



QuadCore Architectural Wall Panel (AWP) Range

KS600-1000 CW, CX, EB, FL, FL-S, LV, MM, MR,
PL, TL, WV

Data Sheet



QuadCore™ AWP Series

Architectural Wall Panel (AWP) Range

The Architectural Wall Panel range is available in eleven distinct profiles; far more than the two or three styles previously available to architects on the market.

Profile options	Coating options available			Non- standard Cover widths
	XL Forte	Spectrum	Altaris	
KS1000 CW (Curvewall) 	✗	✓ Met Silver	✗	1000mm only
KS600/900/1000 CX (Convex) 	✓	✓	✓	600-1000 increments 66.66mm
KS600/900/1000 EB (Euro-Box) 	✓	✓	✓	600-1000 increments 100mm
KS600/900/1000 FL / FL-S ((Flat / Flat Stucco) 	✓ Flat	✓ Flat Stucco	✓ Flat Stucco	600-1000 increments 1mm
KS1000 LV (Louvre) 	✗	✓	✗	1000mm only
KS600/900/1000 MM (Mini-Micro) 	✓	✓	✓	600-1000 increments 8.33mm
KS600/900/1000 MR (Micro-Rib) 	✓	✓	✓	600-1000 increments 20mm
KS600/900/1000 PL (Plank) 	✓	✓	✓	600-1000 increments 100mm
KS1000 TL (Tramline) 	✓	✓	✓	1000mm only
KS600/900/1000 WV (Wave) 	✓	✓	✓	600-1000 increments 100mm

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Applications

Architectural Wall Panels are a range of secret-fix wall panel systems that offer unprecedented freedom of design and top-of-the-range performance to architects. The wide range of profiles allows architects to look beyond traditional insulated panel designs to create buildings with more inspiring façades within the same cost bracket. The AWP range is available in eleven distinct profiles, is available in a variety of panel widths and can be installed both horizontally and vertically.

Note: Additional costs and transport restrictions may apply for non-standard lengths. All lengths may change for export (outside of the UK).

Available Lengths

Standard Lengths	1.8 – 14.5m
Longer Lengths (non-standard)	14.5 - 17m
Shorter Lengths (non-standard)	Below 1.8m



Dimensions, Weight & Thermal Performance

The AWP range has a Thermal Transmittance (U value), calculated using the method required by the Building

Core Thickness (mm)	45	54	60	70	74	80	88	100	120	140	150
AWP U-value (W/m²K)*	0.46	0.35	0.32	0.27	0.25	0.23	0.21	0.19	0.15	0.13	0.12
AWP Weight kg/m² 0.5/0.4 Steel*	9.7	10.1	10.3	10.7	10.9	11.1	11.4	11.9	12.7	13.5	13.9
KS1000 CW U-value (W/m²K)	0.39	0.32	0.28	0.24	0.23	0.21	0.19	0.17	0.14	0.12	-
KS1000 CW Weight kg/m²	11.8	12.2	12.4	12.8	13.0	13.2	13.6	14.0	14.8	15.6	-
KS1000 LV U-value (W/m²K)	0.43	0.35	0.31	0.27	0.25	0.23	0.21	0.18	0.15	0.13	0.12
KS1000 LV Weight kg/m²	12.4	12.8	13.0	13.4	13.6	13.8	14.2	14.6	15.4	16.2	16.6

Regulations Part L2 (England & Wales) and Building Standards Section 6 (Scotland).

* Excluding Curvewall and Louvre. These profiles are listed separately above.

QuadCore™ AWP Series

Insulation Core

KS1000 AWP insulated wall panels are manufactured with an HCFC, CFC and HFC free QuadCore insulation core.

Fire

BS 8414 Tested System

QuadCore® Architectural Wall Panels offer a BS 8414 tested solution that has passed the requirements of BR 135. Classification Report BR 135: 2013 Annex B - P107923-1001

- Substrate: Lightweight steel frame
- Insulation: 70mm Kingspan AWP QuadCore® insulation core
- Fire breaks / Cavity barriers: No cavity barriers used

Reaction to Fire

- Classified B-s1,d0 according to the European Reaction to Fire classification system (Euroclasses) BS EN 13501-1:2007+A1:2009 when tested on the internal liner. Please contact Technical Services for information relating to the external face

Fire Resistance

- EI30 / EI20 according to BS EN 13501-2 and 240 minutes integrity performance with minimum 80mm thickness in horizontal orientation achievable with enhanced product specification and installation requirement
- 240 minutes integrity and 30 minutes insulation when tested to BS 476- Part 22 with minimum 80mm thickness in vertical orientation achievable with enhanced product specification and installation requirement.
- 61 minutes integrity and 22 minutes insulation when tested to BS476- Part 22 with a minimum 70mm thickness in a horizontal orientation achievable with enhanced product specification and installation requirement.

Insurer Approvals

- LPS 1181 Part 1: Issue 1, series of fire growth tests for LPCB approval and is certified to LPS 1181 Grade EXT-B
- FM 4880 Class 1 fire rating of building panels or interior finish materials, unlimited height*
- FM 4881 Class 1 exterior wall systems, unlimited height*
- FM 4882 Class 1 interior wall panels in smoke sensitive occupancies (pharmaceutical manufacturing & storage areas, and food preparation & storage areas or similar occupancies)*
- *900mm & 1000mm cover widths and 2m maximum span only. Excludes Curvewall and Louvre profiles. Please contact [Technical Services](#) for more information



LPS 1181 : Issue 1.2
Cert. No: 260f & 186f

Environmental

Kingspan Insulated Panels produced in the UK are certified to BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) 'Very Good'. Quadcore Insulated Panel systems' Environmental Product Declaration is in accordance with the requirements of EN 15804:2012+A1:2013. All Kingspan manufacturing facilities across the UK and Ireland are powered by 100% renewable energy. Kingspan Insulated Panels directly contribute to BREEAM/LEED credits.

QuadCore™ AWP Series

Air Leakage

An air leakage rate of 3m³/hr/m² at 50Pa or less can be achieved providing the entire building envelope is constructed using Kingspan insulated roof, wall and facades panels.

Acoustic

Sound Reduction Index (SRI)

Hz*	63	125	250	500	1K	2K	4K	8K
SRI (dB)	20	15	17	23	18	25	40	46

* Frequency (Steel panels only)

The AWP range has a single figure weighted sound reduction $R_w = 24$ dB.

Materials

Substrate

- Kingspan XL Forté, Kingspan Spectrum, Kingspan AQUAsafe, Kingspan AQUAsafe55 and Kingspan CLEANsafe: Metallic protected steel to BS EN 10346:2015.thickness 0.5mm.
CLEANsafe 15: Metallic protected steel to BS EN10346:2015.thickness 0.4mm
- Stainless Steel: Austenitic Grade 316 stainless steel to BS EN 10088: Part 2: 2014, thickness 0.4mm.
- Aluminium: Please contact Kingspan Technical Services.

Coatings - External Weather Sheet

- Kingspan XL Forté: Consists of a multi-layer organic coating, embossed with a traditional leather-grain finish.
- Kingspan Spectrum: Consists of a coated semi-gloss finish with slight granular effect.

Coatings - Internal Liner Sheet

- Kingspan CLEANsafe 15: The coating has been developed for use as the internal lining of insulated panels. Standard colour is "bright white" with an easily cleaned surface.
- Kingspan AQUAsafe: The coating has been developed for use as the internal lining of insulated panels to suit high humidity internal environments.
- Kingspan AQUAsafe 55: The coating has been developed for use as the internal lining of insulated panels to swimming pool internal environments.

- Kingspan CLEANsafe 120: The coating has been developed for use as the internal lining of insulated panels where a high level of cleanliness and hygiene is required, and the panels are to be cleaned down on a regular basis.
- Stainless Steel: The stainless steel liner has been developed for use as the internal lining of insulated panels in buildings with a very aggressive/corrosive internal environment.

Biological

Kingspan panels are normally immune to attack from mould, fungi, mildew and vermin. No urea formaldehyde is used in the construction, and the panels are not considered deleterious

Product Tolerance

Length	-5mm +5mm
Width	-2mm +2mm
Thickness	-2mm +2mm
Squareness	-3mm +3mm
Flatness (per metre)	-2mm +2mm

Seals

Factory applied side joint seals. All side joints have a factory applied seal fitted into the groove to automatically seal the joint between panels.

Quality & Durability

KS1000 AWP insulated wall panels are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, complying with BS EN ISO 9001 standard, ensuring long term reliability and service life. The panels are also being manufactured under Environmental Management System Certification BS EN ISO 14001. Compliant to BS OHSAS 18001 Occupational Health and Safety. The KS1000AWP wall panels are CE marked to BS EN 14509: 2013.



QuadCore™ AWP Series

Warranty

Kingspan Panel Protection Warranty covering the structural and thermal performance for a period of up to 40 years and Kingspan Coating Guarantee for a period of up to 40 years (subject to project specific information).

Packing

The AWP range panels are stacked with weather sheet upward. Removable hot melt adhesive is laid between each panel. The top, bottom, sides and ends are protected with polystyrene and timber packing and the entire pack is wrapped in polythene. The number of panels in each pack depends on panel thickness/length.

Core Thickness (mm)	45	54	60	70	74	80	88	100	120	140	150
No. of Panels in Pack	25	20	18	16	15	13	12	11	9	6	5

Note: Applies to UK pack sizes. Please contact Kingspan Customer Services for export information.

Sea Freight

Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional costs. Alternatively, steel containers can be used. Special loading charges apply.

Delivery

All deliveries (unless indicated otherwise) are by road transport to project site. Off-loading is the responsibility of the client.

Site Installation Procedure

Site assembly instructions are available from Kingspan Technical Services

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KS1000 AWP MR QC Wall

External sheet 0.5mm (steel), Internal sheet 0.4mm (steel)

(Unfactored Load/Span tables (to be compared against calculated design wind load values unfactored))



Single Span

Core Thickness (mm)	Load Type											
		2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0
45	Pressure	2.40	2.09	1.72	1.43	1.20	1.01	0.85	-	-	-	-
	Suction	2.17	1.74	1.41	1.14	0.93	0.77	0.62	-	-	-	-
54	Pressure	2.88	2.62	2.35	1.97	1.67	1.42	1.21	1.04	0.90	-	-
	Suction	2.88	2.43	2.00	1.65	1.37	1.14	0.96	0.81	0.68	-	-
60	Pressure	3.20	2.91	2.67	2.35	2.00	1.71	1.47	1.27	1.10	0.96	0.84
	Suction	3.20	2.91	2.42	2.02	1.69	1.42	1.20	1.02	0.87	0.74	0.63
70	Pressure	3.73	3.39	3.11	2.87	2.59	2.23	1.93	1.68	1.46	1.28	1.13
	Suction	3.73	3.39	3.05	2.60	2.24	1.92	1.64	1.40	1.21	1.04	0.90
74	Pressure	3.95	3.59	3.29	3.04	2.82	2.45	2.12	1.85	1.62	1.42	1.25
	Suction	3.95	3.59	3.21	2.74	2.36	2.06	1.81	1.57	1.35	1.17	1.02
80	Pressure	4.27	3.88	3.56	3.28	3.05	2.78	2.42	2.12	1.86	1.63	1.44
	Suction	4.27	3.88	3.45	2.94	2.54	2.21	1.94	1.72	1.54	1.37	1.20
88	Pressure	4.69	4.27	3.91	3.61	3.35	3.13	2.84	2.49	2.19	1.93	1.71
	Suction	4.69	4.27	3.77	3.21	2.77	2.41	2.12	1.88	1.67	1.50	1.36
100	Pressure	5.33	4.85	4.44	4.10	3.81	3.56	3.33	3.07	2.72	2.41	2.15
	Suction	5.33	4.85	4.23	3.60	3.11	2.71	2.38	2.11	1.88	1.69	1.52
120	Pressure	6.40	5.82	5.33	4.92	4.57	4.27	4.00	3.76	3.56	3.26	2.92
	Suction	6.40	5.82	4.97	4.23	3.65	3.18	2.79	2.47	2.21	1.98	1.79
140	Pressure	6.40	5.82	5.33	4.92	4.57	4.27	4.00	3.76	3.56	3.37	3.20
	Suction	6.40	5.82	5.33	4.83	4.16	3.63	3.19	2.82	2.52	2.26	2.04
150	Pressure	6.40	5.82	5.33	4.92	4.57	4.27	4.00	3.76	3.56	3.37	3.20
	Suction	6.40	5.82	5.33	4.92	4.41	3.84	3.38	2.99	2.67	2.40	2.16

Double Span

Core Thickness (mm)	Load Type											
		2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0
45	Pressure	2.40	2.18	2.00	1.85	1.71	1.57	1.35	1.17	1.02	0.90	0.81
	Suction	2.40	2.18	2.00	1.72	1.48	1.29	1.13	1.00	0.89	0.80	0.72
54	Pressure	2.88	2.62	2.40	2.22	2.06	1.92	1.66	1.43	1.25	1.10	0.98
	Suction	2.88	2.62	2.39	2.04	1.76	1.53	1.35	1.19	1.06	0.96	0.86
60	Pressure	3.20	2.91	2.67	2.46	2.29	2.13	1.87	1.61	1.41	1.24	1.10
	Suction	3.20	2.91	2.64	2.25	1.94	1.69	1.49	1.32	1.18	1.05	0.95
70	Pressure	3.73	3.39	3.11	2.87	2.66	2.47	2.24	1.92	1.67	1.46	1.30
	Suction	3.63	3.28	2.99	2.60	2.24	1.95	1.72	1.52	1.36	1.22	1.10
74	Pressure	3.91	3.53	3.21	2.95	2.72	2.53	2.37	2.05	1.78	1.56	1.38
	Suction	3.73	3.36	3.06	2.74	2.36	2.06	1.81	1.60	1.43	1.28	1.16
80	Pressure	4.06	3.66	3.33	3.05	2.82	2.62	2.45	2.24	1.94	1.70	1.50
	Suction	3.86	3.49	3.18	2.92	2.54	2.21	1.94	1.72	1.54	1.38	1.24
88	Pressure	4.26	3.84	3.49	3.20	2.96	2.75	2.57	2.41	2.16	1.89	1.66
	Suction	4.05	3.65	3.33	3.05	2.77	2.41	2.12	1.88	1.67	1.50	1.36
100	Pressure	4.56	4.11	3.73	3.42	3.16	2.93	2.74	2.57	2.42	2.18	1.92
	Suction	4.34	3.91	3.55	3.26	3.01	2.71	2.38	2.11	1.88	1.69	1.52
120	Pressure	4.58	4.12	3.74	3.43	3.16	2.94	2.74	2.57	2.42	2.29	2.17
	Suction	4.34	3.90	3.54	3.25	3.00	2.79	2.61	2.45	2.21	1.98	1.79
140	Pressure	4.60	4.14	3.76	3.44	3.17	2.94	2.74	2.57	2.42	2.28	2.17
	Suction	4.33	3.89	3.54	3.24	2.99	2.78	2.59	2.43	2.29	2.17	2.04
150	Pressure	4.61	4.14	3.76	3.44	3.17	2.94	2.74	2.57	2.42	2.28	2.16
	Suction	4.33	3.89	3.53	3.23	2.98	2.77	2.59	2.43	2.28	2.16	2.05

- Values have been calculated using the method described in BS EN 14509 2013, for dark coloured panels.
- The following deflection limits have been used:
 - Pressure loading L/100
 - Suction loading L/100
- All panel thicknesses have been calculated with a minimum support width of 50mm. Larger support widths are possible.
- The actual wind suction resisted by the panel is dependent upon the number of fasteners and the material of the supporting element.
- The fastener calculation should be carried out in accordance with the appropriate standards.
- For intermediate values linear interpolation may be used.
- The allowable steelwork tolerance between bearing planes of adjacent supports is +/- 5mm.

UK

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For the product offering in other markets
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