-00002	0.29	0.29	0.49	60		Y			1.65	0.6	0.13	20			
	3/4"	Passive Solar	WEA-N-323-00163-00002	0.33	0.47	0.54	56					1.87	0.6	0.13	26	Y		
	3/4"	Passive Solar w/Argon	WEA-N-323-00164-00002	0.30	0.47	0.54	60	Y				1.70	0.6	0.13	30	Y	Y	
	3/4"	Passive Solar Extreme	WEA-N-323-00171-00002	0.27	0.43	0.53	43	Y				1.53	0.6	0.13	31	Y	Y	
	3/4"	Passive Solar Extreme w/Argon	WEA-N-323-00172-00002	0.25	0.43	0.53	46	Y				1.42	0.6	0.13	33	Y	Y	
	3/4"	Zo-e-shield 5	WEA-N-323-00161-00002	0.32	0.19	0.44	57				Y	1.82	0.6	0.13	11			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-323-00162-00002	0.28	0.19	0.44	61		Y	Y	Y	1.59	0.6	0.13	16			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-323-00169-00002	0.27	0.19	0.43	44	Y	Y	Y	Y	1.53	0.6	0.13	17	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-323-00170-00002	0.24	0.19	0.43	48	Y	Y	Y	Y	1.36	0.6	0.13	21	Y	Y	
	3/4"	Zo-e-shield 6	WEA-N-323-00304-00001	0.35	0.19	0.43	55				Y	1.99	0.6	0.13	7			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-323-00305-00001	0.30	0.19	0.43	59		Y	Y	Y	1.70	0.6	0.13	13			
	3/4"	Zo-e SafeGuard Certified	WEA-N-323-00312-00001	0.35	0.19	0.43	49				Y	1.99	0.6	0.13	7			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-323-00313-00001	0.30	0.19	0.43	59		Y	Y	Y	1.70	0.6	0.13	13			
	1"	Zo-e-shield 7	WEA-N-323-00314-00001	0.26	0.18	0.35	64	Y	Y	Y	Y	1.48	0.6	0.13	18	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-323-00315-00001	0.22	0.18	0.35	64	Y	Y	Y	Y	1.25	0.6	0.13	23	Y	Y	
	3/4"	Insul Low-E 240	WEA-N-323-00165-00002	0.33	0.18	0.27	56				Y	1.87	0.6	0.13	9			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-323-00166-00002	0.29	0.18	0.27	60		Y	Y	Y	1.65	0.6	0.13	14			
	3/4"	Insul Low-E 340	WEA-N-323-00167-00002	0.32	0.13	0.27	57				Y	1.82	0.6	0.13	7			
3/4"	Insul Low-E 340 w/Argon	WEA-N-323-00168-00002	0.28	0.13	0.27	61		Y	Y	Y	1.59	0.6	0.13	12				
3/4"	Bronze Low E	WEA-N-323-00159-00012	0.32	0.28	0.37	57					1.82	0.6	0.13	16				
3/4"	Bronze Low E w/Argon	WEA-N-323-00160-00012	0.29	0.28	0.37	60		Y			1.65	0.6	0.13	20				
1" Or Over GIA or SDL	3/4"	Clear Insul	WEA-N-323-00157-00003	0.46	0.48	0.50	45					2.61	0.6	0.13	10			
	3/4"	Insul Low-E	WEA-N-323-00159-00003	0.32	0.26	0.43	57					1.82	0.6	0.13	15			
	3/4"	Insul Low E w/Argon	WEA-N-323-00160-00003	0.29	0.26	0.43	60		Y			1.65	0.6	0.13	19			
	3/4"	Passive Solar	WEA-N-323-00163-00003	0.33	0.42	0.48	56					1.87	0.6	0.13	23			
	3/4"	Passive Solar w/Argon	WEA-N-323-00164-00003	0.30	0.42	0.48	60	Y				1.70	0.6	0.13	27	Y		
	3/4"	Passive Solar Extreme	WEA-N-323-00171-00003	0.27	0.38	0.47	43	Y	Y			1.53	0.6	0.13	28	Y		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-323-00172-00003	0.25	0.38	0.47	46	Y	Y			1.42	0.6	0.13	31	Y	Y	
	3/4"	Zo-e-shield 5	WEA-N-323-00161-00003	0.32	0.18	0.39	57				Y	1.82	0.6	0.13	10			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-323-00162-00003	0.28	0.17	0.39	61		Y	Y	Y	1.59	0.6	0.13	15			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-323-00169-00003	0.27	0.17	0.38	44	Y	Y	Y	Y	1.53	0.6	0.13	16	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-323-00170-00003	0.24	0.17	0.38	48	Y	Y	Y	Y	1.36	0.6	0.13	20	Y		
	3/4"	Zo-e-shield 6	WEA-N-323-00304-00002	0.35	0.18	0.38	55				Y	1.99	0.6	0.13	7			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-323-00305-00002	0.30	0.17	0.38	59		Y	Y	Y	1.70	0.6	0.13	12			
	3/4"	Zo-e SafeGuard Certified	WEA-N-323-00312-00002	0.35	0.18	0.38	49				Y	1.99	0.6	0.13	7			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-323-00313-00002	0.30	0.17	0.38	59		Y	Y	Y	1.70	0.6	0.13	12			
	1"	Zo-e-shield 7	WEA-N-323-00314-00002	0.26	0.16	0.31	64	Y	Y	Y	Y	1.48	0.6	0.13	17	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-323-00315-00002	0.22	0.16	0.31	64	Y	Y	Y	Y	1.25	0.6	0.13	22	Y	Y	
	3/4"	Insul Low-E 240	WEA-N-323-00165-00003	0.33	0.16	0.24	56				Y	1.87	0.6	0.13	8			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-323-00166-00003	0.29	0.16	0.24	60		Y	Y	Y	1.65	0.6	0.13	13			
	3/4"	Insul Low-E 340	WEA-N-323-00167-00003	0.32	0.12	0.23	57				Y	1.82	0.6	0.13	7			
3/4"	Insul Low-E 340 w/Argon	WEA-N-323-00168-00003	0.28	0.12	0.23	61		Y	Y	Y	1.59	0.6	0.13	12				
3/4"	Bronze Low E	WEA-N-323-00159-00013	0.32	0.25	0.33	57				Y	1.82	0.6	0.13	14				
3/4"	Bronze Low E w/Argon	WEA-N-323-00160-00013	0.29	0.25	0.33	60		Y	Y	Y	1.65	0.6	0.13	18				