

Roofspec
Viking



Taking care of detail

The future
of low-slope
roofing



Three layers
Energy efficient
None punctured
Cost-effective

**WARM
ROOFS
NEED
NOT BE
COMPLEX**

WARM-ROOF-ON-STEEL LOW-SLOPE ROOFING SYSTEM

WITH CERTIFIED ENGINEERING, WE HAVE DEVELOPED THE COUNTRY'S SIMPLEST, YET MOST ENERGY-EFFICIENT AND COST-EFFECTIVE WARMROOF SYSTEM – VIKING 'WARMSPAN'

What is WarmSpan?

A full proprietary warm-roof-on-steel tray system. This consists of a wide-spanning steel tray roof deck, which, with its flashing system, also forms the vapour barrier. The Kingspan Polyisocyanurate (PIR) rigid insulation panels are adhered on top, and the system is completed with any of Viking Roofspec's sheet waterproofing membrane systems.

What does WarmSpan offer?

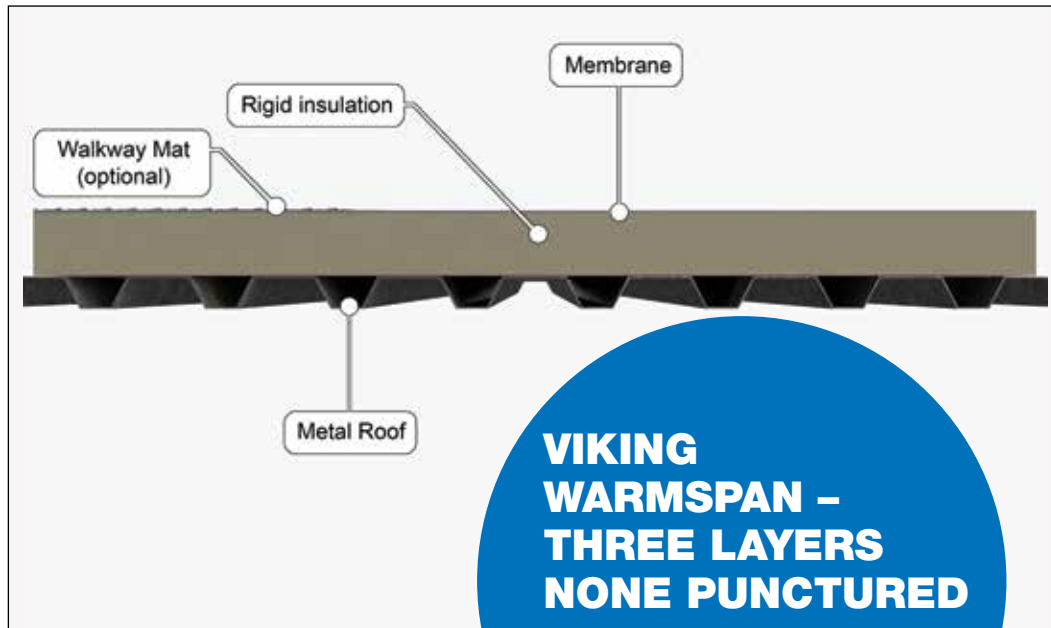
It provides building owners and architects with a fully-engineered; energy-efficient, low-slope roof system, that reduces the total construction costs of the roof and the building significantly.

- Up to 3.6m spanning ability between purlins
- No thermal bridging
- Highest available fire rating – Group 1S
- Integrated vapour barrier

The only New Zealand engineered warm-roof-on-steel low-slope roofing system

Lab testing of WarmSpan's wind uplift resistance using its thinnest polyiso layer.





ALL YOU NEED TO KNOW ABOUT VIKING WARMSPAN

VIKING WARMSPAN IS A WARM-ROOF-ON-STEEL ROOFING SYSTEM FOR LOW-SLOPED ROOFS. IT HAS BEEN ENGINEERED IN NEW ZEALAND AND OFFERS THE COUNTRY'S SIMPLEST, YET MOST ENERGY-EFFICIENT AND COST-EFFECTIVE WARMROOF SYSTEM. THE SYSTEM INCORPORATES A STEEL TRAY, KINGSPAN POLYISO AND ANY OF VIKING ROOFSPEC'S WATERPROOFING MEMBRANE SYSTEMS.

THE SYSTEM

What is WarmSpan?

A full proprietary warm-roof-on-steel tray system. This is made up of a steel tray roof on top of which Kingspan polyiso rigid insulation panels are clad with any of Viking Roofspec's sheet waterproofing membrane systems.

What is the difference between WarmRoof and WarmSpan?

WarmSpan is a type of WarmRoof. To date, Viking's WarmRoofs have comprised of our polyiso panel and membranes installed on a concrete, plywood or steel tray substrate (new or old). Whereas the WarmSpan system includes the substrate supplied by Viking – in this instance a steel tray that has been specifically engineered and tested for New Zealand's building code and conditions.

Why are we introducing WarmSpan?

To provide building owners and architects with a fully-engineered; energy-efficient low-slope roof system that reduces the cost of the roof and therefore the building significantly, while delivering increased performance and greater durability.

What testing has been completed in New Zealand for WarmSpan?

Holmes Solutions in Christchurch completed both point load and uniformly distributed load testing to analyse serviceability limit state (SLS) and the ultimate limit state (ULS) of the WarmSpan system over a range of purlin spans. WarmSpan is the only engineered warm-roof-on-steel system with an integrated vapour barrier. The system has been tested in New Zealand to meet the wind and snow loadings specified within the Building Code. For the full details of the test methods and results please refer to the WarmSpan Engineering Report.

Can you show me the components of the WarmSpan system?

Scan the QR code to view a 3D animation of WarmSpan in action.



PITCH AND PURLINS

What is the minimum pitch for WarmSpan?

The minimum pitch is 2 degrees as required by the New Zealand Building Code for low-slope roofs.

What is the maximum span for the purlins?

The system can span up to 3.6 metres between purlins. A span table for all wind zones is provided in the specification.

Can timber or steel purlins be used?

Yes, either timber or steel can be used.

What is the snow loading and wind zones?

WarmSpan can be specified in all wind and snow zones as described in the New Zealand Building Code. See the span table in the WarmSpan specification for the purlin spans.

ADHESION

What adhesives are used in the WarmSpan system?

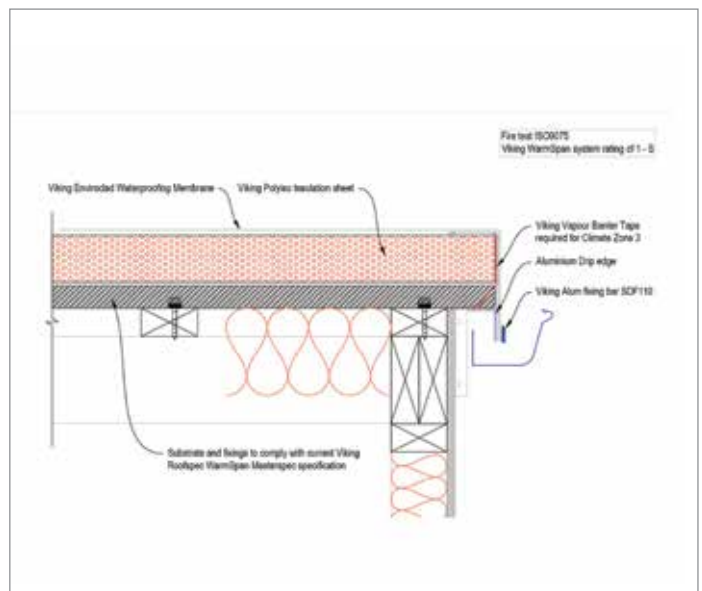
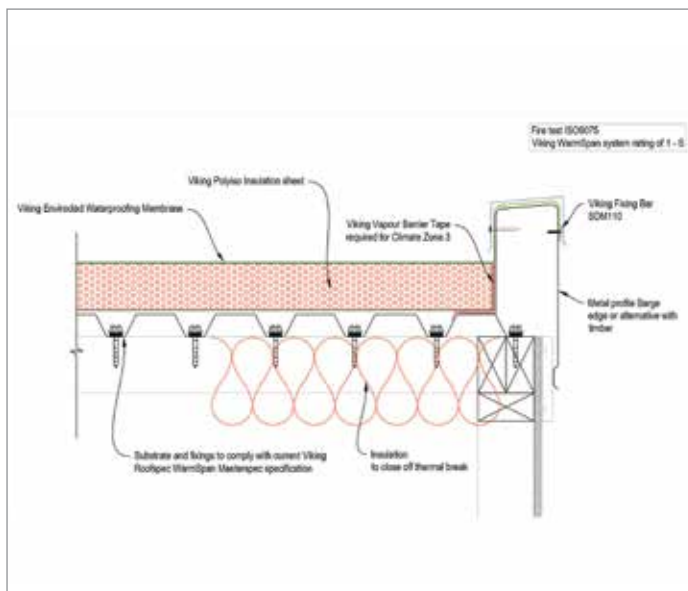
WarmSpan uses a proprietary two-component, polyurethane adhesive (STP900) to bond the Kingspan polyiso panels to the steel tray. When installed to the WarmSpan specification, the STP900 adhesive provides greater strength than mechanical fasteners.

Whatever Viking waterproofing membrane system is used, it will require its normal proprietary adhesive or primer.

Why aren't you using mechanical fasteners like all the others?

The use of a fully adhered system using F.A.S.T. technology, has some strong advantages over the use of mechanical fixings. Mechanical fixings penetrate the insulation and the vapour barrier, which results in thermal loss and thermal bridging, reducing the efficiency of the system.

TYPICAL DETAILS



Typical construction details demonstrating the simplicity of the WarmSpan system with its integrated vapour barrier.

INTEGRATED VAPOUR BARRIER

Why is there no separate vapour barrier?

The WarmSpan system has an integrated vapour barrier. The steel sheets are installed and sealed during installation with a specific flashing system to provide an integral vapour barrier for the system.

What about at key junctions, such as the drip edge?

WarmSpan uses proprietary flashing tapes to seal any transitions or junctions to complete the vapour barrier.

Why is there no cover board?

Cover boards are thin fibre cement type sheets that can be fixed over insulation and under a membrane. The intention of a cover board is to provide superior wind resistance and trafficability. A cover board is not required with WarmSpan as the system exceeds the 'Extra High' wind rating and foot traffic requirements of the building code.

In terms of foot traffic, roofing systems are defined as per one of three service categories:

1. Unrestricted access - A roof which would expect regular foot traffic for maintenance of plant or equipment and is completely trafficable.
2. Restricted access - A roof which is designed for occasional foot traffic. Walking is only permitted along the purlin lines or carefully across two profile ribs.
3. No access - A roof where no foot traffic access is possible or permitted.

The WarmSpan system achieves the 'unrestricted access' rating without requiring the need of a cover board. That said, cover boards can be incorporated into the system if desired, or better still proprietary walkway mats can be installed on the membrane to further protect it, while directing foot traffic to the appropriate areas of the roof.

Do you have samples available?

Our Territory Managers have demonstration models they can show / leave with you for later collection.

Where has this system been used before?

The WarmSpan system has been installed on residential, commercial and industrial buildings. Completed projects include the Te Rehua Marae in Christchurch and the ASB Centre in Blenheim.



SUPPLY

What components of the system will Viking supply?

Everything from the steel tray up i.e the steel tray with integrated vapour barrier, polyiso rigid insulation, waterproofing membrane system (Enviroclad, General Membrane, Epiclاد or Butylclad).

PRICING

What is the average supply and install rate for the system?

For a medium sized job of average complexity the WarmSpan system can be expected to be supplied and installed (as at May 2016):

- With the integrated Vapour Barrier approx. \$200 per m2 (South Island, Central Plateau and cool stores)
- Without the integrated Vapour Barrier approx. \$190 per m2 (North Island)

What is the cost difference between a WarmSpan vs conventional timber substrate membrane roof?

We believe WarmSpan to be approximately 2/3's less expensive. The WarmSpan system eliminates 2/3's of the structure of a traditional plywood substrate. The engineered WarmSpan system can span up to 3.6m, versus rafters at 400mm centres for a plywood substrate (which must be H3.2 treated). The steel tray itself is more cost effective and significantly faster to install than 17mm plywood offering significant cost savings on both product and labour.

INSTALLATION AND SPECIFICATION

Who can install the Viking WarmSpan system?

Only Viking Approved Applicators have access to Viking waterproofing membrane systems. Additionally, if the project is a Full System Warranty job the installers need to be at a minimum level of stage two of our licensing programme.

What specification material do you have available?

Masterspec specification, construction details, a span table and a comprehensive engineering report for the entire system.

Does the BRANZ appraisal for Viking's WarmRoof system apply to WarmSpan?

Yes, the Branz appraisal allows for use of the steel substrate.



What is the fire rating of the overall system?

Achieving a Group 1S Fire Rating from the ISO9705 'room test' means specifiers can choose any Viking WarmRoof system for a residential or commercial project, knowing that they are specifying a system with the highest possible fire rating.



THE STEEL

What is the steel profile that is used?

Can an alternative steel profile be specified?

The profile is the Metalcraft Metcom7 profile. The system has been engineered to use this profile inverted and fixed through the trough. Alternative profiles may be used, if certified by the project architect or engineer.

What is the thickness of the steel?

0.55 gauge.

Being Zinalume, can the system be used in all corrosion zones?

Yes, as the steel deck is used in an internal and sheltered location, Zinalume can be used as part of the WarmSpan system in all corrosion zones in New Zealand.

THE INSULATION

What are the range of thicknesses of the insulation and respective R-Values?

The insulation in our WarmSpan system is Kingspan Therma and the table below indicates thickness and R-Values:



Panel Thickness	Dimensions (m)	Long-Term R-Value*
25mm	1.2 x 2.4	0.95
50mm	1.2 x 2.27	1.9
75mm	1.2 x 2.27	2.85

*average R-Value over the life of the product.

THE MEMBRANE

What waterproofing membrane can be used? Can a double layer torch-on be used as part of the system?

Any of Viking's sheet waterproofing membrane systems can be used, including our torch-on solution, General Membrane.



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Viking



Taking care of detail

VIKING ROOFSPEC WILL ENSURE
YOUR ROOFING SOLUTION MEETS
ALL YOUR NEEDS.

TALK TO OUR TEAM AND FIND AN
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