



## Data Specification

### APL Architectural Series ThermalHEART®

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#### MAIN FEATURES

- An all-new design of the high-performance APL Architectural Series, with thermal breaks for maximum energy efficiency, and different frame sizes
- Double glazed and triple glazed options available in all products
- Suitable for windows and doors in large formats even in exposed locations
- Can achieve tall heights and wide spans, and has been designed for suitability for Extra High wind zones and Specific Design applications
- Frame sizes are 114mm and 171mm for double glazing, and 138mm and 207mm for triple glazing
- Frames have facing adaptors / flange infills which allow 20mm of weather cover if desired
- Ideal for architecturally designed homes and apartments
- Flush sill sliding doors and windows are an option
- Improved water head and weather resistance allow wide suitability for sliding windows and doors in all wind zones
- Recommended maximum door height 3.0m
- Sliding doors slide on an outside track and can meet at 90° corners without the need for a corner post. For most configurations a fixed side panel is required. However, a bypass slider option is available where two or more panels move without needing a fixed pane
- The sliding door system has also been designed for convenient use as a cavity slider or for sliding back over a wall.

#### WINDOWS

**Awning and Casement Windows** come with four frame options, 114mm and 171mm for double glazing and 138mm and 207mm for triple glazing, which couple with adjoining door frames for a continuous interior edge. Awning and casement sashes have a facing sash option, though a non-facing sash option is available. A full range of sill trays and seismic frames are available. Multiple mullion / transom options are available depending on strength requirements have stiffening boxes which project to the interior. Corner posts (90° and 135°) are available. Vent options – Aerovent, SashVent and Ventient.

**Sliding Windows** use the sliding door frame but generally have smaller interlocker stiles, mullions and bi-parting meeting stiles. The sill frame has a flush track and a deep negative detail on the external face for positive aesthetics and improved drainage. Sill tray and seismic frames are available. Interlocker stiles are flush in the closed position.

**Bi-fold Windows** use the bi-fold door system (114mm frame only), which is bottom rolling with an in-frame track. Small, medium and large window rails are available. Window stile strengthening boxes project to both the interior and exterior.

#### DOORS

Hinged Doors have 56mm-thick panels and use the 114mm, 138mm or 171mm frame. They are available in open-out and open-in formats (114mm frame only for open in). The open-out frame and open-in frame have flat faces and can be coupled with sidelights and overlights. French doors have flush meeting stiles for a clean look. Small, medium and large window rails and stiles are available. The hinged door system can be used with seismic frames. Large French door stiles feature an exterior stiffening box. For thermally efficient formal entrance doors the thermally improved Axis range is available. Cedar panels can also be used in conjunction with the ThermalHEART® frame.

**Bi-fold Doors** have 56mm-thick panels use the 114mm frame only, which is bottom rolling with an in-frame track. Small, medium and large door rails are available. Flush rail options are available for low step or level thresholds. Sill tray and seismic frame options available. Door stile strengthening boxes project to both the interior and exterior. Overlights possible.

**Sliding Doors** have an external track and are available in the 114mm and 171mm frames for double glazing, and 138mm and 207mm options for triple glazing. The sill frame has a flush track and a deep negative detail on the external face for positive aesthetics and improved drainage, the latter optimising water head and weather resistance for wide suitability of APL Architectural Series ThermalHEART® sliding doors in all wind zones. Interlocker stiles and mullions are flush in the closed position. Stiffening boxes, in various sizes according to wind exposure, project externally. A seismic perimeter frame can be used. Multiple track options are available. Overlights can be included. Corner sliders (90° internal and external corners ) are available with no corner post. The sliding door system has also been designed for convenient use as a cavity slider or for sliding back over a wall.

### **GLAZING BEADS**

APL Architectural Series ThermalHEART® windows and doors use square beads.

### **FINISH / COLOUR**

Powder coated in a wide range of colours. Two-tone colour schemes are possible by special arrangement, with one colour chosen for the interior and another for the exterior. In

two-tone frames the polyamide thermal break will be seen in its natural black state when windows and doors are opened. In single colour powder coated product the thermal break may be painted the same colour as the aluminium.

Anodised silver and bronze as standard in 12 micron thickness. Other colours and thicknesses are available. In anodised product the thermal break appears in natural black.

### **GLASS**

Double glazed units of a minimum 22mm thickness and a maximum of 32mm. Triple glazing of 44mm triple can be accommodated.

Glass thickness and type to be used is covered by the Human Impact Safety requirements of NZS4223.

### **PERFORMANCE**

Complies with NZS 4211: 2008 Performance of Windows.

A guarantee for all APL Architectural Series ThermalHEART® windows is provided under normal conditions of use against failure of materials and workmanship for five years from the date of practical completion.

## SIZES

**Fixed lights** can be designed to 3000mm high x 2000mm wide. Dimensions may be constrained by glass size availability.

**Awning and casement windows** maxima 1500mm high x 900mm wide in Extra High wind zones. Larger sizes may be possible in lower wind zones. For casements i.e. side hung windows, sash size is also limited by friction stay carrying capacity.

**Sliding windows** can be made to large sizes because they are based on the sliding door system. Panels of 2000mm high x 2000mm wide.

**Bi-fold windows** use the bi-fold door system and are therefore capable of tall heights with a maximum width for windows suggested of 900mm per panel.

**Hinged Doors** have a recommended maximum panel dimensions of 3000mm high x 900mm wide.

**Sliding Doors** have a recommended maximum of 3000m high and 2000mm wide.

**Bi-fold Doors** have a recommended maximum panel size of 3000mm high x 1000mm wide.

## HARDWARE

Window fasteners are available in a range of styles and finishes, including the Miro, Urbo and Icon (stainless steel) and Elemental options.

For sliding windows and doors the surface mounted Albany lock is available as well as Miro, Urbo, Icon and Elemental pull handles with separately installed lock or turn knob.

Bi-fold windows and doors have a swivel operator (Miro, Urbo or Icon or Elemental) with locking pins at head and sill. A 'D' handle/hinge is also available for tall windows.

For hinged doors a range of lever locks are available including the Miro, Urbo, Icon (stainless steel) and Elemental options with key or interior snib. French doors can have a lever handle on both panels (activating two-point locking at top and bottom) or a lever lock on the active panel and flush bolts in the leading edge of the lazy panel.