PERFORMANCE TESTS CONDUCTED
ON A PVC CASEMENT WINDOW S-3800/5000/5500 SERIES
IN ACCORDANCE WITH CAN/CSA A440-00

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4.0 SUMMARY OF TESTS RESULTS

TEST	SPECIFICATIONS	TEST RESULTS	LEVEL
Air tightness	A1: Q<2.79 (m³/hr)m⁻¹ A2: Q<1.65 (m³/hr)m⁻¹ @ 75 Pa A3: Q<0.55 (m³/hr)m⁻¹ *CAN/CSA-A440-00 par. 10.2 & 11.2* *ASTM-E283-99*	Crack length = 4.360 m Q_{inf} = 0.015 (m³/h)m⁻¹ @ 75 Pa Q_{exf} = 0.042 (m³/h)m⁻¹ @ 75 Pa $Q_{average}$ = 0.029 (m³/h)m⁻¹ @ 75 Pa	<u>A3</u>
Water tightness	No water infiltration under a pressure differential of: B1: 150 Pa B5: 500 Pa B2: 200 Pa B6: 600 Pa B3: 300 Pa B7: 700 Pa B4: 400 Pa *CAN/CSA-A440-00 par. 10.3 & 11.3* *ASTM-E547-00*	Pass under a pressure differential of 700 Pa.	<u>B7</u>
Wind load resistance	Deflection Blow-out Pa Pa 500 C1 1500 750 C2 2000 1200 C3 3000 1600 C4 4000 2000 C5 5000 *CAN/CSA-A440-00 par. 10.4 & 11.4* *ASTM-E330-00*	<u>**With 3 snubbers**</u>: Net deflection measured on the stile : 1.54 mm @ -1.2 kPa Deflection permitted = 11.65 mm Blow-out resistance under a pressure of ±3.0 kPa	<u>C3</u>
		<u>**With 4 snubbers**</u>: Net deflection measured on the stile : 1.96 mm @ -2.0 kPa Deflection permitted = 11.65 mm Blow-out resistance under a pressure of ±5.0 kPa	<u>C5</u>
Sash strength and stiffness	The window should have a vertical deflection of the lower outer corner of the sash < 5 mm, and: - close properly and meet the ease of operation test requirements - present no breakage or permanent deformation. *CAN/CSA-A440-00 par. 10.7 & 11.7*	Vertical measured deflection: 2.5 mm	<u>Passed</u>

Performance Evaluation: Casement Window

Ease of operation	- The force required to initiate the motion of the operable light from both the fully closed (Fo) and fully open (Fc) position: Fc=Fo< 60N - The force required to maintain the motion of the sash Fm< 30 N. - The force required to open or close any latches (Fl) < 100 N. *CAN/CSA-A440-00 par. 10.9 & 11.9*	Fo = 37 N Fc = 34 N Fm = 23 N Fl = 9 N	<u>Passed</u>
Sash pull-off	The sash pull-off shall be not greater than 75% of the net engagement of the member on the glazing *CAN/CSA-A440-00 par. 10.11 & 11.11*	Upper rails: Maximum permitted= <u>11.9</u> mm Maximum measured = <u>1.5</u> mm	<u>Passed</u>
Screen strength	No failure or permanent deformation under a 60 N (S1) or 330 N (S2) load. The screen must remain firmly anchored to the window. *CAN/CSA-A440-00 par. 10.10 & 11.10*	Passed under a load of 60 N	<u>S1</u>
Resistance to forced entry	F10: Grade 10 of ASTM F588-04 F20: Grade 20 of ASTM F588-04 *CAN/CSA-A440-00 par. 10.13 & 11.13*	Grade 40 of ASTM F588-04 T_1=10 min., L_1=1334 N, L_2=667 N, L_3=267 N	<u>F20</u>

Performance Evaluation: Casement Window

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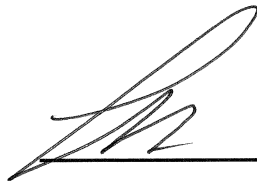
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5.0   CONCLUSION

Based on the tests results, the casement window described in this report meets the requirements of the Standard CAN/CSA A440-00 regarding air infiltration, water resistance, wind load resistance, screen strength and forced entry resistance with the following levels respectively: A3, B7, C3 (With three snubbers) or C5 (With four snubbers), S1 and F20 (grade 40 of ASTM-F588-04).   The window also meets the requirements of the following tests: Sash strength and stiffness, ease of operation and sash pull off.

The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the referenced specification.   This report does not constitute certification of this product, which may only be granted by a certification agency.
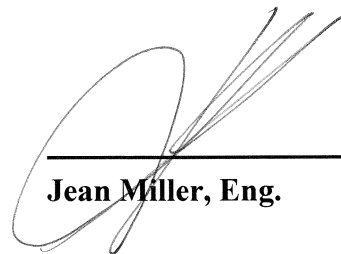
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Performance Evaluation: Casement Window

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