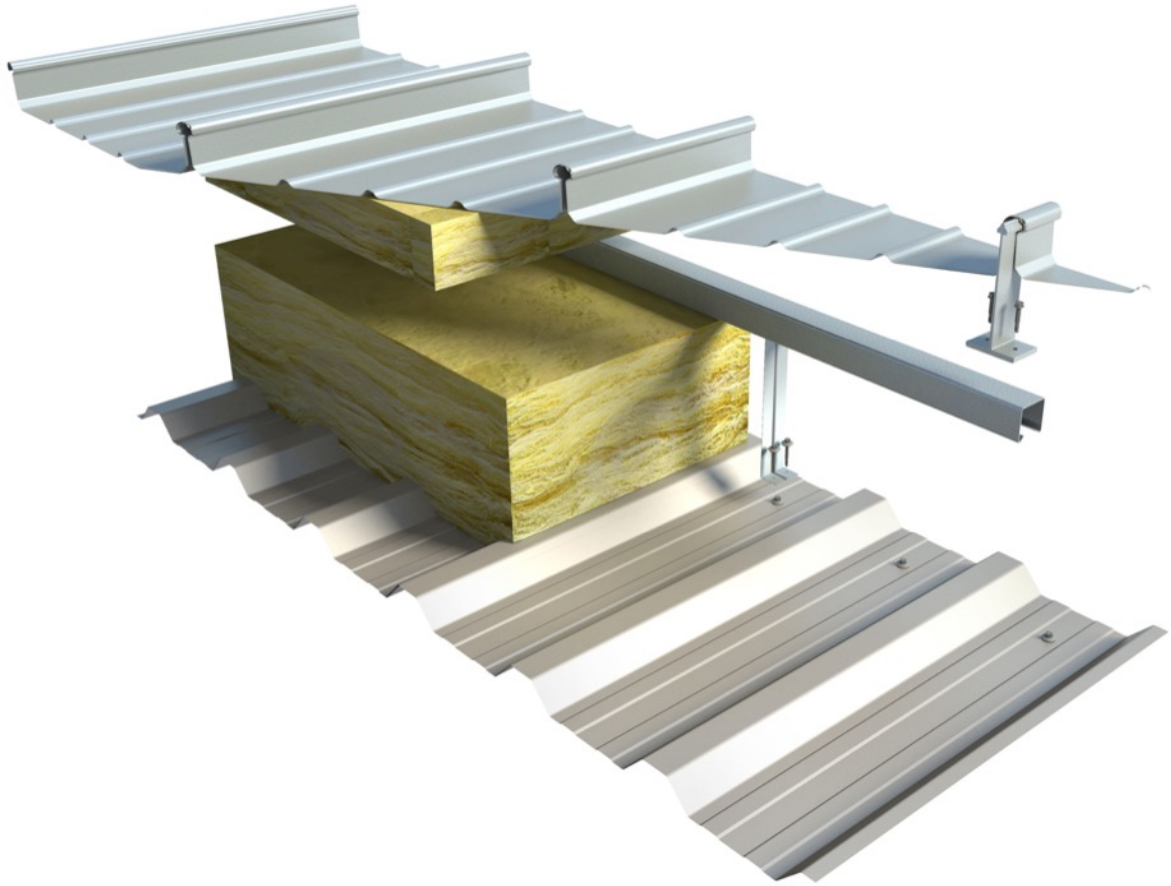
ARK Profiles Ltd: System Data Sheet

ARK®zip 65mm - twin skin - roof: 08-d-ARK-Sys-03/2017



ARK®zip 65mm - system construction

Outer profile	ARKzip 65.400 and 65.435 in 0.9mm aluminium and 0.7mm steel. Refer to ARK product data sheet 09-ARK-Prod-ARKzip 65.400
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, based upon 1.5m average spans and spacer brackets at 1m centres.
Spacer	80mm (standard) or 140mm (check availability) 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. Note- check availability of 140mm halters.
VCL and air barrier	Generally formed by the steel liner in building humidity classes 1-4. Additional 250gsm reinforced polyethylene membrane vcl optional where specified for complicated roof plans. Increase spacer bracket by 30mm when a membrane vcl is included.
Liner	ARKliner 32.1000.200-0.65mm. Refer to ARK product data sheet 02-ARK-Prod-ARKliner

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ARK®zip 65mm - twin skin - roof: 08-d-ARK-Sys-03/2017

ARK®zip 65mm - system performance data: 80mm (standard)halter

U value	W/m^2K	0.24	0.23	0.22	0.21	0.20	0.19	0.18	0.17
Spacer depth	mm	170	180	190	200	210	220	230	240
Insulation roll size	mm	210	220	240	250	260	270	280	290
Compressed insulation depth/ cavity depth	mm	190	200	210	220	230	240	250	260
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	255	265	275	285	295	305	325	335
Weight of roof (0.9mm AL)	kg/m^2	13.6	13.7	14.0	14.1	14.2	14.3	14.4	14.6
Weight of roof (0.7mm steel)	kg/m^2	17.8	18.0	18.2	18.3	18.4	18.6	18.7	18.8
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	260	280	280	300	330	360
Insulation roll size	mm	310	330	330	360	390	420
Compressed insulation depth/ cavity depth	mm	280	300	300	320	350	380
Insulation lambda value	W/mK	0.040	0.040	0.037	0.037	0.037	0.037
Depth of roof	mm	345	365	365	385	415	445
Weight of roof (0.9mm AL)	kg/m^2	14.8	15.0	16.4	16.8	1873	17.8
Weight of roof (0.7mm steel)	kg/m^2	19.0	19.3	20.6	21.1	21.6	22.0
Bracket brace required?		Yes	Yes	Yes	Yes	Yes	Yes

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ARK®zip 65mm - twin skin - roof: 08-d-ARK-Sys-03/2017

ARK®zip 65mm - system performance data: 140mm (check availability) halter

U value	W/m2K	0.25	0.23	0.22	0.21	0.20	0.19	0.18	0.17
Spacer depth	mm	110	120	130	140	150	160	180	190
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	mm	255	265	275	285	295	305	325	335
Weight of roof (0.9mm AL)	kg/m2	13.6	13.8	14.0	14.1	14.2	14.4	14.6	14.7
Weight of roof (0.7mm steel)	kg/m2	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/m2K	0.16	0.15	0.14	0.13	0.12	0.11
Spacer depth	mm	210	220	220	220	240	290
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	mm	355	365	365	365	385	435
Weight of roof (0.9mm AL)	kg/m2	15.0	15.1	16.4	21.7	22.6	24.2
Weight of roof (0.7mm steel)	kg/m2	19.3	19.5	20.8	26.1	27.0	28.6
Bracket brace required?		No	No	No	No	No	Yes

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ARK®zip 65mm - twin skin - roof: 08-d-ARK-Sys-03/2017

ARK®zip 65mm - system data

Non-fragility	Non Fragile Class B to ACR[M]001. Refer to ARK product data sheet 02-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 02-ARK-Prod)
Minimum pitch	Nominal 1.5°.
Acoustics	Typical twin skin systems, glass quilt insulation > 180mm, nominal Rw values 40dB for aluminium ARKzip and Rw=46dB for steel ARKzip (computer modelled values)
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 02-ARK-Prod-ARKliner
Airtightness	ARKzip systems with sealed liners are inherently airtight and contribute to low building air leakage rates. The liner is the air barrier and vapour control layer and has sealed fasteners, sealed side and end laps and robust sealing at eaves, ridge and verge. Penetrations (SVP etc) must be sealed into the liner as well as into the outer sheet. Where a membrane vcl is used in addition, it must also be sealed as above
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 Liners must be sealed all round, including 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

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ARK®zip 65mm - system data

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
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 QBM Distributors Ltd, www.qbmdistributors.co.uk
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