Building Product Information Sheet

Class 2

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Product Name: IV 68 and IV92 Solid Timber Windows and Doors

Product Line: IV68 and IV92 timber joinery profiles, manufactured in New Zealand using specifications from Die Marke Tischler Schreiner (German Master Joiner Association).

Manufacturer Details

- Legal and Trading Name: Optimal Windows Ltd
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Description of Product

The IV68 and IV92 profile systems consists of timber-framed windows and doors (and timber-aluminium variants) manufactured in New Zealand using Western Red Cedar, Abodo Vulcan or Rosewood. The system utilises specialised seals, weather bars, and hardware as defined in the CE-plus system manual. Available configurations include:

- Inward opening turn/tilt, turn-only, and tilt-only units.
- Outward opening single and double sash units.
- Tilt-and-slide and Lift-and-slide doors.
- Fixed glazing and multi-sash folding sliding doors.

Relevant Building Code Clauses

- B1 Structure: B1.3.1, B1.3.2, B1.3.3(h), and B1.3.4.
- B2 Durability: B2.3.1(b) and B2.3.2(b).
- E2 External Moisture: E2.3.2.
- F2 Hazardous Building Materials: F2.3.1 and F2.3.3.

- G4 Ventilation: G4.3.1 (openable windows contribute to natural ventilation).
- G7 Natural Light: G7.3.1 (glazed openings provide adequate natural light).
- H1 Energy Efficiency: H1.3.1 and H1.3.2. (Contributes to)

Statement on How the Product Complies

- Structure (B1): Tested to EN 12210 and certified to Class C5 for wind resistance and Class C for relative frontal deflection (limit ≤1/300). Performance meets or exceeds NZS 4211 requirements for the specified wind zones.
- Durability (B2): Western Red Cedar, Abodo Vulcan and Rosewood have an established New Zealand track record for joinery durability and units are readily replaceable if required.
- External Moisture (E2): Tested to EN 12208, achieving Class 9A for standard 1- and 2-sash units. This performance exceeds the equivalent watertightness requirements of NZS 4211.
- Hazardous Building Materials (F2): The IV68 and IV92 timber joinery systems do not emit harmful gases, liquids, radiation, or solid particles. All coatings and adhesives used comply with NZ Building Code requirements for non-hazardous materials. Where safety glazing is required, it is supplied in accordance with NZS 4223: Part 3 to prevent injury from human impact.
- Ventilation (G4): Openable configurations (turn/tilt, outward opening, sliding) allow natural ventilation in accordance with G4.3.1.
- Natural Light (G7): Glazed units provide natural light to habitable spaces, supporting compliance with G7.3.1.
- Energy Efficiency (H1): The IV68 and IV92 product suites have been tested to EN 12207, achieving Class 4 for air permeability. This classification is defined by a reference air permeability of 3 $m^3/(h \cdot m^2)$ at 100 Pa. This level of performance exceeds the minimum air infiltration requirements for air-conditioned spaces as specified under NZS 4211. The use of solid timber framing, specifically species like Western Red Cedar, Abodo Vulcan and Rosewood, utilises materials with an established track record of durability and performance in the New Zealand environment.

Scope and Limitations of Use

Wind Zones: The IV68 and IV92 profile systems are generally suitable for use in all New Zealand wind zones up to and including Extra High as defined in NZS 3604. However, users must note that certified performance classifications vary significantly depending on the specific configuration and opening mechanism.

Configuration-Specific Performance Caps: While standard windows meet or exceed the requirements for Extra High zones, the following configuration-specific limitations apply based on independent PfB Initial Type Testing:

- **Standard Inward/Outward Windows & French Doors: Certified to Class C5 for Wind Resistance and Class 9A for Watertightness.**

- **Multi-Sash Folding Sliding Doors: Performance is restricted to Class 3 for Wind Resistance and Class 5A for Watertightness.**

- **Lift and Slide Doors: Certified up to Class 5 for Wind Resistance, with 2-sash configurations limited to Class 7A for Watertightness.**

- **Parallel Slide/Tilt Doors: 2-sash units utilizing forced control are limited to Class 4A for Watertightness.**

- **Unprotected Double Windows: Limited to Class 6A for Watertightness.**

Dimensional and Hardware Constraints: To maintain these certified ratings, the maximum sash size, number of locking points, and specific hardware/seal selection must strictly adhere to the technical specifications prescribed in the CE-plus system manual. Deviating from these manual specifications—particularly regarding oversized sashes or reduced locking points—will invalidate the performance classifications and may result in non-compliance with NZBC Clauses B1 and E2

Design, Installation, and Maintenance Requirements

- Installation: Must be installed by suitably qualified tradespersons in accordance with E2/AS1, NZS 4211, and Optimal Windows Installation Guidelines.
- Maintenance: To satisfy B2 Durability, all seals, weather bars, and hardware must be inspected and maintained according to the CE-plus system manual.
- Glazing: Units must be glazed appropriately for application and human impact risk in accordance with NZS 4223: Part 3.

Warning or Ban

This product is not subject to any warnings or bans under section 26 of the Building Act 2004.

Supporting Documentation

- Product Technical Statement – Optimal Wooden Windows and Doors (Version 1.0, 22 May 2017)
- Installation Guidelines (manufacturer website)
- CE Plus Certificate
- PfB Test Certificates (available on request)