



# ScrewFix™ Ceiling Batten System



## The high quality, low cost alternative to timber battens

USG ScrewFix Ceiling Battens are a dimensionally stable, cost effective steel system, expressly designed for screw attaching sheet linings such as plasterboard, fibrous plaster and fibre cement.

It is the obvious choice for all areas requiring a smoothly finished, monolithic ceiling plane, whether flat, vaulted or inclined.

### Application

The ScrewFix Ceiling Batten System offers flexibility of configuration, aesthetic appeal and fast, simple installation. It is suitable for residential constructions featuring large areas of smooth plasterboard, where a quality flat finish is required.

USG ScrewFix Ceiling Battens are equally successful in new installations, interior retrofits and construction of exterior soffits.

### Steel's Superiority

- Dimensionally stable
- Impervious to rot and fungal and insect attack
- Corrosion resistant
- Won't warp, twist or bow
- Easily worked, few tools required
- Non-combustible

USG Interiors Pacific Ltd, (formerly Donn Pacific Ltd) are the leading manufacturers of commercial ceilings in New Zealand. Over 30 years of experience is now available for residential applications with the USG ScrewFix Ceiling Batten System.

### Support New Zealand made products

## Components

### NZ Building Code Compliance:

#### Clause B1 - Structure

The USG ScrewFix Ceiling Batten System, when installed in accordance with the requirements of this brochure 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.

#### Clause B2 - Durability

The USG ScrewFix Ceiling Batten System when installed and used in normal dry non corrosive interior conditions will have a minimum serviceable life of 50 years.

#### Clause G6 - Airborne and Impact Sound

Install in accordance with Winstone Wallboard's GBDA 60b floor/ceiling system.

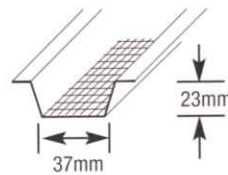
#### AS/NZS2589 Parts 1 & 2 : 1997

Gypsum linings in residential and light commercial construction- Application and finishing.

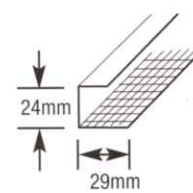
#### User friendly component design

- Rolled safety edge to Batten prevents handling injuries.
- Knurled Batten and Channel faces resist screw slip damage to sheetlinings and assists faster screw fixing.
- Low profile Batten (23mm) maximises available ceiling height, and provides greater adjustability tolerance.
- Direct fix brackets for purlin, truss or joists.
- Direct fix bracket allows fast, easy and accurate adjustment for a level ceiling.
- PC24 Perimeter Channel ideal for edge fixing to walls, bulkheads.
- Perimeter Channel back is pre-dimpled every 50mm for easier screw fixing.
- Components are USG identified to ensure system compatibility. Any substitution is likely to result in lower performance and is at the risk of the builder, designer or owner.

### Ceiling Batten FC37

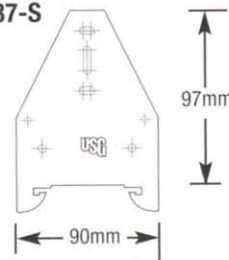


### Perimeter Channel PC24

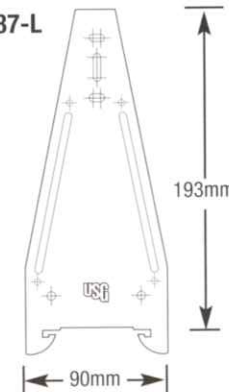


### Direct Fix Brackets

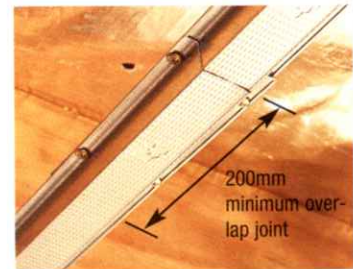
#### DF37-S



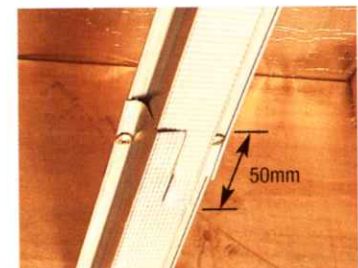
#### DF37-L



### Detail ①



### Detail ②



Alternative Batten Splice

## Installation

### ScrewFix Ceiling Batten System

- Space Battens at centres to suit lining and level of finish - to maximum of 600mm. Consult board manufacturers requirement.
- Join Battens by overlapping 200mm minimum and securing with four pop rivets or 8g-16 x 12mm minimum self drilling wafer head screw. (Detail 1).
- Alternatively join Battens by slitting one end, interlocking 50mm and securing with two pop rivets, screwing or crimping (Detail 2).
- Offset joints across ceiling. Centre of splice joint shall be no greater than 200mm from fixing at 900mm span, 250mm at 1200mm span. Joints are not to be in end spans.

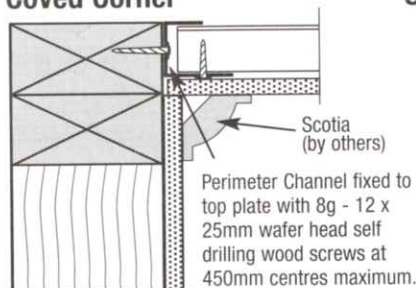
- Where Battens are parallel with Perimeter Channel, the distance between the last Batten and Perimeter Channel shall be no greater than Batten centres.

### Linings

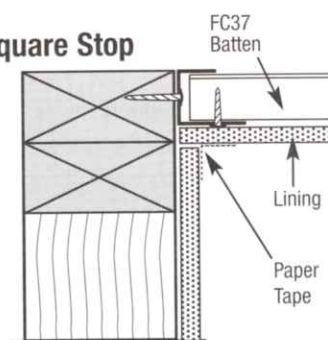
- Lining sheets are installed across the Battens.
- Butt joints centrally on Battens, stagger adjacent butt joints.
- Screw fix with appropriate self drilling bugle head screws at centres recommended by lining manufacturers.
- Locate screws between 10mm and 16mm from sheet edges.
- USG ScrewFix Batten System is used in a number of Winstone Wallboards applications for noise or fire control.

## Perimeter Details

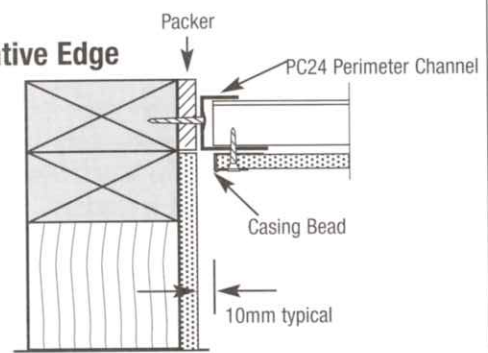
### Coved Corner



### Square Stop



### Negative Edge



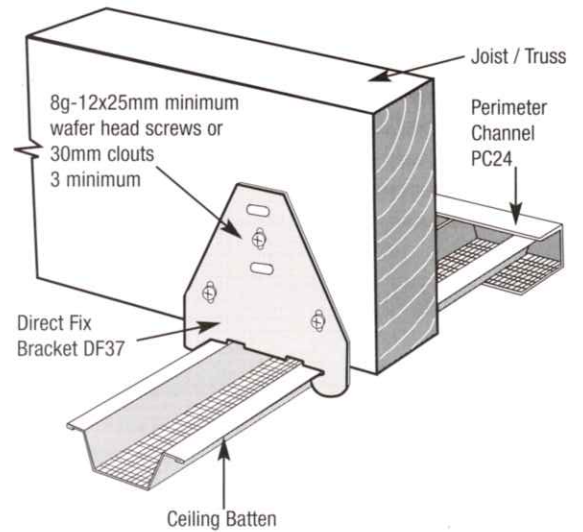
## Fixing

### Direct Fixing Bracket

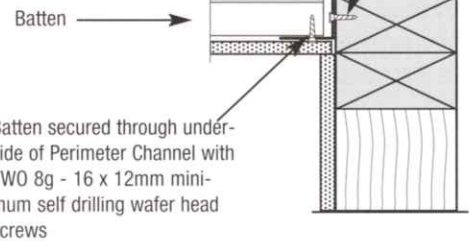
- Helps isolate noise transmission.
- Helps minimise joint cracking from structure movement.
- Maximises headroom.
- Screws or nails to joists or trusses.
- Quick, easy installation.
- 20mm slot adjustment.

### Fixing the Perimeter Channel and Batten

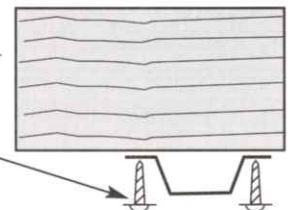
1. Establish the required finished height of the ceiling, allowing for lining thickness and any wiring, pipes etc below joists or trusses.
2. Fix the Perimeter Channel PC24 to the Top Plate or Ribbon Plate with 8g - 12 x 25mm minimum wafer head self drilling wood screws at 450mm centres maximum. Ensure Channel is level and long leg to bottom.
3. The centres of the Battens are determined by the lining board requirements. Consult the manufacturer.
4. Secure Direct Fix Brackets DF37 to joists at predetermined centres with a 8g-12 x 25mm minimum wafer head self drilling wood screw or 30 x 2.5mm galvanised clout. Use vertical slot to allow for leveling adjustment. 25mm minimum gap recommended between joist and batten for acoustic isolation.
5. Insert Batten flange into one side of Direct Fix Bracket, squeeze and rotate batten up in one movement, releasing opposite flange into slot.
6. Each Batten end shall be secured through the underside of the Perimeter Channel with two 8g - 16 x 12mm minimum self drilling wafer head screws.
7. Use a stringline, laser, or long straight edge at 90° to Battens across room to ensure Battens are straight and level. Repeat at several positions for large areas if necessary. Finish with two more screws/clouts once level, in DF37 holes or slots as suitable.
8. Battens may also be fixed directly to the underside of the trusses or joists using 8g - 12 x 25mm wafer head self drilling wood screws, but reduce isolation and are more difficult to level.



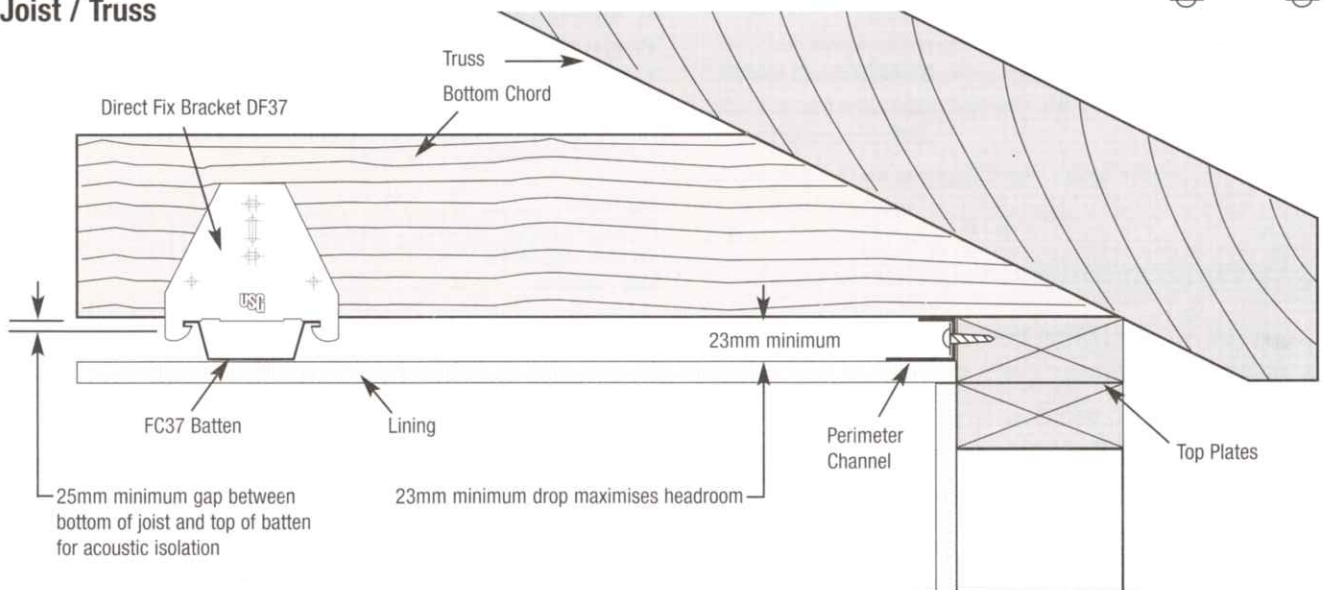
Perimeter Channel fixed to top plate with 8g - 12 x 25mm minimum wafer head self drilling wood screws at 450mm centres maximum



8g - 12 x 25mm minimum wafer head self drilling wood screws



### Joist / Truss



## Technical Information

### Maximum Allowable Loads

#### Uniform Loads (kg/m<sup>2</sup>)

From the following tables select the required level of finish deflection and the span of the ScrewFix Ceiling Batten. The maximum allowable weight is determined by the Batten spacing.

Note: The lining material may dictate at what spacing the Battens should be installed. Consult the lining manufacturers requirements.

#### Deflection of 1/600 - high finish level

Span of Batten	Batten centres		
	400 mm	450 mm	600 mm
900 mm	78kg/m <sup>2</sup>	69	52
1200 mm	31	27	20

#### Deflection of 1/300 - less critical level (visual deflection may be visible)

Span of Batten	Batten centres		
	400 mm	450 mm	600 mm
900 mm	78kg/m <sup>2</sup>	78	78
1200 mm	62	55	41

#### Important Notes:

Shaded areas of tables indicate the ceiling lining weight, plus 0.5kPa (50 kg/m<sup>2</sup>) live load to comply with uniformly distributed loads in domestic non-habitable roof spaces. (NZS 4203:1992 Table 3.4.1 Category 1 Domestic 1.1) These spans will not support the 1.8kN point load of the above category. Where roof spaces are accessible, walking planks shall be provided between roof trusses, ensuring no load can be transferred to the Battens.

#### Approximate Product Amounts per m<sup>2</sup>

		Batten Centres @		
		400	450	600
<b>Batten</b> (linear metres)		2.5	2.22	1.66
<b>Direct Fix Brackets</b>	span @ 900	2.77	2.47	1.85
	span @ 1200	2.08	1.85	1.39
<b>Perimeter Channel</b>		as perimeter of room		

#### Point Load (kg)

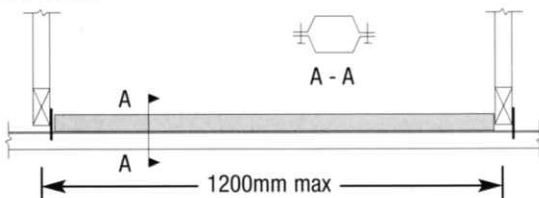
Ceiling mounted fixtures (eg: light fittings) can be supported by the ScrewFix Ceiling Batten System as follows:

Span of Batten @	Max weight
900 mm	15 kg
1200 mm*	7 kg*

#### Important Notes:

For surface attached fittings, provide additional Battens for support. For penetrating fittings eg down lights, the weight shall be no greater than 4kg.

This excludes dynamic loads (eg ceiling fans) where specific support design will be required by others. \*For spans at 1200 mm centres, back to back ScrewFix Ceiling Battens and fasten with 8g-16 x 12mm self drilling wafer head screws at 150 mm centres.



### Installation

Shall not commence until the building is fully enclosed and dry. Mechanical and electrical work above the system should be completed before installation commences. Timber elements are to be 12 - 16% moisture content at time of lining. If used externally, design and construction must ensure that wind blown moisture and chlorides do not have free entry into roof space. Any sources of moisture (eg shower rooms, spa pools, kitchens, laundries, etc) shall not allow moist air into the roof space, but shall duct to the exterior.

#### ISO 9000 Quality Assurance

USG Interiors Pacific Ltd is an accredited ISO 9001:2000 manufacturer - Licence No: 5044 by QAS.



#### Health and Safety

The material composition represents no health hazard. When handling, take care and ensure that safe work practices are adhered to at all times.

Some products may have surface treatments and sharp edges/ends. All reasonable care should be taken when handling or installing to avoid any potential injury to self or others. Users should be properly trained and supervised in the use and handling of these materials. Appropriate personal protective equipment should be used when necessary eg: gloves/glasses etc to avoid any potential injuries.

#### Handling & Storage

Store materials on a flat, dry surface and handle/store in a manner that will prevent distortion, scratches or damage of any kind by/to other trades.

#### Limitations

- Standard finish **not** for use in corrosive environments i.e. in contact with tanalised timber, chemically treated insulation products or copper piping. For additional protection consult your nearest USG representative.
- If Battens are used under roof applications thermal insulation must fully cover them to avoid thermal bridging and potential associated condensation/staining of the ceiling lining along the line of the Battens.
- For fire rated construction, consult USG or Winstone Wallboards Ltd.

#### Notes

- In accordance with USG's policy of continuous product improvement, we reserve the right to alter specifications without prior notice as technology or standards are introduced.
- All sizes and weights are nominal.
- This document has been prepared on reliance of the professional testing, advice and services provided by independent specialist organisations. USG Interiors Pacific Ltd believes the contents of this brochure to be correct at the time of printing. Whilst all care has been taken to ensure accuracy, except to the extent prohibited by law, no liability is accepted for any claim by any person, whether for loss of profits or for any other direct, consequential, indirect or special loss, damage or injury suffered by any person, and whether arising from any negligence or omission on the part of any person or otherwise directly or indirectly from the use of the information contained in this document.

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Manufactured by:  
USG Interiors Pacific Ltd  
Auckland, New Zealand

Distributor:  
**Potter Interior Systems Ltd**  
Phone: 0800 POTTER (0800 768 837)

Available From: