

LokFold

traditional standing seam
roofing system



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Lokfold is a high quality, fully supported, metal roofing and cladding system available in a variety of quality metal finishes including pre-painted and mill finish aluminum, copper, zinc and stainless steel.

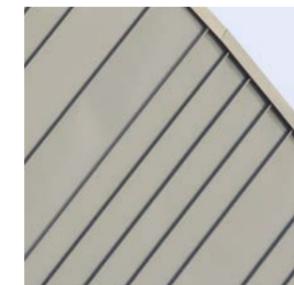
Traditional approach

The Lokfold system provides traditional standing seams or batten rolls on pitched roofs or walls.

The system is based on metal trays which can be formed in the factory or on site, and which are fully supported by the deck to which they are attached, providing a 'traditional' and aesthetically pleasing roof construction that is also extremely cost effective.

Attachment to the deck is made with a combination of fixed and sliding cleats which allow for thermal movement in the length of the tray. The cleats are mechanically folded into the standing seams either by hand or using a portable folding machine.

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Reverse coating of zinc

It is traditional to use underlay to separate zinc from the supporting layer unless the system is fully insulated.

As an alternative, zinc is offered with a plastic coating on the reverse side.

Thermal movements

For long strip roofing, it is important to take into account the movements of the strip occurring as a result of temperature changes. The sheet may sustain damage if insufficient expansion allowance is provided at verges or eaves, at roof upstands or at walls.

All materials expand or contract when the temperature changes.

The change in length of aluminium sheet and zinc sheet is about twice that of steel sheet. The sheet length increases in the summer and decreases in winter. The temperature of the roof material in the summer may be up to 75°C, while in winter it could be conceivably be as low as -35°C. The length of the roof covering also changes, and the calculations below are therefore done to be on the safe side.

The temperature of the sheet at the time of the installation determines how the length will change from its original length in the summer and in the winter.

The table opposite gives particulars of the change in length in steel sheet that can be expected for different installation temperatures. L is the distance in metres from the point where the movement is zero (fixed point) to the end of the sheet.

Temperature at installing °C	Thermal movement in mm	
	Summer (+75°C)	Winter (-35°C)
-10°	+1,0 x L	-0,3 x L
0°	+0,9 x L	-0,4 x L
+10°	+0,8 x L	-0,5 x L
+20°		-0,7 x L
+30°		-0,8 x L

Change in length mm - example:

Temperature during laying: +10°C

Distance L from fixed point to eaves: 7m

Change in length at eaves:

Expansion in the summer +0.8 x 7 = approx +6mm

Contraction in the winter -0.5 x 7 = approx -4mm

It is important to allow for thermal movements so that the sheet or its mountings will be not be damaged. Longer strips should be secured by means of both fixed and sliding clips. Space for expansion and contraction must be allowed at joints and connections.

Product availability

LokFold is available in a variety of formats from the plain coil to the fully installed system.

Coil

For installers who have their own roll forming capacity, Omnis can provide coil for this purpose. As major traders in metal products, our buying capacity means that we can provide extremely cost-effective terms, particularly on aluminium and our own Micro zinc products.

LokFold System

Omnis can provide a complete system to roofing contractors including the trays (site or factory rolled), clips and other accessories, and sale or rent of specialist tools including seam formers.

Supply and Install

Where required, Omnis can provide the complete supply and installation service using our own team of skilled installers in conjunction with the roofing contractor.



LokFold is available in a variety of metals and finishes:

Metal	Thickness (mm)	Max length of tray (m)	Nominal weight (kg/m2)
Aluminium	0.7	10.0	2.60
Micro zinc	0.7	10.0	2.60
Stainless steel	0.4	15.0	3.90
Copper	0.6	10.0	5.70
Zinc	0.8	10.0	6.50

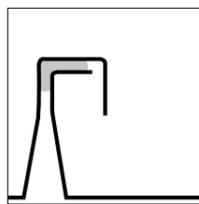
Fixing details

Although there is no technically correct or incorrect end as a start point for a roof, the direction of the prevailing wind should be considered.

In general, each sheet is fixed to the substrate by two fixed clips towards the ridge of the roof, with sliding clips along the length of the slope. The upstand of the next sheet is then laid over and interlocks with the upstand of the tray already in position.

The first fold of the upstand is then formed manually as shown opposite, before mechanical crimping of the upstands using the power seamer.

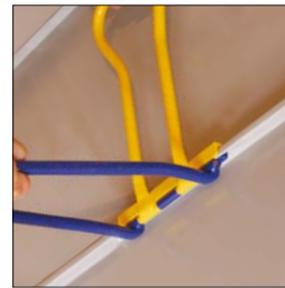
The sliding clips allow the metal to expand and contract freely along its length. Across the width, the profile of the sheet allows expansion and contraction through a gap at the foot of each standing seam.



Expansion and Contraction gap



Manual Folding

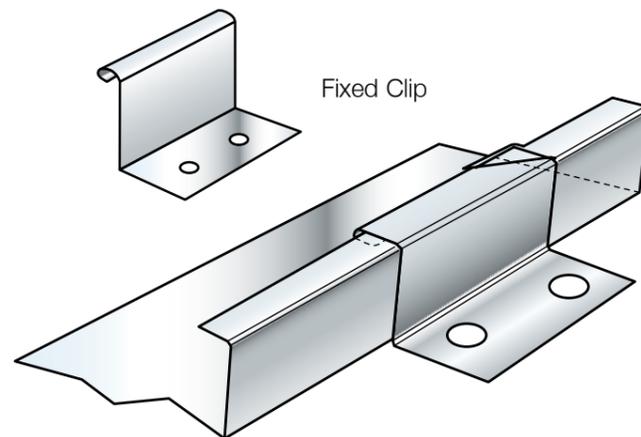


Mechanical Crimping

Fixed Clips

In general, the fixed clips serve to restrain the roofing trays along their upper edge and so direct any expansion movement of the tray towards its lower edge.

Along each upstand, at the highest part of the tray, two fixed clips are required. Each clip is held in position using two cadmium plated screws. It is recommended that for the first clip the upstand is cut to prevent the tray from slipping down the roof during installation.

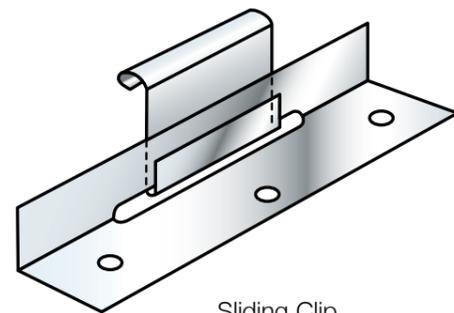


Fixed Clip

Sliding Clips

The fixed component is secured to the roof decking using three nails or cadmium plated screws

The sliding component laps over the preformed upstand and is located onto a slot in the fixed component. The slot in the fixed component must be 70mm in length for all types of metal and in all cases the sliding component must be centred within the slot at installation in order to allow for expansion and contraction of the tray.



Sliding Clip

Number of fixing clips

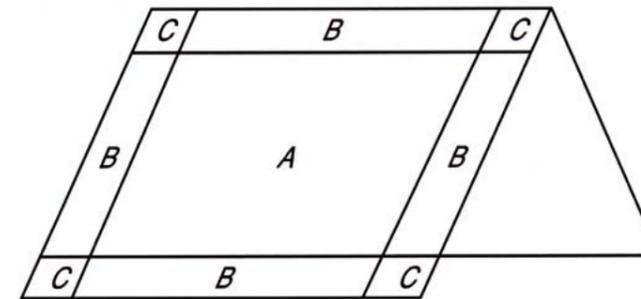
The wind loads anticipated will determine the number of fixing clips required. Towards the edges or corners of the roof, where the wind loading can be expected to be greater, it is necessary to have a greater concentration of clips.

The distance between the fixing clips is determined by the area of the roof as shown in the diagram below.

AREA A - (Middle) One clip every 330mm

AREA B - (Edge) One clip every 200mm

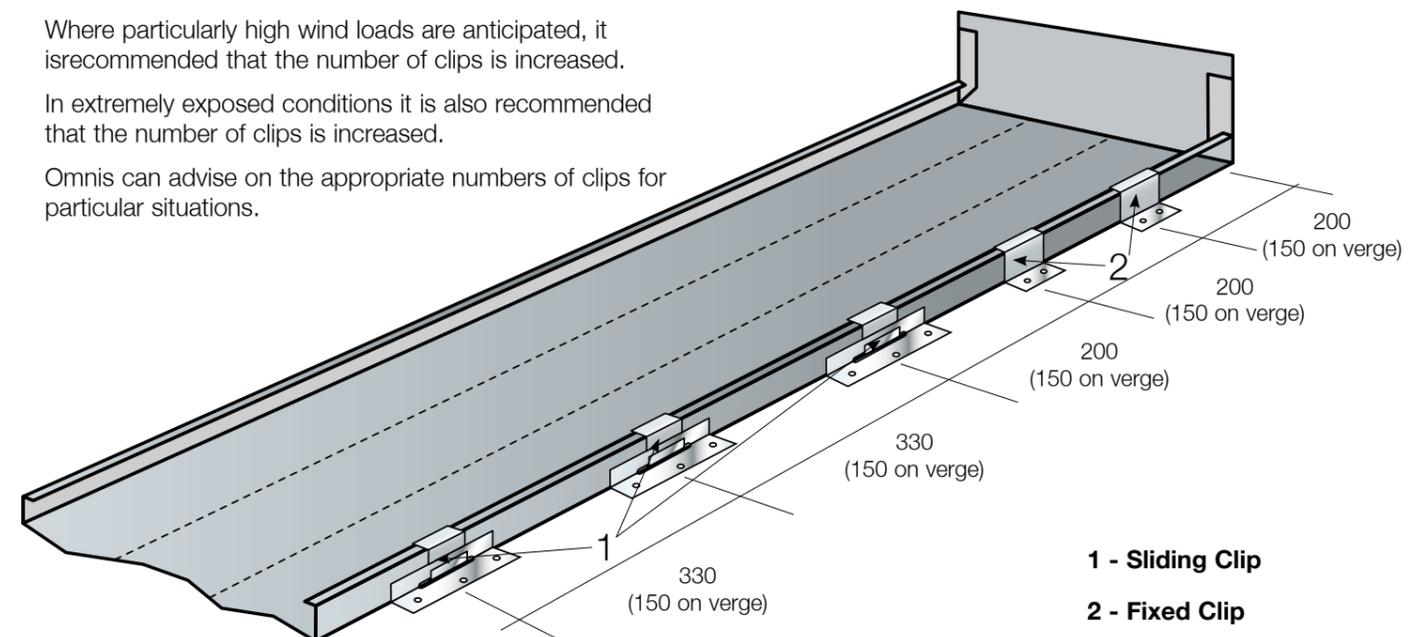
AREA C - (Corners) One clip every 150mm



Where particularly high wind loads are anticipated, it is recommended that the number of clips is increased.

In extremely exposed conditions it is also recommended that the number of clips is increased.

Omnis can advise on the appropriate numbers of clips for particular situations.



1 - Sliding Clip

2 - Fixed Clip

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Omnis reserves the right to make substitutions and modifications to the specifications of any of its products without prior notice. It is the customer's responsibility to ensure that the company's products are correctly installed and that they are suitable for the customer's particular requirements and application.

The company undertakes business only upon its standard terms and conditions.

For project specific NBS based specifications, CAD Details, samples or technical assistance please contact our technical department on enquiries@omnisexteriors.com.

All information is correct as of the date of this document, created May 2015.