

Chosen Wood Window Maintenance created window attachment product, known as the Slim Line Insulating Pane (SLIP) that, when properly installed and attached, is designed to improve energy outcomes. These improvements, as independently verified, result in measurable energy efficiency improvements to the building, such that publicly available codes, incentives, and other policy pushes for improved building energy efficiency will recognize the implementation of the Chosen Wood Window.

## **Product**

SLIP can be installed on existing windows, such that the original windows have energy efficiency improvements on par with modern energy efficiency standards. SLIP can be installed on all types of wood windows, including awning, casement, picture, double hung, and more.

SLIP adds an additional layer of pane to the window, along with additional glazing, and comes with weatherstripping to further prevent heat transfer between indoors and outdoors, the main source of energy loss in a building envelope.

## **Efficiency Outcomes**

To verify the energy efficiency results of the SLIP installation to windows, Chosen Wood Window Maintenance had independent testing completed by highly regarded laboratories in the United States.

The renowned Intertek laboratory performed a computer simulation test on the SLIP Window Panel on a baseline window, with the tests covering our two top-selling models: SLIP with 1/8" tempered clear float glass and 1/8" Pilkington Energy Advantage Low-e SLIP, as well as other variations that include 1/4" variations of those two models and the 1/4" laminated model. The result of this Intertek study found specific needs for cooling (E<sub>Pc</sub>) ranged from 12 to 26, while the specific needs for heating (E<sub>Ph</sub>) ranged from 45 to 66. These metrics can be explained further by this [Lawrence Berkeley National Laboratory methodology](#). As detailed in [a report by the American Council on an Energy Efficient Economy](#), such E<sub>Pc</sub> and E<sub>Ph</sub> results can save significant energy.

Similarly, these SLIP products ranged from a U-Factor of 0.26 to 0.31 BTU / hr\*<sup>2</sup>\*°F), a rating that represents lower than typical heat transmission from to the inside of a building, and from 0.47 to 0.56 for their solar heat gain coefficient (SHGC), a rating that highlights the lower-than-typical solar radiation that moves through the SLIP adorned windows. Both metrics are explained on [this U.S. Department of Energy resource](#).

These ratings put the single-pane windows with SLIP nearly on par with the highest-performing efficiency windows, including that are [ENERGY STAR Rated](#). As a demonstration of this effectiveness, energy testing was performed by the 'Energy Studies in Building' Lab at the University of Oregon. Based on this lab's in-field study, which was conducted specifically on a double-hung operable window with float glass, the Low-e SLIP was found to reduce heat gain/loss through a single pane window by 73%. Additional test results were then modeled on a simulated fixed window and shows that those improvements could improve all the way up to 80% when also paired with weatherstripping.

## **Final Takeaways and Taking Advantage**

To put the above in simple terms, the use of the SLIP attachment to a standard window (depending on your window and the model of SLIP used) will lead to the lost energy through the individual window to reduce by 73% to 80% compared with the window alone. Given that the [U.S. Energy Information](#)

[Administration estimates](#) that over half of U.S. household use goes to maintaining comfortable temperatures and [U.S. Department of Energy concludes](#) that 30% of a home's heating energy is lost through the windows, these window efficiency improvements can amount to monthly energy bill savings of approximately 10 to 12%.

For owners of buildings, the numbers clearly show that SLIP added to your windows will not only save monthly energy, but will ultimately pay for themselves. Even better, the proliferation of public incentives available for installing energy efficiency upgrades to your buildings mean the upfront costs will be even lower.

For the purposes of qualifying the use of the Chosen Wood Window Maintenance SLIP products for an energy efficiency product when it comes to efficiency improvements and incentives, these values listed above can be used as a proof of improved energy performance and applicability for efficiency programs and incentives, so building owners can provide them, along with the below firsthand resources, as verification for eligibility for such energy efficiency incentives:

Specific documentation of the above testing and energy efficiency results can be found on our website:

- [Intertek SLIP Testing](#)
- [University of Oregon SLIP Energy Report](#)