
ENERGATE

MORE WINDOW – MORE ENERGY – MORE LIFE

H[®] Window Company, LLC
Super-insulating Windows and Doors

401 17th Avenue West
Ashland WI 54806

Phone: 715.685.2793

Fax: 715.685.9441

KH@ENERGATE.US

WWW.ENERGATE.US

Test Report (Summary)

No: haeussler-100801-13K



Place and date of Test: ROSENHEIM, 20th September 2010

Tested by: BAUWERK – Ingenieurbüro für Bauphysik

Test object: Passive House Certified window and door system of wood

Tested in acc. to: prEN ISO 10077-2:2010 & EN ISO 10077-1:2010

Manufacturer: Ludwig Häußler GmbH, 67346 Speyer, GERMANY
Super insulated windows and doors factory, WWW.ENERGATE.COM

Product Name: ENERGATE 1042+

Product details:

Profile material: Softwood (400 - 450 kg/m³)

Gasket material: EPDM

Insulation: 0,030 / 0,050 W/mK

Frame depth: varies

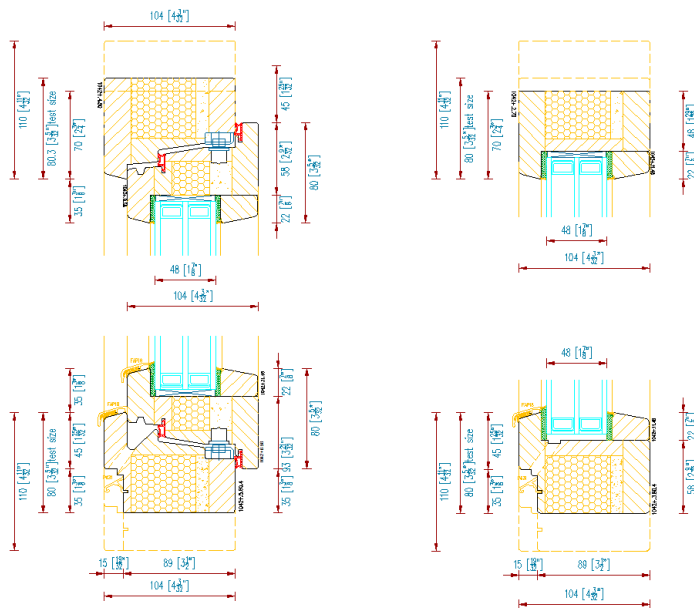
Sash depth: varies

Projected width: varies

IGU thickness: 48 mm (4-18-4-18-4) / 1.89"

IGU depth in frames: 17 mm / 0.67"

IGU spacer bar: HKKF* (*Häußler-Kohle-Karbon-Faser)

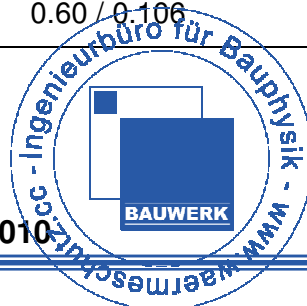


Simulation results

steady-state thermal transmittance test of passive house fenestration systems in accordance to the NFRC 102-2010 product types and model sizes, results to be used in the PHPP for passive houses

	casement window 1.20 x 1.50 m / 45" x 59"		fixed light 1.20 x 1.50 m / 45" x 59"	
	head/jamb	sill	head/jamb	sill
U_{frame} in W/m ² K / in Btu/ft ² hr °F	0.64 / 0.113	0.64 / 0.113	0.63 / 0.111	0.62 / 0.109
U_{glazing} in W/m ² K / in Btu/ft ² hr °F	0.5 / 0.088			
$\Psi_{\text{IG edge}}$ in W/mK / in Btu/ft hr °F	0.024 / 0.014	0.025 / 0.014	0.024 / 0.014	0.025 / 0.014
U_{window} in W/m ² K / in Btu/ft ² hr °F	0.60 / 0.106		0.59 / 0.104	

Dipl.-Ing. (FH) Roland Steinert
ROSENHEIM, 20th September 2010



BAUWERK
Ingenieurbüro für Bauphysik
Raublinger Str. 10, D-83026 Rosenheim
www.waermeschutz.cc

Test Report (Summary)

No: haeussler-100801-13K



Place and date of Test: ROSENHEIM, 20th September 2010

Tested by: BAUWERK – Ingenieurbüro für Bauphysik

Test object: Passive House Certified window and door system of wood

Tested in acc. to: prEN ISO 10077-2:2010 & EN ISO 10077-1:2010

Manufacturer: Ludwig Häußler GmbH, 67346 Speyer, GERMANY
Super insulated windows and doors factory, WWW.ENERGATE.COM

Product Name: ENERGATE 1042

Product details:

Profile material: Softwood (400 - 450 kg/m³)

Gasket material: EPDM

Insulation: none

Frame depth: varies

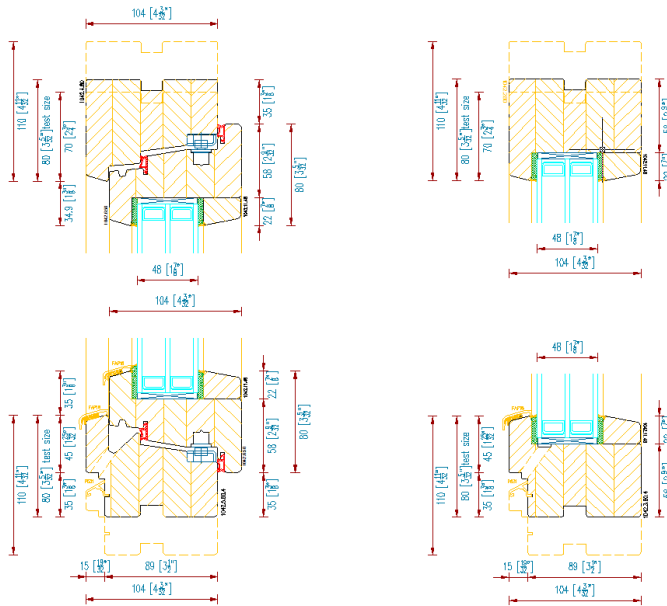
Sash depth: varies

Projected width: varies

IGU thickness: 48 mm (4-18-4-18-4) / 1.89"

IGU depth in frames: 17 mm / 0.67"

IGU spacer bar: HKKF* (*Häußler-Kohle-Karbon-Faser)



Simulation results

steady-state thermal transmittance test of passive house fenestration systems in accordance to the NFRC 102-2010 product types and model sizes, results to be used in the PHPP for passive houses

	casement window 1.20 x 1.50 m / 45" x 59"		fixed light 1.20 x 1.50 m / 45" x 59"	
	head/jamb	sill	head/jamb	sill
U_{frame} in W/m ² K / in Btu/ft ² hr °F	0.89 / 0.157	0.90 / 0.158	0.90 / 0.158	0.90 / 0.158
U_{glazing} in W/m ² K / in Btu/ft ² hr °F	0.5 / 0.088			
$\Psi_{\text{IG edge}}$ in W/mK / in Btu/ft hr °F	0.024 / 0.014	0.025 / 0.014	0.024 / 0.014	0.025 / 0.014
U_{window} in W/m ² K / in Btu/ft ² hr °F	0.68 / 0.119		0.65 / 0.114	

Dipl.-Ing. (FH) Roland Steinert
ROSENHEIM, 20th September 2010

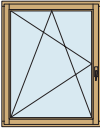
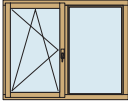
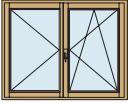
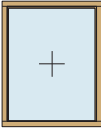
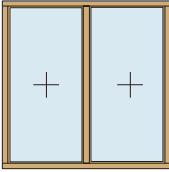
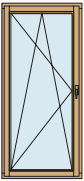
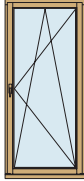
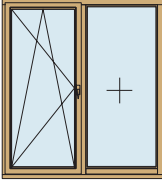
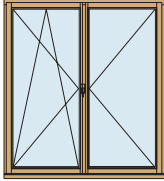

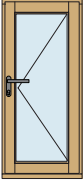
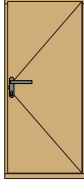
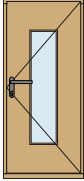
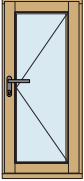
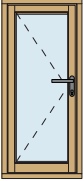
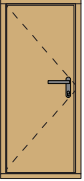
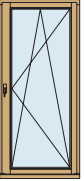
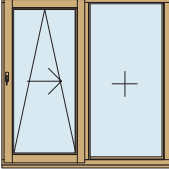
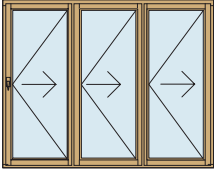
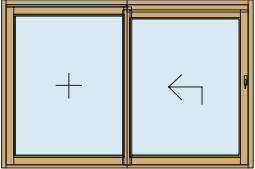
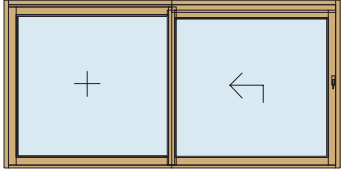


BAUWERK
Ingenieurbüro für Bauphysik
Raublinger Str. 10, D-83026 Rosenheim
www.waermeschutz.cc



Product No:	Product description	Width / Height		ENERGATE 1042			ENERGATE 1042+		
				product U value	product U factor	product R value	product U value	product U factor	product R value
				W/m ² K	Btu/ft ² hr °F	ft ² hr °F/Btu	W/m ² K	Btu/ft ² hr °F	ft ² hr °F/Btu
		mm	mm						
		inch	inch						
1.000 windows									
1.001	Dual action, single opening	1200 47	1500 59	0.68	0.119	8.4	0.60	0.106	9.4
1.002	Dual action, single opening, with fixed sidelight	1500 59	1200 47	0.72	0.126	7.9	0.64	0.112	8.9
1.004	Dual action, double opening	1500 59	1200 47	0.73	0.128	7.8	0.64	0.113	8.8
1.021	Fixed window	1200 47	1500 59	0.65	0.114	8.8	0.59	0.104	9.6
1.021	Glass wall	2000 79	2000 79	0.64	0.113	8.8	0.59	0.105	9.5
1.100 patio doors									
1.001	Dual action, single opening	960 37 ³ / ₄	2090 82 ³ / ₈	0.68	0.120	8.3	0.61	0.107	9.3
1.101	Dual action, single opening swinging door, flat threshold	960 37 ³ / ₄	2090 82 ³ / ₈	0.69	0.121	8.3	0.62	0.109	9.2
1.102	Dual action, single opening swinging door, with fixed sidelight, flat threshold	1920 75 ¹ / ₂	2090 82 ³ / ₈	0.67	0.118	8.5	0.62	0.108	9.3
1.104	Dual action, double opening, flat threshold	1920 75 ¹ / ₂	2090 82 ³ / ₈	0.67	0.117	8.5	0.61	0.107	9.3
1.121	door sidelight	600 24	2000 79	0.72	0.127	7.9	0.64	0.113	8.8
2.000 - 5.000 doors									
2.001.1	Fully glazed main entrance swinging door	960 37 ³ / ₄	2090 82 ³ / ₈	0.74	0.131	7.6	0.62	0.110	9.1
2.201.1	Closed panel main entrance swinging door	960 37 ³ / ₄	2090 82 ³ / ₈	0.59	0.104	9.6	0.55	0.097	10.3
2.301.1	Panel with light main entrance swinging door	960 37 ³ / ₄	2090 82 ³ / ₈	0.65	0.114	8.8	0.61	0.108	9.3
3.001.1	Fully glazed object swinging door	960 37 ³ / ₄	2090 82 ³ / ₈	0.75	0.131	7.6	0.62	0.108	9.3
4.001.3	Fully glazed escape swinging door	960 37 ³ / ₄	2090 82 ³ / ₈	0.75	0.131	7.6	0.63	0.111	9.0
4.201.3	Closed panel escape swinging door	960 37 ³ / ₄	2090 82 ³ / ₈	0.58	0.103	9.7	0.54	0.095	10.5
5.001.1	Lockable patio door	960 37 ³ / ₄	2090 82 ³ / ₈	0.71	0.124	8.1	0.61	0.108	9.3
6.000-8.000 sliding doors									
6.002	Parallel sliding door	2000 79	2000 79	0.68	0.119	8.4	0.62	0.108	9.3
7.003	Folding sliding door	2500 99	2000 79	0.70	0.124	8.1	0.64	0.112	8.9
8.002	Lift & sliding door	3000 118	2000 79	0.69	0.122	8.2	0.66	0.116	8.6
8.002	Lift & sliding door	4000 158	2000 79	0.67	0.118	8.5	0.64	0.112	8.9

Test Report - Typ overview

						
1.001 WINDOW Dual Action single opening	1.002 WINDOW Dual action single opening with fixed sidelight	1.004 WINDOW Dual Action double opening	1.021 WINDOW Fixed window	1.021 WINDOW Glass wall		
						
1.001 PATIO DOOR Dual awction single opening window	1.101 PATIO DOOR Dual action single opening swinging door flat threshold	1.102 PATIO DOOR Dual Action single opening swinging door with fixed sidelight flat threshold	1.104 PATIO DOOR Dual action double opening flat threshold	1.121 PATIO DOOR with fixed door sidelight		
						
2.001.1 DOOR Fully glazed main entrance swinging door	2.201.1 DOOR Closed panel main entrance swinging door	2.301.1 DOOR Panel with light main entrance swinging door	3.001.1 DOOR Fully glazed object swinging door	4.001.3 DOOR Fully glazed escape swinging door	4.201.3 DOOR Closed panel escape swinging door	5.001.1 DOOR Lockable patio door
						
6.002 SLIDING DOOR Parallel sliding door	7.003 SLIDING DOOR Folding sliding door	8.002 SLIDING DOOR Lift & sliding door	8.002 SLIDING DOOR Lift & sliding door			