





espan® 340 with swages

ESPAN® HAS BEEN DESIGNED FOR STYLE AND PERFORMANCE IN MIND. THE HIGH RIBS CREATE STRONG DEFINED SHADOW LINES AND COMBINED WITH CONCEALED FIXINGS PROVIDE FOR SUPERIOR WEATHER PERFORMANCE.

ABOUT METALCRAFT

Metalcraft Roofing has more than 50 years experience in the roofing industry and has 12 branches nationwide we pride ourselves on being New Zealand's largest and most established privately owned building product rollformer and installer with an extensive range of longrun roofing profiles, lightweight metal tiles, metal fencing, rainwater system solutions and a variety of solar generation solutions. We also have a structural steel and insulated panel division.

COLOURS

espan® is available in 20 standard colours from New Zealand Steel in trusted brands: COLORSTEEL® ENDURA® and COLORSTEEL® MAXX®. Colour brochures and steel swatches are available on request.

PRODUCT APPLICATION

The correct application of each grade of material is critical to product performance and life expectancy. Before commencing a project the user must refer to the COLORSTEEL® environmental guide and Metalcraft espan® product data.

STYLE & PERFORMANCE

ESPAN® 340

Minimum Pitch:	3 degrees after deflection
Applications:	Commercial and residential.
Orientation:	Roofs and vertical wall cladding.
Material Options:	0.55mm BMT G300 steel

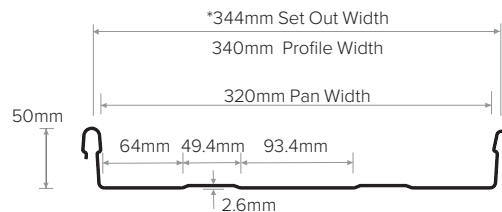
espan® 340 with a flat pan

Profile dimensions are nominal and may vary depending on material. Profile dimensions are not set out dimensions. If a specific set out is required please liaise with Metalcraft Roofing.



espan® 340 with two swages in the pan

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ESPAN® 470

Minimum Pitch:	3 degrees after deflection
Applications:	Commercial and residential.
Orientation:	Roofs and vertical wall cladding.
Material Options:	0.55mm BMT G300 steel and 0.9mm BMT Aluminium.

espan® 470 with a flat pan

When using espan® 470 in Very High, Extra High and SED wind zones this option is not available for roofing and only suitable for vertical cladding. For roofing in these wind zones please use espan® 470 with swages or espan® 340 with or without swages.

Profile dimensions are nominal and may vary depending on material. Profile dimensions are not set out dimensions. If a specific set out is required please liaise with Metalcraft Roofing.



espan® 470 with two swages in the pan

espan® 470 with swages can be used for roofing and vertical cladding in all wind zones. espan® 470 with swages is required for roofing only in Very High, Extra High and SED wind zones to reduce roof noise and provide additional strength.

Profile dimensions are nominal and may vary depending on material. Profile dimensions are not set out dimensions. If a specific set out is required please liaise with Metalcraft Roofing.



NO SUBSTRATE REQUIRED

MINIMUM PITCHES

The minimum pitch is determined by the ability of the roof cladding to discharge maximum rainfall without water penetration through the side laps, end laps or flashings. The minimum pitch for espan® is: 3° for sheet lengths of 40m.

4° for sheet lengths exceeding 40m but less than 60m

The above minimum requirement has been calculated assuming peak rainfall to be less or equal to 100mm/hr.

ROOF NOISE

The homeowner should be aware that temperatures of dark colours are higher than those of lighter colours. Darker colours will thermally expand more. Thermal expansion of metal roofs is covered in the NZMRM Code of Practice.

The MBIE document on roof cladding advises that noise from thermal expansion is normal and should be expected. Refer to MBIE -Guide to tolerances, materials and workmanship in new residential construction 2015.

SOLAR ENERGY

espan® 470 can accommodate either PV solar laminates or clip on solar panels.

espan® 340 can accommodate clip on solar panels and allows for optimum solar energy generation.

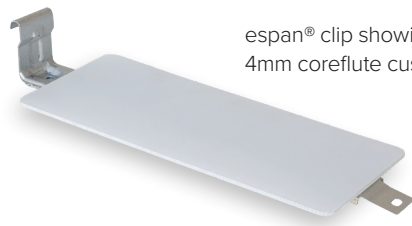
For more information please refer to www.metalcraftgroup.co.nz.

INNOVATIVE CLIP SYSTEM

espan® clips are manufactured out of zincalume® and are fixed directly onto the purlins at recommended spans depending on thickness and wind loadings. The purlins must be parallel with the espan® ribs.

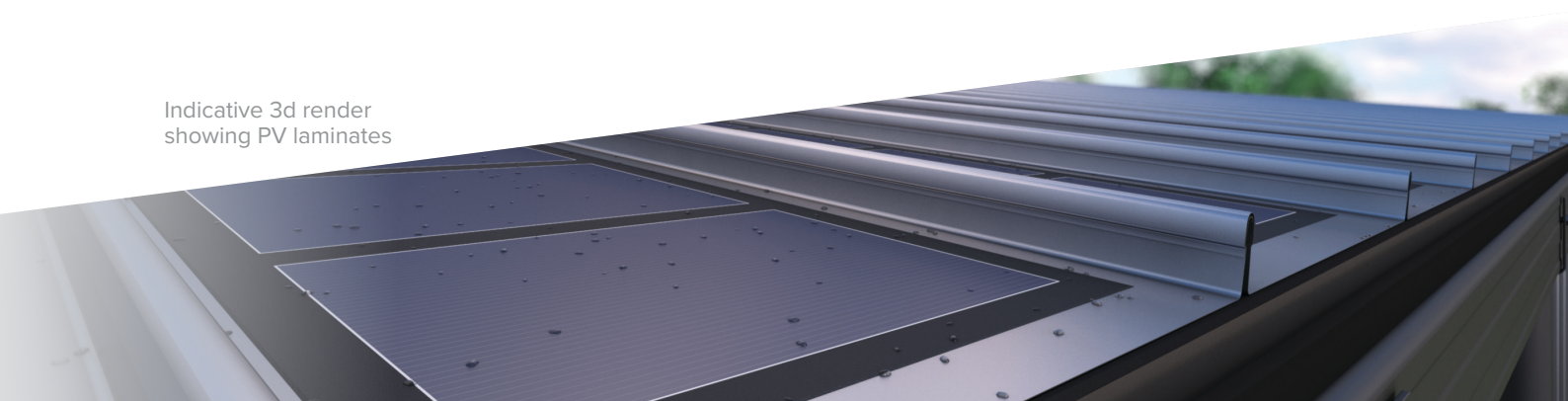
When using espan® 470 in aluminium the espan® clips need to be powder coated as a precautionary measure. Clips are available to order from Metalcraft.

The espan® clip comes standard with a 4mm coreflute cushion. Please refer to Metalcraft Roofing for more information.



espan® clip showing 4mm coreflute cushion.

Indicative 3d render showing PV laminates



SPECIFICATION

WARRANTIES

Material warranties are closely linked to environmental categories. The COLORSTEEL® Environmental Guide classifies the environmental categories and the associated warranties that the various material finishes are given. Please contact your local Metalcraft Roofing branch to request a brochure if you have any questions relating to which product to use in a particular location.

AVAILABILITY

espan® is available for purchase from all Metalcraft branch locations.

RECOMMENDED FIXINGS

Please refer to loadspan and fixing tables for recommended fixings of espan. This is available to download from www.metalcraftgroup.co.nz

ENVIRONMENTAL

The correct grade of material for use in various environments is given in the COLORSTEEL® Environmental Guide.

SUSTAINABILITY

Steel is a recyclable product, so you can be confident in the knowledge that it does not have to be disposed of in landfill. Instead it can easily be recycled and reused, thereby minimising resource use and reducing impact on our environment. As well as this, New Zealand Steel has devoted considerable effort and resources to ensure that their manufacturing processes consider and minimise environmental impacts and adhere to the concepts of sustainability. This is evident in the range of environmental certifications that they have secured such as the International Environmental Management Standard, ISO14001.

FASTENERS

The selection of the appropriate fastener is essential to performance of the roof. The durability of the fastener should be, as a minimum requirement, equal to that of the roofing or cladding. If in doubt, refer to your nearest Metalcraft Roofing branch.

OIL CANNING

Oil canning is an inherent characteristic of cold formed metal products, particularly products with broad flat areas like espan®. It is seen as waviness or distortion in the flat surfaces.

Oil canning does not affect the products strength or performance. The architect, builder and homeowner needs to be aware that oil canning may affect the overall aesthetic outcome. Oil canning may occur during the roll-forming process and or during installation and where thermal expansion occurs. A degree of oil canning is unavoidable.

Please refer to NZMRM Metal Roof and Wall Cladding Code Of Practice - Section 12.3 for more information. (www.metalroofing.org.nz). The end result of the profile is dependent upon the quality of the timber sub-structure that supports it so it is critical that the roof purlins be square and flush for optimum results. Refer espan® installation guide.

HANDLING AND STORAGE

Handling and storage of espan® is as per the NZMRM Code of Practice. www.metalroofing.org.nz. Some important considerations are as follows:

- Site Storage which ensures that sheets are kept dry and ventilated.
- Reducing risk of surface damage to surface coatings during handling, installation and by other trades.
- Ensuring that spans and pitches used are not outside those recommended by Metalcraft Roofing
- Ensuring that correct and sufficient fasteners are used.
- Installation in contact with incompatible materials is avoided.

DISCLAIMER

As part of Metalcraft Roofing's policy of continued improvement, final specifications may vary from those contained in this publication. The company reserves the right at any time and without notice to change the design, materials or features and withdraw products from the market without incurring any liability whatsoever. This publication is issued as a general guide only and should not be treated as a substitute for technical advice. Contact with your nearest Metalcraft branch is recommended to confirm current specifications and availability.

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Metalcraft
Roofing

Metalcraft Roofing are members of the Roofing Association, New Zealand and the New Zealand Metal Roofing Manufacturers Incorporated.

For more information on Metalcraft Roofing visit:
www.metalcraftgroup.co.nz.
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