

SMART WINDOW 1+2



Scandinavian SMART WINDOW 1+2 MSE for commercial and hotel buildings

Product type:

Smart Window is MSEA type, with glazing 1+2 and side hung inward openable Scandinavian window system.

Both window casements are side hung inward openable for cleaning and maintaining purposes only.

Active Solar protection and different effects are integrated inside window, between two separately openable casements. Window key is used for opening window locks.

Ventilation hatch is operated with motorized openers, which work with remote controls or iPad application

Emergency and smoke evacuation windows have fixed handle for opening purposes.

Wooden parts and surface treatment:

Main window frame is finger jointed, engineered timber laminated from two or three sections made from Nordic Redwood, all visible surfaces knotless, on the back side of frame small singular knots are allowed. Inner casement massive jointed Nordic Redwood, all visible surfaces knotless.

Base coating with polyurethane paint, surface painting with water based paint. Manufacturing process of the billet structures with knot and defect removal gives an excellent base for surface treatment. Automated electro- static coating process. The painting takes place prior to installation for loose components, whereby the surface treatment agent can also be supplied to the grooves and joints of the components

Standard colour: white RAL 9010 (NCS S 0502-Y)

Aluminum cladding and surface treatment:

The outer casement and outer cladding of frame are powder coated aluminum profiles.

Standard colours: white RAL 9010, light grey RAL 7040, dark grey RAL 7024, black RAL 9005

Hinge and locking system:

Hinge in inner and outer casement are 8 mm bolt hinges.

Window fasteners in inner casements are with metallic strikers and plates. Outer casement has plastic turn and lock system or metallic strikers.

Fixed window handle is used only if window is used as emergency exit window or smoke evacuation window or French balcony door opening. Type of window handle is nickel free natural anodized aluminum handle.

Child security:

Child security is taken care of when window is correctly closed and locked according to user information.

Balcony door handle has two-hand-operated child security handle type Hoppe KISI2.

Window effects are child secure as they are remote controlled and do not have any loose strings.

Contact information:

www.smartwindow.fi

Send enquiries to:

export@smartwindow.fi

Company address:

Arvomarkiisi Oy, Rajamaankaari 5, 02970 Espoo, Finland



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Solar shading system:

Smart window has several different effects to choose from. By selecting correct effect, you can affect on various functions of window such as LT-value, G-value, Uw-value and even Rw-value, see attached sheet.

With different glazing types you can also have influence on Smart Windows sound reduction abilities.

Window sizes, min and max:

Window width	1-opening	2-openings	3-openings
min	6M	12M	18M
max	17M	30M	30M
Window height	1-opening	2-openings	3-openings
min	5M	5M	5M
max	18M (21M)	18M(21M)	18M(21M)

Window frame area max 6 sqm



NOTE! Final min and max window sizes will always be checked by the producer before offer/order. Sizes are given as Modular sizes, i.e 6M means 580mm and 10M means 980mm

Frame depth: 210mm and 230mm

Glass opening measurement: see detail drawing above.

Standard glazing: 1+2, with 210mm frame, Uw-value 0,94 and sound reduction value Rw47dB

Outside casement: OW 4mm glass

Inside casement: OW dbl glazing unit with 2x 4mm glasses with 1x low-e glass, cavity 16mm Ar

CE-marking and testing: Products are CE marked and tested by the producer.

Environment:

Producer is working with respect for environmental issues. Guideline is ISO 14001 (no certificated).

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Technical information:

Light transmission (LT) tells percentage of daylight passing through glazing system.

Solar transmittance (Gg) tells percentage of solar energy passing through glazing system

Heat transmission through window construction is validated by Uw-value, calculated window size is 1230x1480 mm

Type of window / Type of Effect	Rw	LT-value %	Gg-value %	Uw-value
MSEA / 1+2 / 210mm/ NO EFFECT	47dB	70	51	0,94 (0,78)
MSEA / 1+2 / 210mm/ SUN EFFECT	47dB (+ ~1dB) *	3,8	6,7	0,85 **
MSEA / 1+2 / 210mm/ MILKY EFFECT	47dB (+ ~1dB) *	5,2	7,7	0,85 **
MSEA / 1+2 / 210mm/ BLACKOUT EFFECT	47dB (+ ~1dB) *	0	11,6	0,85 **

*) Values with screens are estimated, not tested.

***) Values are calculated (SSF ESBO Light 2,2), not tested.

MSEA is offered in several different sound reduction levels depending on glazing and frame depth.

Sound reduction levels are from Rw 47dB up to Rw 53dB. Sound reduction is tested in laboratory or calculated.

LT value is value for glass area only.

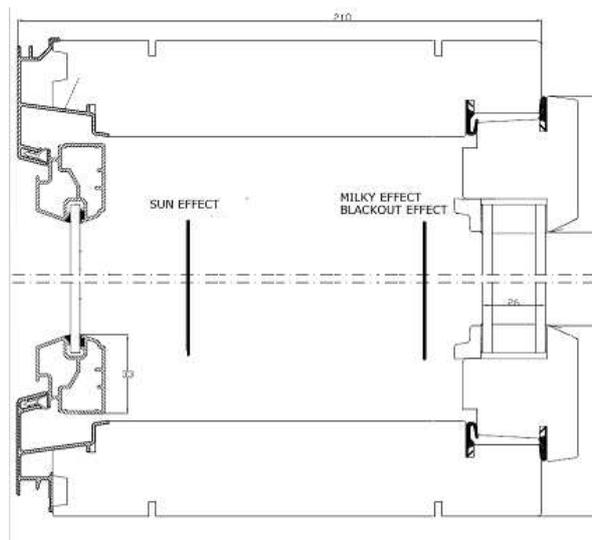
Product standard, performance characteristics according to EN 14351

Air permeability class 4, according to EN 12207

Water tightness class E1200, according to EN 12208

Wind pressure resistance class C3, according to EN 12210

Detail drawing, vertical section



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References:

- Project name: **Kronåsen 1:1, Uppsala Science Park, HUBBEN**
Investor: Vasakronan AB, biggest Swedish property owner
Architect: Landscape architect and interior architect White Arkitekter
Building period: Ready 2017/2018
Building approved: LEED PLATINUM in Energy and Environmental design.
Nominated for Building of the Year 2017 competition in Sweden
- Window type: Skaala BEETA 1+2 with three facades combined sun effect and solar glazing
Totally 331 pcs of windows with 505 pcs automatic sun effects



Picture: White Arkitekter



Façade with sun effects on.



Inside view with sun effects on.

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References:

Project name: **Sveavägen 44, commercial building in Stockholm City**
Investor/owner: Diligentia AB
Architect: Gustaf Clason, renovation 20011-2014 drawings by Wingårdhs Arkitektkontor
Building period: Ready 2014
Building approved: BREEAM EXCELLENT Energy effective building, 1st building in Sweden.
Also prize in Sweden Green Building Award

Window type: Fenestra MSE 1+2 with two facades with combined sun effects and solar glazing.
Totally there are 848 pcs of windows, from which over 700 pcs with automatically controlled SUN EFFECTS



Picture: <https://www.skanska.se/vart-erbjudande/vara-projekt/57265/Sveavagen-44%2C-Stockholm>



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