



MEDERA Timber Solar Shading System

Technical Data Sheet

System Overview

Manufacturer

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Product Description

The MEDERA Timber Solar Shading System is an architecturally engineered external façade solution designed to provide solar control, visual screening, and façade enhancement through the integration of natural timber elements and dedicated support structures.

The system is developed as a fully bespoke architectural shading platform and can be configured in vertical, horizontal, or cantilevered arrangements to suit project-specific aesthetic, environmental, and structural requirements.

MEDERA systems utilise carefully selected timber species including solid, laminated, jointed, modified, and engineered timber formats, combined with aluminium, steel, or stainless-steel support structures to deliver durable and visually refined façade solutions suitable for commercial, education, residential, healthcare, transport, leisure, and public sector applications.

Systems can be supplied in either cassette-based or stick-built arrangements with secret fixing or exposed fixing methodologies selected to suit project requirements and architectural intent.

The system is intended to balance solar control, durability, and architectural expression through carefully engineered timber components and support structures.

Natural Timber Characteristics

Timber is a natural material and variation in colour, grain, texture, and weathering behaviour is inherent within the product. The extent and rate of weathering will vary depending on:

Exposure to environmental conditions may result in:

- Natural silvering and colour variation
- Grain raising
- Movement, twisting, or cupping
- Surface checking, splitting, or resin bleed (species dependent)
- Timber species
- Orientation
- Exposure conditions
- Applied treatments and maintenance regime

These characteristics are considered inherent within natural timber products and do not adversely affect the intended function or structural integrity of the system.

System Configuration

MEDERA systems are bespoke engineered façade systems and can be configured to suit project-specific requirements including:

Arrangement

- Vertical array
- Horizontal array
- Cantilevered configuration
- Feature screening elements

Construction Methodology

- Cassette-based systems
- Stick-built systems
- Modular prefabricated assemblies

Fixing Methodology

- Secret fixing systems
- Exposed fixing systems

Blade / Fin Configuration

- Bespoke blade dimensions
- Variable pitch spacing
- Elliptical, rectangular or custom profiles
- Fixed or variable blade orientation

Blade Orientation

- 90°
- 45°
- 30°
- Project-specific orientations

All MEDERA systems are individually engineered to suit project-specific architectural, structural, and environmental requirements.

Performance

Solar Shading Performance

MEDERA systems are designed to provide project-specific solar control through careful consideration of:

- Blade geometry
- Orientation
- Spacing
- Projection depth
- Building orientation

Shading performance shall be determined based on project-specific environmental and façade design requirements.

Visual Screening

The system can be configured to provide varying levels of:

- Visual screening
- Façade articulation
- Privacy control
- Light diffusion

depending on blade geometry, spacing, and orientation.

Structural Performance

Support structures, fixing systems, and timber elements shall be engineered to accommodate applicable:

- Wind loading
- Dead loading

- Thermal movement
- Serviceability requirements in accordance with project-specific structural requirements.

Environmental Durability

Durability and anticipated service life are dependent upon:

- Timber species selection
- Moisture content control
- Treatment specification
- Exposure conditions
- Maintenance strategy

Construction

MEDERA systems are composite façade assemblies comprising:

- Timber blade or fin elements
- Engineered support structures
- Structural support brackets
- Cassette or stick-built framing systems

- Fixing systems and movement allowances
- Ancillary trims and interface components

Timber elements may be supplied in:

- Solid timber
- Laminated timber

- Jointed timber
- Modified timber
- Engineered timber constructions

Support structures are engineered to suit project-specific structural and architectural requirements.



Timber Species

Timber species shall be selected based on project-specific requirements including:

- Durability
- Stability
- Appearance
- Fire performance strategy
- Treatment compatibility
- Availability and sustainability considerations

Available species include, but are not limited to:

- Western Red Cedar
- European Larch
- Iroko
- Oak
- Redwood
- Ayous
- Accoya
- Thermally modified timbers
- Other suitable timber species

subject to project requirements
Timber may be supplied:

- Air dried
- Kiln dried
- Thermally modified
- Fire treated
- Treated
- Untreated

depending on project requirements and species suitability.

Performance characteristics including durability, movement, weathering behaviour, and treatment compatibility will vary between timber species.

Sustainability

Timber species and support materials can be selected to align with project-specific sustainability and environmental requirements. Responsibly sourced timber options and certified supply chains can be incorporated subject to project specification and availability.

Support Structures

Support structures and bracketry may be fabricated from:

- Aluminium
- Galvanised mild steel
- Stainless steel

Support systems can be:

- Face fixed
- Secret fixed
- Bracket supported
- Cassette mounted
- Thermally isolated where required

All support systems shall be engineered to suit project-specific loading and interface conditions.

Fire Performance

Where required, MEDERA systems can incorporate brush-applied or pressure-impregnated fire-retardant treatments designed to achieve project-specific Euroclass performance requirements.

Treatment suitability, timber species compatibility, anticipated wastage rates, and dimensional stability shall be reviewed on a project-specific basis.

Fire performance requirements shall be assessed in accordance with applicable project regulations, façade strategy, and building classification.

Finishes & Treatments

Timber elements may be supplied:

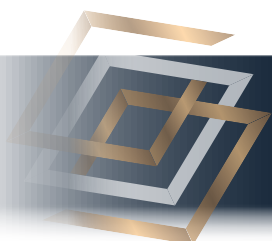
- Untreated
- Pre-weathered
- Oiled
- Stained
- Fire treated
- UV protective treatment systems

Available treatment systems may include:

- Sioo:X
- Osmo
- Restol
- Remmers
- Specialist fire-retardant coatings and impregnation systems

Support structure finishes may include:

- Polyester Powder Coating to BS EN 12206-1 / BS 6496
- Anodised finishes
- Galvanised finishes
- Stainless steel brushed or polished finishes



Installation

Installation shall be carried out strictly in accordance with Solinear design drawings, installation requirements, and project-specific structural interface details.

Installation shall be undertaken by competent installers experienced in façade and timber systems.

Allowance shall be made for:

- Timber movement
- Expansion and contraction
- Moisture variation
- Structural tolerances
- Drainage and ventilation requirements

Any deviation from the intended system configuration, fixing methodology, or support arrangement may adversely affect system performance.

Maintenance

Timber systems require periodic inspection and maintenance appropriate to:

- Timber species
- Applied finish or treatment
- Exposure conditions
- Project environment

Maintenance intervals and treatment renewal requirements will vary depending on project-specific conditions and selected finish systems.

Natural weathering and colour variation are inherent characteristics of external timber systems.

System Performance Statement

MEDERA is a fully bespoke engineered timber façade system designed to balance architectural appearance, solar control, durability, and structural performance.

System performance is dependent upon the complete assembly including:

- Timber species selection
- Support structure design
- Blade configuration
- Fixing methodology
- Environmental exposure
- Installation quality
- Maintenance strategy

All MEDERA systems shall be designed, manufactured, and installed in accordance with project-specific performance and architectural requirements.

