# GIB<sup>®</sup> Rondo<sup>®</sup> Metal Batten Systems

Specification and Installation Manual



# NATIONAL SUPPORT

 
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# GIB® RONDO® METAL BATTEN SYSTEMS PROVIDE A STABLE SUBSTRATE FOR PLASTERBOARD CEILING LININGS.

Regular users of metal batten systems consistently have fewer call-backs for movement related ceiling defects such as peaking or cracked joints and popped fasteners.

GIB<sup>®</sup> Rondo<sup>®</sup> Metal Batten systems offer framing options to enable the construction of resilient and high performing, smooth surfaces. They form an essential part in many GIB<sup>®</sup> Fire Rated and GIB Noise Control<sup>®</sup> Systems and allow for the installation of services in the created cavity.

Some of the wall and ceiling systems are suitable to use as an integral part of airtight and thermal designs for 'high performance' homes.

# WHY USE GIB® RONDO® METAL BATTEN SYSTEMS

- Consistent performance
  - Less influence from moisture or environmental factors than timber. Unlike timber battens which can vary in grade, species and with temperature and humidity
- Lighter weight
  - Lower transport costs and easier to handle on site
- Require less storage space
  - Storage space is often at a premium on building sites and a house-lot of GIB<sup>®</sup> Rondo<sup>®</sup> componentry will occupy substantially less space on site than timber battens
- Easy to achieve a flat, stable substrate
  - This results in a trouble-free ceiling and reduces the risk of costly call-backs
- Noise Control
  - Clip fix systems can noticeably improve inter-storey noise control
- Technical back up, our well established and highly rated technical team are available to quickly and efficiently handle any enquiries, call us on 0800 100 442 or email helpline@gib.co.nz

#### WHAT'S NEW OR CHANGED IN THIS BOOK?

- Introduction of GIB<sup>®</sup> Rondo<sup>®</sup> Metal Batten ceiling and wall systems for easier specification and installation using system specification ID codes
- System selectors for
  - Direct fix systems
  - Clip fix systems
  - Fully suspended systems
- Suspended ceiling specification and installation
- Full component list with parts dimensioned and SKU numbers
- Updated fastener requirements
- Links to installation videos on the GIB<sup>®</sup> Website

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#### **SCOPE OF USE**

The GIB® Rondo® Metal Batten systems covered in this literature are suitable for applications within the following scope of use:

- For buildings designed and constructed in accordance with NZS3604:2011 Timber Framed Buildings or NASH Standard for Residential and Low-Rise Steel Framing
- A maximum ceiling area of 144m<sup>2</sup>, not exceeding 12 metres in any direction
- For use in dry internal environments
- Supporting a single layer 10mm or 13mm GIB<sup>®</sup> plasterboard ceiling lining

# GIB NOISE CONTROL® AND GIB® FIRE RATED SYSTEMS

Fire rated and noise control systems have specific requirements to ensure their performance. Please refer to the relevant GIB<sup>®</sup> literature\* for details about the use and installation of those GIB<sup>®</sup> systems especially regarding requirements for multiple layers of GIB<sup>®</sup> plasterboard and perimeter detailing.

\*GIB® Fire Rated Systems and GIB Noise Control® Systems manual

# **GIB EZYBRACE® SYSTEMS**

Specific design is required to use GIB® Rondo® Metal Battens in a GIB EzyBrace® wall bracing element.

GIB<sup>®</sup> plasterboard ceiling diaphragms are stiff and strong horizontal elements that transfer loads to walls on bracing lines. Full details can be found in the GIB<sup>®</sup> EzyBrace<sup>®</sup> System specification and installation manual or the GIB<sup>®</sup> Site Guide.

#### **COMPLIANCE AND STANDARDS**

When used within the scope of application and the details in this literature, compliance is achieved with the following NZBC Clauses:

- B1 Structure
- B2 Durability
- F2 Hazardous Building Material

Relevant standards:

- AS/NZS 1170 Structural design actions
- AS/NZS 4600:2018 Cold-formed steel structures
- NZS 3404 Parts 1 and 2:1997 Steel structures standard
- AS 1397:2021 Continuous hot-dip metallic coated steel sheet
- AS 3566:2002 Self drilling screws
- AS/NZS 2589:2017 Gypsum linings

#### **ELECTRICITY**

Earthing is not required when electrical fixtures such as light fittings are installed between metal battens or fixed to timber blocking between battens.

Do not run electrical cabling inside metal battens.

For any other scenarios, consult an electrical contractor for any earthing requirements that may need to be incorporated.

#### **CEILING LOADS**

To limit sag, loads on GIB<sup>®</sup> plasterboard ceilings must not exceed an insulation weight of 4.2kg/m<sup>2</sup>, and a fixture weight of 1kg or more unless they are independently supported. The placement of ceiling fixtures such as light fittings are to be limited to one fixture per m<sup>2</sup> unless independently supported.

## BOTTOM CHORD RESTRAINT AND LATERAL SUPPORT OF TOP PLATES

Directly fixed GIB® Rondo® Metal Battens will provide bottom chord restraint for roof trusses and lateral support for top plates for buildings compliant with NZS 3604:2011 or NASH Standard for Residential and Low-Rise Steel Framing. Clip or full suspended systems provide minimal or no restraint or lateral support.

#### **RAKING AND COVED CEILINGS AND SKILLION ROOFS**

Due to the higher and fluctuating air moisture content, temperatures, and low air movement that can occur in raking ceilings, it is strongly recommended that clip fixed GIB<sup>®</sup> Rondo<sup>®</sup> Metal Batten systems are used. Unlike the various species and grades of timber battens which are variously affected by temperature and humidity, the performance of GIB<sup>®</sup> Rondo<sup>®</sup> Metal Battens is consistent throughout New Zealand.

Roof space ventilation, ceiling control joints or perimeter relief, and back-blocking will help reduce the risk of cracking in large expansive plasterboard ceilings.

Specific Engineering Design (SED) is required when designing raking suspended ceilings. See the Suspended Ceiling section in this manual for further details (p.16-19).

# WALL LOADS

Metal battens on walls are not suitable for mounting heavy items such as shelving, cupboards, or vanity units.

#### **TILING WALLS ON BATTEN SYSTEMS**

To support tiles, reduce batten spacing to 450mm centres maximum and batten spans to 800mm centres maximum. Use 13mm GIB Aqualine<sup>®</sup> when tiling on metal battens.

#### **BACK-BLOCKING**

Back-blocking is the practice of laminating an offcut of plasterboard to the back of a joint using GIB-Cove<sup>®</sup> Bond. The back-blocking process is described in detail in the GIB<sup>®</sup> Site Guide.

Back-blocking is required as outlined below:

- Timber battens
  - When there are 3 or more tapered edge joints in a ceiling area
- Metal battens
  - When there are 6 or more tapered edge joints in a ceiling area
- To achieve a Level 5 Finish (all joints)

When using clip fixed metal battens or suspended ceiling, back-blocking tapered edge joints is not required when a Level 4 Finish is specified.

We strongly recommend back-blocking in the following situations:

- Sheet end joints not formed over battens
- All sheet joints in garages
- All sheet joints in ceiling application for superior performance

#### **CONTROL JOINTS**

Control joints are recommended to provide relief from stresses associated with changes in temperature, humidity, and the performance of junctions between dissimilar construction materials. Control joints must be positioned at maximum 12.0m centres in either direction. For general requirements refer to the GIB<sup>®</sup> Site Guide or for more significant structural movements consult the building designer.

Control joints in the GIB® Rondo® Metal Batten system can be achieved as shown in the details section of this manual (p.22).

Refer to the GIB<sup>®</sup> Fire Rated and GIB Noise Control<sup>®</sup> Systems literature for control joints in those systems.

#### **HEALTH AND SAFETY**

Use appropriate PPE such as eye protection and gloves. PPE must be used when handling or cutting GIB® Rondo® Metal Batten system components. Avoid breathing the dust while cleaning metal battens, and avoid any sharp edges when cutting.

# **USE ONLY THE CURRENT SPECIFICATION**

This publication may be superseded by a new publication. Winstone Wallboards accepts no liability for reliance upon publications that have been superseded.

Before using this publication check whether this is the current publication; simply call the GIB® Helpline on 0800 100 442 or visit gib.co.nz

#### **GIB® WARRANTY STATEMENT AND SUBSTITUTION**

#### **Product and System Warranty**

The Winstone Wallboards warranty covers GIB® products and/or systems for a minimum of 10 years from the date of purchase. Winstone Wallboards warrants that GIB® products will be free from defects caused by factory workmanship or materials and, subject to compliance with the conditions in the Winstone Wallboards warranty statement, that the product or system will perform to the extent set out in relevant Winstone Wallboards published literature current at the time of installation. Nothing in this document shall exclude or modify any legal rights a customer may have under the Consumer Guarantees Act or otherwise which cannot be excluded or modified at law.

#### We are 100% Behind our Products and Systems

If any of our products or systems fail to perform as claimed or an issue associated with any GIB® product or system does occur, Winstone Wallboards will work with the relevant parties to help resolve the issue.

#### System and Product Components

A system is a group of related product components that interact to perform a task. Ensure the full GIB® building system, including the appropriate GIB® branded products, are specified and installed. This will ensure performance is not compromised and that any failure that is attributable to GIB® products and/or systems will be supported. Winstone Wallboards will not support system performance where substitute products are used.

#### SUSTAINABILITY

- Winstone Wallboards Ltd is committed to protecting the environment. Environmental planning is integrated into all our business activities:
  - Our operations strive to exceed all environmental regulatory requirements at all times
  - Protection of the environment is a day-to-day responsibility that we must all accept
  - We allocate management time and resources to address relevant environmental issues and continuously improve our activities in that area
  - We will achieve our standards through positive action, employee involvement and constant communication with our neighbours, local authorities and customers
- Recycled steel content in Rondo<sup>®</sup> product is maximised, without being detrimental to the quality of the product
- The Rondo<sup>®</sup> EPD provides the Life Cycle Assessment (LCA) data

Rondo<sup>®</sup> is constantly reviewing its processes to minimise Rondo<sup>®</sup> Australia and New Zealand's consumption of energy from fossil fuels and reducing waste to landfill. Rondo<sup>®</sup> is constantly reviewing advancements in technology that could be introduced to benefit Rondo<sup>®</sup> by reducing annual energy consumption and the waste sent to landfill annually. Rondo<sup>®</sup> also recognises its responsibility in making a genuine commitment to the environment, aiming to achieve and maintain a high standard of environmental care within all areas of its operations.

GIB® sustainability

Rondo<sup>®</sup> sustainability





#### HANDLING AND STORAGE

- Metal components must be protected from the weather prior to installation and stored dry and flat on suitable dunnage
- Do not make service holes in metal battens or accessory components
- Metal battens can be cut using tin snips, a hacksaw or grinder disk. Wear appropriate PPE and take care when using a grinder not to damage the surface of the battens.
- Follow normal safe practices to protect yourself and others

# INSTALLATION

- Install GIB<sup>®</sup> Rondo<sup>®</sup> Metal Batten system after the roof is on. This is important with heavyweight roofs to reduce any unevenness and stress in the ceiling plane as the roof settles. Truss bottom chords usually have a pre-camber which changes under the roof load and will also affect the 'flatness' of the finished ceiling and create stress points especially near wall framing
- Do not line the ceiling until the moisture content of the timber framing supporting the battens is less than 18%. It is recommended that a moisture content of 8-12% is achieved if the building is to be air-conditioned and/or centrally heated
- To minimise the risk of plasterboard surface defects, ensure all ceiling battens run in the same direction. Consider control joints at a change in direction

Scan to view GIB® installation videos



# **BATTEN SPACING AND SPAN**

Batten spacing must not exceed 450mm for 10mm GIB<sup>®</sup> plasterboard and 600mm for 13mm GIB<sup>®</sup> plasterboard. The batten span between direct fixing points or clips must not exceed 1200mm for multi-spans or 900mm for a single span.

- A multiple span batten is continuous across more than 2 supports
- A single span batten spans between 2 supports only e.g., hallway



#### **DROP HEIGHT**

For ceiling applications, the following drop heights can be achieved depending on batten type, Direct Fix (DF), Clip Fix (CF) and Suspended Ceiling (SC). The drop height is measured from the underside of the floor framing or slab to the top of the plasterboard ceiling lining.



# Table 1

Batten Fixing		Туре	Drop Range (mm)	Page
GIB <sup>®</sup> Rondo <sup>®</sup> 310	Direct Fix	N/A	35	12
	Clip Fix	311D Clip	40-65	
		313 Long Clip	40-165	13
		A311 GIB <sup>®</sup> Quiet Clip	40-65	
Rondo <sup>®</sup> 308	Clip Fix	226 Clip	20-45	
		394 Long Clip	20-145	
		STWC Acoustic Clip	30-40	- 14
		Betagrip Clip	35 / 40	14
		A239 Clip 100mm Bolt	55-130	
		A239 Clip 180mm Bolt	55-210	
	Suspended Ceiling	Grid	150-1000	10
		Grid + STSU Clip	165-1000	10
Rondo <sup>®</sup> 129	Clip Fix	226 Clip	30-55	
		394 Long Clip	30-155	
		STWC Acoustic Clip	40-50	15
		Betagrip Clip	30-50	15
		A239 Clip 100mm Bolt	70-140	
		A239 Clip 180mm Bolt	70-220	
	Suspended Ceiling	Grid	165-1000	10
		Grid + STSU Clip	180-1000	18



# GIB® Rondo® Metal Batten Selector - Direct Fix (DF) and Clip Fix (CF) Options

GIB® RONDO® 310 SYSTEM DF AND CF	GIB® RONDO® 308 SYSTEM CF ONLY	GIB <sup>®</sup> RONDO <sup>®</sup> 129 SYSTEM CF ONLY
<b>310 BATTEN</b> 12639 3.6m 12640 4.8m 12641 6.0m <b>35mm (h) x 40mm (face)</b>	<b>308 BATTEN</b> 14918 3.6m 14919 4.8m 14920 6.0m <b>16mm (h) x 38mm (face)</b>	<b>129 BATTEN</b> 14915 3.6m 14916 4.8m 14917 6.0m <b>28mm (h) x 38mm (face)</b>
311D CLIP 12711 92mm (h) x 90mm (w) Adjustment range 2-30mm	<b>226 CLIP</b> 14903 90mm (h) x 66mm (w) Adjustment range 2-30	mm
313 LONG CLIP 14907 190mm (h) x 90mm (w) Adjustment range 2-130mm	<b>394 LONG CLIP</b> 14909 <b>190mm (h) x 66mm (w)</b> Adjustment range 2-130mm 14 14 14 14 14 14 14 14 14 14	A239 CLIP 4911 00mm Rod & Clip A239 CLIP 4913 80mm Rod & Clip
A311 GIB QUIET CLIP® 14209 92mm (h) x 90mm (w) Adjustment range 2-30mm Rubber Grommets	STWC ACOUSTIC CLIP 14984 Resilient mount. Direct fix to wall or ceiling. Adjustment up to 5mm possible. Also referred to as ST001.	BETAGRIP CLIP 4914 or direct fixing to concrete walls or eilings. Approx. before 25mm digustment for height in 5mm acrements. ccepts 129 batten in all slots and 08 batten in upper 2 slots. reviously known as BETAFIX CLIP.
<b>312 JOINTER</b> 12643 <b>55mm (i) x 21mm (w)</b>	<b>138 JOINTER</b> 14924 91mm (I) x 51mm (w)	
<b>340 PERIMETER CHANNEL</b> 12642 3.0m <b>35mm (h) x 24mm x 36mm</b> (uneven leg)	142 PERIMETER CHANNEL 14937 16mm (h) x 13mm x 28mm (uneven leg)	140 PERIMETER CHANNEL         14936         28mm (h) x 20mm x 30mm (uneven leg)
NZ18 PERIMETER ANGLE 12645 3.0m Can also be used for internal corners in tiled shower situations (see GIB® Site Guide). 32mm (h) x 32mm (w) *NZ18 & GIBFix® angle are compatible with all ceiling batter	GIBFIX® ANG 15662 2.4m 15663 2.7m 45mm (h) x 45mm	LE (w)





# **SPECIFICATION EXAMPLE**



#### INTRODUCTION

This section describes Direct Fix (DF) and Clip Fix (CF) ceiling applications. Select an appropriate system based on your specific project requirements, framing alignment, and the required ceiling drop height. Batten options are the GIB® Rondo® 310 Batten with a depth of 35mm, the Rondo® 308 Batten with a depth of 16mm, and the Rondo® 129 Batten with a depth of 28mm.

#### GIB® Rondo® 310 System

- Only the GIB<sup>®</sup> Rondo<sup>®</sup> 310 Batten can be direct fixed
- For clip fixing to framing, the 311D and 313 Long Clip are used with the GIB<sup>®</sup> Rondo<sup>®</sup> 310 Batten
- To reduce noise attenuation between floor levels the GIB
   Quiet Clip<sup>®</sup> can be used with the GIB<sup>®</sup> Rondo<sup>®</sup> 310 Batten

#### GIB® Rondo® 308/129 System

- The Rondo<sup>®</sup> 308 and 129 Battens require clip fixing
- For clip fixing to framing, the 226 and 394 Long Clip are used with Rondo<sup>®</sup> 308 and 129 Batten
- To reduce noise attenuation between floor levels the STWC Acoustic Clip can be used with the Rondo<sup>®</sup> 308 or 129 Batten
- The Betagrip Clip and A239 Clips are used with Rondo<sup>®</sup> 308 or 129 Battens

#### **Specification Reference**

A specification reference can be assigned by combining the batten type, fixing method, and clip type as follows:

GR308/129 Systems	GR310 Systems
GR308 or GR129-CF-226	GR310-DF
GR308 or GR129-CF-394LC	GR310-CF-311D
GR308 or GR129-CF-STWC	GR310-CF-313LC
GR308 or GR129-CF-BGC	GR310-CF-A311
GR308 or GR129-CF-A239100	
GR308 or GR129-CF-A239180	

# INSTALLATION

The supporting framing must be straight and true, and comply with relevant NZBC requirements and associated Standards (see General Design and Installation).

Batten spacing must not exceed 450mm for 10mm GIB<sup>®</sup> plasterboard and 600mm for 13mm GIB<sup>®</sup> plasterboard. The batten span between direct fixing points or clips must not exceed 1200mm for multi-spans or 900mm for a single span.

Ensure all battens run in the same direction to minimise the risk of defects such as plasterboard joint cracking. Consider control joints to provide any stress relief at a change of direction.

#### **JOINTING BATTENS**

When direct fixing using GIB<sup>®</sup> Rondo<sup>®</sup> 310 Battens, batten joints can be made over a supporting framing member. When batten joints fall between framing or when clip fixing is used, the GIB<sup>®</sup> Rondo<sup>®</sup> 310 Battens can be joined using the 312 Jointer. Do not run batten joints in a line but stagger them between adjacent battens.

The Rondo<sup>®</sup> 308 and 129 Battens can be joined using the 138 Jointer. Stagger joints between adjacent battens.

#### **PERIMETER FIXING**

There are several options to fix the ceiling perimeter.

When direct fixing using GIB<sup>®</sup> Rondo<sup>®</sup> 310 Battens. The ceiling perimeter can be fixed to a nominally 140 x 35mm oversize top plate. The batten dimensions match the nominal top plate thickness. When clip fixing, or with a conventional plate arrangement, use the 340 Perimeter channel or a NZ18 or GIBFix<sup>®</sup> Angle.

When clip fixing Rondo<sup>®</sup> 308 or 129 Battens, the ceiling perimeter is fixed to a 142 or 140 Perimeter channel respectively, or a NZ18 or GIBFix<sup>®</sup> Angle.

When a batten runs parallel and 75mm or less from a perimeter wall, a perimeter channel or angle is not required unless the wall-to-ceiling joint is square stopped, or when dictated by fire or structural requirements. Raking or skillion roofs may have specific perimeter requirements for folded metal angles.



max

Instead of a metal angle a batten can be positioned as shown (not suitable for fire-rated applications)

# GIB® RONDO® 310 DIRECT FIX (DF) SYSTEM

This fixing method applies to the GIB<sup>®</sup> Rondo<sup>®</sup> 310 Metal Batten only. For specification purposes the following string can be used.



# **PERIMETER OPTIONS**



#### PREFERRED OPTION

#### **FASTENERS**

Fix directly by fastening with pairs of 32mm x 8g GIB® Grabber® Wafer Head or 32mm x 7g GIB® Grabber® Dual Thread Screws.

- Alternatively, pairs of min. 45mm x 2.8mm flat or 'D' head nails can be used
- For fixing to steel framing a drill tip screw is recommended
- Perimeter channel fixed to wall framing with 32mm x 8g GIB<sup>®</sup> Grabber<sup>®</sup> Wafer Head Screws or 32mm x 7g GIB<sup>®</sup> Grabber<sup>®</sup> Dual Thread Screws at 600mm centres maximum for a standard ceiling, 300mm maximum centres behind square stopping or in ceiling diaphragms. There must be a nog or dwang behind the wall or ceiling perimeter metal channel or angle
- To fix the batten to perimeter channel or angle use 13mm x 7g GIB<sup>®</sup> Grabber<sup>®</sup> Pancake Head Drill Tip Screw or 3mm diameter steel rivets

#### PERIMETER

GIB<sup>®</sup> Rondo<sup>®</sup> NZ18 angle, 340 Perimeter channel, GIBFix<sup>®</sup> Angle or a traditional 140mm oversize top plate. Note that ceiling diaphragms, and raking or skillion ceilings and roofs have specific perimeter requirements, some using folded metal angles.

#### **INSTALLATION**

- 1. Establish ceiling height
- 2. Fix any perimeter channels or angles at required level
- 3. Set out batten centres
- 4. Cut the battens 10mm short to leave a 5mm gap at each end
- 5. Set the battens in the correct position and fasten to the framing taking care not to distort the batten



## GIB® RONDO® 310 CLIP FIX (CF) SYSTEM

GIB

This fixing method applies to the GIB<sup>®</sup> Rondo<sup>®</sup> 310 Metal Batten and matching clip options selected, depending on the desired drop height or acoustic requirements.

Clips available for use with the GIB® Rondo® 310 Batten are the 311D Clip, the 313 Long Clip, and the A311 GIB Quiet Clip®.

For specification purposes coding can be used, quoting the batten type followed by CF and the clip type.

GR310-CF-311D
GR310-CF-313LC
GR310-CF-A311

# **FASTENING THE SHORT AND LONG CLIP**



Insert one 32mm x 8g GIB® Wafer Head Screw into the vertical slot firmly but not quite home. Adjust levels as required and then drive completely home

Insert 2 further fasteners to complete the connection

# FASTENING THE A311 GIB QUIET CLIP®

Insert the first screw into the middle rubber grommet, tighten enough to hold the A311 GIB<sup>®</sup> Quiet Clip<sup>®</sup> in place, adjust the clip to the correct position insert the remaining two screws and tighten. Do not overtighten the screws to the point where the grommet is crushed. The screws should be tightened enough to allow the flexibility to remain in the connection.



Insert one 32mm x 8g GIB® Wafer Head Screw into the vertical slot firmly but not quite home. Adjust levels as required and then drive completely home

Insert 2 further fasteners to complete the connection



# PERIMETER

GIB<sup>®</sup> Rondo<sup>®</sup> NZ18 Angle, 340 Perimeter Channel, GIBFix<sup>®</sup> Angle or a traditional 140mm oversize top plate. Note that ceiling diaphragms, and raking or skillion ceilings and roofs have specific perimeter requirements, some using folded metal.

Perimeter channel fixed to wall framing with 32mm x 8g GIB<sup>®</sup> Grabber<sup>®</sup> Wafer Head Screws or 32mm x 7g GIB<sup>®</sup> Grabber<sup>®</sup> Dual Thread Screws at 600mm centres maximum for a standard ceiling, 300mm maximum centres behind square stopping or in ceiling diaphragms. There must be a nog or dwang behind the wall or ceiling perimeter metal channel or angle.

To fix the batten to perimeter channel or angle, use 13mm x 7g GIB<sup>®</sup> Grabber<sup>®</sup> Pancake Head Drill Tip Screw or 3mm diameter steel rivets.

#### INSTALLATION

- 1. Establish a datum line for the ceiling
- 2. Fix any perimeter channels or angles at the level required
- 3. Place a string line on the datum line at right angles to the battens, under the truss or joist closest to the centre of the room
- 4. Install clips at the required centres based on the batten span using the string line to establish the correct position
- 5. Alternatively use a laser level to provide the datum level and guide the clip installation heights
- Cut the batten to the required length using tin snips, a hacksaw or grinder disk. Cut the battens 10mm short to leave a 5mm gap at each end
- Insert the batten into the channel at each end and fit into the clips
- 8. Install remainder of clips ensuring that the batten is straight and flat

#### GIB® RONDO® 310 CLIP FIX (CF) SYSTEM EXAMPLE

# **Recommended Best Practice Details**



# GIB® RONDO® 308 CLIP FIX (CF) SYSTEM

This fixing method applies to the Rondo® 308 Metal Batten and matching clip options, selected depending on the desired drop height or acoustic requirements.

Clips available for use with the Rondo® 308 Batten are the 226 Clip, the 394 Long Clip, the STWC Acoustic Clip, the Betagrip Clip, and the 100mm or 180mm A239 Clip.

For specification purposes coding can be used, quoting the batten type followed by CF and the clip type.

GR308-CF-226	GR308-CF-BGC
GR308-CF-394LC	GR308-CF-A239100
GR308-CF-STWC	GR308-CF-A239180

#### **STWC ACOUSTIC CLIP**

GIB

Fix the STWC Acoustic Clip to the framing using a 63mm x 8g GIB® Grabber® Self Tapping Screw.



#### **BETAGRIP CLIP**

Fix the Betagrip Clip to timber or steel framing using two 32mm x 7g GIB® Grabber® Dual Thread Screws in the outer holes. Use a min. 50mm long 6mm Hex Head Screw bolt in the centre hole only for fixing to concrete.



#### A239 CLIP

Fix the A239 Clip to concrete floor using the supplied CT06 anchor screw bolt in a 6mm diameter hole drilled to allow a 40mm screw embedment.



#### **FASTENING THE SHORT AND LONG CLIP**

Insert one 32mm x 8g GIB® Wafer Head Screw into the vertical slot firmly but not quite home. Adjust levels as required and then drive completely home

Insert 2 further fasteners to complete the connection



# PERIMETER

GIB® Rondo® NZ18 Angle, 142 Perimeter Channel, GIBFix® Angle or a traditional 140mm oversize top plate. Note that ceiling diaphragms, and raking or skillion ceilings and roofs have specific perimeter requirements, some using folded metal angles.

Perimeter channel fixed to wall framing with 32mm x 8g GIB® Grabber® Wafer Head Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws at 600mm centres maximum for a standard ceiling, 300mm maximum centres behind square stopping or in ceiling diaphragms. There must be a nog or dwang behind the wall or ceiling perimeter metal channel or angle.

To fix the batten to perimeter channel or angle, use 13mm x 7g GIB® Grabber® Pancake Head Drill Tip Screw or 3mm diameter steel rivets.

#### **INSTALLATION**

- Establish a datum line for the ceiling 1.
- 2. Fix any perimeter channels or angles
- З. Place a string line on the datum line at right angles to the battens, under the truss or joist closest to the centre of the room
- Install clips or brackets at the required centres based on 4. the batten span using the string line to establish the correct position
- Alternatively use a laser level to provide the datum level and 5. guide the clip installation heights
- Cut the batten to the required length using tin snips, a 6. hacksaw or grinder disk
- 7. Insert the batten into the channel at each end and fit into the clips or brackets
- 8. Install remainder of clips or brackets ensuring that the batten is straight and flat

#### **GIB® RONDO® 308 CLIP FIX (CF) SYSTEM EXAMPLE**

**Recommended Best Practice Details** 



# GIB® RONDO® 129 CLIP FIX (CF) SYSTEM

This fixing method applies to the Rondo<sup>®</sup> 129 Metal Batten and matching clip options, selected depending on the desired drop height or acoustic requirements.

Clips available for use with the Rondo<sup>®</sup> 129 Batten are the 226 Clip, the 394 Long Clip, the STWC Acoustic Clip, the Betagrip Clip, and the 100 or 180mm A239 Clip.

For specification purposes coding can be used, quoting the batten type followed by CF and the clip type.

GR129-CF-226	GR129-CF-BGC
GR129-CF-394LC	GR129-CF-A239100
GR129-CF-STWC	GR129-CF-A239180

#### **STWC ACOUSTIC CLIP**

GIB

Fix the STWC Acoustic Clip to the framing using a 63mm x 8g GIB® Grabber® Self Tapping Screw.



#### **BETAGRIP CLIP**

Fix the Betagrip Clip to timber or steel framing using two 32mm x 7g GIB<sup>®</sup> Grabber<sup>®</sup> Dual Thread Screws in the outer holes. Use a min. 50mm long 6mm Hex Head Screw bolt in the centre hole only for fixing to concrete.



#### A239 CLIP

Fix the A239 Clip to concrete floor using the supplied CT06 anchor screw bolt in a 6mm diameter hole drilled to allow a 40mm screw embedment.



#### FASTENING THE SHORT AND LONG CLIP

Insert one 32mm x 8g GIB<sup>®</sup> Wafer Head Screw into the vertical slot firmly but not quite home. Adjust levels as required and then drive completely home

Insert 2 further fasteners to complete the connection



# PERIMETER

GIB<sup>®</sup> Rondo<sup>®</sup> NZ18 Angle, 140 Perimeter Channel, GIBFix<sup>®</sup> Angle or a traditional 140mm oversize top plate. Note that ceiling diaphragms, and raking or skillion ceilings and roofs have specific perimeter requirements, some using folded metal angles.

Perimeter channel fixed to wall framing with 32mm x 8g GIB<sup>®</sup> Grabber<sup>®</sup> Wafer Head Screws or 32mm x 7g GIB<sup>®</sup> Grabber<sup>®</sup> Dual Thread Screws at 600mm centres maximum for a standard ceiling, 300mm maximum centres behind square stopping or in ceiling diaphragms. There must be a nog or dwang behind the wall or ceiling perimeter metal channel or angle.

To fix batten to perimeter channel or angle use 13mm x 7g GIB® Grabber® Pancake Head Drill Tip Screw or 3mm diameter steel rivets.

#### **INSTALLATION**

- 1. Establish a datum line for the ceiling
- 2. Fix any perimeter channels or angles
- 3. Place a string line on the datum line at right angles to the battens, under the truss or joist closest to the centre of the room
- Install clips or brackets at the required centres based on the batten span using the string line to establish the correct position
- 5. Alternatively use a laser level to provide the datum level and guide the clip installation heights
- Cut the batten to the required length using tin snips, a hacksaw or grinder disk
- 7. Insert the batten into the channel at each end and fit into the clips or brackets
- 8. Install remainder of clips or brackets ensuring that the batten is straight and flat

#### GIB® RONDO® 129 CLIP FIX (CF) SYSTEM EXAMPLE

**Recommended Best Practice Details** 



Suspended ceiling metal battens (SC) on rod

Fully suspended (150–1000mm drop)





#### **SUSPENDED CEILINGS**

This section describes suspended ceiling (SC) applications. Select an appropriate system based on your specific project requirements, framing alignment, and the required ceiling drop height. Batten options, also referred to as furring channels, are the Rondo<sup>®</sup> 308 and 129 Battens.

The Rondo<sup>®</sup> 308 or 129 Batten is clipped to a top cross rail (TCR) using 139 Clips. The 127 or 128 TCR is connected via 2524 Clips or 167 Side Mounted Clips to 5mm galvanised suspension 121 Rods. Rods are fixed to the supporting structure using 547 Clips for mounting to a horizontal surface, or 534 Clips for side mounting to a vertical face.

The suspended ceiling option permits a drop from 150 to 1000mm.

A specification reference can be assigned for the selected system by combining the batten type, and fixing method. For example:

GR308-SC
GR129-SC

#### SUPPORTING FRAMING AND BATTEN LAYOUT

The supporting framing must be straight and true, and comply with relevant NZBC requirements and associated Standards (see General Design and Installation).

Batten spacing must not exceed 450mm for 10mm GIB® plasterboard and 600mm for 13mm GIB® plasterboard.

Ensure all battens run in the same direction to minimise the risk of defects such as plasterboard joint cracking. Consider control joints to provide any stress relief at a change of direction.



# **JOINTING BATTENS**

The Rondo<sup>®</sup> 308 and 129 Battens can be joined using the 138 Jointer. Do not run batten joints in a line but stagger them between adjacent battens.

#### **JOINTING TOP CROSS RAIL**

To join TCRs, use a 200mm long piece of the 127 TCR and clip it over the top of the rail (see Control Joint Details p.22).

# **PERIMETER FIXING**

The Rondo<sup>®</sup> 308 and 129 Battens can be terminated at the ceiling perimeter into a 142 or 140 Perimeter Channel respectively or can be fixed to a NZ18 or GIBFix<sup>®</sup> Angle.

When a batten runs parallel, and 75mm or less from a perimeter wall, a perimeter channel or angle is not required unless the wall-to-ceiling joint is square stopped, or when dictated by fire or structural requirements.

# FASTENERS

- 1. 534 Top mount fixed to timber framing by fastening with min. 12g x 38mm Hex Head Screw. For fixing to concrete, use min. 50mm long 6mm Hex Head Screw bolt.
- 547 Top mount fixed to underside of the timber with min.
   12g x 38mm Hex Head Screw. For fixing to concrete, use min. 50mm long 6mm Hex Head Screw bolt.
- Perimeter Channel to wall framing with 32mm x 8g GIB<sup>®</sup> Grabber<sup>®</sup> Wafer Head Screws 600mm centres maximum for a standard ceiling, 300mm maximum centres behind square stopping.

# INSTALLATION

- 1. Establish a datum line for the ceiling
- 2. Fix the perimeter channels or angles. There must be a nog/dwang behind the channel or angle
- 3. Cut the suspension rod (121) to length using a hacksaw
- 4. Attach top mount clip (534) to one end of the rod and TCR clip (167) to the other end
- 5. Fix the rod assembly to floor or roof structure above to support the TCR along its length at maximum 1200mm centres and space the TCRs at 1200mm centres maximum to form a 1200mm grid. The first hanger to be a maximum of 400mm from the wall perimeter channel
- 6. Adjust all hangers to correct drop using a string line or laser
- 7. Attach TCR (127) to suspension clips (TCR clip 167)
- 8. Click the 139 locking key batten clips into the TCR at 600mm centres
- Cut the battens to length using tin snips, a hacksaw or grinder disk
- Insert the batten into the channel at each end and fit into the batten clips. Stagger any batten joints and use the 138 batten jointer. Ensure the battens are straight and flat

## SPECIFIC ENGINEERING DESIGN

The suspended ceiling systems in this technical literature can be specified without the need for Specific Engineering Design (SED), provided they are intended for installation within the following scope of use:

- Buildings designed and constructed in accordance with NZS3604:2011 Timber Framed Buildings or NASH Standard for Residential and Low-Rise Steel Framing
- A maximum ceiling area of 144 m<sup>2</sup>, not exceeding 12 metres in any direction
- Supporting a single layer of 10mm or 13mm GIB® plasterboard ceiling lining
- Suspension drop not exceeding 1000 mm measured from the supporting structure above to the back of the ceiling lining
- GIB® plasterboard installed to the suspension grid in accordance with the current GIB® Site Guide
- The ceiling is level, with no height variations along the ceiling plane

This scope assumes buildings of limited height and a ceiling perimeter which is fixed to bounding walls by means of plasterboard fixings to the perimeter channel or angle, and a coved or square stopped junction detail between the ceiling and wall linings.

For application outside this scope, Specific Engineering Design SED is required. Options include full fixing of plasterboard ceiling linings to perimeter walls capable of transferring the associated seismic forces, designing the grid suspension system to transfer these forces to structural walls, or bracing the suspension system so that forces are directly transferred to the floor above.

AS/NZS 2785:2020 Suspended Ceilings - Design and Installation provides one way of designing the suspended ceiling systems. When using this Standard care must be taken not to confuse the performance of a plasterboard lined ceiling with a two-way grid system which accommodates proprietary ceiling tiles.

When other areas of performance are required, such as fireresistance or noise-control, the design must carefully consider compliance with all relevant NZBC clauses.

# **RAKING CEILINGS**

Specific Engineering Design (SED) is recommended when designing raking suspended ceilings. Due to the slope of the ceiling, lateral forces will develop. If these forces are not directly transferred to the perimeter walls by the ceiling linings, they will be imposed on the grid and hangers in which case a separate bracing system is required.

Raking or skillion roofs may also have specific perimeter requirements for folded metal angles (see Raking Ceilings p.23).





#### BATTEN FIXING TO WALLS

This section describes batten fixing to walls. Only the GIB<sup>®</sup> Rondo<sup>®</sup> 310 Batten can be direct fixed. The GIB<sup>®</sup> Rondo<sup>®</sup> 310 Batten as well as the Rondo<sup>®</sup> 308 and 129 Battens can be clip fixed. Note that the Rondo<sup>®</sup> 308 and 129 Battens use a different clip design.

- Do not fix metal battens direct to masonry walls
- Metal batten to wall fixing is not suitable for wall bracing elements without specific design
- Refer to GIB<sup>®</sup> Fire Rated Systems and GIB Noise Control<sup>®</sup> Systems for use in those applications
- Specific thermal design is required when installing metal battens over an internal vapour control membrane as part of an air tightness design
- Battens must be spaced no further than 600mm apart and be supported at 1200mm maximum

#### LININGS

When linings and battens run in the same direction with longitudinal sheet joints formed over battens, there is no need for nogs/dwangs between the battens unless to support sheet end butt joints.

When linings run perpendicular to the battens, there is no need for nogs/dwangs behind the tapered sheet joints.

Sheet end or cut edge joints must be supported by framing.

#### PERIMETER

Use an NZ18 or GIBFix® Angle behind wall-to-ceiling and wall-to-wall joints and fix to battens either side using 13mm x 7g GIB® Grabber® Pancake Head Drill Tip Screws.

#### **GIB® RONDO® 310 SET OUT AND DIRECT FIXING (DF)**

Install battens perpendicular to studs or nogs/dwangs and fix at no more than 1200mm centres with pairs of 32mm x 8g GIB® Grabber® Wafer Head Screws through each flange.

When fixing horizontally, place the lowest batten about 10mm from the floor and the highest to allow for wall/ceiling junction construction and finishing.

#### JOINTING

Batten end joints can be formed over framing or use the 312 Jointer anywhere between supports. Stagger joints between adjacent battens.

#### INSTALLATION

- Cut battens 10mm short leaving a 5mm gap at each end
- Set out batten centres not exceeding 600mm
- Pack where necessary to provide a flat substrate and fasten taking care not to distort the batten
- Form internal and external corners using the NZ18 or GIBFix<sup>®</sup> Angle

## **BATTEN SET OUT AND CLIP FIXING (CF)**

The GIB® Rondo® 310 and Rondo® 308 and 129 Battens can all be clip fixed to walls. Note that the Rondo® 308 and 129 Battens use a different clip design, but otherwise separation achieved with the standard and long clips are the same.

The A311 GIB Quiet Clip® can only be used with the GIB® Rondo® 310 Batten and the STWC Acoustic Clip only accepts

Rondo® 308 and 129 Battens.

For standard clip fixing to walls, simply use the ceiling specification turned 90 degrees, except that batten spacing for walls can be 600mm for both 10mm and 13mm GIB<sup>®</sup> plasterboard linings.

Alternatively, the A239 Clip and threaded rod, the STWC Acoustic Clip, or Betagrip Clip can be used with the Rondo<sup>®</sup> 308 and 129 Battens for face fixing to flat surfaces, including concrete masonry.

Place clips at no more than 1200mm centres along the battens. Space battens at no more than 600mm. When fixing battens horizontally, set out to locate the lowest batten 10mm from the floor and the highest to allow for wall/ceiling junction construction and finishing.

#### JOINTING

Rondo<sup>®</sup> 308 and 129 Batten joints are formed using the 138 Jointer anywhere between supports. Stagger joints between adjacent battens.

## **INSTALLATION**

- Cut battens 10mm short leaving a 5mm gap at each end
- Set out batten centres not exceeding 600mm
- Using a laser or string lines, install the clips at the required centres, creating a level surface
- Fit the battens into the clips
- Form internal and external corners using the NZ18 or GIBFix<sup>®</sup> Angle

#### **FASTENERS**

- Betagrip Clip 38mm x 8g GIB<sup>®</sup> Grabber<sup>®</sup> Wafer Head Screws to timber or 6.0mm diameter screw bolt with minimum 50mm embedment for masonry
- STWC Acoustic Clip 63mm x 8g GIB<sup>®</sup> Grabber<sup>®</sup> Self Tapping Drywall Screws to framing
- A239 Threaded Rod (100 or 180mm) and Clip supplied
   6.5mm masonry anchor

**STWC Acoustic Clip** 

# A239 Clip and Threaded Rod



**Betagrip Clip** 





# **FIXING TO MASONRY**

If installation is required to concrete or masonry, it is recommended that GIB® Rondo® 308 battens are clipped to GIB® Rondo® A239 clips as shown. A239 clips should be spaced at 1200mm centres (maximum) vertically and 600mm centres (maximum) horizontally

# Anchor Bolt



# A239 Clip



**GIB®** Plasterboard Overlay





308 Batten





SEPTEMBER 2024

# **CONTROL JOINT: DIRECT AND CLIP FIXED**



# **CONTROL JOINT: SUSPENDED CEILING**





# **RAKING CEILINGS AND SKILLION ROOFS**

Due to the higher temperatures and low air movement that can occur in raking ceilings it is strongly recommended that clip fixed GIB<sup>®</sup> Rondo<sup>®</sup> metal battens are used (these are considered to be ceiling suspension systems).

Because of the heat that can be generated in roof spaces, timber battens can be subjected to conditions that contribute to joint failure and popped fasteners. The use of control joints or perimeter relief will help reduce the risk of cracking in large, expansive ceilings.

These may not be suitable for use in Fire Rated Systems or Noise Control Systems.

Back-blocking of all ceiling joints is highly recommended as it can reduce the likelihood of cracking.

# FIXED - STEEL BACKING ANGLE

# FLEXIBLE - PERIMETER RELIEF







**NOTE:** It is recommended that a flexible perimeter relief be used where there is a high risk of movement.





# GIB<sup>®</sup> RONDO<sup>®</sup> 308/129 SYSTEM



# GIB® RONDO® 310 SYSTEM





Notes

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Notes

# GIB<sup>®</sup> Rondo<sup>®</sup> Metal Batten Systems, September 2024

# LIMITATIONS

Winstone Wallboards Ltd accepts no liability if the GIB<sup>®</sup> Rondo<sup>®</sup> Metal Batten systems and junction details are not installed in strict accordance with instructions contained within this publication.

#### USE ONLY THE CURRENT SPECIFICATION

This publication may be superseded by a new publication. Winstone Wallboards accepts no liability for reliance upon publications that have been superseded. You should check the GIB<sup>®</sup> website to ensure you are using the current publication. If you are unsure whether this is the current publication, simply call the GIB<sup>®</sup> Helpline on 0800 100 442.

#### SUBSTITUTION

GIB<sup>®</sup> Rondo<sup>®</sup> Metal Batten systems have been specifically designed and tested to achieve the stated performance levels. To maintain the GIB<sup>®</sup> product and system warranty, all system components detailed in this publication must be used when specifying and installing GIB<sup>®</sup> Rondo<sup>®</sup> Metal Batten systems.

#### TRADEMARKS

The names GIB<sup>®</sup>, GIB Fyreline<sup>®</sup>, GIB Ultraline<sup>®</sup>, GIB Toughline<sup>®</sup>, GIB Braceline<sup>®</sup> GIB Noiseline<sup>®</sup>, GIB Aqualine<sup>®</sup>, GIB Weatherline<sup>®</sup>, GIB Tradeset<sup>®</sup>, GIB Plus 4<sup>®</sup>, GIB-Cove<sup>®</sup>, GIB Lite Blue<sup>®</sup>, GIBFix<sup>®</sup>, GIB<sup>®</sup> Quiet Stud<sup>®</sup>, GIB Rail<sup>®</sup>, GIB Barrierline<sup>®</sup>, GIB X-Block<sup>®</sup>, GIB Fire Soundseal<sup>®</sup>, GIB Clip<sup>®</sup>, the colour mauve for GIB Toughline<sup>®</sup>, the colour blue for GIB Braceline<sup>®</sup> GIB Noiseline<sup>®</sup>, the colour pink for GIB Fyreline<sup>®</sup>, the colour green for GIB Aqualine<sup>®</sup>, the colour purple for GIB Weatherline<sup>®</sup> and the shield device are registered trademarks of Fletcher Building Holdings Limited.

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