

# MCRB40 ROOF BATTEN

PRODUCT AND INSTALLATION GUIDE



# WHO WE ARE

## METALCRAFT ROOFING

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We have been operating since the 1950's and originated in the lovely town of Palmerston North. With more than 60 years experience in the industry, we have established a reputation for both manufacturing high quality roll formed products and for providing an unrivalled level of service.

We consider ourselves to be New Zealand's largest privately owned roofing company and experts at manufacturing. We manufacture a wide range of products using locally sourced steel from New Zealand Steel. Solid material warranties backed by New Zealand Steel will give you an assurance of quality and peace of mind.

We also operate two structural manufacturing plants which share production sites with the Metalcraft Roofing branches at Auckland and Christchurch. These branches manufacture and supply a wide selection of purlins, girts and tophats to the construction markets throughout New Zealand.

We are members of:  
The Roofing Association, New Zealand.  
New Zealand Metal Roofing Manufacturers Incorporated.



### BRANCHES

We have 12 branches servicing New Zealand wide. They are geographically positioned from Cromwell to Whangarei allowing us to service local regions from Cape Reinga to Bluff.

### BRANCH LOCATIONS

Whangarei  
Auckland, Hobsonville  
Auckland, East Tamaki  
Hamilton  
Tauranga  
Rotorua  
Hastings  
New Plymouth  
Palmerston North  
Wellington  
Christchurch  
Cromwell

## METALCRAFT ROOFING

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We locally manufacture a wide range of products, suitable for both residential and commercial applications, these products are manufactured using steel from New Zealand Steel, these include:

- Longrun roofing profiles
- Lightweight metal tiles
- Metal fencing
- Gutters, fascias and downpipes
- Purlins, girts, tophaps & bracing
- Composite tray flooring

We can also supply you with:

- Solar energy solutions
- Asphalt shingles
- Insulated panels

## METALCRAFT INSULATED PANELS

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Metalcraft Insulated Panels, our sister company specialises in the manufacture and supply of insulated panels.

All products are backed by solid warranties and the range of insulated panels, supplied by Metalcraft Insulated Panels is used in a variety of applications from Industrial and commercial coolstore to agricultural and architectural buildings. Some interest has developed within the residential sector for clients wishing for a warm roof solution.

### BRANCHES

Metalcraft Insulated Panels head office is in Auckland and services New Zealand wide.

# MCRB40 ROOF BATTEN ADVANTAGES

***Metalcraft Roofing's MCRB40 roof battens are a practical, low-maintenance, and reliable choice for roofing and they can be fitted to timber and steel trusses, ideally suited to timber framed homes, steel framed homes, buildings and carports.***

## INTRODUCTION

Metalcraft Roofing's MCRB40 have been specifically designed in New Zealand to provide structural bracing for both residential and light commercial buildings within the scope and limitations of the current NZS3604:2011 Standard including AS/NZS1170.

## BENEFITS OF USING METALCRAFT ROOFING MCRB40 40MM BATTENS

- **Durability:** Steel battens do not absorb moisture, offering a durable substrate to fix your roofing and flashings into.
- **No Separation Required:** The steel battens are compatible with steel longrun roofing and no separation is required.
- **Strength and Stability:** Stronger and more stable, steel battens support heavy loads and maintain structural integrity.
- **Knurled Mounting Surface:** The two-way dimpled surface; one acts as an increased friction surface that reduces drag when applying underlay roof sheeting. The reverse dimple provides a screw guide for ease of installation of sheet products.
- **Easy Lapping:** Resulting in faster installation without compromising on quality.
- **Rolled Safety Edge:** Provides for easy handling of the product. Making battens much safer and easier to work with.
- **Pre Mitred Ends:** Mitred ends for ease of installation into hips and valleys, saving installation teams time & minimising waste.
- **Expansion:** Metalcraft Roofing's MCR40 roof battens expand and contract at the same rate as steel roofing materials in extreme temperate changes, so they minimise the likelihood of buckling ridge flashings.
- **Lightweight and Easy to Handle and Installation:** The roof battens stack on top of each other, taking up minimal space on site.
- **Consistency:** Steel battens are rollformed for consistency and uniformity.
- **Fire Resistance:** Steel is non-combustible, offering better fire safety.
- **Eco-Friendly:** Recyclable and lower maintenance needs make steel more sustainable.

## DURABILTY

Durability of 50 years is required to satisfy the NZBC, Metalcraft Roofing's MCRB40 roof battens must be designed, used and installed within the limitations of associated span and spacing charts and in accordance with New Zealand Steel's Durability Statement and Metalcraft Roofing's product literature.

## PERFORMANCE

Metalcraft Roofing's MCRB40 (40mm) roof battens have been engineered to provide a substrate, for residential and light commercial applications when used within the limitations of associated span and spacing charts and in accordance with New Zealand Steel's Durability Statement.

## MATERIAL SPECIFICATIONS

The galvanised coating used on Metalcraft Roofing's MCRB40 roof battens must be used in environments as per New Zealand Steel's Durability Statement. The coating must be kept clear of corrosive environments and should not be used in contact with chemically treated timber or other treated products. In the presence of moisture. If there is evidence of damage to the coating, the area should be cleaned and spot primed to the suppliers specifications.

## COMPATIBILITY WITH ASSOCIATED PRODUCTS

Metalcraft Roofing's MCRB40 roof battens are compatible with most associated building products. Runoff from or contact with materials that are incompatible with zinc should be avoided. It is recommended that the installer seek advice if in doubt.

## WHO MAY INSTALL METALCRAFT ROOFING MCRB40 BATTENS

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Installation of Metalcraft Roofing's MCRB40 batten is recommended to be undertaken by trained installation professionals or supervised by those with the appropriate license category where the building work has been identified as restricted building work.

## HEALTH AND SAFETY

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Each of our branches have a comprehensive Health and Safety Policy. We are committed to providing and maintaining a safe and healthy working environment for the people that work for us, our visitors and all persons using our premises as a place to work. It is important to follow good practice at all times and to ensure appropriate safety precautions are taken when installing Metalcraft Roofing's MCRB40 roof battens.

## EXTENT AND LIMITATIONS OF USE

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Metalcraft Roofing's MCRB40 roof batten is designed for use as purlins in steel and timber framed residential and light commercial applications within the limitations of associated span and spacing charts and in accordance with New Zealand Steel's Durability Statement.

## LIABILITY

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Metalcraft Roofing will not accept any liability for its bracing products and systems which are not correctly installed as stipulated in this manual.

## DISCLAIMER

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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 Roofing branch is recommended to confirm current specifications and availability.

## PRODUCT HANDLING, STORAGE, INSTALLATION & MAINTENANCE REQUIREMENTS

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Metalcraft Roofing's MCRB40 roof battens must be handled, stored and installed using the procedures outlined in this document and as per New Zealand Steel's Durability Statement.

The following factors could limit the performance of the product:

- Site or storage or transit exposure that allows the product to get wet and trap water between flat surfaces. If this happens the product should be dried and restacked.
- Damage to the profile of surface coating during, handling, storage, installation or by other trade work.
- The product must be installed in a manner for which they were designed without imposing excessive loads during construction or in their later use.
- All fixings to structural steel or timber must be completed before any loads are imposed.

Other work outside the procedures outlined in this document and as per New Zealand Steel's Durability Statement, should be carried out under the Design Engineers Supervision as some loss of strength may occur.

## USAGE OUTSIDE GUIDELINES

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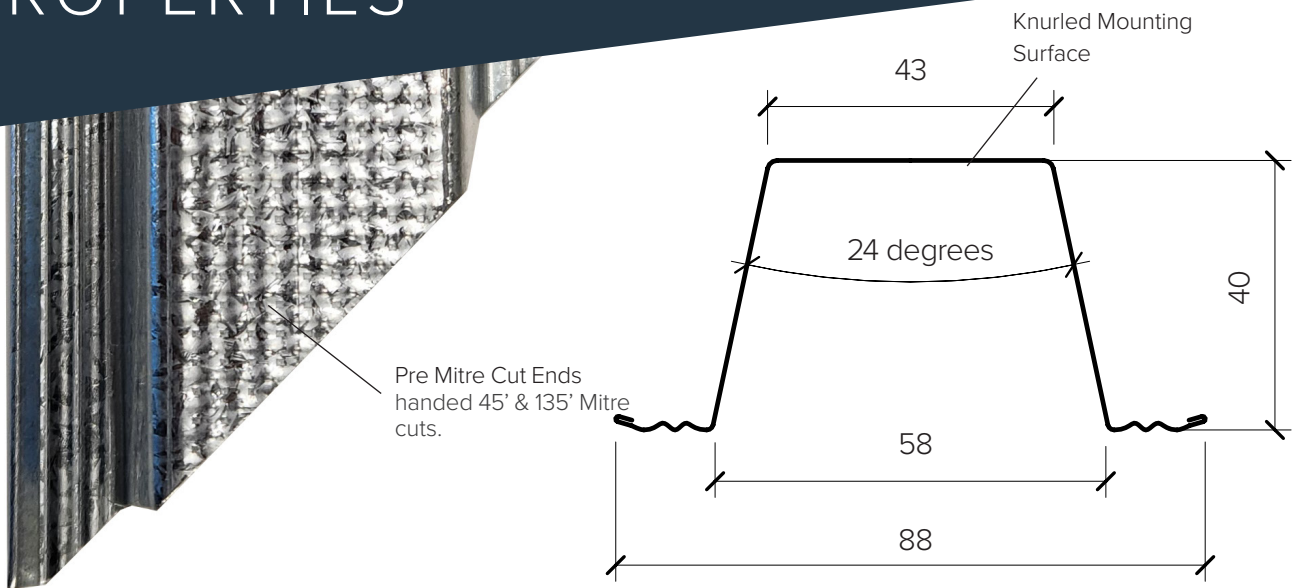
Where Metalcraft Roofing's MCRB40 roof battens are being used outside the limitations and procedures given in this manual and the New Zealand Steel's Durability Statement -together with any doubt as to the handling, storage or installation of this product, written approval should be obtained from the manufacturer for any such specific project and prior to the project commencing.

## TECHNICAL ASSISTANCE

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For technical assistance please refer to:  
[www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz)

# MCRB40 PRODUCT PROPERTIES



## MATERIAL SPECIFICATION MCRB40

MATERIAL THICKNESS	0.55BMT & 0.75BMT
TENSILE GRADE	G550 (550MPA MINIMUM YIELD STRESS)
CORROSION RESISTANCE	Z275 (MINIMUM 275GM/SQ.M ZINC COATING)
DURABILITY	UP TO 50 YEARS*

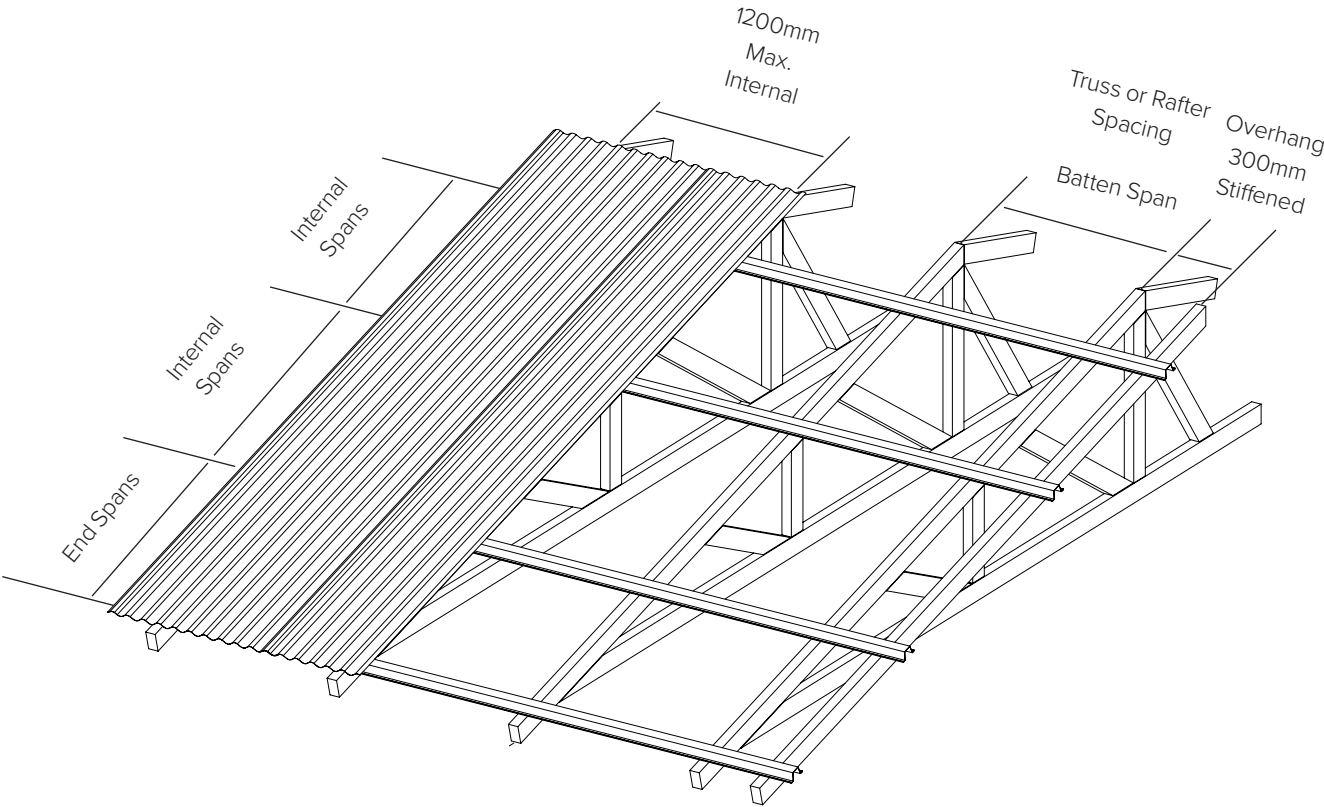
\* Durability of 50 years is required to satisfy the NZBC, Metalcraft Roofing's MCRB40 roof battens must be designed, used and installed within the limitations of associated span and spacing charts and in accordance with New Zealand Steel's Durability Statement and Metalcraft Roofing's product literature.

## DETAILS

AVAILABILITY	MCRB40 is available in 0.55 and 0.75BMT Stock lengths of 6.5 metres, With handed 45° & 135° Mitre cuts.
HANDLING AND STORAGE	RB40 MCRB40 Should be stored in a flat, dry area off the ground.
ENVIRONMENT	Care for your environment. Steel is 100% recyclable.
PRECAUTIONS	The zinc coating used to protect Metalcraft Roofing's MCRB40 is not recommended for use in severe industrial or highly corrosive environments, within 500m of saltwater locations & in accordance with the scope and limitations of the New Zealand Steel Galvsteel Durability Statement. Care must be taken not to damage the protective galvanised coating, or expose the product to environmental conditions that may cause premature corrosion. Take appropriate safety precautions.
DESIGN & FLEXIBILITY	While top hat products are very versatile, independent engineering should be carried out for applications not outlined in these instructions.
FEATURES	Increased friction surface. Rolled safety edge – for ease of handling. Anti-slip screw guides for ease of installation of sheet roofing.
CUTTING	Care must be taken to not damage the protective Zinc coating. If cutting is required, you may use any of the following: Tin Snips or a hacksaw. Cold cut saw (burrs must be cleaned and removed)
PITCH	Designed for roof pitches up to maximum 30 degrees.

# SPAN AND SPACINGS

The installation of the MCRB40 Roof Batten system must be in accordance with the guidelines specified in this manual. It is recommended to be undertaken by trained installation professionals or supervised by those with the appropriate license category where the building work has been identified as restricted building work.



# MAXIMUM SPAN TABLES

Tables are supported by Engineers calculations. Refer Redco Engineering Report: 18053 for full engineering evaluation.

METALCRAFT MCRB4075 - 0.75MM BMT MAX SPAN CHART				
WIND ZONES	SPACING (mm) -MAX SPAN (mm)			
	300 Spacing	600 Spacing	900 Spacing	1200 Spacing
<b>MEDIUM</b> (37m/s)	1200	1200	1100	1000
<b>HIGH</b> (44m/s)	1200	1100	1000	900
<b>VERY HIGH</b> (50m/s)	1200	1000	900	800
<b>EXTRA HIGH</b> (55m/s)	1200	1000	800	700*

METALCRAFT MCRB4055 - 0.55 MM BMT MAX SPAN CHART				
WIND ZONES	SPACING (mm) -MAX SPAN (mm)			
	300 Spacing	600 Spacing	900 Spacing	1200 Spacing
<b>MEDIUM</b> (37m/s)	1100	1000	1000	900
<b>HIGH</b> (44m/s)	1100	1000	900	800
<b>VERY HIGH</b> (50m/s)	1100	900	800	700
<b>EXTRA HIGH</b> (55m/s)	1100	800	700	600*

## NOTES:

- \* Purlin span requires 3/12-11 x 40mm screws into 0.55mm (minimum) B.M.T steel substrate.
- Purlins are designed for a roof with maximum pitch of 30 degrees.
- Purlins are designed to span continuously over minimum 4 supports (Triple spans).
- Maximum cantilever overhang for soffit takes 40% maximum supported span.
- Purlins are specifically designed to meet the critical loading combinations in AS/NZS1170:2011.
- The design is based on a local wind pressure,  $k_1 = 2.0$
- Designed for roof point load of 1.1kN (minimum sharing between 2 purlins)

**All spans in above tables needs to be checked against the pull out vlaues of the fixings of the roofing iron into either MCRB40 0.55mm BMT and 0.75mm BMT as these could be the limiting factors. Requires Engineers sign off.**

APPROVED MCRB40 FASTENERS	
APPLICATION:	RECOMMENDED FASTENER
FIXING METAL BATTEN TO TIMBER SUBSTRATE	2 x 12 x 40 Screws Minimum 30mm penetration into the substrate
STEEL SUBSTRATE 0.55BMT	2 x 12 x 16 Tekes Minimum 3 full threads penetration



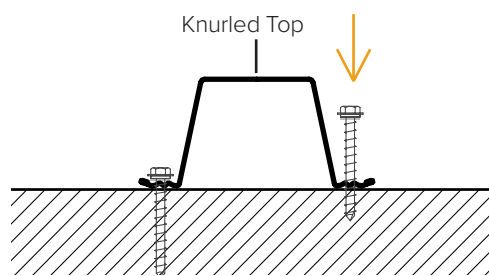
# INSTALLATION

Installation of MCRB40 40mm roofing batten is recommended to be undertaken by trained installation professionals or supervised by those with the appropriate license category where the building work has been identified as restricted building work. Metalcraft Roofing has provided the following installation guide for the proper MCRB40 40mm roofing batten installation.

Please ensure you are using the latest guide, downloadable from: [www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz)

## BATTEN PLACEMENT

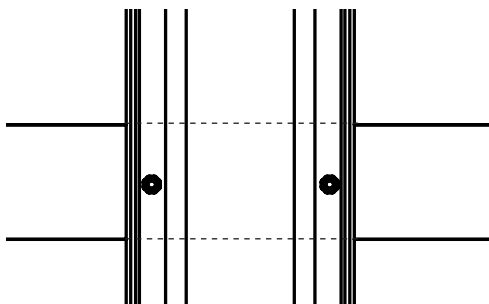
MCRB40 should be fixed directly to the truss, with one fixing per side of the top hat profile. The integrated screw guide assists with the proper locating of the approved fastener during installation.



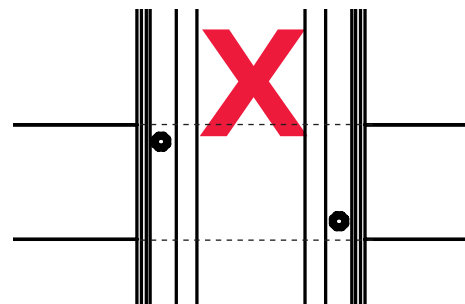
## FASTENER ALI

Proper alignment of the approved fasteners is critical. MCRB40 provides the substrate for fixing roofing products. Correct installation of MCRB40 requires these to be fixed at every truss junction. Fasteners must be fitted inline, centrally on the structural support.

### CORRECT FIXING

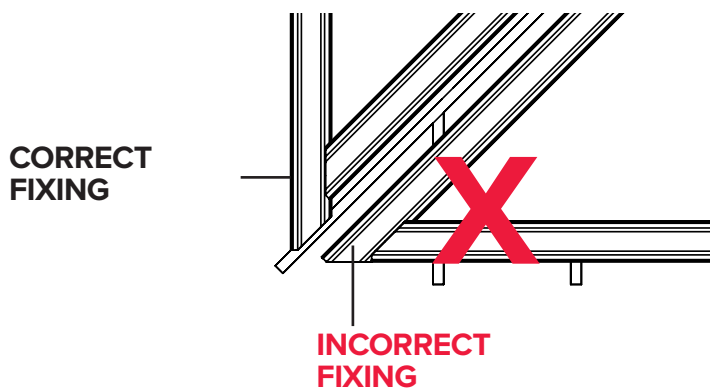


### INCORRECT FIXING



## CONSTRUCTING SYSTEM

- Install Lower MCRB40 around the perimeter of the structure.
- Secondly, Install ridge battens.
- Followed by hips and valleys.
- Intermediate battens are then spaced according to the designed wind zone requirements of the structure and in consultation with the attached span charts.

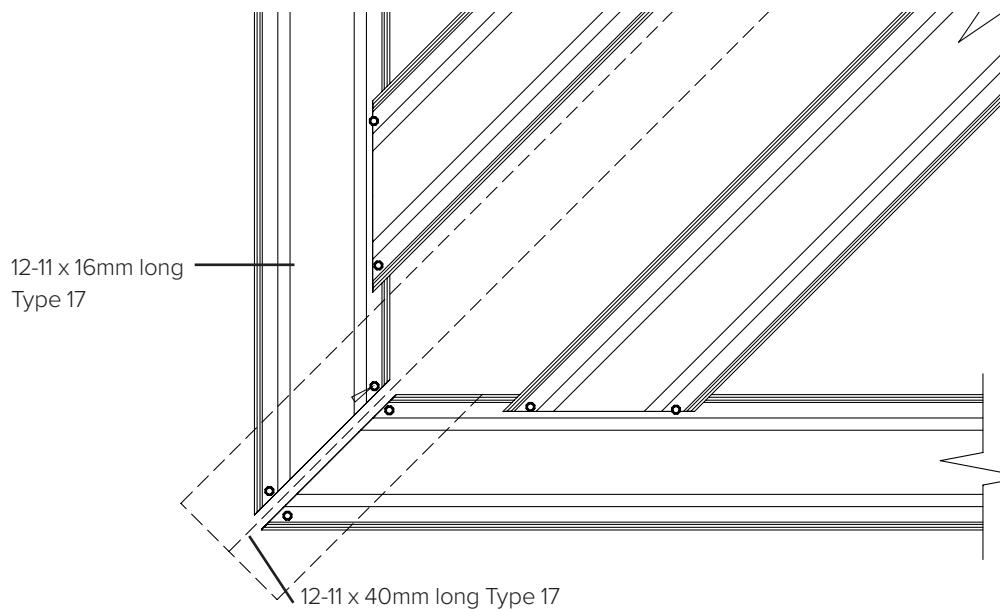


## HIPS AND VALLEYS

MCRB40 are supplied precut with 45° and 135° mitres for easy installation.

Perimeter battens should be fitted as closely as possible to the centreline of the structural support.

Fix batten's vertical battens with 12-11 Uni Tek to Perimeter as per the following detail.

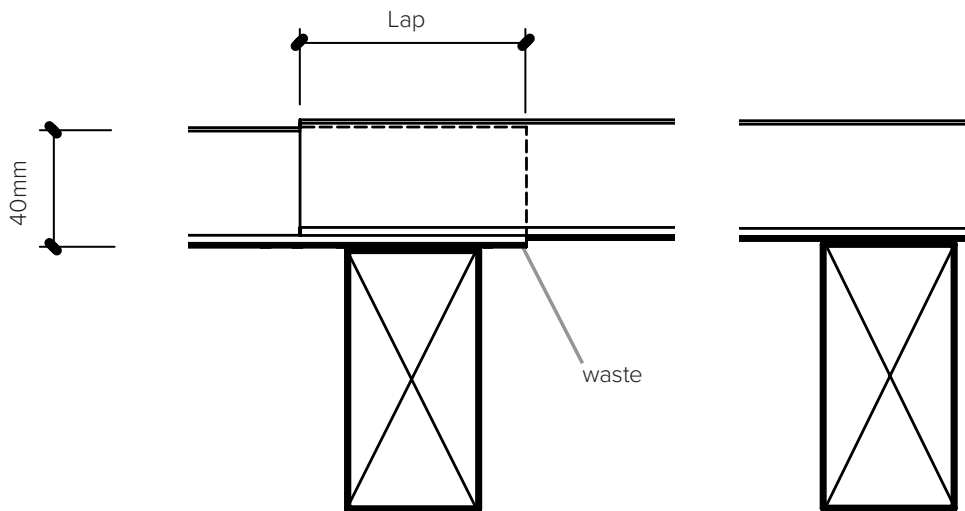


# INSTALLATION

## JOINTING

MCRB40 should always be installed from one end of the roof for ease of installation.

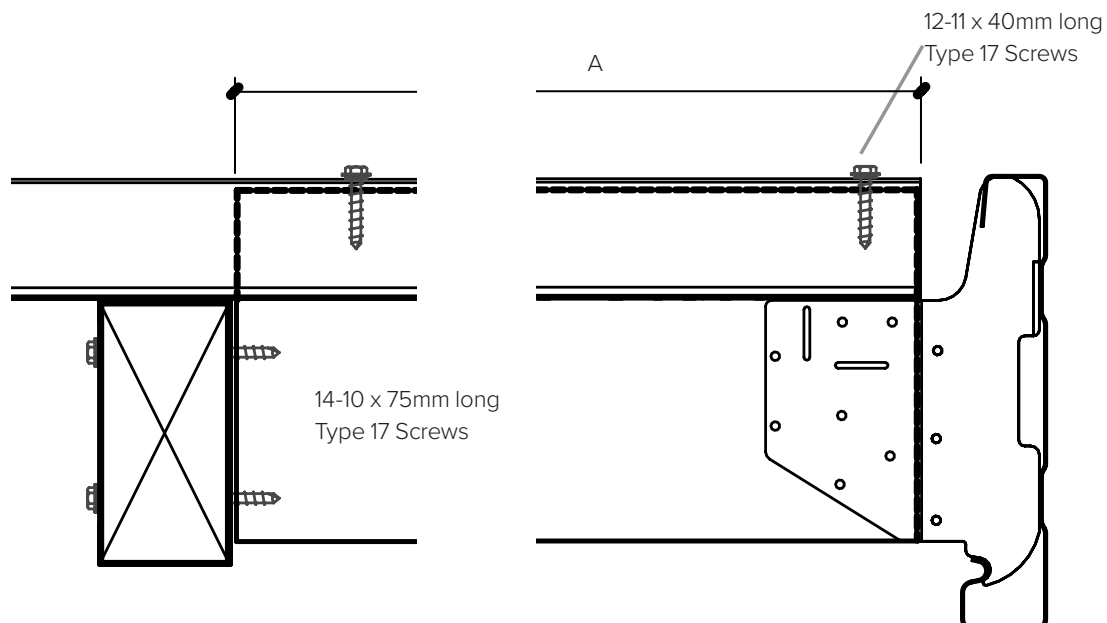
Lap joints should be carried out over a structural member. Allowing a minimum of 100mm of overlap with fasteners installed through both sections into the structure, using correct fasteners & alignment.



## CANTILEVER

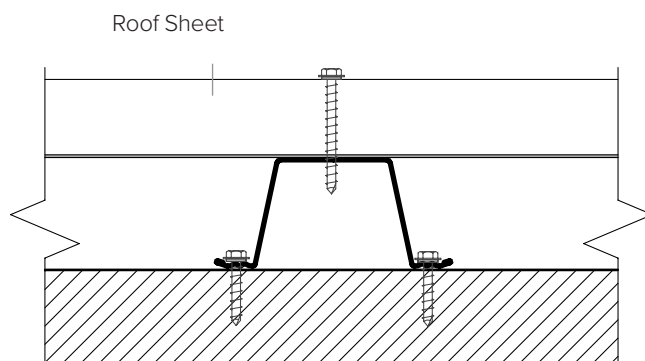
A= The maximum cantilever support span is 40% of the maximum supported span or up to a maximum of 300mm.

Beyond this, MCRB40 must be fully supported. Engineering details are required for batten exceeding 300mm overhang.



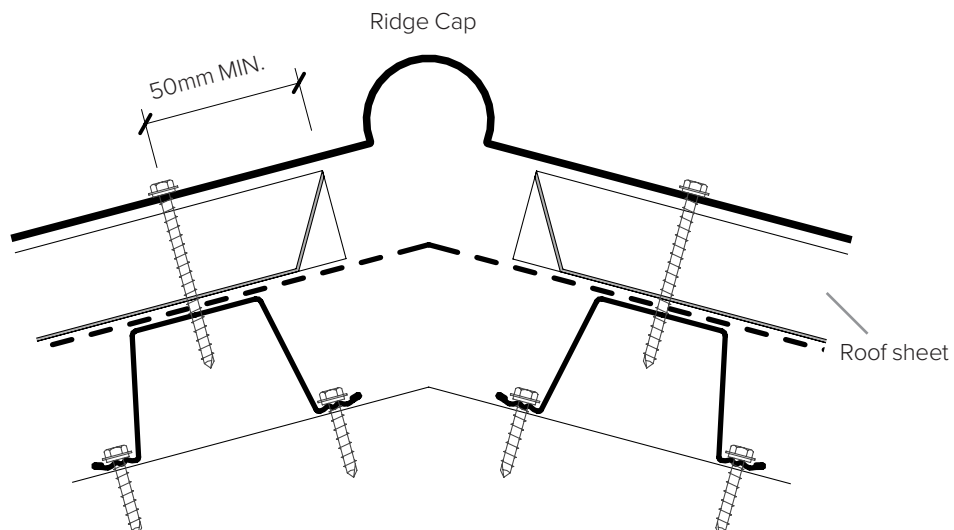
## INSTALLATION OF UNDERLAY / ROOFING

Both Kraft and synthetic underlay are approved for use. With corrugated iron, this is applied over the installed battens. Attach the underlay to the batten using double sided tape, and wafer tek screws. Alternatively, magnets can be used. Roof sheeting should be installed as per manufacturer's instructions and in accordance with RANZ best practice guidelines.



## FIXING THE RIDGE

Ridge fixing must be a minimum of 50mm from the roof sheet's end, per manufacturer's guidelines.



# BRANCHES

## WHANGAREI

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

## AUCKLAND HOBSONVILLE

25 -27 Westpoint Drive, Hobsonville, Auckland  
09 444 1813  
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## AUCKLAND EAST TAMAKI

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09 273 2820  
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## HAMILTON

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07 849 3807  
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## TAURANGA

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## CHRISTCHURCH

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## CROMWELL

20 McNulty Road, Cromwell  
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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.metalcraftroofing.co.nz](http://www.metalcraftroofing.co.nz) .  
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For more information on United Industries visit:  
[www.unitedindustries.co.nz](http://www.unitedindustries.co.nz).