

ARKzip installation guidelines

31-b-ARK-Tech-03/2017

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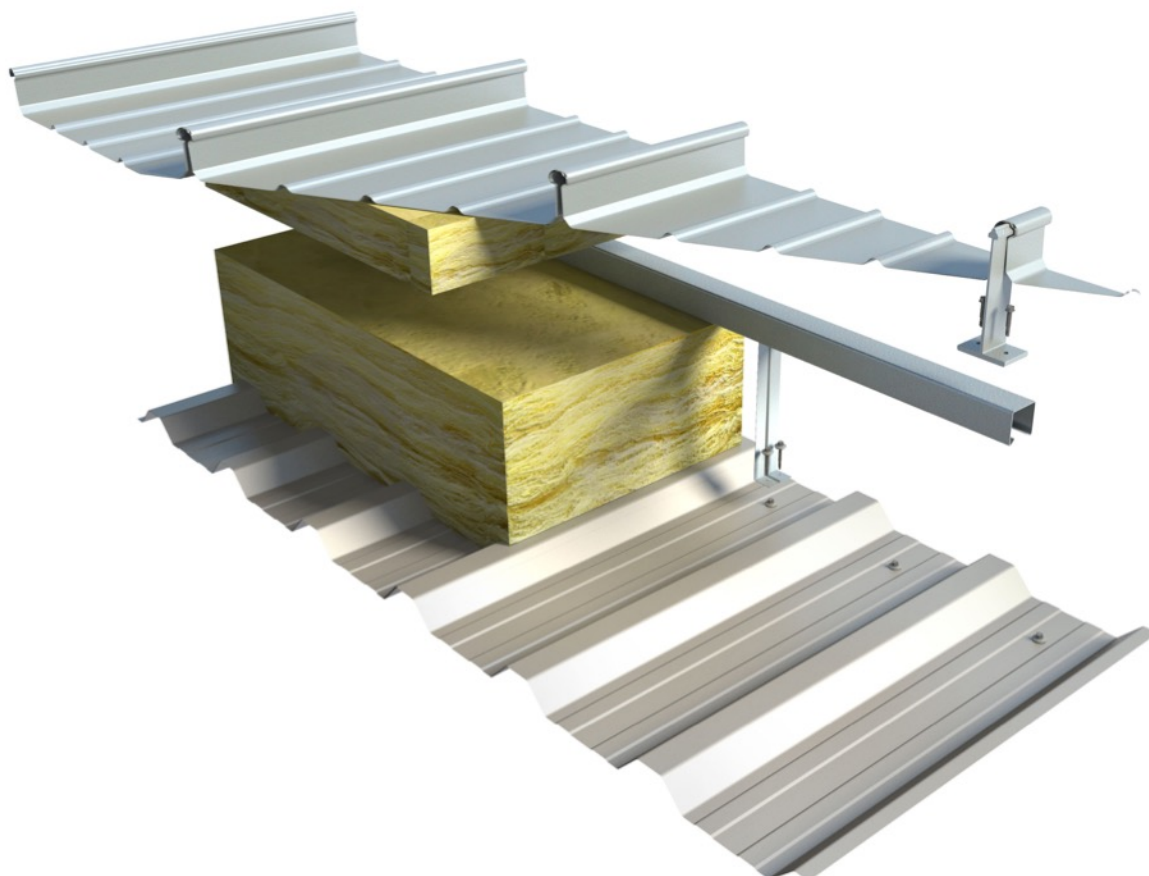
Note:

These installation guidelines are for ARKzip standing seam profiles only.

Before being in a position to use these guidelines the installer is responsible for roof access and other safety aspects.

Before installing ARKzip profiles the installer needs to have correctly and safely installed the liner (or deck), applied seals and membranes as specified so that the vapour control layer/air barrier is installed, and installed the spacer and any ridge or anti sway bracing. The liner must be fully fixed to be rated as non-fragile.

See also data sheet 32-a-ARK-Tech-03/2015 “Minimum requirements for ARKzip standing seam roofing”



Delivery:

1. ARKzip profiles are delivered by road or manufactured on site at eaves or ground level.
2. Packs are banded in max 1t bundles using nylon banding.
3. Painted aluminium sheets will have protective strippable film that must be removed within 2 months after installation.
4. Packs carry labeling to identify the profiles and show the CE mark, number of sheets, material and length.
5. Straight sheets are packed face to face; 2No sheets nestled, 1No facing.
6. Protect plain aluminium from contamination and other trades. Natural aluminium can discolour on exposure to mud/ cement/ mortar etc

Lifting:

Note that the installer is responsible for the safe off loading and hoisting of products

7. Packs < 7.5m can be lifted by site forklift. Take care to avoid damage to the under sheet in a bundle.
8. Packs 7.5m to 12m can be offloaded and hoisted using 2 web slings at >45 degree angle
9. Packs >12m can be offloaded and hoisted using and a lifting beam and straps provided by the crane company.
10. Do not use chains to lift packs
11. Secure bundles on the roof against wind action and against slippage.

Installation - tolerances:

12. The structure must be to an installed tolerance for standing seam roofing. Note that this is more stringent than for basic twin skin roofing. Refer to MCRMA and SCI documentation.

Typically, purlin out of position tolerance should be:

mid span in plane: <20mm

90° to the slope: $\pm L/200$ (typically ± 7.5 mm at 1.5m purlin spacings (L=purlin spacing, mm))

13. Set out halters using the gauging template provided and to the halter spacing specified for the profile width and application (typically curved sheeting has the gauging increased by 5mm).
14. Standing seam roof sheets need to be able to move over the halter for thermal movement, ensure that halters are in line with the sheet ribs ($\pm 2^\circ$) and true to the slope ($\pm 1^\circ$).
If halters are installed in advance of the sheeting, periodically check alignment up the slope.

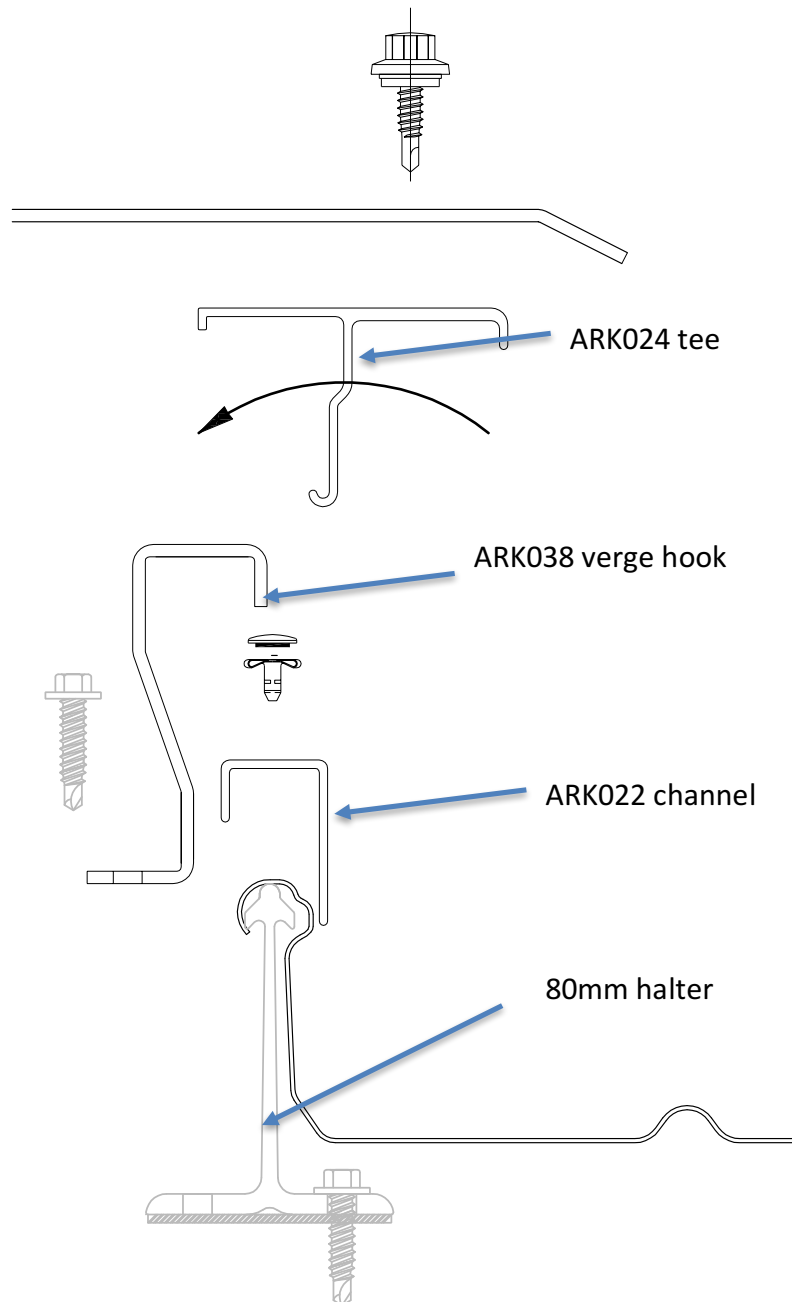
Installation – ARKzip sheets:

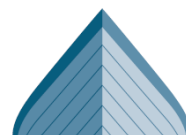
15. Fix halters with the ARK supplied stainless steel fasteners, 2No per halter.
16. Set out the verge halters to the required offset and at 90° to the eaves.
17. Install the ridge spacer ridge support/ fixed point plastisol steel pressing
18. Install the verge sheet, male rib leading. Zip the female rib and install the verge components to provide security against wind action for the trailing edge.
19. Install the fixed point fasteners to the pan of the verge sheet, minimum 2No stainless steel fasteners.
20. Lay quilt insulation in two layers with joints staggered. Cut and pack tightly under spacer. Ensure no gaps. Do not walk on insulation and ensure insulation is dry. The insulation must rise and fill the cavity with 10% compression (ie use say 220mm for a 200mm cavity).

21. Omit the insulation under the verge sheet to avoid it getting wet and install this insulation when the verge flashing is installed.
22. Install sheets ensuring that they click onto the halter heads. Zip up sheets as they are laid with maximum 10 sheets laid ahead. Check that halters are maintaining alignment upslope.
23. To set the zipper onto the ribs, tighten the ribs for 300mm at each end of the sheet using ARK hand pliers. For pre-painted roof sheets, using a cloth to protect the paint from the hand pliers.
24. Set the zipper over the rib and close the jaws before setting the zipper running.
25. Do not walk in the pan of the sheet or with the zipper.
26. The rib head should be 20mm – 22mm diameter after zipping and the overlap edge should be at “4 O’clock” or better.
27. Use stainless steel zipper tools for stucco aluminum and painted materials (painted AL will have strippable protective film, to be removed from the under rib before zipping).
28. Take care of the zipper and keep the zipper tools clean. Swarf etc build up on the tooling will damage the roof sheets.
29. Install the fixed point fasteners as sheets are laid. Protect ridge details from allowing water to enter the roof and soak insulation.
30. Overnight or when strong winds are expected, secure the leading edge by installing verge hooks. Protect insulation from the wet.
31. Remove strippable film within 3 months of delivery.



Verge detail – 80mm (standard) halter:





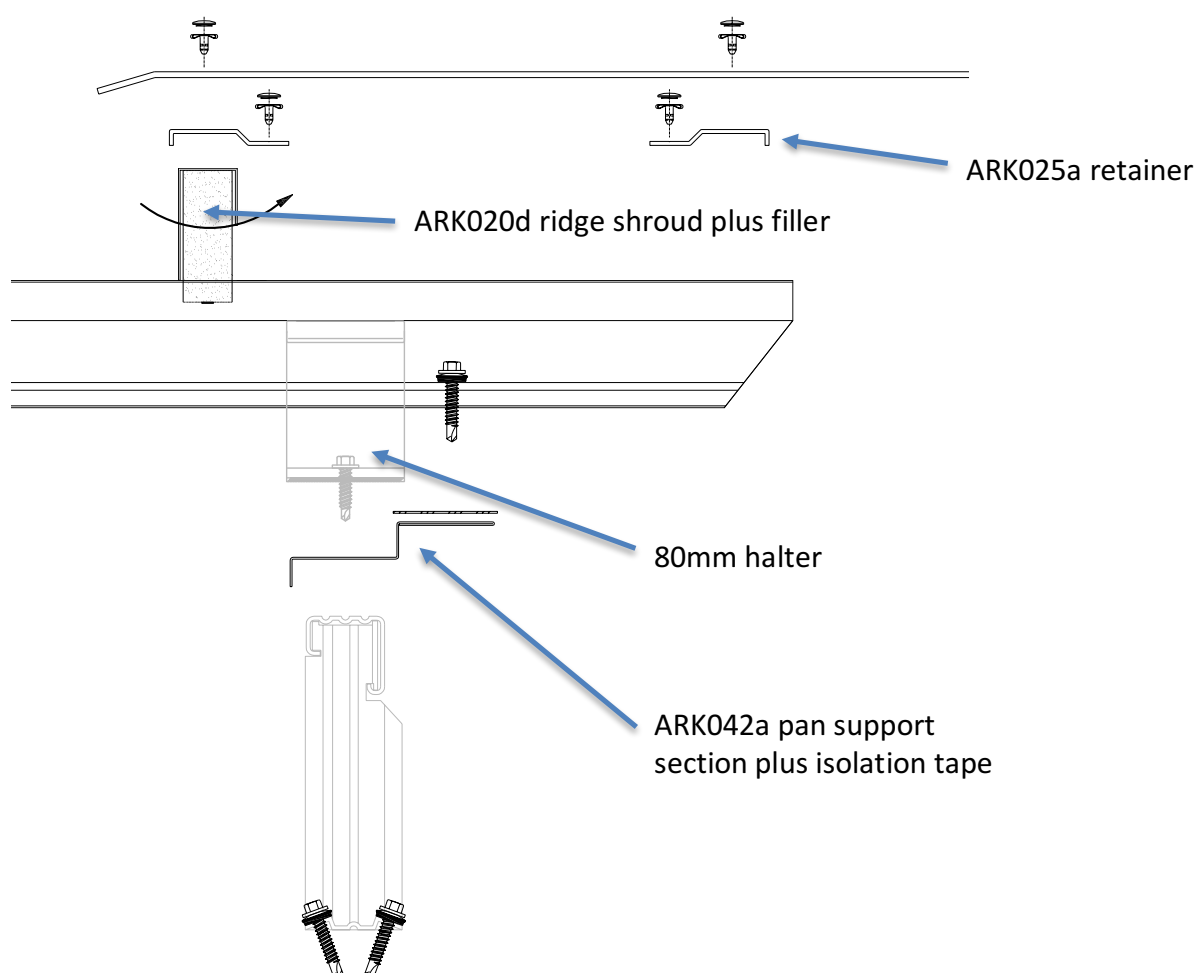
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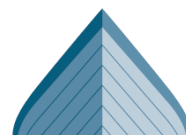
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- 32. The ARK supplied components must be used.
- 33. For pre-curved roof sheets ask for curved verge components
- 34. The detail allows the verge flashing to be secured independent of the roof sheet. The detail allows the roof sheet to undergo thermal movement independent of the verge flashing.
- 35. Verge flashings joints and fasteners must allow for thermal expansion.

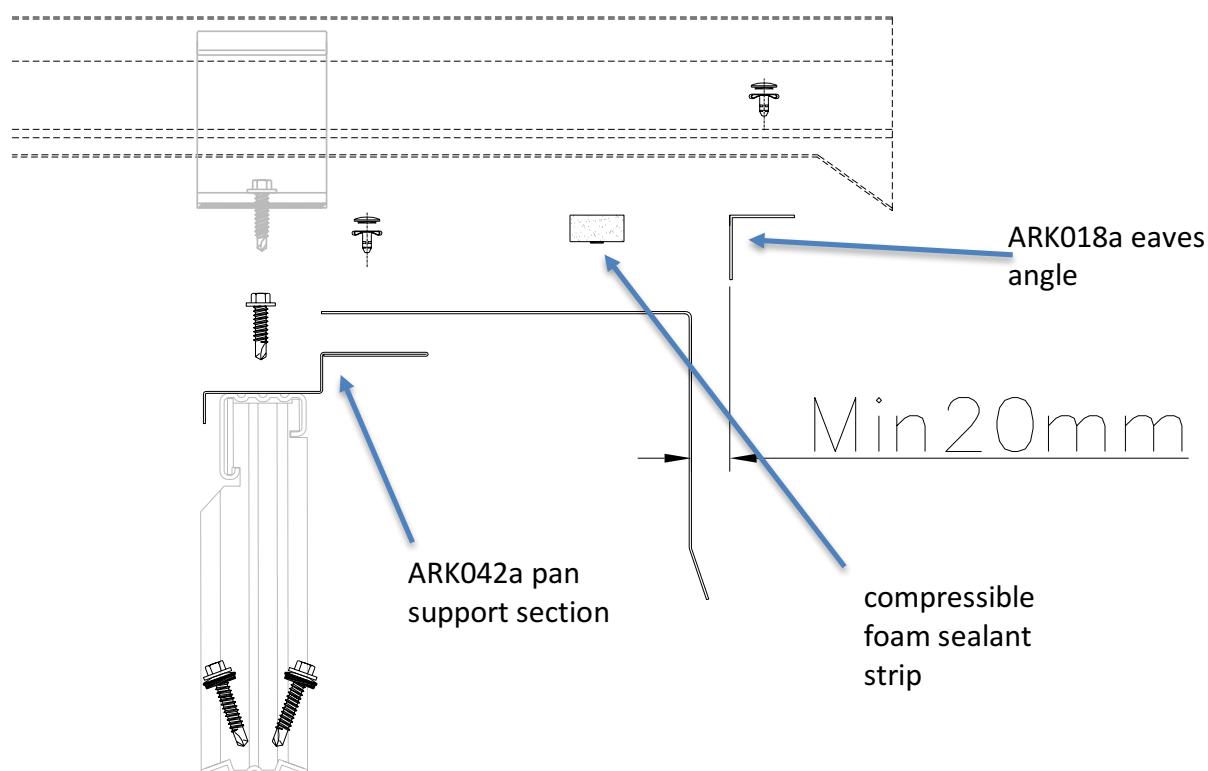
Ridge detail – 80mm (standard) halter:



36. Install fixed point stainless steel screws plus 15mm dia or 19mm dia sealer washers, min 2No per sheet, locate 50mm each side of ribs. Screws are fixed into the pan support section under the roof sheet to provide a fixed point fixing and to ensure a flat roof sheet for the ridge filler to sit on. Plastisol finish provides the isolation between dissimilar metals.
37. Bend sheets to vertical using an ARK turn-up tool.
38. Set the line for the ridge fillers and shrouds.
39. Bed ridge filler blocks in sealant
40. Install shrouds over the fillers.
41. Install the ridge retainers and supports, riveting to the roof sheet ribs.
42. Install the ridge flashing ensuring equally spaced fasteners with minimum 2No fasteners over each roof sheet width (ie 100mm each side of the rib for a 400mm wide sheet).



Eaves detail: 80mm (standard) halter:



43. Install the eaves stiffener angle, toe towards the gutter, allowing a gap between the eaves angle and eaves flashing for thermal expansion of $1.2 \times L$ mm where L is the length of the roof sheet in m, minimum gap 20mm.

44. At pitches $<10^\circ$ install the sheet turn down as well as the eaves stiffener angle.