



Energy Performance Data for Krestmark Windows

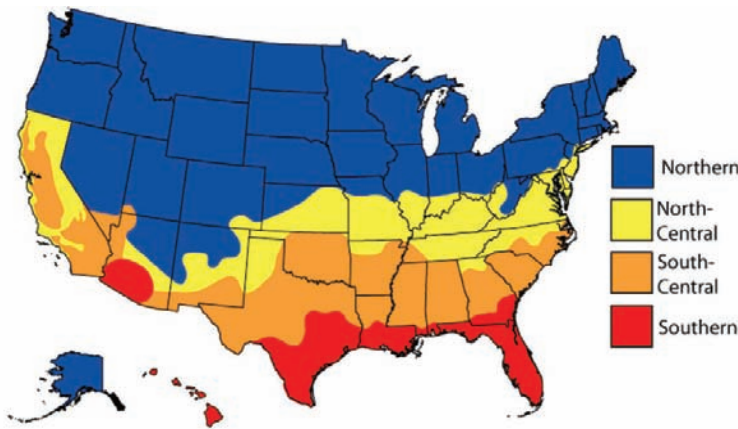
Energy Star® is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices.

Results are already adding up. Americans, with the help of Energy Star, saved enough energy in 2008 alone to avoid greenhouse gas emissions equivalent to those from 29 million cars — all while saving \$19 billion on their utility bills.

The Energy Star performance criteria for windows and doors is different depending on what region of the country the product is being tested. Below is the Energy Star climate map and corresponding requirements for each region.

Krestmark manufactures vinyl windows that, with several glazing options, meet energy star guidelines in all regions.

Energy Star® Qualification Criteria for Residential Windows



ENERGY STAR Program Requirements for Windows, Doors, and Skylights: Version 5.0 (April 7, 2009)

Windows			
Climate Zone	U-Factor ¹	SHGC ²	
Northern	≤ 0.30	Any	Prescriptive
	=0.31	≥ 0.35	Equivalent Energy Performance
	=0.32	≥ 0.40	
North-Central	≤ 0.32	≤ 0.40	
South-Central	≤ 0.35	≤ 0.30	
Southern	≤ 0.60	≤ 0.27	

¹ Btu/h.ft².°F

² Fraction of incident solar radiation

Performance Data for Krestmark Vinyl 220 Replacement Window

3/4" OA Insul		Single Hung			Picture Window		
		U-Factor	SHGC	VT	U-Factor	SHGC	VT
E70 LoE air	no grilles	.33	.30	.55	.32	.31	.58
	w/grilles	.33	.27	.49	.32	.28	.52
	E70 LoE argon	.29	.29	.55	.28	.30	.58
	w/grilles	.29	.26	.49	.28	.28	.52
E40 LoE air	no grilles	.33	.21	.31	.33	.22	.33
	w/grilles	.33	.19	.28	.33	.20	.30
	E40 LoE argon	.30	.20	.32	.29	.21	.33
	w/grilles	.30	.18	.28	.29	.19	.30
E66 LoE air	no grilles	.33	.22	.51	.32	.23	.54
	w/grilles	.33	.20	.45	.32	.21	.48
	E66 LoE argon	.29	.22	.51	.28	.23	.54
	w/grilles	.29	.20	.46	.28	.21	.48



Energy Performance Data for Krestmark Windows

Performance Data for Krestmark Vinyl 200/275 Series Windows							
Glass		Single Hung			Picture Window		
Dual 5/8" OA Insulated		U-Factor	SHGC	VT	U-Factor	SHGC	VT
Clear air	no grilles	.48	.63	.65	.48	.66	.69
Clear air	w/ grilles	.48	.56	.58	.48	.59	.62
E70 LoE air	no grilles	.33	.30	.56	.33	.31	.59
E70 LoE air	w/grilles	.33	.27	.50	.33	.28	.52
E70 LoE argon	no grilles	.29	.29	.56	.28	.31	.59
E70 LoE argon	w/grilles	.29	.26	.50	.28	.28	.52
E40 LoE air	no grilles	.34	.21	.32	.33	.22	.33
E40 LoE air	w/grilles	.34	.19	.28	.33	.20	.30
E40 LoE argon	no grilles	.30	.21	.32	.29	.22	.33
E40 LoE argon	w/grilles	.30	.19	.28	.29	.20	.30
E66 LoE air	no grilles	.33	.22	.51	.32	.24	.54
E66 LoE air	w/grilles	.33	.20	.46	.32	.21	.49
E66 LoE argon	no grilles	.29	.22	.51	.28	.23	.54
E66 LoE argon	w/grilles	.29	.20	.46	.28	.21	.49

Performance Data for Krestmark Vinyl 200/275 Series Windows							
Glass		Single Hung			Picture Window		
Dual 3/4" OA Insulated		U-Factor	SHGC	VT	U-Factor	SHGC	VT
Clear air	no grilles	.47	.61	.65	.47	.65	.68
Clear air	w/ grilles	.47	.55	.58	.47	.58	.61
Clear argon	no grilles	.45	.63	.65	.45	.66	.69
Clear argon	w/ grilles	.45	.56	.58	.45	.60	.62
E70 LoE air	no grilles	.33	.30	.55	.32	.31	.58
E70 LoE air	w/grilles	.33	.27	.49	.32	.28	.52
E70 LoE argon	no grilles	.29	.29	.55	.28	.30	.58
E70 LoE argon	w/grilles	.29	.26	.49	.28	.28	.52
E40 LoE air	no grilles	.33	.21	.31	.33	.22	.33
E40 LoE air	w/grilles	.33	.19	.28	.33	.20	.30
E40 LoE argon	no grilles	.30	.20	.32	.29	.21	.33
E40 LoE argon	w/grilles	.30	.18	.28	.29	.19	.30
E66 LoE air	no grilles	.33	.22	.51	.32	.23	.54
E66 LoE air	w/grilles	.33	.20	.45	.32	.21	.48
E66 LoE argon	no grilles	.29	.22	.51	.28	.23	.54
E66 LoE argon	w/grilles	.29	.20	.46	.28	.21	.48



Energy Performance Data for Krestmark Windows

Performance Data for Krestmark Vinyl 200/275 Series Windows								
Glass		Single Hung			Picture Window			
Triple 3/4" OA Insulated		U-Factor	SHGC	VT	U-Factor	SHGC	VT	
Clear air	no grilles	.40	.57	.60	.39	.60	.63	
Clear air	w/grilles	.41	.51	.54	.39	.52	.51	
E70 LoE #2	no grilles	.35	.28	.51	.34	.29	.54	
E70 LoE #2	w/ grilles	.36	.25	.46	.35	.27	.48	
E40 LoE #2	no grilles	.35	.20	.29	.34	.21	.31	
E40 LoE #2	w/ grilles	.36	.18	.26	.36	.19	.27	
E70 LoE #2&5	no grilles	.31	.25	.43	.29	.27	.46	
E70 LoE #2&5	w/ grilles	.32	.23	.39	.31	.24	.41	
E40 LoE #2&5	no grilles	.31	.17	.14	.30	.18	.15	
E40 LoE #2&5	w/ grilles	.32	.16	.13	.31	.17	.13	

Covered by one or more U.S. Patents: D608,906; D608,907; D608,908; D608,909; D608,910; and D608,911.

Performance Data for Porter-lite Series 400/475 MFG by Krestmark								
Glass		Single Hung			Picture Window			
Dual 5/8" OA Insulated		U-Factor	SHGC	VT	U-Factor	SHGC	VT	
Clear air	no grilles	.47	.66	.69	.47	.72	.75	
Clear air	w/ grilles	.47	.59	.62	.47	.65	.68	
E70 LoE air	no grilles	.32	.31	.59	.30	.34	.64	
E70 LoE air	w/grilles	.32	.28	.52	.30	.31	.58	
E70 LoE argon	no grilles	.28	.31	.59	.26	.34	.64	
E70 LoE argon	w/grilles	.28	.28	.52	.26	.31	.58	
E40 LoE air	no grilles	.33	.22	.33	.31	.24	.36	
E40 LoE air	w/grilles	.33	.20	.30	.31	.22	.33	
E40 LoE argon	no grilles	.28	.21	.33	.26	.23	.36	
E40 LoE argon	w/grilles	.28	.20	.30	.26	.21	.33	
E66 LoE air	no grilles	.32	.23	.54	.30	.25	.59	
E66 LoE air	w/grilles	.32	.21	.48	.30	.23	.53	
E66 LoE argon	no grilles	.27	.23	.54	.25	.25	.59	
E66 LoE argon	w/grilles	.27	.21	.48	.25	.23	.53	



Energy Performance Data for Krestmark Windows

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Performance Data for Porter-lite Series 400/475 MFG by Krestmark							
Glass		Single Hung			Picture Window		
Dual 3/4" OA Insulated		U-Factor	SHGC	VT	U-Factor	SHGC	VT
Clear air	no grilles	.47	.65	.68	.46	.70	.75
Clear air	w/ grilles	.47	.58	.61	.46	.64	.67
E70 LoE air	no grilles	.32	.31	.58	.30	.34	.63
E70 LoE air	w/grilles	.32	.28	.52	.30	.31	.57
E70 LoE argon	no grilles	.28	.31	.58	.26	.33	.63
E70 LoE argon	w/grilles	.28	.28	.52	.26	.30	.57
E40 LoE air	no grilles	.32	.22	.33	.31	.24	.36
E40 LoE air	w/grilles	.32	.20	.30	.31	.21	.33
E40 LoE argon	no grilles	.29	.21	.33	.27	.23	.36
E40 LoE argon	w/grilles	.29	.19	.30	.27	.21	.33
E66 LoE air	no grilles	.31	.23	.54	.30	.25	.59
E66 LoE air	w/grilles	.31	.21	.48	.30	.23	.53
E66 LoE argon	no grilles	.27	.23	.54	.26	.25	.59
E66 LoE argon	w/grilles	.27	.21	.48	.26	.23	.53

Performance Data for Porter-lite Series 400/475 MFG by Krestmark							
Glass		Single Hung			Picture Window		
Triple 3/4" OA Insulated		U-Factor	SHGC	VT	U-Factor	SHGC	VT
Clear air	no grilles	.39	.60	.63	.38	.65	.69
Clear air	w/grilles	.40	.54	.57	.39	.59	.62
E70 LoE #2	no grilles	.33	.29	.54	.32	.32	.59
E70 LoE #2	w/ grilles	.35	.26	.48	.33	.29	.53
E40 LoE #2	no grilles	.34	.21	.31	.32	.23	.33
E40 LoE #2	w/ grilles	.35	.19	.27	.34	.21	.30
E70 LoE #2&5	no grilles	.29	.26	.46	.27	.29	.50
E70 LoE #2&5	w/ grilles	.30	.24	.41	.28	.26	.45
E40 LoE #2&5	no grilles	.30	.18	.15	.27	.20	.16
E40 LoE #2&5	w/ grilles	.31	.16	.13	.29	.18	.15



Energy Performance Data for Krestmark Windows

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Performance Data for Porter-lite Series 400/475 MFG by Krestmark				
Glass		Horizontal Slider		
Dual 5/8" OA Insulated		U-Factor	SHGC	VT
Clear air	no grilles	.49	.65	.68
Clear air	w/ grilles	.49	.58	.61
E70 LoE air	no grilles	.33	.31	.59
E70 LoE air	w/grilles	.33	.28	.52
E70 LoE argon	no grilles	.29	.31	.59
E70 LoE argon	w/grilles	.29	.28	.52
E40 LoE air	no grilles	.34	.22	.33
E40 LoE air	w/grilles	.34	.30	.30
E40 LoE argon	no grilles	.30	.22	.33
E40 LoE argon	w/grilles	.30	.20	.30
E66 LoE air	no grilles	.33	.23	.54
E66 LoE air	w/grilles	.33	.21	.48
E66 LoE argon	no grilles	.28	.23	.54
E66 LoE argon	w/grilles	.28	.21	.48

Performance Data for Porter-lite Series 400/475 MFG by Krestmark				
Glass		Horizontal Slider		
Dual 3/4" OA Insulated		U-Factor	SHGC	VT
Clear air	no grilles	.48	.65	.68
Clear air	w/ grilles	.48	.58	.61
Clear argon	no grilles	.46	.65	.68
Clear argon	w/ grilles	.46	.58	.61
E70 LoE air	no grilles	.33	.31	.59
E70 LoE air	w/grilles	.33	.28	.52
E70 LoE argon	no grilles	.29	.31	.59
E70 LoE argon	w/grilles	.29	.28	.52
E40 LoE air	no grilles	.34	.22	.33
E40 LoE air	w/grilles	.34	.20	.30
E40 LoE argon	no grilles	.30	.21	.33
E40 LoE argon	w/grilles	.30	.19	.30
E66 LoE air	no grilles	.33	.23	.54
E66 LoE air	w/grilles	.33	.21	.48
E66 LoE argon	no grilles	.29	.23	.54



Energy Performance Data for Krestmark Windows

Performance Data for Krestmark Aluminum 100 Series Windows

Glass Dual 5/8" OA Insulated		Single Hung			Picture Window		
		U-Factor	SHGC	VT	U-Factor	SHGC	VT
Clear air	no grilles	.65	.68	.71	.60	.72	.76
Clear air	w/ grilles	.66	.61	.64	.61	.65	.68
E70 LoE air	no grilles	.51	.33	.61	.45	.35	.64
E70 LoE air	w/grilles	.53	.30	.55	.47	.32	.58
E70 LoE Argon	no grilles	.46	.33	.61			
E70 LoE Argon	w/grilles	.48	.30	.55			
E40 LoE air	no grilles	.52	.24	.35	.46	.25	.37
E40 LoE air	w/grilles	.53	.22	.31	.47	.23	.33
E40 LoE Argon	no grilles	.47	.23	.35			
E40 LoE Argon	w/grilles	.48	.21	.31			
E66 LoE air	no grilles	.51	.25	.56	.45	.26	.59
E66 LoE air	w/grilles	.52	.23	.50	.46	.24	.54
E66 LoE Argon	no grilles	.46	.25	.56			
E66 LoE Argon	w/grilles	.47	.23	.50			

Performance Data for Krestmark Aluminum 150 Series Windows

Glass Dual 5/8" OA Insulated		Horizontal Slider		
		U-Factor	SHGC	VT
Clear air	no grilles	.69	.66	.69
Clear air	w/ grilles	.69	.60	.62
E70 LoE air	no grilles	.54	.33	.59
E70 LoE air	w/grilles	.56	.30	.53
E70 LoE Argon	no grilles	.50	.32	.59
E70 LoE Argon	w/grilles	.51	.29	.53
E40 LoE air	no grilles	.55	.23	.34
E40 LoE air	w/grilles	.56	.21	.30
E40 LoE Argon	no grilles	.50	.23	.34
E40 LoE Argon	w/grilles	.51	.21	.30
E66 LoE air	no grilles	.54	.25	.54
E66 LoE air	w/grilles	.55	.23	.49
E66 LoE Argon	no grilles	.49	.24	.54
E66 LoE Argon	w/grilles	.51	.22	.49



Energy Performance Data for Krestmark Windows

Performance Data for Krestmark Aluminum 175 Series Windows

Glass		Single Hung		
Dual 5/8" OA Insulated		U-Factor	SHGC	VT
Clear air	no grilles	.67	.68	.71
Clear air	w/ grilles	.67	.61	.64
E70 LoE air	no grilles	.52	.33	.60
E70 LoE air	w/grilles	.54	.30	.54
E40 LoE air	no grilles	.53	.24	.34
E40 LoE air	w/grilles	.54	.22	.31
E66 LoE air	no grilles	.52	.25	.56
E66 LoE air	w/grilles	.53	.23	.50

Covered by one or more U.S. Patents: D608,906; D608,907; D608,908; D608,909; D608,910; and D608,911.

Performance Data for Krestmark Impact Vinyl 4000 Series

Glass		Single Hung			Picture Window		
Dual 3/4" OA Insulated		U-Factor	SHGC	VT	U-Factor	SHGC	VT
Clear air	no grilles	.47	.61	.67	.47	.67	.73
Clear air	w/ grilles	.48	.55	.60	.48	.60	.66
E70 LoE air	no grilles	.34	.31	.57	.32	.33	.62
E70 LoE air	w/grilles	.35	.28	.51	.34	.30	.56
E40 LoE air	no grilles	.34	.22	.32	.33	.24	.35
E40 LoE air	w/grilles	.36	.20	.29	.34	.22	.32
E66 LoE air	no grilles	.34	.23	.52	.32	.25	.55
E66 LoE air	w/grilles	.35	.21	.47	.34	.23	.52

Performance Data for Krestmark Impact Aluminum 1100 Series

Glass		Single Hung			Picture Window		
Dual 3/4" OA Insulated		U-Factor	SHGC	VT	U-Factor	SHGC	VT
Clear air	w/ grilles	.50	.49	.57	.50	.52	.61
E70 LoE air	w/grilles	.38	.27	.49	.38	.28	.52
E40 LoE air	w/grilles	.39	.20	.28	.38	.21	.29



Energy Performance Data for Krestmark Windows

Krestmark Vinyl Casement, Awning and Picture Window, Series 250					
Glass		Casement/Awning/Picture			Energy Star (meets guidelines in these zones)
Dual 3/4" OA insulated		U-Factor	SHGC	VT	
E70 LoE air	no grilles	.30	.25	.47	All Zones
E70 LoE air	w/grilles	.30	.25	.42	All Zones
E70 LoE argon	no grilles	.27	.25	.47	All Zones
E70 LoE argon	w/grilles	.27	.23	.42	All Zones
E40 LoE air	no grilles	.31	.18	.26	N. Central, S. Central, South
E40 LoE air	w/grilles	.31	.16	.24	N. Central, S. Central, South
E40 LoE argon	no grilles	.28	.17	.26	All Zones
E40 LoE argon	w/grilles	.28	.16	.24	All Zones
E66 LoE air	no grilles	.30	.19	.43	All Zones
E66 LoE air	w/grilles	.30	.17	.39	All Zones
E66 LoE argon	no grilles	.27	.18	.43	All Zones
E66 LoE argon	w/grilles	.27	.17	.39	All Zones

