Espan® has high ribs for strong defined shadow lines and uses a unique clip system that allows Espan® to span and thus eliminates the need for expensive substrate.

Metalcraft Roofing has more than 50 years experience in the roofing industry and has 13 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.
**STYLE AND PERFORMANCE**

Espan® has been designed for style and performance in mind and is Metalcraft Roofing’s new standing seam roof profile. The high ribs create strong defined shadow lines and combined with concealed fixings provide for superior weather performance.

New Zealand Steel is used to give the product extra strength and rigidity. Espan® is available in two widths; 340mm and 470mm. Different pan options are also available, you can choose from either a flat pan for a strong sleek look or have swages in the pan creating extra shadow lines and providing for extra profile strength.

---

**ESPAN® WITH A FLAT PAN**

340mm or 470mm width options

---

**ESPAN® WITH SWAGES IN THE PAN**

340mm or 470mm width options

Although Espan® is designed to have a flat pan, swaging is also available as an option.

---

**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.

---

**RECOMMENDED FIXINGS**

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

---

**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 or flashings.

The minimum pitch for Espan® is:

- 3° after deflection for sheet lengths of 40m.
- 4° after deflection 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.

---

**SOLAR ENERGY**

Espan® 470 can accommodate either PV solar laminates (Colorsteel® Maxx® only) or clip on solar panels. Espan® 340 can accommodate clip on solar panels and allows for optimum solar energy generation. Please refer to the solar brochure for more information.

---

**PRODUCT APPLICATION**

Roofing down to 3 degrees (after deflection) and as a vertically laid wall cladding.
INNOVATIVE CLIP SYSTEM

Espan® has a unique clip system that allows for concealed fixings. The Espan® roofing simply locks onto the clip and allows for superior weather performance as it eliminates the need for fixing penetrations through the pan. Another great benefit of the clip system is that Espan® has great spanning capabilities and eliminates the need for an often expensive substrate. The clips are fixed directly onto the purlins at recommended spans depending on thickness and wind loadings.

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.

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 MRM 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.

WARRANTIES

The correct grade of material for use in various environments is given in the New Zealand Steel Environmental Guide. Material warranties are closely linked to environmental categories. The NZ Steel Environmental Categories Brochure gives a guide to the classification of 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.
OIL CANNING

Oil canning is an inherent characteristic of gauge 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.

Please refer to MRM NZ Metal Roof and Wall Cladding Code Of Practice - Section 2.3.5 for more information. (www.metalroofing.org.nz).

Refer also to MBIE - Guide to tolerances, materials and workmanship in new residential construction 2015 which advises oil canning is a common occurrence with products which have standing seams or wider profile patterns. This is not considered a defect and will become less apparent with weathering.

The end result of the profile is dependent upon the quality of the timber substructure that supports it so it is critical that the roof purlins be square and level for optimum results.

INSTALLATION

Installation of Espan® is as per the MRM Code of Practice, for secret fixed profiles and requires:

Pre Installation:

Check Timber work:

Installers must check timber work is level. Any risk of deviation will give rise to and result in increased oil canning and roof noise.

Roofing should not be fitted if moisture content exceeds 18% Max. Refer MRM Code of Practice.

Espan® Installation:

Clip spacings and fixings as per Metalcraft Roofings - loadspan tables. www.metalcraftgroup.co.nz.

Take care when fixing into cavity battens to ensure the fixings are not over tensioned and that the fixation clips are positioned centrally. Cavity battens should not be crushed and the installers must take care when fixing. Crushed cavity battens will give rise to and result in increased oil canning and roof noise as it will restrict the free movement of Espan® when subjected to thermal expansion and contraction.

Ensure straight alignment of fixing clips and ensure the first Espan sheet is aligned, Espan® should be Installed as per consented drawings and as per MRM Code of Practice.

Stopends - Use only approved Metalcraft Roofing stopend tools and Turn Up and Turn Down Tools.

A minimum 30mm stopend height is allowed for Espan®.

For Flashing details and installation details recommended by Metalcraft Roofing visit: www.metalcraftgroup.co.nz

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.

HANDLING AND STORAGE

Detailed information is included in the New Zealand Steel Installers Guide. Important considerations are as follows:

• Site Storage which ensures sheets are dry & 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.
BRANCHES

WHANGAREI
42-44 Rewa Rewa Road, Whangarei
09 470 0870
sales.whangarei@metalcraftroofing.co.nz

AUCKLAND NORTH SHORE
4 Silverfield, Wairau Park, Glenfield, Auckland
09 444 1813
sales.auckland@metalcraftroofing.co.nz

AUCKLAND EAST TAMAKI
26 Trugood Drive East Tamaki, Auckland
09 273 2820
orders.akl@metalcraftroofing.co.nz

HAMILTON
25 Sheffield Street, Hamilton
07 849 3807
sales.hamilton@metalcraftroofing.co.nz

TAURANGA
42 Poturi St, Tauriko, Tauranga
07 575 7032
sales.tauranga@metalcraftroofing.co.nz

ROTORUA
15 Monokia Street, Rotorua
07 350 1138
sales.rotorua@metalcraftroofing.co.nz

NEW PLYMOUTH
218 De Havilland Drive, Bell Block, New Plymouth
06 755 2113
sales.newplymouth@metalcraftroofing.co.nz

PALMERSTON NORTH
76 Maiden Street, Palmerston North
06 358 9149
sales.palmerston@metalcraftroofing.co.nz

HASTINGS
1454A Omahu Road, Hastings
06 873 9020
sales.hastings@metalcraftroofing.co.nz

WELLINGTON
201 Gracefield Rd, Seaview, Lower Hutt
04 566 2253
sales.wellington@metalcraftroofing.co.nz

CHRISTCHURCH
85 Columbia Ave, Hornby, Christchurch
03 349 7350
sales.christchurch@metalcraftroofing.co.nz

CROMWELL
20 McNulty Road, Cromwell
03 445 4180
sales.cromwell@metalcraftroofing.co.nz

For more information on Metalcraft Roofing visit: www.metalcraftroofing.co.nz
Metalcraft Roofing is part of United Industries Ltd. For more information on United Industries visit: www.unitedindustries.co.nz.