

Viking WarmSpan System

Version: WS-PTS-V1

Product Description:

The Viking WarmSpan System is a fully engineered warm roof system designed for installation onto tested steel profiled metal trays. It offers a cost-effective and energy-efficient solution for low-slope roofs. The system includes a wide-spanning steel deck with an integral flashing system, Kingspan Polyisocyanurate rigid insulation panels, and Viking Roofspec's Torch-on or Enviroclad TPO sheet waterproofing membrane systems. The WarmSpan system can also be used to overlay existing steel roofing systems if certified compliant by an engineer. It provides excellent fire rating, spanning ability, and energy efficiency.

- Highest possible fire rating - Group 1S from the ISO9705 'room test'
- Spanning ability - up to 3.6m between purlins
- Savings est. at 2/3rds on supporting timber framing compared to traditional substrate requirements
- No mechanical fasteners = no thermal bridging
- 6kPa (ULS) Wind uplift resistance - F.A.S.T. adhesive system rivals uplift of any fastener

Higher energy efficiencies are provided by greater R-values per thickness and full thermal coverage of the roof. The system's thermal performance helps achieve Green Star points for a building (see 'Environmental' section). WarmSpan is NZ's only engineer-certified warm roof system, as it has been developed and tested to meet the wind and snow loadings specified within the building code

Suitable for all residential, commercial, and industrial projects, WarmSpan is classified as a low-slope roof, with a recommended roof pitch of 2 degrees.

Purpose and Use:

The Viking WarmSpan System is designed for use as an insulating roof on buildings within the following scope:

- Compliance with NZBC Acceptable Solution E2/AS1, Paragraph 1.1 regarding building height and maximum floor plan areas.
- Suitable for limited access flat roofs with steel structural decks, subject to specific structural design.
- Roofs must be designed to drain water to gutters and drainage outlets complying with the NZBC.
- Roofs must be constructed with suitable falls, as outlined in the Warm Roof BRANZ Appraisal.
- Not intended for use with integral roof gardens.
- Suitable for buildings in NZS 3604 Building Wind Zones, up to and including 'Extra High'.
- Suitable for all residential, commercial, and industrial projects classified as low-slope roofs, with a recommended roof pitch of 2 degrees.

Conditions:

1. The product is suitable for use as a roof waterproofing membrane on buildings within the scope limitations of NZS 3604:2011 and NZBC Acceptable Solution E2/AS1, Paragraph 1.1, or NZBC Acceptable Solution E2/AS1, Paragraph 1.1 regarding building height and floor plan area when subject to specific structural design.
2. The product is suitable for use in NZS 3604:2011 Wind Zones, up to and including 'Extra High'.
3. The weathertightness design of junctions for each specific structure is the responsibility of the building designer.
4. The product will assist with meeting the provisions of the New Zealand Building Code clauses B1, B2, E2, F2, and H1, provided it is employed in accordance with the supplier's installation and maintenance requirements.
5. The product is suitable for use in all Climate Zones as defined in NZBC H1/AS1 and all Exposure Zones as defined in NZS3604.
6. The product has many proprietary accessories available to ensure a complete watertight roof system.

Compliance with the New Zealand Building Code:

The product will assist with meeting the following provisions of the building code when employed in accordance with the supplier's installation and maintenance requirements:

- Clause B1 Structure: Performance B1.3.1.
- Clause B2 Durability: Performance B2.3.1, B2.3.1(b).
- Clause E2 External moisture: Performance E2.3.1, E2.3.2.
- Clause F2 Hazardous building materials: Performance F2.3.1.
- Clause H1 Energy efficiency: Performance H1.3.1, H1.3.1(a).

Design Requirements:

Product specification and incorporation of Viking WarmSpan into the building design should be carried out by a qualified designer/architect/engineer or a building professional who is qualified to design the buildings covered under the scope of use of this product. Access to the technical specifications, installation details, and standards referenced in the current Holmes Solutions Report is necessary to ensure compliance with the design limitations outlined in this PTS.

Installation Requirements:

Installation of the structural roof elements must be carried out in accordance with the Viking WarmSpan System Technical Literature and under the supervision of a Licensed Building Practitioner (LBP) with the relevant License Class. Installation should adhere to all relevant technical information related to the selected installation method, including details provided in the current Viking Product Data Sheets (PDS) and Engineering reports.

- The Viking WarmSpan System is installed onto tested steel profiled metal trays. The system is fully engineered and can have purlin spacings of up to 3.5m.
- The system can be used to overlay existing steel roofing systems if certified compliant by an engineer.
- Depending on the specific requirements and conditions, a vapor barrier may or may not be required. If a vapor barrier is not required, silicon sealant is applied to the overlapping metal sheets, and a vapor tape is installed around the perimeter and penetrations. Consultation with Viking Roofspec is recommended for guidance on vapor barrier requirements.
- If a vapor barrier is required, it is laid directly to the substrate to prevent moisture transfer from the substrate or interior to the insulation layer.
- The insulation layer consists of rigid polyisocyanurate (PIR) closed-cell foam sheets. These PIR boards can be adhered to the substrate using a two-part Polyurethane foam called F.A.S.T Adhesive or installed with mechanical fasteners and insulation plugs.
- The top facer of the insulation layer is made up of fiberglass, which allows for good adhesion of the waterproofing membrane. The membrane can be Viking's Enviroclad, Epiclاد, or Torch-On Membranes.
- In high-traffic areas, a high-density cover board can be used over the PIR board to provide additional protection. The membrane is then installed over the cover board, which can be adhered with F.A.S.T adhesive
- The WarmSpan system does not require venting.
- Refer to the individual membrane's Technical Data Sheets (TDS) or installation guides for specific membrane accessories.

Maintenance Requirements:

The membrane roof system must be regularly checked (twice annually) for damage, rubbish, and debris, particularly around drainage points. Any identified damage, such as small punctures and tears, must be repaired, and coatings reapplied as recommended by Viking Roofspec Ltd. Special care must be taken when inspecting the membrane roof systems to ensure the prevention of moisture ingress, and repairs must be undertaken when required. Drainage outlets must be maintained to operate effectively.

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PRODUCT TECHNICAL STATEMENT



Quality Assurance:

Viking provides quality assurance documents that are recommended to be followed and signed off by installers and builders upon project completion. These documents can be obtained from Viking Managers or the Viking website. The Viking WarmSpan is supported by a BRANZ Appraisal (No. 656),

- Branz Appraisal
- Masterspec,
- Holmes Solutions Engineering Report
- Viking WarmSpan PTS.
- Viking WarmSpan PDS
- Viking WarmSpan Details
- Viking Substrate checklists

Warranty Information:

The Viking WarmSpan System is backed by a 20-year product warranty provided by Viking Roofspec, along with a Certificate of Workmanship issued by Viking Approved Applicator companies. Specific projects may be eligible for Viking's Full System Warranty (FSW), which covers both the materials and the approved applicator's installation in one document for the building owner (conditions apply).

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