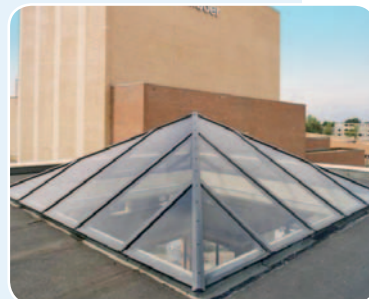
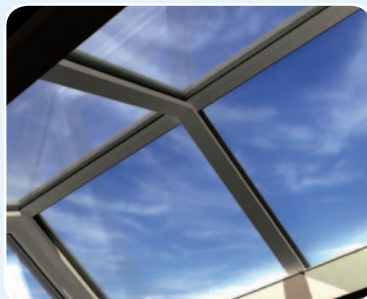


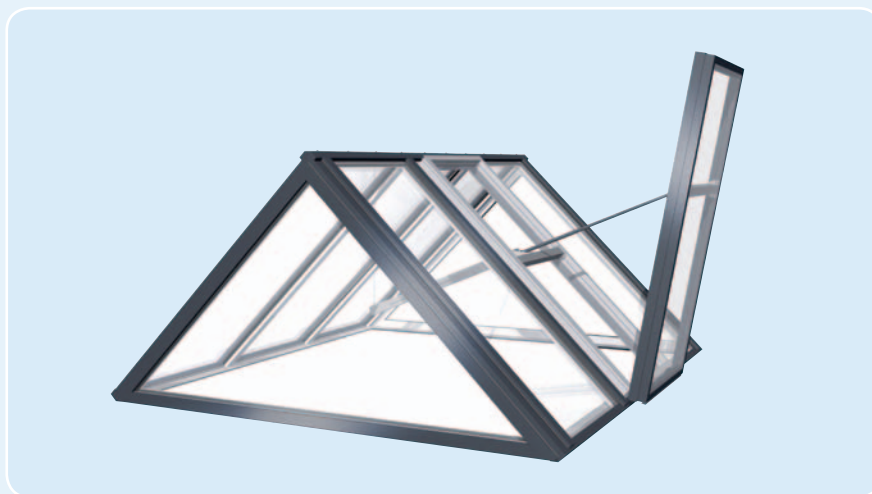


## Brakel® Arcilite



### Thermally separated standard glass roof structure

The thermally separated Arcilite glass roof structure is specially developed for standard forms such as pyramid, single pitch and double pitch with an angle of 15°, 30° or 45°. It is an easy glass structure with a self-supporting ridge structure combining durability, attractive pricing and easy assembly. What's more, it allows for the trouble-free and aesthetic integration of smoke and heat exhaust ventilation hatches.



### High insulation value

The Arcilite is a fully thermally separated system. This thermal separation is realised not only by a thermal separator in the screw ducts, but also by the fact that there is no inside/outside connection for the ridge and bottom edge. This, combined with high-efficiency glass, ensures outstanding insulation values.

### Integration smoke & heat exhaust / ventilation

The Arcilite glazing system is ideal for the aesthetic integration of Brakel casement windows, whether or not EN 12101-2 certified. After all, both high-quality systems are perfectly coordinated and provide an optimal result in terms of daylight ingress, ventilation and fire safety.

## Green Building Products

As a leading partner in its field, Brakel endeavours to remain a forerunner in the area of corporate social responsibility. Given that with our products, we let in the best that nature has to offer, it is only natural that we also care greatly for the environment. We therefore seek to integrate sustainable solutions in our working methods, products and services, wherever possible.

We have categorised our highly extensive product range according to the levels of sustainability and comfort applicable. The many energy efficient products and systems in the range can be recognised by the butterfly icons that they bear.

We classify our products, ranging from functional to sustainable, as follows:



functionally applicable in accordance with current qualifications / standards



compliant with raised sustainability requirements



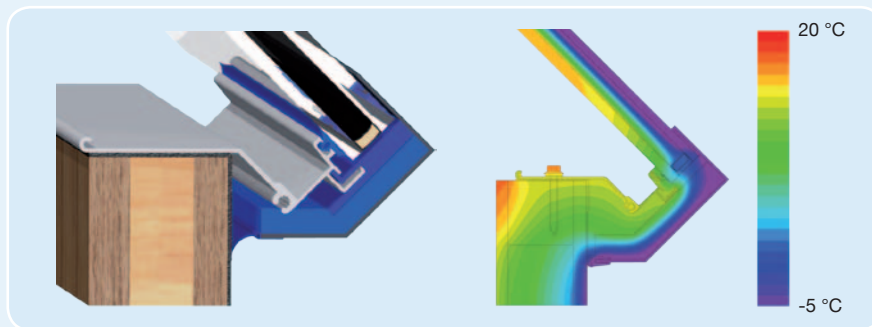
compliant with high sustainability requirements



entirely in keeping with a sustainable solution

## Energy efficient

The Arcilite system is designed with completely thermally separated profiles. This system guarantees a uniform heat flow spread without significant local differences, thereby excluding the chance of condensation under normal conditions.



The illustration shows the heat flow with a temperature curve of -5 °C outdoors to 20 °C indoors.

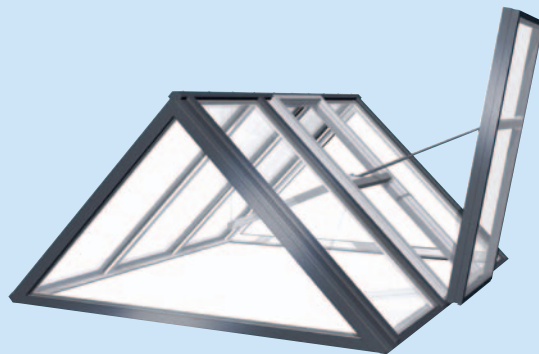


### ++ Plus points Arcilite system ++

- Thermally separated glass structure under a pitch of 15, 30° or 45°
- Trouble-free integration of smoke & heat exhaust windows and / or ventilation hatches
- Flexible dimensions, models and colours
- Favourable pricing
- Short delivery times
- Easy assembly

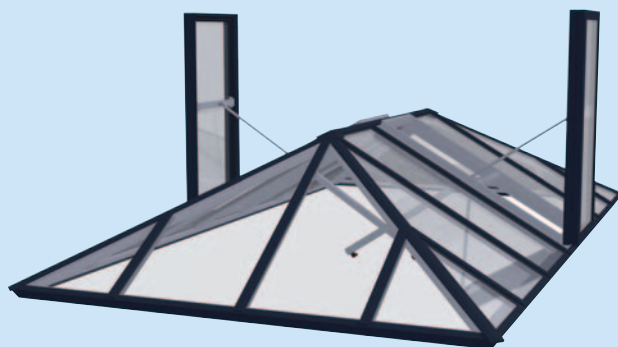
## Roof forms Arcilite

### Double pitch 15°/30°/45°



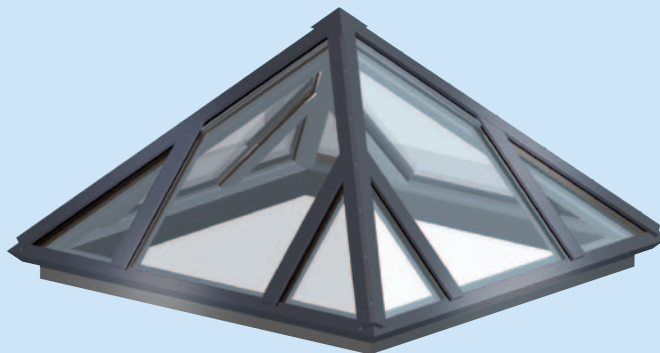
| Pitch | Width roof-lights = Outside width builders upstand | Snow load (N/m²) | Wind suction (N/m²) | Glass weight (kg/m²) | Standard modular dimensions: (mm) | Reactive forces per cross bar |            |
|-------|----------------------------------------------------|------------------|---------------------|----------------------|-----------------------------------|-------------------------------|------------|
|       |                                                    |                  |                     |                      |                                   | Horz. (kN)                    | Vert. (kN) |
| 15°   | 4500                                               | 750              | 1500                | 35                   | 900                               | -6,9/6,0                      | -4,0/3,2   |
| 30°   | 4300                                               | 750              | 1500                | 35                   | 900                               | -7,3/6,4                      | -4,3/3,4   |
|       | 4500                                               | 750              | 1500                | 35                   | <b>800</b>                        | -6,8/5,9                      | -4,0/3,2   |
| 45°   | 3400                                               | 750              | 1500                | 35                   | 900                               | -7,1/6,2                      | -4,2/3,3   |
|       | 3600                                               | 750              | 1500                | 35                   | <b>800</b>                        | -6,7/5,9                      | -4,0/3,1   |

### Double pitch with hip ends 15°/30°/45°



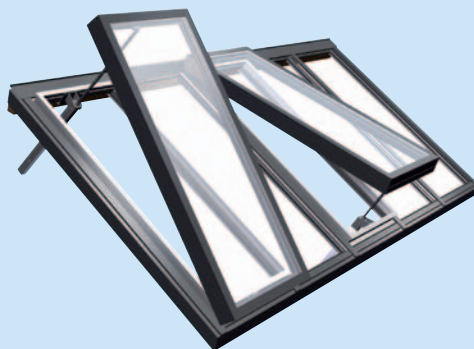
| Pitch | Width roof-lights = Outside width builders upstand | Snow load (N/m²) | Wind suction (N/m²) | Glass weight (kg/m²) | Standard modular dimensions: (mm) | Reactive forces per cross bar |            |
|-------|----------------------------------------------------|------------------|---------------------|----------------------|-----------------------------------|-------------------------------|------------|
|       |                                                    |                  |                     |                      |                                   | Horz. (kN)                    | Vert. (kN) |
| 15°   | 4500                                               | 750              | 1500                | 35                   | 900                               | -6,9/6,0                      | -4,0/3,2   |
| 30°   | 4300                                               | 750              | 1500                | 35                   | 900                               | -7,3/6,4                      | -4,3/3,4   |
|       | 4500                                               | 750              | 1500                | 35                   | <b>800</b>                        | -6,8/5,9                      | -4,0/3,2   |
| 45°   | 3400                                               | 750              | 1500                | 35                   | 900                               | -7,1/6,2                      | -4,2/3,3   |
|       | 3600                                               | 750              | 1500                | 35                   | <b>800</b>                        | -6,7/5,9                      | -4,0/3,1   |

## Pyramid 15°/30°/45°



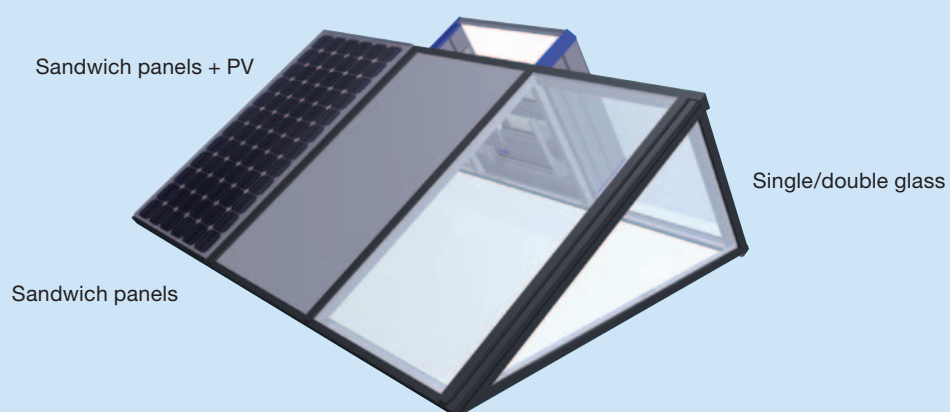
| Pitch | Width roof-lights = Outside width builders upstand | Snow load (N/m²) | Wind suction (N/m²) | Glass weight (kg/m²) | Number of segments | Standard modular dimensions: (mm) | Reactive forces per cross bar |            |
|-------|----------------------------------------------------|------------------|---------------------|----------------------|--------------------|-----------------------------------|-------------------------------|------------|
|       |                                                    |                  |                     |                      |                    |                                   | Horz. (kN)                    | Vert. (kN) |
| 15°   | 4500                                               | 750              | 1500                | 35                   | 5                  | 900                               | -5,5/4,8                      | -3,3/2,5   |
|       | 5000                                               | 750              | 1500                | 35                   | 7                  | <b>714</b>                        | -5,2/4,5                      | -3,1/2,4   |
| 30°   | 4500                                               | 750              | 1500                | 35                   | 5                  | 900                               | -6,2/5,4                      | -3,6/2,8   |
|       | 5000                                               | 750              | 1500                | 35                   | 7                  | <b>714</b>                        | -5,8/5,0                      | -3,4/2,7   |
| 45°   | 4500                                               | 750              | 1500                | 35                   | 7                  | <b>643</b>                        | -5,8/5,0                      | -3,4/2,7   |

## Single pitch 15° - 60°



| Variable pitch | Width roof-lights = Outside width builders upstand | Snow load (N/m²) | Wind suction (N/m²) | Glass weight (kg/m²) | Standard modular dimensions: (mm) | Reactive forces per cross bar |            |
|----------------|----------------------------------------------------|------------------|---------------------|----------------------|-----------------------------------|-------------------------------|------------|
|                |                                                    |                  |                     |                      |                                   | Horz. (kN)                    | Vert. (kN) |
| 15°            | 2500                                               | 750              | 1500                | 35                   | 900                               | 0,7/0,4                       | -2,2/1,8   |
| 30°            | 2500                                               | 750              | 1500                | 35                   | 900                               | 0,7/0,4                       | -2,2/1,8   |
| 45°            | 2400                                               | 750              | 1500                | 35                   | 900                               | 0,7/0,4                       | -2,1/1,7   |
| 60°            | 2400                                               | 750              | 1500                | 35                   | 900                               | 0,7/0,4                       | -2,1/1,7   |

## North light 60°- 30°



| Pitch     | Width roof-lights = Out-side width builders upstand | Snow load (N/m²) | Wind suction (N/m²) | Glass weight (kg/m²) | Standard modular dimensions: (mm) | Reactive forces per cross bar |            |
|-----------|-----------------------------------------------------|------------------|---------------------|----------------------|-----------------------------------|-------------------------------|------------|
|           |                                                     |                  |                     |                      |                                   | Horz. (KN)                    | Vert. (KN) |
| 60° - 30° | 2600                                                | 750              | 1500                | 35                   | 900                               | -5,3/4,6                      | -3,1/2,5   |

### North side - Multifunctional



Daylight ingress



Daily ventilation



Smoke and heat exhaust

### South side - Sustainable



High insulation value (max. panel thickness 200 mm)

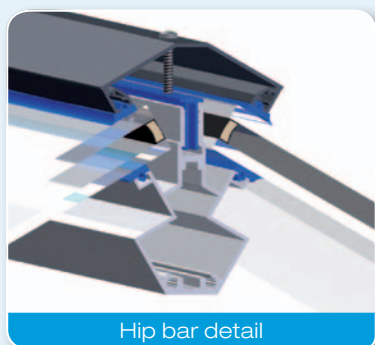


Energy savings by shading



Energy generation through solar panels

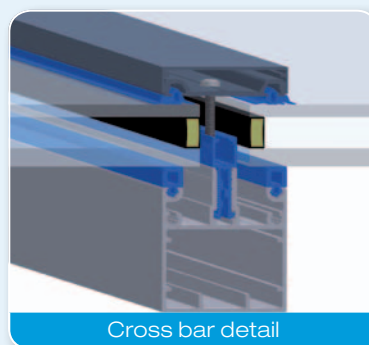
### Details Arcilite



Hip bar detail



Ridge detail



Cross bar detail

## U-value glass roof system

| U-value glass roof system* | Glass composition | Glass thickness | U-value glass |
|----------------------------|-------------------|-----------------|---------------|
| 1,13-1,15 W/m²K            | 6-15-4.4.2 HR++   | 30 mm           | 1,1 W/m²K     |

\* According to EN 10077-2

## Glass options

The Arcilite system is suitable for both single and energy efficient double glazing varying in a glass thickness of 8 to 45 mm and weighing up to 35 kg/m². Consult the sales department in case of deviation.

## Options

- Ideal for combination with EN 12101-2 certified smoke & heat exhaust windows, ventilation hatches or louvered ventilators.
- Surface treatment:
  - RAL colour single layer 60µ; optional double layer 120µ (Qualicoat);
  - Anodic treatment blank 20µ (Qualanod).
- End pieces can also be supplied in (enamelled) sandwich panels.
- Perpendicular wall connection possible.

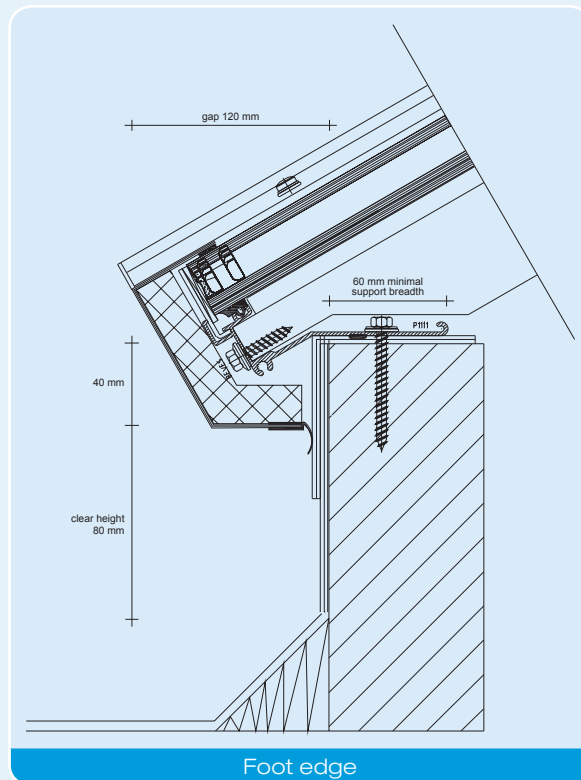
## Fall protection



The Arcilite system provides fall protection in accordance with SB1200.

## Base structure requirements

- Can be assembled on wooden or steel builders upstand.
- The upstand must be able to withstand thrust forces set out in the corresponding table in accordance with EN 1873 classification. If insufficient, extra provisions in the form of a tie rod can be supplied.



## Test results

- U value system = 1,13 – 1,15 W/m²K in accordance with EN 10077-2 (conducted with glass U = 1,1 W/m²K)
- Air permeability: EN 1026: 600 Pa, EN 12207: Class 4
- Water tightness: EN 1027: 900 Pa, EN 12208: Class E900
- Resistance to varying wind loads: Class C5, 1000 Pa (= P2) deflection < 1/300 in accordance with EN 12210 / EN 12211
- Impact resistance: SB1200

