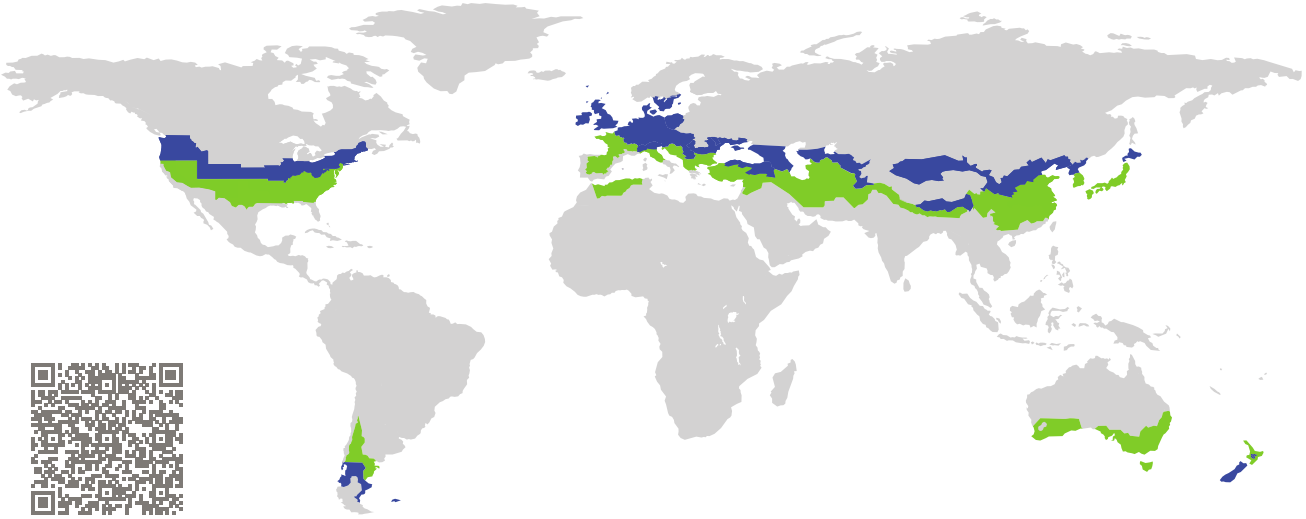
# CERTIFICATE

**Certified Passive House Component**

Component-ID 1242ds03 valid until 31st December 2025

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
Germany



| | |
|---|---|
| Category: | **Door system** |
| Manufacturer: | **Wescon Cedar Products Ltd.**<br>**Duncan**<br>**Canada** |
| Product name: | **Wood Entry Door (Glazed)** |

**This certificate was awarded based on the following criteria for the cool, temperate climate zone**

| | | | |
|---|---|---|---|
| Comfort | $U_D$= 0.78 | ≤ | 0.80 W/(m² K) |
| | $U_{D,installed}$ | ≤ | 0.85 W/(m² K) |
| | with $U_g$[1] | = | 0.70 W/(m² K) |
| Hygiene | $f_{Rsi=0.25}$ | ≥ | 0.70 |
| Airtightness | $Q_{100}$ = 2.25 | ≤ | 2.25 m³/(h m) |

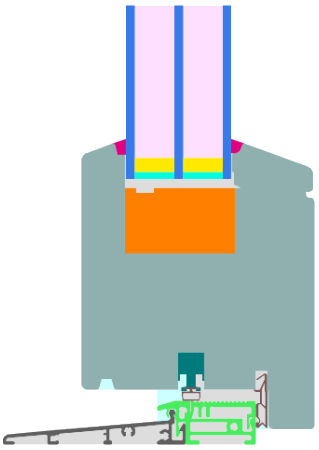
(Inward opening)

[1] Fully glazed door

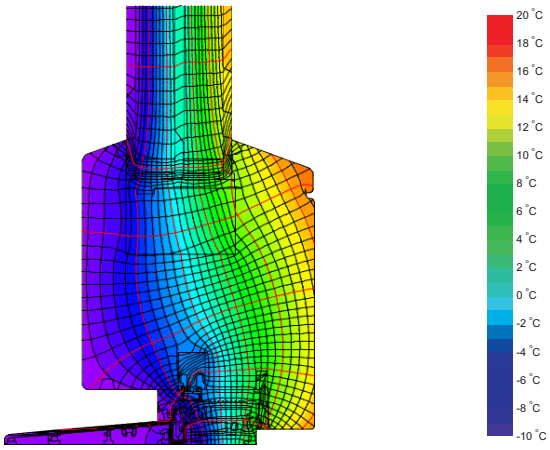
cool, temperate climate

CERTIFIED COMPONENT
Passive House Institute

**Wescon Cedar Products Ltd.**
5120 Polkey Road, V9L 6W3 Duncan, Canada
☎ +1-250-748-5234 | ✉ braden@fensturwindows.com | http://www.fensturwindows.com |



Calculation model




Isothermal

**Description**

Timber frame with cork insulation (Thermacork, 0,040 W/(mK)). Glazing: 4/18/4/18/4; glass intersection: 16 mm; spacer: Superspacer Premium; secondary seal: butyl. At the threshold and the narrow mullion, the temperature factor for the cool-temperate climate is not achieved. Nevertheless, these values are much better than usual. Beyond the requirements, airtightness class 4 according to EN 12207 is achieved.

**Explanation**

The U-values of the door apply to a combination of door and sidelight with fixed glazing, 2.20 m wide by 2.20 m tall. The door and the sidelight are both 1.10 m wide.

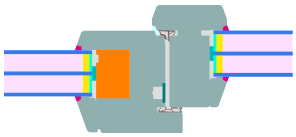
A detailed report of the calculations performed in the context of certification is available from the manufacturer.
Unless stated otherwise, the air tightness was determined according to EN 1026 with respect to the joint length under climate load in conjunction with EN 1121 for the closed, non-locked door. The result corresponds at least to air-tightness class 3 according to EN 12207.
The Passive House Institute has defined international component criteria for seven climate zones. In principle, components which have been certified for climate zones with higher requirements may also be used in climates with less stringent requirements. In a particular climate zone it may make sense to use a component of a higher thermal quality which has been certified for a climate zone with more stringent requirements.

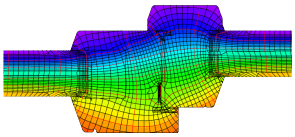
Further information relating to certification
can be found on www.passivehouse.com and passipedia.org.

| Frame values | | Frame width $b_f$ mm | $U$-value frame $U_f$ W/(m² K) | $\Psi$ edge $\Psi_g$ W/(m K) | Temp. Factor $f_{Rsi=0.25}$ [-] |
|---|---|---|---|---|---|
| Mullion<br>1 casement | (1M1) | 156 | 0.83 | 0.020 | 0.72 |
| Door<br>hinge side | (DJ1) | 176 | 0.78 | 0.020 | 0.74 |
| Door<br>lock side | (DL1) | 176 | 0.80 | 0.020 | 0.74 |
| Bottom<br>fixed | (FB1) | 78 | 0.80 | 0.020 | 0.73 |
| Top<br>fixed | (FH1) | 78 | 0.80 | 0.020 | 0.73 |
| Lateral<br>fixed | (FJ1) | 78 | 0.80 | 0.020 | 0.73 |
| Flying Mul-lion | (FM1) | 246 | 0.88 | 0.020 | 0.74 |
| Top | (OH1) | 176 | 0.78 | 0.020 | 0.74 |
| Threshold | (OT2) | 137 | 1.14 | 0.020 | 0.56 |
| Spacer: Super Spacer Premium | | | Secondary seal: Butyl | | |

### Mullion
1 casement

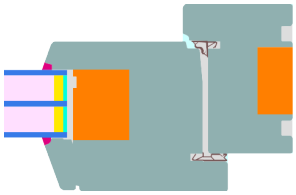
$b_f$ = 156 mm
$U_f$ = 0.83 W/(m² K)
$\Psi_g$ = 0.020 W/(m K)
$f_{Rsi}$ = 0.72

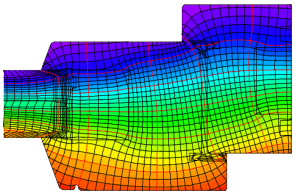




### Door
hinge side

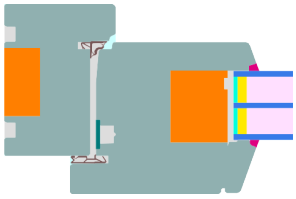
$b_f$ = 176 mm
$U_f$ = 0.78 W/(m² K)
$\Psi_g$ = 0.020 W/(m K)
$f_{Rsi}$ = 0.74

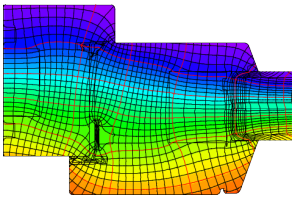




## Door
lock side

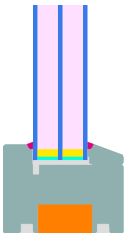
$b_f$ = 176 mm
$U_f$ = 0.80 W/(m² K)
$\Psi_g$ = 0.020 W/(m K)
$f_{Rsi}$ = 0.74

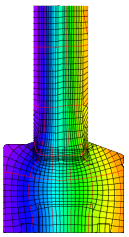




## Bottom
fixed

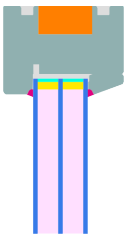
$b_f$ = 78 mm
$U_f$ = 0.80 W/(m² K)
$\Psi_g$ = 0.020 W/(m K)
$f_{Rsi}$ = 0.73

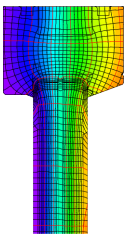




## Top
fixed

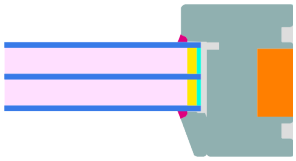
$b_f$ = 78 mm
$U_f$ = 0.80 W/(m² K)
$\Psi_g$ = 0.020 W/(m K)
$f_{Rsi}$ = 0.73

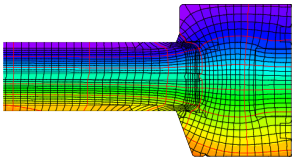




## Lateral
fixed

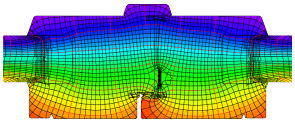
$b_f$ = 78 mm
$U_f$ = 0.80 W/(m² K)
$\Psi_g$ = 0.020 W/(m K)
$f_{Rsi}$ = 0.73





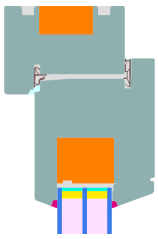
## Flying Mullion

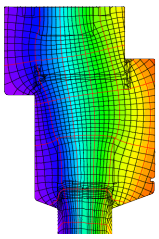
$b_f$ = 246 mm
$U_f$ = 0.88 W/(m² K)
$\Psi_g$ = 0.020 W/(m K)
$f_{Rsi}$ = 0.74



## Top

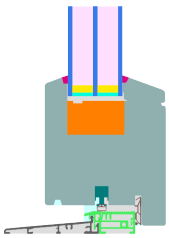
$b_f$ = 176 mm
$U_f$ = 0.78 W/(m$^2$ K)
$\Psi_g$ = 0.020 W/(m K)
$f_{Rsi}$ = 0.74

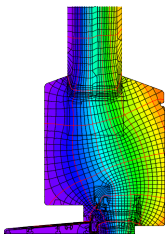




## Threshold

$b_f$ = 137 mm
$U_f$ = 1.14 W/(m$^2$ K)
$\Psi_g$ = 0.020 W/(m K)
$f_{Rsi}$ = 0.56

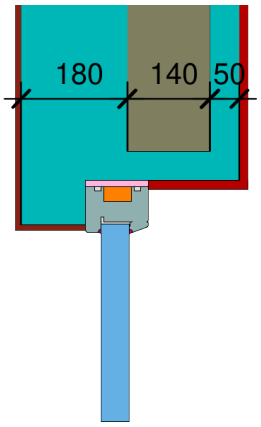




## Validated installations

### Formwork blocks top (fixed)

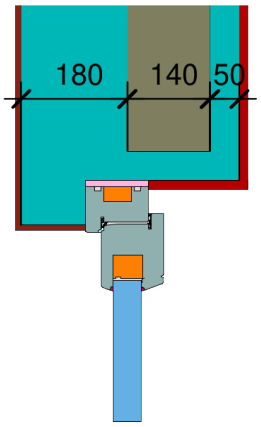
$U_1$ = 0.15 [W/(m² K)]




$\Psi_{install}$ = –0.00 W/(m K)

### Formwork blocks top (operable)

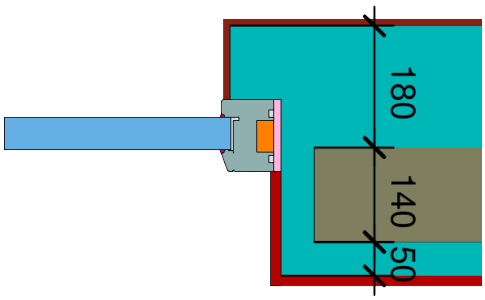
$U_1$ = 0.15 [W/(m² K)]




$\Psi_{install}$ = 0.00 W/(m K)

### Formwork blocks side (fixed)

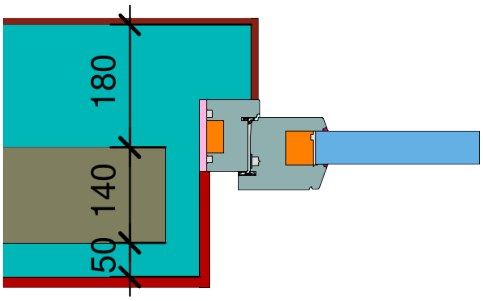
$U_1$ = 0.15 [W/(m² K)]




$\Psi_{install}$ = –0.00 W/(m K)

### Formwork blocks side (operable)

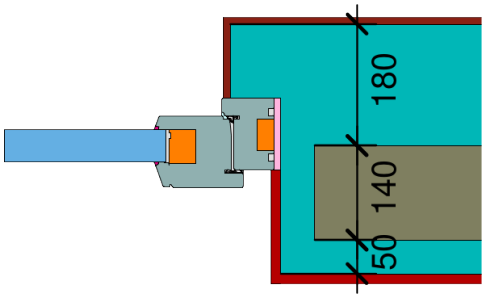
$U_1$ = 0.15 [W/(m² K)]




$\Psi_{install}$ = 0.00 W/(m K)

### Formwork blocks side (operable)

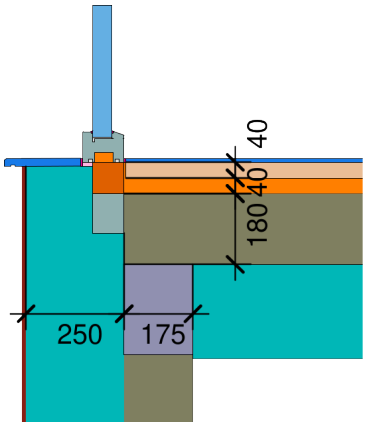
$U_1$ = 0.15 [W/(m² K)]




$\Psi_{install}$ = 0.00 W/(m K)

### Exterior insul. and finish s. (EIFS) threshold (fixed glazing)

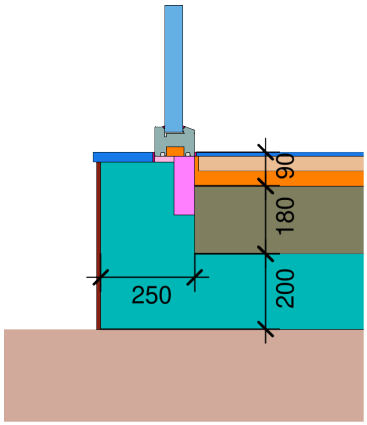
$U_1$ = 0.13 $U_2$ = 0.12 [W/(m² K)]




$\Psi_{install}$ = 0.04 W/(m K)

## Ext. ins. a. finish. s. (EIFS) threshold floor slab (fixed gl.)

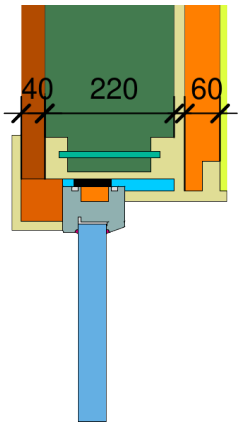
$U_1$ = 0.13 $U_2$ = 0.14 [W/(m² K)]




$\Psi_{install}$ = 0.01 W/(m K)

## Lighthweight timber top (fixed glazed)

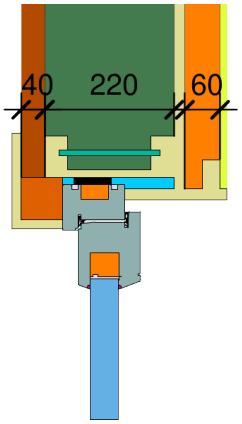
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.01 W/(m K)

## Lighthweight timber top (operable)

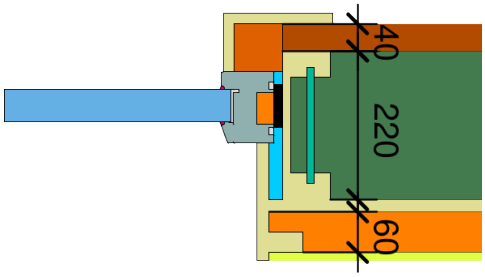
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.01 W/(m K)

## Lighthweight timber side (fixed glazed)

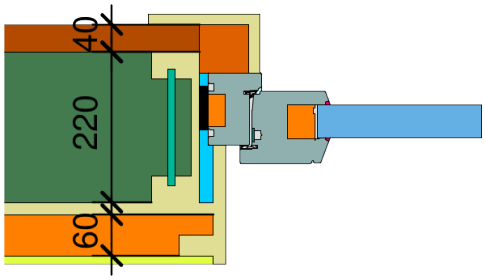
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.01 W/(m K)

## Lighthweight timber side (operable)

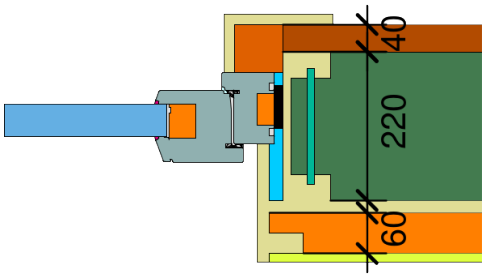
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.01 W/(m K)

## Lighthweight timber side (operable)

$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.01 W/(m K)



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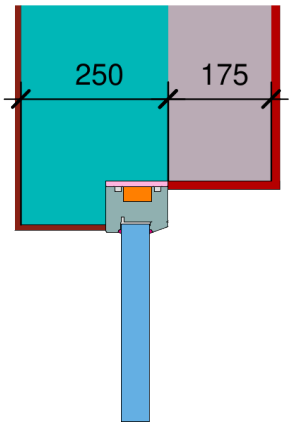
## Exterior insulation and finishing s (EIFS) top (fixed glazing))

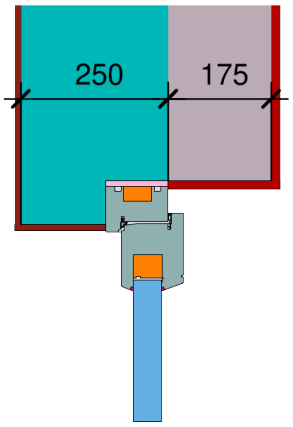
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = –0.01 W/(m K)

## Exterior insulation and finishing s (EIFS) top (operable)

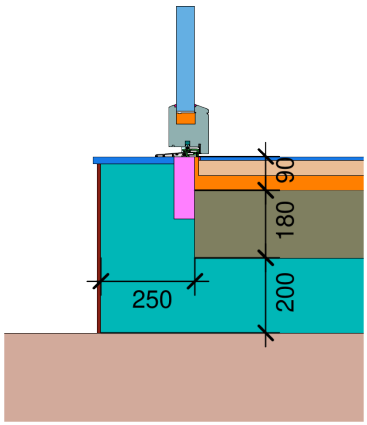
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.00 W/(m K)

## Ext. ins. a. finish. s. (EIFS) threshold floor slab (operable)

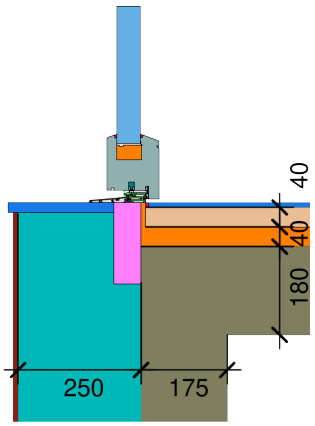
$U_1$ = 0.13 $U_2$ = 0.14 [W/(m² K)]




$\Psi_{install}$ = 0.07 W/(m K)

## Ext insulation a. finish. s. (EIFS) threshold ceiling (operable)

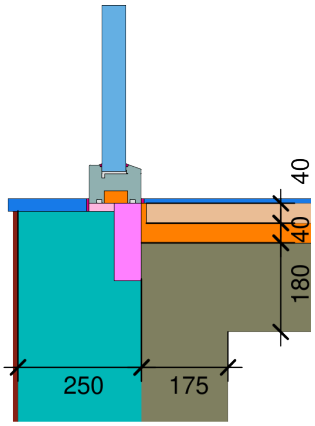
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.08 W/(m K)

## Ext insulation a. finish. s. (EIFS) threshold ceiling (fixed gl)

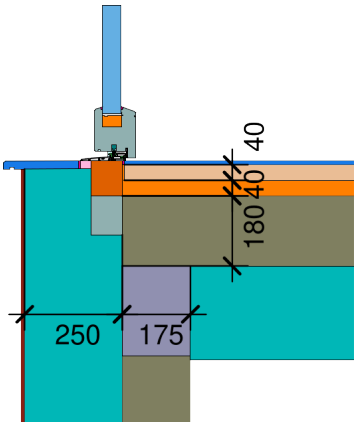
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.03 W/(m K)

## Exterior insulation and finishing s (EIFS) threshold (operable)

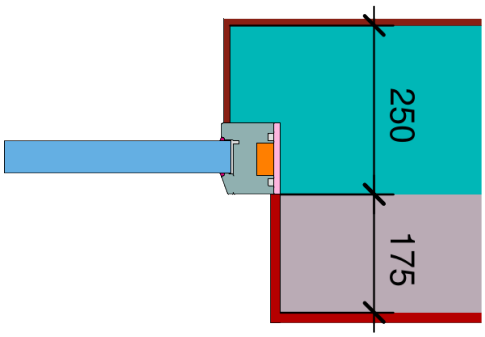
$U_1$ = 0.13 $U_2$ = 0.12 [W/(m² K)]




$\Psi_{install}$ = 0.08 W/(m K)

Exterior insulation and finishing s (EIFS) side (fixed glazed)

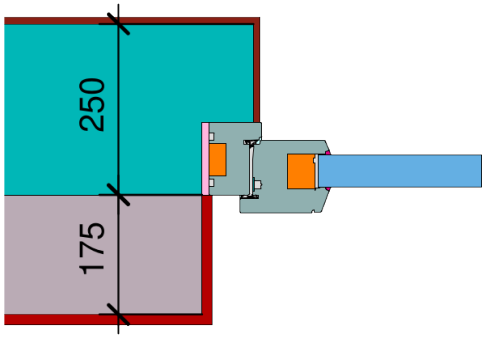
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = –0.01 W/(m K)

Exterior insulation and finishing system (EIFS) side (operable)

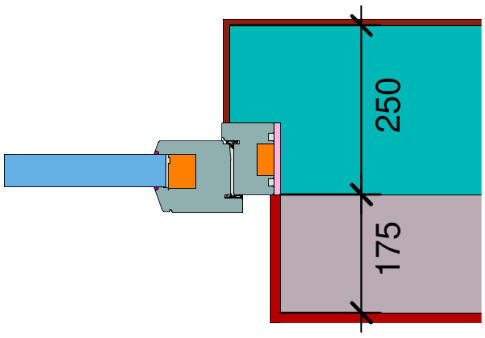
$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.00 W/(m K)

Exterior insulation and finishing system (EIFS) side (operable)

$U_1$ = 0.13 [W/(m² K)]




$\Psi_{install}$ = 0.00 W/(m K)