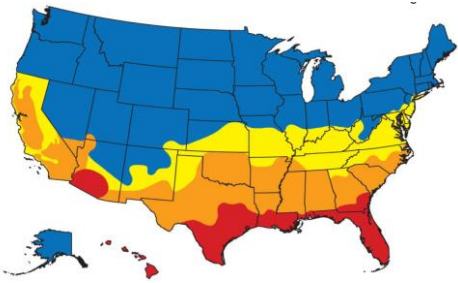
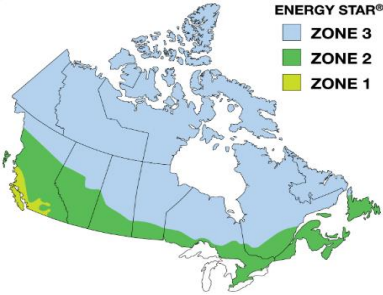


Thermal Performance Data

Contemporary Flush Frame French Casement Windows (8221)

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	
	North-Central	=0.30	>=0.42	
		<=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/ft2			

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

Contemporary Flush Frame French Casement Windows (8221)



US ENERGY STAR V 6.0

CANADIAN ENERGY PERFORMANCE DATA



CANADA ENERGY STAR v 4.1

Grille Option	Glazing thickness	³NFRC Total Unit Calculations ⁴Glazing Option	CPD #	U-Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US ENERGY STAR V 6.0				CANADIAN ENERGY PERFORMANCE DATA							
								N	NC	SC	S	U-Value (metric)	Maximum Air Leakage Ls/m²	Air Infiltration/Exfiltration Average	Energy Rating	1	2	3	
No GIA or SDL	3/4"	Clear Insul	WEA-N-290-00751-00001	0.46	0.57	0.59	42					2.61	0.6	0.02	16				
	3/4"	Insul Low-E	WEA-N-290-00768-00001	0.33	0.31	0.52	52					1.87	0.6	0.02	17				
	3/4"	Insul Low E w/Argon	WEA-N-290-00876-00001	0.30	0.30	0.52	55		Y			1.70	0.6	0.02	20				
	3/4"	Passive Solar	WEA-N-290-00803-00001	0.34	0.50	0.57	52					1.93	0.6	0.02	27	Y			
	3/4"	Passive Solar w/Argon	WEA-N-290-00912-00001	0.31	0.50	0.57	55					1.76	0.6	0.02	30	Y	Y		
	3/4"	Passive Solar Extreme	WEA-N-290-00809-00001	0.29	0.45	0.56	41	Y				1.65	0.6	0.02	30	Y	Y		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-290-00918-00001	0.27	0.45	0.56	44	Y				1.53	0.6	0.02	32	Y	Y		
	3/4"	Zo-e-shield 5	WEA-N-290-00785-00001	0.33	0.21	0.47	53				Y		1.87	0.6	0.02	11			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-290-00894-00001	0.29	0.20	0.47	56		Y	Y	Y		1.65	0.6	0.02	15			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-290-00828-00001	0.28	0.20	0.45	42		Y	Y	Y		1.59	0.6	0.02	17	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-290-00936-00001	0.26	0.20	0.45	45	Y	Y	Y	Y		1.48	0.6	0.02	19	Y		
	3/4"	Zo-e-shield 6	WEA-N-290-00846-00001	0.35	0.21	0.46	50				Y		1.99	0.6	0.02	9			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-290-00948-00001	0.30	0.20	0.46	53		Y	Y	Y		1.70	0.6	0.02	14			
	3/4"	Zo-e SafeGuard Certified	WEA-N-290-00864-00001	0.34	0.21	0.45	50				Y		1.93	0.6	0.02	10			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-290-00966-00001	0.30	0.20	0.45	54		Y	Y	Y		1.70	0.6	0.02	14			
	3/4"	Insul Low-E 240	WEA-N-290-00815-00001	0.33	0.19	0.29	52				Y		1.87	0.6	0.02	10			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-290-00924-00001	0.30	0.19	0.29	55		Y	Y	Y		1.70	0.6	0.02	14			
	3/4"	Insul Low-E 340	WEA-N-290-00821-00001	0.33	0.14	0.28	52				Y		1.87	0.6	0.02	7			
3/4"	Insul Low-E 340 w/Argon	WEA-N-290-00930-00001	0.30	0.13	0.28	55		Y	Y	Y		1.70	0.6	0.02	10				
3/4"	Bronze Low E	WEA-N-290-00779-00001	0.33	0.29	0.39	52						1.87	0.6	0.02	16				
3/4"	Bronze Low E w/Argon	WEA-N-290-00888-00001	0.30	0.29	0.39	55		Y				1.70	0.6	0.02	19				
Less Than 1" GIA or SDL	3/4"	Clear Insul	WEA-N-290-00751-00002	0.46	0.50	0.53	42					2.61	0.6	0.02	12				
	3/4"	Insul Low-E	WEA-N-290-00768-00002	0.33	0.27	0.46	52					1.87	0.6	0.02	15				
	3/4"	Insul Low E w/Argon	WEA-N-290-00876-00002	0.30	0.27	0.46	55		Y			1.70	0.6	0.02	18				
	3/4"	Passive Solar	WEA-N-290-00803-00002	0.34	0.44	0.51	52					1.93	0.6	0.02	23				
	3/4"	Passive Solar w/Argon	WEA-N-290-00912-00002	0.31	0.45	0.51	55					1.76	0.6	0.02	27	Y			
	3/4"	Passive Solar Extreme	WEA-N-290-00809-00002	0.29	0.40	0.49	41	Y	Y			1.65	0.6	0.02	27	Y			
	3/4"	Passive Solar Extreme w/Argon	WEA-N-290-00918-00002	0.27	0.41	0.49	44	Y				1.53	0.6	0.02	30	Y	Y		
	3/4"	Zo-e-shield 5	WEA-N-290-00785-00002	0.33	0.19	0.41	53				Y		1.87	0.6	0.02	10			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-290-00894-00002	0.29	0.18	0.41	56		Y	Y	Y		1.65	0.6	0.02	14			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-290-00828-00002	0.28	0.18	0.40	42		Y	Y	Y		1.59	0.6	0.02	16			
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-290-00936-00002	0.26	0.18	0.40	45	Y	Y	Y	Y		1.48	0.6	0.02	18	Y		
	3/4"	Zo-e-shield 6	WEA-N-290-00847-00001	0.36	0.19	0.40	50				Y		2.04	0.6	0.02	6			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-290-00949-00001	0.34	0.18	0.40	53				Y		1.93	0.6	0.02	8			
	3/4"	Zo-e SafeGuard Certified	WEA-N-290-00865-00001	0.36	0.19	0.40	50				Y		2.04	0.6	0.02	6			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-290-00967-00001	0.32	0.18	0.40	54				Y		1.82	0.6	0.02	10			
	3/4"	Insul Low-E 240	WEA-N-290-00815-00002	0.33	0.17	0.26	52				Y		1.87	0.6	0.02	9			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-290-00924-00002	0.30	0.17	0.26	55		Y	Y	Y		1.70	0.6	0.02	13			
	3/4"	Insul Low-E 340	WEA-N-290-00821-00002	0.33	0.13	0.25	52				Y		1.87	0.6	0.02	7			
3/4"	Insul Low-E 340 w/Argon	WEA-N-290-00930-00002	0.30	0.12	0.25	55		Y	Y	Y		1.70	0.6	0.02	10				
3/4"	Bronze Low E	WEA-N-290-00779-00002	0.33	0.26	0.34	52						1.87	0.6	0.02	14				
3/4"	Bronze Low E w/Argon	WEA-N-290-00888-00002	0.30	0.26	0.34	55		Y				1.70	0.6	0.02	18				
1" Or Over GIA or SDL	3/4"	Clear Insul	WEA-N-290-00751-00004	0.46	0.45	0.46	42					2.61	0.6	0.02	9				
	3/4"	Insul Low-E	WEA-N-290-00768-00004	0.33	0.25	0.40	52				Y		1.87	0.6	0.02	13			
	3/4"	Insul Low E w/Argon	WEA-N-290-00876-00004	0.30	0.24	0.40	55		Y	Y	Y		1.70	0.6	0.02	17			
	3/4"	Passive Solar	WEA-N-290-00803-00004	0.34	0.39	0.45	52					1.93	0.6	0.02	20				
	3/4"	Passive Solar w/Argon	WEA-N-290-00912-00004	0.31	0.40	0.45	55					1.76	0.6	0.02	25				
	3/4"	Passive Solar Extreme	WEA-N-290-00809-00004	0.29	0.36	0.43	41		Y			1.65	0.6	0.02	25				
	3/4"	Passive Solar Extreme w/Argon	WEA-N-290-00918-00004	0.27	0.36	0.43	44	Y	Y			1.53	0.6	0.02	27	Y			
	3/4"	Zo-e-shield 5	WEA-N-290-00785-00004	0.33	0.17	0.36	53				Y		1.87	0.6	0.02	9			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-290-00894-00004	0.29	0.16	0.36	56		Y	Y	Y		1.65	0.6	0.02	13			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-290-00828-00004	0.28	0.16	0.36	42		Y	Y	Y		1.59	0.6	0.02	14			
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-290-00936-00004	0.26	0.16	0.36	45	Y	Y	Y	Y		1.48	0.6	0.02	17	Y		
	3/4"	Zo-e-shield 6	WEA-N-290-00848-00001	0.36	0.17	0.36	50				Y		2.04	0.6	0.02	5			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-290-00950-00001	0.31	0.16	0.36	53				Y		1.76	0.6	0.02	11			
	3/4"	Zo-e SafeGuard Certified	WEA-N-290-00866-00001	0.36	0.17	0.35	50				Y		2.04	0.6	0.02	5			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-290-00968-00001	0.32	0.16	0.35	54				Y		1.82	0.6	0.02	9			
	3/4"	Insul Low-E 240	WEA-N-290-00815-00004	0.33	0.16	0.22	52				Y		1.87	0.6	0.02	8			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-290-00924-00004	0.30	0.15	0.22	55		Y	Y	Y		1.70	0.6	0.02	11			
	3/4"	Insul Low-E 340	WEA-N-290-00822-00001	0.33	0.12	0.22	52				Y		1.87	0.6	0.02	6			
3/4"	Insul Low-E 340 w/Argon	WEA-N-290-00930-00004	0.30	0.11	0.22	55		Y	Y	Y		1.70	0.6	0.02	9				
3/4"	Bronze Low E	WEA-N-290-00779-00004	0.33	0.24	0.30	52				Y		1.87	0.6	0.02	13				
3/4"	Bronze Low E w/Argon	WEA-N-290-00888-00004	0.30	0.23	0.30	55		Y	Y	Y		1.70	0.6	0.02	16				