



# ULTIMATE SECURITY

**The Double Hung 401SH and Single Hung 411SH Windows are virtually break-in proof. After 44 minutes (accumulated) with hand and tool manipulation, the patented center lock made it impossible for entry.**  
(See pictures inside).



**OVERALL PERFORMANCE RATING  
R50**

**FORCED ENTRY RESISTANCE  
GRADE 40**



“Most Innovative Product”



The “Parallex Center Lock” is the key to the high security. The window has a minimum 3 point lock system to a maximum of 5 locks depending upon the size.



Extra deep engineered resin shoot bolt keys reinforce the sash and frame resulting in unprecedented strength. In addition to multiple cam locks, the bolts prevent the window from being pried open.

**PASSES ALL TESTS AND SURPASSES ALL OTHER WINDOWS**

**TEST 1**



**HAND MANIPULATION (T1)**

This is the 1st of 8 tests performed in the lab. The lab technician tried to break in for 10 minutes, by pushing on the glass and frame and sash using tremendous force with his hands and body weight. The sash did not slide at all.

Result: Unable to break in.  Pass  Fail

**TEST 2**



**TOOL MANIPULATION (T2)**

The next test involves the lab technician using 3 tools (screwdriver, coat hanger, flexible knife) for 10 minutes. The technician pries, turns, scrapes, twists, and jams the tools, trying to fail the locks.

Result: Unable to break in.  Pass  Fail

**TEST 3**



**LOAD (L1)**

The window is then clamped securely in the Load machine. Two cables, with a pulling force of 300 lbs. (1334N), try to pull the bottom sash upwards from the frame for 1 minute. The window recorded an impressive meter reading.

Result: Unable to break in.  Pass  Fail

**TEST 4**



**LOAD (L1 + L2)**

With the same cables from Test 3 still attached, a third cable is now attached to the centre of the window and also pulled inward for 1 minute with a force of 150 lbs. (667N). The lab technician attempted to bend or break the sash and/or damage the locks. No damage was visible.

Result: Unable to break in.  Pass  Fail

NO OTHER WINDOW MATCHES THE RELIABILITY, EASY OPERATION, DURABILITY, GUARANTEE AND TEST RESULTS.

TEST 5



**LOAD (L1 + L2 + L3)**

With all 3 cables still attached from Tests 3 and 4, a fourth cable is attached to the right side of the window and also pulled inward for 1 minute with a force of 65 lbs. (289N). The lab technician again attempted to damage or break the frame and/or locks. No damage was visible.

Result: Unable to break in.  Pass  Fail

TEST 7



**HAND MANIPULATION (T1)**

At this point, the window has undergone a tremendous amount of stress as a result of the 5 cables pulling in all directions with high loads applied. Test 7 involves another 10 minutes of Hand Manipulation (repeat of Test 1). Again, the lab technician was unsuccessful in his attempt to damage the window.

Result: Unable to break in.  Pass  Fail

TEST 6



**LOAD (L1+ L2 + L3 + L4)**

A fifth cable is then added (all cables from Tests 3, 4, and 5 are still attached) to the right centre of the window and also pulled upwards for 1 minute in an attempt to move the sash out of the frame. The sash did not move at all.

Result: Unable to break in.  Pass  Fail

TEST 8



**TOOL MANIPULATION (T2)**

The Final Test involves another 10 minutes of Tool Manipulation (repeat of Test 2). Here, the lab technician uses a screwdriver, coat hanger, and flexible knife against the frame and sash to attempt to persuade the window to allow him entry. Again, the lab technician was unsuccessful in his attempt to break in.

Result: Unable to break in.  Pass  Fail

# TEST RESULTS!

## NUMBERS DON'T LIE

Before you buy windows from any other manufacturer, ask for their test results and compare.

TEST	SPECIFICATIONS	TEST RESULTS	RATING																		
<b>Forced Entry Resistance</b> (Grade 40) 2.1.8 "ASTM F 588-97"	No entry shall be gained during hand and tool manipulation, performed to and following the application of the loads specifies here, on the hardware.	<table> <thead> <tr> <th>Test</th> <th>Duration/Load</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Hand &amp; Tool Manipulation</td> <td>10 min</td> <td>No Entry</td> </tr> <tr> <td>Load L1 (lbf)</td> <td>300</td> <td>No Entry</td> </tr> <tr> <td>Load L1+L2 (lbf)</td> <td>300 +150</td> <td>No Entry</td> </tr> <tr> <td>Load L1+L2+L3 (lbf)</td> <td>300 +150 + 65</td> <td>No Entry</td> </tr> <tr> <td>Hand &amp; Tool Manipulation</td> <td>10 min</td> <td>No Entry</td> </tr> </tbody> </table>	Test	Duration/Load	Result	Hand & Tool Manipulation	10 min	No Entry	Load L1 (lbf)	300	No Entry	Load L1+L2 (lbf)	300 +150	No Entry	Load L1+L2+L3 (lbf)	300 +150 + 65	No Entry	Hand & Tool Manipulation	10 min	No Entry	<b>GRADE 40</b>
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<b>Water Resistance (H-R70)</b> 4.3 "ASTM E 547-96"	No leakage past innermost plane following four pressure cycles, each five minutes pressure "ON" and one minute pressure "OFF". <b>Test Pressure: 10.50 psf</b>	No leakage past innermost plane was observed. <table> <thead> <tr> <th>Test</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>With Screen</td> <td>(interior screen) Pass</td> </tr> <tr> <td>Without Screen</td> <td>Pass</td> </tr> </tbody> </table>	Test	Result	With Screen	(interior screen) Pass	Without Screen	Pass	<b>70</b>												
Test	Result																				
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<b>Uniform Load Structural Test (HS-R50)</b> 4.4.2 "ASTM E 330-96"	No glass breakage or permanent damage to window components. Permanent Deflection of frame or sash members $\leq 0.4\%$ of span. <b>Inward Test Pressure: 75.0 psf</b> <b>Outward Test Pressure: 75.0 psf</b>	Measured permanent sash deflection: <table> <thead> <tr> <th>Direction</th> <th>Deflection</th> <th>% of Span</th> </tr> </thead> <tbody> <tr> <td>Inward</td> <td>0.048"</td> <td>0.11%</td> </tr> <tr> <td>Outward</td> <td>0.006"</td> <td>0.01%</td> </tr> </tbody> </table>	Direction	Deflection	% of Span	Inward	0.048"	0.11%	Outward	0.006"	0.01%	<b>50</b>									
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Inward	0.048"	0.11%																			
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<b>Air Infiltration (HS-R15)</b> 2.1.2 "ASTM E 283-91"	Rate of air infiltration $\leq 0.3$ cfm/ft <sup>2</sup> <b>Test Pressure: 1.57 psf</b>	<b>Surface Area:</b> 20.358ft <sup>2</sup> <b>Measured Air Flow:</b> 5.42 cfm <b>Rate of Air Infiltration:</b> 0.266 cfm/ft <sup>2</sup>	<b>PASS</b>																		
<b>Welded Corner Test</b> 2.1.7	Break < 100% along weld	<b>Frame</b> Top Left: Break <100% along weld Bottom Left: Break <100% along weld Top Right: Break <100% along weld Bottom Right: Break <100% along weld <b>Sash</b> Top Left: Break <100% along weld Bottom Left: Break <100% along weld Top Right: Break <100% along weld Bottom Right: Break <100% along weld	<b>PASS</b>																		



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