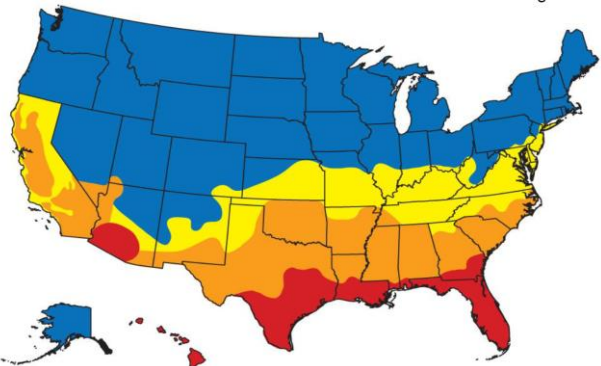


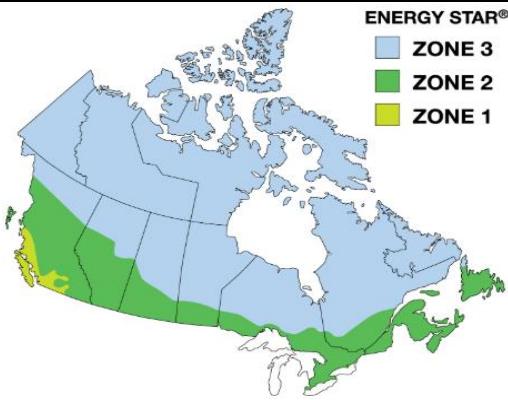
Thermal Performance Data

Contemporary Flush Frame Casement Windows - Operating (8216)

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

Contemporary Flush Frame Casement Windows - Operating (8216)



CANADIAN ENERGY PERFORMANCE DATA



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-286-00943-00001	0.45	0.54	0.56	43					2.56	0.6	0.05	15			
	3/4"	Insul Low-E	WEA-N-286-00944-00001	0.33	0.29	0.49	54					1.87	0.6	0.05	16			
	3/4"	Insul Low E w/Argon	WEA-N-286-00945-00001	0.30	0.29	0.49	58		Y			1.70	0.6	0.05	19			
	3/4"	Passive Solar	WEA-N-286-00950-00001	0.34	0.47	0.54	54					1.93	0.6	0.05	25			
	3/4"	Passive Solar w/Argon	WEA-N-286-00951-00001	0.31	0.48	0.54	57					1.76	0.6	0.05	29	Y	Y	
	3/4"	Passive Solar Extreme	WEA-N-286-00952-00001	0.29	0.43	0.53	42	Y				1.65	0.6	0.05	29	Y		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-286-00953-00001	0.27	0.43	0.53	45	Y				1.53	0.6	0.05	31	Y	Y	
	3/4"	Zo-e-shield 5	WEA-N-286-00946-00001	0.33	0.20	0.44	55				Y	1.87	0.6	0.05	11			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-286-00947-00001	0.30	0.19	0.44	58		Y	Y	Y	1.70	0.6	0.05	14			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-286-00948-00001	0.28	0.19	0.43	43		Y	Y	Y	1.59	0.6	0.05	16	Y		
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-286-00949-00001	0.26	0.19	0.43	46	Y	Y	Y	Y	1.48	0.6	0.05	18	Y		
	3/4"	Zo-e-shield 6	WEA-N-286-00964-00001	0.34	0.20	0.43	52				Y	1.93	0.6	0.05	9			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-286-00966-00001	0.30	0.19	0.43	56		Y	Y	Y	1.70	0.6	0.05	14			
	3/4"	Zo-e SafeGuard Certified	WEA-N-286-00980-00001	0.34	0.20	0.43	50				Y	1.93	0.6	0.05	9			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-286-00982-00001	0.30	0.19	0.43	56		Y	Y	Y	1.70	0.6	0.05	14			
	1"	Zo-e-shield 7	WEA-N-286-00984-00001	0.27	0.18	0.35	63	Y	Y	Y	Y	1.53	0.6	0.05	17	Y		
	1"	Zo-e-shield 7 w/ Argon	WEA-N-286-00986-00001	0.24	0.18	0.35	67	Y	Y	Y	Y	1.36	0.6	0.05	21	Y	Y	
	3/4"	Insul Low-E 240	WEA-N-286-00954-00001	0.34	0.18	0.27	54				Y	1.93	0.6	0.05	8			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-286-00955-00001	0.31	0.18	0.27	57				Y	1.76	0.6	0.05	12			
	3/4"	Insul Low-E 340	WEA-N-286-00956-00001	0.33	0.13	0.27	55				Y	1.87	0.6	0.05	6			
3/4"	Insul Low-E 340 w/Argon	WEA-N-286-00957-00001	0.30	0.13	0.27	58		Y	Y	Y	1.70	0.6	0.05	10				
3/4"	Bronze Low E	WEA-N-286-00944-00011	0.33	0.28	0.37	54					1.87	0.6	0.05	15				
3/4"	Bronze Low E w/Argon	WEA-N-286-00945-00011	0.30	0.28	0.37	58		Y			1.70	0.6	0.05	19				
Less Than 1" GIA or SDL	3/4"	Clear Insul	WEA-N-286-00943-00002	0.45	0.49	0.51	43					2.56	0.6	0.05	12			
	3/4"	Insul Low-E	WEA-N-286-00944-00002	0.33	0.27	0.44	54					1.87	0.6	0.05	15			
	3/4"	Insul Low E w/Argon	WEA-N-286-00945-00002	0.30	0.26	0.44	58		Y			1.70	0.6	0.05	18			
	3/4"	Passive Solar	WEA-N-286-00950-00002	0.34	0.43	0.49	54					1.93	0.6	0.05	22			
	3/4"	Passive Solar w/Argon	WEA-N-286-00951-00002	0.31	0.43	0.49	57					1.76	0.6	0.05	26	Y		
	3/4"	Passive Solar Extreme	WEA-N-286-00952-00002	0.29	0.39	0.48	42	Y	Y			1.65	0.6	0.05	26	Y		
	3/4"	Passive Solar Extreme w/Argon	WEA-N-286-00953-00002	0.27	0.39	0.48	45	Y	Y			1.53	0.6	0.05	29	Y		
	3/4"	Zo-e-shield 5	WEA-N-286-00946-00002	0.33	0.18	0.40	55				Y	1.87	0.6	0.05	9			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-286-00947-00002	0.30	0.18	0.40	58		Y	Y	Y	1.70	0.6	0.05	13			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-286-00948-00002	0.28	0.18	0.39	43		Y	Y	Y	1.59	0.6	0.05	15			
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-286-00949-00002	0.26	0.17	0.39	46	Y	Y	Y	Y	1.48	0.6	0.05	17	Y		
	3/4"	Zo-e-shield 6	WEA-N-286-00965-00001	0.35	0.18	0.39	52				Y	1.99	0.6	0.05	7			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-286-00967-00001	0.31	0.18	0.39	56				Y	1.76	0.6	0.05	12			
	3/4"	Zo-e SafeGuard Certified	WEA-N-286-00981-00001	0.35	0.18	0.39	50				Y	1.99	0.6	0.05	7			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-286-00983-00001	0.31	0.18	0.39	56				Y	1.76	0.6	0.05	12			
	1"	Zo-e-shield 7	WEA-N-286-00985-00001	0.27	0.16	0.32	63	Y	Y	Y	Y	1.53	0.6	0.05	16			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-286-00987-00001	0.24	0.16	0.32	67	Y	Y	Y	Y	1.36	0.6	0.05	19	Y		
	3/4"	Insul Low-E 240	WEA-N-286-00954-00002	0.34	0.17	0.25	54				Y	1.93	0.6	0.05	7			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-286-00955-00002	0.31	0.16	0.25	57				Y	1.76	0.6	0.05	11			
	3/4"	Insul Low-E 340	WEA-N-286-00956-00002	0.33	0.12	0.24	55				Y	1.87	0.6	0.05	6			
3/4"	Insul Low-E 340 w/Argon	WEA-N-286-00957-00002	0.30	0.12	0.24	58		Y	Y	Y	1.70	0.6	0.05	10				
3/4"	Bronze Low E	WEA-N-286-00944-00012	0.33	0.26	0.33	54					1.87	0.6	0.05	14				
3/4"	Bronze Low E w/Argon	WEA-N-286-00945-00012	0.30	0.25	0.33	58		Y	Y	Y	1.70	0.6	0.05	17				
1" Or Over GIA or SDL	3/4"	Clear Insul	WEA-N-286-00943-00003	0.45	0.44	0.46	43					2.56	0.6	0.05	9			
	3/4"	Insul Low-E	WEA-N-286-00944-00003	0.33	0.24	0.40	54				Y	1.87	0.6	0.05	13			
	3/4"	Insul Low E w/Argon	WEA-N-286-00945-00003	0.30	0.24	0.40	58		Y	Y	Y	1.70	0.6	0.05	17			
	3/4"	Passive Solar	WEA-N-286-00950-00003	0.34	0.39	0.44	54					1.93	0.6	0.05	20			
	3/4"	Passive Solar w/Argon	WEA-N-286-00951-00003	0.31	0.39	0.44	57					1.76	0.6	0.05	24			
	3/4"	Passive Solar Extreme	WEA-N-286-00952-00003	0.29	0.36	0.43	42		Y			1.65	0.6	0.05	25			
	3/4"	Passive Solar Extreme w/Argon	WEA-N-286-00953-00003	0.27	0.36	0.43	45	Y	Y			1.53	0.6	0.05	27	Y		
	3/4"	Zo-e-shield 5	WEA-N-286-00946-00003	0.33	0.17	0.36	55				Y	1.87	0.6	0.05	9			
	3/4"	Zo-e-shield 5 w/ Argon	WEA-N-286-00947-00003	0.30	0.16	0.36	58		Y	Y	Y	1.70	0.6	0.05	12			
	3/4"	Zo-e-shield 5 Extreme	WEA-N-286-00948-00003	0.28	0.16	0.35	43		Y	Y	Y	1.59	0.6	0.05	14			
	3/4"	Zo-e-shield 5 Extreme w/ Argon	WEA-N-286-00949-00003	0.26	0.16	0.35	46	Y	Y	Y	Y	1.48	0.6	0.05	17	Y		
	3/4"	Zo-e-shield 6	WEA-N-286-00965-00002	0.35	0.17	0.35	52				Y	1.99	0.6	0.05	6			
	3/4"	Zo-e-shield 6 w/ Argon	WEA-N-286-00967-00002	0.31	0.16	0.35	56				Y	1.76	0.6	0.05	11			
	3/4"	Zo-e SafeGuard Certified	WEA-N-286-00981-00002	0.35	0.16	0.35	50				Y	1.99	0.6	0.05	6			
	3/4"	Zo-e SafeGuard Certified w/ Argon	WEA-N-286-00983-00002	0.31	0.16	0.35	56				Y	1.76	0.6	0.05	11			
	1"	Zo-e-shield 7	WEA-N-286-00985-00002	0.27	0.15	0.29	63	Y	Y	Y	Y	1.53	0.6	0.05	15			
	1"	Zo-e-shield 7 w/ Argon	WEA-N-286-00987-00002	0.24	0.15	0.29	67	Y	Y	Y	Y	1.36	0.6	0.05	19	Y		
	3/4"	Insul Low-E 240	WEA-N-286-00954-00003	0.34	0.15	0.22	54				Y	1.93	0.6	0.05	6			
	3/4"	Insul Low-E 240 w/Argon	WEA-N-286-00955-00003	0.31	0.15	0.22	57				Y	1.76	0.6	0.05	10			
	3/4"	Insul Low-E 340	WEA-N-286-00956-00003	0.33	0.11	0.22	55				Y	1.87	0.6	0.05	5			
3/4"	Insul Low-E 340 w/Argon	WEA-N-286-00957-00003	0.30	0.11	0.22	58		Y	Y	Y	1.70	0.6	0.05	9				
3/4"	Bronze Low E	WEA-N-286-00944-00013	0.33	0.23	0.30	54				Y	1.87	0.6	0.05	12				
3/4"	Bronze Low E w/Argon	WEA-N-286-00945-00013	0.30	0.23	0.30	58		Y	Y	Y	1.70	0.6	0.05	16				