



Arkzip 65mm - system construction

Outer profile	Arkzip 65.400 and 65.430 in 0.9mm aluminium and 0.7mm steel. Refer to Ark product data sheet 09
Insulation	Glass or rock mineral wool quilt to BS EN 13162 and BS3533:1981, non-combustible Euroclass A1 to BS EN ISO 13501-1 Thickness as System Performance table below.
Spacer	140mm aluminium halter with bracket and rail spacer system. 1.5mm galvanised steel brackets to depth as System Performance table below, max spacing 1m. 1.25mm galvanised steel rail, interlocking end joints, bracket stability braces at 20m max spacing on brackets of 250mm and above. Spacer fixed to 30mm deep x 1.5mm galv steel top hat load spreaders over 3No deck crowns. Apply 2mm EPDM pads under tophat fixing locations to add to seal at fastener holes.
VCL and air barrier	For building humidity classes 1-4, 250gsm reinforced polyethylene membrane vcl with laps sealed using 2No lines of Class A butyl strip sealant OR self adhesive foil lined vcl membrane on primed deck. For Building class 5, self adhesive vcl only and refer to Ark for guidance.
Acoustic insulation	Black or white tissue faced 45kg/m ³ rock fibre wedge batts to fill troughs

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Web perforated deck	<p>Web perforated Arkdeck, refer to individual Arkdeck data sheets or datasheet 15 for the Arkdeck product range</p> <p>Profiles marked “perfo” are available with perforations to the mid section of the web of the profile. With tissue faced acoustic batts set within the trough of the deck, the web perforations allow the deck to provide sound absorption.</p> <p>Perforation pattern availability subject to production location.</p> <p>BZ: R5T12.5: 15%</p> <p>DA: R5T8: 35%</p>
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Arkzip 65mm - system performance data

U value	W/m ² K	0.25	0.23	0.22	0.21	0.20	0.19	0.18	0.17
Spacer depth	mm	80	90	100	110	120	130	150	160
Insulation roll size	mm	210	220	240	250	260	270	290	300
Compressed insulation depth/ cavity depth	mm	190	200	210	220	230	240	260	270
Insulation lambda value	W/mK	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
Depth of roof above deck	mm	255	265	275	285	295	305	325	335
Weight of roof (0.9mm AL, excluding deck)	kg/m ²	13.6	13.8	14.0	14.1	14.2	14.4	14.6	14.7
Weight of roof (0.7mm steel, excluding deck)	kg/m ²	18.0	18.1	18.4	18.5	18.6	18.7	19.0	19.1
Bracket brace required?		No	No	No	No	No	No	No	No

U value	W/m ² K	0.16	0.15	0.14	0.13	0.12	0.11
Spacer depth	mm	180	190	190	190	210	260
Insulation roll size	mm	320	330	330	330	360	410
Compressed insulation depth/ cavity depth	mm	290	300	300	300	320	370
Insulation lambda value	W/mK	0.040	0.040	0.037	0.032	0.032	0.032
Depth of roof above deck	mm	355	365	365	365	385	435
Weight of roof (0.9mm AL)	kg/m ²	15.0	15.1	16.4	21.7	22.6	24.2
Weight of roof (0.7mm steel)	kg/m ²	19.3	19.5	20.8	26.1	27.0	28.6
Bracket brace required?		No	No	No	No	No	Yes

Arkzip 65mm - system data

Fire properties	Insulation is EuroClass A1 to BS EN ISO 13501-1, non combustible Deck Class 0, Topsheet Class AA to National Standards (Refer to Ark product data sheets 09-Ark-Prod)
Minimum pitch	Nominal 1.5°.
Guarantees and Warranties	Refer to Ark technical data sheet 05-Ark-Tech “Warranties and guarantees”
Curve options	Natural curve to 40m minimum radius. Factory curve radius is profile and material dependent, consult Ark.
Fasteners, sealants	Refer to Ark product data sheets 09 and 15

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Airtightness	The membrane vcl is the air barrier and vapour control layer and has sealed laps and robust sealing at eaves, ridge and verge. Penetrations (SVP etc) must be sealed into the vcl as well as into the outer sheet. The vcl must be undamaged and well installed. Lay the roll parallel to the deck for lap support.	
Building humidity class	System appropriate for BS EN 13788 building classes 1 – 4. For class 5 and pool environments special precautions are needed, refer to Ark.	
Installation key requirements	<p>Insulation must be dry when covered by the outer sheet.</p> <p>Insulation must fill the insulation cavity with minimal gaps around the spacer</p> <p>Fasteners for deck and spacer brackets are carbon steel self drillers and must have 15/16mm diameter sealed washers</p> <p>Exposed fasteners are 304 grade stainless steel with coloured heads and 16mm diameter sealer washers, or aluminium rivets.</p> <p>Spacer brackets must have 2 fasteners per bracket.</p> <p>Halter brackets have 2No 304 grade stainless steel fasteners plus an isolating EPDM seal.</p> <p>Spacer brackets max 300mm from joggle joint</p> <p>Isolate aluminium from galvanised steel</p> <p>Include fillers bedded in sealant under the deck profile</p> <p>Collect swarf from deck troughs</p> <p>Arkzip requires a single fixed point per sheet, normally at the ridge or crown of a curved roof.</p> <p>Zip sheets as laid.</p> <p>Increase halter gauge by 5mm for natural curve sheets</p> <p>Set zipping tool to 20mm rib top diameter</p> <p>Close ribs by hand pliers at each sheet end before zipping.</p> <p>Protect pre-painted sheet finishes with a rib cloth</p> <p>Walk on Arkzip ribs</p>	
Rooflights	Strip/ in-plane rooflights not possible. Daylighting units need to be supported on upstand kerbs. Ridge rooflights are an option.	
Insulation	<p>Earthwool Ecosse FactoryClad 40/37/32 glass mineral wool quilt to BS EN 13162BS and BS3533:1981, non-combustible Euroclass A1 to BS EN ISO 13501-1</p> <p>Partner company Knauf Insulation Ltd, www.knaufinsulation.co.uk</p> <p>Acoustic batts, RW3 White or black T/F</p> <p>Partner company Rockwool Ltd www.rockwool.co.uk</p>	
Roof safety systems	<p>Partner company Latchways plc, www.latchways.com</p> <p>Partner company QBM Distributors Ltd, www.qbmdistributors.co.uk</p>	
Fasteners	<p>Partner company EJOT UK Ltd, www.ejot.co.uk</p> <p>Partner company SFS intec Ltd, www.sfsintec.biz/uk</p> <p>Partner company Woodall Fastening Systems Ltd, www.techscrew.com</p> <p>Partner company QBM Distributors Ltd, www.qbmdistributors.co.uk</p>	