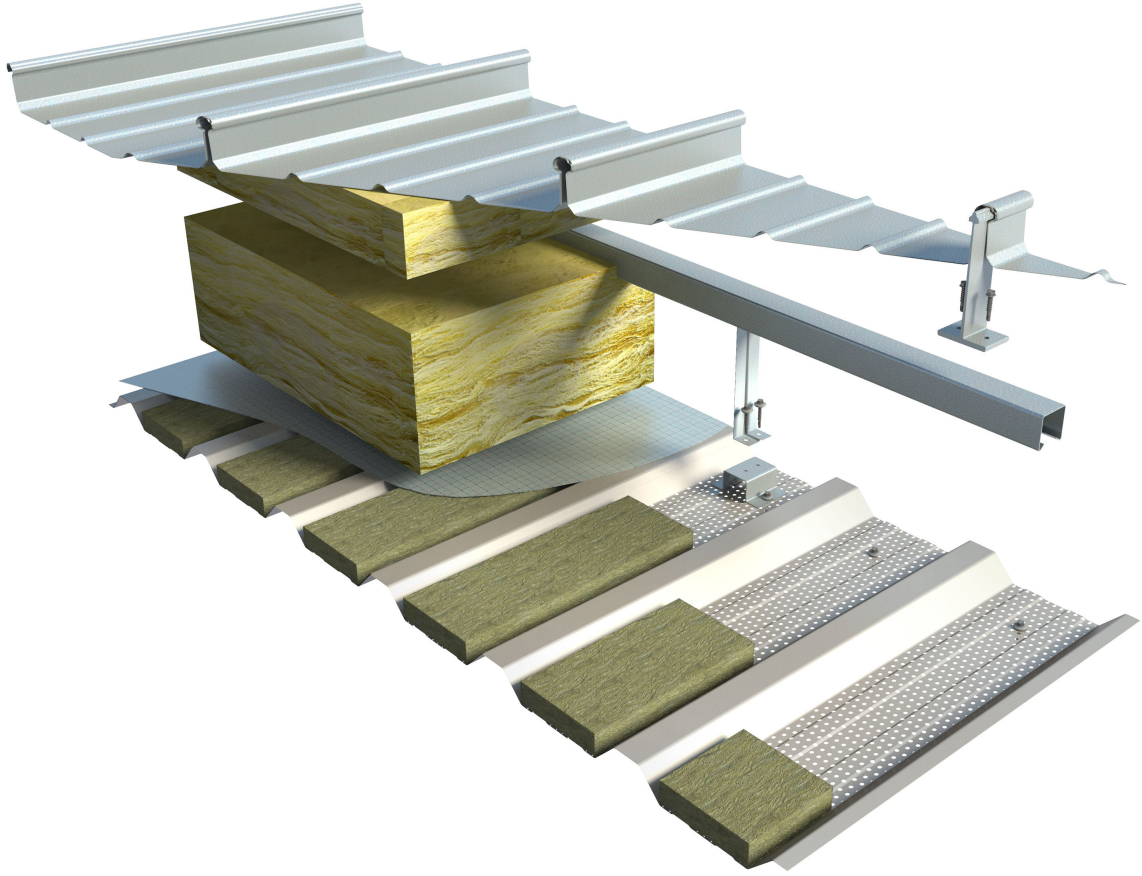
Arkzip 65mm - twin skin – acoustic roof: 29-a-Ark-Sys-03/2015



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-Ark-Prod-Arkzip 65.400&430
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. Fix to 2mm galv steel 20/30/40/30/20mm x 60mm tophat stools located under the vcl. All fasteners to be 5.5mm dia plus 16mm dia sealer washers
VCL and air barrier	250gsm reinforced polyethylene membrane. Laps sealed using 1.5mm x 20mm butyl sealant, 2No strips. VCL robustly sealed to perimeters and penetrations. Use solid profiled filler blocks bedded in gun applied sealant under and over liner at eaves/ ridge. Bed VCL and clamp to fillers using an angle strip. Lay vcl parallel to liner for lap support. Seal side laps over rib for support. Alternative self adhesive 0.6mm foil faced vcl, prime ribs.
Acoustic insulation	30mm x 115mm black or white tissue faced 45kg/m^3 rock fibre strips
Liner	Arkliner 32.1000.200-0.65mm perfo. Pan perforated 45% open area. Refer to Ark product data sheet 30-Ark-Prod-Arkliner

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Arkzip 65mm - system performance data

U value	W/m^2K	0.25	0.23	0.22	0.21	0.20	0.19	0.18	0.17
Spacer depth	mm	90	100	110	120	130	140	160	170
Insulation roll size	mm	190	200	210	220	240	250	270	280
Compressed insulation depth/ cavity depth	mm	170	180	190	200	210	220	240	250
Insulation lambda value	W/mK	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
Depth of roof	mm	235	245	156	265	275	285	305	315
Weight of roof (0.9mm AL)	kg/m^2	13.9	14.1	13.0	14.3	14.4	14.5	14.8	14.9
Weight of roof (0.7mm steel)	kg/m^2	18.3	18.4	17.4	18.7	18.8	18.9	19.2	19.3
Bracket brace required?		No	No	No	No	No	No	No	No

U value	W/m^2K	0.16	0.15	0.14	0.13	0.12	0.11
Spacer depth	mm	190	200	200	200	220	270
Insulation roll size	mm	300	310	310	310	330	390
Compressed insulation depth/ cavity depth	mm	270	280	280	280	300	350
Insulation lambda value	W/mK	0.040	0.040	0.037	0.032	0.032	0.032
Depth of roof	mm	335	345	345	345	365	415
Weight of roof (0.9mm AL)	kg/m^2	15.1	15.3	15.3	15.3	15.5	16.1
Weight of roof (0.7mm steel)	kg/m^2	19.5	19.6	19.6	19.6	19.9	20.5
Bracket brace required?		No	No	No	No	No	Yes

Arkzip 65mm - system data

Non-fragility	Non Fragile Class B to ACR[M]001. Refer to Ark product data sheet 30-Ark-Prod
Fire properties	Insulation is EuroClass A1 to BS EN ISO 13501-1, non combustible Liner Class 0, Topsheet Class AA to National Standards (Refer to Ark product data sheets 09-Ark-Prod and 30-Ark-Prod)
Minimum pitch	Nominal 1.5°.
Guarantees and Warranties	Ark Silver and Ark Gold. 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-Ark-Prod-Arkzip 65.400&430 and 30-Ark-Prod-Arkliner perfo

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Airtightness	Arkzip systems with a sealed vcl are inherently airtight and contribute to low building air leakage rates. The vcl is the air barrier and vapour control layer and has sealed side and end 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 most robust vcl is a self adhesive membrane with self sealing laps and the ability to bond to perimeters and penetrations. These tend to be the most resistant to damage and better in the long term.
Installation key requirements	Insulation must be dry when covered by the outer sheet. Insulation must fill the insulation cavity with minimal gaps around the spacer Fasteners for liner and spacer brackets are carbon steel self drillers and must have 15/16mm diameter sealed washers Liner fixings are in every trough at end laps, ridges and eaves, alternate troughs at intermediate purlins. Exposed fasteners are 304 grade stainless steel with coloured heads and 16mm diameter sealer washers, or aluminium rivets. Spacer brackets must have 2 fasteners per bracket. Halter brackets have 2No 304 grade stainless steel fasteners plus an isolating EPDM seal. Spacer brackets max 300mm from joggle joint Isolate aluminium from galvanised steel The vcl must be sealed all round, including over and under fillers bedded in sealant Arkzip requires a single fixed point per sheet, normally at the ridge or crown of a curved roof. Zip sheets as laid. Increase halter gauge by 5mm for natural curve sheets (Note impact on module if rooflights to be installed) Set zipping tool to 20mm rib top diameter Close ribs by hand pliers at each sheet end before zipping. Protect pre-painted sheet finishes with a rib cloth Walk on Arkzip ribs
Rooflights	In-plane and barrel vault site assembled triple skin GRP rooflight. Note- applies only to 65.400 profile for module to match liner at 400mm cover width 2.4kg/m2 inner and outer GRP, 4 wall polycarbonate internal layer, Class B non-fragility, U=1.3W/m^2K Partner company Brett Martin Daylight Systems, www.daylightsystems.com
Insulation	Earthwool Ecose 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 Partner company Knauf Insulation Ltd, www.knaufinsulation.co.uk Acoustic batts, RW3 White or black T/F Partner company Rockwool Ltd www.rockwool.co.uk
Roof safety systems	Partner company Latchways plc, www.latchways.com Partner company QBM Distributors Ltd, www.qbmdistributors.co.uk
Fasteners	Partner company EJOT UK Ltd, www.ejot.co.uk Partner company SFS intec Ltd, www.sfsintec.biz/uk Partner company Woodall Fastening Systems Ltd, www.techscrew.com Partner company QBM Distributors Ltd, www.qbmdistributors.co.uk

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