

**REPORT NO.** 09/10B

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Opinion on compliance of "70 mm EuroFutur Classic Tilt and Turn window" with the requirements of NZS 4211: 2008 Specifications for Performance of windows.

On 27 October 2008, Performance tests were carried out on "70mm EuroFutur Classic Tilt and Turn window" for Profine GmbH, to assess compliance with the requirements of AS 2047:1999 Windows in buildings – Selection and installation by the Prüfinstitut für Bauelemente GmbH, Zweibrücker Str. 217 D-66954 Pirmasens, Germany. The results in English, are presented in Test report F 2008 /47.

The Test report indicates that the test laboratory Prüfinstitut für Bauelemente GmbH (Testing Laboratory for building materials) is an accredited testing Laboratory to the German laboratory accrediting agency Deutscher Akkreditierungsstelle Technik Rat (German Accreditation Body for Technology).

## **REQUEST FOR OPINION**

The clients, EuroWindows Ltd are licensed manufacturers of uPVC windows and doors using the designs, uPVC extrusions and related components of Profine GmbH. EuroWindows Ltd are seeking an opinion that the test on the "70 mm EuroFutur Classic Tilt and Turn window" performed to assess compliance with the requirements on AS 2047:1999 using the associated test procedures detailed in AS 4420 parts 0 – 6, will provide test data that will permit an assessment of compliance with the current requirements of NZS 4211.

## **ASSESSMENT SUMMARY**

The assessment of the test results evaluated in detail in the attached page indicates the following:

**Deflection under Serviceability Wind Pressure**  
No deflection requirement on single sash window.

**Operating forces**  
No requirement for Tilt & Turn windows

**Air Infiltration**  
Complies with the "Air conditioned" requirement,

**Water penetration**  
Complies with Very High Wind Zone requirements.

**Ultimate Strength**

Complies with Very High Wind Zone requirements.


**Overall Wind Zone rating**

Complies with Very High Wind Zone

**DISCLAIMER**

This assessment has been undertaken on the test results made by an accredited test laboratory on a sample of the described of "70 mm EuroFutur Classic Tilt and Turn window" manufactured by the licensors Profine GmbH. Provided that the New Zealand licensees EuroWindows Ltd, manufacture a similar window unit with identical design, components and workmanship, similar compliance performance would be expected.

**JOHN YOLLAND & ASSOCIATES LTD**



John R. Yolland M.E (Chem & Mtls)  
Consulting Engineer

20 July 2009

**TEST REPORT ANALYSIS** of "70 mm EuroFutur Classic Tilt and Turn window"

**Deflection under Serviceability Wind Pressure (on full height mullion)**

Test pressures of  $\pm 1800$  Pa exceed Serviceability Wind Pressure for Very High Wind Zone of  $\pm 1250$  Pa.

No deflection measurement requirement on sash rails

Assessment : Complies with Very High Wind Zone

**Opening strengths**

Assessment : No requirement for tilt and turn windows

**Air Infiltration**

Opening joint length (estimated)	6.0 m
Overall area	2.51 m <sup>2</sup>

Maximum permitted leakages are calculated as follows: -

Air conditioned	3.80 l/s
Non air conditioned	15.5 l/s

Positive Air Leakage Test @150 Pa	1.0 l/s
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Negative Air Leakage Test	1.1 l/s
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Assessment : Complies with the Air conditioned requirement.

**Water Penetration**

Wind Zone:	Very High
Maximum Test Pressure	375 Pa

Tested to pressure of 450 Pa

Assessment : Complies with Very High Wind Zone requirements.

**Ultimate Strength**

Wind Zone:	Very High
Maximum Test Pressure	1760 Pa

Tested to pressure of 2300 Pa

Assessment : Complies with Very High Wind Zone requirements.