

## Skaala HAS-10, outward opening window

Thermal transmittance (of window) U, (W/m<sup>2</sup>·K)

**U<sub>w</sub> = 1,0** (HAS115-10, HAS131-10)

Total solar transmittance of glass

**g<sub>g</sub> = 0,53** (HAS115-10, HAS131-10)

Total solar transmittance of window

**g<sub>w</sub> = 0,38** (HAS115-10, HAS131-10)

Light transmittance (%)

**LT = 71** (HAS115-10, HAS131-10)

**Product Family** Skaala Scandic

### Window type

Outward opening aluminium clad timber window with one casement, triple glass unit, frame depth 115mm, alternatively 131mm. The casement and the frame with modern, straight lined profile.

### Materials

**Painted windows:** Frame finger jointed made from Nordic Redwood, all visible surfaces knotless, on the back side of the frame small singular knots are allowed. Casement engineered timber laminated from three sections, made from Nordic Redwood, all visible surfaces knotless.

**Stained windows:** Frame made from Nordic Redwood, all visible surfaces knotless, on the back side of the frame small singular knots are allowed. Casement engineered timber laminated from three sections, made from Nordic Redwood, inner and outer surfaces knotless and with finger joints

**Aluminium cladding:** The outer glazing frame and outer cladding of frame powder coated aluminium.

### Maximum and minimum sizes

Maximum and minimum sizes of single opening casements:

TT180	490mm	1600mm	496mm	1595mm
TT60	490mm	1600mm	396mm	1595mm

Maximum width and height of frame is 3000 mm, however maximum area of the frame is 6 m<sup>2</sup>.

### Glazing

As standard glazing triple IG-unit with SuperSpacer, argon gas. In HAS115-10 product there is one Low-E glass. Glazing with silicone and with outer aluminium frame. Mild green tint of the glazing is a normal characteristic of the product. Intensity depends on the number of glass panes and the structure of the product. Energy values are defined with standard glazing.

### Hardware

Assa Allswing hinge system

**Top Swing (TT180)**, window that can be rotated 170°.

**Top Hung (TT60)**, top hung window that can be opened 60°.

**Side Swing (ST180)**, side hung window that can be rotated 170°.

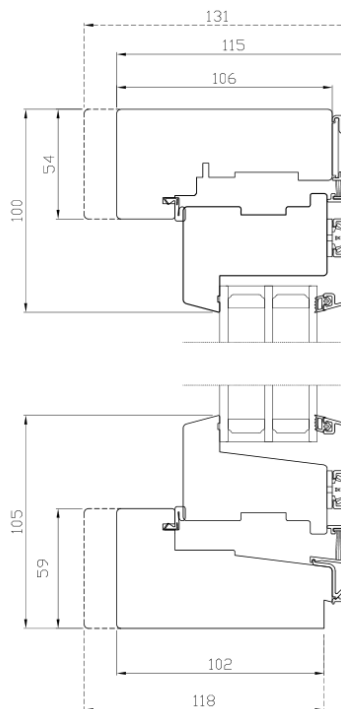
**Side Hung (ST)**, hardware for side hung window.

Espagnolette Mila Garant and standard handle Hoppe Tokyo.

Standard colours of handle aluminium, brass and white.

### Weather-stripping

PU-weather-strip (Q-Lon) in frame rebate. Between the aluminium glazing frame and the IG-unit TPE-weather-strip. Between frame and casement brush strip.



### Surface treatment types:

#### Painting (VM)

Base coating with polyurethane paint, surface painting with water based paint. Manufacturing process of the billet structures with know and defect removal gives an excellent base for surface treatment. Painting is processed as a manually spray painting procedure with high pressure. Painting is carried out with separated parts before the assembly. Due to the procedure all grooves and frame ends have a clean finish as well. Standard colour: white (NCS S 0502-Y)

#### Staining and lacquering (KL)

1x coat of translucent stain + inner part of frame and casement lacquered

#### Base coat (SK)

Base coating with colourless wood protective liquid.

#### Notification for stain coloured products

The characteristics of the timber material used in the manufacturing process may have a little variation depending on the growth location, growing process/speed, felling seasons, lengths of storage and lengths of drying period. Due to this the absorption of the material used in the staining process may vary causing gentle colour fluctuation between different products and even between different areas of the same product. For some reason the final colours of products may slightly differ from the colours presented in colour maps.

#### Astragals

PIR30A, PIR60A= clip-on astragals to outer surface, fixed with lock-on systems

POB15, POB30 = plant on bars glued onto the glazing from both sides.

JPY = timber astragal, outer part aluminium, dividing the glass elements, width 78 mm.

#### Accessories (optional)

Venetian blinds on inner surface (with control wires).

Trickle ventilators supplied loose.

Groove for internal trim (only for 131 mm frame depth)

#### Condensation of the outermost glass surface of the outer glazing in windows with good insulating qualities

In certain times during a year when the humidity is high the windows can gather condensation on the outermost glass surface of the glazing. Other than the weather conditions, condensation may also be caused by the architectural design of the building (e.g. roof structure), compass directions and surrounding plants. Condensation is either a cause of a low temperature inside the building or a good insulation of the window. Thermal radiation from the inside is not enough to keep the glass dry. Condensation is not harmful and does not damage the window. Skaala FrostFree structure will solve this problem. However, because this is a normal natural phenomenon, it might occur in some conditions also in FrostFree windows.