Light + Air International



# Kingspan plus arcade rooflight Data sheet

Modular daylight system with thermal separation and versatile retrofitting options





Daylighting Solutions Natural Ventilation Solutions Smoke Management Solutions Service & Maintenance Building Automation



## Application

The Kingspan plus arcade rooflight is an extremely energyefficient, thermally separated, arched aluminium and PVC profile structure. It is particularly suitable for more demanding installations with respect to heat insulation, sealing, and protection against condensation.

### Application areas

- industrial flat roofs with a maximum roof pitch up to 20° (maximum 5° parallel to the ridge)
- greater pitches available on request
- heated industrial halls, trade fair, sports and exhibition halls, commercial and administration buildings
- new builds and energy efficiency renovation projects
- on Kingspan base systems or frame upstands provided by the customer

#### Material

- aluminium and PVC profile systems
- plates made from multi-wall polycarbonate sheets, PETG, GFK, glass mat

### Features and benefits

- available in widths of 1-6 metres in any length
- very good U values due to thermally separated profile systems e.g.  $U_{\rm RC}$  from 1.2 for 3 m span and 40 m length, without  $flaps^{\rm 5)}$
- very good insulation capacity in the support area due to twin-wall PVC profiles
- reduced condensation where demands are greater due to optional insulation in the support area
- thermally separated flap systems
- can be extended due to modular design and wide range of accessories
- can be individually adapted to static requirements
- different glazing options available for a wide range of requirements such as protection against heat, sound, the sun or emissions
- hard roofing glazing variant also available with HDS (hail, fall-through and sun protection)
- can be classified as a melt-out area in fire protection plans in accordance with EN 18230-1
- entire system has excellent sealing properties
- reduced heating costs due to highly efficient overall design
- variants to accommodate high snow loads also available
- approved in accordance with European Technical Approval ETA - 17/0482 and type approval
- compatible with Kingspan fall arrest and fall-through protection systems
- intelligent connection technology and frame safety connection made from EPDM



Cross-section of plus arcade rooflight



Isothermal properties for cross-section of arcade rooflight without additional insulation in the support area



Isothermal properties for cross-section for arcade rooflight with additional insulation in the support area



### Technical specifications



### Full flap with NSHE<sup>4)</sup>

- installation position: over the entire span of the arcade rooflight
- available in 1.00 m and 2.00 m variants
- for spans from 1.00 m to 2.52 m
- SHE flap systems tested in accordance with EN 12101-2





### Apex vent with NSHE

- installation position: at the apex with two transom profiles for mounting
- flap dimensions (W x L):
  1.50 m x 2.00 m
  2.50 m x 1.00 m
  2.50 m x 2.00 m
- for spans from 2.00 m to 6.00 m (1.50 m x 2.00 m)
- for spans from 2.70 m to 6.00 m (2.50 m x 1.00 m) (2.50 m x 2.00 m)
- SHE flap systems tested in accordance with EN 12101-2

Glazing variants	Span width [m]	Uʻvalue [Ŵ/m²K]	Soundproofing quality [dB]	Light transmission <sup>3)</sup> [%]	g value <sup>3)</sup> opal [%]	Fire behaviour [DIN EN 13501]
PC 16/7	2.00 - 6.00	1.8 <sup>1)</sup>	21	45	46	B-s1, d0
PC 20/7	2.50 - 6.00	1.6	23	44	45	B-s1, d0
PC 10/4 + PC 10/4	1.00 - 6.00	1.7	24	37	43	E
PC 10/4 + glass mat + PC 10/4 <sup>2)</sup>	1.00 - 6.00	1.7	24	27	33	E
PC 16/7 + 10/4 2)	2.00 - 6.00	1.3	24	28	37	E
PC 16/7 + glass mat + PC 10/4 <sup>2)</sup>	2.00 - 6.00	1.3	24	20	29	E
PC 16/7 + 6 mm PETG	2.00 - 6.00	1.8	30	38	43	E
PC 16/7 + PC 16/7	2.00 - 6.00	1.1	25	21	28	E
PC 10/2 with Aerogel filling	1.00 - 3.30	2	21	74	71	E
PC 16/3 with Aerogel filling	2.00 - 3.50	1.3	21	65	64	E
PC 20/3 with Aerogel filling	2.50 - 3.50	1.1	21	63	63	E
PC 16/7 IR control white	2.00 - 6.00	1.8 <sup>1)</sup>	21	22	31	B-s1, d0

1) Vertical installation

2) Meets the requirements for B roof (t1) "hard roofing"

3) Opal glazing only, other materials available on request

4) NSHE (T-05) from span of 1.35 m (national)

5) Values dependent on design, glazing, fitting, dimensions

#### Specific U values can be calculated on request.

Depending on the glazing material and width, the plus arcade rooflight is supplied with a dome pitch of 1/5 or 1/9.

### INTERNATIONAL

Kingspan Light + Air E: kla.international@kingspan.com www.kingspanlightandairinternational.com



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