













Thermal Performance Data

*ENERGY STAR performance is based on Residential NFRC sizes:		
Climate	U-Value	SHGC
N=Northern	0.35 and below	any
NC=North Central	0.40 and below	0.55 and below
SC=South Central	0.40 and below	0.40 and below
S=Southern	0.75 and below	0.40 and below






AdvantEdge Double Hung

Product Type	Glazing Options		Residential NFRC 48" x 60"				 Energy Star
	Glazing Thickness	Glazing Type	U-Value	R-Value	Solar Heat Gain Co-Efficient	Visible Light Transmittance	
Without Grilles	DSB	Insul	0.47	2.13	0.62	0.65	
	DSB	Insul w/Argon Gas	0.46	2.17	0.62	0.65	
	DSB	Insul Low E	 0.33	3.03	0.31	0.56	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas	 0.30	3.33	0.31	0.56	N,NC,SC,S
With Grilles (Standard 0.75")	DSB	Insul	0.47	2.13	0.55	0.58	
	DSB	Insul w/Argon Gas	0.46	2.17	0.55	0.58	
	DSB	Insul Low E	 0.33	3.03	0.28	0.50	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas	 0.30	3.33	0.28	0.50	N,NC,SC,S






Manchester Double Hung

Product Type	Glazing Options		Residential NFRC 48" x 60"				 Energy Star
	Glazing Thickness	Glazing Type	U-Value	R-Value	Solar Heat Gain Co-Efficient	Visible Light Transmittance	
Without Grilles	DSB	Insul	0.47	2.13	0.61	0.64	
	DSB	Insul w/Argon Gas	0.45	2.22	0.61	0.64	
	DSB	Insul Low E	 0.33	3.03	0.29	0.54	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas	 0.30	3.33	0.29	0.54	N,NC,SC,S
With Grilles (Standard 0.75")	DSB	Insul	0.47	2.13	0.54	0.57	
	DSB	Insul w/Argon Gas	0.45	2.22	0.54	0.57	
	DSB	Insul Low E	 0.33	3.03	0.26	0.48	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas	 0.30	3.33	0.26	0.48	N,NC,SC,S








Manchester Single Hung

	Glazing Options			Residential NFRC 48" x 60"				
Product Type	Glazing Thickness	Glazing Type	U-Value	R-Value	Solar Heat Gain Co-Efficient	Visible Light Transmittance	Energy Star	
Without Grilles	DSB	Insul	0.48	2.08	0.62	0.65		
	DSB	Insul w/Argon Gas	0.46	2.17	0.62	0.65		
	DSB	Insul Low E	 0.34	2.94	0.29	0.55	N,NC,SC,S	
	DSB	Insul Low E w/Argon Gas	 0.30	3.33	0.29	0.55	N,NC,SC,S	
With Grilles (Standard 0.75")	DSB	Insul	0.48	2.08	0.55	0.58		
	DSB	Insul w/Argon Gas	0.46	2.17	0.55	0.58		
	DSB	Insul Low E	 0.34	2.94	0.26	0.49	N,NC,SC,S	
	DSB	Insul Low E w/Argon Gas	 0.30	3.33	0.26	0.49	N,NC,SC,S	







Manchester Slider

	Glazing Options			Residential NFRC 60" x 48"				
Product Type	Glazing Thickness	Glazing Type	U-Value	R-Value	Solar Heat Gain Co-Efficient	Visible Light Transmittance	Energy Star	
Without Grilles	DSB	Insul	0.48	2.08	0.62	0.65		
	DSB	Insul w/Argon Gas	0.46	2.17	0.62	0.65		
	DSB	Insul Low E	 0.34	2.94	0.29	0.55	N,NC,SC,S	
	DSB	Insul Low E w/Argon Gas	 0.30	3.33	0.29	0.55	N,NC,SC,S	
With Grilles (Standard 0.75")	DSB	Insul	0.48	2.08	0.55	0.58		
	DSB	Insul w/Argon Gas	0.46	2.17	0.55	0.58		
	DSB	Insul Low E	 0.34	2.94	0.26	0.49	N,NC,SC,S	
	DSB	Insul Low E w/Argon Gas	 0.30	3.33	0.26	0.49	N,NC,SC,S	





Manchester Awning

	Glazing Options			Residential NFRC 60" x 24"				
Product Type	Glazing Thickness	Glazing Type	U-Value	R-Value	Solar Heat Gain Co-Efficient	Visible Light Transmittance	Energy Star	
Without Grilles	DSB	Insul	0.42	2.38	0.51	0.53		
	DSB	Insul w/Argon Gas	 0.40	2.50	0.51	0.53	NC	
	DSB	Insul Low E	 0.30	3.33	0.24	0.45	N,NC,SC,S	
	DSB	Insul Low E w/Argon Gas	 0.27	3.70	0.24	0.45	N,NC,SC,S	
With Grilles (Standard 0.75")	DSB	Insul	0.42	2.38	0.46	0.48		
	DSB	Insul w/Argon Gas	 0.40	2.50	0.46	0.48	NC	
	DSB	Insul Low E	 0.30	3.33	0.22	0.41	N,NC,SC,S	
	DSB	Insul Low E w/Argon Gas	 0.27	3.70	0.22	0.41	N,NC,SC,S	





Manchester Casement

Product Type	Glazing Options		Residential NFRC 24" x 60"				Energy Star	
	Glazing Thickness	Glazing Type	U-Value	R-Value	Solar Heat Gain Co-Efficient	Visible Light Transmittance		
Without Grilles	DSB	Insul		0.42	2.38	0.51	0.53	
	DSB	Insul w/Argon Gas		0.40	2.50	0.51	0.53	NC
	DSB	Insul Low E		0.30	3.33	0.24	0.45	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas		0.28	3.57	0.24	0.45	N,NC,SC,S
With Grilles (Standard 0.75")	DSB	Insul		0.42	2.38	0.46	0.48	
	DSB	Insul w/Argon Gas		0.40	2.50	0.46	0.48	NC
	DSB	Insul Low E		0.30	3.33	0.22	0.41	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas		0.28	3.57	0.22	0.41	N,NC,SC,S






Manchester Casement Picture Window

Product Type	Glazing Options		Residential NFRC 48" x 60"				Energy Star	
	Glazing Thickness	Glazing Type	U-Value	R-Value	Solar Heat Gain Co-Efficient	Visible Light Transmittance		
Without Grilles	DSB	Insul		0.45	2.22	0.60	0.63	
	DSB	Insul w/Argon Gas		0.43	2.33	0.60	0.63	
	DSB	Insul Low E		0.31	3.23	0.29	0.54	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas		0.27	3.70	0.28	0.54	N,NC,SC,S
With Grilles (Standard 0.75")	DSB	Insul		0.45	2.22	0.54	0.56	
	DSB	Insul w/Argon Gas		0.43	2.33	0.54	0.56	
	DSB	Insul Low E		0.31	3.23	0.26	0.48	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas		0.27	3.70	0.26	0.48	N,NC,SC,S

Manchester Picture Window

Product Type	Glazing Options		Residential NFRC 48" x 60"				Energy Star	
	Glazing Thickness	Glazing Type	U-Value	R-Value	Solar Heat Gain Co-Efficient	Visible Light Transmittance		
Without Grilles	DSB	Insul		0.46	2.17	0.64	0.67	
	DSB	Insul w/Argon Gas		0.44	2.27	0.64	0.67	
	DSB	Insul Low E		0.32	3.13	0.3	0.57	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas		0.28	3.57	0.3	0.57	N,NC,SC,S
With Grilles (Standard 0.75")	DSB	Insul		0.46	2.17	0.57	0.60	
	DSB	Insul w/Argon Gas		0.44	2.27	0.57	0.60	
	DSB	Insul Low E		0.32	3.13	0.27	0.51	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas		0.28	3.57	0.27	0.51	N,NC,SC,S

Vinyl Glide Sliding Glass Door

Product Type	Glazing Options		Residential NFRC 80" x 80"					
	Glazing Thickness	Glazing Type	U-Value	R-Value	Solar Heat Gain Co-Efficient	Visible Light Transmittance	Energy Star	
Without Grilles	DSB	Insul		0.47	2.13	0.59	0.63	
	DSB	Insul w/Argon Gas		0.45	2.22	0.60	0.63	
	DSB	Insul Low E		0.34	2.94	0.28	0.53	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas		0.30	3.33	0.28	0.53	N,NC,SC,S
With Grilles (Standard 0.75")	DSB	Insul		0.47	2.13	0.52	0.55	
	DSB	Insul w/Argon Gas		0.45	2.22	0.52	0.55	
	DSB	Insul Low E		0.34	2.94	0.25	0.46	N,NC,SC,S
	DSB	Insul Low E w/Argon Gas		0.30	3.33	0.25	0.46	N,NC,SC,S