



BATTENMAN[®] CB22

CEILING BATTEN SYSTEM

INSTALLATION MANUAL
NEW ZEALAND



GENERAL INFORMATION

PREFACE

Batten Manufacturers limited, Trading as BATTENMAN, is a New Zealand owned and operated manufacturer of innovative products and systems to the construction sector.

Specialising in roll formed steel products and componentry.

For more information on BATTENMAN building products, please refer to www.battenman.co.nz or Phone 0508 BATTEN (0508 2288 36)

INTRODUCTION

BATTENMAN CB22 Ceiling battens have been specifically designed and rigorously tested 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.

TECHNICAL ASSISTANCE

For technical assistance please refer to www.battenman.co.nz or Phone 0508 BATTEN (0508 22 88 36)

WARRANTY

For more information on BATTENMAN building products and system warranties please refer to www.battenman.co.nz or phone 0508 BATTEN

LIABILITY

Batten Manufacturers Limited T/A BATTENMAN will not accept any liability for its bracing products and systems which are not correctly installed as stipulated in this manual.

PERFORMANCE

BATTENMAN® CB22 metal battens have been independently engineered to provide a premium, structurally sound substrate, for residential and light commercial applications

BENEFITS OF USING BATTENMAN CB22 CEILING BATTENS

Lightweight Steel Battens are the future of construction, Providing a superior plasterboard installation system. With simple installation, The dimensionally accurate substrate offers Strength, Durability and Reliability.

Plasterboard fixers love the embossed surface for easy screw placement in difficult areas.

LIMITATIONS OF USE

For interior application only. And for strict use In accordance with this manual

WHO MAY INSTALL BATTENMAN CB22

Installation of CB22 Ceiling battens is recommended to be undertaken by trained BATTEMAN installation professionals and supervised by those with the appropriate license category where the building work has been identified as Restricted building work.

HEALTH AND SAFETY

It is important to follow good practice at all times and to ensure appropriate safety precautions are taken when installing BATTENMAN® CB22 and all supporting components.

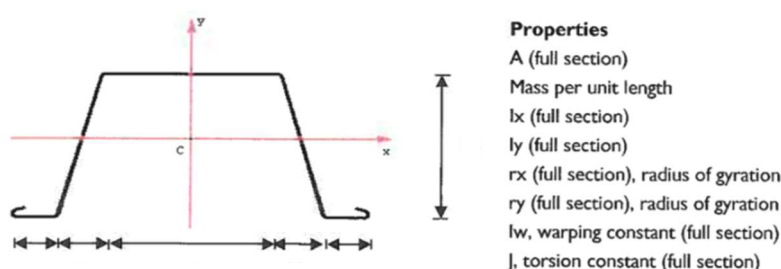
COMPATIBILITY WITH ASSOCIATED PRODUCTS

BATTENMAN® CB22 are compatible with most associated building products. Run off from, or contact with materials that are incompatible with zinc should be avoided. It is recommended that the installer seeks advice if in doubt.

BATTENMAN CEILING BATTENS CB22

Battenman CB22 metal ceiling battens have been designed to comply with NZS3604:2011 standard, as they apply to residential and light commercial timber framed buildings.

To achieve the required performance of the **BATTENMAN® CB22** system the correct components must be used and installed in strict accordance with the installation instructions and diagrams



MATERIAL SPECIFICATION CB35	
MATERIAL THICKNESS	.50BMT
TENSILE GRADE	G550 (550MPa Minimum yield stress)
CORROSION RESISTANCE	Z275 (Minimum 275gm/sq.m Zinc coating)
AVAILABILITY	Available in custom lengths up to 7.5m

DETAILS	
HANDLING AND STORAGE	BATTENMAN CB22® Should be stored in a flat, dry area, off the ground.
PRECAUTIONS	Corrosive environments, The zinc coating used to protect BATTENMAN® CB22 is not recommended for use in unlined structures in severe industrial, or highly corrosive environments located within one kilometre of salt water locations.
FIXING OF PLASTERBOARD	Refer to manufacturers recommendations regarding suitable fasteners and fixing details for sheeting.
DESIGN & FLEXIBILITY	CB35 Ceiling battens can be used to construct a plasterboard fixing substrate in accordance with the guidelines explained in this manual.

BATTENMAN CB35 SYSTEM	
FIXINGS	90mm Ringshank nails, or 32mm x 8g Wafer screw 10G 16x16 TEK wafer screw (Batten to Channel/Angle connection)
FRAMING	Moisture content of less than 16% at time of lining, must comply with AS/NZS2589.1:1997.
ALLOWABLE WIND PRESSURE	Suitable for up to Extra High Windzone

PRODUCT DESCRIPTION AND FEATURES

The BATTENMAN CB22 ceiling system provides construction professionals with a premium plasterboard fixing substrate, for all residential and light commercial projects.

Compatible with all popular domestic ceiling plasterboards, BATTENMAN Steel ceiling battens provide significant advantages over traditional ceiling fixing methods. .

Custom run ceiling battens are manufactured for individual projects and are installed by approved installation agents, known as BATTENMAN

The system is both lightweight, and dimensionally stable. Making handling easy and improving the overall finish of your construction project.

The custom run battens minimise construction waste, which is not only better for the environment, but is more cost effective for the end user. It also makes the system considerably faster to install. Helping to reduce construction times, and labour cost.

Making subcontracting this business so affordable, that not only volume builders, but many private builders are switching to the system.

The 22mm deep profile can be used both as a ceiling batten for internal fixing of ceilings and wall linings.

The top flange of the profile has an embossed surface to increase surface area for Plasterboard adhesive, while also functioning as a screw guide. Making it easier for plasterboard fixing screws to grip and "bite-in" without slippage during awkward installation positioning.

The roll formed safety edge on the bottom flange, provides improved handling during installation.

Nominal lapping (non-structural) is simple and will ensure continuity and straightness of fastener alignment.

High strength and light weight

Won't shrink warp, twist or burn

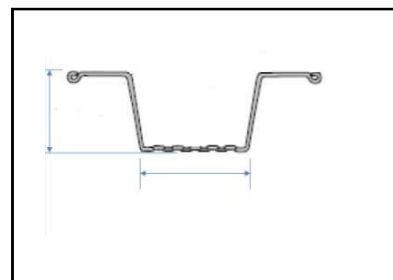
CB22 METAL CEILING BATTEN COMPONENTS

The CB22 ceiling batten system includes a range of components, to provide installers with design flexibility, for a range of construction situations.

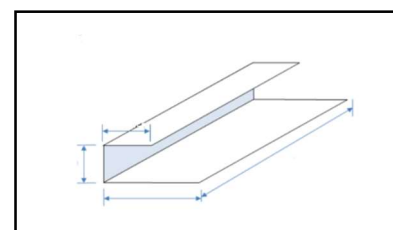
The system is suitable for Direct fix. Direct fix on clip, Ceiling height adjustment, Class 4, Class 5 ceilings.

CB22 Metal Batten

The CB35 comes in custom lengths up to 7.5m,
Available in Square cut



BC22 Batten Channel – 3.0m stock length

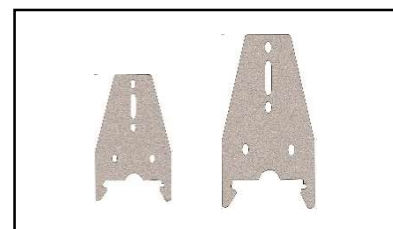


BH22 Batten Hanger

The Hanger system is available in a number of lengths to allow ceiling height to be adjusted, or allow clearance for services.

BH22 Standard length

BH22L Long length 190mm

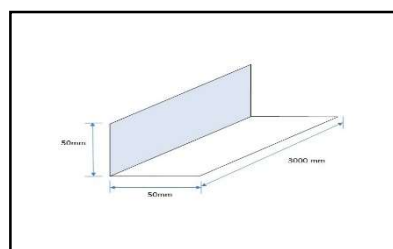


BH22

BH22L

BA5060 50x50 angle

This product comes in a 3.0m Stock length only



FASTENERS

BATTENMAN® SPECIFIED FASTENERS

APPLICATION: RAKED OR PITCHED CEILING	RECOMMENDED FASTENER
FIXING METAL BATTEN TO TIMBER SUBSTRATE	#6 Scavenger head self tapping screws. Minimum 30mm penetration into substrate
STEEL SUBSTRATE 0.55BMT	#10x16 wafer head Tek screw Minimum 3 full threads penetration

Installation

METHOD A: DIRECT FIXING

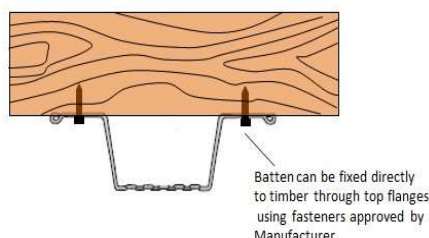
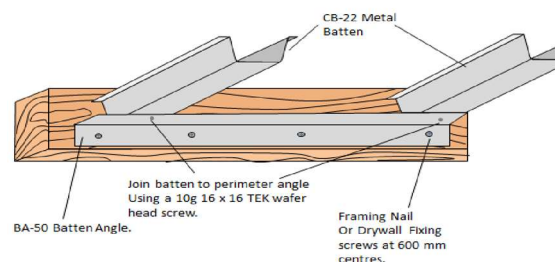
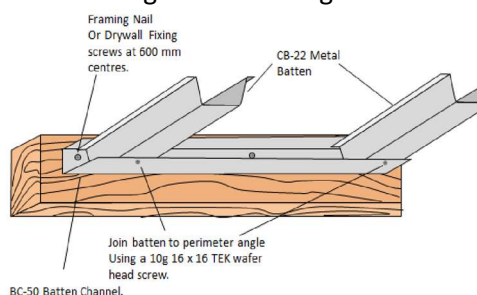
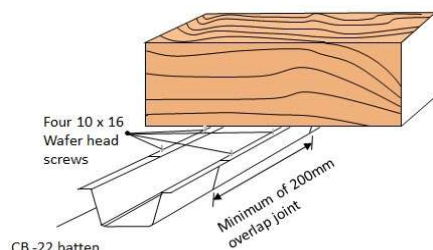


Fig-2

- Where there is no ribbon plate, fix the first batten no more than 50mm from the top plate in their longitudinal direction.
- Fix battens direct to trusses or ceiling joists using fasteners through each flange.
- When using Perimeter angle or channel, fix batten to angle using one wafer head screw.



- Join battens by overlapping battens by a minimum of 200mm directly under ceiling trusses and secure with four (4) 10-16 wafer head Tek screws. (Fig-3)



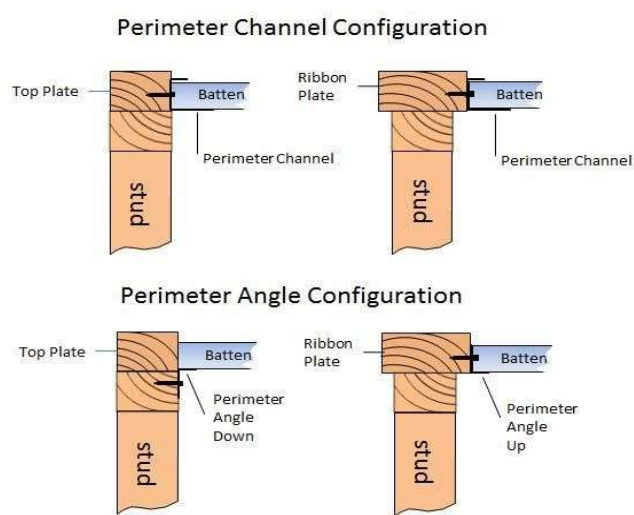
Where girder trusses are used, or the primary framing changes direction, trimmers shall be fitted to ensure the maximum spans specified are not exceeded.

Do not join battens in end spans.

- Do not direct fix batten to the underside of trafficable floors. Ceiling battens are designed to carry the weight of the ceiling only – always use batten hangers.

METHOD B: PERIMETER FIXING

- Perimeter channel to be fixed to top plate in line with batten spacing's.
- Perimeter channel is to be fixed to the top plate so that the long leg is to the bottom.
- Perimeter angle to be fixed to top plate in line with batten spacing.

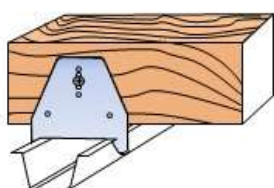


BATTEN HANGER FIXING

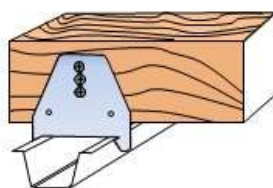
The use of Battenman Hanger plate's helps to isolate noise transmission.

- Ensure that the framing complies with the requirements of AS/NZS2589.1:1997.
- The ceiling batten hanger allows for levelling of the ceiling framing, as well as independent movement of the ceiling.
- Fix the batten hanger to the side of the truss or ceiling joist firstly by nailing or screwing through the central slot in the batten hanger.
- Adjust the batten hangers by string line or laser level until they are all level. Fix secondary nails or screws through the batten hanger after levelling and simply snap the batten into position.

- Where the ceiling is to be constructed to the underside of a trafficable floor, it is recommended that batten hangers be used.
- Leave a minimum of 10mm clear spacing between the batten and the substrate when using batten hangers.
- Supplementary bottom chord bracing may be required when fixing batten hangers.



1. Fix first screw in
Adjustment slot



2. Set batten Hanger to
correct height and
Secure with secondary fixing

CUTTING BATTENS

BATTENMAN® ceiling battens are manufactured from high quality Z275 Galvanised Steel. Care must be taken to not damage the protective galvanised coating, by exposing the product to excessive heat or

If cutting is required you may use any of the following:

- Tin Snips
- Hack Saw
- Drop saw with cold cut blade
- Angle grinder with cold saw blade

CEILING LOAD LIMITS

Point loads are to be directly fixed to the ceiling batten (not to plasterboard) using appropriate expanding anchor

BATTENMAN® CB35 POINT LOAD TABLE

SPAN	MAXIMUM LOAD DIRECTLY ANCHORED TO BATTEN
900	25KG
1200	10KG

CEILING MAXIMUM SPAN CHART

The following chart is supplied to be used with single thickness layer of plasterboard.

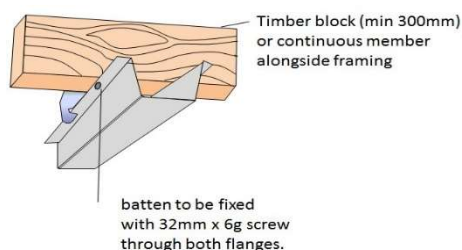
This should be read alongside Plasterboard manufacturers guidelines.

BATTENMAN® CB35 RESIDENTIAL SPAN TABLE FOR INTERNAL APPLICATION			
PLASTERBOARD THICKNESS SINGLE LAYER	MAX BATTEN SPACING	MULTI SPAN	SINGLE SPAN (UTILITY/GARAGE)
10mm	450	1200	900
13mm	600	1200	900

DIAPHRAGM CEILINGS

BattenMan CB22 metal batten systems may be used in ceiling diaphragms as required provided that the following conditions are met;

- The batten is either fixed directly to the underside of the ceiling framing OR
- The batten is fixed to a block or continuous member that has been securely attached to the ceiling framing with 4x90mm nails (minimum)



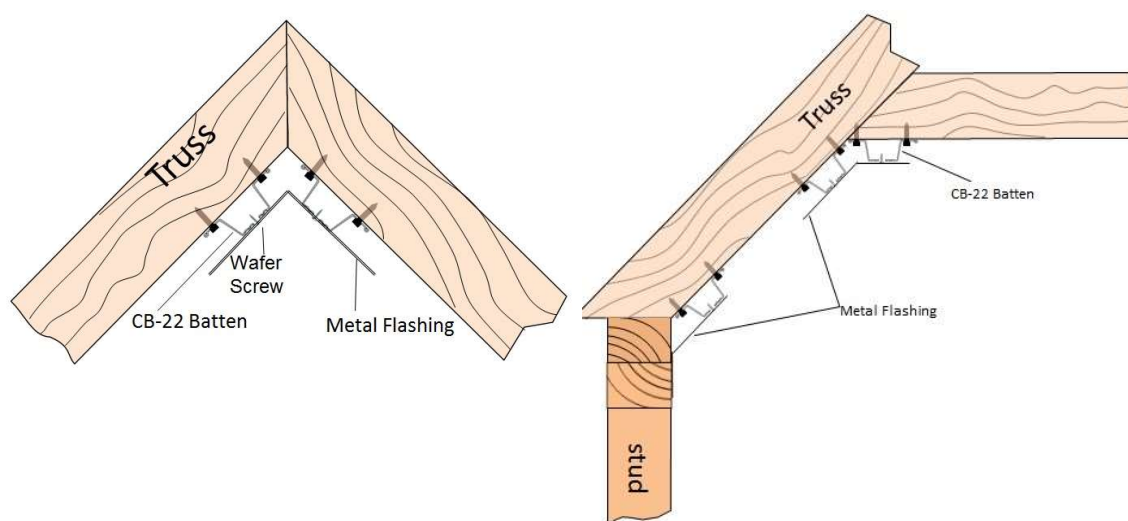
NOTE: It is not acceptable to install a ceiling diaphragm on batten hangers without additional support as shown in fig 8 below.

PITCHED AND RAKED CEILINGS

Battenman CB22 System can be used in pitched and raked ceiling applications, Changes in plane can be easily achieved by attaching a folded metal angle to the junction as per the images below.

Please note:

- Minimum 0.55mm BMT.
- Fastened on each edge using 2.8mm x 30mm Nails or 32mm x 8g wafer head screws at 300mm centres.
- Plasterboard linings to be fastened to each edge of the folded angle at 150mm centres



- Raked ceiling flashing

Pitched ceiling

COMPLIANCE WITH NEW ZEALAND BUILDING CODES

Clause B1 Structure:

The Battenman CB22 Ceiling batten system, when installed in accordance with the requirements of this manual will support the stated loads including uniformly distributed live load as per NZS 4203:1992 Table 3.4.1 for non habitable roof spaces in domestic buildings.

G9 – Electricity

Electrical wiring to be completed in accordance of G9,

Clause B2 – Durability

The Battenman CB35 Ceiling batten system when installed and used in normal dry non corrosive interior conditions will have a minimum service life of 50 years.

Clause B6 – Airborne and Impact sound.

Battenman CB35 (Perimeter channel and hangar) Is compatible with the GBDFA60B intertenancy system.

AS/NZS2589 Parts 1 & 2 : 1997

The BattenMan metal ceiling batten, as detailed in this brochure, fully complies with the following New Zealand and Australian standard:

AS/NZS2589 Parts 1 and 2:1997 for use with plasterboard and gypsum ceiling and wall linings, provided they are fitted in accordance with the manufacturer's recommendations.

WARRANTY

The BattenMan metal ceiling batten system is warranted to be free from defects in material and workmanship. We will replace and/or repair any product found to be defective, if installed by an authorised BattenMan installer.

SAFETY

When installing metal ceiling battens ensure that the following are observed to protect you and others on the job site.

- Cut steel is sharp—wear gloves. Always clear any swarf left from the cutting process.
- Always wear eye protection when cutting steel and when driving screws or nails. A screw/nail may jump off the power screwdriver or nail gun and can cause eye injuries
- Always ensure that you have a stable platform when working above ground level.
- Battens may contain traces of lubricant used in the roll forming process.
- Care should be taken when handling battens that may be slippery.
- Hearing protection should be worn when operating a nail gun.



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