

## METRO SERIES

### MAIN FEATURES

- A stylish and versatile range of heavy-duty windows and doors based on a unified and contemporary design approach.
- Occupies an intermediate position between the FIRST<sup>TM</sup> residential suite and the high-performance APL ARCHITECTURAL SERIES.
- Suitable for residential and architectural applications in demanding environments.
- Frames and profiles feature clean, flat surfaces for a modern appearance.
- The product portfolio comprises sliding doors, hinged and bi-fold doors and awning, casement and sliding windows, all designed to reflect a coordinated aesthetic.
- Sliding doors and awning / casement windows are suitable in 'Specific Design' environments.
- Sliding doors can have an opening window in the moving panel when the flush-line Piatto sash lock is used.
- Doors are suitable to a height of 2.4 metres in most wind exposures.
- Sliding doors have a clean, uncluttered sill and track, are bottom rolling for ease of movement in larger sizes and are not sensitive to lintel drop.
- The bi-fold door can be supplied with a 'lay-back' option in some configurations where the panels swing back against adjoining walls for minimal projection on to decks.
- Awning and casement sashes have a flush, non-facing design, though a facing sash option is available.
- Double glazing up to a maximum thickness of 24mm is possible on doors and to 26mm on awning and casement windows.

### WINDOWS

**Awning / Casement / Fixed Light Windows** use the facing frame (08678). The non-facing sash (08679) is used as standard, though a facing sash (08604) is available, as well as other options (08603), (08605), (08606), (08607). All 40mm Window Series mullions and transoms can be used with the (08678) frame, so stiffening fins or boxes can project externally or internally depending on window span and aesthetic considerations.

**Sliding Windows** use the sliding door frame (02900) but have smaller sliding panel rails and profiles and interlocker stiles and mullions. Stiffening boxes on interlocker stiles and mullions are flush in the closed position.

**Bi-fold Windows** use the bi-fold door system, which is bottom rolling with an in-frame track.

### GLAZING BEADS

For double glazing, beads lie near flush with the glass. METRO SERIES windows come with square glazing beads as standard (for single glazed), though sloped beads are available and may be required on certain sash options.

### FINISH / COLOUR

**Powder Coated** in a wide range of colours.

**Anodised** silver and bronze as standard, 12 micron thickness. Other colours and thicknesses are available.

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### GLASS

Double glazing to a maximum thickness of 24mm on sliding windows and 26mm on awning / casement windows can be used. 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. Certificates can be provided on request. Awning and casement windows are suitable for 'Specific Design' applications in wind pressures of 1.3kPa serviceability provided they do not exceed recommended size guidelines.

A guarantee for all METRO SERIES products is provided under normal conditions of use against failure of materials and workmanship for five years from the date of practical completion.

### SIZES

Awning and casement windows are suitable for 'Specific Design' applications in wind pressures of 1.3Kpa serviceability provided they do not exceed recommended size guidelines. In 'very high' wind zones the maximum size for sashes is 1400mm high x 900mm wide. For casements i.e. side hung windows, sash size is also limited by friction stay carrying capacity, which is important when selecting double glazed units. Fixed lights can be designed to large dimensions depending on glass size availability. For example, a picture window 2000mm high x 2000mm wide would be suitable in a very high wind zone.

Because sliding windows are based on the door system size limitations are the same as for sliding doors.

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

### HARDWARE

Window fasteners are available in a range of styles and finishes, including the Miro™ and Icon wedgeless option.

For sliding windows the surface mounted Albany lock, small Miro™ 'D' handle with morticed one-point hook lock can be used or the Icon stainless steel 'D' handle or flush pull with morticed one-point hook lock.

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