



**Phius Product Number:** W-101728  
**Date Last Certified:** 11/01/2023  
**THERM Files Available:** No

**Phius Certification Path:** Orange Path  
**Valid Through:** 11/01/2025  
**Air Leakage Test Data Available:** Yes



PRODUCT INFORMATION	
<b>Product Name:</b> Innotech 88PH+ XI Operable Window	
<b>Manufacturer:</b> Innotech Windows + Doors	<b>Primary Frame Material:</b> Vinyl
<b>Series:</b> 88PH+ XI	<b>Fixed or Operable:</b> Operable
<b>Model:</b> 88PH+ XI Operable Window	<b>Operation Type:</b> Dual Action Tilt Turn

IGU DETAILS		
<b>Glazing Name:</b> 4-270/4-CLR/4-180_46		
<b>Glass Layers:</b> Triple	<b>Gas Fill:</b> Argon	<b>Spacer:</b> Quanex Super Spacer Premium

RECOMMENDED CLIMATE ZONES <i>(NOTE: This information is not for use in building energy models. See next section.)</i>										
Recommended Climate Zones and Whole-Window U-values by Zone, at Standard Model Size [Btu/hr·ft <sup>2</sup> ·°F]										
Climate Zone	0, 1, 2	3A	3B	3C	4A, 4B	4C, 5C	5A, 5B	6	7	8
Recommended Zones	✓	✓	✓	✓	✓	✓	✓	✓		
U-Whole-Window	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13
<b>Modeled Size [W×H]</b>	47.24" × 59.06"		<b>SHGC, Whole Window:</b> 0.23				<b>Condensation Resistance:</b>			

**COMPONENT-LEVEL PERFORMANCE DATA [IP Units] | Compatible with building energy modeling tools**

U-COG   Center of Glass U-Values, by Climate Zone [Btu/hr·ft <sup>2</sup> ·°F]										
Climate Zone	0, 1, 2	3A	3B	3C	4A, 4B	4C, 5C	5A, 5B	6	7	8
U-COG Value	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.12	0.12
<b>SHGC-COG   Center of Glass Solar Heat Gain Coefficient, All Climate Zones</b>								0.35		

Frame Parameters	Left Jamb	Right Jamb	Head	Sill
Frame Section	Left	Right	Top	Bottom
<b>Frame Width</b>	5.20"	5.20"	5.20"	5.20"
<b>Frame U-Value</b> [Btu/hr·ft <sup>2</sup> ·°F]	0.11	0.11	0.11	0.11
<b>Glazing-to-Frame Psi Value</b> [Btu/hr·ft·°F]	0.0152	0.0152	0.0152	0.0152

**Frame-to-Wall Psi Value** is dependent on the on-site installation condition. *(See Phius Guidebook for more details.)*



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<b>Series:</b> 88PH+ XI	<b>Fixed or Operable:</b> Operable	
<b>Model:</b> 88PH+ XI Operable Window	<b>Operation Type:</b> Dual Action Tilt Turn	
IGU DETAILS		
<b>Glazing Name:</b> 4-270/4-CLR/4-180_46		
<b>Glass Layers:</b> Triple	<b>Gas Fill:</b> Argon	<b>Spacer:</b> Quanex Super Spacer Premium

RECOMMENDED CLIMATE ZONES <i>(NOTE: This information is not for use in building energy models. See next section.)</i>										
Recommended Climate Zones and Whole-Window U-values by Zone, at Standard Model Size [W/m <sup>2</sup> K]										
Climate Zone	0, 1, 2	3A	3B	3C	4A, 4B	4C, 5C	5A, 5B	6	7	8
<b>Recommended Zones</b>	✓	✓	✓	✓	✓	✓	✓	✓		
<b>U-Whole-Window</b>	0.67	0.66	0.66	0.67	0.66	0.66	0.67	0.68	0.72	0.74
<b>Modeled Size [W × H]</b>	1.20 m × 1.50 m			<b>SHGC, Whole Window:</b> 0.23			<b>Condensation Resistance:</b>			

**COMPONENT-LEVEL PERFORMANCE DATA [SI Units] | Compatible with building energy modeling tools**

U-COG   Center of Glass U-Values, by Climate Zone [W/m <sup>2</sup> K]										
Climate Zone	0, 1, 2	3A	3B	3C	4A, 4B	4C, 5C	5A, 5B	6	7	8
<b>U-COG Value</b>	0.59	0.58	0.58	0.58	0.58	0.58	0.59	0.61	0.66	0.69
<b>SHGC-COG   Center of Glass Solar Heat Gain Coefficient, All Climate Zones</b>								0.35		

Frame Parameters	Left Jamb	Right Jamb	Head	Sill
Frame Section	Left	Right	Top	Bottom
<b>Frame Width</b>	132 mm	132 mm	132 mm	132 mm
<b>Frame U-Value [W/m<sup>2</sup>K]</b>	0.63	0.63	0.65	0.65
<b>Glazing-to-Frame Psi Value [W/mK]</b>	0.0264	0.0264	0.0264	0.0264

**Frame-to-Wall Psi Value** is dependent on the on-site installation condition. *(See Phius Guidebook for more details.)*