



# Timber & Aluminium composite

Designed and tested to exceed all contemporary European & UK standards, plus the extreme weather conditions of Scandinavia, this proven system offers a comprehensive range of purpose made factory finished timber & aluminium composite windows, doors and associated products at affordable prices. The system comprises both **outward and inward** opening windows and doors, suited fixed lights, panels and louvres, which are all custom manufactured to size, shape and finish offering designers the flexibility to create the facade of their choice. Here in the UK the system has been supplied to over **500** building projects as diverse as individual residential schemes through to major health, education, housing, and commercial developments in both the private and public sectors.

## Construction

Composite construction combines extruded aluminium alloy profiles to EN AW 6060-T6 and close grained laminated North European Redwood, Class J10/J30, in accordance with BS EN 942: 1996. Other timber species are also available.

Timber frame and casement sections are precision machined and assembled with pinned and glued comb joints. Mullions and transoms are assembled with mortice and tenon joints. External aluminium frame profiles are assembled with sealed mitred joints by means of crimped angle cleats, bonded with PIB tape and mechanically fixed with stainless steel pins to internal timber members. Windows are fully weather stripped with EPDM slot seals.

## Appearance

Aluminium profiles are chemically pre-treated and powder coated in any standard RAL colour and specified gloss level in accordance with BS6496: 1984. The timber is fully factory finished with multi-coat spray applied water based clear lacquer, paint to NCS/RAL specification or a wide range of stain finishes.

## Glass/Glazing

The units are factory double or triple glazed to specification in accordance with BS6262: 1982 with 28mm or 36mm dual sealed units constructed to EN1279-2: 2002. They are either externally or internally bead glazed employing a drained and ventilated glazing system with sealed units incorporating composite super spacers and gas filling as standard, together with security tape glazing where applicable. All available **high performance** glass types can be specified to meet particular requirements for thermal insulation, acoustic attenuation, solar control, safety and security.



Open In Double Glazed



Open In Triple Glazed



Coupled Sash



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## Manufacture

Every window and door is made by a skilled craftsman from carefully selected materials utilising modern plant and the latest manufacturing techniques. Disciplined supply chain management and quality procedures mean products are delivered direct to site as programmed, palletised and protected for safe and efficient offloading and distribution. Every care is taken throughout the process for Health & Safety, Quality and the Environment.



## Weather/Tightness

precision machining and assembly, together with the use of multipoint espagnolette locking, superior weather-stripping materials and sealants, ensures that the windows perform to the very highest classification categories of EN1026, EN1027 and EN12211 for Air Permeability, Water-tightness and Wind Resistance.

## Thermal/Insulation

The System has been designed to offer exceptional standards of thermal insulation. The use of high grade timber with a very low thermal transmittance value greatly reduces heat loss through frame members. Double or triple glazed sealed units combined with the very latest low emissive coatings, the use of composite super spacers and gas filling as standard means the products can be supplied with whole 'U' values lower than 1.0W/m<sup>2</sup>K (Tested in accordance with EN ISO 12567 and EN ISO 10077-1/ 10077-2).

## Acoustic/Attenuation

Careful attention to the design and detailing means that all windows and doors offer a high standard of noise insulation. Double glazed windows can typically provide a sound reduction of up to 44dB(Rw) with the use of special laminated glass.

## Solar/Control

With the ever increasing performance requirements for low energy buildings, the control of heat gain is critical to reducing energy consumption and the limitation of CO<sub>2</sub> emissions. This system can be specified with double or triple glazed sealed units which incorporate the latest generation of solar control glass from Europe's leading manufacturers. The coupled sash windows and doors can also be supplied with integral blind systems for additional solar control and for anti glare purposes.

## Health&Safety

Every window and door is designed to combat the risks to safety as well as to provide convenience and ease of operation. Units are fitted with a variety of opening and cleaning position safety restrictors, locking devices, anti-slam friction stays and safety glass to offer complete peace of mind to the user.



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## Security

Robust construction combined with concealed multipoint espagnolette locking and high performance security devices mean the system offers exceptional levels of security. For enhanced security performance requirements all windows and doors will be supplied in accordance with BS7950/PAS24 "Secured by Design" standards.

## Fire/Resistance

A selection of the opening windows and fixed lights have been tested for integrity up to 48 minutes and for insulation up to 29 minutes in accordance with SS EN 1634-1:2000, SS EN 1363-1:1999 and where appropriate SS EN 1363-2: 1999.

## Blast/Resistance

All windows and doors can be manufactured to comply with both M.O.D. normal and enhanced specification requirements.



- Designed to exceed all contemporary standards, purpose made windows are manufactured to size, shape and finish offering the flexibility to create the facade of your choice.
- A comprehensive range of hinged and sliding doors are available providing the same high performance, to suite with all our window products.
- The coupled sash concept has been refined into the most advanced window of its type, offering additional solar control and acoustic attenuation benefits.